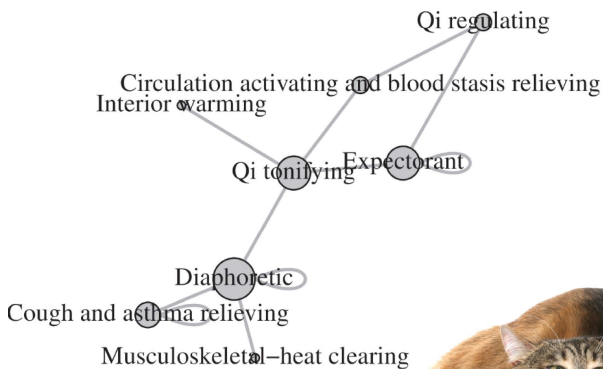




Veterinary Herbal Pharmacopoeia

Respiratory



Sun-Chong Wang

NOVA

VETERINARY SCIENCE AND MEDICINE

VETERINARY HERBAL PHARMACOPOEIA

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VETERINARY SCIENCE AND MEDICINE

**VETERINARY HERBAL
PHARMACOPOEIA**

SUN-CHONG WANG



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PREFACE

Compared with the time elapsed for the evolved trait of grass-eating in dogs and cats, the time that has passed since the creation in 1938 of the modern U.S. Food and Drug Administration (U.S. FDA) is short. The arsenal of the U.S. FDA approved drugs cannot cure all diseases. Noticeable incurable diseases are chronic diseases such as asthma, cancers, diabetes, and irritable bowel syndrome.

The majority of the U.S. FDA approved drugs are for humans, with only about < 10% of them are for animals. The U.S. FDA therefore permits veterinarians, within the context of a veterinarian-client-patient relationship, to prescribe human drugs to nonfood-producing animals, in a practice called extra-label use of drugs in animals, when: 1) the health of the animal is under threat; or 2) suffering or death of the animal may result from no treatment. Similar provision exists in the E.U. and U.K. where it is called veterinary cascade.

The number of pet dogs and cats continues to increase, especially in mainland China, so does the expenditure per pet. Urbanization, lower marriage rates and delayed parenthood can explain the rises. Pet parents, with an increased disposable income, pursue 'premium' or green products and services, such as organic foods and holistic medicine, not only for themselves but also for their pet children.

Although human and other mammals such as horses, cattle, sheep, pigs, camels, and elephants have very different morphology, they share much of the pathophysiology as the underlying cellular biochemistry is evolutionally conserved. Theories of most ethnomedicines, including traditional Chinese medicine (TCM), were applicable to both humans and nonhuman mammals within individual ethnomedicines. In particular, almost all traditional Chinese veterinary recipes were copied from TCM without changes.

Oral administration of drugs to pets is most convenient for veterinarians and pet owners. Granulation of concentrated herbal extracts (CHEG) is therefore preferred. Thanks to biotechnological advances, such form of TCM herbal preparations has been used by human patients and reimbursed by medical insurance in Japan since 1967, in

South Korea since 1987 and in Taiwan since 1995. CHEGs have also become popular in the West. In addition, CHEGs are labeled as dietary supplements in the U.S. The book is about recipes composed of CHEGs.

An herbal recipe, containing multiple herbs, is considered to address the totality of the patient, in contrast to the one-drug-one-target paradigm of modern drugs. Therefore, herb combinatorics holds the key. Based on state-of-the-art deep learning techniques on seven million CHEG recipes in the National Health Insurance Database (Taiwan), the book delineates, from A to Z, 395 CHEG herbs, their co-herbs, and their intended diseases. Recipes for the most common 94 and 81 conditions, from head to toe, for dogs and cats are given in later parts of the book.

The book is intended as a textbook or reference book on canine and feline herbology. The pedagogy to this subject is to liken recipe composing to language learning; if we regard herbs as vocabulary of a foreign language, called CHEG language, then CHEG pairs are phrases and CHEG recipes are sentences in the CHEG language. Part 1 of the book lays out the dictionary of the CHEG language, where each of the 395 CHEG herbs that have been in use and available in the market is given its intended health conditions in VeNom (<http://venomcoding.org>) and ICD terms (https://en.wikipedia.org/wiki/List_of_ICD-9_codes), which are regarded as our mother language. An herb's common companion herbs together with the intended health conditions of such herb pairs are also given in the dictionary. Part 2 lists the recipes for the 94 most common canine conditions, grouped according to the anatomic regions of the dog, from the VetCompass project of the Royal Veterinary College, University of London. Part 3 does the same for the 81 most common feline conditions. Parts 2 and 3 altogether serve as an application (and reinforcement) of the CHEG words and phrases introduced (learned) in Part 1. In addition to anatomic listing of diseases, diseases are grouped by their affected organ systems in the discussion of each anatomic chapter. Template recipes for diseases affecting individual organ systems are obtained. With the templates, the reader is able to compose CHEG recipes for other, rarer or emergent conditions.

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Sun-Chong Wang
New Taipei, Taiwan
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ACRONYMS

US FDA	The Food and Drug Administration of the United States
CHEG	concentrated herbal extract granules
ICD-9	International Statistical Classification of Diseases and Related Health Problems, 9 th revision
AI	artificial intelligence
CNN	convolutional neural network
RNN	recurrent neural network
VeNom	veterinary nomenclature

PART 1: BASICS

Chapter 1

INTRODUCTION

A narrow sense of holism is that whole body of the patient is treated, in contrast to the one-drug-one-target, reductionist approach of modern western medicine, with which most often only symptoms, but not etiology, of a disease are treated. For example, to treat acidic reflux, the modern western medical approach is to decrease acid production in the stomach whereas a holistic approach would not only reduce acidity but also prevent stomach contents from going back up to the esophagus by e.g., activating movements of the intestines. The idea and practice that an herbal recipe comprises multiple component herbs are indeed rooted in the holism. A broad sense of holism takes also into account mental, social, behavioral and life style factors of the patient to treat the disease.

Before bringing the benefits of herbal remedies to pets, some hurdles have to be overcome. The first is concerned with what drugs a veterinarian can legally prescribe to animals. In particular, can human medicine be prescribed to companion animals? The second question has to do with the availability of herbs in a dosage form which is convenient for pets and pet owners as well. The third is about how to combine individual herbs in such a convenient form into recipes for holistic care. To answer the questions, a jurisdiction has to be chosen because answers depend on the regulatory system. We chose the United States for the discussion of the concerns as it is the largest and also most developed market in the world. Answers to these questions clear the way for veterinarians and pet owners to prescribe concentrated herbal extract granules to our pets.

1.1. REGULATIONS OF ANIMAL DRUGS IN THE UNITED STATES

Pharmaceutical products, i.e., drugs, have to be approved before they are marketed by the drug company. Approval of animal drugs is governed by the Food and Drug Administration in the United States (US FDA). To get approval, the drug sponsoring

company has to provide evidence to the FDA that the drug is safe and effective for the indicated health condition in the specified animal species, both of which are part of the information, called drug label, printed on the package containing the drug. Other important information in the drug label includes dosage, route, frequency and duration of administration, contraindications and side effects. In the context of veterinary medicine, drug safety includes the following four aspects: 1) safety to the animal that receives the drug; 2) safety to the person who administers the drug to the receiving animal; 3) safety to the people who consume the food made from the animal that received the drug; and 4) safety to the environment. Effectiveness is typically shown through a difference in the drug effect, i.e., biological activity, measured between the group of animals receiving the drug and that receiving placebo, i.e., inert drug.

Science seeks truth. One of the properties of medical truth is replicability. The drug company is responsible for providing scientific evidence for the safety and effectiveness of a new drug. The US FDA receives and reviews the evidence, ensuring that the claims in the drug label proposed by the drug company are replicable. Evidence for both safety and effectiveness of a new drug is best assessed by studies called veterinary clinical trials, which have four phases. Different phases of a veterinary clinical trial have different goals and involve different numbers of animals. A phase I trial studies the safety and dosage of the drug by varying the doses of the drug to a group of about 10 healthy animals. If the result of phase I suggests that the drug is safe to check for its efficacy, then a phase II trial is launched to assess the effect of the drug, at the dosage level determined from phase I, in a group of about 30 animals with the indicated disease. If the outcome of the phase II trial is promising, a phase III trial follows to confirm by comparing the effectiveness of the new drug with that of placebo or standard treatment on a larger number of animals per group. Phases II and III differ not only in number of animals, but also in their assumptions: phase II does not assume existence of a drug effect while phase III assumes some effects. Moreover, Phase II trials are ideal in that participating animals may come from a breeding house, sharing the same environment, while phase III are realistic in the sense that participating animals come from different pet owners from different places. Participating animals are assigned into one of the two groups randomly in order to balance any unforeseen biases. If caretakers including experimenters and pet owners know the group assignment, the way of caring for the placebo group animals may differ because of empathy. To minimize such bias, caretakers should be concealed from the group assignment. Once phase III is successful, evidence is considered substantial by the FDA for the drug's approval. Phase IV, also called post-marketing surveillance, studies long-term and rare effects of the drug. Note that, throughout the phases, safety and side effects of the drug are continuously evaluated.

If a new animal drug fails at a phase, then the trial will be aborted without proceeding to the next phase unless the drug label claims are modified. Success rates go down with phases. Development of animal drugs is therefore very costly. Although development of

human drugs is not less expensive, human population outnumbers pet population, and many pet owners still place a higher priority on themselves than on their pets. As such, pharmaceutical companies put more efforts and resources on human drug developments; animal drug market size is only few percent of human drug market. Indeed, the number of approved animal drugs amounts to only less than 10% of all approved drugs. Even with the tremendously dominant efforts on human drug development, many human diseases including rare and chronic diseases have not had FDA approved drugs. The issue is even more serious and urgent for animals.

The issue is not new and the US FDA has permitted veterinarians to prescribe approved human drugs for an animal when the animal's health is threatened or the animal will suffer or even die without any treatment. Since animal is not the targeted species of a human drug, such a cross species use of drug is extra or off the label and called extra-label or off-label drug use. Before deciding to make an extra-label drug prescription, the veterinarian must have been acquainted with and examined the animal through interactions with the animal and also animal owner. The interactions among the veterinarian, animal owner and animal form the so-called veterinarian-client-patient relationship. Such a relationship, which cannot be established by telemedicine alone, ensures that continuing care and treatment of the animal is within reach without delay through, e.g., timely and regular follow-up evaluations. For food-producing animals, requirements for extra-label drug use are stricter. For example, for the treatment of sick chickens, if both drug for cows and drug for people for the condition are available, then drug for cows should be used. Furthermore, the time interval between withdrawal of the drug from the treated animals and sacrifice of them for food production has to pass a minimum, which usually ranges from a week to a month. The restrictions aim to keep drug residues from entering into the human food chain. Similar provisions of extra-label use of drugs in animals exist in the European Union and United Kingdom, where they are called veterinary cascade.

1.2. CONCENTRATED HERBAL EXTRACT GRANULES (CHEGs)

Drugs come with a variety of administration routes and dosage forms. Oral intake of tablets is convenient for the patient as well as caretaker in terms of preparation, administration, transportation and storage of the drug. In the case of drugs for pet dogs and cats, pet owners can easily slip a tablet into the bowl holding pet food. Pet dogs and cats typically devour everything in the bowl without noticing the tablet. Dosage levels vary with pet's weight. It is not uncommon to halve a tablet for small pets. The other convenient dosage form of animal drugs is powders. If a spoonful of powder weighs a gram, then dosage levels will be measured by number of spoons. Again, the pet owner simply spreads the powders over the pet food. Although powders smell stronger than a

tablet because of a larger total surface area of the powders, hungry pets cannot but eat everything up since stuffs in the bowl get mixed up. It would be wonderful if medicinal herbs come in the form of powders. Although cats are known to be pickier eaters than dogs, owners find ways to trick their pets into taking medicine.

There does exist such form of herbal remedies for human ailments. It was first introduced in Japan in the 1920s. As time goes on and technology advances, medicinal herbs are now not simply dried and ground into powders but are firstly water extracted in traditional ways, called decoction, documented in classical medical canons. Traditionally, aromatic herbs were added into decoction in the last few minutes of the decocting process so that active, volatile constituents in the aromatic herbs are not lost through evaporation. A recovery system, called essential oil recovery, is therefore invented and installed in modern manufacturing process to retain the thermally sensitive constituents. Extraction and recovery are followed by separation of dregs and concentration of the remaining extracts. The concentrated aqueous extracts are then sprayed and dried into granules. We call this powder form of herbal preparations CHEG for concentrated *herbal extract granules*. In granulation, a filling medium, called excipient, can be incorporated or not. CHEGs with excipients, which are made of hypo-allergic starch, have a slightly lower concentration but are more resistant to moisture after exposure to airs in comparison to CHEGs without excipients. The concentration of CHEGs with excipients is about 5. That is, a gram of CHEG herb is equivalent to five grams of the corresponding dry herb. Nowadays, dozens of pharmaceutical companies in the United States and east Asia manufacture CHEGs in standards conforming to the current Good Manufacturing Practice.

One of the CHEG products, code named YIV-906, has gone through series of phases I and II clinical trials in 140 human cancer patients recently. Results of the clinical trials demonstrated that YIV-906 was not toxic at the used dosage level and that it reduced such gastrointestinal side effects as diarrhea, nausea and vomiting in patients receiving chemo and/or radiation therapies (Lam et al., 2018). Despite the findings of YIV-906 clinical trials and the fact that CHEGs are granular form of herbs which have been used as medicines in the East since ancient times, CHEGs, in the United States, are marketed and sold as dietary supplements. Dietary supplements are a category of food like minerals and vitamins. They are supposed to be safe according to the usage directions on the labels. However, unlike prescription and non-prescription drugs, they are not intended to diagnose, treat, cure or prevent any disease. As such, in the dietary supplements' labeling claims are statements like 'a daily multi supports optimal health', 'calcium builds strong bones' or 'fiber maintains bowel regularity'. The first statement is called general well-being claim and the latter two structure/function claims. Again, unlike drugs, no claims about alteration of physiology by dietary supplements can be made in their product labels. Nevertheless, as dietary supplements are self-medicated, veterinarians and pet owners can administer CHEGs to pets without violating label or extra-label use of drugs in animals.

As effectiveness becomes irrelevant to the discussion of dietary supplements, the remaining concerns are safety and quality. Although most herbal medicines have clean safety histories, contamination and adulteration were recently reported (Ting et al., 2013; Coghlan et al., 2015). Legally, it is the responsibility of dietary supplement manufacturers, not the US FDA, to guarantee the safety, authenticity and quality of the content of their products. Leading CHEG manufacturers therefore have taken measures to guard their brand names. For example, CHEG manufacturers purchase their source herbal materials from growers with whom they have maintained a long term relationship. In addition to organoleptic analysis of the raw herbs and parts, identities of the herb species are verified by thin layer chromatography, which is a technique to separate nonvolatile mixtures. Next, yeast, fungi and pathogenic microorganisms including *Escherichia coli* and *Salmonella* are analyzed by microbiological testing. Pesticide and synthetic fertilizer residues are screened by gas chromatography/mass spectrometry, which is used to identify volatile organic compounds. Heavy metal contaminants including lead, arsenic, mercury and cadmium are measured by inductively coupled plasma mass spectrometry, which is known for its ability to detect metals in liquid at very low concentrations. Aristolochic acids, which are nephrotoxic, are screened by liquid chromatography/mass spectrometry, which identifies polar and high molecular weight organic compounds in the sample. Aflatoxins, which are poisonous carcinogens produced by fungi growing in warm and humid environments, are checked by high performance liquid chromatography/fluorescent detector, which is a robust and cost-effective method for mycotoxin detection. Finally, potency and batch-to-batch product consistency are quantified by high performance liquid chromatography/photodiode array, which is again a cost effective way of component quantification in a mixture. The above safety and quality control measures apply throughout the whole process of CHEG production including source material procurement, raw herb pre-processing, extraction, separation, concentration and granulation.

1.3. ART AND BIG DATA OF CHEG RECIPES

The number of commercially available CHEG herbs exceeds 400. Each CHEG herb is supposed to have its distinct benefits according to its traditional use. A step forward, toward holism, is to combine multiple CHEG herbs into a recipe for specific conditions of modern health problems. If we make a parallel between herbology and language, an herb is like a word, an herb pair is like a phrase, and an herbal recipe is like a sentence. In the first visit to an herbal clinician, he or she prescribes a recipe and also schedules a follow-up evaluation next week. In the follow-up, based on patient response, the clinician may prescribe a recipe which is identical to, modified from or completely different from the previous recipe. Along the course of the therapy, the clinician is therefore

communicating with the patient physiology in herbal language. Note that in the holistic point of view, clinicians address not only the physiology but also psychology of the patient. As the neurocognitive capacity of pets is less developed than humans, we discuss effects of herbal recipes on pathophysiology in veterinary medicine.

Canonical herbal texts are not short of functions of herbs. Rules about combining herbs into multi-herb formulas have also been developed. The problems with the former is that functions and uses of herbs are expressed in the system of ancient theories and model of human (and animal) body which are far less precise and accurate than modern anatomy and physiology. Modern diagnostics make the difference: a computed tomography scan locates the spot of clot or bleeding in the brain; a magnetic resonance imaging detects narrowed arteries to the heart; x-rays diagnose nodules in the lungs; endoscopy looks for ulcers in the stomach; ultrasounds reveal enlarged fatty livers; blood and urine tests identify abnormalities in the kidney; and so on. Functions and thus uses of herbs should preferably be annotated in terms of modern disease diagnoses, not ancient diagnoses. Concurrent systems of annotations could also be a solution, but we emphasize annotations of herbal uses using modern terms over traditional terms as biomedicine and technology have made great advances — an example is the CHEG delivery form of herbs — the discipline of herbal medicine should move forward too.

Regarding combination of herbs into multi-herb formulas, after thousands of years of development, hundreds of herbal formulas have survived the test of time and are in wide use today. We call them classical formulas, and they are also available in CHEG form in the market, the number of which is over 300. However, we opt for not using them to dogs and cats as we consider them to be too anthropocentric. That is, in the development of the classical herbal formulas, their compositions and proportions have been finely tuned and optimized for the pathophysiology of human beings, who lived in the pre-modern societies of the ancient times. So, the job is to combine herbs from scratch into recipes, not from combining formulas and herbs into recipes. The task is simpler as the repertoire size is only 400 CHEG herbs, instead of the 400 CHEG herbs plus 300 CHEG formulas.

The ways of combining CHEG herbs into CHEG recipes can be learned from the ancient ways of combining herbs into formulas. Ancient wisdom provides us with hints but we should not copy it without precautions because selected herbs were cooked together to make decoctions whereas CHEG herbs were separately cooked already and are then brought together to make granule recipes. Two herbs cooked together may generate new ingredients which are not present otherwise. It is possible that the newly generated ingredients confer the synergistic effect of mixed herbs. The reactions that lead to new ingredients could also be responsible for reduced toxicity of the combination. Possibilities abound. Granule herb A plus granule herb B may thus give different clinical outcome from the A-B mixture herbal decoction due to the different chemistries between the two preparation processes. This is why herbalists trained in traditional systems should be cautious when they are to make CHEG recipes. A minor, technical issue further

complicates the business. CHEG herbs come in different concentrations depending on how difficult the crude herbs can be concentrated in the standard CHEG manufacturing. So, when classical medical texts prescribe 20 grams of dry herb A plus 15 grams of dry herb B, the grams in CHEG herbs have to be recalculated.

It sounds that CHEG adopters are sailing into an uncharted territory. Fortunately, herbal clinicians in Taiwan have gained extensive experiences of CHEG prescribing for over two decades as CHEGs are the only form of herbal prescriptions that are reimbursed by the national health insurance program in Taiwan since 1995. To get insurance reimbursement, an herbal clinician submits records of diagnosed conditions of the patient together with the corresponding CHEG prescriptions to the insurance agency. In the record, the diagnoses, which were typically made by western medicine trained physicians who referred the patient to the herbal clinician, are in modern terms, i.e., the International Statistical Classification of Diseases and Related Health Problems, 9th revision (ICD-9), published by the World Health Organization. Even without a referral, the herbal clinician knows the patient's latest western medical diagnoses from the health insurance card of the patient which holds, in the cloud, the recent diagnoses and prescriptions of the patient. The cloud medical information system is designed to avoid wastes due to redundant prescriptions. The reimbursement records therefore represent collaboration between western medical doctors and traditional herbal clinicians. Another feature of the healthcare system in Taiwan is that the insurance program covers all residents in Taiwan; the collection of reimbursement claims thus represents the whole population, not a particular subgroup within the population as for data from the insurance systems of other countries. The book is based on results of analysis of the (human) insurance reimbursement claims involving CHEG herbs recorded between 2004 and 2013 from the National Health Insurance Database of Taiwan.

1.4. COMPOSING CHEG RECIPES BY DEEP LEARNING

In the database, there are a total of seven million records with prescriptions which involve only CHEG herbs. A straightforward descriptive statistical analysis of the data shows that the number of different CHEG herbs used in the 10 years is 395. A prescription is found to consist of an average of seven to eight CHEG herbs. Furthermore, the number of different health conditions in the seven million insurance claims is 5994. A patient could be diagnosed to have up to three different health conditions in a claim. The number of ways of choosing seven herbs out of the repertoire of 395 herbs is astronomical, so is the number of possible distinct disease combinations of a patient. Conventional statistical and machine learning methods cannot help us answer questions one may ask. For example, a patient with primary condition A and secondary condition B comes to you for help, what if the combination of conditions does not exist in the seven

million insurance records? The other way around is that I am prescribed a multiple of herbs with a specified weight ratio. If such a combination of herbs and proportion is absent in the dataset, how do I know what condition the prescription is for?

The method of deep learning comes to the rescue. Deep learning is just a fancy name for artificial intelligence (AI), which was first coined more than sixty years ago. Learning is emphasized here as the so-called intelligence results from learning. The fodder to learning is data. In the information era, data are such a strategical material as petroleum in the industrial age. We need data to run our deep learning algorithms just like we need fuels and electricity to move our mechanicals and machines. In order for the learned algorithm to be intelligent, the data should be of vast quantity and of high quality. The requirement of a large volume of data, called big data, typically necessitates the data to come from diverse sources. For example, if the AI system under development is to successfully identify cats in a collection of photos containing animals, then the cats in the learning set of photos should be of different breeds, colors, ages, gestures, positions, orientations and sizes in the photos. The backgrounds of the photos should also preferably be varied. Such a collection of data most likely comes from different sources, e.g., cat owners. Upon learning, the system is able to identify cat images which are not present in the learning dataset. Namely, the system is intelligent enough to recognize cats the system has never seen before. The inferential capability of deep learning contrasts sharply to that of the conventional methods, whose inference accuracies are much poorer. The gap between is like professionals versus amateurs. The quality of the data in the learning dataset should be high. For example, if lions are mislabeled as cats in the learning dataset, then the system after learning will mistake lions for cats. The quantity, diversity and quality requirements are all met by our disease-CHEG dataset from the National Health Insurance Database: data came from the population; prescriptions were made by the total of five thousand Chinese herbal clinicians; diagnoses were made by them or their western medical peers; and all the clinicians were well-trained and licensed.

The superior inference of deep learning is attributed to the mathematical models, called artificial neural networks, the deep learning method uses. Imagine that given value of height, we want to infer the sex of a person. The task is easily done using a mathematical function called logistic function which takes real values as input and returns a binary number such as 0 and 1. In prediction by the logistic function, a cutoff height is first found and heights below (or above) the cutoff are returned 0 (1). With only one feature of the person, the prediction accuracy will be low. For example, men can be short and some women are tall. So, let's increase the input features to also include hair length and occupation. Again, in prediction, a boundary surface, in the three-dimensional height versus length versus occupation space, is first found and any points on one side (or the other) of the boundary surface will be returned 0 (1). Prediction accuracy increases with the number of input variables. However, a limit was soon reached, crippling advances of machine learning for three decades. The key to break the limit is that the

artificial neural network models in deep learning can approximate arbitrary nonlinear functions, constructing boundary surfaces of arbitrary shape and even with disjoint enclosures in the input variable space to capture instances such as male artists wearing long hairs.

It is the interactions of the features that determine the classes of the images. The other reason conventional machine learning methods failed is that the necessary features and their combinations were handcrafted by experts. As the number of features increased, their possible combinations exploded and even experts could miss some of the essential interactions. Moreover, experts could manually define the slit-shaped pupil of the feline to identify cats. What if the eyes do not appear in the center of the photo? What if the eyes are half closed? What if there are more than one cats in the photo? Even with a single and simple defining feature, its possible variations in reality are enormous. If we request the cat be in the center of the photo, the AI system is not practical, let alone intelligent. All the difficulties are overcome by the deep learning method, which learns the features and their interactions from scratch from the data. The requisite of big data of high quality can again not be overemphasized.

Among the suite of artificial neural network models, we chose convolutional neural networks (CNN) for image classification, which is one of the most mature applications in the current wave of AI advances (LeCun et al., 2015). To apply CNN to our data, we converted a CHEG prescription into an image, where pixel i with intensity j indicates CHEG herb i with a dose of j grams, and so on. The image is mapped to class k just like the prescription was prescribed to a patient with disease k . i ranges from 1 to 395. j is normalized weight ranging from 0 to 1 with 1 is the maximum dosage per serve of the CHEG herb set by the manufacturer (typically 5 grams/serve), and k ranges from 1 to 5994. Note that an image has many illuminating pixels with different brightness just like a recipe contains a multiple of herbs with different weights. Before learning, we balanced the classes so that the numbers of recipes for different diseases were roughly equal, the rationale being that the CNN model would not spend most of its resources in learning common diseases at the expense of less common diseases. Finally, learning proceeds as an ordinary multi-task CNN image classification does (Wang, 2017). Multi-task here means that we mapped a recipe to not only diseases, but also to other clinical information including age and sex of the patient and month of the prescription, and so on. Table 3.2 of Chapter 3, which annotates clinical uses of CHEG herbs, is based on such application of CNN deep learning on the seven million health insurance records.

The other full-fledged deep learning method applies to language translation, which is a central topic in the discipline of natural language processing. Like CNN, as the artificial neural networks suitable for sequence data, called recurrent neural networks (RNN), progressed, the quality of language translation underwent a quantum jump, which is evidenced by the growing popularity of Google Translate. To take advantage of the RNN development, we tokenized our seven million pairs of disease diagnoses and CHEG

recipes, and employed the neural machine translation method (Luong et al., 2017) which, developed by Google, underlies Google Translate. Specifically, patient phenotype including disease diagnoses was considered as a sentence in source language and the associated CHEG prescription consisting of multiple CHEG herbs as a sentence in target language. Seven million source-target sentence pairs derived from the insurance dataset were then trained by the neural machine translation method. Tables in Parts 2 and 3 of the book, which list CHEG prescriptions given human equivalent diseases of the pet diseases of our interest, are based on results of state of the art neural machine translation (Wang, 2017). Section 3.1 of Chapter 3 addresses the issue of CHEG dose extrapolation from humans to pets.

We also cross examined the results from the two independent deep learning methods (i.e., image classification with CNN and neural machine translation with RNN). Convergence between the two results should be expected, which is indeed the case as we will see in our discussions following the tables in Parts 2 and 3 of the book.

1.5. DRUG-HERB CONTRAINDICATIONS

In new drug development, a new drug goes through successive phases of clinical trials. Results of safety and effectiveness apply to the individual drugs that have gone through the trials. Therefore, if we combine two or more drugs, called cocktail, the safety and effectiveness of the cocktail are supposed to be unknown, and separate clinical trials are required by the US FDA to approve the cocktail's use. This is because of drug-drug interactions taking place in the body which may produce toxic substances and cause damage to the patient. Similar precautions can be made to drug-herb interactions where concurrent use of drug and herbs may elicit unwanted patient responses.

Although systematic, large-scale and persistent vigilance programs of adverse drug-herb interactions are lacking, general rules about drug-herb contraindications can be drawn from the physicochemical, pharmacokinetic and pharmacodynamic principles underlying the interacting drug and herb. Specifically, acidic drugs do not combine with basic herbs, and vice versa. For example, acidic drugs such as aspirin and pepsin do not combine with basic herbs such as *bèimǔ* and *hǎipiāoxiāo*. Basic drugs such as aluminium hydroxide, aminophylline, sodium bicarbonate and sodium lactate do not mix with acidic herbs such as *shānzhā*, *shānzhūyú*, *wū méi* and *wǔwèizǐ*. Antibiotic quinolone and tetracycline are not to be used together with metal-ion (e.g., calcium, magnesium, iron) containing medicinals such as *hǎipiāoxiāo*, *lónggǔ*, *mǔlì*, *shígāo* and *shí juémíng* because the formed chelates interfere with absorption by the gastrointestinal tract. Neither are metal-ion containing drugs such as aluminium hydroxide and ferrous sulfate used with

Table 1.1. Drug-herb interactions

Drug class	Drug name	Beneficial drug-herb pair	Forbidden drug-herb pair	Warnings about the drug
Antimicrobial	Penicillin	cìwǔjiǎ, jīnyínhuā, liánqiáo	bīngláng, cāngěr zǐ, dàhuáng, dì gǔ pí, huáng qín, huánglián, kǔshēn, zhīshí	could cause anaphylaxis in pets
	Ampicillin	shānzhā		could cause immune reactions
	Streptomycin	báijiāngcán, báitóuwēng, chuānxiōng, gāncáo, gǔ suì bù, huángjīng, jī xuè téng, ròuguì	báisháo, huǒ má rén, nǚzhēn zǐ, sānqī, shānzhūyú, táorén, wū yào, yán hú suǒ	toxic to cats' and dogs' ears
	Gentamycin	cháihú, fāng jǐ, hòupò, jīnqián cǎo, mùxiāng, ròuguì, xiāng fù, yù jīn, zhīshí	báimáo gēn, báisháo, bǎnlángēn, chántuì, chuān xīn lián, dà qīng yè, dàxiǎo jì, dàn zhú yè, hé yè, huǒ má rén, jīnyínhuā, liánqiáo, lónggǔ, lú gēn, mǔdānpí, mǔlì, niúxī, nǚzhēn zǐ, púgōngyīng, qiànshí, sānqī, sāng piāoxiǎo, sāng yè, shānzhā, shānzhūyú, shígāo, táorén, wū méi, wū yào, yán hú suǒ, zīhuādidīng	toxic to animals' kidneys and cats' and dogs' and ears
	Kanamycin		báisháo, dàn zhú yè, huǒ má rén, nǚzhēn zǐ, sānqī, shānzhūyú, táorén, wū yào, yán hú suǒ	toxic to cats' and dogs' ears
	Oxytetracycline	cháihú, gāncáo, gégēn, huángbò, huánglián, rénshēn	hǔ zhàng, shānzhā, wū méi	could cause adverse reactions in animals' gastrointestinal
	Tetracycline	huánglián	cǎoguǒ, cè bó yè, chántuì, chì sháo, jīnèijīn, láifúzi, lónggǔ, màiyá, mǔlì, qiànshí, sāng piāoxiǎo, shén qū, shēng má, shí juémíng, shígāo, shíliú pí, xiānhè cǎo, zhīzǐ	toxic to livers; could cause adverse reactions in animals' gastrointestinal
	Florfenicol		chì sháo, dàhuáng, dì yú, hē zǐ, shēng má, shíliú pí, zhīzǐ	toxic to fetus; not to be used in food producing animals
	Erythromycin		báisháo, bǎnlángēn, cè bó yè, chántuì, chénpí, chì sháo, chuān xīn lián, chuānxiōng, dà qīng yè, dàhuáng, dàn zhú yè, dì yú, hē zǐ, jīnèijīn, láifúzi, màiyá, nǚzhēn zǐ, qiānlǐ guāng, qiānniú zǐ, qīng pí, shānzhā, shānzhūyú, shén qū, shēng má, shēngjiāng, shíliú pí, wū méi, wū bèi zǐ, wǔwèizi, xiānhè cǎo, zhīzǐ, zhīshí, zīhuādidīng	may cause adverse effects in the gastrointestinal of dogs and cats if taken orally
	Spiramycin	huánglián	chuān xīn lián, dàn zhú yè	
	Lincomycin		cè bó yè, dàhuáng, shíliú pí, wū bèi zǐ, xiānhè cǎo	could cause adverse gastrointestinal reactions in cats and dogs if taken orally; not to be used in animals with kidney and liver problems
	Sulfadiazine		báimáo gēn, báisháo, bǎnlángēn, cāngěr zǐ, chénpí, chì sháo, chuānxiōng, dà qīng yè, dàhuáng, dàn zhú yè, dì gǔ pí, dì yú, fān xiè yè, hē zǐ, hé yè, hǔ zhàng, jīnèijīn, jīnyínhuā, liánqiáo, lú gēn, màiyá, mǔdānpí, niúxī, nǚzhēn zǐ, púgōngyīng, qīng pí, sāng yè, shānzhā, shānzhūyú, shén qū, shēng má, shíliú pí, wū méi, wū bèi zǐ, wǔwèizi, zhīzǐ, zhīshí, zīhuādidīng	could cause crystallization in the urethra

Table 1.1. (Continued)

Drug class	Drug name	Beneficial drug-herb pair	Forbidden drug-herb pair	Warnings about the drug
	Trimethoprim	(báitóuwēng, xiānhè cǎo, mǎchǐxiàn), (dì yú, qín pí, shānzhā), (kùshēn, huángbò, gāncǎo, xiānhè cǎo), (púgōngyīng, nǚzhēn zǐ), (rěndōng téng, huáng qín, huángbò, guàn zhòng, hàn lián cǎo), qīng hǎo	yúxīngcǎo	not to be used in pregnant animals and animals with kidney and liver problems
	Norfloxacin		huángbò, lónggǔ, mǔlǐ, nǚzhēn zǐ, qiānshí, sāng piāoxiǎo, shānzhūyú, shígāo	could cause blindness in cats; not to be used in dogs younger than 8 weeks old
	Furazolidone		biǎndòu, chénpí, máhuáng, qīng pí, zhīshí	not to be used in young animals and animals with liver problems
	Nitrofurantoin	chì sháo, gāncǎo, shānzhā	báimáo gēn, báisháo, bǎnlángēn, dà qīng yè, dàxiǎo jì, dānshēn, dàn zhú yè, hé yè, jīnyínhuā, liánqiáo, lú gēn, mǔdānpí, niúxī, nǚzhēn zǐ, púgōngyīng, sāng yè, shānzhūyú, zīhuādidīng	could cause gastrointestinal and liver disorders in cats and dogs; not to be used in young and pregnant animals and animals with kidney problems
	Berberine hydrochloride		huáshí	not to be used in pregnant animals
	Urotropine	jīnqián cǎo		not to be used in dehydrated animals and animals with kidney and liver problems
Antiparasitic	Dipterex		bīngláng, shēng má	not to be used in weak and pregnant animals
	Niclosamide	bīngláng		
	Metronidazole	(báisháo, zhì gāncǎo), bòhé		not to be used in food producing animals
Central nervous system stimulant	Caffeine	dī lóng, sāng jīshēng, yùnmí xǔ	báimáo gēn, bǎnlángēn, bèimǔ, dà qīng yè, dàhuáng, gōu téng, hé yè, hú huánglián, jīnyínhuā, liánqiáo, lóngdǎn cǎo, lú gēn, mǔdānpí, niúxī, púgōngyīng, qín pí, sāng yè, shān dòu gēn, yán hú suǒ, zīhuādidīng	not to be used in pregnant animals
Sedative and anticonvulsant	Chlorpromazine		chántuì, dīngxiāng, shēng má, yán hú suǒ, zhīzǐ	may cause arrhythmia and shaking in cats and dogs
	Chloral hydrate		xìxīn	
	Magnesium sulfate	dàhuáng	cháihú, chántuì, dàxiǎo jì, gāoliángjiāng, hé yè, hónghuā, hú huánglián, huái huā, liánqiáo, lóngdǎn cǎo, pú huáng, qín pí, sānqī, sāng yè, shān dòu gēn, shānzhā, wú líng zhī, yúxīngcǎo	not to be used in animals with severe cardiovascular, respiratory and renal problems
	Phenobarbital		dīngxiāng	not to be used in animals with kidney and liver problems

Drug class	Drug name	Beneficial drug-herb pair	Forbidden drug-herb pair	Warnings about the drug
Antipyretic, analgesic and anti-inflammatory	Aspirin	dàhuáng	báimáo gēn, báisháo, bǎnlángēn, dà qīng yè, dàxiǎo jì, dàn zhú yè, guizhī, hé yè, jīnyínhuā, liánqiáo, lú gēn, mǔdānpí, niúxī, nǚzhēn zǐ, púgōngyīng, sāng yè, shānzhūyú, wú yào, zīhuādidīng	toxic to cats; not to be used in pregnant animals and animals with kidney problems
	Analgin	(jīnyínhuā, huáng qín)		may cause bleeding
	Aminophenazone		chì shǎo, dàhuáng, shēng má, zhīzǐ	not to be used in cats; not to be used in young animals and animals with liver and kidney problems
	Phenylbutazone		gāncǎo	not to be used in animals with bone marrow, blood, kidney or abdominal problems; not to be used in food producing animals
	Indomethacin		báimáo gēn, báisháo, bǎnlángēn, dà qīng yè, dàxiǎo jì, dàn zhú yè, hé yè, jīnyínhuā, liánqiáo, lú gēn, mǔdānpí, niúxī, nǚzhēn zǐ, púgōngyīng, sāng yè, shānzhūyú, zīhuādidīng	may cause gastrointestinal problems in cats and dogs; may cause damage to liver and hematopoiesis; not to be used in animals with kidney problems and gastric ulcer
	Morphine		rénshēn, xixīn	may cause overreactions in cats; not to be used in animals with digestive, liver and kidney problems; may cause addiction
	Procaine		xìngrén	not for dogs and cats epidural and intraspinal anesthesia
Anticholinergic	Atropine		bèimǔ, cè bó yè, chántuì, dàhuáng, dīngxiāng, gāncǎo, hú huánglián, lóngdǎn cǎo, mài mén dōng, pú huáng, qín pí, shān dòu gēn, tiānméndōng, xiānhè cǎo, yīmùcǎo	
	Scopolamine		báimáo gēn, bǎnlángēn, chántuì, dà qīng yè, hé yè, jīnyínhuā, liánqiáo, lú gēn, mǔdānpí, niúxī, púgōngyīng, sāng yè, zīhuādidīng	
Adrenergic	Adrenaline	shān dòu gēn	gāncǎo, wú zhūyú, yīmùcǎo	may cause arrhythmia
	Isoprenaline		gāncǎo, yīmùcǎo	
	Noradrenaline		gāncǎo, wú zhūyú	
Blood and circulatory	Digitoxin		cè bó yè, chántuì, chénpí, chì shǎo, dàhuáng, fūzǐ, gāncǎo, huángbò, huánglián, kùshēn, mài mén dōng, qīng hǎo, qīng pí, rénshēn, shēng má, shígāo, tiānméndōng, xiānhè cǎo, zhīzǐ, zhīshí	
	Digoxin		bèimǔ, cè bó yè, chántuì, chì shǎo, fūzǐ, gāncǎo, hú huánglián, huángbò, huánglián, kùshēn, mài mén dōng, mùxiāng, qín pí, rénshēn, shārcén, shān dòu gēn, shēng má, shígāo, tiānméndōng, xiānhè cǎo, zhīzǐ	

Table 1.1. (Continued)

Drug class	Drug name	Beneficial drug-herb pair	Forbidden drug-herb pair	Warnings about the drug
	Ferrous sulfate		báitóuwēng, bèimǔ, cāngěr zǐ, cè bó yè, cháihú, chì sháo, dì gǔ pí, gégēn, hú huánglián, jīngjié, lóngdǎn cǎo, qín pí, sānqī, shān dòu gēn, xià kǔcǎo, xiānhè cǎo, xiāng fù, xiāng rú, xuánshēn, yù jīn, zīhuādidīng	not to be used in animals with digestive tract ulcers
	Ferrous gluconate		cè bó yè, shēng má, xiānhè cǎo	
	Ferrous fumarate		cè bó yè, chì sháo, shēng má, xiānhè cǎo, zhīzǐ	
	Sodium bicarbonate	dàhuáng, gāoliángjiāng	báimáo gēn, bǎnlángēn, bèimǔ, cāngěr zǐ, cè bó yè, dà qīng yè, dì gǔ pí, fān xiè yè, hé yè, hú huánglián, jīnyínhuā, liánqiáo, lóngdǎn cǎo, lú gēn, mài yá, mǔdānpí, niúxī, púgōngyīng, qín pí, sānqī, sāng yè, shān dòu gēn, shén qū, shēng má, xiānhè cǎo, zhīzǐ, zhīshí, zīhuādidīng	
Respiratory	Codeine		cè bó yè, rénshēn, xiānhè cǎo, yù lí rén	not to be used in animals with phlegm
	Aminophylline		báimáo gēn, báisháo, bǎnlángēn, bèimǔ, dà qīng yè, dàsuàn, dàn zhú yè, fān xiè yè, hé yè, hú huánglián, jīnyínhuā, liánqiáo, lóngdǎn cǎo, lú gēn, mǔdānpí, niúxī, nǚzhēn zǐ, púgōngyīng, qín pí, sāng yè, shān dòu gēn, shānzhūyú, zīhuādidīng	not to be used in animals with heart and liver problems
Digestive	Dilute hydrochloric acid		cháihú	
	Pepsin		báitóuwēng, bèimǔ, cāngěr zǐ, cè bó yè, cháihú, chì sháo, dì gǔ pí, hú huánglián, huángbò, huánglián, kǔshēn, lóngdǎn cǎo, qín pí, rénshēn, shān dòu gēn, shēng má, shí juémíng, wū yào, xiānhè cǎo, zhīzǐ	
	Lactasin		báitóuwēng, bèimǔ, cāngěr zǐ, cè bó yè, chì sháo, dì gǔ pí, hú huánglián, huángbò, huánglián, kǔshēn, liánqiáo, lóngdǎn cǎo, qín pí, rénshēn, shān dòu gēn, shēng má, shí juémíng, xiānhè cǎo, zhīmǔ	
	Pancreatin		báitóuwēng, bèimǔ, cè bó yè, chì sháo, dì gǔ pí, hú huánglián, huángbò, huánglián, kǔshēn, lóngdǎn cǎo, qín pí, rénshēn, shān dòu gēn, shēng má, shí juémíng, xiānhè cǎo, zhīzǐ	
	Sodium sulfate	dàhuáng		
	Cimetidine		chántuì	
	Aluminium hydroxide		báimáo gēn, báisháo, bǎnlángēn, bèimǔ, cháihú, chénpí, dà qīng yè, dàxiǎo jì, dānshēn, dàn zhú yè, fān xiè yè, gāoliángjiāng, gégēn, hé yè, hónghuā, hú huánglián, huái huā, jīnyínhuā, jīngjié, liánqiáo, lóngdǎn cǎo, lú gēn, mǔdānpí, niúxī, pú huáng, púgōngyīng, qín pí, sānqī, sāng yè, shān dòu gēn, shānzhā, wú líng zhī, xià kǔcǎo, xiāng fù, xiāng rú, xuánshēn, xuèjié, yúxīngcǎo, yù jīn, zhīshí, zīhuādidīng	

Drug class	Drug name	Beneficial drug-herb pair	Forbidden drug-herb pair	Warnings about the drug
Reproductive	Hydrochloro-thiazide		gāncǎo, mài mén dòng, tiānméndōng	
	Spironolactone		qīng hǎo	
	Pituitrin	nǚzhēn zǐ, sānqī, tiānhuā	dùzhòng	could cause allergic reactions
	Methyltesto-sterone		dānshēn	
	Progesterone		jiānghuáng, yù jīn	not to be used in animals with heart, liver or kidney conditions
Antiallergic	Diphenhy-dramine		gǒuqǐzǐ, máhuáng, yīn chén	
Adreno-corticotropic hormone	Prednisolone		bīngláng, chántuì, shí juémíng	
Vitamins	Vitamin E		cǎoguǒ, shí juémíng	
	Vitamin C		chǎihú, huáng qín, lóngdǎn cǎo, rénshēn	not to be used in animals with kidney stones and gout
	Vitamin B1		cè bó yè, dānshēn, shēng má, xiānhè cǎo	
	Vitamin B2		dàhuáng	
	Vitamin B6		cè bó yè, dānshēn, shēng má, xiānhè cǎo	
	Vitamin B12		mùxiāng, shā rén	
	Nicotinic acid		chǎihú, dàhuáng, huáng qín, lóngdǎn cǎo, rénshēn	
Trace elements	Calcium chloride		cāngěr zǐ, dì gǔ pí	
	Calcium gluconate		chì sháo, shēng má, zhǐzǐ	

flavonoid-rich herbs such as xuánshēn and zǐhuādidīng. Multienzyme tablets such as pepsin and pancreatin are not used with tannin-rich herbs such as shíliú pí and wǔ bèi zǐ. Probiotics such as lactasin and prebiotics do not combine with counteracting, antibiotic herbs such as huáng qín, jīnyínhuā, liánqiáo and yúxīngcǎo. Cardiac glycosides do not combine with màntuólúó huā which, containing belladonna alkaloids, decreases the gastrointestinal mobility and thus increases toxicity of cardiac glycosides. Sulfonamides such as sulfadiazine do not mix with acidic herbs such as púgōngyīng, shānzhā, wū méi and wǔwèizǐ for fear that crystallization of sulfonamides in urine blocks the urethra.

As there are unwanted drug-herb interactions, there are also found synergistic effects from combining some drugs with herbs. Synergies include strengthening and/or widening of drug actions. If the therapeutic effect of a drug is enhanced by addition of an herb(s), the dose of the drug can be lowered, reducing side effects of the drug. However, such use of synergy is possible only for a clinician who is taking care of the patient and knows both western and herbal medicines well. In reality, pet patient is likely taken care of by western and herbal medicines separately and pet owner does not know what is already prescribed to the pet. For example, if a purgative drug is already taken, a concurrent purgative herb can cause severe dehydration of the pet. Such form of synergy should therefore be avoided. On the other hand, if the indicated conditions of the drug-herb combination exceed that of the drug alone, the combination addresses comorbidities of the patient, lowering patient's dependence on drugs. Such form of synergy is beneficial. In the following table, we show drugs and their beneficial and forbidden combinations (Yu, 2014). In Table 1.1, penicillin can be paired with cǐwǔjiā and should not be paired with bīngláng, ..., and so on. Note that the table is by no means complete. A recommended practice is therefore that an herbal therapeutic course starts after the western one finishes. Namely, western and herbal veterinary therapies alternate, not concur.

Chapter 2

TRADITIONAL THERAPEUTIC CLASSIFICATION OF HERBS

In modern western medicine, drugs are categorized based on their chemical structures, biological targets, anatomical or functional changes they induce, or the diseases they treat. In the case of herbs, the first two ways of categorization are out of the question as an herb can consist of thousands of ingredients, not a single compound.

In traditional herbal medicine, herbs have also been categorized. The classification was however based on the anatomical or functional changes, i.e., mode of action, an herb induces. Although the knowledge of traditional herbal practitioners about the anatomy and physiology of patients is less precise, the actions of the herbs they described and categorized in traditional medical texts are easy for anyone to understand. For example, herbs that induce perspiration, herbs that clear heat, herbs that arrest bleeding, herbs that constrict soft tissues, and so on. However, the traditional classification is not without questions. Naming of herb classes is in particular problematic as many of the class names have very similar meanings. For example, herbs that help water flow and soak up dampness and herbs that transform dampness both mean to drain excessive water in the body. A solution to the problem is to add annotations to the class names as to which part(s) of the body the herbs mainly act on.

In addition to annotating classes, we rank classes according to how often the herbs in the class were used in clinical practices. This is done in the following way. We ranked each CHEG herb first by the number of times it was prescribed in the insurance dataset introduced last chapter. The median of the ranks of the herbs belonging to a class was then obtained, giving the class rank. Classes were then ordered by the class ranks. The Herb usage column of Table 2.1 shows such ranking. The last column will become clear in the end of the next chapter.

Table 2.1. Traditional classification of herb actions

Rank	Number of herbs	Herb usage	Disease specificity
1	Exterior-dampness removing	Hematinic	Cough and asthma relieving
2	Diaphoretic	Blood-heat clearing	Digestion helping
3	Respiratory-heat clearing	Qi tonifying	Tranquilizing
4	Circulation activating and blood stasis relieving	Diaphoretic	Hematinic
5	Expectorant	Interior warming	Blood-heat clearing
6	Hemostatic	Yin nourishing	Laxative
7	Qi regulating	Tranquilizing	Hemostatic
8	Astringing	Circulation activating and blood stasis relieving	Rheumatism dispelling
9	Yin nourishing	Yang tonifying	Diaphoretic
10	Rheumatism dispelling	Endopathic wind calming	Yang tonifying
11	Musculoskeletal-heat clearing	Qi regulating	Expectorant
12	Skin-damp-heat clearing	Cough and asthma relieving	Musculoskeletal-heat clearing
13	Yang tonifying	Musculoskeletal-heat clearing	Endopathic wind calming
14	Qi tonifying	Interior-dampness removing	Yin nourishing
15	Endopathic wind calming	Digestion helping	Qi regulating
16	Cough and asthma relieving	Rheumatism dispelling	Circulation activating and blood stasis relieving
17	Digestion helping	Deficient-heat clearing	Skin-damp-heat clearing
18	Tranquilizing	Hemostatic	Interior warming
19	Interior warming	Expectorant	Astringing
20	Interior-dampness removing	Astringing	Qi tonifying
21	Blood-heat clearing	Laxative	Respiratory-heat clearing
22	Laxative	Exterior-dampness removing	Exterior-dampness removing
23	Deficient-heat clearing	Skin-damp-heat clearing	Interior-dampness removing
24	Anthelmintic	Respiratory-heat clearing	Anthelmintic
25	Hematinic	Anthelmintic	Deficient-heat clearing

2.1. EXTERIOR-DAMPNESS REMOVING

More than 20 classes of herbs in terms of their therapeutic actions have been summarized in traditional Chinese medicine and traditional Chinese veterinary medicine textbooks (Xie and Preast, 2010; Chen et al., 2012; Yu, 2014). As to CHEG herbs, we have collated a sum of 25 classes, shown in Table 2.1 above. We will discuss them one by one in the order of the size of each class. That is, we begin with the class which contains the largest number of herbs in the CHEG form. Note that largest class size does not mean herbs in the class are in widest usage. There are so many herbs in the class simply means that so many herbs produce this therapeutic effect. In the third column of Table 2.1, we rank classes according to their frequencies of use. A second reminder is that it is possible an herb confers multiple therapeutic effects. In other words, an herb can in principle belong to several classes. The classification in this chapter shows an herb's primary class.

The name of the first class is, if we translate it literally, ‘helping water flow and soaking up dampness’. The class consists of 40 CHEG herbs. We see here that although the name involves water its specific effects and target organs or systems of the body are unclear. In fact, we have four classes, among the 25, whose names in the original language involve water: ‘stopping wind and eliminating dampness’ of the 10th class, ‘clearing heat and drying dampness’ of the 12th class and ‘transforming dampness’ of the 20th class. If we adopt names in the original language, we may get lost soon. If we use the models and theories of the traditional medicine to explain the classification, we are not better off either since many of the theories, e.g., the five viscera, and models, e.g., meridians, in the traditional medicine (Tang, 2005; Wang, 2013) are either a simplification of or not in line with those of the modern western medicine, which most of the readers were trained in. However, the idea of traditional herbal medicines which emphasizes balances within the patient is what patients are attracted to. To compromise, we will derive a new name for each class based on what diagnoses, in terms of the ICD-9 diseases, the CHEG herbs in the class were intended to treat. The mapping from CHEG herbs to ICD-9 diseases is by the CNN deep learning method and the health insurance reimbursement dataset of the previous chapter. We will elaborate on the mapping again in the next chapter. Let’s take it for granted for the time being.

As the class contains 40 herbs, if an herb treats a disease, there will be 40 diseases in the class. Since the 40 herbs belong to the same class, it is not surprising that some of the treated diseases overlap. Namely, the number of distinct diseases in a class is less than the number of member herbs. The more salient of the overlapping, the clearer it is that the overlapping diseases are treated by the herbs in the class. That is, by the degree of overlapping, we identify the major diseases the herbs in the class are intended to treat. If we turn the overlapping degree into a graphical form, it is called wordcloud in the field of text mining. In the following series of plots from Figures 2.1 to 2.25, we show results of such kind of data summarization and presentation analysis.

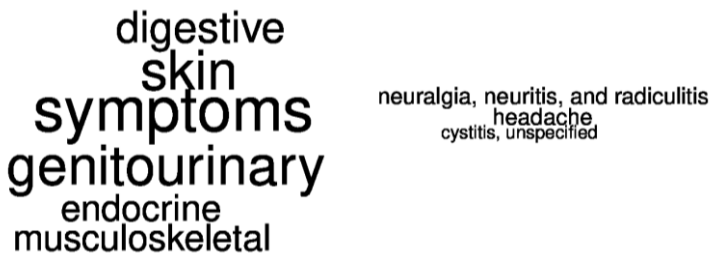


Figure 2.1. Indications of the herbs that ‘help water flow and soak up dampness’.

In Figure 2.1 is shown the intended disease groups of the first CHEG class. There are 5994 distinct diseases for a CHEG herb to map to. But there are only 18 groups of diseases according to ICD-9. So, if we use disease groups instead of diseases, the

overlapping can be more salient. On the left-hand side of Figure 2.1 shows such disease group wordcloud. It is seen that the top three ICD-9 disease groups are Symptoms, signs, and ill-defined conditions, Diseases of the skin and subcutaneous tissue, and Diseases of the genitourinary system. As symptoms can originate from a wide range of anatomical locations of the body, we show in the right half of the plot the details of the affected parts of the body the CHEG herbs are intended to treat. The resolution reveals headache, neuralgia, neuritis, and radiculitis as the top symptoms targeted by the herbs in the class. Similarly, as the genitourinary system comprises the reproductive and urinary systems, we resolve the genitourinary system diseases the CHEG herbs are intended to treat in the right of Figure 2.1. The result indicates that cystitis is the troubling condition within the genitourinary system the herbs in the class are intended to mitigate. If we resolve disease groups group by group, we find the leading condition in the diseases of the skin and subcutaneous tissue to be contact dermatitis and other eczema, unspecified cause. The emerging picture looks that the conditions treated by the herbs in the class involve excessive dampness in the exterior parts of the body. Combining the findings and the traditional name of the class, we call the herbs in the class exterior-dampness removing.

2.2. DIAPHORETIC



Figure 2.2. Indications of the herbs that ‘resolve the surface’.

The second class, containing 33 CHEG herbs, is called diaphoretic as the herbal effect is to help excretion of bodily fluid by exerting the sweat glands and opening the pores on the surface of the body according to traditional texts. The name in the original language is translated into ‘resolving the surface’ and they are intended to treat diseases caused by exogenous pathogens according to the traditional texts. We apply the wordcloud technique in order to know better about the class. The result shown in Figure 2.2 indicates that the herbs in the class treat Diseases of the respiratory system and Symptoms, signs and ill-defined conditions, whose detailed symptoms include headache, cough and neuropathies. It becomes clear that the herbs are primarily for respiratory diseases and infections including allergic rhinitis.

2.3. RESPIRATORY-HEAT CLEARING

The third class includes 32 CHEG herbs and literally translates to ‘clearing heat and detoxifying’. From the traditional name of the class, it sounds to be antipyretic but it is not clear what causes the inflammation or which inflamed parts of the body the herbs are treating. Let’s look at the wordcloud annotation using modern disease diagnoses in Figure 2.3, which shows Diseases of the respiratory system as the leading group of diseases treated by the herbs in this class. Furthermore, the leading symptoms on the right of Figure 2.3 identify cough, which is a major respiratory disease symptom. The secondary symptom is chronic rhinitis. It becomes clear that the cause of the heat or fever the herbs in the class try to clear is infection of the upper respiratory tract. We therefore name the class respiratory-heat clearing.



Figure 2.3. Indications of the herbs that ‘clear heat and detoxify’.

2.4. CIRCULATION ACTIVATING AND BLOOD-STASIS RELIEVING

The fourth class has 28 CHEG herbs with a traditional name translated directly into ‘blood vitalizing and bruise dissolving’. Again, specific systems of the pathophysiology or anatomy treated by the herbs are not clear. Looking at Figure 2.4 reveals that the herbs are for conditions of the musculoskeletal system and connective tissue, in particular lumbago, and the female reproductive system, in particular absence of menstruation, by means of, as the traditional name suggests, improving or restoring blood circulation. We therefore call the class of herbs circulation activating and blood-stasis relieving.

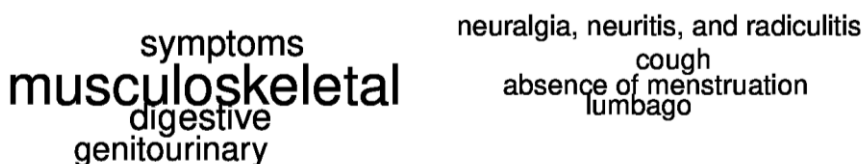


Figure 2.4. Indications of the herbs that ‘vitalize blood and dissolve bruises’.

2.5. EXPECTORANT

The fifth class, consisting of 22 CHEG herbs, is called expectorant in traditional Chinese medical literature. The dominating condition on the right of Figure 2.5 for the leading symptoms on the left turns out to be cough. As the traditional name of the class depicts, the class of herbs are specifically for patients with respiratory diseases who are coughing with phlegm.



Figure 2.5. Indications of the herbs that ‘help thin and loosen sputum’.

2.6. HEMOSTATIC

The sixth class, with 20 CHEG herbs, literally reads ‘stop bleeding’. An analysis of the salient groups of diseases treated by the herbs in the class indicates, in Figure 2.6, that the herbs are primarily used for female reproductive system conditions including endometriosis and circulatory system conditions including residual hemorrhoidal skin tags.

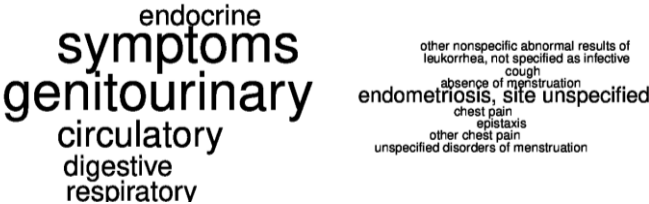


Figure 2.6. Indications of the herbs that ‘arrest bleeding’.

2.7. QI REGULATING

The seventh class, called qi regulating in traditional medical treatises, has 19 CHEG herbs. Although qi, pronounced as chi, in traditional Chinese medicine is a form of energy, sometimes called vital energy, circulating in a ‘subtle’ system of web of conduits other than the well-recognized vascular system, the qi in our analysis takes the earthly form as the gas produced through fermentation in the digestive system. Note one of the definitions of the Chinese word qi is indeed gas. So, according to Figure 2.7, the class of

herbs are mainly used to treat problems, i.e., flatulence, eructation and gas pain, caused by runaway gas in the digestive system.



Figure 2.7. Indications of the herbs that 'regulate qi'.

2.8. ASTRINGING

The eighth class is traditionally called astringing, containing 18 CHEG herbs. When patients suffer from dehydration or hyperhidrosis we would restrain them from urination for fear of further water loss. However, in modern days, pets and pet owners are more likely to be troubled by excesses, e.g., frequent urination, which in particular becomes more annoying as patients get older. The herbs in the class relieve such conditions as shown in Figure 2.8.



Figure 2.8. Indications of the herbs that 'tighten soft tissues'.

2.9. YIN NOURISHING

The ninth class has 17 CHEG herbs and has to do with nutrition supplementation. Yin and yang are two opposing yet complementing factors or properties of everything in the cosmos according to the philosophy of ancient China. There are plenty of yin versus yang examples in our everyday life such as coldness versus hotness, water versus fire and female versus male. In the context of traditional medicine, yin and yang refer, respectively, to materialistic (i.e., anatomical) and functional (i.e., physiological) aspects of the body. Once we understand the concept of yin and yang dichotomy in herbal medicine, Figure 2.9 becomes easy in that the herbs in this class address diseases of the digestive system, including peptic ulcer and disorder of the intestine, in order to improve absorption and transformation of food in the body.



Figure 2.9. Indications of the herbs that ‘supplement yin’.

2.10. RHEUMATISM DISPELLING

The tenth class, containing also 17 CHEG herbs, has the traditional name meaning ‘wind stopping and dampness eliminating’. In traditional Chinese medicine, symptoms or syndromes that arise suddenly and subside quickly are endowed with the character of ‘wind’. The herbs in the class sound from the original meaning to treat symptoms that occur when weather turns humid. The overlapping disease groups treated by the herbs in Figure 2.10 indeed show diseases of the musculoskeletal system and connective tissue as the leading group of diseases treated by the herbs. Detailed conditions also include chondrocalcinosis, disorder of muscle, ligament, and fascia, edema, gouty arthropathy, monoplegia of upper limb affecting unspecified side, myalgia and myositis, pain in joint, hand, and pleural effusion. We call the herbs rheumatism dispelling.



Figure 2.10. Indications of the herbs that ‘stop wind and eliminate dampness’.

2.11. MUSCULOSKELETAL-HEAT CLEARING

The eleventh class encompasses 15 CHEG herbs with a literal name ‘heat clearing and fire extinguishing’. It sounds antipyretic and having to do with inflammation but is again not clear about the inflamed parts of the body. Figure 2.11 illustrates that the leading three inflamed organ systems of the body treated by the herbs are the musculoskeletal system and connective tissue, digestive system and sense organs (i.e., disorder of globe and other ill-defined disorders of eye). The target body parts are quite diverse. The herbs are therefore anti-inflammatory of the musculoskeletal system, digestive system and sense organ conditions.



Figure 2.11. Indications of the herbs that 'clear heat and extinguish fire'.

2.12. SKIN-DAMP-HEAT CLEARING

The twelfth class, containing 15 CHEG herbs, is literally called 'heat clearing and dampness drying'. Again, the ancient heat here sounds to mean the modern inflammation. When we look at the analysis in Figure 2.12, we realize they are mainly for the inflamed conditions of the skin and subcutaneous tissue. We therefore call the herbs skin-damp-heat clearing in comparison to the class of herbs in the last section. A note is that the conditions treated here involve manifestation of dampness in the patient, in addition to inflammation, as the traditional name suggests.

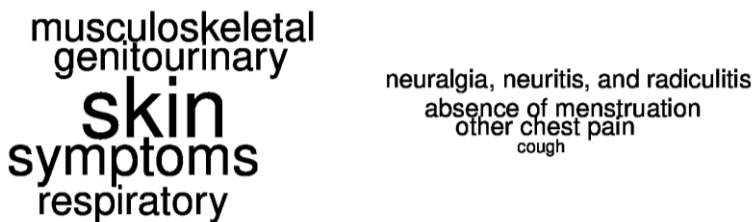


Figure 2.12. Indications of the herbs that 'clear heat and dry dampness'.

2.13. YANG TONIFYING

The thirteenth class, consisting again of 15 CHEG herbs, tonify the yang aspect of some parts of the body according to the class name in the texts of traditional medicine. The target organ systems of the herbs are not clear until we run the disease overlapping analysis. Traditionally, yang is also associated with male, i.e., manliness. It is therefore not surprising to see the result in Figure 2.13 which shows musculoskeletal and genitourinary systems are treated. Specific diseases in the groups also include hyperplasia of prostate, impotence of organic origin and male infertility, unspecified. Herbs in the class are typically for aging males.



Figure 2.13. Indications of the herbs that ‘supplement yang’.

2.14. QI TONIFYING

The fourteenth class is composed of 14 CHEG herbs and called qi-tonifying in traditional Chinese medical texts. As qi is also regarded as a form of energy which in modern terms would be oxygen, when a patient requires supplementation of qi, the patient is generally weak. Dyspepsia can also make one weak. Figure 2.14 shows that the herbs in the class treat diseases of the respiratory system, which is responsible for taking in oxygen as a fuel for energy production in the mitochondria of eukaryotic cells. It is interesting to note that female infertility with unspecified origin is treated by qi tonifying herbs. Also note that according to Table 2.1, qi tonifying herbs are frequently used, as we will see in later parts of the book where herbs of different classes are combined to make a recipe.



Figure 2.14. Indications of herbs that ‘supplement qi’.

2.15. ENDOPATHIC-WIND CALMING

The fifteenth class has 13 CHEG herbs. The class name when translated literally reads ‘liver easing and wind calming’. The liver in traditional Chinese medicine is in charge of blood storage and circulation. Liver is pronounced as gān in Mandarin. We should have called the class ‘gān smoothing and wind calming’, instead. The theory of the five viscera in traditional medicine is not as accurate and precise as that of modern western medicine, which is one of the reasons we have opted to rename the traditional classification using new terms in this chapter. So, the herbs treat diseases of the circulatory system including benign essential hypertension and pure hypercholesterolemia. The treated conditions also include headache, pruritic disorder, facial nerve disorder and vertiginous syndromes and labyrinthine disorders which highlight the ‘wind’ or sporadic characteristic of the treated conditions of this class of herbs.



Figure 2.15. Indications of herbs that 'ease liver and calm wind'.

2.16. COUGH AND ASTHMA RELIEVING

The sixteenth class, which comprises 13 CHEG herbs, has the effect of cough and asthma relieving as the name in traditional texts indicates 'cough quelling and asthma relieving'. Indeed, the analysis in Figure 2.16 shows that the herbs are for the cough symptom in the diseases of the respiratory system including bronchitis.



Figure 2.16. Indications of herbs that 'relieve cough and asthma'.

2.17. DIGESTION HELPING

The seventeenth class contains 11 CHEG herbs and has to do with digestion as its traditional name, 'food digesting', indicates. Specific digestive diseases include pure hypercholesterolemia, disorder of intestine, dyspepsia and other specified disorders of function of stomach, flatulence, eructation, and gas pain, other noninfectious gastroenteritis and colitis, peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction as well as chronic lymphadenitis.



Figure 2.17. Indications of herbs that 'help digest foods'.

2.18. TRANQUILIZING

The eighteenth class, including 11 CHEG herbs, comes with a name meaning tranquilizing. The herbs obviously help patients with sleep problems shown in Figure 2.18. According to the theories of the traditional medicine, mentality is governed by the heart. So, it is not unexpected that the herbs in the class also treat palpitations.



A word cloud with two words: 'symptoms' in a large, bold, black font, and 'other sleep disturbances' in a smaller, regular black font to its right.

Figure 2.18. Indications of herbs that ‘calm the mind’.

2.19. INTERIOR WARMING

The nineteenth class has only nine CHEG herbs and translates to ‘interior warming’. Interior refers to the visceral organs, dysfunction of any of which has dire consequences. It is not clear from the traditional name which somatic organs are warmed up by the herbs. The wordcloud analysis in Figure 2.19 unveils that it is the respiratory and digestive systems that the herbs in the class intend to warm. In particular, patients with allergic rhinitis and/or peptic ulcer are likely to be treated with interior warming herbs.



A word cloud with five words: 'symptoms' in a large, bold, black font; 'respiratory' in a large, bold, black font below it; 'digestive' in a large, bold, black font below 'respiratory'; 'other chest pain' in a smaller, regular black font to the right; and 'headache' in a smaller, regular black font below 'other chest pain'.

Figure 2.19. Indications of herbs that ‘warm interior up’.

2.20. INTERIOR-DAMPNESS REMOVING

The twentieth class encompasses also nine CHEG herbs and has a name which literally means ‘dampness transforming’. In an effort to make it more specific while keeping the original meaning, we see in Figure 2.20 that the herbs in the class deal with water retaining in the abdomen due to diseases of the digestive system such as dyspepsia and other specified disorders of function of stomach and gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction. Other conditions treated by the class of herbs include diaper or napkin rash and leucorrhea, not specified as infective, both of which involve excess of bodily fluid.



Figure 2.20. Indications of herbs that 'transform dampness'.

2.21. BLOOD-HEAT CLEARING

The twenty-first class, containing seven CHEG herbs, is literally called 'heat clearing and blood cooling'. It is the fourth class we have encountered whose traditional name involves heat-clearing. We associated the former three heat clearing to respiratory-heat, musculoskeletal-heat and skin-damp-heat respectively. Figure 2.21 shows that the inflammation treated by this class of herbs involve skin conditions including contact dermatitis and other eczema and pruritic disorder. Note that the conditions treated by the skin-damp-heat clearing herbs of section 2.12 are associated with both warm and damp manifestations of the patient while the conditions treated by the herbs in the current class manifest mainly warmth.

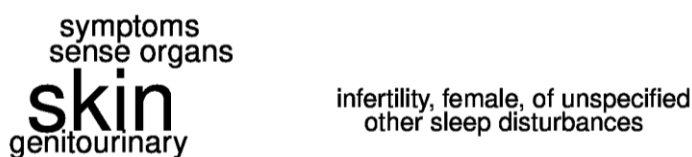


Figure 2.21. Indications of herbs that 'clear heat and cool blood'.

2.22. LAXATIVE

The twenty-second class, composed only of five CHEG herbs, is called laxative in traditional texts. It is clearly connected with diseases of the digestive system in particular peptic ulcer and constipation as shown in Figure 2.22.

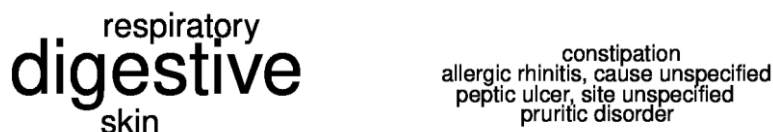


Figure 2.22. Indications of herbs that 'drain down the bowels'.

2.23. DEFICIENT-HEAT CLEARING

The twenty-third class has only four CHEG herbs and a traditional name translated word for word to ‘deficient-heat clearing’. In the viewpoint of the traditional medicine, patients treated by the class of herbs manifest heat, i.e., high body temperature. However, the cause of the fever is not by exogenous pathogens such as influenza viruses but by seemingly over activities of some body functions or overreactions of the immunity, manifesting skin and sleep problems as shown in Figure 2.23. The ostensible body heat can be counteracted by supplementing yin, which is deficient, to neutralize yang, which is superfluous. The traditional medical physicians believe the heat is virtual and thus call it deficient-heat clearing.



Figure 2.23. Indications of herbs that ‘clear deficient heat’.

2.24. ANTHELMINTIC

The twenty-fourth class, containing four CHEG herbs, is called ‘worm dispelling’ in the language of the traditional medicine. Most parasitic worms grow up, mate and lay eggs in the digestive system of the host. The herbs in the class therefore treat patients with diseases of the digestive system as shown in Figure 2.24. Note that according to Table 2.1, anthelmintic herbs were least used. The use frequency data were however extracted from human health insurance claims. It is therefore not surprising that worm diseases are rare in people of the developed countries. As to pets, worm infections are still prevalent as we will see in Parts 2 and 3 of the book.



Figure 2.24. Indications of herbs that ‘dispel worms’.

2.25. HEMATINIC

The twenty-fifth and also the last class contains four CHEG herbs and literally reads ‘blood supplementing’. A way of blood deficiency can be due to digestive system

problems which hinder absorption and transformation of nutrition into blood. Figure 2.25 shows that the herbs in the class treat diseases of the digestive system including ulcerative (chronic) enterocolitis, supporting the scenario.

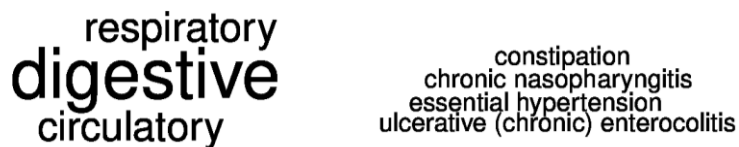


Figure 2.25. Indications of herbs that 'supplement blood'.

Chapter 3

MODERN THERAPEUTIC USES OF CHEG HERBS AND HERB PAIRS

In learning a new language, a first task is to get a dictionary. In the dictionary, words in the foreign language are explained in the mother language of the user. In our case, the new words are CHEG herbs and the mother language is disease diagnoses of modern western medicine. Furthermore, in the dictionary, usage examples of a word, i.e., combinations of words, are best provided so that the user knows how to join words in a particular context.

If a word appears everywhere in different kinds of articles, the word provides little information on the topics discussed in the articles. Examples of such words are ‘the’, ‘and’, ‘of’, ‘is’, ‘which’, and so on. They nevertheless are needed in order to construct grammatically correct sentences. Similar scenarios may arise in CHEG language where some herbs appear in recipes for a variety of diseases. A way to differentiate such herbs is by a quantification system which measures the relevance of CHEG herbs in disease treatment. For example, the so-called ‘topic-specificity’ score of ‘the’ would be low though the usage frequency of ‘the’ is high. One of our aims in this chapter is to build such a quantification scheme into the CHEG dictionary.

3.1. DOSE REGIMEN EXTRAPOLATION BY ALLOMETRIC SCALING

In human drug development, doses of a new drug are first examined experimentally using laboratory animals such as mice, rats, guinea pigs (a species of rodent), rabbits, hamsters and dogs in trials called preclinical trials. The dose which is found to cause therapeutic effect in experimental animals, called therapeutic or effective dose, is then extrapolated to that for humans using a mathematic formula which accounts for

differences in physiological rates due to changes in body size across species. The study of how characteristics or traits of living organisms change with size is called allometry. In allometric study, the relationship between a biological variable (e.g., organ size), P , and body size, W , between or within species is often found to follow an equation of a simple power law form,

$$P = aW^b \quad (1)$$

where a and b are constants. Such a dependence of P on W is linear in a $\log(P)$ versus $\log(W)$ plot and the relationship is called allometric scaling. In our discussion here, the relevant variable, P , is basal metabolic rate as it has to do with absorption, distribution, metabolism and excretion of drugs in the body and thus helps us decide the right amount of CHEGs for pets given the known CHEG doses for humans. In the case of basal metabolic rate, the value of b is equal to three quarters (West et al., 1997).

Note that imagine I have a factory to refine crude oil. If I expand my oil company by tripling the size of the refinery, then the output capacity of my company should triple. In such an ideal scenario, b equals one. If b is less than one, it means production is constrained by intrinsic or extrinsic factors which are beyond the company's control. Examples of intrinsic factors are availability of mechanics and parts with tripled size by existing technologies. Extrinsic factors include accessibility to raw materials, land, water, electricity, and so on. Indeed, when animals evolve, they do not have time to invent new molecular and cellular machineries; large animals adapt to the physical and environmental constraints in evolution by slowing down their heartbeat, respiration and movement, in comparison to small animals.

When extrapolating doses determined from experimental animals to the maximum safe starting dose for first-in-human clinical trials, the US FDA guidance uses a b value of two thirds (i.e., 0.67) in the above allometric scaling equation. A b equal to two thirds relates changes in body surface area to changes in body size. Although body surface area determines heat dissipation, the science behind body surface area scaling is constantly debated (Kang and Lee, 2011; Blanchard and Smoliga, 2015). Note that the difference between the two scalings from laboratory animal dose to human dose is that body surface area scaling ($b = 0.67$) will generate a smaller dose than will basal metabolic rate scaling ($b = 0.75$). As the job of FDA of the US and any other countries is to safeguard the well-beings of their taxpayers, it is understandable that the initial human doses are set lower. Dose escalations are then tried in human clinical trials to find the right dose.

Our goal is in the reverse in that dose conversion from humans to pets goes from large animals to small animals. Let's embrace the same safety-first principle of the US FDA to safeguard pet patients. As a lower therapeutic dose implies the clearance of the drug in the body is slower so that a smaller amount of drug is needed to maintain the required drug concentration in the blood or tissue, we would therefore rather

underestimate the pets' metabolic rate than overestimate it. In order to underestimate, we have to choose a b value equal to three quarters, instead of two thirds used by the US FDA. This is because an allometric scaling by $b = 0.75$ pushes up the metabolic rate less than that by $b = 0.67$, given the human dose, as shown in Figure 3.1. The three quarter scaling is also what has been used in zoological medicine for dose conversion among birds, mammals and reptiles (Hunter and Isaza, 2008; Cunningham et al., 2010). Once we work out the mathematics, we get the following conversion formulas for CHEG dose (in grams), daily frequency and duration of therapy (in days) for pets,

$$\text{dose} = 5/60 \times (\text{pet weight}/60)^{-0.25} \times \text{pet weight}$$

$$\text{frequency} = 3 \times (\text{pet weight}/60)^{-0.25}$$

$$\text{duration} = 7 \times (\text{pet weight}/60)^{-0.25}$$

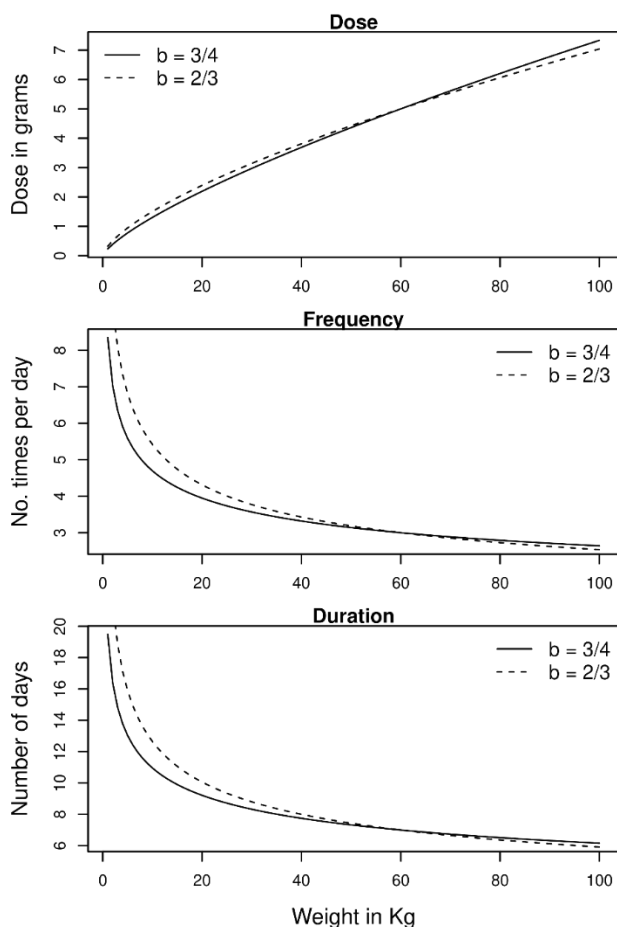


Figure 3.1. Change of dose, frequency and duration with pet weight.

Table 3.1. Dose regimen for pets of different weight

Weight in Kg	Weight in lbs.	Dose in grams	Dose in grams with a safety factor of 2	No. serves a day	Number of days
1	2.2	0.2	0.1	8.3	19.5
2	4.4	0.4	0.2	7.0	16.4
3	6.6	0.5	0.3	6.3	14.8
4	8.8	0.7	0.3	5.9	13.8
5	11.0	0.8	0.4	5.6	13.0
6	13.2	0.9	0.4	5.3	12.4
7	15.4	1.0	0.5	5.1	12.0
8	17.6	1.1	0.6	5.0	11.6
9	19.8	1.2	0.6	4.8	11.2
10	22.0	1.3	0.7	4.7	11.0
11	24.3	1.4	0.7	4.6	10.7
12	26.5	1.5	0.7	4.5	10.5
13	28.7	1.6	0.8	4.4	10.3
14	30.9	1.7	0.8	4.3	10.1
15	33.1	1.8	0.9	4.2	9.9
16	35.3	1.9	0.9	4.2	9.7
17	37.5	1.9	1.0	4.1	9.6
18	39.7	2.0	1.0	4.1	9.5
19	41.9	2.1	1.1	4.0	9.3
20	44.1	2.2	1.1	3.9	9.2
21	46.3	2.3	1.1	3.9	9.1
22	48.5	2.4	1.2	3.9	9.0
23	50.7	2.4	1.2	3.8	8.9
24	52.9	2.5	1.3	3.8	8.8
25	55.1	2.6	1.3	3.7	8.7
26	57.3	2.7	1.3	3.7	8.6
27	59.5	2.7	1.4	3.7	8.5
28	61.7	2.8	1.4	3.6	8.5
29	63.9	2.9	1.4	3.6	8.4
30	66.1	3.0	1.5	3.6	8.3
31	68.3	3.0	1.5	3.5	8.3
32	70.5	3.1	1.6	3.5	8.2
33	72.8	3.2	1.6	3.5	8.1
34	75.0	3.3	1.6	3.5	8.1
35	77.2	3.3	1.7	3.4	8.0
36	79.4	3.4	1.7	3.4	8.0
37	81.6	3.5	1.7	3.4	7.9
38	83.8	3.5	1.8	3.4	7.8
39	86.0	3.6	1.8	3.3	7.8
40	88.2	3.7	1.8	3.3	7.7
41	90.4	3.8	1.9	3.3	7.7
42	92.6	3.8	1.9	3.3	7.7
43	94.8	3.9	1.9	3.3	7.6
44	97.0	4.0	2.0	3.2	7.6
45	99.2	4.0	2.0	3.2	7.5
46	101.4	4.1	2.0	3.2	7.5
47	103.6	4.2	2.1	3.2	7.4
48	105.8	4.2	2.1	3.2	7.4
49	108.0	4.3	2.1	3.2	7.4
50	110.2	4.4	2.2	3.1	7.3

Note that the appearance of -0.25 arises from the fact that the unit of P is measured in per unit mass of the animal. In this case, we have to divide both sides of the scaling equation (1) by W , giving rise to $b - 1$. P is called specific basal metabolic rate. In the above equations and figures, we have assumed the CHEG regimen for an adult human of 60 Kg to be 5 grams of CHEG per serve and three serves per day for seven days. Now, if we plug in a pet weight of 18 Kg, then we get a dose of 2.0 grams of CHEG per serve and 4.1 serves a day for 9.5 days. If we set the b value to two thirds, the corresponding values for the pet of the same weight become 2.2 g, 4.5 times and 10.4 days, verifying that the three quarter allometric scaling as an underestimation of pet's specific metabolic rate and a smaller and thus safer starting CHEG dose regimen for the pet. In Table 3.1 we show the CHEG dose, frequency and duration for pets of weight in Kg or lbs. Note that if we are to estimate CHEG doses for horses which are bigger than humans, we should use the body surface area scaling, which is used by the US FDA for dose extrapolating from small laboratory animals to humans. This point is also made clear by Figure 3.1 where, given a human dose, we choose a scaling to underestimate the dose for pets for safety reasons.

Although allometric scaling is handy, the method neglects some other details about species differences in physicochemistry, pharmacokinetics and pharmacodynamics. For example, if a drug targets a receptor, what if the expression or affinity of the receptor differ from one species to the other? The difference is more significant for drugs for the central nervous and immune systems as the neurotransmitter profile and allergic reactions exhibit large interspecies variations. The family of cytochrome P450 enzymes in mammalian liver for xenobiotic clearance is also different between species. In general, allometrically scalable drugs are those that are 1) predominantly renally excreted; 2) minimally hepatically metabolized; 3) not targeting targets which are expressed and bound differently between species; and 4) not distributing extensively into tissue (Sharma and McNeill, 2009). The US FDA addresses the complications by dividing the initial dose determined by the body surface area scaling by a factor of 10 for first-in-human clinical trials (US FDA, 2005). By the same token, we may divide the dose determined by the three quarter scaling by a factor of, e.g., 2 for first-in-pet CHEG therapies, as shown in the fourth column of Table 3.1. The veterinarian or pet owner may then consider escalating the dose after follow-up examinations.

3.2. HERB-HERB INTERACTIONS

Although seven modalities of herb pairings have been described in traditional herbal texts (Zheng, 2009; Xie and Preast, 2010), they can be summarized into five distinct modes. The first mode of pairing combines two herbs of the same therapeutic action to enhance the effect. For example, we would combine two diaphoretics in order to

strengthen the capability of the herb pair for perspiration induction. Two rheumatism dispelling herbs together may fasten recovery of monoplegia. Two circulation activating and blood stasis relieving herbs are used together to treat absence of menstruation. Two yin nourishing herbs improve material supplementation. Two digestion helping herbs join to help fat metabolism. Two endopathic wind calming herbs are used together to lower blood pressure. Two different exterior-dampness removing (or yang tonifying) herbs are paired to treat urinary frequency.

The second type of pairing combines two herbs of dissimilar therapeutic actions in order to enhance the action of one of the herb. For example, an astringing herb can combine with a hemostatic herb to enhance hemostasis. Qi is traditionally believed to guide circulation. Qi regulating herbs are therefore commonly paired with hemostatic herbs to treat abnormal bleeding such as endometriosis. Diaphoretics may also help muscular pain relieving of the rheumatism dispelling herbs. Qi tonifying herbs may improve sleep with tranquilizing herbs or with deficient-heat clearing herbs. Qi regulating herbs combine with tranquilizing herbs to treat cardiac dysrhythmia and palpitations. Expectorant herbs help endopathic wind calming herbs for the treatment of epilepsy. Respiratory-heat clearing herbs help skin condition relief of the skin-damp-heat clearing herbs. Treatment of lumbago by yang tonifying herbs is enhanced by circulation activating and blood stasis relieving herbs. Respiratory- and blood-heat clearing herbs join to treat contact dermatitis, so do skin-damp-heat clearing and endopathic wind calming herbs. Hematinic herbs mix with yang tonifying herbs to treat peptic ulcer. Laxatives for constipation are enhanced by musculoskeletal-heat clearing herbs. Absence of menstruation can be treated by a combination of hematinic herbs and circulation activating and blood stasis relieving herbs. Combination of dissimilar herbs can also expand the range of indications of the pair. For example, combining an expectorant herb with a cough and asthma relieving herb helps cough up sputum. Qi regulating herbs combine with interior warming herbs to treat quadriplegia and with interior-dampness removing herbs to treat hiccough. More examples can be found in the rest of the book.

The third mode of pairing reduces the toxicity of one of the herb in the pair. For example, a yin nourishing herb can pair with a laxative herb to reduce adverse effects of laxative abuse such as dehydration and electrolyte imbalances. The fourth mode of pairing is counterproductive in that the therapeutic effect of one herb is destroyed by the second herb. The fifth mode is forbidden as the pairing produces new ingredients which make the pair toxic. The first three modes of pairing are desirable while the last two modes are not. With 395 CHEG herbs, the number of possible CHEG pairs is $395 \times 394 / 2 = 77815$. It is not possible to run clinical or preclinical trials one pair by one pair.

We have trained our deep learning model so that the CNN model learned the way the five thousand herbal clinicians in Taiwan combined CHEG herbs to make their prescriptions.

3.3. DICTIONARY OF CHEG HERBS AND THEIR PAIRINGS

In order to capitalize on the learned deep learning model, we construct an image representing an herb. Remember the intensity of a pixel in the image represents dose of the corresponding herb. Such an herb image therefore contains a single illuminating pixel. We then input the herb image to the deep learning model that has already been trained and ask the trained model to make prediction about the label of the image. The model outputs 5994 numbers corresponding to the probabilities of the 5994 distinct diseases (called labels in the jargon of machine learning). Let's call probability score. We rank the diseases by their scores and list the top ranking diseases whose scores are greater than 1.7% in Table 3.2. Note that if we guess the label randomly using a uniform probability distribution, the probability of each label is $1/5994 = 0.017\%$. Although our cutoff score at 1.7% looks low, it is a hundred times that of a random guess. This way, we created a dictionary of the CHEG herbs.

In the next step, we prepared images of herb pairs, in each of which only two pixels illuminate. We fed the 77815 images one by one for the model to predict. The output probabilities of each image represent the degrees to which the model is certain about the diseases the herb pair is intended to treat. We ranked the diseases by their probabilities, i.e., scores, and retained only the diseases whose scores are greater than the sum of the corresponding single herb scores. That is, for a disease, if the score of AB is greater than the sum of score of A and score of B, then the disease is retained in Table 3.2. This algorithm aims to identify the first three beneficial modes of herb pairings outlined in the last section. Once we know how to pair herbs, we can pair pairs. That is, we pair AB and AC to make a recipe containing ABC, or we combine AB with CD to make a recipe comprising ABCD. The co-occurrence network of CHEG herbs and CHEG formulas was shown to be a small-world network (Wang, 2019), by which a friend of mine befriends another friend of mine. Multi-herb herbal recipes are made the same way, by joining herbs which frequently pair. Table 3.2 therefore serves as a foundation for herbal recipe construction.

In Table 3.2, the first column lists the CHEG herbs in alphabetic order of their pinyins, which are how Chinese characters are written in Roman alphabets by the Chinese. The second column lists the intended diseases of the herb. The digits in parentheses following the diseases are the ICD-9 codes of the diseases. The third column gives the score of the disease output by the deep learning model. The fourth column

indicates the traditional therapeutic class of the herb introduced in the last chapter (*cf.* the first two columns of Table 2.1). The fifth column gives the months when the herb is most likely to be prescribed to patients, output again by the multi-task CNN deep learning model. The last column specifies the usage frequency of the herb by the herbal clinicians in Taiwan. We divided the 395 CHEG herbs into five groups according to their numbers of occurrences in the seven million CHEG prescriptions. The top 79 herbs receive five stars in the Usage column of the table. The second top 79 herbs receive four stars, and so on. The table also includes herb pairs following annotation of each herb. For example, + B in a row following A herb means AB pair. The rows for herb pairs are shaded in light gray in order to separate them from the rows of single herbs.

With the table, for each herb, we assign the maximum score to it. For example, in the above, *zǐ wǎn* is given 21, *zǐsū zǐ* is given 7, and so on. Each herb has a score. We then calculate the median score for those herbs belonging to a class (the fourth column of Table 3.2). Each class now has a score, called disease specificity. We then rank the classes according to their disease specificities. The result is shown in the last column of Table 2.1 in the beginning of the previous chapter.

Coming back to Table 3.2, several comments are in order. We can grade herbs by their scores and usages. Herbs whose scores are high and usages are frequent can be grouped into the first rate group because they are widely used for specific diseases. Herbs whose scores are low but usages are high are grouped into the second rate group because they are widely used for many diseases. Their roles in the recipes may be supportive as exemplified by the use of *qi* tonifying herbs in many recipes for a variety of diseases. Herbs whose scores are high but usages are rare can be grouped into the third rate group because either they are replaceable or their intended diseases are rare. Herbs whose scores are low and usages are rare are rated the lowest. The first to the third quartile of the 395 maximal scores of the 395 herbs in Table 3.2 are, respectively, 6, 10, 17. So, for an herb with a maximum score of 20, we know that the herb’s disease specificity is high. If the maximum score is 10, we know the herb is mediocre, and so on. The other comment is that when two or more herbs for a chosen disease are of the same rate, we consult the months to determine which herb to use. Next, when a five-star herb and a one-star herb compose a pair, the usage frequency of the pair is one star because the composition is limited by the availability of the one-star herb. Finally, we remind that the diseases in Table 3.2 are human diseases as the deep learning method generating the table utilized human health insurance data. Nevertheless, almost all the common canine and feline diseases can be matched to human diseases as we will see in the following chapters of the book.

Table 3.2. Therapeutic uses of CHEG herbs and pairs

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
àiyè (艾叶, 艾葉) <i>Folium Artemisiae Argyi</i>	Absence of menstruation (6260)	7	6	12,11,10	***
	Endometriosis, site unspecified (6179)	5			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	4			
	Dysmenorrhea (6253)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Leiomyoma of uterus, unspecified (2189)	2			
	Endometriosis (617)	2			
+ dì yú (地榆, 地榆)	Absence of menstruation (6260)	21	+ 6	2,4,3	***
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	60	+ 6	12,11,1	***
bā jī tiān (巴戟天, 巴戟天) <i>Radix Morindae Officinalis</i>	Male infertility, unspecified (6069)	12	13	11,10,8	****
	Impotence of organic origin (60784)	7			
	Unspecified disorder of pancreatic internal secretion (2519)	6			
	Other sleep disturbances (78059)	6			
	Lumbago (7242)	5			
	Infertility, female, of unspecified origin (6289)	4			
	Unspecified disorder of globe (3609)	3			
	Urinary frequency (78841)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	3			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	2			
	Absence of menstruation (6260)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ běi bǎnlángēn (北板蓝根, 北板藍根)	Unspecified disorder of pancreatic internal secretion (2519)	13	+ 3	6,1,8	*
+ gǒu jǐ (狗脊, 狗脊)	Lumbago (7242)	44	+ 13	1,7,11	****
+ lián xū (莲须, 蓮鬚)	Impotence of organic origin (60784)	44	+ 8	11,10,12	**
+ shānzhūyú (山茱萸, 山茱萸)	Impotence of organic origin (60784)	14	+ 8	6,7,9	****
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	52	+ 11	11,5,8	****
bái biǎndòu (白扁豆, 白扁豆) <i>Semen Lablab Album</i>	Allergic rhinitis, cause unspecified (4779)	4	14	7,5,6	***
	Dyspepsia and other specified disorders of function of stomach (5368)	4			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Constipation (5640)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Diarrhea of presumed infectious origin (0093)	2			
	Malignant neoplasm of other specified sites of stomach (1518)	2			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	2			
	Functional digestive disorders, not elsewhere classified (564)	2			
	Cough (7862)	2			
+ běi shāshēn (北沙参, 北沙参)	Cough (7862)	8	+ 9	7,5,6	***
+ dàhuáng (大黄, 大黄)	Constipation (5640)	41	+ 22	1,11,7	***
+ liánzǐ (莲子, 蓮子)	Flatulence, eructation, and gas pain (7873)	11	+ 8	5,6,7	**
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	86	+ 2	7,3,8	***
bái chūn gēn (白椿根, 白椿根) <i>Ecdysanthera rosea</i>	Absence of menstruation (6260)	31	12	5,4,10	*
	Leukorrhea, not specified as infective (6235)	30			
	Allergic rhinitis, cause unspecified (4779)	6			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	5			
	Dysmenorrhea (6253)	3			
	Headache (7840)	2			
	Other sleep disturbances (78059)	2			
+ báiguǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	47	+ 16	4,5,6	*
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	61	+ 6	4,7,10	*
+ biǎn bó (扁柏, 扁柏)	Absence of menstruation (6260)	50	+ 6	6,5,7	*
+ bó zǐ rén (柏子仁, 柏子仁)	Palpitations (7851)	46	+ 18	5,6,4	*
+ cāngzhú (苍术, 蒼朮)	Leukorrhea, not specified as infective (6235)	52	+ 20	4,5,12	*
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	79	+ 8	10,5,11	*
+ guībǎn (龟板, 龜板)	Absence of menstruation (6260)	45	+ 9	10,11,8	*
+ hǎi rén cǎo (海人草, 海人草)	Leukorrhea, not specified as infective (6235)	47	+ 24	4,10,3	*
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Absence of menstruation (6260)	76	+ 6	5,2,4	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jī xuè téng (鸡血藤, 雞血藤)	Absence of menstruation (6260)	45	+ 4	5,6,7	*
+ lóng yǎnhuā (龙眼花, 龍眼花)	Leukorrhea, not specified as infective (6235)	43	+ 1	7,6,5	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	46	+ 6	10,11,12	*
+ qiānshí (芡实, 芡實)	Leukorrhea, not specified as infective (6235)	44	+ 8	10,7,8	*
+ tǔ fú líng (土茯苓, 土茯苓)	Leukorrhea, not specified as infective (6235)	88	+ 3	5,11,4	*
+ xiāng fù (香附, 香附)	Absence of menstruation (6260)	58	+ 7	5,11,6	*
+ yī yī rén (薏苡仁, 薏苡仁)	Leukorrhea, not specified as infective (6235)	42	+ 1	5,6,4	*
bái dòu kòu (白豆蔻, 白豆蔻) <i>Fructus Amomi Rotundus</i>	Dyspepsia and other specified disorders of function of stomach (5368)	15	20	6,7,8	***
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	7			
	Abdominal pain, other specified site (78909)	5			
	Unspecified functional disorder of intestine (5649)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	3			
	Peptic ulcer, site unspecified (533)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Benign essential hypertension (4011)	2			
	Unspecified pruritic disorder (6989)	2			
+ cāng ěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	45	+ 2	11,8,1	***
+ dīng xiāng (丁香, 丁香)	Abdominal pain, other specified site (78909)	36	+ 19	6,1,2	**
+ fó shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	48	+ 7	1,8,4	***
+ mù zéi cǎo (木贼草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	42	+ 2	4,8,7	***
+ ròu cōng róng (肉苁蓉, 肉蓯蓉)	Dyspepsia and other specified disorders of function of stomach (5368)	43	+ 13	6,7,8	***
+ ròu dòu kòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	16	+ 8	11,7,8	**
+ shí hú suī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	49	+ 2	1,2,4	**
+ xiè bái (薤白, 薤白)	Hiccough (7868)	76	+ 7	11,8,1	***
+ zǐ huā dì dīng (紫花地丁, 紫花地丁)	Unspecified disease of hair and hair follicles (7049)	55	+ 3	6,8,5	***
bái guǒ (白果, 白果) <i>Semen Ginkgo</i>	Urinary frequency (78841)	7	16	11,1,2	**
	Leukorrhea, not specified as infective (6235)	5			
	Hyperplasia of prostate unspecified (6009)	4			
	Tinnitus, unspecified (38830)	3			
	Other urinary incontinence (78839)	2			
	Cough (7862)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	2			
	Other chest pain (78659)	2			
	Benign essential hypertension (4011)	2			
	Asthma, unspecified type, unspecified (49390)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	47	+ 12	4,5,6	*
+ bái huā shé shé cǎo (白花蛇舌草, 白花蛇舌草)	Leukorrhea, not specified as infective (6235)	11	+ 3	11,12,2	**
+ bái jī guān huā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	56	+ 6	8,7,11	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	63	+ 8	12,11,1	*
+ dà jīn yīng (大金樱, 大金樱)	Urinary frequency (78841)	25	+ 8	1,11,2	*
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	57	+ 13	12,3,4	**
+ xiǎo jīn yīng (小金樱, 小金樱)	Urinary frequency (78841)	13	+ 8	11,4,5	*
+ yī yǐ rén (薏苡仁, 薏苡仁)	Leukorrhea, not specified as infective (6235)	54	+ 1	1,11,10	**
bái huā cǎo (白花草, 白花草) <i>Habenaria dentata</i> (Sw.) Schltr.	Unspecified disorder of metabolism (2779)	34	12	7,6,10	*
	Dysmenorrhea (6253)	6			
	Endometriosis, site unspecified (6179)	3			
	Absence of menstruation (6260)	3			
	Leiomyoma of uterus, unspecified (2189)	3			
	Scanty or infrequent menstruation (6261)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Sleep disturbance, unspecified (78050)	2			
	Unspecified functional disorder of stomach (5369)	2			
bái huā lián (白花莲, 白花蓮) <i>Herba Saururi Chinensis</i>	Cough (7862)	9	12	11,12,5	*
	Allergic rhinitis, cause unspecified (4779)	7			
	Unspecified pruritic disorder (6989)	4			
	Peptic ulcer, site unspecified (533)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Chronic rhinitis (4720)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Lipoma (214)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Allergic rhinitis (477)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Benign essential hypertension (4011)	2			
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	47	+ 6	4,6,5	*
+ bái qián (白前, 白前)	Cough (7862)	25	+ 5	4,5,10	*
+ báizhī (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	44	+ 2	11,5,12	*
+ bòhé (薄荷, 薄荷)	Allergic rhinitis, cause unspecified (4779)	50	+ 2	5,7,6	*
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	54	+ 8	12,11,10	*
+ wǔwèizǐ (五味子, 五味子)	Other chronic hepatitis (57149)	46	+ 8	8,5,7	*
báihuáshé shé cǎo (白花蛇舌草, 白花蛇舌草) <i>Herba Hedyotidis</i>	Contact dermatitis and other eczema, unspecified cause (6929)	7	3	12,11,7	****
	Unspecified pruritic disorder (6989)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Cough (7862)	4			
	Cystitis, unspecified (5959)	3			
	Throat pain (7841)	2			
	Other sleep disturbances (78059)	2			
	Pain in joint, other specified sites (71948)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified gingival and periodontal disease (5239)	2			
	Influenza with pneumonia (4870)	2			
	Contact dermatitis and other eczema (692)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Pain in joint, shoulder region (71941)	2			
	Urticaria, unspecified (7089)	2			
+ báiguǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	11	+ 16	11,12,2	**
+ dà qīng yè (大青叶, 大青葉)	Contact dermatitis and other eczema, unspecified cause (6929)	9	+ 3	7,4,5	****
+ dānshēn (丹参, 丹參)	Chronic hepatitis (5714)	75	+ 4	5,4,3	****
+ hǔ zhàng (虎杖, 虎杖)	Chronic hepatitis (5714)	43	+ 1	2,4,5	****
+ mǔdānpí (牡丹皮, 牡丹皮)	Contact dermatitis and other eczema, unspecified cause (6929)	63	+ 21	4,6,7	****
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	44	+ 3	11,12,7	****
+ wǔ jiā pí (五加皮, 五加皮)	Other chronic hepatitis (57149)	68	+ 10	5,4,11	****
+ wǔwèizǐ (五味子, 五味子)	Other chronic hepatitis (57149)	84	+ 8	5,6,7	****
bái jīguānhuā (白鸡冠花, 白雞冠花) <i>Celosia cristata L.</i>	Leukorrhea, not specified as infective (6235)	20	6	7,8,6	**
	Unspecified inflammatory disease of female pelvic organs and tissues (6149)	8			
	Allergic rhinitis, cause unspecified (4779)	4			
	Absence of menstruation (6260)	4			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Flatulence, eructation, and gas pain (7873)	4			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	3			
	Headache (7840)	3			
	Excessive or frequent menstruation (6262)	2			
	Irregular menstrual cycle (6264)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	61	+ 12	4,7,10	*
+ báiguǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	56	+ 16	8,7,11	**
+ bái huā lián (白花莲, 白花莲)	Leukorrhea, not specified as infective (6235)	47	+ 12	4,6,5	*
+ bì xiè (萆薢, 萆薢)	Leukorrhea, not specified as infective (6235)	46	+ 1	8,7,5	**
+ cāngzhú (苍术, 蒼朮)	Leukorrhea, not specified as infective (6235)	73	+ 20	4,8,7	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	72	+ 8	8,11,4	*
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Leukorrhea, not specified as infective (6235)	51	+ 12	7,6,4	**
+ lóng yǎnhuā (龙眼花, 龍眼花)	Leukorrhea, not specified as infective (6235)	76	+ 1	7,6,8	**
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	45	+ 13	4,8,3	**
bái jí (白芨, 白芨) <i>Rhizoma Bletillae</i>	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	24	6	11,10,5	****
	Flatulence, eructation, and gas pain (7873)	15			
	Chronic gastric ulcer without mention of hemorrhage or perforation, without mention of obstruction (53170)	8			
	Peptic ulcer, site unspecified (533)	7			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction (53491)	6			
	Acute gastritis, without mention of hemorrhage (53500)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Unspecified functional disorder of stomach (5369)	2			
+ báitóuwēng (白头翁, 白頭翁)	Flatulence, eructation, and gas pain (7873)	24	+ 3	10,7,11	**
+ fān xiè yè (番泻叶, 番瀉葉)	Peptic ulcer, site unspecified (533)	43	+ 22	11,10,5	**
+ fó shǒu gān (佛手柑, 佛手柑)	Flatulence, eructation, and gas pain (7873)	41	+ 7	11,1,12	****
+ hǎipiǎoxiǎo (海螵蛸, 海螵蛸)	Chronic gastric ulcer without mention of hemorrhage or perforation, without mention of obstruction (53170)	59	+ 8	5,4,1	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ huánglián (黄连, 黄連)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	67	+ 12	5,1,12	****
+ mùxiāng (木香, 木香)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	43	+ 7	6,2,3	****
+ yán hú suǒ (延胡索, 延胡索)	Peptic ulcer, site unspecified (533)	45	+ 4	3,5,1	****
+ zhìqiào (枳壳, 枳殼)	Flatulence, eructation, and gas pain (7873)	71	+ 7	10,5,7	****
bái jí lí (白蒺藜, 白蒺藜) <i>Fructus Tribuli</i>	Unspecified pruritic disorder (6989)	3	15	5,6,4	**
	Diaper or napkin rash (6910)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Contact dermatitis and other eczema (692)	2			
	Allergic rhinitis (477)	2			
	Prurigo (6982)	2			
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis (477)	28	+ 2	1,11,12	**
+ chuān qī (川七, 川七)	Diaper or napkin rash (6910)	52	+ 6	8,5,7	**
+ dì gǔ pí (地骨皮, 地骨皮)	Contact dermatitis and other eczema (692)	41	+ 23	8,9,5	**
+ kǔshēn (苦参, 苦參)	Dermatophytosis of foot (1104)	4	+ 12	4,6,3	**
báijiāngcán (白僵蚕, 白僵蠶) <i>Bombyx Batryticatus</i>	Facial nerve disorder, unspecified (3519)	18	15	7,8,2	****
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7			
	Pneumonia due to respiratory syncytial virus (4801)	6			
	Unspecified disorders of nervous system (3499)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Other dermatoses (702)	2			
	Acute upper respiratory infections of multiple or unspecified sites (465)	2			
	Myalgia and myositis, unspecified (7291)	2			
+ chuān xīn lián (穿心莲, 穿心蓮)	Facial nerve disorder, unspecified (3519)	44	+ 3	2,7,8	*
+ dì fū zǐ (地肤子, 地膚子)	Contact dermatitis and other eczema, unspecified cause (6929)	28	+ 1	8,7,2	****
+ dì lóng (地龙, 地龍)	Pneumonia due to respiratory syncytial virus (4801)	63	+ 15	2,1,6	****
+ gǒuqǐ zǐ (枸杞子, 枸杞子)	Facial nerve disorder, unspecified (3519)	42	+ 9	6,7,3	****
+ huáshí (滑石, 滑石)	Pneumonia due to respiratory syncytial virus (4801)	41	+ 1	7,8,6	****
+ jiāng cán (僵蚕, 僵蠶)	Trigeminal neuralgia (3501)	40	+ 15	6,1,7	****
+ jīngjiè (荆芥, 荊芥)	Pneumonia due to respiratory syncytial virus (4801)	52	+ 2	8,7,1	****
+ kǔshēn gēn (苦参根, 苦參根)	Contact dermatitis and other eczema, unspecified cause (6929)	21	+ 12	7,6,8	****
+ niúbàng zǐ (牛蒡子, 牛蒡子)	Pneumonia due to respiratory syncytial virus (4801)	57	+ 2	5,8,2	****
+ shí juémíng (石决明, 石決明)	Facial nerve disorder, unspecified (3519)	26	+ 15	2,7,6	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ tiān nán xīng (天南星, 天南星)	Facial nerve disorder, unspecified (3519)	26	+ 5	7,6,8	**
+ wēilíng xiān (威灵仙, 威靈仙)	Malignant neoplasm of retina (1905)	68	+ 10	7,6,8	***
+ yúxīngcǎo (鱼腥草, 魚腥草)	Pneumonia due to respiratory syncytial virus (4801)	77	+ 3	8,7,2	***
bái jiè zǐ (白芥子, 白芥子) <i>Semen Sinapis</i>	Cough (7862)	32	5	11,10,8	***
	Lipoma (214)	13			
	Allergic rhinitis, cause unspecified (4779)	5			
	Allergic rhinitis (477)	3			
	Chronic pharyngitis (4721)	2			
	Uterine leiomyoma (218)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Neoplasm of uncertain behavior of digestive and respiratory systems (235)	2			
+ bái qián (白前, 白前)	Cough (7862)	34	+ 5	11,12,5	***
+ báizhī (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	50	+ 2	11,12,5	***
+ bǎi bù (百部, 百部)	Cough (7862)	44	+ 16	11,5,3	***
+ chángshān (常山, 常山)	Cough (7862)	43	+ 5	12,8,11	*
+ hǎi jīnshā (海金沙, 海金沙)	Lipoma (214)	58	+ 1	5,6,4	*
+ hǎi rén cǎo (海人草, 海人草)	Lipoma (214)	41	+ 24	11,10,5	*
+ hē zǐ (诃子, 訶子)	Cough (7862)	43	+ 8	8,5,11	**
+ jiāng cán (僵蚕, 殭蠶)	Facial nerve disorder, unspecified (3519)	59	+ 15	10,11,9	***
+ jiégěng (桔梗, 桔梗)	Cough (7862)	47	+ 5	5,11,4	***
+ lòu lú (漏芦, 漏蘆)	Lipoma (214)	62	+ 3	11,10,12	*
+ lùjiǎo (鹿角, 鹿角)	Cough (7862)	42	+ 13	11,10,8	*
+ mǎtí jīn (马蹄金, 馬蹄金)	Lipoma (214)	42	+ 12	11,1,5	*
+ màntuóluó huā (曼陀罗花, 曼陀羅花)	Cough (7862)	43	+ 16	8,11,10	*
+ mǔlì (牡蛎, 牡蠣)	Lipoma (214)	46	+ 15	11,10,8	***
+ qiàn cǎogēn (茜草根, 茜草根)	Cough (7862)	56	+ 6	8,11,10	*
báiliǎn (白蔹, 白蔹) <i>Radix Ampelopsis</i>	Unspecified functional disorder of intestine (5649)	6	3	11,3,10	*
	Allergic rhinitis, cause unspecified (4779)	4			
	Other sleep disturbances (78059)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Chronic rhinitis (4720)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Unspecified pruritic disorder (6989)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ púgōngyīng (蒲公英, 蒲公英)	Unspecified functional disorder of intestine (5649)	41	+ 3	1,4,2	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	41	+ 6	11,12,8	*
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	49	+ 2	3,4,5	*
báimáo gēn (白茅根, 白茅根) <i>Rhizoma Imperatae</i>	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	11	6	7,6,5	****
	Hematuria (5997)	6			
	Epistaxis (7847)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Dysuria (7881)	3			
	Heat stroke and sunstroke (9920)	3			
	Constipation (5640)	3			
	Cystitis, unspecified (5959)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Chronic pyelonephritis without lesion of renal medullary necrosis (59000)	3			
	Peptic ulcer, site unspecified (533)	2			
+ fān mài xū (番麦须, 番麥鬚)	Stomatitis and mucositis (ulcerative) (5280)	46	+ 1	7,9,6	**
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	97	+ 2	7,3,6	****
+ shí hú (石斛, 石斛)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	20	+ 9	7,6,8	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	47	+ 2	7,8,6	**
+ yīn chén (茵陈, 茵陳)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	73	+ 1	10,5,4	****
bái qián (白前, 白前) <i>Rhizoma et Radix Cynanchi Stauntonii</i>	Cough (7862)	21	5	4,5,1	***
	Allergic rhinitis, cause unspecified (4779)	8			
	Bronchitis, not specified as acute or chronic (490)	3			
	Allergic rhinitis (477)	2			
	Chronic nasopharyngitis (4722)	2			
	Chronic bronchitis (491)	2			
	Acute upper respiratory infections of unspecified site (4659)	2			
	Unspecified allergic alveolitis and pneumonitis (4959)	2			
+ bái huā lián (白花莲, 白花蓮)	Cough (7862)	25	+ 12	4,5,10	*
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	34	+ 5	11,12,5	***
+ bǎi bù (百部, 百部)	Cough (7862)	43	+ 16	5,1,4	***
+ bèi mǔ (贝母, 貝母)	Cough (7862)	23	+ 5	4,1,3	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Cough (7862)	24	+ 1	1,5,4	***
+ hé huān pí (合欢皮, 合欢皮)	Cough (7862)	34	+ 18	4,3,5	***
+ hòupò (厚朴, 厚朴)	Cough (7862)	28	+ 20	5,1,2	***
+ mù zéi cǎo (木贼草, 木贼草)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	4,5,7	***
+ pípá yè (枇杷叶, 枇杷葉)	Cough (7862)	47	+ 16	1,2,3	***
+ tiānméndōng (天门冬, 天門冬)	Cough (7862)	24	+ 9	5,8,7	***
báisháo (白芍, 白芍) <i>Radix Paeoniae Alba</i>	Unspecified essential hypertension (4019)	10	25	5,1,4	*****
	Gastritis and duodenitis (535)	6			
	Benign essential hypertension (4011)	5			
	Pure hypercholesterolemia (2720)	5			
	Abdominal pain (7890)	4			
	Gastric ulcer (531)	4			
	Palpitations (7851)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Cardiac dysrhythmia, unspecified (4279)	3			
	Meniere's disease, unspecified (38600)	2			
	Dysmenorrhea (6253)	2			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Abdominal pain, other specified site (78909)	2			
	Other chest pain (78659)	2			
+ diào téng gōu (钓藤钩, 釣藤鉤)	Benign essential hypertension (4011)	64	+ 15	11,9,6	****
+ ròu cōng róng (肉苁蓉, 肉蓯蓉)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	46	+ 13	6,1,7	****
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	44	+ 18	4,10,1	*****
báitóuwēng (白头翁, 白頭翁) <i>Radix Pulsatillae</i>	Pain in joint, other specified sites (71948)	11	3	7,8,9	**
	Chronic pharyngitis (4721)	9			
	Chronic rhinitis (4720)	8			
	Flatulence, eructation, and gas pain (7873)	7			
	Unspecified pruritic disorder (6989)	6			
	Influenza with pneumonia (4870)	4			
	Residual hemorrhoidal skin tags (4559)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Headache (7840)	3			
	Leukorrhea, not specified as infective (6235)	3			
	Cough (7862)	3			
	Throat pain (7841)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Pain in joint, hand (71944)	2			
+ bái jí (白芨, 白芨)	Flatulence, eructation, and gas pain (7873)	24	+ 6	10,7,11	**
+ bái wēi (白薇, 白薇)	Unspecified pruritic disorder (6989)	17	+ 23	8,7,9	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	48	+ 8	8,7,10	*
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified pruritic disorder (6989)	12	+ 23	8,9,7	**
+ ròu dòu kòu (肉豆蔻, 肉豆蔻)	Diarrhea of presumed infectious origin (0093)	15	+ 8	7,8,10	**
+ xià kū huā (夏枯花, 夏枯花)	Pain in joint, other specified sites (71948)	51	+ 11	8,7,9	*
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Pain in joint, other specified sites (71948)	21	+ 3	8,7,10	*
bái wēi (白薇, 白薇) <i>Radix et Rhizoma Cynanchi Atrati</i>	Unspecified pruritic disorder (6989)	6	23	4,6,7	****
	Unspecified menopausal and postmenopausal disorder (6279)	3			
	Cough (7862)	3			
	Other sleep disturbances (78059)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Throat pain (7841)	2			
	Headache (7840)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ bái tóu wēng (白头翁, 白头翁)	Unspecified pruritic disorder (6989)	17	+ 3	8,7,9	**
+ biǎn bó (扁柏, 扁柏)	Cough (7862)	8	+ 6	6,8,7	**
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified menopausal and postmenopausal disorder (6279)	16	+ 23	7,4,6	****
+ pèi lán (佩兰, 佩兰)	Contact dermatitis and other eczema (692)	6	+ 20	5,6,4	****
+ zǐ sū gēng (紫苏梗, 紫苏梗)	Urticaria, unspecified (7089)	13	+ 7	5,6,7	**
bái xiān pí (白鲜皮, 白鲜皮) <i>Cortex Dictamni</i>	Contact dermatitis and other eczema, unspecified cause (6929)	14	12	8,7,6	****
	Unspecified pruritic disorder (6989)	7			
	Pruritus and related conditions (698)	6			
	Contact dermatitis and other eczema (692)	5			
	Dermatophytosis of unspecified site (1109)	4			
	Dermatophytosis (110)	4			
	Allergic rhinitis (477)	2			
	Other psoriasis (6961)	2			
	Dermatomycosis, unspecified (1119)	2			
	Allergic rhinitis, cause unspecified (4779)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bàn zhī lián (半枝莲, 半枝蓮)	Contact dermatitis and other eczema, unspecified cause (6929)	18	+ 3	7,8,12	****
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis (477)	53	+ 2	11,1,12	****
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified pruritic disorder (6989)	19	+ 23	8,7,6	****
+ dì yú (地榆, 地榆)	Contact dermatitis and other eczema, unspecified cause (6929)	19	+ 6	1,7,8	****
+ jīnyínhuā (金银花, 金銀花)	Dermatophytosis (110)	43	+ 3	11,8,9	****
+ mòyào (没药, 沒藥)	Contact dermatitis and other eczema, unspecified cause (6929)	14	+ 4	6,7,8	****
+ sāng bái pí (桑白皮, 桑白皮)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 16	8,4,7	****
+ tǔ fú líng (土茯苓, 土茯苓)	Unspecified pruritic disorder (6989)	25	+ 3	5,1,6	****
+ xīn yí (辛夷, 辛夷)	Allergic rhinitis (477)	80	+ 2	7,6,5	****
+ zào jiǎo cì (皂角刺, 皂角刺)	Chronic hepatitis (5714)	66	+ 5	6,3,7	****
báizhǐ (白芷, 白芷) <i>Radix Angelicae Dahuricae</i>	Allergic rhinitis, cause unspecified (4779)	37	2	5,11,7	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Headache (7840)	6			
	Constipation (5640)	3			
	Unspecified pruritic disorder (6989)	2			
	Chronic nasopharyngitis (4722)	2			
	Allergic rhinitis (477)	2			
	Chronic rhinitis (4720)	2			
+ bái huā lián (白花莲, 白花蓮)	Allergic rhinitis, cause unspecified (4779)	44	+ 12	11,5,12	*
+ bái jiè zǐ (白芥子, 白芥子)	Allergic rhinitis, cause unspecified (4779)	50	+ 5	11,12,5	****
+ hē zǐ (诃子, 訶子)	Allergic rhinitis, cause unspecified (4779)	50	+ 8	11,5,3	**
+ huángjīn guì (黄金桂, 黃金桂)	Allergic rhinitis, cause unspecified (4779)	42	+ 2	10,5,11	*
+ huángqí (黄耆, 黃耆)	Allergic rhinitis, cause unspecified (4779)	55	+ 14	1,9,7	*****
+ lóng yǎnhuā (龙眼花, 龍眼花)	Allergic rhinitis, cause unspecified (4779)	46	+ 1	11,7,12	**
+ mù tōng (木通, 木通)	Allergic rhinitis, cause unspecified (4779)	71	+ 1	11,10,5	****
+ sāng bái pí (桑白皮, 桑白皮)	Other dermatoses (702)	49	+ 16	2,1,12	****
+ shí chāngpú (石菖蒲, 石菖蒲)	Allergic rhinitis, cause unspecified (4779)	52	+ 18	1,3,12	****
+ suàn tóu (蒜头, 蒜頭)	Allergic rhinitis, cause unspecified (4779)	49	+ 17	5,7,6	*
+ xià kū huā (夏枯花, 夏枯花)	Allergic rhinitis, cause unspecified (4779)	57	+ 11	10,11,8	*
+ zǐ sū zǐ (紫苏子, 紫蘇子)	Allergic rhinitis, cause unspecified (4779)	47	+ 16	11,1,10	*
báizhú (白术, 白朮) <i>Rhizoma Atractylodis Macrocephalae</i>	Allergic rhinitis, cause unspecified (4779)	8	14	3,4,5	*****
	Constipation (5640)	7			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	5			
	Functional digestive disorders, not elsewhere classified (564)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Unspecified nonpsychotic mental disorder (3009)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Gastric ulcer (531)	3			
	Chronic rhinitis (4720)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Palpitations (7851)	3			
	Unspecified functional disorder of stomach (5369)	3			
+ dihuáng (地黄, 地黄)	Constipation (5640)	41	+ 21	8,9,7	*****
+ yù jīn (郁金, 鬱金)	Other chest pain (78659)	50	+ 4	5,3,4	*****
bǎi bù (百部, 百部) <i>Radix Stemonae</i>	Bronchitis, not specified as acute or chronic (490)	25	16	5,3,8	****
	Cough (7862)	24			
	Allergic rhinitis, cause unspecified (4779)	6			
	Unspecified chronic bronchitis (4919)	4			
	Asthma, unspecified type, unspecified (49390)	2			
	Chronic nasopharyngitis (4722)	2			
	Pulmonary tuberculosis, unspecified, unspecified (01190)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	44	+ 5	11,5,3	***
+ bái qián (白前, 白前)	Cough (7862)	43	+ 5	5,1,4	***
+ bǎi hé (百合, 百合)	Cough (7862)	45	+ 9	5,8,7	*****
+ biǎn bó (扁柏, 扁柏)	Cough (7862)	41	+ 6	1,3,5	**
+ gǔ yá (穀芽, 穀芽)	Bronchitis, not specified as acute or chronic (490)	42	+ 17	3,1,2	**
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Cough (7862)	42	+ 5	5,3,2	**
+ qián hú (前胡, 前胡)	Cough (7862)	43	+ 5	8,7,5	***
+ sāng yè (桑叶, 桑葉)	Cough (7862)	47	+ 2	1,5,3	*****
+ tiānméndōng (天门冬, 天門冬)	Cough (7862)	52	+ 9	5,8,3	*****
bǎi hé (百合, 百合) <i>Bulbus Lili</i>	Other sleep disturbances (78059)	16	9	5,7,9	*****
	Cough (7862)	7			
	Allergic rhinitis, cause unspecified (4779)	6			
	Acute gastritis, without mention of hemorrhage (53500)	5			
	Unspecified nonpsychotic mental disorder (3009)	4			
	Unspecified psychophysiological malfunction (3069)	3			
	Chronic nasopharyngitis (4722)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Sleep disturbances (7805)	3			
	Symptomatic menopausal or female climacteric states (6272)	3			
	Bronchitis, not specified as acute or chronic (490)	3			
	Chronic rhinitis (4720)	2			
	Palpitations (7851)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ bǎi bù (百部, 百部)	Cough (7862)	45	+ 16	5,8,7	****
+ hé huān pí (合欢皮, 合歡皮)	Other sleep disturbances (78059)	33	+ 18	9,5,7	****
+ lónggǔ (龙骨, 龍骨)	Other sleep disturbances (78059)	41	+ 18	3,1,9	****
+ pípá yè (枇杷叶, 枇杷葉)	Cough (7862)	48	+ 16	3,1,5	****
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	52	+ 18	11,9,7	****
+ wū méi (乌梅, 烏梅)	Unspecified psychophysiological malfunction (3069)	90	+ 8	7,6,10	****
+ wū yào (乌药, 烏藥)	Acute gastritis, without mention of hemorrhage (53500)	46	+ 7	9,7,5	****
+ yìzhì rén (益智仁, 益智仁)	Unspecified functional disorder of intestine (5649)	49	+ 13	7,3,5	****
+ yuǎnzhì (远志, 遠志)	Other sleep disturbances (78059)	45	+ 18	9,11,5	****
bài jiàng cǎo (败酱草, 敗醬草) <i>Herba Patriniae</i>	Chronic rhinitis (4720)	10	3	9,8,4	****
	Chronic nasopharyngitis (4722)	6			
	Unspecified pruritic disorder (6989)	6			
	Other sleep disturbances (78059)	4			
	Leukorrhea, not specified as infective (6235)	4			
	Hepatitis, unspecified (5733)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Malignant neoplasm of colon, unspecified site (1539)	3			
	Viral hepatitis B without mention of hepatic coma, acute or unspecified, without mention of hepatitis delta (07030)	2			
	Pain in joint, shoulder region (71941)	2			
	Abdominal pain (7890)	2			
	Other chronic hepatitis (57149)	2			
	Malignant neoplasm of rectum (1541)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ bàn zhī lián (半枝莲, 半枝蓮)	Malignant neoplasm of rectum, rectosigmoid junction and anus (154)	19	+ 3	8,10,7	****
+ bèimǔ (贝母, 貝母)	Malignant neoplasm of pylorus (1511)	47	+ 5	8,7,5	****
+ dānshēn (丹参, 丹參)	Chronic hepatitis (5714)	41	+ 4	5,8,2	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ hǎipiāoxiāo (海螵蛸, 海螵蛸)	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	41	+ 8	5,8,2	***
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	41	+ 17	8,7,4	***
+ liú jì nú (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	22	+ 4	5,4,8	**
+ lù lù tōng (路路通, 路路通)	Chronic rhinitis (4720)	41	+ 10	8,9,11	***
+ niúbàng zǐ (牛蒡子, 牛蒡子)	Chronic rhinitis (4720)	49	+ 2	5,8,4	***
+ xīn yì (辛夷, 辛夷)	Chronic rhinitis (4720)	42	+ 2	8,5,4	***
+ zào jiǎo cì (皂角刺, 皂角刺)	Chronic rhinitis (4720)	46	+ 5	8,9,10	***
+ zhū dǎn (猪胆, 豬膽)	Chronic rhinitis (4720)	49	+ 3	8,9,10	*
+ zihuādìdīng (紫花地丁, 紫花地丁)	Unspecified pruritic disorder (6989)	20	+ 3	5,8,4	***
bǎnlángēn (板蓝根, 板藍根) <i>Radix Isatidis</i>	Cough (7862)	19	3	5,10,9	****
	Other sleep disturbances (78059)	8			
	Influenza with pneumonia (4870)	6			
	Chronic rhinitis (4720)	5			
	Throat pain (7841)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			
	Other chest pain (78659)	3			
	Bronchitis, not specified as acute or chronic (490)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Chronic pharyngitis (4721)	2			
+ bèimǔ (贝母, 貝母)	Cough (7862)	54	+ 5	5,9,8	****
+ yīyī rén (薏苡仁, 薏苡仁)	Viral warts (0781)	54	+ 1	5,8,9	****
bànxià (半夏, 半夏) <i>Rhizoma Pinelliae Praeparatum</i>	Other sleep disturbances (78059)	22	5	2,10,9	*****
	Allergic rhinitis, cause unspecified (4779)	11			
	Benign essential hypertension (4011)	5			
	Acute gastritis, without mention of hemorrhage (53500)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Unspecified essential hypertension (4019)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Chronic pharyngitis (4721)	3			
	Palpitations (7851)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Cough (7862)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	1,11,4	*****
+ diào téng gōu (钓藤钩, 釣藤鉤)	Benign essential hypertension (4011)	44	+ 15	3,4,10	****
+ xià kūcǎo (夏枯草, 夏枯草)	Other sleep disturbances (78059)	54	+ 11	5,4,10	****
+ xìng rén (杏仁, 杏仁)	Calculus of gallbladder and bile duct without cholecystitis, without mention of obstruction (57490)	43	+ 16	2,3,10	*****
bàn zhī lián (半枝莲, 半枝蓮) <i>Herba Scutellariae Barbatae</i>	Cough (7862)	6	3	11,12,10	***
	Unspecified pruritic disorder (6989)	4			
	Chronic rhinitis (4720)	4			
	Pain in joint, other specified sites (71948)	4			
	Headache (7840)	3			
	Other sleep disturbances (78059)	3			
	Other chest pain (78659)	3			
	Unspecified disorder of globe (3609)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Chronic pharyngitis (4721)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Urinary frequency (78841)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
+ bái xiān pí (白鲜皮, 白鮮皮)	Contact dermatitis and other eczema, unspecified cause (6929)	18	+ 12	7,8,12	***
+ bài jiàng cǎo (败酱草, 敗醬草)	Malignant neoplasm of rectum, rectosigmoid junction and anus (154)	19	+ 3	8,10,7	****
+ hǎizǎo (海藻, 海藻)	Malignant neoplasm of stomach (151)	51	+ 5	5,4,3	**
+ qiānlǐ guāng (千里光, 千里光)	Headache (7840)	7	+ 3	10,9,8	**
+ wángbùliúxíng (王不留行, 王不留行)	Allergic rhinitis, cause unspecified (4779)	7	+ 4	9,8,10	**
běi bǎnlángēn (北板蓝根, 北板藍根) <i>Radix Isatidis</i>	Allergic rhinitis, cause unspecified (4779)	7	3	12,4,9	*
	Cough (7862)	6			
	Chronic rhinitis (4720)	5			
	Headache (7840)	5			
	Other sleep disturbances (78059)	4			
	Chronic pharyngitis (4721)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified disorder of globe (3609)	2			
	Unspecified pruritic disorder (6989)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified functional disorder of intestine (5649)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ bā jǐ tiān (巴戟天, 巴戟天)	Unspecified disorder of pancreatic internal secretion (2519)	13	+ 13	6,1,8	*
+ dà xiǎo jì (大小蓟, 大小蓟)	Hematuria (5997)	10	+ 6	5,4,3	*
+ hǎi gé (海蛤, 海蛤)	Cough (7862)	7	+ 5	5,4,9	*
+ mò yào (没药, 沒藥)	Pain in joint, multiple sites (71949)	8	+ 4	3,9,2	*
+ wáng bù liú xíng (王不留行, 王不留行)	Dyspepsia and other specified disorders of function of stomach (5368)	10	+ 4	9,10,11	*
+ zé lán (泽兰, 澤蘭)	Unspecified functional disorder of intestine (5649)	41	+ 4	4,12,10	*
běi shā shēn (北沙参, 北沙参) <i>Radix Glehniae</i>	Cough (7862)	8	9	2,8,3	****
	Allergic rhinitis, cause unspecified (4779)	5			
	Chronic rhinitis (4720)	5			
	Bronchitis, not specified as acute or chronic (490)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Acute upper respiratory infections of unspecified site (4659)	2			
	Chronic nasopharyngitis (4722)	2			
	Allergic rhinitis (477)	2			
+ bái biǎn dòu (白扁豆, 白扁豆)	Cough (7862)	8	+ 14	7,5,6	***
+ hǔ zhàng (虎杖, 虎杖)	Alcoholic fatty liver (5710)	57	+ 1	7,8,2	***
+ huǒ má rén (火麻仁, 火麻仁)	Unspecified functional disorder of intestine (5649)	26	+ 22	3,6,5	***
+ qín pí (秦皮, 秦皮)	Cough (7862)	10	+ 12	3,2,10	**
+ tiān mén dōng (天门冬, 天門冬)	Cough (7862)	17	+ 9	9,8,6	****
+ xuán shēn (玄参, 玄参)	Cough (7862)	11	+ 21	3,2,1	****
běi yīn chén (北茵陈, 北茵陈) <i>Herba Artemisiae Scopariae</i>	Unspecified viral hepatitis without mention of hepatic coma (0709)	8	1	10,8,9	*
	Headache (7840)	7			
	Cough (7862)	5			
	Other sleep disturbances (78059)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Influenza with pneumonia (4870)	5			
	Unspecified disorder of globe (3609)	4			
	Throat pain (7841)	3			
	Chronic rhinitis (4720)	3			
	Unspecified pruritic disorder (6989)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Alcoholic fatty liver (5710)	2			
	Flatulence, eructation, and gas pain (7873)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other chest pain (78659)	2			
	Pain in joint, other specified sites (71948)	2			
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	55	+ 2	5,4,3	*
+ tiānméndōng (天门冬, 天門冬)	Cough (7862)	9	+ 9	9,8,7	*
+ yīn chén (茵陈, 茵陳)	Unspecified viral hepatitis without mention of hepatic coma (0709)	11	+ 1	1,4,2	*
bèimǔ (贝母, 貝母) <i>Bulbus Fritillariae Cirrhosae</i>	Cough (7862)	15	5	1,3,4	*****
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	12			
	Acute gastritis, without mention of hemorrhage (53500)	8			
	Bronchitis, not specified as acute or chronic (490)	7			
	Allergic rhinitis, cause unspecified (4779)	4			
	Acute bronchitis (4660)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified chronic disease of tonsils and adenoids (4749)	3			
	Chronic nasopharyngitis (4722)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Chronic rhinitis (4720)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
+ bái qián (白前, 白前)	Cough (7862)	23	+ 5	4,1,3	***
+ bài jiàng cǎo (败酱草, 敗醬草)	Malignant neoplasm of pylorus (1511)	47	+ 3	8,7,5	***
+ bǎnlángēn (板蓝根, 板藍根)	Cough (7862)	54	+ 3	5,9,8	*****
+ dīngxiāng (丁香, 丁香)	Other symptoms involving digestive system (78799)	40	+ 19	1,3,5	**
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	56	+ 17	7,5,4	*****
+ huá zé lán (华泽兰, 華澤蘭)	Cough (7862)	41	+ 3	1,2,3	*
+ lái fū zǐ (莱菔子, 萊菔子)	Cough (7862)	44	+ 17	10,9,1	***
+ qián hú (前胡, 前胡)	Cough (7862)	43	+ 5	3,1,2	***
+ wū yào (乌药, 烏藥)	Acute gastritis, without mention of hemorrhage (53500)	73	+ 7	4,5,3	*****
bǐ zǐ cǎo (笔仔草, 筆仔草) <i>Pogonatherum crinitum</i> (Thunb.) Kunth	Pain in joint, other specified sites (71948)	6	11	7,9,5	*
	Other chest pain (78659)	5			
	Flatulence, eructation, and gas pain (7873)	4			
	Headache (7840)	4			
	Abdominal pain, other specified site (78909)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Lumbago (7242)	2			
	Cough (7862)	2			
	Absence of menstruation (6260)	2			
	Pain in joint, hand (71944)	2			
	Unspecified pruritic disorder (6989)	2			
	Pain in joint, lower leg (71946)	2			
	Oliguria and anuria (7885)	2			
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 11	5,10,7	*
bì xiè (萆薢, 萆薢) <i>Rhizoma Dioscoreae Septemlobae</i>	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	56	1	8,9,7	***
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	22			
	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled (25020)	4			
	Pain in joint, other specified sites (71948)	2			
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	46	+ 6	8,7,5	**
+ chuān mù tōng (川木通, 川木通)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	58	+ 1	8,9,10	*
+ chuān xīn lián (穿心莲, 穿心蓮)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	75	+ 3	8,10,4	*
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Chronic renal failure (585)	60	+ 1	8,4,5	**
+ gǔ jīng cǎo (谷精草, 穀精草)	Unspecified disorder of globe (3609)	44	+ 11	8,9,7	**
+ hǎi rén cǎo (海人草, 海人草)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	58	+ 24	4,10,1	*
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	94	+ 4	8,4,7	***
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	47	+ 17	5,7,8	***
+ hóng téng (红藤, 紅藤)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	60	+ 3	8,9,7	*
+ huáng jīng (黄精, 黃精)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	62	+ 9	8,9,10	***
+ mǎ chǐ xiàn (马齿苋, 馬齒莧)	Rectal prolapse (5691)	51	+ 3	8,10,9	**
+ màn tuó luó huā (曼陀罗花, 曼陀羅花)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	76	+ 16	10,8,9	*
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	82	+ 2	8,10,7	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ qiàn cǎogēn (茜草根, 茜草根)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	77	+ 6	8,10,9	*
+ quán xiē (全蝎, 全蝎)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	57	+ 15	8,10,9	*
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	49	+ 13	8,4,9	***
+ shí chún (石菖, 石菖)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	71	+ 12	8,10,9	*
+ shǐ jūnzǐ (使君子, 使君子)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	60	+ 24	8,7,10	*
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	68	+ 1	5,4,8	*
+ tánxiāng (檀香, 檀香)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	59	+ 7	8,10,9	**
+ yùmǐ ruǐ (玉米蕊, 玉米蕊)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	63	+ 1	8,10,9	*
+ zihuādidīng (紫花地丁, 紫花地丁)	Rectal prolapse (5691)	70	+ 3	10,8,7	***
biǎn xù (萹蓄, 萹蓄) <i>Herba Polygoni Avicularis</i>	Cystitis, unspecified (5959)	3	1	10,5,11	**
	Headache (7840)	2			
	Hematuria (5997)	2			
	Other sleep disturbances (78059)	2			
	Chronic rhinitis (4720)	2			
+ pèilán (佩兰, 佩兰)	Peptic ulcer, site unspecified (533)	5	+ 20	6,5,7	**
+ zhūlǐng (猪苓, 猪苓)	Cystitis, unspecified (5959)	4	+ 1	5,7,4	**
biǎn bó (扁柏, 扁柏) <i>Cacumen Platycladi</i>	Cough (7862)	8	6	6,8,7	**
	Absence of menstruation (6260)	7			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Unspecified pruritic disorder (6989)	3			
	Abdominal pain (7890)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Other chest pain (78659)	2			
	Hemorrhoids (455)	2			
	Headache (7840)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Chest pain (7865)	2			
	Epistaxis (7847)	2			
	Constipation (5640)	2			
+ bái chūn gēn (白椿根, 白椿根)	Absence of menstruation (6260)	50	+ 12	6,5,7	*
+ bái wēi (白薇, 白薇)	Cough (7862)	8	+ 23	6,8,7	**
+ bǎi bù (百部, 百部)	Cough (7862)	41	+ 16	1,3,5	**
+ chixiǎodòu (赤小豆, 赤小豆)	Hemorrhage of gastrointestinal tract, unspecified (5789)	12	+ 1	5,6,7	**
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Absence of menstruation (6260)	54	+ 6	5,6,7	**
+ huái huā (槐花, 槐花)	Hemorrhoids (455)	42	+ 6	9,10,6	**
+ pípá yè (枇杷叶, 枇杷葉)	Cough (7862)	73	+ 16	5,6,3	**
+ wàn diǎn jīn (万点金, 萬點金)	Cough (7862)	19	+ 16	1,6,3	**
biǎndòu (扁豆, 扁豆) <i>Semen Lablab Album</i>	Unspecified functional disorder of intestine (5649)	6	14	8,10,9	**
	Unspecified functional disorder of stomach (5369)	4			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Cough (7862)	2			
	Influenza with pneumonia (4870)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Chronic rhinitis (4720)	2			
+ chì fú líng (赤茯苓, 赤茯苓)	Unspecified functional disorder of intestine (5649)	7	+ 1	10,11,3	**
+ hú má rén (胡麻仁, 胡麻仁)	Unspecified functional disorder of intestine (5649)	12	+ 9	10,8,9	**
+ qiàn shí (芡实, 芡實)	Unspecified functional disorder of intestine (5649)	12	+ 8	8,10,9	**
+ qīng pí (青皮, 青皮)	Unspecified functional disorder of intestine (5649)	9	+ 7	5,10,8	**
+ ròu dòu kǒu (肉豆蔻, 肉豆蔻)	Unspecified functional disorder of stomach (5369)	13	+ 8	8,10,11	**
biē jiǎ (鳖甲, 鳖甲) <i>Carapax Trionycis</i>	Pain in joint, other specified sites (71948)	6	9	9,10,8	***
	Lumbago (7242)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Headache (7840)	3			
	Cough (7862)	3			
	Hyperplasia of prostate unspecified (6009)	3			
	Chronic liver disease and cirrhosis (571)	3			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	2			
	Benign essential hypertension (4011)	2			
	Other chest pain (78659)	2			
	Other sleep disturbances (78059)	2			
	Hyperplasia of prostate (600)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	2			
+ gǎoběn (藁本, 藁本)	Headache (7840)	14	+ 2	9,3,10	***
+ xù duàn (续断, 續斷)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	16	+ 13	9,11,10	***
+ yìzhì rén (益智仁, 益智仁)	Hyperplasia of prostate (600)	62	+ 13	3,1,2	***
bīngláng (檳榔, 檳榔) <i>Semen Arecae</i>	Unspecified functional disorder of stomach (5369)	5	24	5,8,4	****
	Chronic rhinitis (4720)	5			
	Unspecified pruritic disorder (6989)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Upper respiratory tract hypersensitivity reaction, site unspecified (4788)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Pain in joint, other specified sites (71948)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			
	Headache (7840)	3			
	Constipation (5640)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Abdominal pain, other specified site (78909)	2			
+ dīng shù xiù (丁竖朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	46	+ 1	8,9,3	**
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	63	+ 11	5,7,8	****
bó zǐ rén (柏子仁, 柏子仁) <i>Semen Platycladi</i>	Palpitations (7851)	17	18	9,5,8	****
	Benign essential hypertension (4011)	15			
	Other sleep disturbances (78059)	12			
	Tachycardia, unspecified (7850)	5			
	Unspecified essential hypertension (4019)	3			
	Constipation (5640)	2			
	Cardiac dysrhythmia, unspecified (4279)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Absence of menstruation (6260)	2			
	Heart disease, unspecified (4299)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bái chūn gēn (白椿根, 白椿根)	Palpitations (7851)	46	+ 12	5,6,4	*
+ cìwǔjiā (刺五加, 刺五加)	Palpitations (7851)	19	+ 5	3,9,8	*
+ shí chāngpú (石菖蒲, 石菖蒲)	Palpitations (7851)	45	+ 18	6,5,3	****
bòhé (薄荷, 薄荷) <i>Herba Menthae</i>	Allergic rhinitis, cause unspecified (4779)	26	2	5,6,4	*****
	Chronic rhinitis (4720)	7			
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Cough (7862)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Gastritis and duodenitis (535)	2			
	Unspecified pruritic disorder (6989)	2			
	Allergic rhinitis (477)	2			
	Functional digestive disorders, not elsewhere classified (564)	2			
+ bái huālián (白花莲, 白花莲)	Allergic rhinitis, cause unspecified (4779)	50	+ 12	5,7,6	*
+ júhóng (橘红, 橘红)	Cough (7862)	32	+ 7	5,8,6	****
bǔ gǔ zhī (补骨脂, 補骨脂) <i>Fructus Psoraleae</i>	Urinary frequency (78841)	9	13	8,9,11	*****
	Vitiligo (70901)	6			
	Absence of menstruation (6260)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Unspecified pruritic disorder (6989)	2			
	Pain in joint (7194)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Headache (7840)	2			
	Rheumatoid arthritis (7140)	2			
	Klippel-Feil syndrome (75616)	2			
+ suǒ yáng (锁阳, 鎖陽)	Urinary frequency (78841)	50	+ 13	12,5,4	**
+ yìzhì rén (益智仁, 益智仁)	Hyperplasia of prostate (600)	57	+ 13	4,1,5	****
cāngěr zǐ (苍耳子, 蒼耳子) <i>Fructus Xanthii(stir-baked)</i>	Allergic rhinitis, cause unspecified (4779)	26	2	11,1,12	*****
	Chronic rhinitis (4720)	13			
	Chronic nasopharyngitis (4722)	10			
	Allergic rhinitis (477)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Hemangioma, any site (2280)	4			
	Chronic sinusitis (473)	3			
	Unspecified pruritic disorder (6989)	2			
	Influenza (487)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Allergic rhinitis, cause unspecified (4779)	45	+ 20	11,8,1	***
+ bái jí lí (白蒺藜, 白蒺藜)	Allergic rhinitis (477)	28	+ 15	1,11,12	**
+ bái xiān pí (白鲜皮, 白鲜皮)	Allergic rhinitis (477)	53	+ 12	11,1,12	***
+ bànxià (半夏, 半夏)	Allergic rhinitis, cause unspecified (4779)	41	+ 5	1,11,4	*****
+ dì lóng (地龙, 地龍)	Allergic rhinitis, cause unspecified (4779)	57	+ 15	12,1,11	*****
+ fú líng (茯苓, 茯苓)	Allergic rhinitis, cause unspecified (4779)	53	+ 1	1,8,12	*****
+ hǎi jīnshā (海金沙, 海金沙)	Allergic rhinitis (477)	42	+ 1	1,2,11	*
+ huáng qín (黄芩, 黄芩)	Allergic rhinitis, cause unspecified (4779)	64	+ 12	1,7,8	*****
+ huòxiāng (藿香, 藿香)	Hemangioma, any site (2280)	82	+ 20	1,2,4	*****
+ jiégěng (桔梗, 桔梗)	Hemangioma, any site (2280)	78	+ 5	8,1,2	*****
+ mùguā (木瓜, 木瓜)	Postgastric surgery syndromes (5642)	41	+ 10	7,8,11	*****
+ mù tōng (木通, 木通)	Allergic rhinitis, cause unspecified (4779)	52	+ 1	1,12,7	***
+ qiàn cǎogēn (茜草根, 茜草根)	Allergic rhinitis, cause unspecified (4779)	41	+ 6	1,2,12	*
+ shēngjiāng (生姜, 生薑)	Allergic rhinitis, cause unspecified (4779)	40	+ 2	1,7,11	*****
+ wū yào (乌药, 烏藥)	Allergic rhinitis, cause unspecified (4779)	42	+ 7	12,11,1	*****
cāngzhú (苍术, 蒼朮) <i>Rhizoma Atractylodis</i>	Leukorrhea, not specified as infective (6235)	5	20	8,7,4	*****
	Diarrhea of presumed infectious origin (0093)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Residual hemorrhoidal skin tags (4559)	2			
	Unspecified pruritic disorder (6989)	2			
	Cough (7862)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Pruritus and related conditions (698)	2			
	Disorders of function of stomach (536)	2			
	Contact dermatitis and other eczema (692)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	52	+ 12	4,5,12	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	73	+ 6	4,8,7	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	76	+ 8	4,7,8	*
+ liánqiáo (连翘, 連翹)	Contact dermatitis and other eczema, unspecified cause (6929)	59	+ 3	8,4,7	*****
+ zhūlǐng (猪苓, 豬苓)	Unspecified functional disorder of stomach (5369)	6	+ 1	7,8,5	***
cǎo dòukòu (草豆蔻, 草豆蔻) <i>Semen Alpiniae Katsumadai</i>	Dyspepsia and other specified disorders of function of stomach (5368)	28	20	8,7,6	*
	Flatulence, eructation, and gas pain (7873)	7			
	Unspecified functional disorder of stomach (5369)	4			
	Unspecified functional disorder of intestine (5649)	4			
	Acute gastritis, without mention of hemorrhage (53500)	3			
	Constipation (5640)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	59	+ 17	8,7,3	*
+ ròu cōng róng (肉苁蓉, 肉從蓉)	Dyspepsia and other specified disorders of function of stomach (5368)	40	+ 13	8,7,9	*
+ wǔ líng zhī (五灵脂, 五靈脂)	Dyspepsia and other specified disorders of function of stomach (5368)	56	+ 4	8,6,2	*
cǎo guǒ (草果, 草果) <i>Fructus Tsaoko</i>	Unspecified functional disorder of intestine (5649)	5	20	10,9,8	*
	Flatulence, eructation, and gas pain (7873)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Unspecified pruritic disorder (6989)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Cough (7862)	2			
+ dīngxiāng (丁香, 丁香)	Peptic ulcer, site unspecified (533)	9	+ 19	10,8,9	*
+ ròu dòukòu (肉豆蔻, 肉豆蔻)	Unspecified functional disorder of intestine (5649)	13	+ 8	8,9,7	*
cǎo jué míng (草决明, 草決明) <i>Semen Cassiae</i>	Constipation (5640)	19	11	5,4,10	***
	Pure hypercholesterolemia (2720)	6			
	Unspecified essential hypertension (4019)	6			
	Benign essential hypertension (4011)	5			
	Absence of menstruation (6260)	4			
	Mixed hyperlipidemia (2722)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Alcoholic fatty liver (5710)	2			
	Headache (7840)	2			
	Flatulence, eructation, and gas pain (7873)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ fān xiè yè (番泻叶, 番瀉葉)	Constipation (5640)	52	+ 22	7,8,5	**
+ gé gēn (葛根, 葛根)	Benign essential hypertension (4011)	65	+ 2	10,8,7	****
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	74	+ 1	5,4,3	****
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	47	+ 22	10,1,11	****
+ qīng xiāng zǐ (青箱子, 青箱子)	Other ill-defined disorders of eye (37999)	46	+ 11	4,6,5	**
+ xī liǎn cǎo (豨薟草, 豨薟草)	Benign essential hypertension (4011)	42	+ 10	6,7,8	**
cè bó yè (侧柏叶, 側柏葉) <i>Cacumen Platycladi</i>	Secondary malignant neoplasm of lung (1970)	6	6	10,11,7	**
	Allergic rhinitis, cause unspecified (4779)	5			
	Epistaxis (7847)	5			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	2			
	Malignant neoplasm of nasopharynx, unspecified site (1479)	2			
	Other chest pain (78659)	2			
	Unspecified pruritic disorder (6989)	2			
	Malignant neoplasm of posterior wall of nasopharynx (1471)	2			
+ ǒu jié (藕节, 藕節)	Epistaxis (7847)	41	+ 6	10,11,12	**
cháihú (柴胡, 柴胡) <i>Radix Bupleuri</i>	Cough (7862)	10	2	4,3,1	*****
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	7			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	7			
	Unspecified functional disorder of stomach (5369)	7			
	Gastric ulcer (531)	6			
	Headache (7840)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Disorders of function of stomach (536)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Other chest pain (78659)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	77	+ 2	5,4,1	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ dì yú (地榆, 地榆)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	52	+ 6	4,3,1	***
+ xì xīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	42	+ 19	1,11,12	*****
chántuì (蝉蜕, 蟬蛻) <i>Periostracum Cicadae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	22	2	1,2,8	*****
	Unspecified pruritic disorder (6989)	17			
	Allergic rhinitis, cause unspecified (4779)	8			
	Pruritus and related conditions (698)	8			
	Allergic rhinitis (477)	4			
	Contact dermatitis and other eczema (692)	4			
	Urticaria, unspecified (7089)	3			
	Cough (7862)	2			
	Chronic rhinitis (4720)	2			
	Chronic nasopharyngitis (4722)	2			
+ chuānxiōng (川芎, 川芎)	Allergic rhinitis, cause unspecified (4779)	69	+ 4	5,12,7	*****
+ huáng qín (黄芩, 黃芩)	Allergic rhinitis, cause unspecified (4779)	65	+ 12	9,8,2	*****
+ jí lí (蒺藜, 蒺藜)	Unspecified pruritic disorder (6989)	39	+ 15	9,1,3	*****
+ juémíngzǐ (决明子, 決明子)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 11	3,5,1	***
+ púgōngyīng (蒲公英, 蒲公英)	Allergic rhinitis, cause unspecified (4779)	46	+ 3	1,5,7	*****
+ suānzǎo rén (酸枣仁, 酸棗仁)	Contact dermatitis and other eczema, unspecified cause (6929)	41	+ 18	3,2,4	*****
+ zǐ sū (紫苏, 紫蘇)	Urticaria, unspecified (7089)	55	+ 2	7,9,8	***
chāngpú (菖蒲, 菖蒲) <i>Acorus calamus L.</i>	Chronic rhinitis (4720)	40	18	6,5,7	**
	Tinnitus, unspecified (38830)	9			
	Cardiac dysrhythmia, unspecified (4279)	6			
	Unspecified functional disorder of intestine (5649)	5			
	Other sleep disturbances (78059)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
+ chuān xīn lián (穿心莲, 穿心蓮)	Chronic rhinitis (4720)	57	+ 3	5,6,4	*
+ fù zǐ (附子, 附子)	Cardiac dysrhythmia, unspecified (4279)	47	+ 19	3,4,6	**
+ gé huā (葛花, 葛花)	Chronic rhinitis (4720)	51	+ 1	5,6,7	*
+ hóng huā (红花, 紅花)	Chronic rhinitis (4720)	58	+ 4	4,2,3	**
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	62	+ 6	6,7,8	**
+ jīn chán (金蝉, 金蟬)	Chronic rhinitis (4720)	67	+ 18	5,4,1	**
+ suàn tóu (蒜头, 蒜頭)	Chronic rhinitis (4720)	57	+ 17	5,6,4	*
+ tán xiāng (檀香, 檀香)	Cardiac dysrhythmia, unspecified (4279)	46	+ 7	6,5,8	**
+ xīn yí (辛夷, 辛夷)	Chronic rhinitis (4720)	72	+ 2	5,6,4	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ yúxīngcǎo (鱼腥草, 魚腥草)	Chronic rhinitis (4720)	61	+ 3	4,5,3	**
+ zào jiǎo cì (皂角刺, 皂角刺)	Chronic rhinitis (4720)	60	+ 5	5,6,4	**
chángshān (常山, 常山) <i>Radix Dichroae</i>	Chronic rhinitis (4720)	10	5	3,2,4	*
	Other chest pain (78659)	7			
	Flatulence, eructation, and gas pain (7873)	5			
	Cough (7862)	4			
	Pain in joint, other specified sites (71948)	4			
	Headache (7840)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified pruritic disorder (6989)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	43	+ 5	12,8,11	*
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	40	+ 6	5,6,4	*
chēqiǎncǎo (车前草, 車前草) <i>Herba Plantaginis</i>	Cystitis, unspecified (5959)	4	1	4,5,7	***
	Hyperplasia of prostate unspecified (6009)	3			
	Chronic rhinitis (4720)	3			
	Dacryoadenitis, unspecified (37500)	3			
	Chronic conjunctivitis (3721)	2			
	Edema (7823)	2			
	Urethritis, unspecified (59780)	2			
chē qián zǐ (车前子, 車前子) <i>Semen Plantaginis</i>	Constipation (5640)	6	1	8,5,4	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Chronic rhinitis (4720)	6			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	3			
	Edema (7823)	3			
	Absence of menstruation (6260)	3			
	Chronic renal failure (585)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Benign essential hypertension (4011)	2			
	Oliguria and anuria (7885)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Unspecified functional disorder of intestine (5649)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chì fú líng (赤茯苓, 赤茯苓)	Hydronephrosis (591)	7	+ 1	5,8,3	**
+ shā yuàn zǐ (沙苑子, 沙苑子)	Chronic rhinitis (4720)	44	+ 9	8,7,10	**
chénpí (陈皮, 陳皮) <i>Pericarpium Citri Reticulatae</i>	Cough (7862)	6	7	6,5,1	*****
	Chronic rhinitis (4720)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Headache (7840)	2			
	Hyperemesis gravidarum with metabolic disturbance, unspecified as to episode of care or not applicable (64310)	2			
	Chronic nasopharyngitis (4722)	2			
	Other sleep disturbances (78059)	2			
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	42	+ 17	8,5,9	****
+ xià kū cǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	84	+ 11	5,3,12	****
chénxiāng (沉香, 沉香) <i>Aquilariae Lignum Resinatum</i>	Unspecified functional disorder of intestine (5649)	4	7	1,3,2	*
	Disorders of function of stomach (536)	4			
	Unspecified pruritic disorder (6989)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Headache (7840)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Cough (7862)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Unspecified functional disorder of stomach (5369)	2			
+ dàn dòu chí (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	40	+ 2	1,5,4	*
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	25	+ 6	6,1,4	*
+ ǒu jiē (藕节, 藕節)	Epistaxis (7847)	57	+ 6	6,5,7	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	48	+ 6	1,12,11	*
+ wú zhū yú (吴茱萸, 吳茱萸)	Other quadriplegia (34409)	72	+ 19	1,11,4	*
+ xīn yì (辛夷, 辛夷)	Allergic rhinitis (477)	40	+ 2	1,10,2	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xuèjié (血竭, 血竭)	Chest pain (7865)	20	+ 6	5,4,1	*
chì fúíng (赤茯苓, 赤茯苓) <i>Poria</i>	Hydronephrosis (591)	3	1	3,7,5	**
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified disorder of globe (3609)	2			
	Cough (7862)	2			
+ biǎndòu (扁豆, 扁豆)	Unspecified functional disorder of intestine (5649)	7	+ 14	10,11,3	**
+ chē qián zǐ (车前子, 車前子)	Hydronephrosis (591)	7	+ 1	5,8,3	**
+ chuān wū (川乌, 川烏)	Benign essential hypertension (4011)	5	+ 10	3,5,7	**
+ jīnqián cǎo (金钱草, 金錢草)	Calculus of kidney (5920)	6	+ 1	5,11,1	**
+ shí wěi (石葦, 石葦)	Urinary frequency (78841)	3	+ 1	7,8,5	*
+ xiǎohuìxiāng (小茴香, 小茴香)	Chronic glomerulonephritis with unspecified pathological lesion in kidney (5829)	49	+ 19	5,7,4	**
+ yùmǐ xū (玉米须, 玉米鬚)	Unspecified functional disorder of intestine (5649)	6	+ 1	5,8,7	*
chì sháo (赤芍, 赤芍) <i>Radix Paeoniae Rubra</i>	Infertility, female, of unspecified origin (6289)	11	21	6,3,5	*****
	Endometriosis, site unspecified (6179)	8			
	Chronic rhinitis (4720)	7			
	Other chest pain (78659)	4			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	2			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	2			
	Dysmenorrhea (6253)	2			
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	43	+ 4	5,7,4	*****
+ kuàndōng huā (款冬花, 款冬花)	Other chest pain (78659)	48	+ 16	11,1,10	*****
+ táo rén (桃仁, 桃仁)	Endometriosis, site unspecified (6179)	42	+ 4	6,10,8	*****
chì xiǎodòu (赤小豆, 赤小豆) <i>Semen Phaseoli</i>	Contact dermatitis and other eczema, unspecified cause (6929)	4	1	5,3,8	***
	Leukorrhea, not specified as infective (6235)	3			
	Unspecified pruritic disorder (6989)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	2			
	Cough (7862)	2			
	Urethral abscess (5970)	2			
+ biǎn bó (扁柏, 扁柏)	Hemorrhage of gastrointestinal tract, unspecified (5789)	12	+ 6	5,6,7	**
+ dōngguā zī (冬瓜子, 冬瓜子)	Chronic rhinitis (4720)	26	+ 1	5,4,3	***
+ shí wěi (石葦, 石葦)	Urinary frequency (78841)	5	+ 1	8,5,3	*
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 11	5,4,7	***
+ yùmǐ xū (玉米须, 玉米须)	Edema (7823)	6	+ 1	5,6,7	*
chōng wèi zǐ (茺蔚子, 茺蔚子) <i>Fructus Leonuri</i>	Unspecified disorder of lacrimal system (3759)	77	4	12,3,1	**
	Unspecified disorder of globe (3609)	6			
+ gǔ jīng cǎo (谷精草, 穀精草)	Unspecified disorder of globe (3609)	47	+ 11	7,8,3	**
+ júhuā (菊花, 菊花)	Unspecified disorder of globe (3609)	44	+ 2	7,3,5	**
+ mù zéi cǎo (木贼草, 木賊草)	Unspecified disorder of globe (3609)	42	+ 2	4,5,1	**
chǔ shí zǐ (褚实子, 褚實子) <i>Fructus Broussonetiae</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8	1	8,10,9	*
	Benign essential hypertension (4011)	4			
	Chronic rhinitis (4720)	4			
	Other sleep disturbances (78059)	4			
	Allergic rhinitis, cause unspecified (4779)	4			
	Other chest pain (78659)	3			
	Unspecified essential hypertension (4019)	3			
	Generalized and unspecified atherosclerosis (4409)	2			
	Pain in joint, other specified sites (71948)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Palpitations (7851)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	47	+ 2	9,8,6	*
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	41	+ 6	6,5,7	*
+ liú jì nú (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 4	8,9,10	*
chuān liàn zǐ (川楝子, 川楝子) <i>Fructus Toosendan</i>	Atherosclerosis (440)	16	7	5,6,3	****
	Gastric ulcer (531)	6			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Endometriosis, site unspecified (6179)	2			
	Hernia of unspecified site without mention of obstruction or gangrene (5539)	2			
	Other chest pain (78659)	2			
	Unspecified functional disorder of intestine (5649)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Duodenal ulcer (532)	2			
+ chuān qī (川七, 川七)	Other chest pain (78659)	33	+ 6	5,11,9	****
+ púgōngyīng (蒲公英, 蒲公英)	Peptic ulcer, site unspecified (533)	47	+ 3	7,1,5	****
+ sānqī (三七, 三七)	Gastric ulcer (531)	64	+ 6	5,10,4	****
+ wū yào (乌药, 烏藥)	Endometriosis, site unspecified (6179)	58	+ 7	12,11,10	****
chuān mù tōng (川木通, 川木通) <i>Caulis Clematidis Armandii</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6	1	4,5,3	*
	Benign essential hypertension (4011)	6			
	Other chest pain (78659)	5			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Chest pain (7865)	2			
	Pure hypercholesterolemia (2720)	2			
	Cardiac dysrhythmias (427)	2			
	Palpitations (7851)	2			
	Unspecified essential hypertension (4019)	2			
	Headache (7840)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	58	+ 1	8,9,10	*
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	67	+ 1	5,4,3	*
+ huàshí cǎo (化石草, 化石草)	Calculus of kidney (5920)	28	+ 1	5,7,8	*
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	54	+ 2	4,5,6	*
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	76	+ 11	5,3,8	*
chuān qī (川七, 川七) <i>Radix NotoGinseng</i>	Other chest pain (78659)	19	6	9,11,8	****
	Diaper or napkin rash (6910)	8			
	Contusion of chest wall (9221)	6			
	Pain in joint, multiple sites (71949)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Allergic rhinitis, cause unspecified (4779)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	2			
	Chest pain (7865)	2			
	Unspecified chronic bronchitis (4919)	2			
+ bái jí lí (白蒺藜, 白蒺藜)	Diaper or napkin rash (6910)	52	+ 15	8,5,7	**
+ chuān liǎn zǐ (川楝子, 川楝子)	Other chest pain (78659)	33	+ 7	5,11,9	****
+ guā lóu (栝蒌, 栝蒌)	Other chest pain (78659)	44	+ 5	11,12,8	**
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Other chest pain (78659)	42	+ 5	5,8,3	**
+ guā lóu rén (栝蒌仁, 栝蒌仁)	Other chest pain (78659)	42	+ 5	5,11,1	****
+ hǔ zhàng (虎杖, 虎杖)	Contusion of chest wall (9221)	54	+ 1	5,1,8	****
+ huái huā (槐花, 槐花)	Residual hemorrhoidal skin tags (4559)	76	+ 6	11,8,9	****
+ máo dōng qīng (毛冬青, 毛冬青)	Unspecified late effects of cerebrovascular disease (4389)	35	+ 3	5,2,7	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	72	+ 6	11,12,1	****
+ sān lèng (三棱, 三棱)	Other chest pain (78659)	23	+ 4	9,10,3	****
+ shān zhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	27	+ 17	9,11,1	****
+ shén qū (神麴, 神麴)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 17	8,9,5	****
+ wàn diǎn jīn (万点金, 萬點金)	Other chest pain (78659)	45	+ 16	8,11,6	**
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	83	+ 11	8,9,5	****
+ yù jīn (郁金, 鬱金)	Other chest pain (78659)	59	+ 4	5,9,4	****
+ zhīqiào (枳壳, 枳殼)	Other chest pain (78659)	41	+ 7	8,7,9	****
chuān shān lóng (穿山龙, 穿山龍) <i>Rhizoma Dioscoreae Nipponicae</i>	Myalgia and myositis, unspecified (7291)	17	10	5,3,4	*
	Pain in joint, multiple sites (71949)	7			
	Lumbago (7242)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Pain in joint (7194)	5			
	Pain in joint, other specified sites (71948)	5			
	Pain in joint, lower leg (71946)	3			
	Pain in joint, hand (71944)	3			
	Pain in joint, shoulder region (71941)	2			
	Other chest pain (78659)	2			
	Backache, unspecified (7245)	2			
+ huángjīn guì (黄金桂, 黃金桂)	Myalgia and myositis, unspecified (7291)	24	+ 2	5,10,11	*
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	42	+ 6	6,7,5	*
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 11	5,3,11	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xuèjié (血竭, 血竭)	Chest pain (7865)	19	+ 6	3,2,5	*
chuān wū (川乌, 川烏) <i>Radix Aconiti</i>	Lumbago (7242)	4	10	5,3,1	***
	Benign essential hypertension (4011)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Other chest pain (78659)	2			
	Monoplegia of upper limb affecting unspecified side (34440)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ chì fúlíng (赤茯苓, 赤茯苓)	Benign essential hypertension (4011)	5	+ 1	3,5,7	**
+ qiānghuó (羌活, 羌活)	Myalgia and myositis, unspecified (7291)	5	+ 2	5,11,1	***
+ ròuguì (肉桂, 肉桂)	Benign essential hypertension (4011)	8	+ 19	3,2,5	***
+ tiān nán xīng (天南星, 天南星)	Benign essential hypertension (4011)	4	+ 5	5,1,3	**
chuān xīn lián (穿心莲, 穿心蓮) <i>Herba Andrographis</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7	3	5,3,2	*
	Other sleep disturbances (78059)	6			
	Cough (7862)	6			
	Chronic rhinitis (4720)	5			
	Headache (7840)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified disorder of globe (3609)	3			
	Influenza with pneumonia (4870)	2			
	Other chest pain (78659)	2			
	Absence of menstruation (6260)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ báijāngcán (白僵蚕, 白殭蠶)	Facial nerve disorder, unspecified (3519)	44	+ 15	2,7,8	*
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	75	+ 1	8,10,4	*
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	57	+ 18	5,6,4	*
+ fú xiǎomài (浮小麦, 浮小麥)	Generalized hyperhidrosis (7808)	48	+ 8	7,8,5	*
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	42	+ 6	6,7,8	*
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	65	+ 18	11,3,10	*
+ tánxiāng (檀香, 檀香)	Other chest pain (78659)	46	+ 7	2,1,6	*
+ wú zhūyú (吴茱萸, 吳茱萸)	Other quadriplegia (34409)	53	+ 19	5,11,4	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61	+ 11	5,7,3	*
+ yè jiāo téng (夜交藤, 夜交藤)	Other sleep disturbances (78059)	43	+ 18	11,10,3	*
chuānxiōng (川芎, 川芎) <i>Radix Chuanxiong</i>	Chest pain, unspecified (78650)	14	4	4,7,11	*****
	Chest pain (7865)	12			
	Contusion of chest wall (9221)	9			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8			
	Headache (7840)	6			
	Other chest pain (78659)	4			
	Other sleep disturbances (78059)	2			
	Sprain of thoracic (8471)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ chán tuì (蝉蜕, 蝉蜕)	Allergic rhinitis, cause unspecified (4779)	69	+ 2	5,12,7	*****
+ dāng guī (当归, 當歸)	Absence of menstruation (6260)	73	+ 25	2,8,7	*****
+ rén shēn (人参, 人參)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	37	+ 14	3,4,8	*****
+ suān zǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	47	+ 18	11,12,2	*****
+ tán xiāng (檀香, 檀香)	Chest pain (7865)	42	+ 7	11,1,2	**
chūn gēn pí (椿根皮, 椿根皮) <i>Cortex Ailanthi</i>	Leukorrhea, not specified as infective (6235)	44	8	11,5,10	*
	Absence of menstruation (6260)	4			
	Dysmenorrhea (6253)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Cervicitis and endocervicitis (6160)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	79	+ 12	10,5,11	*
+ bái guǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	63	+ 16	12,11,1	*
+ bái huā lián (白花莲, 白花蓮)	Leukorrhea, not specified as infective (6235)	54	+ 12	12,11,10	*
+ bái jī guān huā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	72	+ 6	8,11,4	*
+ bái tóu wēng (白头翁, 白頭翁)	Leukorrhea, not specified as infective (6235)	48	+ 3	8,7,10	*
+ cāng zhú (苍术, 蒼朮)	Leukorrhea, not specified as infective (6235)	76	+ 20	4,7,8	*
+ hǎi rén cǎo (海人草, 海人草)	Leukorrhea, not specified as infective (6235)	53	+ 24	8,7,11	*
+ huáng bǎi (黄柏, 黃柏)	Leukorrhea, not specified as infective (6235)	52	+ 12	8,6,9	*
+ lóng yǎn huā (龙眼花, 龍眼花)	Leukorrhea, not specified as infective (6235)	54	+ 1	6,7,8	*
+ mián yīn chén (绵茵陈, 綿茵陳)	Leukorrhea, not specified as infective (6235)	49	+ 1	11,10,4	*
+ qiàn cǎo gēn (茜草根, 茜草根)	Leukorrhea, not specified as infective (6235)	57	+ 6	8,10,9	*
+ qiàn shí (芡实, 芡實)	Leukorrhea, not specified as infective (6235)	51	+ 8	1,5,10	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ suàn tóu (蒜头, 蒜頭)	Leukorrhea, not specified as infective (6235)	76	+ 17	8,4,5	*
ciwūjiā (刺五加, 刺五加) <i>Radix et Rhizoma seu Caulis Acanthopanax Senticosi</i>	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	4	5	3,5,6	*
	Other sleep disturbances (78059)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
	Cardiac dysrhythmia, unspecified (4279)	2			
	Palpitations (7851)	2			
+ bó zǐ rén (柏子仁, 柏子仁)	Palpitations (7851)	19	+ 18	3,9,8	*
+ fùpénzǐ (覆盆子, 覆盆子)	Urinary frequency (78841)	49	+ 8	3,2,1	*
+ máhuáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	40	+ 8	8,6,7	*
cōng bái (葱白, 葱白) <i>Bulbus Allii Fistulosi</i>	Cough (7862)	5	2	1,2,4	***
	Chronic rhinitis (4720)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified pruritic disorder (6989)	2			
	Urinary frequency (78841)	2			
	Other sleep disturbances (78059)	2			
	Acute nasopharyngitis [common cold] (460)	2			
+ fùpénzǐ (覆盆子, 覆盆子)	Urinary frequency (78841)	8	+ 8	1,2,3	***
+ jīnqián cǎo (金钱草, 金錢草)	Chronic rhinitis (4720)	6	+ 1	1,7,2	**
dà dīng huáng (大丁癢, 大丁癢) <i>Radix Cudrariae Gerontogae</i>	Other chest pain (78659)	13	12	8,7,3	**
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6			
	Unspecified pruritic disorder (6989)	6			
	Flatulence, eructation, and gas pain (7873)	5			
	Cough (7862)	4			
	Headache (7840)	4			
	Pain in joint, other specified sites (71948)	3			
	Stomatitis and mucositis (ulcerative) (5280)	3			
	Pain in joint, hand (71944)	3			
	Other sleep disturbances (78059)	2			
	Throat pain (7841)	2			
	Urinary frequency (78841)	2			
	Cystitis, unspecified (5959)	2			
	Unspecified disorder of globe (3609)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	2			
+ dì wúgōng (地蜈蚣, 地蜈蚣)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	17	+ 15	8,7,9	**
+ sāng zhī (桑枝, 桑枝)	Pain in joint, hand (71944)	46	+ 10	12,3,8	**
+ wàn diǎn jīn (万点金, 萬點金)	Other chest pain (78659)	18	+ 16	3,1,2	**
+ yī tiáo gēn (一条根, 一條根)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 2	8,7,9	**
dàfēng cǎo (大风草, 大風草) <i>Setaria palmifolia</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4	10	8,5,7	*
	Unspecified pruritic disorder (6989)	4			
	Cough (7862)	3			
	Chronic rhinitis (4720)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Headache (7840)	2			
	Allergic rhinitis (477)	2			
+ dàfēng téng (大风藤, 大風藤)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8	+ 2	5,4,1	*
+ dàxiǎo jì (大小薊, 大小薊)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6	+ 6	5,4,7	*
+ liú jì nǚ (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	+ 4	11,12,10	*
dàfēng téng (大风藤, 大風藤) <i>Caulis Sinomenii</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8	2	4,5,3	*
	Pain in joint, hand (71944)	5			
	Unspecified pruritic disorder (6989)	4			
	Pain in joint, other specified sites (71948)	4			
	Unspecified disorder of autonomic nervous system (3379)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Other chest pain (78659)	3			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	2			
	Influenza with pneumonia (4870)	2			
	Pain in joint, lower leg (71946)	2			
	Headache (7840)	2			
+ dàfēng cǎo (大风草, 大風草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8	+ 10	5,4,1	*
+ liú jì nǚ (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	17	+ 4	1,3,4	*
+ wǔ jiā pí (五加皮, 五加皮)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	24	+ 10	3,1,4	*
dàfù pí (大腹皮, 大腹皮) <i>Pericarpium Arecae</i>	Flatulence, eructation, and gas pain (7873)	6	7	4,1,8	***
	Unspecified functional disorder of intestine (5649)	6			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Dyspepsia and other specified disorders of function of stomach (5368)	6			
	Unspecified functional disorder of stomach (5369)	4			
	Constipation (5640)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
+ dàxiǎo jì (大小蓟, 大小薊)	Dyspepsia and other specified disorders of function of stomach (5368)	9	+ 6	8,7,5	****
+ hǎi gé (海蛤, 海蛤)	Flatulence, eructation, and gas pain (7873)	8	+ 5	10,8,11	****
+ pèilán (佩兰, 佩蘭)	Dyspepsia and other specified disorders of function of stomach (5368)	13	+ 20	6,5,8	****
+ wángbùliúxíng (王不留行, 王不留行)	Dyspepsia and other specified disorders of function of stomach (5368)	8	+ 4	2,4,10	**
dàhuáng (大黄, 大黃) <i>Radix et Rhizoma Rhei</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	13	22	8,1,5	*****
	Peptic ulcer, site unspecified (533)	8			
	Constipation (5640)	8			
	Allergic rhinitis, cause unspecified (4779)	6			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Disorders of function of stomach (536)	4			
	Absence of menstruation (6260)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Contact dermatitis and other eczema (692)	2			
	Pure hypercholesterolemia (2720)	2			
+ bái biǎndòu (白扁豆, 白扁豆)	Constipation (5640)	41	+ 14	1,11,7	****
+ fān xiè yè (番泻叶, 番瀉葉)	Peptic ulcer, site unspecified (533)	58	+ 22	1,7,8	**
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	68	+ 4	2,1,4	*****
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	46	+ 17	2,7,3	****
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	71	+ 2	7,8,6	****
+ shú dì huáng (熟地黄, 熟地黃)	Constipation (5640)	53	+ 25	12,9,1	*****
dà jīn yīng (大金樱, 大金櫻) <i>Fructus Rosae Laevigatae</i>	Urinary frequency (78841)	16	8	1,7,9	*
	Frequency of urination and polyuria (7884)	7			
	Hyperplasia of prostate (600)	6			
	Prostatitis, unspecified (6019)	3			
	Other sleep disturbances (78059)	3			
	Urinary incontinence (7883)	3			
	Hyperplasia of prostate unspecified (6009)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified disorder of male genital organs (6089)	3			
	Lumbago (7242)	3			
	Psychosexual dysfunction with other specified psychosexual dysfunctions (30279)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Unspecified disorder of autonomic nervous system (3379)	2			
	Impotence of organic origin (60784)	2			
+ báiguǒ (白果, 白果)	Urinary frequency (78841)	25	+ 16	1,11,2	*
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Hyperplasia of prostate (600)	52	+ 1	8,5,4	*
+ nǚzhēn zǐ (女贞子, 女贞子)	Urinary frequency (78841)	18	+ 9	3,7,5	*
+ xiǎojīn yīng (小金樱, 小金樱)	Urinary frequency (78841)	29	+ 8	7,8,9	*
dà qīng yè (大青叶, 大青葉) <i>Folium Isatidis</i>	Cough (7862)	9	3	5,4,7	***
	Pain in joint, other specified sites (71948)	6			
	Headache (7840)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Throat pain (7841)	4			
	Other sleep disturbances (78059)	3			
	Unspecified pruritic disorder (6989)	3			
	Unspecified disorder of globe (3609)	3			
	Pain in joint, shoulder region (71941)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Pain in joint, hand (71944)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Chronic rhinitis (4720)	2			
	Pain in joint, upper arm (71942)	2			
	Lumbago (7242)	2			
+ báihuāshé shé cǎo (白花蛇舌草, 白花蛇舌草)	Contact dermatitis and other eczema, unspecified cause (6929)	9	+ 3	7,4,5	***
+ gǎoběn (藁本, 藁本)	Headache (7840)	10	+ 2	11,5,10	***
+ jiǔ céng tǎ (九层塔, 九層塔)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 7	4,6,5	**
+ shā rén (砂仁, 砂仁)	Psoriatic arthropathy (6960)	43	+ 20	5,6,7	***
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	29	+ 3	11,6,10	***
dà suàn (大蒜, 大蒜) <i>Allium sativum</i> L.	Constipation (5640)	6	24	3,7,5	*
	Flatulence, eructation, and gas pain (7873)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Headache (7840)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified functional disorder of intestine (5649)	2			
	Unspecified pruritic disorder (6989)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified functional disorder of stomach (5369)	2			
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	44	+ 6	12,7,11	*
+ wú zhūyú (吴茱萸, 吴茱萸)	Other quadriplegia (34409)	52	+ 19	5,4,7	*
dàxiǎo jì (大小蓟, 大小蓟) <i>Herba Cirsii Japonici; Radix Cirsii Japonici</i>	Unspecified disorder of globe (3609)	6	6	5,4,3	***
	Unspecified pruritic disorder (6989)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Other sleep disturbances (78059)	4			
	Cough (7862)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Urinary frequency (78841)	3			
	Hematuria (5997)	3			
	Absence of menstruation (6260)	3			
	Abdominal pain, other specified site (78909)	3			
	Other chest pain (78659)	3			
	Headache (7840)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Anorexia (7830)	2			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	2			
	Epistaxis (7847)	2			
	Chronic rhinitis (4720)	2			
	Enuresis (3076)	2			
+ běi bǎnlángēn (北板蓝根, 北板蓝根)	Hematuria (5997)	10	+ 3	5,4,3	*
+ dàfēng cǎo (大风草, 大风草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6	+ 10	5,4,7	*
+ dàfùpí (大腹皮, 大腹皮)	Dyspepsia and other specified disorders of function of stomach (5368)	9	+ 7	8,7,5	***
+ dì yú (地榆, 地榆)	Hematuria (5997)	8	+ 6	7,4,5	***
+ hàn lián cǎo (旱莲草, 旱莲草)	Hematuria (5997)	17	+ 9	5,1,9	***
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Absence of menstruation (6260)	56	+ 6	5,9,8	**
+ júhóng (橘红, 橘红)	Cough (7862)	13	+ 7	8,1,10	***
+ tǔ fúlíng (土茯苓, 土茯苓)	Infection of kidney, unspecified (5909)	43	+ 3	11,1,12	***

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xiǎojīn yīng (小金櫻, 小金櫻)	Urinary frequency (78841)	25	+ 8	5,7,9	*
dàzǎo (大棗, 大棗) <i>Fructus Jujubae</i>	Dyspepsia and other specified disorders of function of stomach (5368)	11	14	11,8,10	*****
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Absence of menstruation (6260)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Cough (7862)	3			
	Other chest pain (78659)	3			
	Unspecified pruritic disorder (6989)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Secondary malignant neoplasm of lung (1970)	2			
	Chronic rhinitis (4720)	2			
	Asthma, unspecified type, unspecified (49390)	2			
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	85	+ 17	9,10,11	**
+ jīngmǐ (粳米, 粳米)	Dyspepsia and other specified disorders of function of stomach (5368)	53	+ 14	8,1,9	*
+ lù lù tōng (路路通, 路路通)	Allergic rhinitis, cause unspecified (4779)	45	+ 10	3,2,5	***
+ shānzhā (山楂, 山楂)	Dyspepsia and other specified disorders of function of stomach (5368)	60	+ 17	9,8,5	*****
dānshēn (丹參, 丹參) <i>Radix et Rhizoma Salviae Miltiorrhizae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	5	4	5,4,8	*****
	Monoplegia of upper limb affecting unspecified side (34440)	4			
	Other chest pain (78659)	4			
	Congenital monoplegia (3433)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	2			
	Unspecified chronic liver disease without mention of alcohol (5719)	2			
+ báihuāshé shé cǎo (白花蛇舌草, 白花蛇舌草)	Unspecified viral hepatitis without mention of hepatic coma (0709)	2	+ 3	5,4,3	*****
	Chronic hepatitis (5714)	75			
	Chronic hepatitis (5714)	41			
	Contact dermatitis and other eczema, unspecified cause (6929)	12			
	Benign essential hypertension (4011)	48			
	Other chronic hepatitis (57149)	44			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61			
	Gastrojejunal ulcer (534)	33			
+ xià kǔcǎo (夏枯草, 夏枯草)			+ 11	3,4,5	*****
dàn dòuchǐ (淡豆豉, 淡豆豉) <i>Semen Sojae Praeparatum</i>			2	5,7,8	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	3			
	Cough (7862)	3			
	Sleep disturbances (7805)	2			
	Pain in joint, shoulder region (71941)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ cháhú (柴胡, 柴胡)	Gastrojejunal ulcer (534)	77	+ 2	5,4,1	****
+ chénxiāng (沉香, 沉香)	Gastrojejunal ulcer (534)	40	+ 7	1,5,4	*
+ gégēn (葛根, 葛根)	Gastrojejunal ulcer (534)	68	+ 2	7,5,4	****
+ gé huā (葛花, 葛花)	Gastrojejunal ulcer (534)	56	+ 1	5,7,4	*
+ hǎi jīnshā (海金沙, 海金沙)	Gastrojejunal ulcer (534)	59	+ 1	5,7,1	*
+ hǎi rén cǎo (海人草, 海人草)	Gastrojejunal ulcer (534)	54	+ 24	5,7,1	*
+ hé yè (荷叶, 荷叶)	Gastrojejunal ulcer (534)	95	+ 1	5,6,7	****
+ huángjīng (黄精, 黄精)	Gastrojejunal ulcer (534)	80	+ 9	1,5,8	****
+ jīnqián cǎo (金钱草, 金錢草)	Gastrojejunal ulcer (534)	46	+ 1	1,2,4	**
+ juémíngzǐ (决明子, 决明子)	Gastrojejunal ulcer (534)	62	+ 11	1,5,11	****
+ lú gēn (芦根, 蘆根)	Gastrojejunal ulcer (534)	49	+ 11	7,6,5	****
+ pípá yè (枇杷叶, 枇杷葉)	Gastrojejunal ulcer (534)	47	+ 16	7,1,5	****
+ qiānniú zǐ (牵牛子, 牽牛子)	Gastrojejunal ulcer (534)	48	+ 22	5,4,7	*
+ qīng hāo (青蒿, 青蒿)	Gastrojejunal ulcer (534)	69	+ 23	5,7,6	****
+ sāng yè (桑叶, 桑葉)	Gastrojejunal ulcer (534)	50	+ 2	4,5,1	****
+ shǐ jūnzǐ (使君子, 使君子)	Gastrojejunal ulcer (534)	56	+ 24	1,12,4	*
+ xiāng rú (香薷, 香薷)	Gastrojejunal ulcer (534)	45	+ 2	7,5,6	**
+ xuánfùhuā (旋覆花, 旋覆花)	Gastrojejunal ulcer (534)	38	+ 5	8,9,7	**
+ xuèjié (血竭, 血竭)	Gastrojejunal ulcer (534)	45	+ 6	5,7,4	**
dàn zhú yè (淡竹叶, 淡竹葉) <i>Herba Lophatheri</i>	Contact dermatitis and other eczema, unspecified cause (6929)	8	11	8,7,10	*****
	Stomatitis and mucositis (ulcerative) (5280)	4			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			
	Other sleep disturbances (78059)	3			
	Cough (7862)	3			
	Chronic rhinitis (4720)	2			
	Unspecified functional disorder of intestine (5649)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
dāngguī (当归, 當歸) <i>Radix Angelicae Sinensis</i>	Cystitis, unspecified (5959)	2	25	5,8,11	*****
	Chronic nasopharyngitis (4722)	7			
	Allergic rhinitis, cause unspecified (4779)	6			
	Absence of menstruation (6260)	5			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	4			
	Hemorrhoids (455)	3			
	Excessive or frequent menstruation (6262)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Other and unspecified coagulation defects (2869)	2			
	Peptic ulcer, site unspecified (533)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Endometriosis, site unspecified (6179)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Other sleep disturbances (78059)	2			
	Residual hemorrhoidal skin tags (4559)	2			
	Unspecified pruritic disorder (6989)	2			
+ chuānxiōng (川芎, 川芎)	Absence of menstruation (6260)	73	+ 4	2,8,7	*****
dāngguī wěi (当归尾, 當歸尾) <i>Radix Angelicae Sinensis</i> (lower part)	Unspecified functional disorder of stomach (5369)	10	4	12,1,11	****
	Constipation (5640)	4			
	Dizziness and giddiness (7804)	4			
	Disorders of menstruation and other abnormal bleeding from female genital tract (626)	3			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	2			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Scanty or infrequent menstruation (6261)	2			
	Unspecified pruritic disorder (6989)	2			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	2			
+ gǒu jǐ (狗脊, 狗脊)	Unspecified functional disorder of stomach (5369)	60	+ 13	11,10,1	****
+ jiāng cán (僵蚕, 殭蠶)	Trigeminal neuralgia (3501)	16	+ 15	1,2,12	****
+ jiùcài zǐ (韭菜子, 韭菜子)	Unspecified functional disorder of stomach (5369)	29	+ 13	8,9,10	**
dāng shēn (党参, 黨參) <i>Radix Codonopsis</i>	Syncope and collapse (7802)	4	14	8,4,7	*****
	Absence of menstruation (6260)	3			
	Unspecified functional disorder of stomach (5369)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	3			
	Anemia associated with other specified nutritional deficiency (2818)	2			
	Chronic rhinitis (4720)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Cough (7862)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Edema (7823)	2			
	Unspecified pruritic disorder (6989)	2			
	Constipation (5640)	2			
	Chronic nasopharyngitis (4722)	2			
+ huáng qín (黄芩, 黄芩)	Chronic pharyngitis and nasopharyngitis (472)	63	+ 12	9,7,8	*****
dǎodì wúgōng (倒地蜈蚣, 倒地蜈蚣) <i>Rhizoma Helminthostachytis</i>	Chronic rhinitis (4720)	9	3	2,3,5	****
	Allergic rhinitis, cause unspecified (4779)	6			
	Pain in joint, shoulder region (71941)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Gouty arthropathy (2740)	4			
	Other chest pain (78659)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Cough (7862)	3			
	Pain in joint, hand (71944)	3			
	Unspecified pruritic disorder (6989)	2			
	Headache (7840)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Other sleep disturbances (78059)	2			
+ wēilíng xiān (威灵仙, 威靈仙)	Gouty arthropathy (2740)	41	+ 10	7,11,5	****
dēngxīncǎo (灯心草, 燈心草) <i>Medulla Junci</i>	Unspecified functional disorder of intestine (5649)	3	1	10,7,8	**
	Other sleep disturbances (78059)	3			
	Unspecified pruritic disorder (6989)	2			
	Prurigo (6982)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Urethritis, not sexually transmitted, and urethral syndrome (597)	2			
	Influenza with pneumonia (4870)	2			
	Pain in joint, other specified sites (71948)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
+ jù mài (瞿麦, 瞿麥)	Edema (7823)	4	+ 1	4,10,2	**
+ pàngdàhǎi (胖大海, 胖大海)	Voice disturbance (7844)	18	+ 5	7,8,10	**
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Edema (7823)	7	+ 3	10,7,5	*
dì fū zǐ (地肤子, 地膚子) <i>Fructus Kochiae</i>	Unspecified pruritic disorder (6989)	13	1	3,1,2	****
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Contact dermatitis and other eczema (692)	7			
	Urticaria, unspecified (7089)	4			
	Pruritus and related conditions (698)	3			
	Dermatophytosis of unspecified site (1109)	3			
	Erythematousquamous dermatosis (690)	2			
	Actinic keratosis (7020)	2			
	Leukorrhea, not specified as infective (6235)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Contact dermatitis and other eczema, unspecified cause (6929)	28	+ 15	8,7,2	****
+ sāng bái pí (桑白皮, 桑白皮)	Contact dermatitis and other eczema, unspecified cause (6929)	49	+ 16	8,4,2	****
dì gǔ pí (地骨皮, 地骨皮) <i>Cortex Lycii</i>	Contact dermatitis and other eczema, unspecified cause (6929)	5	23	8,9,7	****
	Allergic rhinitis, cause unspecified (4779)	5			
	Unspecified pruritic disorder (6989)	4			
	Cough (7862)	4			
	Prurigo (6982)	3			
	Symptomatic menopausal or female climacteric states (6272)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Chronic nasopharyngitis (4722)	2			
	Chronic rhinitis (4720)	2			
+ bái jí lí (白蒺藜, 白蒺藜)	Contact dermatitis and other eczema (692)	41	+ 15	8,9,5	**
+ bái tóu wēng (白头翁, 白頭翁)	Unspecified pruritic disorder (6989)	12	+ 3	8,9,7	**
+ bái wēi (白薇, 白薇)	Unspecified menopausal and postmenopausal disorder (6279)	16	+ 23	7,4,6	****
+ bái xiān pí (白鲜皮, 白鮮皮)	Unspecified pruritic disorder (6989)	19	+ 12	8,7,6	****
+ dì yú (地榆, 地榆)	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	6	+ 6	9,7,6	****
+ má huáng gēn (麻黄根, 麻黃根)	Generalized hyperhidrosis (7808)	41	+ 8	7,8,9	*
+ shí gāo (石膏, 石膏)	Unspecified pruritic disorder (6989)	25	+ 11	8,9,10	****
+ shí hú (石斛, 石斛)	Unspecified functional disorder of intestine (5649)	13	+ 9	8,5,9	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
dìhuáng (地黄, 地黄) <i>Radix Rehmanniae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	8	21	7,9,5	*****
	Unspecified functional disorder of intestine (5649)	6			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	5			
	Unspecified pruritic disorder (6989)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Constipation (5640)	3			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	3			
	Residual hemorrhoidal skin tags (4559)	3			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Urinary frequency (78841)	2			
	Other sleep disturbances (78059)	2			
	Diabetes mellitus (250)	2			
+ báizhú (白术, 白朮)	Constipation (5640)	41	+ 14	8,9,7	*****
+ gāncǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	69	+ 14	3,5,8	*****
+ gǒuqǐzi (枸杞子, 枸杞子)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	51	+ 9	5,4,3	*****
+ hǎi jīnshā (海金沙, 海金沙)	Urethritis, not sexually transmitted, and urethral syndrome (597)	41	+ 1	5,1,6	*
+ huái huā (槐花, 槐花)	Residual hemorrhoidal skin tags (4559)	55	+ 6	7,5,6	***
+ zhīzi (梔子, 梔子)	Unspecified nonpsychotic mental disorder (3009)	41	+ 11	6,5,7	*****
dì lóng (地龙, 地龍) <i>Pheretima</i>	Benign essential hypertension (4011)	19	15	1,5,2	*****
	Other sleep disturbances (78059)	15			
	Unspecified essential hypertension (4019)	13			
	Palpitations (7851)	9			
	Cardiac dysrhythmia, unspecified (4279)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Peripheral enthesopathies and allied syndromes (726)	2			
	Cough (7862)	2			
+ báijiāngcán (白僵蚕, 白僵蠶)	Pneumonia due to respiratory syncytial virus (4801)	63	+ 15	2,1,6	***
+ cāngěr zi (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	12,1,11	*****
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	85	+ 2	1,11,3	*****
+ huáng qín (黄芩, 黄芩)	Allergic rhinitis, cause unspecified (4779)	48	+ 12	4,9,1	*****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	45	+ 6	6,5,7	**
+ jīnyínhuā (金银花, 金銀花)	Cough (7862)	67	+ 3	1,12,11	****
+ jīngmǐ (粳米, 粳米)	Benign essential hypertension (4011)	52	+ 14	1,3,12	*
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	43	+ 2	5,4,1	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	60	+ 2	2,1,5	**
dì wúgōng (地蜈蚣, 地蜈蚣) <i>Scolopendra</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	15	15	9,5,7	**
	Other chest pain (78659)	4			
	Lumbago (7242)	3			
	Late effect of contusion (9063)	3			
	Pain in joint, lower leg (71946)	2			
	Pain in joint, other specified sites (71948)	2			
	Sciatica (7243)	2			
+ dà dīng huáng (大丁癩, 大丁癩)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	17	+ 12	8,7,9	**
dì yú (地榆, 地榆) <i>Radix Sanguisorbae</i>	Residual hemorrhoidal skin tags (4559)	4	6	3,4,2	****
	Hemorrhoids (455)	3			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	3			
	Gastric ulcer (531)	3			
	Secondary malignant neoplasm of lung (1970)	3			
	Rectal prolapse (5691)	3			
	Internal hemorrhoids without mention of complication (4550)	3			
	Peptic ulcer, site unspecified (533)	3			
	Malignant neoplasm of colon, unspecified site (1539)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Constipation (5640)	2			
	Malignant neoplasm of cervix uteri, unspecified site (1809)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Malignant neoplasm of prostate (185)	2			
+ àiyè (艾叶, 艾葉)	Absence of menstruation (6260)	21	+ 6	2,4,3	****
+ bái xiān pí (白鮮皮, 白鮮皮)	Contact dermatitis and other eczema, unspecified cause (6929)	19	+ 12	1,7,8	****
+ chái hú (柴胡, 柴胡)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	52	+ 2	4,3,1	****
+ dà xiǎo jì (大小蓟, 大小蓟)	Hematuria (5997)	8	+ 6	7,4,5	****
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	6	+ 23	9,7,6	****
+ dú huó (独活, 獨活)	Malignant neoplasm of prostate (185)	9	+ 10	10,4,9	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ hónghuā (红花, 紅花)	Rectal prolapse (5691)	41	+ 4	4,7,8	***
+ xiānmáo (仙茅, 仙茅)	Unspecified functional disorder of intestine (5649)	4	+ 13	7,10,9	**
diào téng gōu (钓藤钩, 釣藤鉤) <i>Ramulus Uncariae Cum Uncis</i>	Benign essential hypertension (4011)	11	15	11,10,3	****
	Headache (7840)	9			
	Other anxiety states (30009)	7			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	4			
	Other sleep disturbances (78059)	4			
	Other chest pain (78659)	3			
	Dizziness and giddiness (7804)	3			
	Unspecified essential hypertension (4019)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Diarrhea of presumed infectious origin (0093)	2			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	2			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
+ báisháo (白芍, 白芍)	Benign essential hypertension (4011)	64	+ 25	11,9,6	****
+ bànxià (半夏, 半夏)	Benign essential hypertension (4011)	44	+ 5	3,4,10	****
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	59	+ 1	5,6,7	**
+ guàn zhòng (贯众, 貫眾)	Headache (7840)	13	+ 3	11,10,9	**
+ shuāng gōu téng (双钩藤, 雙鉤藤)	Unspecified essential hypertension (4019)	15	+ 15	4,3,12	**
+ shuǐ dīngxiāng (水丁香, 水丁香)	Unspecified hypertensive heart disease without heart failure (40290)	48	+ 1	3,12,1	*
dīng shù xiǔ (丁竖朽, 丁豎朽) <i>Herba Elephantopus</i>	Unspecified hypertensive heart disease without heart failure (40290)	19	1	8,4,5	**
	Chronic renal failure (585)	8			
	Flatulence, eructation, and gas pain (7873)	6			
	Edema (7823)	4			
	Pure hypercholesterolemia (2720)	4			
	Chronic glomerulonephritis with unspecified pathological lesion in kidney (5829)	3			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	3			
	Hypertensive heart disease (402)	3			
	Headache (7840)	3			
	Malignant neoplasm of female breast (174)	2			
	Chronic hepatitis (5714)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ bì xiè (萆薢, 萆薢)	Chronic renal failure (585)	60	+ 1	8,4,5	**
+ bīngláng (檳榔, 檳榔)	Unspecified hypertensive heart disease without heart failure (40290)	46	+ 24	8,9,3	**
+ diào téng gōu (釣藤钩, 釣藤钩)	Unspecified hypertensive heart disease without heart failure (40290)	59	+ 15	5,6,7	**
+ ějiāo (阿胶, 阿膠)	Chronic renal failure (585)	41	+ 25	8,4,3	**
+ gégēn (葛根, 葛根)	Unspecified hypertensive heart disease without heart failure (40290)	93	+ 2	8,7,4	**
+ gé huā (葛花, 葛花)	Unspecified hypertensive heart disease without heart failure (40290)	48	+ 1	8,4,5	*
+ gǒuqizi (枸杞子, 枸杞子)	Chronic renal failure (585)	40	+ 9	4,8,5	**
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	68	+ 17	4,7,8	**
+ hóng téng (红藤, 紅藤)	Pure hypercholesterolemia (2720)	54	+ 3	8,4,7	*
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	76	+ 1	4,3,2	**
+ huǒ má rén (火麻仁, 火麻仁)	Unspecified hypertensive heart disease without heart failure (40290)	57	+ 22	4,6,5	**
+ jiānghuáng (姜黄, 薑黃)	Unspecified hypertensive heart disease without heart failure (40290)	44	+ 4	10,8,2	**
+ jīnqián cǎo (金钱草, 金錢草)	Chronic renal failure (585)	35	+ 1	4,7,5	**
+ mùlì (牡蛎, 牡蠣)	Unspecified hypertensive heart disease without heart failure (40290)	84	+ 15	10,9,8	**
+ shānzhā (山楂, 山楂)	Unspecified hypertensive heart disease without heart failure (40290)	42	+ 17	2,8,4	**
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	41	+ 1	4,3,2	*
+ shuǐ xiānzi (水仙子, 水仙子)	Unspecified hypertensive heart disease without heart failure (40290)	51	+ 17	4,5,8	*
+ tǔ fúlíng (土茯苓, 土茯苓)	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	30	+ 3	8,5,4	**
+ wàn diǎn jīn (万点金, 萬點金)	Unspecified hypertensive heart disease without heart failure (40290)	44	+ 16	4,5,3	**
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 11	5,8,11	**
+ xiè bái (薤白, 薤白)	Unspecified hypertensive heart disease without heart failure (40290)	94	+ 7	3,4,2	**
+ yán hú suǒ (延胡索, 延胡索)	Unspecified hypertensive heart disease without heart failure (40290)	58	+ 4	4,5,6	**
+ yī zhī xiāng (一枝香, 一枝香)	Unspecified hypertensive heart disease without heart failure (40290)	47	+ 16	8,5,4	**
+ yīmǔcǎo (益母草, 益母草)	Chronic renal failure (585)	63	+ 4	8,4,3	**
dīngxiāng (丁香, 丁香) <i>Flos Caryophylli</i>	Peptic ulcer, site unspecified (533)	9	19	1,8,9	**
	Dyspepsia and other specified disorders of function of stomach (5368)	9			
	Abdominal pain, other specified site (78909)	7			
	Flatulence, eructation, and gas pain (7873)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Other symptoms involving digestive system (7879)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Abdominal pain, other specified site (78909)	36	+ 20	6,1,2	**
+ bèimǔ (贝母, 貝母)	Other symptoms involving digestive system (78799)	40	+ 5	1,3,5	**
+ cǎoguǒ (草果, 草果)	Peptic ulcer, site unspecified (533)	9	+ 20	10,8,9	*
+ mùxiāng (木香, 木香)	Other endocrine disorders (259)	16	+ 7	6,5,4	**
+ ròuguì (肉桂, 肉桂)	Abdominal pain, other specified site (78909)	9	+ 19	6,7,8	**
+ tánxiāng (檀香, 檀香)	Peptic ulcer, site unspecified (533)	40	+ 7	1,11,10	**
+ wángbùliúxíng (王不留行, 王不留行)	Dyspepsia and other specified disorders of function of stomach (5368)	12	+ 4	3,2,11	**
+ wū yào (乌药, 烏藥)	Gastric ulcer (531)	9	+ 7	11,10,12	**
+ xuèjié (血竭, 血竭)	Peptic ulcer, site unspecified (533)	15	+ 6	6,5,8	**
dīng jīng cǎo (定经草, 定經草) <i>Lindernia anagallis</i> (Burm.f.) Pennell	Absence of menstruation (6260)	6	1	8,3,5	*
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Other sleep disturbances (78059)	4			
	Infertility, female, of unspecified origin (6289)	4			
	Pain in joint, other specified sites (71948)	3			
	Irregular menstrual cycle (6264)	3			
	Influenza with pneumonia (4870)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Leukorrhea, not specified as infective (6235)	3			
	Unspecified pruritic disorder (6989)	2			
	Dysmenorrhea (6253)	2			
	Headache (7840)	2			
	Phlebitis and thrombophlebitis of unspecified site (4519)	2			
	Unspecified breast disorder (6119)	2			
	Pain in joint, hand (71944)	2			
+ jù mài (瞿麦, 瞿麥)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	9	+ 1	11,10,12	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	55	+ 6	11,12,10	*
+ xiāng fù (香附, 香附)	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	42	+ 7	3,11,12	*
+ yín yáng huò (淫羊藿, 淫羊藿)	Infertility, female, of unspecified origin (6289)	40	+ 13	10,12,9	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
dōngguā zǐ (冬瓜子, 冬瓜子) <i>Semen Benincasae</i>	Chronic rhinitis (4720)	20	1	3,5,1	***
	Cough (7862)	9			
	Unspecified pruritic disorder (6989)	7			
	Pain in joint, other specified sites (71948)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Hyperplasia of prostate (600)	4			
	Headache (7840)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
+ bái qián (白前, 白前)	Cough (7862)	24	+ 5	1,5,4	***
+ chìxiǎodòu (赤小豆, 赤小豆)	Chronic rhinitis (4720)	26	+ 1	5,4,3	***
+ dà jīn yīng (大金樱, 大金樱)	Hyperplasia of prostate (600)	52	+ 8	8,5,4	*
+ guā lóu rén (栝蒌仁, 栝蒌仁)	Cough (7862)	41	+ 5	1,5,3	***
+ huǒ má rén (火麻仁, 火麻仁)	Chronic rhinitis (4720)	23	+ 22	1,12,5	***
+ niú bàng zǐ (牛蒡子, 牛蒡子)	Chronic rhinitis (4720)	31	+ 2	5,1,10	***
+ xiān chá (仙楂, 仙楂)	Chronic rhinitis (4720)	25	+ 17	8,5,3	*
+ zhū dǎn (猪胆, 猪胆)	Chronic rhinitis (4720)	40	+ 3	3,5,8	*
dōng kuí zǐ (冬葵子, 冬葵子) <i>Fructus Malvae</i>	Headache (7840)	5	1	7,1,6	*
	Allergic rhinitis, cause unspecified (4779)	4			
	Pain in joint, other specified sites (71948)	4			
	Urinary frequency (78841)	3			
	Residual hemorrhoidal skin tags (4559)	3			
	Chronic rhinitis (4720)	3			
	Cough (7862)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Hyperplasia of prostate unspecified (6009)	2			
	Calculus of kidney (5920)	2			
	Unspecified gingival and periodontal disease (5239)	2			
+ shí hú suǐ (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	50	+ 2	7,1,12	*
dōng yáng cān (东洋参, 東洋参) <i>Arctium lappa</i>	Cough (7862)	6	3	10,9,4	*
	Allergic rhinitis, cause unspecified (4779)	5			
	Chronic rhinitis (4720)	4			
	Chronic nasopharyngitis (4722)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Palpitations (7851)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Headache (7840)	2			
	Unspecified pruritic disorder (6989)	2			
	Other chest pain (78659)	2			
	Influenza with pneumonia (4870)	2			
dú huó (独活, 獨活) <i>Radix Angelicae Pubescentis</i>	Unspecified pleural effusion (5119)	6	10	5,8,9	****
	Lumbago (7242)	6			
	Sciatica (7243)	5			
	Myalgia and myositis, unspecified (7291)	5			
	Rheumatoid arthritis (7140)	4			
	Klippel-Feil syndrome (75616)	4			
	Unspecified disorder of globe (3609)	3			
	Pain in joint, lower leg (71946)	3			
	Headache (7840)	3			
	Other chest pain (78659)	2			
	Heart disease, unspecified (4299)	2			
+ dì yú (地榆, 地榆)	Malignant neoplasm of prostate (185)	9	+ 6	10,4,9	***
+ háipiāoxiǎo (海螵蛸, 海螵蛸)	Unspecified pleural effusion (5119)	72	+ 8	5,10,11	****
+ jiānghuáng (姜黄, 薑黃)	Other osteoporosis (73309)	7	+ 4	9,10,11	****
+ xī liǎn cǎo (豨薟草, 豨薟草)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	19	+ 10	5,7,8	**
dùzhòng (杜仲, 杜仲) <i>Cortex Eucommiae</i>	Lumbago (7242)	15	13	11,3,5	*****
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	5			
	Benign essential hypertension (4011)	4			
	Absence of menstruation (6260)	4			
	Osteoporosis (7330)	4			
	Myalgia and myositis, unspecified (7291)	3			
	Pain in joint, lower leg (71946)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 11	5,7,8	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
ējiao (阿胶, 阿膠) <i>Colla Corii Asini</i>	Ulcerative (chronic) enterocolitis (5560)	42	25	8,5,3	****
	Chronic renal failure (585)	9			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Urticaria, unspecified (7089)	2			
	Unspecified pruritic disorder (6989)	2			
+ dīng shù xiù (丁竖朽, 丁豎朽)	Chronic renal failure (585)	41	+ 1	8,4,3	**
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	41	+ 1	5,3,12	*
é shù (莪术, 莪朮) <i>Rhizoma Curcumae</i>	Leiomyoma of uterus, unspecified (2189)	6	4	11,10,5	****
	Dysmenorrhea (6253)	6			
	Endometriosis, site unspecified (6179)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Absence of menstruation (6260)	3			
	Other chest pain (78659)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Other sleep disturbances (78059)	3			
	Unspecified functional disorder of stomach (5369)	3			
+ púgōngyīng (蒲公英, 蒲公英)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	60	+ 3	5,6,1	****
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	56	+ 6	11,8,12	***
fān mài xū (番麦须, 番麥鬚) <i>Stigma Maydis</i>	Stomatitis and mucositis (ulcerative) (5280)	16	1	7,8,10	**
	Urinary frequency (78841)	14			
	Urethral abscess (5970)	13			
	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	6			
	Diabetes mellitus (250)	6			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	3			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Chronic pyelonephritis without lesion of renal medullary necrosis (59000)	2			
	Headache (7840)	2			
+ báimáo gēn (白茅根, 白茅根)	Stomatitis and mucositis (ulcerative) (5280)	46	+ 6	7,9,6	**
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	66	+ 5	5,7,6	**
+ mián yīn chén (绵茵陈, 綿茵陳)	Urethral abscess (5970)	50	+ 1	7,9,8	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ pú huáng (蒲黄, 蒲黄)	Urethral abscess (5970)	45	+ 6	7,1,9	**
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	89	+ 2	7,8,5	**
+ suǒ yáng (锁阳, 鎖陽)	Urinary frequency (78841)	67	+ 13	7,2,10	**
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	73	+ 16	3,7,4	**
fān xiè yè (番泻叶, 番瀉葉) <i>Folium Sennae</i>	Peptic ulcer, site unspecified (533)	22	22	10,8,5	**
	Constipation (5640)	20			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	5			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Rheumatoid arthritis (7140)	2			
+ bái jí (白芨, 白芨)	Peptic ulcer, site unspecified (533)	43	+ 6	11,10,5	**
+ cǎo jué míng (草决明, 草決明)	Constipation (5640)	52	+ 11	7,8,5	**
+ dà huáng (大黄, 大黃)	Peptic ulcer, site unspecified (533)	58	+ 22	1,7,8	**
+ gāo liáng jiāng (高良姜, 高良薑)	Peptic ulcer, site unspecified (533)	32	+ 19	11,12,10	**
+ hóng qū (红耧, 紅耧)	Pure hypercholesterolemia (2720)	40	+ 17	4,5,3	**
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	47	+ 22	1,5,3	**
+ pèi lán (佩兰, 佩蘭)	Peptic ulcer, site unspecified (533)	53	+ 20	5,6,7	**
+ ròu cōng róng (肉苁蓉, 肉從蓉)	Constipation (5640)	43	+ 13	5,10,1	**
+ shú dì huáng (熟地黄, 熟地黃)	Constipation (5640)	62	+ 25	9,8,1	**
+ tán xiāng (檀香, 檀香)	Cardiac dysrhythmia, unspecified (4279)	44	+ 7	1,8,11	**
+ xià kū cǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 11	5,8,7	**
fǎng fēng (防风, 防風) <i>Radix Saposhnikoviae</i>	Chronic rhinitis (4720)	12	2	1,2,6	*****
	Chronic pharyngitis and nasopharyngitis (472)	6			
	Allergic rhinitis, cause unspecified (4779)	5			
	Allergic rhinitis (477)	4			
	Unspecified essential hypertension (4019)	3			
	Unspecified pruritic disorder (6989)	3			
	Unspecified functional disorder of intestine (5649)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Functional digestive disorders, not elsewhere classified (564)	3			
	Acute sinusitis (461)	3			
	Chronic nasopharyngitis (4722)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Cough (7862)	2			
	Headache (7840)	2			
	Pruritus and related conditions (698)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ hē zǐ (诃子, 訶子)	Allergic rhinitis (477)	73	+ 8	2,1,5	**
+ qiānghuó (羌活, 羌活)	Fever (7806)	30	+ 2	8,1,7	*****
fǎng jǐ (防己, 防己) <i>Radix Stephaniae Tetrandrae</i>	Edema (7823)	12	10	5,7,8	***
	Benign essential hypertension (4011)	8			
	Constipation (5640)	7			
	Unspecified essential hypertension (4019)	6			
	Unspecified functional disorder of intestine (5649)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Palpitations (7851)	2			
	Lumbago (7242)	2			
	Cough (7862)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	49	+ 2	8,7,9	***
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 8	7,5,8	**
+ sāng bái pí (桑白皮, 桑白皮)	Benign essential hypertension (4011)	67	+ 16	5,8,7	***
+ yuǎnzhì (远志, 遠志)	Benign essential hypertension (4011)	42	+ 18	8,5,9	***
+ zé qī (泽漆, 澤漆)	Edema (7823)	40	+ 1	5,7,8	*
fèng wěi cǎo (凤尾草, 鳳尾草) <i>Pteris multifida Poir</i>	Contact dermatitis and other eczema, unspecified cause (6929)	4	1	8,9,11	**
	Pain in joint, other specified sites (71948)	3			
	Chronic pharyngitis (4721)	3			
	Chronic rhinitis (4720)	3			
	Cough (7862)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Allergic rhinitis, cause unspecified (4779)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Unspecified pruritic disorder (6989)	2			
	Functional diarrhea (5645)	2			
fó shǒu gān (佛手柑, 佛手柑) <i>Fructus Citri Sarcodactylis</i>	Dyspepsia and other specified disorders of function of stomach (5368)	13	7	4,5,8	***
	Flatulence, eructation, and gas pain (7873)	10			
	Unspecified functional disorder of intestine (5649)	10			
	Chronic rhinitis (4720)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Infantile cerebral palsy, unspecified (3439)	3			
	Constipation (5640)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Acute gastritis, without mention of hemorrhage (53500)	2			
	Influenza with pneumonia (4870)	2			
+ bái dòu kòu (白豆蔻, 白豆蔻)	Dyspepsia and other specified disorders of function of stomach (5368)	48	+ 20	1,8,4	***
+ bái jí (白芨, 白芨)	Flatulence, eructation, and gas pain (7873)	41	+ 6	11,1,12	***
+ gāncǎo (甘草, 甘草)	Dyspepsia and other specified disorders of function of stomach (5368)	42	+ 14	8,9,6	***
+ mài yá (麦芽, 麦芽)	Dyspepsia and other specified disorders of function of stomach (5368)	72	+ 17	8,6,12	***
+ púgōngyīng (蒲公英, 蒲公英)	Unspecified functional disorder of intestine (5649)	45	+ 3	12,11,1	***
+ ròu cōng róng (肉苁蓉, 肉苁蓉)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	42	+ 13	5,4,1	***
+ shén qū (神麴, 神麴)	Dyspepsia and other specified disorders of function of stomach (5368)	45	+ 17	8,5,3	***
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	1,3,12	**
+ wángbùliúxíng (王不留行, 王不留行)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 4	1,10,5	**
+ yìzhì rén (益智仁, 益智仁)	Dyspepsia and other specified disorders of function of stomach (5368)	55	+ 13	4,5,3	***
+ zé lán (泽兰, 澤蘭)	Unspecified functional disorder of intestine (5649)	46	+ 4	9,8,10	***
+ zǐ sū (紫苏, 紫蘇)	Unspecified functional disorder of intestine (5649)	46	+ 2	8,1,9	***
fú hǎi shí (浮海石, 浮海石) <i>Pumex</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	5	2,3,4	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	7			
	Influenza with pneumonia (4870)	6			
	Other sleep disturbances (78059)	4			
	Cough (7862)	4			
	Chronic pharyngitis (4721)	4			
	Pain in joint, other specified sites (71948)	3			
	Headache (7840)	3			
	Chronic rhinitis (4720)	3			
	Unspecified disorder of autonomic nervous system (3379)	3			
	Pain in joint, lower leg (71946)	2			
	Unspecified pruritic disorder (6989)	2			
	Throat pain (7841)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Other chest pain (78659)	2			
+ jiāng cán (僵蚕, 殭蠶)	Allergic rhinitis, cause unspecified (4779)	11	+ 15	1,2,4	**
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	46	+ 2	3,4,10	**
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	70	+ 2	3,4,2	**
+ xìxīn (細辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	49	+ 19	12,1,2	**
fúlíng (茯苓, 茯苓) <i>Poria</i>	Contact dermatitis and other eczema, unspecified cause (6929)	13	1	5,3,6	*****
	Contact dermatitis and other eczema (692)	9			
	Unspecified pruritic disorder (6989)	6			
	Unspecified functional disorder of stomach (5369)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Cough (7862)	3			
	Other sleep disturbances (78059)	3			
	Asthma, unspecified type, unspecified (49390)	2			
	Peptic ulcer, site unspecified (533)	2			
	Palpitations (7851)	2			
+ cāngěr zǐ (蒼耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	53	+ 2	1,8,12	*****
fú shén (茯神, 茯神) <i>Poria cum Radix Pini</i>	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	23	18	4,5,1	*****
	Other sleep disturbances (78059)	11			
	Unspecified alcohol-induced mental disorders (2919)	6			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Palpitations (7851)	2			
	Unspecified menopausal and postmenopausal disorder (6279)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Headache (7840)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	61	+ 6	5,4,6	**
+ yùzhú (玉竹, 玉竹)	Unspecified alcohol-induced mental disorders (2919)	58	+ 9	1,2,3	*****
fú xiǎomài (浮小麦, 浮小麦) <i>Fructus Triticis Levis</i>	Generalized hyperhidrosis (7808)	18	8	7,8,9	***
	Symptomatic menopausal or female climacteric states (6272)	8			
	Unspecified functional disorder of intestine (5649)	7			
	Other sleep disturbances (78059)	7			
	Stomatitis and mucositis (ulcerative) (5280)	3			
	Cough (7862)	2			
	Palpitations (7851)	2			
	Unspecified menopausal and postmenopausal disorder (6279)	2			
	Unspecified pruritic disorder (6989)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ chuān xīn lián (穿心莲, 穿心莲)	Generalized hyperhidrosis (7808)	48	+ 3	7,8,5	*
+ mǔlì (牡蛎, 牡蛎)	Generalized hyperhidrosis (7808)	43	+ 15	7,8,9	***
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Unspecified functional disorder of intestine (5649)	33	+ 8	8,7,9	**
+ sāng yè (桑叶, 桑叶)	Generalized hyperhidrosis (7808)	78	+ 2	8,7,6	***
fùpénzǐ (覆盆子, 覆盆子) <i>Fructus Rubi</i>	Urinary frequency (78841)	8	8	3,12,1	***
	Epiphora, unspecified as to cause (37520)	7			
	Other sleep disturbances (78059)	4			
	Urinary incontinence, unspecified (78830)	4			
	Hyperplasia of prostate unspecified (6009)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Headache (7840)	2			
	Cough (7862)	2			
	Palpitations (7851)	2			
	Urinary incontinence (7883)	2			
	Frequency of urination and polyuria (7884)	2			
	Enuresis (3076)	2			
+ cìwǔjiā (刺五加, 刺五加)	Urinary frequency (78841)	49	+ 5	3,2,1	*
+ cōng bái (葱白, 葱白)	Urinary frequency (78841)	8	+ 2	1,2,3	***
+ sāng piāoxiāo (桑螵蛸, 桑螵蛸)	Urinary frequency (78841)	55	+ 8	11,10,12	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ wū yào (乌药, 烏藥)	Urinary frequency (78841)	58	+ 7	12,11,4	****
fùzǐ (附子, 附子) <i>Radix Aconiti Lateralis Praeparata</i>	Other chest pain (78659)	9	19	6,3,1	*****
	Palpitations (7851)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			
	Unspecified pruritic disorder (6989)	3			
	Urinary frequency (78841)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Cough (7862)	2			
	Headache (7840)	2			
	Cardiac dysrhythmia, unspecified (4279)	2			
	Pain in joint, other specified sites (71948)	2			
+ chāngpú (菖蒲, 菖蒲)	Cardiac dysrhythmia, unspecified (4279)	47	+ 18	3,4,6	**
+ jiāng cán (僵蚕, 殭蠶)	Facial nerve disorder, unspecified (3519)	41	+ 15	6,7,1	****
gāncǎo (甘草, 甘草) <i>Radix et Rhizoma Glycyrrhizae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	19	14	8,11,7	*****
	Other sleep disturbances (78059)	16			
	Allergic rhinitis, cause unspecified (4779)	9			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Prurigo (6982)	4			
	Cough (7862)	3			
	Unspecified pruritic disorder (6989)	3			
	Chronic nasopharyngitis (4722)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Urinary frequency (78841)	2			
	Constipation (5640)	2			
+ dìhuáng (地黄, 地黃)	Contact dermatitis and other eczema, unspecified cause (6929)	69	+ 21	3,5,8	*****
+ fó shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	42	+ 7	8,9,6	****
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 3	8,11,1	**
+ mǔdānpí (牡丹皮, 牡丹皮)	Contact dermatitis and other eczema, unspecified cause (6929)	73	+ 21	8,7,3	*****
+ qīng hāo (青蒿, 青蒿)	Other sleep disturbances (78059)	41	+ 23	8,10,11	****
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	53	+ 18	3,8,11	*****
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	66	+ 3	3,8,2	****
+ yè jiāo téng (夜交藤, 夜交藤)	Other sleep disturbances (78059)	52	+ 18	10,8,9	****
+ zǐ sū (紫苏, 紫蘇)	Contact dermatitis and other eczema, unspecified cause (6929)	53	+ 2	8,7,5	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ zīsū gěng (紫苏梗, 紫蘇梗)	Urticaria (708)	93	+ 7	4,5,3	**
+ zīsū zǐ (紫苏子, 紫蘇子)	Contact dermatitis and other eczema, unspecified cause (6929)	44	+ 16	8,4,7	*
gānjiāng (干姜, 乾薑) <i>Rhizoma Zingiberis</i>	Allergic rhinitis, cause unspecified (4779)	4	19	6,3,2	*****
	Unspecified functional disorder of stomach (5369)	4			
	Unspecified essential hypertension (4019)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	2			
	Chronic rhinitis (4720)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Palpitations (7851)	2			
	Cough (7862)	2			
	Nausea with vomiting (78701)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ shēngjiāng (生姜, 生薑)	Allergic rhinitis, cause unspecified (4779)	11	+ 2	2,1,4	*****
gāoliángjiāng (高良姜, 高良薑) <i>Rhizoma Alpiniae Officinarum</i>	Unspecified functional disorder of intestine (5649)	6	19	1,11,12	**
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Peptic ulcer, site unspecified (533)	3			
	Chronic rhinitis (4720)	2			
	Pain in joint, other specified sites (71948)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
+ fān xiè yè (番泻叶, 番瀉葉)	Peptic ulcer, site unspecified (533)	32	+ 22	11,12,10	**
+ sāng yè (桑叶, 桑葉)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	54	+ 2	6,5,3	**
+ wū tián (乌甜, 烏甜)	Unspecified functional disorder of intestine (5649)	13	+ 3	1,12,11	*
+ xìxīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	48	+ 19	12,1,11	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
gǎoběn (藁本, 藁本) <i>Rhizoma et Radix Ligustici</i>	Headache (7840)	9	2	11,10,9	****
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	7			
	Migraine (346)	6			
	Allergic rhinitis, cause unspecified (4779)	3			
	Allergic rhinitis (477)	3			
	Migraine, unspecified (3469)	2			
	Benign essential hypertension (4011)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Other sleep disturbances (78059)	2			
+ biējǎ (鳖甲, 鳖甲)	Headache (7840)	14	+ 9	9,3,10	***
+ dà qīng yè (大青叶, 大青葉)	Headache (7840)	10	+ 3	11,5,10	***
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	1,11,12	**
+ tiānmá (天麻, 天麻)	Occlusion and stenosis of unspecified precerebral artery without mention of cerebral infarction (43390)	56	+ 15	5,9,11	****
gégēn (葛根, 葛根) <i>Radix Puerariae Lobatae</i>	Benign essential hypertension (4011)	22	2	7,8,9	*****
	Unspecified essential hypertension (4019)	9			
	Headache (7840)	7			
	Allergic rhinitis, cause unspecified (4779)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Palpitations (7851)	3			
	Chronic rhinitis (4720)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Other sleep disturbances (78059)	2			
	Peptic ulcer, site unspecified (533)	2			
+ cǎo juémíng (草决明, 草决明)	Benign essential hypertension (4011)	65	+ 11	10,8,7	***
+ chù shí zǐ (楮实子, 楮實子)	Benign essential hypertension (4011)	47	+ 1	9,8,6	*
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	68	+ 2	7,5,4	***
+ dì lóng (地龙, 地龍)	Benign essential hypertension (4011)	85	+ 15	1,11,3	****
+ dīng shù xiù (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	93	+ 1	8,7,4	**
+ fáng jǐ (防己, 防己)	Benign essential hypertension (4011)	49	+ 10	8,7,9	***
+ gōu téng (钩藤, 鉤藤)	Benign essential hypertension (4011)	43	+ 15	8,9,7	****
+ hé huān pí (合欢皮, 合歡皮)	Benign essential hypertension (4011)	53	+ 18	8,9,7	***
+ héshǒuwū (何首乌, 何首烏)	Benign essential hypertension (4011)	72	+ 9	7,9,8	****
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	97	+ 1	4,5,3	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ mǎtí jīn (马蹄金, 馬蹄金)	Benign essential hypertension (4011)	45	+ 12	8,9,7	*
+ niúxī (牛膝, 牛膝)	Benign essential hypertension (4011)	44	+ 4	4,2,7	*****
+ qiānnián jiàn (千年健, 千年健)	Dislocation of jaw (830)	40	+ 10	7,8,6	**
+ quán xiē (全蝎, 全蠍)	Benign essential hypertension (4011)	42	+ 15	8,7,9	*
+ sāng zhī (桑枝, 桑枝)	Unspecified disorder of muscle, ligament, and fascia (7289)	55	+ 10	6,10,8	****
+ wú zhūyú (吴茱萸, 吳茱萸)	Classical migraine (3460)	54	+ 19	7,11,1	****
+ xī liǎn cǎo (豨薟草, 豨薟草)	Benign essential hypertension (4011)	50	+ 10	6,9,7	**
+ xià kūcǎo (夏枯草, 夏枯草)	Benign essential hypertension (4011)	47	+ 11	8,7,5	****
+ xià kū huā (夏枯花, 夏枯花)	Benign essential hypertension (4011)	48	+ 11	7,8,9	*
+ xiān chá (仙楂, 仙楂)	Benign essential hypertension (4011)	68	+ 17	7,6,9	*
+ zéxiè (泽泻, 澤瀉)	Benign essential hypertension (4011)	53	+ 1	7,5,6	*****
+ zhǐzi (梔子, 梔子)	Benign essential hypertension (4011)	49	+ 11	7,5,9	*****
gě huā (葛花, 葛花) <i>Flos Puerariae lobatae</i>	Headache (7840)	10	1	7,8,5	*
	Unspecified functional disorder of intestine (5649)	8			
	Benign essential hypertension (4011)	5			
	Cough (7862)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Influenza with pneumonia (4870)	4			
	Chronic rhinitis (4720)	3			
	Other sleep disturbances (78059)	3			
	Unspecified disorder of globe (3609)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Pain in joint, other specified sites (71948)	2			
	Throat pain (7841)	2			
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	51	+ 18	5,6,7	*
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	56	+ 2	5,7,4	*
+ dīng shù xiù (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	48	+ 1	8,4,5	*
+ héshǒuwū (何首烏, 何首烏)	Benign essential hypertension (4011)	50	+ 9	9,5,11	*
+ mì měng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	57	+ 21	10,7,5	*
gōu téng (钩藤, 鉤藤) <i>Ramulus Uncariae Cum Uncis</i>	Pure hypercholesterolemia (2720)	20	15	9,8,10	****
	Insomnia with sleep apnea, unspecified (78051)	11			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pure hyperglyceridemia (2721)	10			
	Unspecified essential hypertension (4019)	9			
	Other sleep disturbances (78059)	5			
	Benign essential hypertension (4011)	3			
	Headache (7840)	3			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	43	+ 2	8,9,7	****
+ hàipiāoxiǎo (海螵蛸, 海螵蛸)	Tetany (7817)	46	+ 8	4,5,3	****
+ hóng huā (红花, 紅花)	Unspecified essential hypertension (4019)	59	+ 4	2,12,11	****
+ shān dòu gēn (山豆根, 山豆根)	Unspecified diseases of blood and blood-forming organs (2899)	62	+ 3	8,9,3	**
+ shuāng gōu téng (双钩藤, 雙鉤藤)	Unspecified essential hypertension (4019)	26	+ 15	12,11,9	**
gǒu jǐ (狗脊, 狗脊) <i>Rhizoma Cibotii</i>	Lumbago (7242)	21	13	3,10,11	****
	Pain in joint, other specified sites (71948)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pain in joint, multiple sites (71949)	2			
	Pain in joint, lower leg (71946)	2			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
	Myalgia and myositis, unspecified (7291)	2			
+ bā jǐ tiān (巴戟天, 巴戟天)	Lumbago (7242)	44	+ 13	1,7,11	****
+ dāng guī wěi (当归尾, 當歸尾)	Unspecified functional disorder of stomach (5369)	60	+ 4	11,10,1	****
+ sāng zhī (桑枝, 桑枝)	Lumbago (7242)	53	+ 10	11,7,10	****
+ yī zhī xiāng (一枝香, 一枝香)	Lumbago (7242)	46	+ 16	3,11,8	**
gǒu qǐ zǐ (枸杞子, 枸杞子) <i>Fructus Lycii</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	9	9	4,5,11	*****
	Unspecified pruritic disorder (6989)	5			
	Myalgia and myositis, unspecified (7291)	5			
	Unspecified disorder of globe (3609)	5			
	Chronic rhinitis (4720)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Constipation (5640)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Headache (7840)	2			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Cough (7862)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Facial nerve disorder, unspecified (3519)	42	+ 15	6,7,3	***
+ dìhuáng (地黄, 地黃)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	51	+ 21	5,4,3	*****
+ dīng shù xiù (丁豎朽, 丁豎朽)	Chronic renal failure (585)	40	+ 1	4,8,5	**
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	41	+ 17	5,8,4	**
+ jiūcài zǐ (韭菜子, 韭菜子)	Unspecified functional disorder of intestine (5649)	9	+ 13	8,5,7	**
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	63	+ 1	5,4,12	*
gǔ jīng cǎo (谷精草, 穀精草) <i>Flos Eriocauli</i>	Unspecified disorder of globe (3609)	11	11	8,10,12	**
	Unspecified retinal detachment (3619)	9			
	Epiphora, unspecified as to cause (37520)	8			
	Unspecified functional disorder of intestine (5649)	4			
	Other sleep disturbances (78059)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Dacryoadenitis, unspecified (37500)	2			
	Unspecified functional disorder of stomach (5369)	2			
+ bì xiè (萆薢, 萆薢)	Unspecified disorder of globe (3609)	44	+ 1	8,9,7	**
+ chōng wèi zǐ (茺蔚子, 茺蔚子)	Unspecified disorder of globe (3609)	47	+ 4	7,8,3	**
+ jí lí (蒺藜, 蒺藜)	Contact dermatitis and other eczema, unspecified cause (6929)	16	+ 15	8,7,3	**
+ jú huā (菊花, 菊花)	Unspecified disorder of globe (3609)	44	+ 2	7,5,8	**
+ qiáomài (荞麦, 蕎麥)	Unspecified functional disorder of intestine (5649)	25	+ 17	10,8,1	*
+ yì zhì rén (益智仁, 益智仁)	Postgastric surgery syndromes (5642)	54	+ 13	4,7,3	**
gǔ suì bǔ (骨碎补, 骨碎補) <i>Rhizoma Drynariae</i>	Lumbago (7242)	14	4	7,3,1	*****
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6			
	Superficial injury of face, neck, and scalp except eye (910)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Late effect of contusion (9063)	4			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction (53491)	3			
	Cough (7862)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pain in joint, lower leg (71946)	3			
	Headache (7840)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Other chest pain (78659)	2			
+ sānqī (三七, 三七)	Pain in joint, multiple sites (71949)	61	+ 6	5,7,6	***
+ sāng jìshēng (桑寄生, 桑寄生)	Lumbago (7242)	27	+ 10	7,9,11	****
+ shēng má (升麻, 升麻)	Pulpitis (5220)	45	+ 2	7,6,5	****
+ tùsīzi (菟丝子, 菟丝子)	Lumbago (7242)	42	+ 13	7,8,4	****
+ wú míng yì (无名异, 无名异)	Superficial injury of face, neck, and scalp except eye (910)	61	+ 4	12,5,1	**
+ yín yáng huò (淫羊藿, 淫羊藿)	Klippel-Feil syndrome (75616)	16	+ 13	7,6,5	****
gǔ yá (穀芽, 穀芽) <i>Fructus Setariae Germinatus</i>	Dyspepsia and other specified disorders of function of stomach (5368)	21	17	1,7,8	**
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	9			
	Unspecified functional disorder of intestine (5649)	8			
	Allergic rhinitis, cause unspecified (4779)	6			
	Chronic rhinitis (4720)	5			
	Flatulence, eructation, and gas pain (7873)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Constipation (5640)	2			
	Unspecified pruritic disorder (6989)	2			
	Disorders of function of stomach (536)	2			
	Acute gastritis, without mention of hemorrhage (53500)	2			
+ bǎi bù (百部, 百部)	Bronchitis, not specified as acute or chronic (490)	42	+ 16	3,1,2	**
+ cǎo dòu kòu (草豆蔻, 草豆蔻)	Dyspepsia and other specified disorders of function of stomach (5368)	59	+ 20	8,7,3	*
+ dà zǎo (大枣, 大枣)	Dyspepsia and other specified disorders of function of stomach (5368)	85	+ 14	9,10,11	**
+ gǒu qǐ zǐ (枸杞子, 枸杞子)	Dyspepsia and other specified disorders of function of stomach (5368)	41	+ 9	5,8,4	**
+ jīng mǐ (粳米, 粳米)	Dyspepsia and other specified disorders of function of stomach (5368)	47	+ 14	10,8,9	*
+ lú gēn (芦根, 芦根)	Unspecified functional disorder of intestine (5649)	21	+ 11	7,10,8	**
+ mì mēng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	53	+ 21	10,7,8	**
+ ròu cōng róng (肉苁蓉, 肉苁蓉)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 13	10,8,7	**
+ shén qū (神麴, 神麴)	Dyspepsia and other specified disorders of function of stomach (5368)	46	+ 17	7,5,10	**
+ xià kū cǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61	+ 11	5,4,8	**
gù zhǐ huā (故纸花, 故紙花) <i>Semen Oroxyli</i>	Throat pain (7841)	5	20	1,8,7	***
	Cough (7862)	5			
	Unspecified functional disorder of intestine (5649)	4			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Voice disturbance (7844)	4			
	Headache (7840)	3			
	Myalgia and myositis, unspecified (7291)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
+ háng jú (杭菊, 杭菊)	Unspecified disorder of globe (3609)	6	+ 2	4,3,5	***
+ pàngdàhǎi (胖大海, 胖大海)	Voice disturbance (7844)	13	+ 5	8,7,6	**
+ qiáomài (荞麦, 蕎麥)	Unspecified functional disorder of intestine (5649)	14	+ 17	1,7,8	*
guā lóu (栝蒌, 栝蒌) <i>Fructus Trichosanthis</i>	Other chest pain (78659)	6	5	5,7,3	**
	Cough (7862)	5			
	Stridor (7861)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
+ chuān qī (川七, 川七)	Other chest pain (78659)	44	+ 6	11,12,8	**
guā lóu gēn (栝蒌根, 栝蒌根) <i>Radix Trichosanthis</i>	Polydipsia (7835)	11	11	7,6,5	***
	Chronic rhinitis (4720)	5			
	Stomatitis and mucositis (ulcerative) (5280)	3			
	Oral aphthae (5282)	3			
	Constipation (5640)	2			
	Malignant neoplasm of nasopharynx, unspecified site (1479)	2			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	26	+ 22	6,2,3	***
+ tiānhuā (天花, 天花)	Polydipsia (7835)	55	+ 5	7,6,8	***
guā lóu pí (栝蒌皮, 栝蒌皮) <i>Pericarpium Trichosanthis</i>	Diabetes mellitus of mother, complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64800)	24	5	5,6,3	**
	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	23			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	14			
	Cough (7862)	5			
	Bronchitis, not specified as acute or chronic (490)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bǎi bù (百部, 百部)	Cough (7862)	42	+ 16	5,3,2	**
+ chuān qī (川七, 川七)	Other chest pain (78659)	42	+ 6	5,8,3	**
+ fān mài xū (番麦须, 番麦须)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	66	+ 1	5,7,6	**
+ huángjīng (黄精, 黄精)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	53	+ 9	10,7,12	**
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	48	+ 6	6,5,7	**
+ kuàndōng huā (款冬花, 款冬花)	Cough (7862)	43	+ 16	8,11,10	**
+ pípá yè (枇杷叶, 枇杷叶)	Cough (7862)	42	+ 16	7,5,6	**
+ sāng bái pí (桑白皮, 桑白皮)	Diabetes mellitus of mother, complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64800)	86	+ 16	5,6,4	**
+ sāng yè (桑叶, 桑叶)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	68	+ 2	5,6,4	**
guā lóu rén (栝蒌仁, 栝蒌仁) <i>Semen Trichosanthis</i>	Cough (7862)	13	5	1,5,8	*****
	Other chest pain (78659)	9			
	Allergic rhinitis, cause unspecified (4779)	4			
	Chest pain (7865)	4			
	Chronic nasopharyngitis (4722)	3			
	Acute nasopharyngitis [common cold] (460)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Herpes zoster without mention of complication (0539)	2			
	Chronic rhinitis (4720)	2			
	Palpitations (7851)	2			
+ chuān qī (川七, 川七)	Other chest pain (78659)	42	+ 6	5,11,1	****
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Cough (7862)	41	+ 1	1,5,3	****
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	76	+ 6	1,6,5	**
+ yù jīn (郁金, 郁金)	Other chest pain (78659)	49	+ 4	5,7,8	****
guàn zhòng (贯众, 贯众) <i>Rhizoma Dryopteris Crassirhizomatis</i>	Cough (7862)	10	3	10,11,8	**
	Unspecified disorder of globe (3609)	8			
	Headache (7840)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Throat pain (7841)	3			
	Unspecified pruritic disorder (6989)	3			
	Influenza with pneumonia (4870)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Unspecified gingival and periodontal disease (5239)	2			
	Allergic rhinitis, cause unspecified (4779)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pain in joint, other specified sites (71948)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ diào téng gōu (钓藤钩, 釣藤鉤)	Headache (7840)	13	+ 15	11,10,9	**
guībǎn (龟板, 龜板) <i>Carapax et Plastrum Testudinis</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	9	9,8,10	****
	Other sleep disturbances (78059)	6			
	Pain in joint, shoulder region (71941)	5			
	Chronic pharyngitis (4721)	5			
	Pain in joint, other specified sites (71948)	4			
	Pain in joint, hand (71944)	3			
	Absence of menstruation (6260)	3			
	Headache (7840)	2			
	Cough (7862)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified disorder of globe (3609)	2			
	Dysmenorrhea (6253)	2			
+ bái chūn gēn (白椿根, 白椿根)	Absence of menstruation (6260)	45	+ 12	10,11,8	*
guìzhī (桂枝, 桂枝) <i>Ramulus Cinnamomi</i>	Other sleep disturbances (78059)	6	2	5,7,6	*****
	Allergic rhinitis, cause unspecified (4779)	5			
	Allergic rhinitis (477)	5			
	Headache (7840)	3			
	Cardiac dysrhythmia, unspecified (4279)	3			
	Other chest pain (78659)	3			
	Palpitations (7851)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
hǎi gé (海蛤, 海蛤) <i>Concha Meretricis seu Cyclinae</i>	Allergic rhinitis, cause unspecified (4779)	5	5	5,10,4	***
	Cough (7862)	5			
	Flatulence, eructation, and gas pain (7873)	3			
	Other sleep disturbances (78059)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Palpitations (7851)	2			
	Allergic rhinitis (477)	2			
	Sleep disturbances (7805)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ běi bǎnlángēn (北板蓝根, 北板藍根)	Cough (7862)	7	+ 3	5,4,9	*
+ dàfùpí (大腹皮, 大腹皮)	Flatulence, eructation, and gas pain (7873)	8	+ 7	10,8,11	****
+ hǎipiāoxiǎo (海螵蛸, 海螵蛸)	Flatulence, eructation, and gas pain (7873)	16	+ 8	5,4,3	****
+ pàngdàhǎi (胖大海, 胖大海)	Voice disturbance (7844)	13	+ 5	7,8,5	**
+ pèilán (佩兰, 佩蘭)	Allergic rhinitis, cause unspecified (4779)	6	+ 20	5,6,4	****
hǎi jīnshā (海金沙, 海金沙) <i>Spora Lygodii</i>	Crystal arthropathies (7120)	11	1	4,5,1	*
	Calculus of kidney (5920)	10			
	Nephrotic syndrome (581)	9			
	Urethritis, not sexually transmitted, and urethral syndrome (597)	8			
	Calculus in urethra (5942)	4			
	Gout (274)	4			
	Contact dermatitis and other eczema (692)	3			
	Chronic pyelonephritis (5900)	3			
	Diabetes mellitus (250)	2			
	Cystitis (595)	2			
	Allergic rhinitis (477)	2			
	Peptic ulcer, site unspecified (533)	2			
	Disorders of function of stomach (536)	2			
	Gastritis and duodenitis (535)	2			
	Gastrojejunal ulcer (534)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Lipoma (214)	58	+ 5	5,6,4	*
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis (477)	42	+ 2	1,2,11	*
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	59	+ 2	5,7,1	*
+ dìhuáng (地黄, 地黃)	Urethritis, not sexually transmitted, and urethral syndrome (597)	41	+ 21	5,1,6	*
+ huàshí cǎo (化石草, 化石草)	Cholelithiasis (574)	53	+ 1	5,7,4	*
+ jīnèijīn (鸡内金, 雞內金)	Calculus in urethra (5942)	68	+ 17	4,5,3	*
+ mǔlì (牡蛎, 牡蠣)	Disorders of function of stomach (536)	45	+ 15	2,5,3	*
+ sānqī (三七, 三七)	Gastric ulcer (531)	41	+ 6	5,3,4	*
+ xīn yī (辛夷, 辛夷)	Allergic rhinitis (477)	43	+ 2	5,1,4	*
hǎipiāoxiǎo (海螵蛸, 海螵蛸) <i>Endoconcha Sepiae</i>	Chronic gastric ulcer without mention of hemorrhage or perforation, without mention of obstruction (53170)	12	8	5,4,1	*****
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	9			
	Acute gastritis, without mention of hemorrhage (53500)	6			
	Peptic ulcer, site unspecified (533)	5			
	Flatulence, eructation, and gas pain (7873)	5			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Gastric ulcer (531)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage or perforation, without mention of obstruction (53290)	4			
	Chronic pyelonephritis without lesion of renal medullary necrosis (59000)	4			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Gastrojejunal ulcer (534)	2			
	Duodenal ulcer (532)	2			
+ bái jí (白芨, 白芨)	Chronic gastric ulcer without mention of hemorrhage or perforation, without mention of obstruction (53170)	59	+ 6	5,4,1	****
+ bài jiàng cǎo (败酱草, 败酱草)	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	41	+ 3	5,8,2	***
+ dú huó (独活, 独活)	Unspecified pleural effusion (5119)	72	+ 10	5,10,11	****
+ gōu téng (钩藤, 钩藤)	Tetany (7817)	46	+ 15	4,5,3	****
+ hǎi gé (海蛤, 海蛤)	Flatulence, eructation, and gas pain (7873)	16	+ 5	5,4,3	***
+ lái fū zǐ (莱菔子, 莱菔子)	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	62	+ 17	4,2,5	***
+ má huáng (麻黄, 麻黄)	Allergic rhinitis (477)	42	+ 2	1,2,5	*****
+ sān qī (三七, 三七)	Gastric ulcer (531)	63	+ 6	5,3,4	***
+ shā rén (砂仁, 砂仁)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	58	+ 20	4,5,1	*****
hǎi rén cǎo (海人草, 海人草) <i>Digenea simplex</i> (Wulf.) C. Ag.	Cough (7862)	5	24	4,10,9	*
	Flatulence, eructation, and gas pain (7873)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Disorders of function of stomach (536)	3			
	Absence of menstruation (6260)	3			
	Benign essential hypertension (4011)	3			
	Headache (7840)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Unspecified functional disorder of stomach (5369)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	47	+ 12	4,10,3	*
+ bái jiè zǐ (白芥子, 白芥子)	Lipoma (214)	41	+ 5	11,10,5	*
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	58	+ 1	4,10,1	*
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	53	+ 8	8,7,11	*
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	54	+ 2	5,7,1	*
+ má huáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	51	+ 8	7,8,10	*
+ shān zhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	48	+ 17	5,6,4	*
hǎi zǎo (海藻, 海藻) <i>Sargassum</i>	Unspecified functional disorder of intestine (5649)	4	5	5,3,4	**
	Cough (7862)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pure hypercholesterolemia (2720)	2			
	Headache (7840)	2			
	Benign essential hypertension (4011)	2			
	Constipation (5640)	2			
	Unspecified breast disorder (6119)	2			
	Unspecified pruritic disorder (6989)	2			
+ bàn zhī lián (半枝莲, 半枝莲)	Malignant neoplasm of stomach (151)	51	+ 3	5,4,3	**
+ huí xiāng (茴香, 茴香)	Unspecified functional disorder of intestine (5649)	4	+ 19	5,8,4	**
hǎn qiào cǎo (蚶壳草, 蚶壳草) <i>Herba Centellae</i>	Other chest pain (78659)	8	12	3,2,4	**
	Unspecified pruritic disorder (6989)	7			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7			
	Headache (7840)	4			
	Cough (7862)	4			
	Pain in joint, other specified sites (71948)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Chronic rhinitis (4720)	2			
	Other sleep disturbances (78059)	2			
	Diarrhea of presumed infectious origin (0093)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Stridor (7861)	2			
+ huà shí cǎo (化石草, 化石草)	Calculus of kidney (5920)	65	+ 1	3,11,5	**
+ qīng pí (青皮, 青皮)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	11	+ 7	5,10,7	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ wúmíng yì (无名异, 無名異)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 4	11,3,10	**
hàn lián cǎo (旱莲草, 旱蓮草) <i>Herba Ecliptae</i>	Unspecified disorder of globe (3609)	9	9	5,2,3	****
	Other sleep disturbances (78059)	6			
	Unspecified disease of pancreas (5779)	4			
	Chronic rhinitis (4720)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Headache (7840)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Other chest pain (78659)	3			
	Cough (7862)	3			
	Infantile cerebral palsy, unspecified (3439)	2			
	Unspecified pruritic disorder (6989)	2			
	Pain in joint, lower leg (71946)	2			
	Unspecified endocrine disorder (2599)	2			
	Influenza with pneumonia (4870)	2			
	Pain in joint, shoulder region (71941)	2			
	Pain in joint, other specified sites (71948)	2			
	Pain in joint, hand (71944)	2			
+ dàxiǎo jì (大小蓟, 大小薊)	Hematuria (5997)	17	+ 6	5,1,9	***
+ hóng gǔ shé (红骨蛇, 紅骨蛇)	Influenza with pneumonia (4870)	41	+ 2	1,2,5	**
háng jú (杭菊, 杭菊) <i>Flos Chrysanthemi</i>	Headache (7840)	3	2	3,4,9	****
	Unspecified disorder of globe (3609)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Cough (7862)	2			
	Allergic rhinitis (477)	2			
+ gù zhǐ huā (故纸花, 故紙花)	Unspecified disorder of globe (3609)	6	+ 20	4,3,5	***
hē zǐ (诃子, 訶子) <i>Fructus Chebulae</i>	Allergic rhinitis (477)	8	8	5,8,2	**
	Chronic rhinitis (4720)	8			
	Allergic rhinitis, cause unspecified (4779)	5			
	Cough (7862)	5			
	Chronic pharyngitis (4721)	4			
	Throat pain (7841)	4			
	Voice disturbance (7844)	4			
	Bronchitis, not specified as acute or chronic (490)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Chronic nasopharyngitis (4722)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Other voice and resonance disorders (78449)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	43	+ 5	8,5,11	**
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	50	+ 2	11,5,3	**
+ fáng fēng (防风, 防风)	Allergic rhinitis (477)	73	+ 2	2,1,5	**
hé huān pí (合欢皮, 合欢皮) <i>Cortex Albiziae</i>	Other sleep disturbances (78059)	12	18	5,3,9	****
	Benign essential hypertension (4011)	11			
	Allergic rhinitis, cause unspecified (4779)	6			
	Headache (7840)	5			
	Unspecified essential hypertension (4019)	4			
	Cough (7862)	4			
	Unspecified nonpsychotic mental disorder (3009)	4			
	Cardiac dysrhythmia, unspecified (4279)	3			
	Constipation (5640)	2			
	Palpitations (7851)	2			
+ bái qián (白前, 白前)	Cough (7862)	34	+ 5	4,3,5	****
+ bǎihé (百合, 百合)	Other sleep disturbances (78059)	33	+ 9	9,5,7	****
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	53	+ 2	8,9,7	****
+ héshǒuwū (何首乌, 何首乌)	Unspecified essential hypertension (4019)	59	+ 9	9,8,7	****
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	44	+ 6	5,4,9	**
+ tánxiāng (檀香, 檀香)	Cardiac dysrhythmia, unspecified (4279)	41	+ 7	8,9,10	**
+ tiān nán xīng (天南星, 天南星)	Benign essential hypertension (4011)	13	+ 5	5,3,4	**
héshǒuwū (何首乌, 何首乌) <i>Radix Polygoni Multiflora</i>	Benign essential hypertension (4011)	22	9	11,5,8	*****
	Unspecified essential hypertension (4019)	8			
	Absence of menstruation (6260)	6			
	Pure hypercholesterolemia (2720)	5			
	Other sleep disturbances (78059)	4			
	Palpitations (7851)	4			
	Unspecified pruritic disorder (6989)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Headache (7840)	3			
	Alcoholic fatty liver (5710)	2			
	Other chronic hepatitis (57149)	2			
	Chronic rhinitis (4720)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pain in joint, other specified sites (71948)	2			
	Infertility, female, of unspecified origin (6289)	2			
	Constipation (5640)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	72	+ 2	7,9,8	****
+ gé huā (葛花, 葛花)	Benign essential hypertension (4011)	50	+ 1	9,5,11	*
+ hé huān pí (合欢皮, 合欢皮)	Unspecified essential hypertension (4019)	59	+ 18	9,8,7	****
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	44	+ 17	5,7,4	****
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	47	+ 1	5,10,9	****
+ jí lí (蒺藜, 蒺藜)	Vitiligo (70901)	45	+ 15	1,11,12	****
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	52	+ 17	5,6,7	****
+ wú zhūyú (吴茱萸, 吳茱萸)	Unspecified essential hypertension (4019)	43	+ 19	1,5,7	****
+ wǔwèizǐ (五味子, 五味子)	Other chronic hepatitis (57149)	41	+ 8	8,5,9	****
+ yuǎnzhì (远志, 遠志)	Unspecified essential hypertension (4019)	50	+ 18	11,5,12	****
+ zǐ cǎogēn (紫草根, 紫草根)	Unspecified pruritic disorder (6989)	40	+ 21	5,6,8	**
hé yè (荷叶, 荷葉) <i>Folium Nelumbinis</i>	Headache (7840)	9	1	6,8,5	***
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6			
	Unspecified endocrine disorder (2599)	5			
	Other sleep disturbances (78059)	4			
	Other and unspecified hyperlipidemia (2724)	2			
	Constipation (5640)	2			
	Chronic rhinitis (4720)	2			
	Gastrojejunal ulcer (534)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Tinnitus, unspecified (38830)	2			
	Chronic pharyngitis (4721)	2			
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	95	+ 2	5,6,7	****
+ júhuā (菊花, 菊花)	Headache (7840)	11	+ 2	8,6,7	****
hēi pú huáng (黑蒲黄, 黑蒲黃) <i>Pollen Typhae</i>	Endometriosis, site unspecified (6179)	37	6	8,5,9	**
	Absence of menstruation (6260)	22			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	10			
	Leiomyoma of uterus, unspecified (2189)	5			
	Endometriosis of uterus (6170)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Excessive or frequent menstruation (6262)	2			
	Endometriosis (617)	2			
+ bái chūn gēn (白椿根, 白椿根)	Absence of menstruation (6260)	76	+ 12	5,2,4	*
+ biǎn bó (扁柏, 扁柏)	Absence of menstruation (6260)	54	+ 6	5,6,7	**
+ dà xiǎo jì (大小薊, 大小薊)	Absence of menstruation (6260)	56	+ 6	5,9,8	**
+ hóng huā (红花, 紅花)	Absence of menstruation (6260)	56	+ 4	4,2,3	**
+ huái huā (槐花, 槐花)	Residual hemorrhoidal skin tags (4559)	45	+ 6	8,2,7	**
+ jī xuè téng (鸡血藤, 雞血藤)	Absence of menstruation (6260)	48	+ 4	11,6,5	**
+ lǐ zhī hé (荔枝核, 荔枝核)	Endometriosis, site unspecified (6179)	57	+ 7	9,10,8	**
+ mǔ dān pí (牡丹皮, 牡丹皮)	Absence of menstruation (6260)	62	+ 21	4,5,2	**
+ mù xiāng (木香, 木香)	Endometriosis, site unspecified (6179)	60	+ 7	5,12,3	**
+ wū yào (乌药, 烏藥)	Endometriosis, site unspecified (6179)	65	+ 7	12,11,10	**
+ wǔ líng zhī (五灵脂, 五靈脂)	Endometriosis, site unspecified (6179)	44	+ 4	8,9,6	**
+ xià kū huā (夏枯花, 夏枯花)	Endometriosis, site unspecified (6179)	46	+ 11	5,7,4	*
+ zé lán (泽兰, 澤蘭)	Absence of menstruation (6260)	41	+ 4	12,5,8	**
hóng gǔ shé (红骨蛇, 紅骨蛇) <i>Kadsura japonica</i> (Linn.) <i>Dunal</i>	Influenza with pneumonia (4870)	19	2	1,4,3	**
	Chronic rhinitis (4720)	8			
	Cough (7862)	5			
	Throat pain (7841)	4			
	Headache (7840)	3			
	Pain in joint, other specified sites (71948)	3			
	Other sleep disturbances (78059)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Unspecified pruritic disorder (6989)	2			
	Backache, unspecified (7245)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Influenza (487)	2			
+ hàn lián cǎo (旱莲草, 旱蓮草)	Influenza with pneumonia (4870)	41	+ 9	1,2,5	**
hóng huā (红花, 紅花) <i>Flos Carthami</i>	Absence of menstruation (6260)	17	4	4,2,3	*****
	Unspecified essential hypertension (4019)	15			
	Rectal prolapse (5691)	8			
	Irregular menstrual cycle (6264)	5			
	Myalgia and myositis, unspecified (7291)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Cough (7862)	2			
+ bì xiè (萆薢, 萆薢)	Rectal prolapse (5691)	94	+ 1	8,4,7	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	58	+ 18	4,2,3	**
+ chì sháo (赤芍, 赤芍)	Rectal prolapse (5691)	43	+ 21	5,7,4	*****
+ dàhuáng (大黄, 大黄)	Rectal prolapse (5691)	68	+ 22	2,1,4	*****
+ dì yú (地榆, 地榆)	Rectal prolapse (5691)	41	+ 6	4,7,8	***
+ gōu téng (钩藤, 钩藤)	Unspecified essential hypertension (4019)	59	+ 15	2,12,11	****
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Absence of menstruation (6260)	56	+ 6	4,2,3	**
+ huái huā (槐花, 槐花)	Rectal prolapse (5691)	95	+ 6	4,2,3	***
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Rectal prolapse (5691)	59	+ 12	2,5,6	***
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Rectal prolapse (5691)	92	+ 3	2,8,7	**
+ mò yào (没药, 沒藥)	Myalgia and myositis, unspecified (7291)	18	+ 4	4,3,7	*****
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	88	+ 2	4,3,2	***
+ qiānnián jiàn (千年健, 千年健)	Chondrocalcinosis, cause unspecified (7123)	78	+ 10	4,3,5	**
+ shānzhā (山楂, 山楂)	Rectal prolapse (5691)	47	+ 17	5,4,2	*****
+ xià kūcǎo (夏枯草, 夏枯草)	Unspecified essential hypertension (4019)	40	+ 11	3,7,4	****
+ yúxīngcǎo (鱼腥草, 魚腥草)	Rectal prolapse (5691)	59	+ 3	2,4,5	****
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Rectal prolapse (5691)	43	+ 3	5,7,4	*
+ zhǐshí (枳实, 枳實)	Rectal prolapse (5691)	67	+ 7	5,7,6	*****
+ zǐhuā dì dīng (紫花地丁, 紫花地丁)	Rectal prolapse (5691)	48	+ 3	5,4,3	***
hóngjǐngtiān (红景天, 紅景天) <i>Herba et Rhizoma Rhodiolae Crenulatae</i>	Cough (7862)	3	4	8,9,10	*
	Unspecified functional disorder of intestine (5649)	2			
	Other sleep disturbances (78059)	2			
hóng qū (红藜, 紅藜) <i>Fermentum Rubrum</i>	Pure hypercholesterolemia (2720)	39	17	6,3,5	*****
	Mixed hyperlipidemia (2722)	11			
	Other and unspecified hyperlipidemia (2724)	8			
	Pure hyperglyceridemia (2721)	6			
	Disorders of lipid metabolism (272)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Unspecified disorder of lipid metabolism (2729)	2			
	Coagulation defects (286)	2			
	Cervicalgia (7231)	2			
+ bài jiàng cǎo (败酱草, 敗醬草)	Pure hypercholesterolemia (2720)	41	+ 3	8,7,4	****
+ bèimǔ (贝母, 貝母)	Pure hypercholesterolemia (2720)	56	+ 5	7,5,4	*****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bì xiè (萆薢, 萆薢)	Pure hypercholesterolemia (2720)	47	+ 1	5,7,8	****
+ chén pí (陈皮, 陳皮)	Pure hypercholesterolemia (2720)	42	+ 7	8,5,9	*****
+ dà huáng (大黃, 大黃)	Pure hypercholesterolemia (2720)	46	+ 22	2,7,3	*****
+ dīng shù xiǔ (丁豎朽, 丁豎朽)	Pure hypercholesterolemia (2720)	68	+ 1	4,7,8	**
+ fān xiè yè (番泻叶, 番瀉葉)	Pure hypercholesterolemia (2720)	40	+ 22	4,5,3	**
+ hé shǒu wū (何首烏, 何首烏)	Pure hypercholesterolemia (2720)	44	+ 9	5,7,4	*****
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	50	+ 1	7,6,5	****
+ huáng qí (黃耆, 黃耆)	Pure hypercholesterolemia (2720)	41	+ 14	4,5,3	*****
+ jiāng huáng (姜黃, 薑黃)	Pure hypercholesterolemia (2720)	41	+ 4	4,9,3	*****
+ jiǔ cài zǐ (韭菜子, 韭菜子)	Pure hypercholesterolemia (2720)	41	+ 13	6,7,4	**
+ jú hóng (橘紅, 橘紅)	Pure hypercholesterolemia (2720)	48	+ 7	8,7,9	****
+ lú gēn (芦根, 蘆根)	Pure hypercholesterolemia (2720)	44	+ 11	7,8,6	****
+ lù jiǎo (鹿角, 鹿角)	Pure hypercholesterolemia (2720)	41	+ 13	5,7,6	*
+ pú huáng (蒲黃, 蒲黃)	Pure hypercholesterolemia (2720)	50	+ 6	7,2,5	****
+ shén qū (神麴, 神麴)	Pure hypercholesterolemia (2720)	49	+ 17	7,3,5	*****
+ shuǐ xiān zǐ (水仙子, 水仙子)	Pure hypercholesterolemia (2720)	42	+ 17	6,5,7	*
+ wū méi (乌梅, 烏梅)	Pure hypercholesterolemia (2720)	44	+ 8	3,10,4	****
hóng téng (紅藤, 紅藤) <i>Caulis Sargentodoxae</i>	Pure hypercholesterolemia (2720)	12	3	7,8,6	*
	Headache (7840)	6			
	Other and unspecified hyperlipidemia (2724)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Cough (7862)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Pure hyperglyceridemia (2721)	3			
	Other sleep disturbances (78059)	2			
	Alcoholic fatty liver (5710)	2			
	Other chest pain (78659)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Benign essential hypertension (4011)	2			
	Mixed hyperlipidemia (2722)	2			
	Unspecified endocrine disorder (2599)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	60	+ 1	8,9,7	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ dīng shù xiù (丁竖朽, 丁豎朽)	Pure hypercholesterolemia (2720)	54	+ 1	8,4,7	*
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	46	+ 1	5,7,4	*
+ sāng yè (桑叶, 桑葉)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	55	+ 2	6,4,5	*
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	47	+ 17	5,6,7	*
+ wú zhūyú (吴茱萸, 吳茱萸)	Other quadriplegia (34409)	54	+ 19	5,4,1	*
hòupò (厚朴, 厚朴) <i>Cortex Magnoliae Officinalis</i>	Cough (7862)	10	20	2,8,9	*****
	Other chest pain (78659)	9			
	Allergic rhinitis, cause unspecified (4779)	5			
	Flatulence, eructation, and gas pain (7873)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Late effect of contusion (9063)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Constipation (5640)	3			
	Absence of menstruation (6260)	2			
	Allergic rhinitis (477)	2			
	Unspecified functional disorder of stomach (5369)	2			
+ bái qián (白前, 白前)	Cough (7862)	28	+ 5	5,1,2	***
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	40	+ 2	7,12,4	***
+ zhīshí (枳实, 枳實)	Constipation (5640)	32	+ 7	5,6,8	*****
hú huánglián (胡黄连, 胡黃連) <i>Rhizoma Picrorhizae</i>	Throat pain (7841)	5	23	9,8,7	*
	Cough (7862)	2			
+ jiégěng (桔梗, 桔梗)	Throat pain (7841)	40	+ 5	5,4,3	*
hú má rén (胡麻仁, 胡麻仁) <i>Semen Sesami Nigrum</i>	Unspecified pruritic disorder (6989)	10	9	11,10,8	**
	Unspecified functional disorder of intestine (5649)	7			
	Cough (7862)	6			
	Headache (7840)	6			
	Other sleep disturbances (78059)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Throat pain (7841)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Influenza with pneumonia (4870)	3			
	Unspecified disorder of globe (3609)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Constipation (5640)	2			
+ biāndòu (扁豆, 扁豆)	Unspecified functional disorder of intestine (5649)	12	+ 14	10,8,9	**
hútáo (胡桃, 胡桃) <i>Semen Juglandis</i>	Pain in joint, other specified sites (71948)	3	13	8,9,7	*
	Cough (7862)	2			
	Lumbago (7242)	2			
+ jiùcài zǐ (韭菜子, 韭菜子)	Unspecified functional disorder of intestine (5649)	13	+ 13	10,6,7	*
+ yín yáng huò (淫羊藿, 淫羊藿)	Impotence of organic origin (60784)	8	+ 13	6,12,8	*
hǔ zhàng (虎杖, 虎杖) <i>Rhizoma et Radix Polygoni Cuspidati</i>	Pure hypercholesterolemia (2720)	10	1	4,7,5	***
	Residual hemorrhoidal skin tags (4559)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Pain in joint, other specified sites (71948)	4			
	Unspecified hypertensive heart disease without heart failure (40290)	3			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Unspecified essential hypertension (4019)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Anal fissure (5650)	2			
	Generalized and unspecified atherosclerosis (4409)	2			
	Phlebitis and thrombophlebitis of unspecified site (4519)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ báihuāshé shé cǎo (白花蛇舌草, 白花蛇舌草)	Chronic hepatitis (5714)	43	+ 3	2,4,5	***
+ běi shāshēn (北沙参, 北沙参)	Alcoholic fatty liver (5710)	57	+ 9	7,8,2	***
+ cǎo juémíng (草决明, 草决明)	Pure hypercholesterolemia (2720)	74	+ 11	5,4,3	***
+ chuān mù tōng (川木通, 川木通)	Pure hypercholesterolemia (2720)	67	+ 1	5,4,3	*
+ chuān qī (川七, 川七)	Contusion of chest wall (9221)	54	+ 6	5,1,8	***
+ dīng shù xiǔ (丁竖朽, 丁竖朽)	Unspecified hypertensive heart disease without heart failure (40290)	76	+ 1	4,3,2	**
+ gégēn (葛根, 葛根)	Unspecified hypertensive heart disease without heart failure (40290)	97	+ 2	4,5,3	***
+ héshǒuwū (何首乌, 何首乌)	Pure hypercholesterolemia (2720)	47	+ 9	5,10,9	***
+ hóng qū (红麴, 红麴)	Pure hypercholesterolemia (2720)	50	+ 17	7,6,5	***
+ hóng téng (红藤, 红藤)	Pure hypercholesterolemia (2720)	46	+ 3	5,7,4	*
+ lónggǔ (龙骨, 龙骨)	Unspecified hypertensive heart disease without heart failure (40290)	55	+ 18	3,2,7	***
+ mǔlì (牡蛎, 牡蛎)	Unspecified hypertensive heart disease without heart failure (40290)	76	+ 15	5,8,4	***
+ pú huáng (蒲黄, 蒲黄)	Pure hypercholesterolemia (2720)	79	+ 6	5,11,1	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ shānyào (山药, 山藥)	Other specified congenital anomalies (75989)	54	+ 14	8,7,1	***
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	60	+ 17	5,1,3	***
+ shuǐ dīngxiāng (水丁香, 水丁香)	Unspecified hypertensive heart disease without heart failure (40290)	98	+ 1	12,1,10	*
+ suàn tóu (蒜头, 蒜頭)	Pure hypercholesterolemia (2720)	60	+ 17	5,4,2	*
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 11	5,3,2	***
+ xiè bái (薤白, 薤白)	Unspecified hypertensive heart disease without heart failure (40290)	93	+ 7	4,11,10	***
+ zé qī (泽漆, 澤漆)	Pure hypercholesterolemia (2720)	45	+ 1	4,5,3	*
+ zéxiè (泽泻, 澤瀉)	Pure hypercholesterolemia (2720)	70	+ 1	5,2,4	***
huáshí (滑石, 滑石) <i>Talcum</i>	Polydipsia (7835)	7	1	7,5,6	****
	Headache (7840)	6			
	Unspecified functional disorder of intestine (5649)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	4			
	Other sleep disturbances (78059)	3			
	Unspecified pruritic disorder (6989)	3			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Heat stroke and sunstroke (9920)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Pneumonia due to respiratory syncytial virus (4801)	41	+ 15	7,8,6	***
+ sāng yè (桑叶, 桑葉)	Generalized hyperhidrosis (7808)	49	+ 2	5,6,7	****
huá zé lán (华泽兰, 華澤蘭) <i>Eupatorium chinense L.</i>	Cough (7862)	6	3	1,12,2	*
	Flatulence, eructation, and gas pain (7873)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Chronic rhinitis (4720)	3			
	Headache (7840)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Unspecified pruritic disorder (6989)	2			
	Other sleep disturbances (78059)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified functional disorder of stomach (5369)	2			
+ bèimǔ (贝母, 貝母)	Cough (7862)	41	+ 5	1,2,3	*
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 6	6,5,7	*
huàshí cǎo (化石草, 化石草) <i>Herba Orthosiphonae</i>	Calculus of kidney (5920)	26	1	11,8,7	**
	Calculus of gallbladder with acute cholecystitis, without mention of obstruction (57400)	10			
	Cholelithiasis (574)	5			
	Urinary calculus, unspecified (5929)	4			
	Calculus of ureter (5921)	4			
	Calculus in urethra (5942)	4			
	Urethral abscess (5970)	3			
+ chuān mù tōng (川木通, 川木通)	Calculus of kidney (5920)	28	+ 1	5,7,8	*
+ hǎi jīn shā (海金沙, 海金沙)	Cholelithiasis (574)	53	+ 1	5,7,4	*
+ hǎn qiào cǎo (蚶壳草, 蚶壳草)	Calculus of kidney (5920)	65	+ 12	3,11,5	***
+ jīguānhuā (鸡冠花, 雞冠花)	Calculus of kidney (5920)	41	+ 6	11,8,12	*
+ mián yīn chén (绵茵陈, 綿茵陳)	Calculus of kidney (5920)	53	+ 1	7,8,5	*
+ xiān chá (仙楂, 仙楂)	Calculus of kidney (5920)	43	+ 17	11,8,7	*
+ xù duàn (续断, 續斷)	Calculus of kidney (5920)	46	+ 13	5,3,6	***
huái huā (槐花, 槐花) <i>Flos Sophorae</i>	Residual hemorrhoidal skin tags (4559)	12	6	10,11,9	****
	Contact dermatitis and other eczema, unspecified cause (6929)	11			
	Hemorrhoids (455)	8			
	Anal fissure (5650)	5			
	Unspecified pruritic disorder (6989)	4			
	Headache (7840)	3			
	Rectal prolapse (5691)	3			
	Other sleep disturbances (78059)	3			
	Chronic rhinitis (4720)	3			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Abdominal pain, other specified site (78909)	2			
+ biǎn bó (扁柏, 扁柏)	Hemorrhoids (455)	42	+ 6	9,10,6	**
+ chuān qī (川七, 川七)	Residual hemorrhoidal skin tags (4559)	76	+ 6	11,8,9	***
+ dìhuáng (地黄, 地黃)	Residual hemorrhoidal skin tags (4559)	55	+ 21	7,5,6	***
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Residual hemorrhoidal skin tags (4559)	45	+ 6	8,2,7	**
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	95	+ 4	4,2,3	***
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	51	+ 2	11,10,12	***
+ shí gāo (石膏, 石膏)	Contact dermatitis and other eczema, unspecified cause (6929)	41	+ 11	7,10,5	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 11	5,7,3	***
+ xiānhè cǎo (仙鹤草, 仙鹤草)	Residual hemorrhoidal skin tags (4559)	41	+ 6	7,6,5	***
+ yúxīngcǎo (鱼腥草, 鱼腥草)	Anal fissure (5650)	49	+ 3	11,10,12	***
+ zhúrú (竹茹, 竹茹)	Hemorrhoids (455)	44	+ 5	9,11,5	***
+ zǐcǎo (紫草, 紫草)	Contact dermatitis and other eczema, unspecified cause (6929)	31	+ 21	7,8,10	***
huángbò (黄柏, 黄柏) <i>Cortex Phellodendri Chinensis</i>	Absence of menstruation (6260)	8	12	8,9,1	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Leukorrhea, not specified as infective (6235)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Lumbago (7242)	2			
	Endometriosis, site unspecified (6179)	2			
	Dysmenorrhea (6253)	2			
	Other sleep disturbances (78059)	2			
	Unspecified pruritic disorder (6989)	2			
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	52	+ 8	8,6,9	*
huángjīn guì (黄金桂, 黄金桂) <i>Cudrania cochinchinensis</i> (Lour.) Kudo	Flatulence, eructation, and gas pain (7873)	5	2	10,9,8	*
	Unspecified disorder of autonomic nervous system (3379)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Other chest pain (78659)	3			
	Urinary frequency (78841)	3			
	Other sleep disturbances (78059)	3			
	Headache (7840)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified disorder of globe (3609)	3			
	Unspecified pruritic disorder (6989)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Pain in joint, lower leg (71946)	2			
	Chronic nasopharyngitis (4722)	2			
	Dysmenorrhea (6253)	2			
	Absence of menstruation (6260)	2			
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	42	+ 2	10,5,11	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chuān shān lóng (穿山龙, 穿山龍)	Myalgia and myositis, unspecified (7291)	24	+ 10	5,10,11	*
+ jī xuè téng (鸡血藤, 雞血藤)	Monoplegia of upper limb affecting unspecified side (34440)	51	+ 4	5,7,8	*
+ máo dōng qīng (毛冬青, 毛冬青)	Unspecified disorder of globe (3609)	10	+ 3	5,1,4	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	55	+ 6	9,12,11	*
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	54	+ 18	8,2,3	*
+ suǒ yáng (锁阳, 鎖陽)	Scanty or infrequent menstruation (6261)	32	+ 13	10,11,12	*
+ tōng cǎo (通草, 通草)	Dyspepsia and other specified disorders of function of stomach (5368)	11	+ 1	10,8,5	*
+ xìng rén (杏仁, 杏仁)	Bronchitis, not specified as acute or chronic (490)	52	+ 16	11,1,10	*
huángjīng (黄精, 黃精) <i>Rhizoma Polygonati</i>	Unspecified functional disorder of intestine (5649)	9	9	5,8,9	***
	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	9			
	Unspecified functional disorder of stomach (5369)	9			
	Cough (7862)	5			
	Constipation (5640)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			
	Gastrojejunal ulcer (534)	3			
	Unspecified pruritic disorder (6989)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	2			
	Chronic rhinitis (4720)	2			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
	Other sleep disturbances (78059)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	62	+ 1	8,9,10	***
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	80	+ 2	1,5,8	***
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	53	+ 5	10,7,12	**
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	94	+ 18	9,3,8	***
huánglián (黄连, 黃連) <i>Rhizoma Coptidis</i>	Contact dermatitis and other eczema, unspecified cause (6929)	20	12	6,12,8	*****
	Unspecified functional disorder of stomach (5369)	12			
	Unspecified pruritic disorder (6989)	4			
	Cough (7862)	3			
	Other sleep disturbances (78059)	3			
	Constipation (5640)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Leukorrhea, not specified as infective (6235)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
	Absence of menstruation (6260)	2			
+ bái jí (白芨, 白芨)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	67	+ 6	5,1,12	****
+ mùguā (木瓜, 木瓜)	Fever (7806)	43	+ 10	7,6,5	****
+ sānqī (三七, 三七)	Gastric ulcer (531)	77	+ 6	5,4,7	****
huángqí (黄耆, 黄耆) <i>Radix Astragali</i>	Anemia of mother, unspecified as to episode of care or not applicable (64820)	12	14	9,3,8	*****
	Other chest pain (78659)	8			
	Allergic rhinitis, cause unspecified (4779)	6			
	Monoplegia of upper limb affecting unspecified side (34440)	6			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Carcinoma in situ of other and unspecified digestive organs (2309)	2			
	Ulceration of intestine (56982)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	55	+ 2	1,9,7	*****
+ hóng qū (红麴, 红麴)	Pure hypercholesterolemia (2720)	41	+ 17	4,5,3	****
+ máhuáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	58	+ 8	9,5,8	*
+ mǔlì (牡蛎, 牡蛎)	Generalized hyperhidrosis (7808)	52	+ 15	9,2,8	*****
+ qiáomài (荞麦, 蕎麥)	Generalized hyperhidrosis (7808)	42	+ 17	9,8,7	*
+ shān dòu gēn (山豆根, 山豆根)	Carcinoma in situ of other and unspecified digestive organs (2309)	46	+ 3	3,11,10	**
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	45	+ 17	7,8,9	*****
+ yīn chén (茵陈, 茵陳)	Other injury to liver without mention of open wound into cavity (86409)	55	+ 1	2,1,5	****
huáng qín (黄芩, 黄芩) <i>Radix Scutellariae</i>	Allergic rhinitis, cause unspecified (4779)	25	12	9,8,10	*****
	Chronic nasopharyngitis (4722)	14			
	Acute sinusitis, unspecified (4619)	10			
	Chronic rhinitis (4720)	9			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Absence of menstruation (6260)	2			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	64	+ 2	1,7,8	*****
+ chán tuì (蟬蛻, 蟬蛻)	Allergic rhinitis, cause unspecified (4779)	65	+ 2	9,8,2	*****
+ dāng shēn (党参, 黨參)	Chronic pharyngitis and nasopharyngitis (472)	63	+ 14	9,7,8	*****
+ dì lóng (地龙, 地龍)	Allergic rhinitis, cause unspecified (4779)	48	+ 15	4,9,1	*****
+ jīnyínhuā (金银花, 金銀花)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 3	10,9,8	*****
+ mǔdānpí (牡丹皮, 牡丹皮)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 21	6,4,8	*****
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	41	+ 6	9,12,8	***
+ qiáomài (荞麦, 蕎麥)	Allergic rhinitis, cause unspecified (4779)	64	+ 17	8,7,10	*
+ qīng xiāngzǐ (青箱子, 青箱子)	Other ill-defined disorders of eye (37999)	67	+ 11	8,9,6	**
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	72	+ 18	7,8,2	*****
huángshuǐ qié (黄水茄, 黃水茄) <i>Herba Solani Incani</i>	Unspecified pruritic disorder (6989)	5	1	4,5,8	**
	Malignant neoplasm of bronchus and lung, unspecified (1629)	4			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	4			
	Chronic rhinitis (4720)	4			
	Malignant neoplasm of colon, unspecified site (1539)	3			
	Malignant neoplasm of breast (female), unspecified (1749)	3			
	Secondary malignant neoplasm of lung (1970)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Malignant neoplasm of trachea, bronchus, and lung (162)	2			
	Cough (7862)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Malignant neoplasm of liver, primary (1550)	2			
+ púgōngyīng (蒲公英, 蒲公英)	Malignant neoplasm of female breast (174)	43	+ 3	5,4,6	**
+ tīng lì zǐ (葶苈子, 葶藶子)	Malignant neoplasm of bronchus and lung, unspecified (1629)	45	+ 16	8,11,3	**
+ xuèjié (血竭, 血竭)	Chronic hepatitis (5714)	49	+ 6	4,5,3	**
+ yúxīngcǎo (鱼腥草, 魚腥草)	Secondary malignant neoplasm of lung (1970)	45	+ 3	5,4,8	**
+ zhū dǎn (猪胆, 豬膽)	Chronic rhinitis (4720)	17	+ 3	4,3,8	*
huíxiāng (茴香, 茴香) <i>Fructus Foeniculi</i>	Headache (7840)	3	19	7,5,10	**
	Peptic ulcer, site unspecified (533)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Lumbago (7242)	2			
	Flatulence, eructation, and gas pain (7873)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
+ hǎizǎo (海藻, 海藻)	Unspecified functional disorder of intestine (5649)	4	+ 5	5,8,4	**
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Peptic ulcer, site unspecified (533)	29	+ 8	11,10,8	**
+ wúmíng yì (无名异, 无名异)	Headache (7840)	10	+ 4	10,1,11	**
+ xiōngqiōng (芎藭, 芎藭)	Peptic ulcer, site unspecified (533)	13	+ 4	2,1,3	**
huǒ má rén (火麻仁, 火麻仁) <i>Fructus Cannabis</i>	Constipation (5640)	22	22	1,2,6	***
	Unspecified functional disorder of intestine (5649)	11			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	7			
	Dyspepsia and other specified disorders of function of stomach (5368)	7			
	Allergic rhinitis, cause unspecified (4779)	6			
	Chronic rhinitis (4720)	4			
	Unspecified functional disorder of stomach (5369)	4			
	Excessive or frequent menstruation (6262)	4			
	Acne varioliformis (7060)	2			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
	Unspecified pruritic disorder (6989)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Headache (7840)	2			
+ běi shāshēn (北沙参, 北沙参)	Unspecified functional disorder of intestine (5649)	26	+ 9	3,6,5	***
+ cǎo juémíng (草决明, 草决明)	Constipation (5640)	47	+ 11	10,1,11	***
+ dīng shù xiǔ (丁竖朽, 丁竖朽)	Unspecified hypertensive heart disease without heart failure (40290)	57	+ 1	4,6,5	**
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Chronic rhinitis (4720)	23	+ 1	1,12,5	***
+ fān xiè yè (番泻叶, 番泻叶)	Constipation (5640)	47	+ 22	1,5,3	**
+ guā lóu gēn (栝蒌根, 栝蒌根)	Constipation (5640)	26	+ 11	6,2,3	***
+ tiānméngdōng (天门冬, 天门冬)	Constipation (5640)	29	+ 9	6,9,1	***
+ xiān chá (仙楂, 仙楂)	Constipation (5640)	31	+ 17	1,2,6	*
+ xuánshēn (玄参, 玄参)	Constipation (5640)	36	+ 21	1,3,2	***
+ zhīshí (枳实, 枳实)	Constipation (5640)	62	+ 7	1,12,5	***
huòxiāng (藿香, 藿香) <i>Herba Pogostemonis</i>	Diaper or napkin rash (6910)	21	20	5,6,8	****
	Allergic rhinitis, cause unspecified (4779)	8			
	Unspecified pruritic disorder (6989)	5			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified functional disorder of stomach (5369)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Cough (7862)	4			
	Headache (7840)	3			
	Prurigo (6982)	3			
	Chronic rhinitis (4720)	2			
	Allergic rhinitis (477)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Acute sinusitis, unspecified (4619)	2			
+ cāngěr zǐ (苍耳子, 蒼耳子)	Hemangioma, any site (2280)	82	+ 2	1,2,4	****
+ jiégěng (桔梗, 桔梗)	Hemangioma, any site (2280)	44	+ 5	2,5,4	****
+ shén qū (神麴, 神麴)	Diaper or napkin rash (6910)	48	+ 17	1,3,8	****
jī gǔ cǎo (鸡骨草, 雞骨草) <i>Herba Abri</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	9	11	8,9,7	*
	Flatulence, eructation, and gas pain (7873)	6			
	Other chest pain (78659)	5			
	Pain in joint, other specified sites (71948)	4			
	Chronic pharyngitis (4721)	3			
	Headache (7840)	3			
	Pain in joint, shoulder region (71941)	3			
	Unspecified disorder of globe (3609)	3			
	Cough (7862)	2			
	Other sleep disturbances (78059)	2			
	Other disorders of external ear (38089)	2			
	Influenza with pneumonia (4870)	2			
	Calculus of gallbladder with acute cholecystitis, without mention of obstruction (57400)	2			
	Unspecified disorder of gallbladder (5759)	2			
	Chronic rhinitis (4720)	2			
+ sū zǐ (苏子, 蘇子)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 16	8,9,10	*
jīguānhuā (鸡冠花, 雞冠花) <i>Flos Celosiae Cristatae</i>	Unspecified functional disorder of intestine (5649)	7	6	5,7,6	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Flatulence, eructation, and gas pain (7873)	5			
	Unspecified pruritic disorder (6989)	5			
	Chronic rhinitis (4720)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Headache (7840)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Cough (7862)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Influenza with pneumonia (4870)	2			
	Pain in joint, other specified sites (71948)	2			
	Pain in joint, lower leg (71946)	2			
+ huàshí cǎo (化石草, 化石草)	Calculus of kidney (5920)	41	+ 1	11,8,12	*
+ máhuáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	46	+ 8	7,8,6	*
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	52	+ 2	2,1,3	*
+ suānzǎo rén (酸枣仁, 酸枣仁)	Other sleep disturbances (78059)	48	+ 18	2,3,7	*
+ yè jiāo téng (夜交藤, 夜交藤)	Other sleep disturbances (78059)	46	+ 18	9,11,3	*
jīnèijīn (鸡内金, 雞內金) <i>Endothelium Corneum Gigeriae Galli</i>	Flatulence, eructation, and gas pain (7873)	21	17	4,5,9	****
	Unspecified functional disorder of stomach (5369)	7			
	Gastritis and duodenitis (535)	7			
	Unspecified functional disorder of intestine (5649)	7			
	Calculus of gallbladder with acute cholecystitis, without mention of obstruction (57400)	6			
	Dyspepsia and other specified disorders of function of stomach (5368)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	5			
	Cough (7862)	2			
	Peptic ulcer, site unspecified (533)	2			
	Acute gastritis, without mention of hemorrhage (53500)	2			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	2			
	Nutritional marasmus (261)	2			
+ hǎi jīnshā (海金沙, 海金沙)	Calculus in urethra (5942)	68	+ 1	4,5,3	*
+ qiáomài (荞麦, 蕎麥)	Unspecified functional disorder of intestine (5649)	21	+ 17	8,7,9	*
+ zhīqiào (枳壳, 枳殼)	Flatulence, eructation, and gas pain (7873)	65	+ 7	5,3,4	****
jī xiāng téng (鸡香藤, 雞香藤) <i>Paederia foetida</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	12	2	5,8,4	*
	Chronic rhinitis (4720)	7			
	Cough (7862)	6			
	Pain in joint, other specified sites (71948)	4			
	Unspecified pruritic disorder (6989)	2			
	Chronic pharyngitis (4721)	2			
+ lù lù tōng (路路通, 路路通)	Chronic rhinitis (4720)	36	+ 10	4,12,3	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
jī xuè téng (鸡血藤, 雞血藤) <i>Caulis Spatholobi</i>	Monoplegia of upper limb affecting unspecified side (34440)	40	4	3,2,6	****
	Monoplegia of upper limb (3444)	10			
	Absence of menstruation (6260)	10			
	Lumbago (7242)	2			
+ bái chūn gēn (白椿根, 白椿根)	Absence of menstruation (6260)	45	+ 12	5,6,7	*
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Absence of menstruation (6260)	48	+ 6	11,6,5	**
+ huángjīn guì (黄金桂, 黄金桂)	Monoplegia of upper limb affecting unspecified side (34440)	51	+ 2	5,7,8	*
+ qiàn cǎo gēn (茜草根, 茜草根)	Monoplegia of upper limb affecting unspecified side (34440)	51	+ 6	7,8,3	*
+ sāng zhī (桑枝, 桑枝)	Monoplegia of upper limb (3444)	47	+ 10	5,4,3	****
jí lí (蒺藜, 蒺藜) <i>Fructus Tribuli</i>	Unspecified pruritic disorder (6989)	10	15	11,12,1	****
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Vitiligo (70901)	6			
	Allergic rhinitis, cause unspecified (4779)	5			
	Headache (7840)	4			
	Chronic rhinitis (4720)	4			
	Hordeolum and other deep inflammation of eyelid (3731)	2			
	Urticaria, unspecified (7089)	2			
+ chántuì (蝉蜕, 蟬蛻)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2	+ 2	9,1,3	****
	Unspecified pruritic disorder (6989)	39			
	Contact dermatitis and other eczema, unspecified cause (6929)	16			
	Vitiligo (70901)	45			
	Unspecified pruritic disorder (6989)	53			
	Unspecified pruritic disorder (6989)	46			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	70			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	9	15	6,1,4	***
jiāng cán (僵蚕, 殭蠶) <i>Bombyx Batryticatus</i>	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	7			
	Allergic rhinitis, cause unspecified (4779)	7			
	Trigeminal neuralgia (3501)	5			
	Facial nerve disorder, unspecified (3519)	5			
	Other chronic hepatitis (57149)	5			
	Unspecified essential hypertension (4019)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Bell's palsy (3510)	3			
	Facial nerve disorders (351)	2			
	Unspecified disorder of male genital organs (6089)	2			
	Other sleep disturbances (78059)	2			
	Unspecified pruritic disorder (6989)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Trigeminal neuralgia (3501)	40	+ 15	6,1,7	***
+ bái jiè zǐ (白芥子, 白芥子)	Facial nerve disorder, unspecified (3519)	59	+ 5	10,11,9	***
+ dāngguī wěi (当归尾, 當歸尾)	Trigeminal neuralgia (3501)	16	+ 4	1,2,12	***
+ fú hǎi shí (浮海石, 浮海石)	Allergic rhinitis, cause unspecified (4779)	11	+ 5	1,2,4	**
+ fùzǐ (附子, 附子)	Facial nerve disorder, unspecified (3519)	41	+ 19	6,7,1	***
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	72	+ 6	6,10,8	**
+ jiǔ céng tǎ (九层塔, 九層塔)	Chronic rhinitis (4720)	10	+ 7	8,6,3	**
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	46	+ 3	8,9,7	**
+ shānzhā (山楂, 山楂)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	42	+ 17	1,12,2	***
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	55	+ 2	2,1,6	**
+ sīguā luò (丝瓜络, 絲瓜絡)	Monoplegia of upper limb affecting unspecified side (34440)	42	+ 10	10,1,12	***
+ tiānmá (天麻, 天麻)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	49	+ 15	1,6,5	***
jiānghuáng (姜黄, 薑黃) <i>Rhizoma Curcumae Longae</i>	Unspecified functional disorder of intestine (5649)	6	4	11,10,8	*****
	Monoplegia of upper limb affecting unspecified side (34440)	5			
	Myalgia and myositis, unspecified (7291)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Alcoholic fatty liver (5710)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Other sleep disturbances (78059)	2			
	Other and unspecified coagulation defects (2869)	2			
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	44	+ 1	10,8,2	**
+ dú huó (独活, 獨活)	Other osteoporosis (73309)	7	+ 10	9,10,11	*****
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	41	+ 17	4,9,3	*****
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	45	+ 6	11,10,1	**
jiàng zhēn xiāng (降真香, 降真香) <i>Lignum Dalbergiae Odoriferae</i>	Other nonspecific abnormal results of function study of cardiovascular system (79439)	21	6	6,5,7	**
	Postmyocardial infarction syndrome (4110)	20			
	Cardiac dysrhythmia, unspecified (4279)	19			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cardiomegaly (4293)	9			
	Other chest pain (78659)	4			
	Palpitations (7851)	3			
	Chest pain (7865)	2			
+ chāngpú (菖蒲, 菖蒲)	Cardiac dysrhythmia, unspecified (4279)	62	+ 18	6,7,8	**
+ chángshān (常山, 常山)	Postmyocardial infarction syndrome (4110)	40	+ 5	5,6,4	*
+ chénxiāng (沉香, 沉香)	Postmyocardial infarction syndrome (4110)	25	+ 7	6,1,4	*
+ chù shí zǐ (栳实子, 栳实子)	Cardiac dysrhythmia, unspecified (4279)	41	+ 1	6,5,7	*
+ chuān shān lóng (穿山龙, 穿山龍)	Postmyocardial infarction syndrome (4110)	42	+ 10	6,7,5	*
+ chuān xīn lián (穿心莲, 穿心蓮)	Postmyocardial infarction syndrome (4110)	42	+ 3	6,7,8	*
+ dì lóng (地龙, 地龍)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	45	+ 15	6,5,7	**
+ fú shén (茯神, 茯神)	Cardiac dysrhythmia, unspecified (4279)	61	+ 18	5,4,6	**
+ guā lóu pí (栳蒻皮, 栳蒻皮)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	48	+ 5	6,5,7	**
+ guā lóu rén (栳蒻仁, 栳蒻仁)	Postmyocardial infarction syndrome (4110)	76	+ 5	1,6,5	**
+ hé huān pí (合欢皮, 合歡皮)	Cardiac dysrhythmia, unspecified (4279)	44	+ 18	5,4,9	**
+ huá zé lán (华泽兰, 華澤蘭)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 3	6,5,7	*
+ jiāng cán (僵蚕, 殭蠶)	Cardiac dysrhythmia, unspecified (4279)	72	+ 15	6,10,8	**
+ jiānghuáng (姜黄, 薑黃)	Postmyocardial infarction syndrome (4110)	45	+ 4	11,10,1	**
+ juémíngzǐ (决明子, 決明子)	Postmyocardial infarction syndrome (4110)	42	+ 11	1,5,6	**
+ lóu lú (漏芦, 漏蘆)	Postmyocardial infarction syndrome (4110)	42	+ 3	12,11,10	*
+ pú huáng (蒲黄, 蒲黃)	Postmyocardial infarction syndrome (4110)	60	+ 6	11,1,10	**
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Cardiac dysrhythmia, unspecified (4279)	43	+ 8	7,8,6	**
+ ruí rén (蕤仁, 蕤仁)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	42	+ 9	1,6,4	*
+ sāng piāoxiāo (桑嫫蛸, 桑嫫蛸)	Cardiac dysrhythmia, unspecified (4279)	43	+ 8	11,1,4	**
+ sāng yè (桑叶, 桑葉)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	69	+ 2	6,5,7	**
+ sāng zhī (桑枝, 桑枝)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 10	7,6,5	**
+ shānzhā (山楂, 山楂)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 17	6,7,5	**
+ shí chāngpú (石菖蒲, 石菖蒲)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	78	+ 18	7,8,3	**
+ suǒ yáng (锁阳, 鎖陽)	Cardiac dysrhythmia, unspecified (4279)	30	+ 13	10,4,7	**
+ tánxiāng (檀香, 檀香)	Cardiac dysrhythmia, unspecified (4279)	52	+ 7	1,2,6	**
+ wǔ bèi zǐ (五倍子, 五倍子)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 8	6,7,5	*
+ xīyáng cān (西洋参, 西洋參)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	41	+ 14	6,5,7	*
+ yán hú suǒ (延胡索, 延胡索)	Other chest pain (78659)	58	+ 4	7,5,6	**
+ yùmǐ ruǐ (玉米蕊, 玉米蕊)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	45	+ 1	6,5,4	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
jiégěng (桔梗, 桔梗) <i>Radix Platycodonis</i>	Cough (7862)	12	5	11,5,2	*****
	Chronic nasopharyngitis (4722)	10			
	Other chest pain (78659)	6			
	Allergic rhinitis, cause unspecified (4779)	5			
	Chronic pharyngitis (4721)	4			
	Allergic rhinitis (477)	4			
	Chronic rhinitis (4720)	3			
	Contusion of chest wall (9221)	3			
	Headache (7840)	2			
	Throat pain (7841)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	47	+ 5	5,11,4	***
+ cāng ěr zǐ (苍耳子, 蒼耳子)	Hemangioma, any site (2280)	78	+ 2	8,1,2	*****
+ hú huáng lián (胡黄连, 胡黃連)	Throat pain (7841)	40	+ 23	5,4,3	*
+ huò xiāng (藿香, 藿香)	Hemangioma, any site (2280)	44	+ 20	2,5,4	*****
+ xīn yí (辛夷, 辛夷)	Chronic nasopharyngitis (4722)	43	+ 2	5,2,1	*****
jīn chán (金蝉, 金蟬) <i>Cordyceps Cicadae</i>	Unspecified pruritic disorder (6989)	26	18	11,1,2	***
	Contact dermatitis and other eczema, unspecified cause (6929)	24			
	Urticaria, unspecified (7089)	17			
	Chronic rhinitis (4720)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Pruritus and related conditions (698)	4			
	Headache (7840)	3			
+ chāng pú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	67	+ 18	5,4,1	**
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	42	+ 3	5,4,11	***
+ xīn yí (辛夷, 辛夷)	Chronic rhinitis (4720)	36	+ 2	5,4,8	***
+ yú xīng cǎo (鱼腥草, 魚腥草)	Pneumonia due to respiratory syncytial virus (4801)	50	+ 3	5,4,8	***
+ zhū dǎn (猪胆, 豬膽)	Chronic rhinitis (4720)	58	+ 3	11,8,5	*
+ zǐ sū yè (紫苏叶, 紫蘇葉)	Urticaria, unspecified (7089)	46	+ 2	1,2,5	***
+ zǐ sū zǐ (紫苏子, 紫蘇子)	Urticaria, unspecified (7089)	43	+ 16	1,5,4	*
jīn qián cǎo (金钱草, 金錢草) <i>Herba Lysimachiae</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6	1	1,2,11	**
	Pain in joint, hand (71944)	5			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Calculus of kidney (5920)	5			
	Pain in joint, shoulder region (71941)	5			
	Functional digestive disorders, not elsewhere classified (564)	3			
	Chronic rhinitis (4720)	3			
	Acute parametritis and pelvic cellulitis (6143)	3			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	3			
	Pain in joint, other specified sites (71948)	3			
	Headache (7840)	3			
	Gastrojejunal ulcer (534)	2			
	Unspecified pruritic disorder (6989)	2			
	Peptic ulcer, site unspecified (533)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Cough (7862)	2			
	Pain in joint, lower leg (71946)	2			
	Calculus in urethra (5942)	2			
+ chì fú lǐng (赤茯苓, 赤茯苓)	Calculus of kidney (5920)	6	+ 1	5,11,1	**
+ cōng bái (葱白, 葱白)	Chronic rhinitis (4720)	6	+ 2	1,7,2	**
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	46	+ 2	1,2,4	**
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Chronic renal failure (585)	35	+ 1	4,7,5	**
+ pèi lán (佩兰, 佩蘭)	Peptic ulcer, site unspecified (533)	9	+ 20	1,5,2	**
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	54	+ 2	7,1,2	**
+ zǐ sū gěng (紫苏梗, 紫蘇梗)	Unspecified functional disorder of intestine (5649)	29	+ 7	1,2,5	**
jīn yín huā (金银花, 金銀花) <i>Flos Lonicerae Japonicae</i>	Malignant neoplasm of colon, unspecified site (1539)	32	3	8,11,3	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	15			
	Unspecified pruritic disorder (6989)	5			
	Unspecified functional disorder of intestine (5649)	3			
	Malignant neoplasm of colon (153)	3			
	Cough (7862)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Contact dermatitis and other eczema (692)	2			
+ bái xiān pí (白鲜皮, 白鮮皮)	Dermatophytosis (110)	43	+ 12	11,8,9	***
+ dì lóng (地龙, 地龍)	Cough (7862)	67	+ 15	1,12,11	*****
+ huáng qín (黄芩, 黃芩)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 12	10,9,8	*****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
jìn qí (晋耆, 晉耆) <i>Radix Hedysari</i>	Allergic rhinitis, cause unspecified (4779)	7	14	8,9,7	*
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	3			
	Chronic rhinitis (4720)	2			
	Chronic nasopharyngitis (4722)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
jīngjiè (荆芥, 荊芥) <i>Spica Schizonepetae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	17	2	10,7,12	*****
	Pruritus and related conditions (698)	8			
	Allergic rhinitis, cause unspecified (4779)	7			
	Contact dermatitis and other eczema (692)	6			
	Cough (7862)	5			
	Unspecified pruritic disorder (6989)	3			
	Chronic rhinitis (4720)	3			
	Chronic nasopharyngitis (4722)	3			
	Allergic rhinitis (477)	2			
	Absence of menstruation (6260)	2			
	Prurigo (6982)	2			
	Urticaria, unspecified (7089)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Pneumonia due to respiratory syncytial virus (4801)	52	+ 15	8,7,1	***
jīngmǐ (粳米, 粳米) <i>Semen Oryzae Sativae</i>	Malignant neoplasm of liver, not specified as primary or secondary (1552)	4	14	1,11,10	*
	Unspecified chronic liver disease without mention of alcohol (5719)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Rheumatism, unspecified and fibrositis (7290)	2			
	Other sleep disturbances (78059)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ dàzǎo (大枣, 大棗)	Unspecified disorder of globe (3609)	2	+ 14	8,1,9	*
	Dyspepsia and other specified disorders of function of stomach (5368)	53			
+ dì lóng (地龙, 地龍)	Benign essential hypertension (4011)	52	+ 15	1,3,12	*
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	47	+ 17	10,8,9	*
jiūcài zǐ (韭菜子, 韭菜子) <i>Semen Allii Tuberosi</i>	Unspecified functional disorder of intestine (5649)	6	13	8,7,9	**
	Lumbago (7242)	5			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Headache (7840)	4			
	Hyperplasia of prostate unspecified (6009)	3			
	Impotence of organic origin (60784)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Other sleep disturbances (78059)	3			
	Cough (7862)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
	Unspecified disorder of globe (3609)	2			
	Cardiac dysrhythmia, unspecified (4279)	2			
+ dāngguī wěi (当归尾, 當歸尾)	Unspecified functional disorder of stomach (5369)	29	+ 4	8,9,10	**
+ gǒuqǐzǐ (枸杞子, 枸杞子)	Unspecified functional disorder of intestine (5649)	9	+ 9	8,5,7	**
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	41	+ 17	6,7,4	**
+ hú táo (胡桃, 胡桃)	Unspecified functional disorder of intestine (5649)	13	+ 13	10,6,7	*
+ jué míng zǐ (决明子, 決明子)	Headache (7840)	10	+ 11	7,8,9	**
+ xiān máo (仙茅, 仙茅)	Unspecified functional disorder of intestine (5649)	14	+ 13	7,8,9	**
jiǔ céng tǎ (九层塔, 九層塔) <i>Herba Ocimi Basilici</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8	7	5,4,10	**
	Chronic rhinitis (4720)	4			
	Pure hyperglyceridemia (2721)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Unspecified disorder of globe (3609)	2			
	Other chest pain (78659)	2			
	Irritable bowel syndrome (5641)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Absence of menstruation (6260)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Chronic pharyngitis (4721)	2			
+ dà qīng yè (大青叶, 大青葉)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 3	4,6,5	**
+ jiāng cán (僵蚕, 殭蠶)	Chronic rhinitis (4720)	10	+ 15	8,6,3	**
+ shén qū (神麴, 神麴)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	51	+ 17	8,9,4	**
+ wǔ jiā pí (五加皮, 五加皮)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	22	+ 10	10,11,8	**
+ yī tiáo gēn (一条根, 一條根)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	14	+ 2	9,8,10	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ zào jiǎo cì (皂角刺, 皂角刺)	Chronic rhinitis (4720)	11	+ 5	3,12,8	**
jú hé (橘核, 橘核) <i>Semen Citri Reticulatae</i>	Hernia of unspecified site without mention of obstruction or gangrene (5539)	21	7	6,7,11	*
	Inguinal hernia, without mention of obstruction or gangrene, unilateral or unspecified (not specified as recurrent) (55090)	6			
	Inguinal hernia (550)	3			
	Flatulence, eructation, and gas pain (7873)	2			
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	48	+ 6	11,10,7	*
jú hóng (橘红, 橘红) <i>Exocarpium Citri Rubrum</i>	Cough (7862)	8	7	8,10,11	***
	Bronchitis, not specified as acute or chronic (490)	8			
	Allergic rhinitis, cause unspecified (4779)	6			
	Other chest pain (78659)	6			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Chronic rhinitis (4720)	3			
	Pain in joint, other specified sites (71948)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Lumbago (7242)	2			
+ bò hé (薄荷, 薄荷)	Cough (7862)	32	+ 2	5,8,6	***
+ dà xiǎo jì (大小薊, 大小薊)	Cough (7862)	13	+ 6	8,1,10	***
+ hóng qū (红麴, 红麴)	Pure hypercholesterolemia (2720)	48	+ 17	8,7,9	***
+ xià kū cǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	71	+ 11	7,5,8	***
jú huā (菊花, 菊花) <i>Flos Chrysanthemi</i>	Unspecified disorder of globe (3609)	6	2	7,3,10	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Headache (7840)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Cough (7862)	3			
	Benign essential hypertension (4011)	3			
	Dacryoadenitis, unspecified (37500)	2			
	Palpitations (7851)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Acute conjunctivitis, unspecified (37200)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified essential hypertension (4019)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chōng wèi zǐ (茺蔚子, 茺蔚子)	Unspecified disorder of globe (3609)	44	+ 4	7,3,5	**
+ gǔ jīng cǎo (谷精草, 穀精草)	Unspecified disorder of globe (3609)	44	+ 11	7,5,8	**
+ hé yè (荷叶, 荷葉)	Headache (7840)	11	+ 1	8,6,7	***
+ mì měng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	56	+ 21	3,7,12	**
+ qiān lǐ guāng (千里光, 千里光)	Other ill-defined disorders of eye (37999)	48	+ 3	3,7,5	**
+ qīng xiāng zǐ (青箱子, 青箱子)	Acute conjunctivitis, unspecified (37200)	43	+ 11	3,5,4	**
jù mài (瞿麦, 瞿麥) <i>Herba Dianthi</i>	Other sleep disturbances (78059)	4	1	11,10,12	***
	Cough (7862)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			
	Chronic rhinitis (4720)	3			
	Absence of menstruation (6260)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Influenza with pneumonia (4870)	2			
	Edema (7823)	2			
	Unspecified disorder of globe (3609)	2			
	Urethral abscess (5970)	2			
+ dēng xīn cǎo (灯心草, 燈心草)	Edema (7823)	4	+ 1	4,10,2	**
+ dìng jīng cǎo (定经草, 定經草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	9	+ 1	11,10,12	*
+ lú gēn (芦根, 蘆根)	Urethritis, unspecified (59780)	20	+ 11	7,9,8	***
+ wú míng yì (无名异, 無名異)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	14	+ 4	11,10,12	**
+ xī liǎn cǎo (豨莶草, 豨薺草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	41	+ 10	10,11,9	**
jué míng zǐ (决明子, 決明子) <i>Semen Cassiae</i>	Unspecified functional disorder of intestine (5649)	7	11	5,1,9	***
	Pure hyperglyceridemia (2721)	7			
	Constipation (5640)	5			
	Headache (7840)	5			
	Pure hypercholesterolemia (2720)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Benign essential hypertension (4011)	3			
	Unspecified disorder of globe (3609)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Cough (7862)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chántuì (蟬蛻, 蟬蛻)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 2	3,5,1	***
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	62	+ 2	1,5,11	***
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	42	+ 6	1,5,6	**
+ jiǔcài zǐ (韭菜子, 韭菜子)	Headache (7840)	10	+ 13	7,8,9	**
kǔshēn (苦參, 苦參) <i>Radix Sophorae Flavescentis</i>	Contact dermatitis and other eczema, unspecified cause (6929)	4	12	4,5,3	**
	Unspecified pruritic disorder (6989)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Acne varioliformis (7060)	2			
	Urticaria, unspecified (7089)	2			
	Dermatophytosis of foot (1104)	2			
+ bái jí lí (白蒺藜, 白蒺藜)	Dermatophytosis of foot (1104)	4	+ 15	4,6,3	**
+ zǐ sū gěng (紫苏梗, 紫蘇梗)	Urticaria, unspecified (7089)	46	+ 7	5,7,4	**
kǔshēn gēn (苦參根, 苦參根) <i>Radix Sophorae Flavescentis</i>	Unspecified pruritic disorder (6989)	14	12	5,3,4	***
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Other sleep disturbances (78059)	6			
	Dermatophytosis of unspecified site (1109)	3			
	Dyshidrosis (70581)	2			
	Epiphora (3752)	2			
	Cardiac dysrhythmia, unspecified (4279)	2			
+ bái jiāngcán (白僵蚕, 白殭蠶)	Contact dermatitis and other eczema, unspecified cause (6929)	21	+ 15	7,6,8	***
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Unspecified pruritic disorder (6989)	16	+ 3	5,7,10	*
kuàngōng huā (款冬花, 款冬花) <i>Flos Farfarae</i>	Cough (7862)	20	16	8,11,4	****
	Bronchitis, not specified as acute or chronic (490)	12			
	Chronic rhinitis (4720)	9			
	Acute upper respiratory infections of unspecified site (4659)	7			
	Allergic rhinitis, cause unspecified (4779)	6			
	Headache (7840)	4			
	Unspecified functional disorder of intestine (5649)	4			
	Chronic nasopharyngitis (4722)	3			
	Other sleep disturbances (78059)	2			
	Allergic rhinitis (477)	2			
	Other chest pain (78659)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ chì sháo (赤芍, 赤芍)	Other chest pain (78659)	48	+ 21	11,1,10	****
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Cough (7862)	43	+ 5	8,11,10	**
kūn bù (昆布, 昆布) <i>Thallus Laminariae; Thallus Eckloniae</i>	Unspecified pruritic disorder (6989)	17	5	5,6,3	**
	Flatulence, eructation, and gas pain (7873)	6			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Goiter, unspecified (2409)	5			
	Other chest pain (78659)	4			
	Headache (7840)	4			
	Cough (7862)	4			
	Throat pain (7841)	3			
	Other sleep disturbances (78059)	2			
	Pain in joint, hand (71944)	2			
láifúzi (莱菔子, 莱菔子) <i>Semen Raphani</i>	Other noninfectious gastroenteritis and colitis (558)	18	17	1,2,3	***
	Flatulence, eructation, and gas pain (7873)	10			
	Cough (7862)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Disorders of function of stomach (536)	2			
+ bèimǔ (贝母, 贝母)	Absence of menstruation (6260)	2	+ 5	10,9,1	***
	Cough (7862)	44			
+ hǎipiāoxiǎo (海螵蛸, 海螵蛸)	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	62	+ 8	4,2,5	***
lìzhī hé (荔枝核, 荔枝核) <i>Semen Litchi</i>	Endometriosis, site unspecified (6179)	6	7	5,3,10	**
	Flatulence, eructation, and gas pain (7873)	6			
	Dysmenorrhea (6253)	5			
	Pain in joint, other specified sites (71948)	4			
	Abnormalities of the hair (7042)	3			
	Chronic rhinitis (4720)	3			
	Headache (7840)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Absence of menstruation (6260)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	2			
	Unspecified pruritic disorder (6989)	2			
	Uterine prolapse without mention of vaginal wall prolapse (6181)	2			
	Other chest pain (78659)	2			
	Leiomyoma of uterus, unspecified (2189)	2			
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Endometriosis, site unspecified (6179)	57	+ 6	9,10,8	**
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	66	+ 6	12,11,10	**
+ sāng yè (桑叶, 桑葉)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	65	+ 2	5,6,3	**
liánqiáo (连翘, 連翹) <i>Fructus Forsythiae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	18	3	3,7,4	*****
	Unspecified pruritic disorder (6989)	16			
	Prurigo (6982)	8			
	Contact dermatitis and other eczema (692)	7			
	Pruritus and related conditions (698)	3			
	Urticaria, unspecified (7089)	2			
	Carbuncle and furuncle of face (6800)	2			
	Acne varioliformis (7060)	2			
	Urticaria (708)	2			
+ cāngzhú (苍朮, 蒼朮)	Contact dermatitis and other eczema, unspecified cause (6929)	59	+ 20	8,4,7	*****
+ jí lí (蒺藜, 蒺藜)	Unspecified pruritic disorder (6989)	53	+ 15	3,1,4	*****
+ zǐ sū yè (紫苏叶, 紫蘇葉)	Unspecified pruritic disorder (6989)	47	+ 2	9,8,4	*****
lián xū (莲须, 蓮鬚) <i>Nelumbinis Stamen</i>	Other chest pain (78659)	8	8	12,11,1	**
	Flatulence, eructation, and gas pain (7873)	5			
	Headache (7840)	5			
	Other sleep disturbances (78059)	5			
	Lumbago (7242)	3			
	Unspecified pruritic disorder (6989)	3			
	Cough (7862)	3			
	Pain in joint, other specified sites (71948)	3			
	Tinnitus, unspecified (38830)	3			
	Urinary frequency (78841)	2			
	Absence of menstruation (6260)	2			
	Unspecified disorder of autonomic nervous system (3379)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Palpitations (7851)	2			
	Dysuria (7881)	2			
	Influenza with pneumonia (4870)	2			
+ bā jì tiān (巴戟天, 巴戟天)	Impotence of organic origin (60784)	44	+ 13	11,10,12	**
+ liánzǐ xīn (莲子心, 蓮子心)	Other sleep disturbances (78059)	12	+ 18	8,9,10	**
liánzǐ (莲子, 蓮子) <i>Semen Nelumbinis</i>	Flatulence, eructation, and gas pain (7873)	7	8	5,12,6	**
	Pain in joint, other specified sites (71948)	6			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Diarrhea of presumed infectious origin (0093)	3			
	Other sleep disturbances (78059)	3			
	Lumbago (7242)	3			
	Unspecified pruritic disorder (6989)	3			
	Constipation (5640)	2			
+ bái biǎndòu (白扁豆, 白扁豆)	Flatulence, eructation, and gas pain (7873)	11	+ 14	5,6,7	**
+ liánzǐ xīn (莲子心, 蓮子心)	Other sleep disturbances (78059)	10	+ 18	5,8,7	**
+ liú jì nú (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 4	12,5,2	**
liánzǐ xīn (莲子心, 蓮子心) <i>Plumula Nelumbinis</i>	Other sleep disturbances (78059)	9	18	8,7,9	**
	Unspecified disorder of globe (3609)	6			
	Unspecified pruritic disorder (6989)	5			
	Headache (7840)	5			
	Flatulence, eructation, and gas pain (7873)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Cough (7862)	4			
	Other chest pain (78659)	3			
	Pain in joint, other specified sites (71948)	3			
	Palpitations (7851)	3			
	Chronic rhinitis (4720)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified breast disorder (6119)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Absence of menstruation (6260)	2			
+ lián xū (莲须, 蓮鬚)	Other sleep disturbances (78059)	12	+ 8	8,9,10	**
+ liánzǐ (莲子, 蓮子)	Other sleep disturbances (78059)	10	+ 8	5,8,7	**
+ lónggǔ (龙骨, 龍骨)	Other sleep disturbances (78059)	19	+ 18	7,6,8	**
+ yuǎnzhì (远志, 遠志)	Other sleep disturbances (78059)	31	+ 18	8,5,9	**
liú jì nú (刘寄奴, 劉寄奴) <i>Herba Artemisiae Anomalaе</i>	Lumbago (7242)	9	4	4,11,12	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	9			
	Pain in joint, other specified sites (71948)	5			
	Absence of menstruation (6260)	5			
	Chronic rhinitis (4720)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Headache (7840)	3			
	Chronic nasopharyngitis (4722)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Other sleep disturbances (78059)	2			
	Cough (7862)	2			
	Constipation (5640)	2			
	Myalgia and myositis, unspecified (7291)	2			
+ bài jiàng cǎo (败酱草, 敗醬草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	22	+ 3	5,4,8	**
+ chù shí zǐ (楮实子, 楮實子)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 1	8,9,10	*
+ dà fēng cǎo (大风草, 大風草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	+ 10	11,12,10	*
+ dà fēng téng (大风藤, 大風藤)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	17	+ 2	1,3,4	*
+ lián zǐ (莲子, 蓮子)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 8	12,5,2	**
+ qiàn cǎo (茜草, 茜草)	Absence of menstruation (6260)	10	+ 6	4,2,11	**
+ sān léng (三棱, 三稜)	Absence of menstruation (6260)	11	+ 4	10,12,11	**
+ wú míng yì (无名异, 無名異)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	29	+ 4	11,10,12	**
+ xī liǎn cǎo (豨莶草, 豨薺草)	Poisoning by other and unspecified general anesthetics (9684)	20	+ 10	1,3,9	**
+ xià kū cǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	74	+ 11	5,7,11	**
+ xù duàn (续断, 續斷)	Lumbago (7242)	49	+ 13	11,2,1	**
lóng dǎn cǎo (龙胆草, 龍膽草) <i>Radix et Rhizoma Gentianae</i>	Unspecified pruritic disorder (6989)	6	12	7,6,1	****
	Acute gastritis, without mention of hemorrhage (53500)	5			
	Gastritis and duodenitis (535)	4			
	Cough (7862)	4			
	Tinnitus (3883)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Acne varioliformis (7060)	3			
	Leukorrhea, not specified as infective (6235)	3			
	Chronic rhinitis (4720)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other chronic hepatitis (57149)	2			
	Unspecified disorder of gallbladder (5759)	2			
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	51	+ 6	7,6,4	***
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	59	+ 4	2,5,6	***
+ lóng yǎnhuā (龙眼花, 龍眼花)	Leukorrhea, not specified as infective (6235)	10	+ 1	6,7,5	**
+ shān zhīzi (山梔子, 山梔子)	Tinnitus (3883)	57	+ 11	7,8,1	***
+ wū méi (乌梅, 烏梅)	Chronic rhinitis (4720)	7	+ 8	10,8,7	***
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	73	+ 11	9,10,5	***
lónggǔ (龙骨, 龍骨) <i>Os Draconis</i>	Other sleep disturbances (78059)	11	18	1,2,3	***
	Disorders of function of stomach (536)	3			
	Unspecified hypertensive heart disease without heart failure (40290)	3			
	Sleep disturbances (7805)	2			
	Absence of menstruation (6260)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Chronic hepatitis (5714)	2			
	Unspecified pruritic disorder (6989)	2			
	Chronic sinusitis (473)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ bǎihé (百合, 百合)	Other sleep disturbances (78059)	41	+ 9	3,1,9	***
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	55	+ 1	3,2,7	***
+ liánzǐ xīn (莲子心, 蓮子心)	Other sleep disturbances (78059)	19	+ 18	7,6,8	**
lóng yǎnhuā (龙眼花, 龍眼花) <i>Dimocarpus longan Lour.</i>	Leukorrhea, not specified as infective (6235)	8	1	6,7,2	**
	Pain in joint, other specified sites (71948)	6			
	Allergic rhinitis, cause unspecified (4779)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Other chest pain (78659)	4			
	Cough (7862)	3			
	Other sleep disturbances (78059)	3			
	Herpes zoster without mention of complication (0539)	3			
	Unspecified pruritic disorder (6989)	3			
	Pain in joint, lower leg (71946)	3			
	Pain in joint, shoulder region (71941)	2			
	Chronic pharyngitis (4721)	2			
	Meniere's disease, unspecified (38600)	2			
	Influenza with pneumonia (4870)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Chronic rhinitis (4720)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	43	+ 12	7,6,5	*
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	76	+ 6	7,6,8	**
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	46	+ 2	11,7,12	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	54	+ 8	6,7,8	*
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Leukorrhea, not specified as infective (6235)	10	+ 12	6,7,5	**
+ qīng hāo (青蒿, 青蒿)	Pain in joint, other specified sites (71948)	9	+ 23	10,8,9	**
+ xìxīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	47	+ 19	1,2,12	**
lòu lú (漏芦, 漏蘆) <i>Radix Rhapontici</i>	Endometriosis of uterus (6170)	6	3	11,12,9	*
	Secondary malignant neoplasm of lung (1970)	5			
	Malignant neoplasm of ovary (1830)	4			
	Benign neoplasm of breast (217)	4			
	Malignant neoplasm of bone and articular cartilage (170)	3			
	Malignant neoplasm of female breast (174)	3			
	Other chest pain (78659)	2			
	Absence of menstruation (6260)	2			
	Malignant neoplasm of breast (female), unspecified (1749)	2			
	Endometriosis, site unspecified (6179)	2			
	Unspecified breast disorder (6119)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Lipoma (214)	62	+ 5	11,10,12	*
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	42	+ 6	12,11,10	*
+ púgōngyīng (蒲公英, 蒲公英)	Benign neoplasm of breast (217)	54	+ 3	1,6,5	*
lú gēn (芦根, 蘆根) <i>Rhizoma Phragmitis</i>	Unspecified functional disorder of intestine (5649)	16	11	7,6,9	***
	Acute gastritis, without mention of hemorrhage (53500)	9			
	Other sleep disturbances (78059)	5			
	Cough (7862)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Insomnia with sleep apnea, unspecified (78051)	2			
	Unspecified pruritic disorder (6989)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	49	+ 2	7,6,5	***
+ gǔ yá (穀芽, 穀芽)	Unspecified functional disorder of intestine (5649)	21	+ 17	7,10,8	**
+ hóng qū (红薹, 紅薹)	Pure hypercholesterolemia (2720)	44	+ 17	7,8,6	***

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jù mài (瞿麦, 瞿麥)	Urethritis, unspecified (59780)	20	+ 1	7,9,8	***
lùjiǎo (鹿角, 鹿角) <i>Cornua cervi</i>	Allergic rhinitis, cause unspecified (4779)	10	13	8,10,12	*
	Cough (7862)	6			
	Chronic rhinitis (4720)	3			
	Unspecified pruritic disorder (6989)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	42	+ 5	11,10,8	*
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	41	+ 17	5,7,6	*
+ mì mēng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	48	+ 21	10,12,7	*
lù lù tōng (路路通, 路路通) <i>Fructus Liquidambaris</i>	Allergic rhinitis, cause unspecified (4779)	18	10	12,1,3	***
	Chronic rhinitis (4720)	18			
	Acute sinusitis, unspecified (4619)	13			
	Chronic nasopharyngitis (4722)	7			
	Allergic rhinitis due to other allergen (4778)	5			
	Rheumatoid arthritis (7140)	4			
	Allergic rhinitis (477)	3			
+ bài jiàng cǎo (败酱草, 敗醬草)	Chronic rhinitis (4720)	41	+ 3	8,9,11	***
+ dà zǎo (大枣, 大棗)	Allergic rhinitis, cause unspecified (4779)	45	+ 14	3,2,5	***
+ jī xiāng téng (鸡香藤, 雞香藤)	Chronic rhinitis (4720)	36	+ 2	4,12,3	*
+ mù zéi cǎo (木贼草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	52	+ 2	4,12,3	***
+ qín jiǎo (秦艽, 秦朮)	Rheumatoid arthritis (7140)	64	+ 10	12,11,10	***
+ zǐ sū (紫苏, 紫蘇)	Allergic rhinitis, cause unspecified (4779)	44	+ 2	4,5,3	***
má huáng (麻黄, 麻黃) <i>Herba Ephedrae</i>	Allergic rhinitis, cause unspecified (4779)	24	2	1,3,9	*****
	Dermatomycosis, unspecified (1119)	11			
	Urticaria, unspecified (7089)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			
	Unspecified pruritic disorder (6989)	4			
	Constipation (5640)	3			
	Other acne (7061)	2			
+ hǎi piāo xiǎo (海螵蛸, 海螵蛸)	Allergic rhinitis (477)	42	+ 8	1,2,5	*****
+ xiān chá (仙楂, 仙楂)	Mixed hyperlipidemia (2722)	42	+ 17	1,6,5	*
+ xīn yí (辛夷, 辛夷)	Allergic rhinitis, cause unspecified (4779)	48	+ 2	1,7,8	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
máhuáng gēn (麻黄根, 麻黄根) <i>Radix et Rhizoma Ephedrae</i>	Generalized hyperhidrosis (7808)	22	8	7,8,10	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Other chest pain (78659)	3			
	Headache (7840)	2			
	Unspecified pruritic disorder (6989)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Chronic rhinitis (4720)	2			
	Unspecified nerve root and plexus disorder (3539)	2			
+ ciwǔjiā (刺五加, 刺五加)	Generalized hyperhidrosis (7808)	40	+ 5	8,6,7	*
+ dì gǔ pí (地骨皮, 地骨皮)	Generalized hyperhidrosis (7808)	41	+ 23	7,8,9	*
+ hǎi rén cǎo (海人草, 海人草)	Generalized hyperhidrosis (7808)	51	+ 24	7,8,10	*
+ huángqí (黄耆, 黄耆)	Generalized hyperhidrosis (7808)	58	+ 14	9,5,8	*
+ jīguānhuā (鸡冠花, 雞冠花)	Generalized hyperhidrosis (7808)	46	+ 6	7,8,6	*
+ mǔlì (牡蛎, 牡蠣)	Generalized hyperhidrosis (7808)	44	+ 15	9,7,8	*
+ qiáomài (荞麦, 蕎麥)	Generalized hyperhidrosis (7808)	73	+ 17	10,8,11	*
+ sāng yè (桑叶, 桑葉)	Generalized hyperhidrosis (7808)	81	+ 2	8,7,6	*
mǎbiān cǎo (马鞭草, 馬鞭草) <i>Herba Verbenae</i>	Chronic rhinitis (4720)	3	4	12,11,10	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified pruritic disorder (6989)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Unspecified functional disorder of intestine (5649)	2			
mǎ bó (马勃, 馬勃) <i>Lasiosphaera seu Calvaria</i>	Peptic ulcer, site unspecified (533)	5	3	10,8,11	*
	Gastrojejunal ulcer (534)	3			
	Cough (7862)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Chronic hepatitis (5714)	2			
	Chronic rhinitis (4720)	2			
	Throat pain (7841)	2			
mǎchíxiàn (马齿苋, 馬齒莧) <i>Herba Portulacae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	8	3	5,6,7	**
	Unspecified disease of pancreas (5779)	6			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	5			
	Other sleep disturbances (78059)	4			
	Other chest pain (78659)	3			
	Chronic rhinitis (4720)	3			
	Residual hemorrhoidal skin tags (4559)	2			
	Pure hypercholesterolemia (2720)	2			
	Malignant neoplasm of colon, unspecified site (1539)	2			
	Rectal prolapse (5691)	2			
	Actinic keratosis (7020)	2			
+ bì xiè (萆薢, 萆薢)	Rectal prolapse (5691)	51	+ 1	8,10,9	**
+ gāncǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 14	8,11,1	**
+ hónghuā (红花, 紅花)	Rectal prolapse (5691)	92	+ 4	2,8,7	**
+ jiāng cán (僵蚕, 殭蠶)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	46	+ 15	8,9,7	**
+ mù zéi cǎo (木賊草, 木賊草)	Rectal prolapse (5691)	44	+ 2	4,8,1	**
+ sāng bái pí (桑白皮, 桑白皮)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	42	+ 16	5,4,8	**
+ sāng yè (桑叶, 桑葉)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	67	+ 2	5,4,7	**
+ táorén (桃仁, 桃仁)	Rectal prolapse (5691)	41	+ 4	6,5,8	**
+ xīn yì (辛夷, 辛夷)	Chronic rhinitis (4720)	46	+ 2	6,5,7	**
mǎtí jīn (马蹄金, 馬蹄金) <i>Dichondra repens</i> Forst	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7	12	10,11,9	*
	Flatulence, eructation, and gas pain (7873)	5			
	Headache (7840)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Influenza with pneumonia (4870)	3			
	Anorexia (7830)	3			
	Pain in joint, other specified sites (71948)	3			
	Peptic ulcer, site unspecified (533)	2			
	Cough (7862)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Chronic rhinitis (4720)	2			
	Absence of menstruation (6260)	2			
	Other chest pain (78659)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Lipoma (214)	42	+ 5	11,1,5	*
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	45	+ 2	8,9,7	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	46	+ 6	12,11,1	*
mài mén dōng (麦门冬, 麥門冬) <i>Radix Ophiopogonis</i>	Cough (7862)	7	9	10,3,5	*****
	Allergic rhinitis, cause unspecified (4779)	6			
	Bronchitis, not specified as acute or chronic (490)	6			
	Other chest pain (78659)	4			
	Unspecified pruritic disorder (6989)	4			
	Absence of menstruation (6260)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Constipation (5640)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	67	+ 2	12,10,11	**
màiyá (麦芽, 麥芽) <i>Fructus Hordei Germinatus</i>	Chronic lymphadenitis (2891)	26	17	3,2,12	*****
	Dyspepsia and other specified disorders of function of stomach (5368)	17			
	Unspecified functional disorder of stomach (5369)	6			
	Flatulence, eructation, and gas pain (7873)	6			
	Disorders of function of stomach (536)	3			
	Unspecified disorder of lactation, unspecified as to episode of care or not applicable (67690)	3			
	Unspecified breast disorder (6119)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Unspecified endocrine disorder (2599)	2			
	Unspecified disorder of gallbladder (5759)	2			
+ fó shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	72	+ 7	8,6,12	****
+ mùguā (木瓜, 木瓜)	Postgastric surgery syndromes (5642)	81	+ 10	8,7,9	*****
+ shānyào (山药, 山藥)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 14	8,3,5	*****
+ shén qū (神麴, 神麴)	Postgastric surgery syndromes (5642)	44	+ 17	5,3,8	*****
+ yìzhì rén (益智仁, 益智仁)	Postgastric surgery syndromes (5642)	56	+ 13	4,6,3	****
+ zhūlíng (猪苓, 豬苓)	Ostium secundum type atrial septal defect (7455)	36	+ 1	5,8,1	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
màn jīng zǐ (蔓荆子, 蔓荆子) <i>Fructus Viticis</i>	Headache (7840)	13	2	11,10,5	****
	Benign essential hypertension (4011)	6			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	5			
	Unspecified functional disorder of intestine (5649)	5			
	Migraine (346)	5			
	Migraine, unspecified (3469)	4			
	Absence of menstruation (6260)	3			
	Allergic rhinitis (477)	3			
	Other sleep disturbances (78059)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Atopic dermatitis and related conditions (691)	2			
màntuólúo huā (曼陀罗花, 曼陀羅花) <i>Dature Stramonium</i>	Flatulence, eructation, and gas pain (7873)	5	16	10,12,4	*
	Cough (7862)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Allergic rhinitis, cause unspecified (4779)	4			
	Chronic rhinitis (4720)	3			
	Other chest pain (78659)	3			
	Other sleep disturbances (78059)	2			
	Unspecified disorder of globe (3609)	2			
	Chronic nasopharyngitis (4722)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	43	+ 5	8,11,10	*
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	76	+ 1	10,8,9	*
+ ǒu jiē (藕节, 藕節)	Epistaxis (7847)	48	+ 6	6,10,5	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	47	+ 6	12,11,10	*
+ yì zhì rén (益智仁, 益智仁)	Hyperplasia of prostate (600)	56	+ 13	4,1,3	*
máo dōng qīng (毛冬青, 毛冬青) <i>Radix Ilicis Pubescentis</i>	Pain in joint, other specified sites (71948)	7	3	5,4,3	*
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	6			
	Other sleep disturbances (78059)	6			
	Cough (7862)	4			
	Unspecified endocrine disorder (2599)	4			
	Other chest pain (78659)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified essential hypertension (4019)	3			
	Palpitations (7851)	3			
	Headache (7840)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified disorder of globe (3609)	3			
	Stridor (7861)	3			
	Chronic rhinitis (4720)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ chuān qī (川七, 川七)	Unspecified late effects of cerebrovascular disease (4389)	35	+ 6	5,2,7	*
+ huángjīn guì (黄金桂, 黄金桂)	Unspecified disorder of globe (3609)	10	+ 2	5,1,4	*
+ shān dòu gēn (山豆根, 山豆根)	Unspecified disorder of globe (3609)	8	+ 3	1,2,3	*
+ wángbùliúxíng (王不留行, 王不留行)	Cough (7862)	14	+ 4	5,4,1	*
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	32	+ 16	3,4,7	*
mì měng huā (密蒙花, 密蒙花) <i>Flos Buddlejae</i>	Unspecified disorder of globe (3609)	26	21	5,7,10	**
	Unspecified disorder of lacrimal system (3759)	6			
	Dacryoadenitis, unspecified (37500)	4			
	Disorders of the globe (360)	3			
	Unspecified glaucoma (3659)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Acute conjunctivitis, unspecified (37200)	2			
+ gé huā (葛花, 葛花)	Unspecified disorder of globe (3609)	57	+ 1	10,7,5	*
+ gǔ yá (穀芽, 穀芽)	Unspecified disorder of globe (3609)	53	+ 17	10,7,8	**
+ jú huā (菊花, 菊花)	Unspecified disorder of globe (3609)	56	+ 2	3,7,12	**
+ lù jiǎo (鹿角, 鹿角)	Unspecified disorder of globe (3609)	48	+ 13	10,12,7	*
+ nǚ zhēn zǐ (女贞子, 女贞子)	Unspecified disorder of globe (3609)	49	+ 9	3,4,7	**
+ xià kū huā (夏枯花, 夏枯花)	Unspecified disorder of globe (3609)	43	+ 11	5,12,7	*
+ yù mǐ xū (玉米须, 玉米鬚)	Unspecified disorder of globe (3609)	47	+ 1	7,10,5	*
+ yuǎn zhì (远志, 遠志)	Unspecified disorder of globe (3609)	46	+ 18	5,12,10	**
mián yīn chén (绵茵陈, 綿茵陳) <i>Herba Artemisiae Scopariae</i>	Unspecified functional disorder of intestine (5649)	8	1	12,11,9	*
	Endometriosis, site unspecified (6179)	3			
	Headache (7840)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified pruritic disorder (6989)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Absence of menstruation (6260)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Chronic rhinitis (4720)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	49	+ 8	11,10,4	*
+ fān mài xū (番麦须, 番麦须)	Urethral abscess (5970)	50	+ 1	7,9,8	*
+ huàshí cǎo (化石草, 化石草)	Calculus of kidney (5920)	53	+ 1	7,8,5	*
+ púgōngyīng (蒲公英, 蒲公英)	Unspecified functional disorder of intestine (5649)	43	+ 3	12,1,4	*
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	42	+ 13	4,12,5	*
mòyào (没药, 沒藥) <i>Myrrha</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7	4	5,11,12	*****
	Lumbago (7242)	7			
	Pain in joint, multiple sites (71949)	7			
	Chronic rhinitis (4720)	3			
	Klippel-Feil syndrome (75616)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Pain in joint, other specified sites (71948)	3			
	Other chest pain (78659)	3			
	Pain in joint, lower leg (71946)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ bái xiān pí (白鲜皮, 白鲜皮)	Contact dermatitis and other eczema, unspecified cause (6929)	14	+ 12	6,7,8	***
+ běi bǎnlángēn (北板蓝根, 北板蓝根)	Pain in joint, multiple sites (71949)	8	+ 3	3,9,2	*
+ hóng huā (红花, 紅花)	Myalgia and myositis, unspecified (7291)	18	+ 4	4,3,7	*****
+ xuè jié (血竭, 血竭)	Chest pain (7865)	16	+ 6	1,5,2	**
mǔdānpí (牡丹皮, 牡丹皮) <i>Cortex Moutan</i>	Contact dermatitis and other eczema, unspecified cause (6929)	21	21	4,6,5	*****
	Unspecified pruritic disorder (6989)	15			
	Allergic rhinitis, cause unspecified (4779)	4			
	Absence of menstruation (6260)	4			
	Palpitations (7851)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Other sleep disturbances (78059)	2			
	Prurigo (6982)	2			
	Contact dermatitis and other eczema (692)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Chronic nasopharyngitis (4722)	2			
	Dysmenorrhea (6253)	2			
+ báihuāshé shé cǎo (白花蛇舌草, 白花蛇舌草)	Contact dermatitis and other eczema, unspecified cause (6929)	63	+ 3	4,6,7	****
+ gāncǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	73	+ 14	8,7,3	*****
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Absence of menstruation (6260)	62	+ 6	4,5,2	**
+ huáng qín (黄芩, 黄芩)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 12	6,4,8	*****
+ ǒu jiē (藕节, 藕节)	Epistaxis (7847)	54	+ 6	6,5,3	**
+ sāng bái pí (桑白皮, 桑白皮)	Contact dermatitis and other eczema, unspecified cause (6929)	53	+ 16	7,6,8	*****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	50	+ 2	4,3,5	**
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 3	5,4,6	*****
+ xì xīn (细辛, 细辛)	Chronic rhinitis (4720)	40	+ 19	1,11,12	*****
mǔ lì (牡蛎, 牡蛎) <i>Concha Ostreae</i>	Other sleep disturbances (78059)	14	15	5,1,2	*****
	Unspecified functional disorder of intestine (5649)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Acute gastritis, without mention of hemorrhage (53500)	4			
	Unspecified hypertensive heart disease without heart failure (40290)	4			
	Headache (7840)	3			
	Disorders of function of stomach (536)	3			
	Diarrhea of presumed infectious origin (0093)	3			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Cyst of thyroid (2462)	2			
	Generalized hyperhidrosis (7808)	2			
	Peptic ulcer, site unspecified (533)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Cough (7862)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Lipoma (214)	46	+ 5	11,10,8	***
+ dīng shù xiù (丁竖朽, 丁竖朽)	Unspecified hypertensive heart disease without heart failure (40290)	84	+ 1	10,9,8	**
+ fú xiǎomài (浮小麦, 浮小麦)	Generalized hyperhidrosis (7808)	43	+ 8	7,8,9	***
+ hǎi jīn shā (海金沙, 海金沙)	Disorders of function of stomach (536)	45	+ 1	2,5,3	*
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	76	+ 1	5,8,4	***

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ huángqí (黄耆, 黄耆)	Generalized hyperhidrosis (7808)	52	+ 14	9,2,8	*****
+ máhuáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	44	+ 8	9,7,8	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	62	+ 6	9,10,7	***
+ qiáomài (荞麦, 蕎麥)	Generalized hyperhidrosis (7808)	76	+ 17	6,5,7	*
+ sāng yè (桑叶, 桑葉)	Generalized hyperhidrosis (7808)	75	+ 2	3,4,2	*****
+ shí juémíng (石决明, 石決明)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	20	+ 15	2,3,5	***
+ shuǐ dīngxiāng (水丁香, 水丁香)	Unspecified hypertensive heart disease without heart failure (40290)	83	+ 1	11,10,5	*
+ táo rén (桃仁, 桃仁)	Endometriosis, site unspecified (6179)	42	+ 4	10,2,6	*****
+ xiè bái (薤白, 薤白)	Unspecified hypertensive heart disease without heart failure (40290)	49	+ 7	1,5,11	***
mùguā (木瓜, 木瓜) <i>Fructus Chaenomelis</i>	Unspecified disorder of muscle, ligament, and fascia (7289)	12	10	7,5,6	*****
	Congenital monoplegia (3433)	5			
	Fever (7806)	5			
	Unspecified disorder of joint, site unspecified (71990)	4			
	Pain in joint, lower leg (71946)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Convulsions (7803)	3			
	Lumbago (7242)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Pain in joint (7194)	3			
	Klippel-Feil syndrome (75616)	2			
	Pain in joint, other specified sites (71948)	2			
+ cāngěr zǐ (苍耳子, 蒼耳子)	Postgastric surgery syndromes (5642)	41	+ 2	7,8,11	*****
+ huánglián (黄连, 黃連)	Fever (7806)	43	+ 12	7,6,5	*****
+ mài yá (麦芽, 麥芽)	Postgastric surgery syndromes (5642)	81	+ 17	8,7,9	*****
+ niú xī (牛膝, 牛膝)	Mononeuritis of unspecified site (3559)	13	+ 4	9,7,8	*****
+ shānzhā (山楂, 山楂)	Postgastric surgery syndromes (5642)	53	+ 17	11,5,7	*****
+ shén qū (神麴, 神麴)	Postgastric surgery syndromes (5642)	99	+ 17	5,3,7	*****
mù tōng (木通, 木通) <i>Caulis Clematidis Armandii</i>	Allergic rhinitis, cause unspecified (4779)	10	1	7,5,4	***
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Edema (7823)	4			
	Monoplegia of upper limb affecting unspecified side (34440)	4			
	Cough (7862)	3			
	Urethral abscess (5970)	2			
	Urinary frequency (78841)	2			
	Disorders of urea cycle metabolism (2706)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Lumbago (7242)	2			
	Oliguria and anuria (7885)	2			
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	71	+ 2	11,10,5	***
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	52	+ 2	1,12,7	***
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	33	+ 3	5,4,1	***
+ wú zhū yú (吴茱萸, 吳茱萸)	Monoplegia of upper limb affecting unspecified side (34440)	41	+ 19	4,5,1	***
+ xì xīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	50	+ 19	10,11,1	***
+ xián fēng cǎo (咸丰草, 咸豐草)	Disorders of urea cycle metabolism (2706)	11	+ 3	10,7,4	*
mù xiāng (木香, 木香) <i>Radix Aucklandiae</i>	Flatulence, eructation, and gas pain (7873)	10	7	10,11,3	*****
	Allergic rhinitis, cause unspecified (4779)	8			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	8			
	Unspecified functional disorder of stomach (5369)	7			
	Endometriosis, site unspecified (6179)	5			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	3			
	Dysmenorrhea (6253)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Other sleep disturbances (78059)	2			
	Diarrhea of presumed infectious origin (0093)	2			
	Functional diarrhea (5645)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ bái jí (白芨, 白芨)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	43	+ 6	6,2,3	****
+ dīng xiāng (丁香, 丁香)	Other endocrine disorders (259)	16	+ 19	6,5,4	**
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Endometriosis, site unspecified (6179)	60	+ 6	5,12,3	**
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	49	+ 6	10,1,11	***
+ wū yào (乌药, 烏藥)	Endometriosis, site unspecified (6179)	63	+ 7	10,11,12	****
mù zéi cǎo (木賊草, 木賊草) <i>Herba Equiseti Hiemalis</i>	Allergic rhinitis, cause unspecified (4779)	32	2	7,8,4	***
	Rectal prolapse (5691)	10			
	Unspecified disorder of globe (3609)	8			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified cataract (3669)	3			
	Unspecified sinusitis (chronic) (4739)	3			
	Chronic rhinitis (4720)	2			
	Epiphora, unspecified as to cause (37520)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Unspecified pruritic disorder (6989)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Allergic rhinitis, cause unspecified (4779)	42	+ 20	4,8,7	***
+ bái qián (白前, 白前)	Allergic rhinitis, cause unspecified (4779)	41	+ 5	4,5,7	***
+ bì xiè (萆薢, 萆薢)	Rectal prolapse (5691)	82	+ 1	8,10,7	***
+ chōng wèi zǐ (茺蔚子, 茺蔚子)	Unspecified disorder of globe (3609)	42	+ 4	4,5,1	**
+ dà huáng (大黄, 大黄)	Rectal prolapse (5691)	71	+ 22	7,8,6	***
+ dì lóng (地龙, 地龍)	Allergic rhinitis, cause unspecified (4779)	43	+ 15	5,4,1	***
+ fú hǎi shí (浮海石, 浮海石)	Allergic rhinitis, cause unspecified (4779)	46	+ 5	3,4,10	**
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	88	+ 4	4,3,2	***
+ hòu pò (厚朴, 厚朴)	Allergic rhinitis, cause unspecified (4779)	40	+ 20	7,12,4	***
+ huái huā (槐花, 槐花)	Rectal prolapse (5691)	51	+ 6	11,10,12	***
+ lù lù tōng (路路通, 路路通)	Allergic rhinitis, cause unspecified (4779)	52	+ 10	4,12,3	***
+ mǎ chǐ xiàn (马齿苋, 馬齒莧)	Rectal prolapse (5691)	44	+ 3	4,8,1	**
+ qiānniú zǐ (牽牛子, 牽牛子)	Allergic rhinitis, cause unspecified (4779)	43	+ 22	8,7,4	*
+ shān zhā (山楂, 山楂)	Rectal prolapse (5691)	84	+ 17	12,4,1	***
+ shēng jiāng (生姜, 生薑)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	4,1,8	***
+ shuǐ xiān zǐ (水仙子, 水仙子)	Allergic rhinitis, cause unspecified (4779)	55	+ 17	4,5,10	*
+ táo rén (桃仁, 桃仁)	Rectal prolapse (5691)	42	+ 4	4,6,3	***
+ xì xīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	88	+ 19	11,12,1	***
+ xīn yí (辛夷, 辛夷)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	8,7,4	***
+ zǐ sū zǐ (紫苏子, 紫蘇子)	Allergic rhinitis, cause unspecified (4779)	61	+ 16	4,12,1	*
niǎo bù xiǔ (鸟不宿, 鳥不宿) <i>Aralia chinensis</i>	Pain in joint, other specified sites (71948)	11	4	8,7,10	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8			
	Lumbago (7242)	5			
	Pain in joint, lower leg (71946)	3			
	Myalgia and myositis, unspecified (7291)	2			
	Pain in joint, hand (71944)	2			
	Pain in joint, shoulder region (71941)	2			
	Sciatica (7243)	2			
	Allergic rhinitis, cause unspecified (4779)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
niúbàng zǐ (牛蒡子, 牛蒡子) <i>Fructus Arctii</i>	Cough (7862)	15	2	5,10,3	****
	Chronic rhinitis (4720)	8			
	Bronchitis, not specified as acute or chronic (490)	7			
	Chronic pharyngitis (4721)	7			
	Allergic rhinitis, cause unspecified (4779)	6			
	Throat pain (7841)	3			
	Allergic rhinitis (477)	3			
	Acute laryngopharyngitis (4650)	3			
	Acute upper respiratory infections of unspecified site (4659)	3			
	Other voice and resonance disorders (78449)	2			
	Unspecified sinusitis (chronic) (4739)	2			
	Acute nasopharyngitis [common cold] (460)	2			
+ báijiāngcán (白僵蚕, 白僵蚕)	Pneumonia due to respiratory syncytial virus (4801)	57	+ 15	5,8,2	****
+ bài jiàng cǎo (败酱草, 败酱草)	Chronic rhinitis (4720)	49	+ 3	5,8,4	****
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Chronic rhinitis (4720)	31	+ 1	5,1,10	****
+ tiānhuā (天花, 天花)	Hypertrophy of tonsil with adenoids (47410)	25	+ 5	1,8,10	*****
niúxī (牛膝, 牛膝) <i>Radix Achyranthis Bidentatae</i>	Pain in joint, lower leg (71946)	4	4	9,5,6	*****
	Polymyalgia rheumatica (725)	4			
	Benign essential hypertension (4011)	4			
	Sciatica (7243)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Absence of menstruation (6260)	3			
	Open fracture of unspecified part of tibia alone (82390)	3			
	Lumbago (7242)	2			
	Gout, unspecified (2749)	2			
	Headache (7840)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	44	+ 2	4,2,7	*****
+ mùguā (木瓜, 木瓜)	Mononeuritis of unspecified site (3559)	13	+ 10	9,7,8	*****
+ sānqī (三七, 三七)	Pain in joint, lower leg (71946)	42	+ 6	11,9,5	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	46	+ 2	7,8,4	**
+ tiānmá (天麻, 天麻)	Occlusion and stenosis of unspecified precerebral artery without mention of cerebral infarction (43390)	65	+ 15	5,3,9	****
nǚzhēn zǐ (女贞子, 女贞子) <i>Fructus Ligustri Lucidi</i>	Unspecified disease of pancreas (5779)	15	9	9,3,10	****
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified disorder of globe (3609)	3			
	Lumbago (7242)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Tinnitus, unspecified (38830)	2			
	Palpitations (7851)	2			
	Epiphora, unspecified as to cause (37520)	2			
	Urinary frequency (78841)	2			
	Pain in joint, other specified sites (71948)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Headache (7840)	2			
+ dà jīn yīng (大金櫻, 大金櫻)	Urinary frequency (78841)	18	+ 8	3,7,5	*
+ mì mēng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	49	+ 21	3,4,7	***
+ shānzhūyú (山茱萸, 山茱萸)	Unspecified disorder of globe (3609)	28	+ 8	9,4,3	****
+ wū tián (乌甜, 烏甜)	Unspecified disease of pancreas (5779)	42	+ 3	3,10,9	*
ǒu jiē (藕节, 藕節) <i>Nodus Nelumbinis Rhizomatis</i>	Epistaxis (7847)	23	6	6,5,7	**
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	3			
	Unspecified pruritic disorder (6989)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Absence of menstruation (6260)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
+ cè bó yè (侧柏叶, 側柏葉)	Epistaxis (7847)	41	+ 6	10,11,12	***
+ chénxiāng (沉香, 沉香)	Epistaxis (7847)	57	+ 7	6,5,7	*
+ màntuóluó huā (曼陀罗花, 曼陀羅花)	Epistaxis (7847)	48	+ 16	6,10,5	*
+ mǔdānpí (牡丹皮, 牡丹皮)	Epistaxis (7847)	54	+ 21	6,5,3	***
+ qiàn cǎogēn (茜草根, 茜草根)	Epistaxis (7847)	40	+ 6	6,5,7	*
+ tiānhuā (天花, 天花)	Polydipsia (7835)	46	+ 5	6,5,7	**
pàngdàhǎi (胖大海, 胖大海) <i>Semen Sterculiae Lychnophorae</i>	Cough (7862)	6	5	8,7,9	***
	Pain in joint, other specified sites (71948)	6			
	Flatulence, eructation, and gas pain (7873)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified pruritic disorder (6989)	3			
	Headache (7840)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Voice disturbance (7844)	2			
	Unspecified disorder of autonomic nervous system (3379)	2			
	Other voice and resonance disorders (78449)	2			
	Chronic pharyngitis (4721)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Chronic rhinitis (4720)	2			
	Other sleep disturbances (78059)	2			
+ dēngxīncǎo (灯心草, 燈心草)	Voice disturbance (7844)	18	+ 1	7,8,10	***
+ gù zhǐhuā (故纸花, 故紙花)	Voice disturbance (7844)	13	+ 20	8,7,6	***
+ hǎi gé (海蛤, 海蛤)	Voice disturbance (7844)	13	+ 5	7,8,5	***
+ xuánfùhuā (旋覆花, 旋覆花)	Pain in joint, other specified sites (71948)	10	+ 5	7,8,6	***
pèilán (佩兰, 佩蘭) <i>Herba Eupatorii</i>	Peptic ulcer, site unspecified (533)	5	20	6,5,11	****
	Contact dermatitis and other eczema (692)	4			
	Disorders of function of stomach (536)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Absence of menstruation (6260)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Allergic rhinitis (477)	2			
+ bái wēi (白薇, 白薇)	Contact dermatitis and other eczema (692)	6	+ 23	5,6,4	****
+ biān xù (蒹蓄, 蒹蓄)	Peptic ulcer, site unspecified (533)	5	+ 1	6,5,7	***
+ dàfùpí (大腹皮, 大腹皮)	Dyspepsia and other specified disorders of function of stomach (5368)	13	+ 7	6,5,8	****
+ fān xiè yè (番泻叶, 番瀉葉)	Peptic ulcer, site unspecified (533)	53	+ 22	5,6,7	**
+ hǎi gé (海蛤, 海蛤)	Allergic rhinitis, cause unspecified (4779)	6	+ 5	5,6,4	****
+ jīnqián cǎo (金钱草, 金錢草)	Peptic ulcer, site unspecified (533)	9	+ 1	1,5,2	**
+ qīng pí (青皮, 青皮)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	36	+ 7	5,7,6	****
pí pá yè (枇杷叶, 枇杷葉) <i>Folium Eriobotryae</i>	Cough (7862)	28	16	8,5,7	****
	Allergic rhinitis, cause unspecified (4779)	6			
	Chronic rhinitis (4720)	5			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Bronchitis, not specified as acute or chronic (490)	5			
	Influenza (487)	4			
	Chronic nasopharyngitis (4722)	4			
	Acute nasopharyngitis [common cold] (460)	2			
	Acute bronchitis (4660)	2			
	Allergic rhinitis (477)	2			
	Acute sinusitis, unspecified (4619)	2			
	Pneumonia due to respiratory syncytial virus (4801)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Acute upper respiratory infections of unspecified site (4659)	2			
	Influenza with pneumonia (4870)	2			
+ bái qián (白前, 白前)	Cough (7862)	47	+ 5	1,2,3	***
+ bǎi hé (百合, 百合)	Cough (7862)	48	+ 9	3,1,5	*****
+ biǎn bó (扁柏, 扁柏)	Cough (7862)	73	+ 6	5,6,3	**
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	47	+ 2	7,1,5	***
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Cough (7862)	42	+ 5	7,5,6	**
púgōngyīng (蒲公英, 蒲公英) <i>Herba Taraxaci</i>	Unspecified functional disorder of intestine (5649)	22	3	1,5,12	*****
	Acute gastritis, without mention of hemorrhage (53500)	11			
	Benign neoplasm of breast (217)	6			
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Chronic rhinitis (4720)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified pruritic disorder (6989)	2			
+ bái liǎn (白蔹, 白蔹)	Unspecified functional disorder of intestine (5649)	41	+ 3	1,4,2	*
+ chán tuì (蝉蜕, 蝉蜕)	Allergic rhinitis, cause unspecified (4779)	46	+ 2	1,5,7	*****
+ chuān liǎn zǐ (川楝子, 川楝子)	Peptic ulcer, site unspecified (533)	47	+ 7	7,1,5	*****
+ é shù (莪术, 莪术)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	60	+ 4	5,6,1	*****
+ fó shǒu gān (佛手柑, 佛手柑)	Unspecified functional disorder of intestine (5649)	45	+ 7	12,11,1	***
+ huángshuǐ qié (黄水茄, 黄水茄)	Malignant neoplasm of female breast (174)	43	+ 1	5,4,6	**
+ lòu lú (漏芦, 漏芦)	Benign neoplasm of breast (217)	54	+ 3	1,6,5	*
+ mián yīn chén (绵茵陈, 绵茵陈)	Unspecified functional disorder of intestine (5649)	43	+ 1	12,1,4	*
+ sāng bái pí (桑白皮, 桑白皮)	Carbuncle and furuncle of face (6800)	52	+ 16	1,4,6	*****
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	51	+ 13	4,5,8	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ zhúrú (竹茹, 竹茹)	Acute gastritis, without mention of hemorrhage (53500)	41	+ 5	5,6,1	****
pú huáng (蒲黄, 蒲黄) <i>Pollen Typhae</i>	Endometriosis, site unspecified (6179)	40	6	12,11,1	***
	Endometriosis of uterus (6170)	16			
	Leiomyoma of uterus, unspecified (2189)	8			
	Infertility, female, of unspecified origin (6289)	6			
	Dysmenorrhea (6253)	3			
	Benign neoplasm of uterus, part unspecified (2199)	3			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Benign neoplasm of ovary (220)	2			
+ àiyè (艾叶, 艾葉)	Endometriosis, site unspecified (6179)	60	+ 6	12,11,1	****
+ bái chūn gēn (白椿根, 白椿根)	Endometriosis, site unspecified (6179)	46	+ 12	10,11,12	*
+ báiliǎn (白蔹, 白蔹)	Endometriosis, site unspecified (6179)	41	+ 3	11,12,8	*
+ chénxiāng (沉香, 沉香)	Endometriosis, site unspecified (6179)	48	+ 7	1,12,11	*
+ chuān qī (川七, 川七)	Endometriosis, site unspecified (6179)	72	+ 6	11,12,1	****
+ dàsuàn (大蒜, 大蒜)	Endometriosis, site unspecified (6179)	44	+ 24	12,7,11	*
+ dìng jīng cǎo (定经草, 定經草)	Endometriosis, site unspecified (6179)	55	+ 1	11,12,10	*
+ é shù (莪术, 莪朮)	Endometriosis, site unspecified (6179)	56	+ 4	11,8,12	****
+ fān mài xū (番麦须, 番麥鬚)	Urethral abscess (5970)	45	+ 1	7,1,9	**
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	50	+ 17	7,2,5	****
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	79	+ 1	5,11,1	****
+ huángjīn guì (黄金桂, 黃金桂)	Endometriosis, site unspecified (6179)	55	+ 2	9,12,11	*
+ huáng qín (黄芩, 黃芩)	Endometriosis, site unspecified (6179)	41	+ 12	9,12,8	****
+ jiàng zhēn xiāng (降真香, 降真香)	Postmyocardial infarction syndrome (4110)	60	+ 6	11,1,10	**
+ jú hé (橘核, 橘核)	Endometriosis, site unspecified (6179)	48	+ 7	11,10,7	*
+ lìzhī hé (荔枝核, 荔枝核)	Endometriosis, site unspecified (6179)	66	+ 7	12,11,10	**
+ mǎtí jīn (马蹄金, 馬蹄金)	Endometriosis, site unspecified (6179)	46	+ 12	12,11,1	*
+ màntuóluó huā (曼陀罗花, 曼陀羅花)	Endometriosis, site unspecified (6179)	47	+ 16	12,11,10	*
+ mǔlì (牡蛎, 牡蠣)	Endometriosis, site unspecified (6179)	62	+ 15	9,10,7	****
+ mùxiāng (木香, 木香)	Endometriosis, site unspecified (6179)	49	+ 7	10,1,11	****
+ ròu cōng róng (肉苁蓉, 肉從蓉)	Endometriosis, site unspecified (6179)	69	+ 13	8,12,7	****
+ ruì rén (蕤仁, 蕤仁)	Endometriosis, site unspecified (6179)	46	+ 9	12,11,8	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ suàn tóu (蒜头, 蒜頭)	Endometriosis, site unspecified (6179)	45	+ 17	12,11,1	*
+ wū yào (乌药, 烏藥)	Endometriosis, site unspecified (6179)	61	+ 7	12,9,11	***
+ xià kū huā (夏枯花, 夏枯花)	Endometriosis, site unspecified (6179)	58	+ 11	12,7,8	*
+ xù duàn (续断, 續斷)	Endometriosis, site unspecified (6179)	68	+ 13	1,2,11	***
+ yán hú suǒ (延胡索, 延胡索)	Dysmenorrhea (6253)	41	+ 4	1,10,11	***
+ zhī jù zǐ (枳椇子, 枳椇子)	Endometriosis, site unspecified (6179)	54	+ 3	12,8,11	*
qiānlǐ guāng (千里光, 千里光) <i>Herba Senecionis Scandentis</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5	3	10,3,4	**
	Flatulence, eructation, and gas pain (7873)	4			
	Other chest pain (78659)	4			
	Pain in joint, other specified sites (71948)	3			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Cough (7862)	2			
	Other sleep disturbances (78059)	2			
	Palpitations (7851)	2			
+ bàn zhī lián (半枝莲, 半枝蓮)	Headache (7840)	7	+ 3	10,9,8	**
+ jú huā (菊花, 菊花)	Other ill-defined disorders of eye (37999)	48	+ 2	3,7,5	**
+ qīng xiāng zǐ (青箱子, 青箱子)	Other ill-defined disorders of eye (37999)	91	+ 11	10,4,8	**
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	17	+ 3	4,5,1	**
qiānnián jiàn (千年健, 千年健) <i>Rhizoma Homalomenae</i>	Chondrocalcinosis, cause unspecified (7123)	20	10	10,6,11	**
	Klippel-Feil syndrome (75616)	5			
	Pain in joint (7194)	4			
	Pain in joint, other specified sites (71948)	4			
	Myalgia and myositis, unspecified (7291)	3			
	Lumbago (7242)	3			
	Pain in joint, lower leg (71946)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Chest pain (7865)	2			
	Pain in joint, multiple sites (71949)	2			
+ gé gēn (葛根, 葛根)	Dislocation of jaw (830)	40	+ 2	7,8,6	**
+ hóng huā (红花, 紅花)	Chondrocalcinosis, cause unspecified (7123)	78	+ 4	4,3,5	**
+ rěn dōng téng (忍冬藤, 忍冬藤)	Klippel-Feil syndrome (75616)	36	+ 10	7,6,4	**
+ shān zhū yú (山茱萸, 山茱萸)	Klippel-Feil syndrome (75616)	20	+ 8	9,7,3	**
+ wú zhū yú (吴茱萸, 吳茱萸)	Monoplegia of upper limb affecting unspecified side (34440)	47	+ 19	3,11,4	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ wǔ jiā pí (五加皮, 五加皮)	Klippel-Feil syndrome (75616)	24	+ 10	6,10,5	**
qiānniú zǐ (牵牛子, 牵牛子) <i>Semen Pharbitidis</i>	Allergic rhinitis, cause unspecified (4779)	6	22	12,11,10	*
	Cough (7862)	4			
	Chronic rhinitis (4720)	2			
	Chronic nasopharyngitis (4722)	2			
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	48	+ 2	5,4,7	*
+ mù zéi cǎo (木贼草, 木贼草)	Allergic rhinitis, cause unspecified (4779)	43	+ 2	8,7,4	*
+ sāng yè (桑叶, 桑葉)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	53	+ 2	4,3,8	*
qián hú (前胡, 前胡) <i>Radix Peucedani</i>	Cough (7862)	18	5	8,10,9	***
	Chronic rhinitis (4720)	8			
	Bronchitis, not specified as acute or chronic (490)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Allergic rhinitis (477)	3			
	Acute sinusitis, unspecified (4619)	2			
	Other sleep disturbances (78059)	2			
	Chronic nasopharyngitis (4722)	2			
	Acute upper respiratory infections of unspecified site (4659)	2			
+ bǎi bù (百部, 百部)	Cough (7862)	43	+ 16	8,7,5	***
+ bèimǔ (贝母, 貝母)	Cough (7862)	43	+ 5	3,1,2	***
qiàncǎo (茜草, 茜草) <i>Radix et Rhizoma Rubiae</i>	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	9	6	9,10,11	***
	Absence of menstruation (6260)	8			
	Dysmenorrhea (6253)	4			
	Endometriosis, site unspecified (6179)	4			
	Residual hemorrhoidal skin tags (4559)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Excessive or frequent menstruation (6262)	2			
+ liú jì nú (刘寄奴, 劉寄奴)	Absence of menstruation (6260)	10	+ 4	4,2,11	**
qiàn cǎo gēn (茜草根, 茜草根) <i>Radix et Rhizoma Rubiae</i>	Allergic rhinitis, cause unspecified (4779)	11	6	5,6,4	*
	Cough (7862)	5			
	Other sleep disturbances (78059)	5			
	Palpitations (7851)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Headache (7840)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified pruritic disorder (6989)	2			
	Unspecified essential hypertension (4019)	2			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	2			
	Asthma, unspecified type, unspecified (49390)	2			
+ bái jiè zǐ (白芥子, 白芥子)	Cough (7862)	56	+ 5	8,11,10	*
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	77	+ 1	8,10,9	*
+ cāng ěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	1,2,12	*
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	57	+ 8	8,10,9	*
+ jī xuè téng (鸡血藤, 雞血藤)	Monoplegia of upper limb affecting unspecified side (34440)	51	+ 4	7,8,3	*
+ ǒu jiē (藕节, 藕節)	Epistaxis (7847)	40	+ 6	6,5,7	*
qiànshí (芡实, 芡實) <i>Semen Euryales</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	8	8	1,8,10	***
	Urinary frequency (78841)	7			
	Unspecified functional disorder of intestine (5649)	4			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	4			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	3			
	Proteinuria (7910)	3			
	Leukorrhea, not specified as infective (6235)	3			
	Urinary incontinence (7883)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Other sleep disturbances (78059)	2			
	Enuresis (3076)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	44	+ 12	10,7,8	*
+ biǎndòu (扁豆, 扁豆)	Unspecified functional disorder of intestine (5649)	12	+ 14	8,10,9	**
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	51	+ 8	1,5,10	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 8	8,11,1	**
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	46	+ 13	4,8,7	***
+ tánxiāng (檀香, 檀香)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 7	8,1,7	**
qiānghuó (羌活, 羌活) <i>Rhizoma et Radix Notopterygii</i>	Fever (7806)	3	2	7,8,5	*****
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified hypertensive heart and renal disease (4049)	3			
	Headache (7840)	3			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Influenza (487)	2			
+ chuān wū (川乌, 川烏)	Myalgia and myositis, unspecified (7291)	5	+ 10	5,11,1	***
+ fáng fēng (防风, 防風)	Fever (7806)	30	+ 2	8,1,7	*****
+ xī liǎn cǎo (豨薟草, 豨薟草)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	45	+ 10	11,9,12	**
qiáomài (荞麦, 蕎麥) <i>Fagopyrum esculentum Moench</i>	Unspecified functional disorder of intestine (5649)	11	17	8,1,10	*
	Headache (7840)	9			
	Allergic rhinitis, cause unspecified (4779)	8			
	Cough (7862)	6			
	Influenza with pneumonia (4870)	5			
	Unspecified disorder of globe (3609)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Chronic rhinitis (4720)	3			
	Generalized hyperhidrosis (7808)	2			
	Unspecified pruritic disorder (6989)	2			
	Throat pain (7841)	2			
	Unspecified gingival and periodontal disease (5239)	2			
	Flatulence, eructation, and gas pain (7873)	2			
+ gǔ jīng cǎo (谷精草, 穀精草)	Unspecified functional disorder of intestine (5649)	25	+ 11	10,8,1	*
+ gù zhǐ huā (故纸花, 故紙花)	Unspecified functional disorder of intestine (5649)	14	+ 20	1,7,8	*
+ huáng qí (黄耆, 黃耆)	Generalized hyperhidrosis (7808)	42	+ 14	9,8,7	*
+ huáng qín (黄芩, 黃芩)	Allergic rhinitis, cause unspecified (4779)	64	+ 12	8,7,10	*
+ jī nèi jīn (鸡内金, 雞內金)	Unspecified functional disorder of intestine (5649)	21	+ 17	8,7,9	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ máhuáng gēn (麻黄根, 麻黄根)	Generalized hyperhidrosis (7808)	73	+ 8	10,8,11	*
+ mǔlì (牡蛎, 牡蛎)	Generalized hyperhidrosis (7808)	76	+ 15	6,5,7	*
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	56	+ 2	2,1,12	*
+ zélán (泽兰, 澤蘭)	Unspecified functional disorder of intestine (5649)	30	+ 4	1,12,4	*
+ zīsū (紫苏, 紫蘇)	Unspecified functional disorder of intestine (5649)	43	+ 2	7,5,1	*
qínjiāo (秦艽, 秦艽) <i>Radix Gentianae Macrophyllae</i>	Monoplegia of upper limb affecting unspecified side (34440)	8	10	5,3,10	****
	Rheumatoid arthritis (7140)	8			
	Pain in joint, multiple sites (71949)	6			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Headache (7840)	5			
	Pain in joint, hand (71944)	4			
	Systemic lupus erythematosus (7100)	3			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Pain in joint, other specified sites (71948)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Pain in joint (7194)	2			
+ lù lù tōng (路路通, 路路通)	Rheumatoid arthritis (7140)	64	+ 10	12,11,10	****
+ sīguā luò (丝瓜络, 絲瓜絡)	Monoplegia of upper limb affecting unspecified side (34440)	40	+ 10	12,11,1	****
+ zīsū gěng (紫苏梗, 紫蘇梗)	Headache (7840)	13	+ 7	5,2,1	**
qín pí (秦皮, 秦皮) <i>Cortex Fraxini</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4	12	10,11,12	**
	Allergic rhinitis, cause unspecified (4779)	3			
	Cough (7862)	3			
	Headache (7840)	2			
	Pain in joint, other specified sites (71948)	2			
+ běi shāshēn (北沙参, 北沙參)	Cough (7862)	10	+ 9	3,2,10	**
qīng hāo (青蒿, 青蒿) <i>Herba Artemisiae Annuae</i>	Other sleep disturbances (78059)	7	23	8,10,7	****
	Cough (7862)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Pain in joint, other specified sites (71948)	4			
	Unspecified pruritic disorder (6989)	4			
	Headache (7840)	4			
	Unspecified disorder of gallbladder (5759)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pain in joint, shoulder region (71941)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Chronic pharyngitis (4721)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Chronic rhinitis (4720)	2			
+ dân dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	69	+ 2	5,7,6	***
+ gāncǎo (甘草, 甘草)	Other sleep disturbances (78059)	41	+ 14	8,10,11	***
+ lóng yǎnhuā (龙眼花, 龍眼花)	Pain in joint, other specified sites (71948)	9	+ 1	10,8,9	**
+ xīyáng cān (西洋参, 西洋参)	Other sleep disturbances (78059)	10	+ 14	8,10,7	*
+ xiāng rú (香薷, 香薷)	Fever (7806)	9	+ 2	7,8,5	**
qīng pí (青皮, 青皮) <i>Pericarpium Citri Reticulatae Viride</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	8	7	5,7,10	***
	Flatulence, eructation, and gas pain (7873)	5			
	Cough (7862)	5			
	Contusion of chest wall (9221)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Other sleep disturbances (78059)	4			
	Other chest pain (78659)	4			
	Abdominal pain, other specified site (78909)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Constipation (5640)	3			
	Pain in joint, hand (71944)	2			
	Chest pain, unspecified (78650)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Unspecified breast disorder (6119)	2			
	Pain in joint, other specified sites (71948)	2			
+ biǎndòu (扁豆, 扁豆)	Unspecified functional disorder of intestine (5649)	9	+ 14	5,10,8	**
+ hǎn qiào cǎo (蚶壳草, 蚶壳草)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	11	+ 12	5,10,7	**
+ pèilán (佩兰, 佩蘭)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	36	+ 20	5,7,6	***
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 8	5,8,7	**
qīng xiāngzi (青箱子, 青箱子) <i>Semen Celosiae</i>	Other ill-defined disorders of eye (37999)	37	11	10,4,8	**
	Acute conjunctivitis, unspecified (37200)	9			
	Unspecified disorder of globe (3609)	2			
+ cǎo juémíng (草决明, 草決明)	Other ill-defined disorders of eye (37999)	46	+ 11	4,6,5	**
+ huáng qín (黄芩, 黄芩)	Other ill-defined disorders of eye (37999)	67	+ 12	8,9,6	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ júhuā (菊花, 菊花)	Acute conjunctivitis, unspecified (37200)	43	+ 2	3,5,4	***
+ qiānlǐ guāng (千里光, 千里光)	Other ill-defined disorders of eye (37999)	91	+ 3	10,4,8	***
quán guā lóu (全栝蒌, 全栝蒌) <i>Trichosanthis</i>	Cough (7862)	1	5	10,9,5	*
quán xiē (全蝎, 全蝎) <i>Scorpio</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5	15	2,3,5	*
	Pain in joint (7194)	5			
	Allergic rhinitis (477)	4			
	Headache (7840)	3			
	Benign essential hypertension (4011)	3			
	Cardiac dysrhythmias (427)	3			
	Chest pain (7865)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Cough (7862)	2			
	Chronic rhinitis (4720)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	57	+ 1	8,10,9	*
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	42	+ 2	8,7,9	*
+ xīn yī (辛夷, 辛夷)	Allergic rhinitis (477)	48	+ 2	5,4,2	*
+ zǐ sū gěng (紫苏梗, 紫苏梗)	Urticaria (708)	54	+ 7	5,4,3	*
rénshēn (人參, 人參) <i>Radix Ginseng</i>	Allergic rhinitis, cause unspecified (4779)	8	14	3,8,7	****
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	7			
	Chronic rhinitis (4720)	4			
	Thyroid dysfunction of mother, unspecified as to episode of care or not applicable (64810)	4			
	Heart disease, unspecified (4299)	3			
	Palpitations (7851)	3			
	Cough (7862)	2			
	Allergic rhinitis (477)	2			
+ chuānxiōng (川芎, 川芎)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	37	+ 4	3,4,8	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	61	+ 2	7,8,5	**
+ zhīqiào (枳壳, 枳壳)	Allergic rhinitis, cause unspecified (4779)	42	+ 7	3,7,4	****
rěndōng téng (忍冬藤, 忍冬藤) <i>Caulis Lonicerae Japonicae</i>	Klippel-Feil syndrome (75616)	18	10	7,5,6	***
	Myalgia and myositis, unspecified (7291)	4			
	Rheumatoid arthritis (7140)	4			
	Pain in joint, hand (71944)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified local infection of skin and subcutaneous tissue (6869)	3			
	Unspecified disorder of joint, site unspecified (71990)	3			
	Pain in joint, lower leg (71946)	2			
+ qiānnián jiàn (千年健, 千年健)	Klippel-Feil syndrome (75616)	36	+ 10	7,6,4	**
+ xī liǎn cǎo (豨薟草, 豨薟草)	Rheumatoid arthritis (7140)	19	+ 10	7,4,5	**
ròu cōng róng (肉苁蓉, 肉苁蓉) <i>Herba Cistanches</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	18	13	6,10,11	****
	Constipation (5640)	12			
	Dyspepsia and other specified disorders of function of stomach (5368)	11			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	4			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	4			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Infertility, female, of unspecified origin (6289)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Chronic rhinitis (4720)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Other sleep disturbances (78059)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Dyspepsia and other specified disorders of function of stomach (5368)	43	+ 20	6,7,8	***
+ báisháo (白芍, 白芍)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	46	+ 25	6,1,7	****
+ cǎo dòukòu (草豆蔻, 草豆蔻)	Dyspepsia and other specified disorders of function of stomach (5368)	40	+ 20	8,7,9	*
+ fān xiè yè (番泻叶, 番泻叶)	Constipation (5640)	43	+ 22	5,10,1	**
+ fó shǒu gān (佛手柑, 佛手柑)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	42	+ 7	5,4,1	***
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 17	10,8,7	**
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	69	+ 6	8,12,7	****
+ tiānmá (天麻, 天麻)	Occlusion and stenosis of carotid artery without mention of cerebral infarction (43310)	55	+ 15	5,7,6	****
+ wú zhūyú (吴茱萸, 吴茱萸)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 19	11,5,1	****
ròu dòu gēn (肉豆根, 肉豆根) <i>Euchresta japonica</i>	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	5	4	10,8,11	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified functional disorder of intestine (5649)	3			
	Benign essential hypertension (4011)	2			
	Other urinary incontinence (78839)	2			
	Urinary frequency (78841)	2			
	Proteinuria (7910)	2			
	Chronic pyelonephritis without lesion of renal medullary necrosis (59000)	2			
	Other sleep disturbances (78059)	2			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	53	+ 2	3,2,6	**
ròudòukòu (肉豆蔻, 肉豆蔻) <i>Semen Myristicae</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	12	8	8,7,11	**
	Unspecified functional disorder of intestine (5649)	9			
	Diarrhea of presumed infectious origin (0093)	8			
	Other sleep disturbances (78059)	6			
	Unspecified functional disorder of stomach (5369)	5			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Acute gastritis, without mention of hemorrhage (53500)	3			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	3			
	Chronic nasopharyngitis (4722)	3			
	Peptic ulcer, site unspecified (533)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	16	+ 20	11,7,8	**
+ bái tóu wēng (白头翁, 白头翁)	Diarrhea of presumed infectious origin (0093)	15	+ 3	7,8,10	**
+ biǎn dòu (扁豆, 扁豆)	Unspecified functional disorder of stomach (5369)	13	+ 14	8,10,11	**
+ cǎo guǒ (草果, 草果)	Unspecified functional disorder of intestine (5649)	13	+ 20	8,9,7	*
+ fáng jǐ (防己, 防己)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 10	7,5,8	**
+ fú xiǎo mài (浮小麦, 浮小麦)	Unspecified functional disorder of intestine (5649)	33	+ 8	8,7,9	**
+ huí xiāng (茴香, 茴香)	Peptic ulcer, site unspecified (533)	29	+ 19	11,10,8	**
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	43	+ 6	7,8,6	**
+ qiàn shí (芡实, 芡實)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 8	8,11,1	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ qīng pí (青皮, 青皮)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	+ 7	5,8,7	**
+ shíliú pí (石榴皮, 石榴皮)	Unspecified functional disorder of intestine (5649)	19	+ 8	11,3,5	*
+ xiānmáo (仙茅, 仙茅)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	12	+ 13	7,11,6	**
+ yán hú suǒ (延胡索, 延胡索)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	56	+ 4	7,8,11	**
ròuguì (肉桂, 肉桂) <i>Cortex Cinnamomi</i>	Allergic rhinitis, cause unspecified (4779)	6	19	8,6,7	*****
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	3			
	Lumbago (7242)	2			
	Other sleep disturbances (78059)	2			
	Benign essential hypertension (4011)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Palpitations (7851)	2			
+ chuān wū (川乌, 川烏)	Benign essential hypertension (4011)	8	+ 10	3,2,5	***
+ dīngxiāng (丁香, 丁香)	Abdominal pain, other specified site (78909)	9	+ 19	6,7,8	**
+ shēngjiāng (生姜, 生薑)	Allergic rhinitis, cause unspecified (4779)	12	+ 2	11,3,8	*****
rǔxiāng (乳香, 乳香) <i>Olibanum</i>	Lumbago (7242)	10	4	1,5,6	*****
	Klippel-Feil syndrome (75616)	7			
	Pain in joint (7194)	6			
	Open fracture of unspecified part of neck of femur (8209)	3			
	Sprain of thoracic (8471)	2			
ruì rén (蕤仁, 蕤仁) <i>Nux Prinsepiae</i>	Unspecified disorder of lacrimal system (3759)	19	9	1,2,3	*
	Unspecified disorder of globe (3609)	5			
	Epiphora, unspecified as to cause (37520)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Optic atrophy, unspecified (37710)	2			
	Headache (7840)	2			
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	42	+ 6	1,6,4	*
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	46	+ 6	12,11,8	*
+ xià kū huā (夏枯花, 夏枯花)	Unspecified disorder of lacrimal system (3759)	70	+ 11	4,2,12	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
sān léng (三棱, 三棱) <i>Rhizoma Sparganii</i>	Cough (7862)	6	4	5,12,11	***
	Other chest pain (78659)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Chronic pharyngitis (4721)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Chronic hepatitis, unspecified (57140)	2			
	Pain in joint, lower leg (71946)	2			
	Dysmenorrhea (6253)	2			
	Pain in joint, hand (71944)	2			
	Absence of menstruation (6260)	2			
+ chuān qī (川七, 川七)	Other chest pain (78659)	23	+ 6	9,10,3	***
+ liú jì nú (刘寄奴, 劉寄奴)	Absence of menstruation (6260)	11	+ 4	10,12,11	**
+ sū mù (苏木, 蘇木)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7	+ 4	10,12,11	***
+ wáng bù liú xíng (王不留行, 王不留行)	Absence of menstruation (6260)	11	+ 4	4,5,3	**
+ xiān hè cǎo (仙鹤草, 仙鶴草)	Hypertrophy of uterus (6212)	44	+ 6	12,1,3	***
sān qī (三七, 三七) <i>Radix et Rhizoma Notoginseng</i>	Diabetes mellitus (250)	32	6	5,9,11	***
	Gastric ulcer (531)	11			
	Pain in joint, multiple sites (71949)	11			
	Pain in joint, lower leg (71946)	7			
	Pain in joint, shoulder region (71941)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
+ chuān liàn zǐ (川楝子, 川楝子)	Gastric ulcer (531)	64	+ 7	5,10,4	***
+ gǔ suì bǔ (骨碎补, 骨碎補)	Pain in joint, multiple sites (71949)	61	+ 4	5,7,6	***
+ hǎi jīn shā (海金沙, 海金沙)	Gastric ulcer (531)	41	+ 1	5,3,4	*
+ hǎi piāo xiāo (海螵蛸, 海螵蛸)	Gastric ulcer (531)	63	+ 8	5,3,4	***
+ huáng lián (黄连, 黃連)	Gastric ulcer (531)	77	+ 12	5,4,7	***
+ niú xī (牛膝, 牛膝)	Pain in joint, lower leg (71946)	42	+ 4	11,9,5	***
+ yín yáng huò (淫羊藿, 淫羊藿)	Diabetes mellitus (250)	50	+ 13	5,10,9	***
+ yù mǐ ruǐ (玉米蕊, 玉米蕊)	Diabetes mellitus (250)	42	+ 1	5,4,9	*
sāng bái pí (桑白皮, 桑白皮) <i>Cortex Mori</i>	Diabetes mellitus of mother, complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64800)	31	16	8,2,1	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	12			
	Contact dermatitis and other eczema, unspecified cause (6929)	11			
	Prurigo (6982)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
	Chronic nasopharyngitis (4722)	2			
	Other dermatoses (702)	2			
+ bái xiān pí (白鲜皮, 白鲜皮)	Contact dermatitis and other eczema, unspecified cause (6929)	45	+ 12	8,4,7	***
+ báizhǐ (白芷, 白芷)	Other dermatoses (702)	49	+ 2	2,1,12	****
+ dì fū zǐ (地肤子, 地膚子)	Contact dermatitis and other eczema, unspecified cause (6929)	49	+ 1	8,4,2	***
+ fǎng jǐ (防己, 防己)	Benign essential hypertension (4011)	67	+ 10	5,8,7	***
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Diabetes mellitus of mother, complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64800)	86	+ 5	5,6,4	**
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	42	+ 3	5,4,8	**
+ mǔdānpí (牡丹皮, 牡丹皮)	Contact dermatitis and other eczema, unspecified cause (6929)	53	+ 21	7,6,8	****
+ púgōngyīng (蒲公英, 蒲公英)	Carbuncle and furuncle of face (6800)	52	+ 3	1,4,6	****
+ tǔ fú líng (土茯苓, 土茯苓)	Contact dermatitis and other eczema, unspecified cause (6929)	49	+ 3	4,1,2	****
+ xī liǎn cǎo (豨薟草, 豨薟草)	Poisoning by other and unspecified general anesthetics (9684)	98	+ 10	4,8,3	**
+ xìxīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	51	+ 19	1,12,2	****
sāng jìshēng (桑寄生, 桑寄生) <i>Herba Taxilli</i>	Absence of menstruation (6260)	5	10	7,9,11	****
	Benign essential hypertension (4011)	3			
	Palpitations (7851)	3			
	Headache (7840)	3			
	Malignant neoplasm of female breast (174)	2			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
	Leiomyoma of uterus, unspecified (2189)	2			
	Endometriosis, site unspecified (6179)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Lumbago (7242)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Coagulation defects (286)	2			
	Other sleep disturbances (78059)	2			
	Infertility, female, of unspecified origin (6289)	2			
+ gǔ suì bǔ (骨碎补, 骨碎補)	Lumbago (7242)	27	+ 4	7,9,11	****
+ xī liǎn cǎo (豨莶草, 豨薺草)	Poisoning by other and unspecified general anesthetics (9684)	42	+ 10	3,7,6	**
sāng piāoxiǎo (桑螵蛸, 桑螵蛸) <i>Ootheca Mantidis</i>	Urinary frequency (78841)	22	8	10,11,12	**
	Enuresis (3076)	13			
	Frequency of urination and polyuria (7884)	8			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	7			
	Other urinary incontinence (78839)	3			
	Chronic rhinitis (4720)	2			
	Urethritis, unspecified (59780)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ fùpénzǐ (覆盆子, 覆盆子)	Urinary frequency (78841)	55	+ 8	11,10,12	**
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	43	+ 6	11,1,4	**
+ wǔwèizǐ (五味子, 五味子)	Other urinary incontinence (78839)	48	+ 8	9,11,5	**
sāng yè (桑叶, 桑葉) <i>Folium Mori</i>	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	52	2	4,3,6	****
	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	33			
	Generalized hyperhidrosis (7808)	3			
+ bái biǎndòu (白扁豆, 白扁豆)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	86	+ 14	7,3,8	***
+ báiliǎn (白蒺, 白薺)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	49	+ 3	3,4,5	*
+ báimáo gēn (白茅根, 白茅根)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	97	+ 6	7,3,6	****
+ bǎi bù (百部, 百部)	Cough (7862)	47	+ 16	1,5,3	****
+ běi yīn chén (北茵陈, 北茵陳)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	55	+ 1	5,4,3	*
+ chuān mù tōng (川木通, 川木通)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	54	+ 1	4,5,6	*
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	50	+ 2	4,5,1	****
+ fān mài xū (番麦须, 番麥鬚)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	89	+ 1	7,8,5	**
+ fú xiǎomài (浮小麦, 浮小麥)	Generalized hyperhidrosis (7808)	78	+ 8	8,7,6	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ gāoliángjiāng (高良姜, 高良薑)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	54	+ 19	6,5,3	**
+ guā lóu pí (栝蒌皮, 栝蒌皮)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	68	+ 5	5,6,4	**
+ hóng téng (紅藤, 紅藤)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	55	+ 3	6,4,5	*
+ huáshí (滑石, 滑石)	Generalized hyperhidrosis (7808)	49	+ 1	5,6,7	****
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	69	+ 6	6,5,7	**
+ jīnqián cǎo (金錢草, 金錢草)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	54	+ 1	7,1,2	**
+ lǐzhī hé (荔枝核, 荔枝核)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	65	+ 7	5,6,3	**
+ máhuáng gēn (麻黃根, 麻黃根)	Generalized hyperhidrosis (7808)	81	+ 8	8,7,6	*
+ mǎchixiàn (馬齒莧, 馬齒莧)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	67	+ 3	5,4,7	**
+ mǔlì (牡蠣, 牡蠣)	Generalized hyperhidrosis (7808)	75	+ 15	3,4,2	****
+ qiānniú zǐ (牽牛子, 牽牛子)	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	53	+ 22	4,3,8	*
+ ròu dòu gēn (肉豆根, 肉豆根)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	53	+ 4	3,2,6	**
+ shānyào (山藥, 山藥)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	83	+ 14	4,3,5	****
+ sīguā luò (絲瓜絡, 絲瓜絡)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	56	+ 10	1,5,2	***
+ wū tián (烏甜, 烏甜)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	41	+ 3	3,2,4	*
+ xī liǎn cǎo (豨薟草, 豨薟草)	Poisoning by other and unspecified general anesthetics (9684)	41	+ 10	5,4,3	**
+ xìng rén (杏仁, 杏仁)	Cough (7862)	43	+ 16	3,2,1	****
+ yùmǐ ruǐ (玉米蕊, 玉米蕊)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	57	+ 1	4,6,5	*
+ yùmǐ xū (玉米須, 玉米鬚)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	50	+ 1	4,6,5	*
sāng zhī (桑枝, 桑枝) <i>Ramulus Mori</i>	Pain in joint, hand (71944)	34	10	12,11,3	****
	Unspecified disorder of muscle, ligament, and fascia (7289)	6			
	Pain in joint, multiple sites (71949)	4			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pain in joint, upper arm (71942)	4			
	Other sprains and strains of wrist (84209)	3			
	Pain in joint, shoulder region (71941)	2			
	Pain in joint, other specified sites (71948)	2			
+ dà dīng huáng (大丁癰, 大丁癰)	Pain in joint, hand (71944)	46	+ 12	12,3,8	**
+ gé gēn (葛根, 葛根)	Unspecified disorder of muscle, ligament, and fascia (7289)	55	+ 2	6,10,8	*****
+ gǒu jǐ (狗脊, 狗脊)	Lumbago (7242)	53	+ 13	11,7,10	*****
+ jī xuè téng (鸡血藤, 雞血藤)	Monoplegia of upper limb (3444)	47	+ 4	5,4,3	*****
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 6	7,6,5	**
+ yī zhī xiāng (一枝香, 一枝香)	Lumbago (7242)	59	+ 16	11,1,3	**
shā rén (砂仁, 砂仁) <i>Fructus Amomi</i>	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	6	20	8,6,11	*****
	Allergic rhinitis, cause unspecified (4779)	6			
	Peptic ulcer, site unspecified (533)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Cough (7862)	4			
	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage or perforation, without mention of obstruction (53290)	4			
	Psoriasis and similar disorders (696)	3			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Other chest pain (78659)	2			
+ dà qīng yè (大青叶, 大青葉)	Psoriatic arthropathy (6960)	43	+ 3	5,6,7	***
+ hǎi piāo xiāo (海螵蛸, 海螵蛸)	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	58	+ 8	4,5,1	*****
+ shí hú suī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	52	+ 2	1,12,7	**
+ tiān huā (天花, 天花)	Psoriasis and similar disorders (696)	43	+ 5	11,6,8	*****
+ yán hú suǒ (延胡索, 延胡索)	Peptic ulcer, site unspecified (533)	65	+ 4	8,3,6	*****
shā shēn (沙参, 沙参) <i>Radix Adenophorae</i>	Allergic rhinitis, cause unspecified (4779)	12	9	7,6,8	*****
	Cough (7862)	7			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other sleep disturbances (78059)	3			
	Upper respiratory tract hypersensitivity reaction, site unspecified (4788)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Chronic pharyngitis (4721)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Chronic nasopharyngitis (4722)	2			
	Other and unspecified diseases of upper respiratory tract (4789)	2			
	Actinic keratosis (7020)	2			
	Headache (7840)	2			
	Chronic rhinitis (4720)	2			
+ tiānméndōng (天门冬, 天門冬)	Cough (7862)	19	+ 9	9,8,5	****
shā yuàn zǐ (沙苑子, 沙苑子) <i>Semen Astragali Complanati</i>	Allergic rhinitis, cause unspecified (4779)	13	9	11,12,1	**
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Other sleep disturbances (78059)	5			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	4			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	4			
	Leukorrhea, not specified as infective (6235)	4			
	Headache (7840)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Unspecified functional disorder of stomach (5369)	2			
	Scanty or infrequent menstruation (6261)	2			
	Unspecified menopausal and postmenopausal disorder (6279)	2			
+ chē qián zǐ (车前子, 車前子)	Chronic rhinitis (4720)	44	+ 1	8,7,10	**
shān dòu gēn (山豆根, 山豆根) <i>Radix et Rhizoma Sophorae Tonkinensis</i>	Influenza with pneumonia (4870)	4	3	2,1,6	**
	Other chest pain (78659)	4			
	Unspecified disorder of globe (3609)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Chronic pharyngitis (4721)	3			
	Cough (7862)	3			
	Throat pain (7841)	3			
	Pain in joint, other specified sites (71948)	3			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Absence of menstruation (6260)	3			
	Allergic rhinitis, cause unspecified (4779)	2			
	Other sleep disturbances (78059)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Chronic rhinitis (4720)	2			
	Tinnitus, unspecified (38830)	2			
+ gōu téng (钩藤, 钩藤)	Unspecified diseases of blood and blood-forming organs (2899)	62	+ 15	8,9,3	**
+ huángqí (黄耆, 黄耆)	Carcinoma in situ of other and unspecified digestive organs (2309)	46	+ 14	3,11,10	**
+ máo dōng qīng (毛冬青, 毛冬青)	Unspecified disorder of globe (3609)	8	+ 3	1,2,3	*
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	49	+ 2	3,8,1	**
+ tiān nán xīng (天南星, 天南星)	Chronic pharyngitis (4721)	4	+ 5	1,2,12	**
shānyào (山药, 山藥) <i>Rhizoma Dioscoreae</i>	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	9	14	8,1,11	*****
	Unspecified functional disorder of intestine (5649)	9			
	Dyspepsia and other specified disorders of function of stomach (5368)	7			
	Open wound of hip and thigh, without mention of complication (8900)	6			
	Actinic keratosis (7020)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	2			
	Absence of menstruation (6260)	2			
	Diarrhea of presumed infectious origin (0093)	2			
	Diabetes mellitus (250)	2			
+ hǔ zhàng (虎杖, 虎杖)	Other specified congenital anomalies (75989)	54	+ 1	8,7,1	***
+ mài yá (麦芽, 麥芽)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 17	8,3,5	****
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	83	+ 2	4,3,5	****
shānzhā (山楂, 山楂) <i>Fructus Crataegi</i>	Pure hypercholesterolemia (2720)	19	17	12,1,6	*****
	Flatulence, eructation, and gas pain (7873)	6			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other and unspecified hyperlipidemia (2724)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Mixed hyperlipidemia (2722)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Pure hyperglyceridemia (2721)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	2			
	Alcoholic fatty liver (5710)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Other chest pain (78659)	2			
+ chuān qī (川七, 川七)	Pure hypercholesterolemia (2720)	27	+ 6	9,11,1	****
+ dà zǎo (大枣, 大棗)	Dyspepsia and other specified disorders of function of stomach (5368)	60	+ 14	9,8,5	*****
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	42	+ 1	2,8,4	**
+ hǎi rén cǎo (海人草, 海人草)	Pure hypercholesterolemia (2720)	48	+ 24	5,6,4	*
+ héshǒuwū (何首乌, 何首烏)	Pure hypercholesterolemia (2720)	52	+ 9	5,6,7	****
+ hóng huā (红花, 紅花)	Rectal prolapse (5691)	47	+ 4	5,4,2	*****
+ hóng téng (红藤, 紅藤)	Pure hypercholesterolemia (2720)	47	+ 3	5,6,7	*
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	60	+ 1	5,1,3	****
+ huáng qí (黄耆, 黃耆)	Pure hypercholesterolemia (2720)	45	+ 14	7,8,9	*****
+ jiāng cán (僵蚕, 殭蠶)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	42	+ 15	1,12,2	****
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 6	6,7,5	**
+ mù guā (木瓜, 木瓜)	Postgastric surgery syndromes (5642)	53	+ 10	11,5,7	*****
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	84	+ 2	12,4,1	****
+ shān zhū yú (山茱萸, 山茱萸)	Alcoholic fatty liver (5710)	21	+ 8	9,7,10	*****
+ shuǐ xiān zǐ (水仙子, 水仙子)	Pure hypercholesterolemia (2720)	40	+ 17	5,12,6	*
+ xiān chá (仙楂, 仙楂)	Mixed hyperlipidemia (2722)	19	+ 17	12,5,11	*
+ yì yǐ rén (薏苡仁, 薏苡仁)	Pure hypercholesterolemia (2720)	47	+ 1	8,5,12	*****
shān zhǐ zǐ (山梔子, 山梔子) <i>Fructus Gardeniae</i>	Allergic rhinitis, cause unspecified (4779)	8	11	4,5,3	*****
	Other sleep disturbances (78059)	6			
	Epilepsy, unspecified, without mention of intractable epilepsy (34590)	5			
	Throat pain (7841)	3			
	Headache (7840)	3			
	Other chronic hepatitis (57149)	2			
	Cough (7862)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Tinnitus (3883)	57	+ 12	7,8,1	****
shānzhūyú (山茱萸, 山茱萸) <i>Fructus Corni</i>	Unspecified disorder of globe (3609)	5	8	9,10,7	****
	Absence of menstruation (6260)	5			
	Benign essential hypertension (4011)	4			
	Oligospermia (6061)	4			
	Other sleep disturbances (78059)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Urinary frequency (78841)	3			
	Palpitations (7851)	2			
	Scanty or infrequent menstruation (6261)	2			
	Cough (7862)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
+ bā jǐ tiān (巴戟天, 巴戟天)	Impotence of organic origin (60784)	14	+ 13	6,7,9	****
+ nǚzhēn zǐ (女贞子, 女貞子)	Unspecified disorder of globe (3609)	28	+ 9	9,4,3	****
+ qiānnián jiàn (千年健, 千年健)	Klippel-Feil syndrome (75616)	20	+ 10	9,7,3	**
+ shānzhā (山楂, 山楂)	Alcoholic fatty liver (5710)	21	+ 17	9,7,10	****
+ wǔwèizǐ (五味子, 五味子)	Other chronic hepatitis (57149)	32	+ 8	9,8,7	****
shé chuáng zǐ (蛇床子, 蛇床子) <i>Fructus Cnidii</i>	Leukorrhea, not specified as infective (6235)	17	13	12,4,8	***
	Contact dermatitis and other eczema, unspecified cause (6929)	8			
	Unspecified pruritic disorder (6989)	7			
	Urethral abscess (5970)	3			
	Urinary frequency (78841)	3			
	Prurigo (6982)	3			
	Contact dermatitis and other eczema (692)	2			
+ báiguǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	57	+ 16	12,3,4	**
+ bái jīguānhuā (白鸡冠花, 白雞冠花)	Leukorrhea, not specified as infective (6235)	45	+ 6	4,8,3	**
+ bì xiè (萆薢, 萆薢)	Leukorrhea, not specified as infective (6235)	49	+ 1	8,4,9	****
+ mián yīn chén (绵茵陈, 綿茵陳)	Leukorrhea, not specified as infective (6235)	42	+ 1	4,12,5	*
+ púgōngyīng (蒲公英, 蒲公英)	Leukorrhea, not specified as infective (6235)	51	+ 3	4,5,8	****
+ qiànshí (芡实, 芡實)	Leukorrhea, not specified as infective (6235)	46	+ 8	4,8,7	****
+ yīyī rén (薏苡仁, 薏苡仁)	Leukorrhea, not specified as infective (6235)	46	+ 1	12,1,8	****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
shègān (射干, 射干) <i>Rhizoma Belamcandae</i>	Chronic nasopharyngitis (4722)	17	3	10,12,11	****
	Chronic rhinitis (4720)	13			
	Chronic pharyngitis (4721)	11			
	Cough (7862)	6			
	Bronchitis, not specified as acute or chronic (490)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Acute sinusitis, unspecified (4619)	3			
	Throat pain (7841)	3			
	Influenza with pneumonia (4870)	2			
shén qū (神麴, 神麴) <i>Massa Medicata Fermentata</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	23	17	5,3,6	****
	Dyspepsia and other specified disorders of function of stomach (5368)	8			
	Unspecified functional disorder of intestine (5649)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Pure hypercholesterolemia (2720)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Disorders of function of stomach (536)	2			
	Postgastric surgery syndromes (5642)	2			
	Peptic ulcer, site unspecified (533)	2			
+ chuān qī (川七, 川七)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 6	8,9,5	*****
+ fǒ shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	45	+ 7	8,5,3	***
+ gǔ yá (穀芽, 穀芽)	Dyspepsia and other specified disorders of function of stomach (5368)	46	+ 17	7,5,10	**
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	49	+ 17	7,3,5	*****
+ huòxiāng (藿香, 藿香)	Diaper or napkin rash (6910)	48	+ 20	1,3,8	*****
+ jiǔ céng tǎ (九层塔, 九層塔)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	51	+ 7	8,9,4	**
+ mài yá (麦芽, 麥芽)	Postgastric surgery syndromes (5642)	44	+ 17	5,3,8	*****
+ mù guā (木瓜, 木瓜)	Postgastric surgery syndromes (5642)	99	+ 10	5,3,7	*****
+ shí hú (石斛, 石斛)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	54	+ 9	3,1,5	*****
+ wángbùliúxíng (王不留行, 王不留行)	Dyspepsia and other specified disorders of function of stomach (5368)	49	+ 4	9,10,2	**
+ yán hú suǒ (延胡索, 延胡索)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	43	+ 4	3,6,8	*****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ yìzhì rén (益智仁, 益智仁)	Postgastric surgery syndromes (5642)	52	+ 13	3,11,4	****
shēngjiāng (生姜, 生薑) <i>Rhizoma Zingiberis Recens</i>	Allergic rhinitis, cause unspecified (4779)	7	2	4,2,1	*****
	Flatulence, eructation, and gas pain (7873)	5			
	Unspecified functional disorder of stomach (5369)	4			
	Cough (7862)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Constipation (5640)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Headache (7840)	2			
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	40	+ 2	1,7,11	*****
+ gānjiāng (干姜, 乾薑)	Allergic rhinitis, cause unspecified (4779)	11	+ 19	2,1,4	*****
+ mù zéi cǎo (木贼草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	4,1,8	****
+ ròuguì (肉桂, 肉桂)	Allergic rhinitis, cause unspecified (4779)	12	+ 19	11,3,8	*****
shēng má (升麻, 升麻) <i>Rhizoma Cimicifugae</i>	Unspecified pruritic disorder (6989)	12	2	8,5,9	****
	Contact dermatitis and other eczema, unspecified cause (6929)	6			
	Throat pain (7841)	5			
	Unspecified gingival and periodontal disease (5239)	3			
	Chronic rhinitis (4720)	3			
	Other sleep disturbances (78059)	2			
	Peptic ulcer, site unspecified (533)	2			
	Headache (7840)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Cough (7862)	2			
	Absence of menstruation (6260)	2			
	Tinnitus, unspecified (38830)	2			
+ gǔ suì bǔ (骨碎补, 骨碎補)	Pulpitis (5220)	45	+ 4	7,6,5	****
+ jí lí (蒺藜, 蒺藜)	Unspecified pruritic disorder (6989)	46	+ 15	8,7,6	****
+ xìxīn (细辛, 細辛)	Unspecified gingival and periodontal disease (5239)	47	+ 19	12,1,11	****
shí chāngpú (石菖蒲, 石菖蒲) <i>Rhizoma Acori Tatarinowii</i>	Palpitations (7851)	19	18	6,5,8	*****
	Allergic rhinitis, cause unspecified (4779)	14			
	Chronic rhinitis (4720)	7			
	Other sleep disturbances (78059)	6			
	Chronic nasopharyngitis (4722)	3			
	Tinnitus, unspecified (38830)	3			
	Headache (7840)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Benign essential hypertension (4011)	2			
	Unspecified sinusitis (chronic) (4739)	2			
	Cough (7862)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Meniere's disease, unspecified (38600)	2			
	Unspecified essential hypertension (4019)	2			
	Unspecified functional disorder of stomach (5369)	2			
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	52	+ 2	1,3,12	****
+ bó zǐ rén (柏子仁, 柏子仁)	Palpitations (7851)	45	+ 18	6,5,3	****
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	78	+ 6	7,8,3	**
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	59	+ 2	2,3,4	**
+ shú dìhuáng (熟地黄, 熟地黄)	Tinnitus, unspecified (38830)	50	+ 25	11,9,6	****
+ tánxiāng (檀香, 檀香)	Palpitations (7851)	58	+ 7	11,1,3	**
+ yè jiāo téng (夜交藤, 夜交藤)	Other sleep disturbances (78059)	51	+ 18	5,8,7	****
shí chún (石莼, 石莼) <i>Ulva lactuca L.</i>	Allergic rhinitis, cause unspecified (4779)	4	12	4,10,3	*
	Benign essential hypertension (4011)	3			
	Cough (7862)	3			
	Chronic rhinitis (4720)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Headache (7840)	2			
	Other sleep disturbances (78059)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	71	+ 1	8,10,9	*
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	49	+ 1	5,3,10	*
+ zhǐzi (梔子, 梔子)	Unspecified nonpsychotic mental disorder (3009)	41	+ 11	5,7,6	*
shígāo (石膏, 石膏) <i>Gypsum Fibrosum</i>	Contact dermatitis and other eczema, unspecified cause (6929)	10	11	7,5,6	*****
	Unspecified pruritic disorder (6989)	9			
	Polydipsia (7835)	5			
	Headache (7840)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Urticaria, unspecified (7089)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified pruritic disorder (6989)	25	+ 23	8,9,10	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ huái huā (槐花, 槐花)	Contact dermatitis and other eczema, unspecified cause (6929)	41	+ 6	7,10,5	****
+ zhī mǔ (知母, 知母)	Unspecified disease of the salivary glands (5279)	44	+ 11	5,6,7	*****
shí hú (石斛, 石斛) <i>Caulis Dendrobii</i>	Unspecified functional disorder of intestine (5649)	9	9	8,3,10	****
	Other malaise and fatigue (78079)	8			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	7			
	Contact dermatitis and other eczema, unspecified cause (6929)	7			
	Unspecified functional disorder of stomach (5369)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Polydipsia (7835)	3			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	3			
	Other sleep disturbances (78059)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2			
+ báimáo gēn (白茅根, 白茅根)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	20	+ 6	7,6,8	****
+ dì gǔ pí (地骨皮, 地骨皮)	Unspecified functional disorder of intestine (5649)	13	+ 23	8,5,9	****
+ shén qū (神麴, 神麴)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	54	+ 17	3,1,5	****
+ xù duàn (续断, 續斷)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	67	+ 13	3,1,2	****
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	52	+ 16	1,5,4	**
+ yú xīng cǎo (鱼腥草, 魚腥草)	Unspecified functional disorder of intestine (5649)	41	+ 3	3,4,5	****
+ yù zhú (玉竹, 玉竹)	Unspecified functional disorder of intestine (5649)	14	+ 9	3,4,1	****
+ zǐ sū gěng (紫苏梗, 紫蘇梗)	Unspecified functional disorder of intestine (5649)	41	+ 7	5,1,4	**
shí hú suī (石胡荽, 石胡荽) <i>Herba Centipedae</i>	Allergic rhinitis, cause unspecified (4779)	44	2	1,2,3	**
	Allergic rhinitis (477)	10			
	Chronic rhinitis (4720)	8			
	Unspecified nasal polyp (4719)	5			
	Chronic nasopharyngitis (4722)	3			
	Allergic rhinitis due to other allergen (4778)	2			
	Acute sinusitis, unspecified (4619)	2			
	Cough (7862)	2			
+ bái dòu kǒu (白豆蔻, 白豆蔻)	Allergic rhinitis, cause unspecified (4779)	49	+ 20	1,2,4	**
+ báimáo gēn (白茅根, 白茅根)	Allergic rhinitis, cause unspecified (4779)	47	+ 6	7,8,6	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ dì lóng (地龙, 地龍)	Allergic rhinitis, cause unspecified (4779)	60	+ 15	2,1,5	**
+ dōng kuí zǐ (冬葵子, 冬葵子)	Allergic rhinitis, cause unspecified (4779)	50	+ 1	7,1,12	*
+ fó shǒu gān (佛手柑, 佛手柑)	Allergic rhinitis, cause unspecified (4779)	57	+ 7	1,3,12	**
+ fú hǎi shí (浮海石, 浮海石)	Allergic rhinitis, cause unspecified (4779)	70	+ 5	3,4,2	**
+ gǎo běn (藁本, 藁本)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	1,11,12	**
+ jī guān huā (鸡冠花, 雞冠花)	Allergic rhinitis, cause unspecified (4779)	52	+ 6	2,1,3	*
+ jiāng cán (僵蚕, 殭蠶)	Allergic rhinitis, cause unspecified (4779)	55	+ 15	2,1,6	**
+ mài mén dōng (麦门冬, 麥門冬)	Allergic rhinitis, cause unspecified (4779)	67	+ 9	12,10,11	**
+ mǔ dān pí (牡丹皮, 牡丹皮)	Allergic rhinitis, cause unspecified (4779)	50	+ 21	4,3,5	**
+ niú xī (牛膝, 牛膝)	Allergic rhinitis, cause unspecified (4779)	46	+ 4	7,8,4	**
+ qiáo mài (荞麦, 蕎麥)	Allergic rhinitis, cause unspecified (4779)	56	+ 17	2,1,12	*
+ rén shēn (人参, 人參)	Allergic rhinitis, cause unspecified (4779)	61	+ 14	7,8,5	**
+ shā rén (砂仁, 砂仁)	Allergic rhinitis, cause unspecified (4779)	52	+ 20	1,12,7	**
+ shān dòu gēn (山豆根, 山豆根)	Allergic rhinitis, cause unspecified (4779)	49	+ 3	3,8,1	**
+ shí chāng pú (石菖蒲, 石菖蒲)	Allergic rhinitis, cause unspecified (4779)	59	+ 18	2,3,4	**
+ wū yào (乌药, 烏藥)	Allergic rhinitis, cause unspecified (4779)	61	+ 7	10,8,3	**
+ xiān hè cǎo (仙鹤草, 仙鶴草)	Allergic rhinitis, cause unspecified (4779)	56	+ 6	12,2,1	**
+ xīn yī (辛夷, 辛夷)	Allergic rhinitis, cause unspecified (4779)	61	+ 2	5,3,4	**
+ xù duàn (续断, 續斷)	Allergic rhinitis, cause unspecified (4779)	57	+ 13	12,10,2	**
+ zhī qiào (枳壳, 枳殼)	Allergic rhinitis, cause unspecified (4779)	54	+ 7	5,3,2	**
shí jué míng (石决明, 石決明) <i>Concha Haliotidis</i>	Headache (7840)	7	15	2,5,3	***
	Other sleep disturbances (78059)	7			
	Benign essential hypertension (4011)	7			
	Unspecified essential hypertension (4019)	4			
	Unspecified pruritic disorder (6989)	4			
	Unspecified disorder of globe (3609)	3			
	Pain in joint, other specified sites (71948)	2			
	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Alcoholic fatty liver (5710)	2			
	Unspecified disorders of arteries and arterioles (4479)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Flatulence, eructation, and gas pain (7873)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Palpitations (7851)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Facial nerve disorder, unspecified (3519)	26	+ 15	2,7,6	***
+ mǔlì (牡蛎, 牡蠣)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	20	+ 15	2,3,5	***
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	65	+ 18	2,1,3	***
shíliú pí (石榴皮, 石榴皮) <i>Pericarpium Granati</i>	Chronic rhinitis (4720)	4	8	3,4,5	*
	Flatulence, eructation, and gas pain (7873)	3			
	Other chronic hepatitis (57149)	3			
	Chronic hepatitis (5714)	2			
	Pain in joint, other specified sites (71948)	2			
	Klippel-Feil syndrome (75616)	2			
	Proteinuria (7910)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Unspecified functional disorder of intestine (5649)	19	+ 8	11,3,5	*
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	41	+ 1	3,5,4	*
shí wěi (石葦, 石葦) <i>Folium Pyrrosiae</i>	Urinary frequency (78841)	3	1	10,8,4	*
	Calculus of kidney (5920)	2			
+ chì fúlíng (赤茯苓, 赤茯苓)	Urinary frequency (78841)	3	+ 1	7,8,5	*
+ chìxiǎodòu (赤小豆, 赤小豆)	Urinary frequency (78841)	5	+ 1	8,5,3	*
+ xiānmáo (仙茅, 仙茅)	Proteinuria (7910)	5	+ 13	10,11,12	*
shǐ jūnzǐ (使君子, 使君子) <i>Fructus Quisqualis</i>	Flatulence, eructation, and gas pain (7873)	8	24	10,5,11	*
	Anorexia (7830)	5			
	Peptic ulcer, site unspecified (533)	4			
	Disorders of function of stomach (536)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Cough (7862)	3			
	Diarrhea of presumed infectious origin (0093)	2			
	Headache (7840)	2			
	Ulceration of intestine (56982)	2			
	Constipation (5640)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	60	+ 1	8,7,10	*
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	56	+ 2	1,12,4	*
shì dì (柿蒂, 柿蒂) <i>Calyx Kaki</i>	Flatulence, eructation, and gas pain (7873)	12	7	5,4,6	*
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	6			
	Hiccough (7868)	4			
	Unspecified functional disorder of intestine (5649)	4			
	Peptic ulcer, site unspecified (533)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Disorders of function of stomach (536)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Palpitations (7851)	2			
	Other chest pain (78659)	2			
	Gastric ulcer (531)	2			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Functional digestive disorders, not elsewhere classified (564)	2			
shú dì huáng (熟地黄, 熟地黄) <i>Radix Rehmanniae Praeparata</i>	Constipation (5640)	25	25	9,5,3	*****
	Other sleep disturbances (78059)	4			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	2			
	Benign neoplasm of breast (217)	2			
	Epiphora, unspecified as to cause (37520)	2			
+ dà huáng (大黄, 大黄)	Constipation (5640)	53	+ 22	12,9,1	*****
+ fān xiè yè (番泻叶, 番泻叶)	Constipation (5640)	62	+ 22	9,8,1	**
+ shí chāng pú (石菖蒲, 石菖蒲)	Tinnitus, unspecified (38830)	50	+ 18	11,9,6	*****
shuāng gōu téng (双钩藤, 雙鉤藤) <i>Ramulus Uncariae Cum Uncis</i>	Unspecified essential hypertension (4019)	7	15	5,4,7	**
	Headache (7840)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Dizziness and giddiness (7804)	3			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	2			
+ diào téng gōu (钓藤钩, 釣藤鉤)	Unspecified essential hypertension (4019)	15	+ 15	4,3,12	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ gōu téng (钩藤, 钩藤)	Unspecified essential hypertension (4019)	26	+ 15	12,11,9	**
+ tiānmá (天麻, 天麻)	Occlusion and stenosis of carotid artery without mention of cerebral infarction (43310)	86	+ 15	5,1,4	**
+ zǐsū gěng (紫苏梗, 紫蘇梗)	Urticaria, unspecified (7089)	16	+ 7	5,4,2	**
shuǐ dīngxiāng (水丁香, 水丁香) <i>Herba Ludwigiae</i>	Chronic renal failure (585)	19	1	3,4,5	*
	Unspecified hypertensive heart disease without heart failure (40290)	7			
	Proteinuria (7910)	4			
	Unspecified pruritic disorder (6989)	4			
	Pain in joint, shoulder region (71941)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Chronic rhinitis (4720)	2			
	Headache (7840)	2			
+ bì xiè (萆薢, 萆薢)	Chronic renal failure (585)	68	+ 1	5,4,8	*
+ diào téng gōu (钩藤钩, 釣藤鉤)	Unspecified hypertensive heart disease without heart failure (40290)	48	+ 15	3,12,1	*
+ dīng shù xiù (丁竖朽, 丁豎朽)	Chronic renal failure (585)	41	+ 1	4,3,2	*
+ ē jiāo (阿胶, 阿膠)	Chronic renal failure (585)	41	+ 25	5,3,12	*
+ gōuqǐzi (枸杞子, 枸杞子)	Chronic renal failure (585)	63	+ 9	5,4,12	*
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	98	+ 1	12,1,10	*
+ mǔ lì (牡蛎, 牡蠣)	Unspecified hypertensive heart disease without heart failure (40290)	83	+ 15	11,10,5	*
+ shí chún (石菖, 石蓴)	Chronic renal failure (585)	49	+ 12	5,3,10	*
+ shí liú pí (石榴皮, 石榴皮)	Chronic renal failure (585)	41	+ 8	3,5,4	*
+ xiè bái (薤白, 薤白)	Unspecified hypertensive heart disease without heart failure (40290)	92	+ 7	11,10,4	*
+ yì mǔ cǎo (益母草, 益母草)	Chronic renal failure (585)	58	+ 4	3,4,5	*
+ yù mǐ ruǐ (玉米蕊, 玉米蕊)	Chronic renal failure (585)	65	+ 1	5,3,10	*
+ yù mǐ xū (玉米须, 玉米鬚)	Chronic renal failure (585)	62	+ 1	5,3,1	*
shuǐ xiānzǐ (水仙子, 水仙子) <i>Chrysomyia megacephala</i> (Fab.)	Allergic rhinitis, cause unspecified (4779)	15	17	1,5,3	*
	Chronic rhinitis (4720)	5			
	Cough (7862)	3			
	Constipation (5640)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Headache (7840)	2			
	Unspecified pruritic disorder (6989)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Benign essential hypertension (4011)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Influenza with pneumonia (4870)	2			
+ dīng shù xiù (丁竖朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	51	+ 1	4,5,8	*
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	42	+ 17	6,5,7	*
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	55	+ 2	4,5,10	*
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	40	+ 17	5,12,6	*
sīguā luò (丝瓜络, 絲瓜絡) <i>Retinervus Luffae Fructus</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	18	10	11,10,9	***
	Other sleep disturbances (78059)	2			
	Cough (7862)	2			
+ jiāng cán (僵蚕, 殭蠶)	Monoplegia of upper limb affecting unspecified side (34440)	42	+ 15	10,1,12	***
+ qínjiǎo (秦艽, 秦艽)	Monoplegia of upper limb affecting unspecified side (34440)	40	+ 10	12,11,1	***
+ sāng yè (桑叶, 桑葉)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	56	+ 2	1,5,2	***
+ xī liǎn cǎo (豨薟草, 豨薟草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	53	+ 10	9,11,10	**
sōng jié (松节, 松節) <i>Lignum Pini Nodi</i>	Cough (7862)	5	10	3,8,5	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	4			
	Other chest pain (78659)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Chronic rhinitis (4720)	2			
	Pain in joint, lower leg (71946)	2			
	Palpitations (7851)	2			
	Klippel-Feil syndrome (75616)	2			
	Headache (7840)	2			
sū mù (苏木, 蘇木) <i>Lignum Sappan</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4	4	8,3,6	***
	Chronic rhinitis (4720)	3			
	Late effect of contusion (9063)	3			
	Headache (7840)	3			
	Other chest pain (78659)	2			
	Other sleep disturbances (78059)	2			
+ sān léng (三棱, 三稜)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7	+ 4	10,12,11	***
sū zǐ (苏子, 蘇子) <i>Fructus Perillae</i>	Cough (7862)	9	16	8,9,10	***

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Chronic pharyngitis (4721)	4			
	Chronic rhinitis (4720)	4			
	Influenza with pneumonia (4870)	3			
	Pain in joint, other specified sites (71948)	3			
	Headache (7840)	2			
	Pain in joint, multiple sites (71949)	2			
	Allergic rhinitis (477)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
+ jī gǔ cǎo (鸡骨草, 雞骨草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	+ 11	8,9,10	*
+ tiān nán xīng (天南星, 天南星)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	+ 5	8,9,10	**
suānzǎo rén (酸枣仁, 酸棗仁) <i>Semen Ziziphi Spinosae</i>	Other sleep disturbances (78059)	34	18	8,2,1	*****
	Sleep disturbance, unspecified (78050)	3			
	Sleep disturbances (7805)	3			
	Acute gastritis, without mention of hemorrhage (53500)	2			
	Unspecified menopausal and postmenopausal disorder (6279)	2			
+ báisháo (白芍, 白芍)	Other sleep disturbances (78059)	44	+ 25	4,10,1	*****
+ bǎihé (百合, 百合)	Other sleep disturbances (78059)	52	+ 9	11,9,7	*****
+ chán tuì (蟬蛻, 蟬蛻)	Contact dermatitis and other eczema, unspecified cause (6929)	41	+ 2	3,2,4	*****
+ chuān xīn lián (穿心莲, 穿心蓮)	Other sleep disturbances (78059)	65	+ 3	11,3,10	*
+ chuānxiōng (川芎, 川芎)	Other sleep disturbances (78059)	47	+ 4	11,12,2	*****
+ gāncǎo (甘草, 甘草)	Other sleep disturbances (78059)	53	+ 14	3,8,11	*****
+ huángjīn guì (黄金桂, 黃金桂)	Other sleep disturbances (78059)	54	+ 2	8,2,3	*
+ huángjīng (黄精, 黃精)	Other sleep disturbances (78059)	94	+ 9	9,3,8	****
+ huáng qín (黄芩, 黃芩)	Other sleep disturbances (78059)	72	+ 12	7,8,2	*****
+ jīguānhuā (鸡冠花, 雞冠花)	Other sleep disturbances (78059)	48	+ 6	2,3,7	*
+ shí juémíng (石决明, 石決明)	Other sleep disturbances (78059)	65	+ 15	2,1,3	****
+ wǔ jiā pí (五加皮, 五加皮)	Other sleep disturbances (78059)	45	+ 10	2,3,11	****
+ xīyáng cān (西洋参, 西洋參)	Other sleep disturbances (78059)	48	+ 14	10,2,8	*
+ xià kū huā (夏枯花, 夏枯花)	Other sleep disturbances (78059)	46	+ 11	4,7,2	*
+ yán hú suǒ (延胡索, 延胡索)	Other sleep disturbances (78059)	42	+ 4	3,10,8	*****
suàn tóu (蒜头, 蒜頭) <i>Allium sativum L.</i>	Allergic rhinitis, cause unspecified (4779)	9	17	12,8,7	*
	Unspecified functional disorder of intestine (5649)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified pruritic disorder (6989)	4			
	Other sleep disturbances (78059)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Chronic nasopharyngitis (4722)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Cough (7862)	2			
	Benign essential hypertension (4011)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Headache (7840)	2			
	Chronic rhinitis (4720)	2			
	Absence of menstruation (6260)	2			
+ báizhǐ (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	49	+ 2	5,7,6	*
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	57	+ 18	5,6,4	*
+ chūn gēn pí (椿根皮, 椿根皮)	Leukorrhea, not specified as infective (6235)	76	+ 8	8,4,5	*
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	60	+ 1	5,4,2	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	45	+ 6	12,11,1	*
suǒ yáng (锁阳, 鎖陽) <i>Herba Cynomorii</i>	Urinary frequency (78841)	18	13	10,11,12	**
	Scanty or infrequent menstruation (6261)	15			
	Pain in joint, other specified sites (71948)	4			
	Dysmenorrhea (6253)	3			
	Other sleep disturbances (78059)	3			
	Leukorrhea, not specified as infective (6235)	2			
	Irregular menstrual cycle (6264)	2			
	Impotence of organic origin (60784)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Dizziness and giddiness (7804)	2			
+ bù gǔ zhī (补骨脂, 補骨脂)	Urinary frequency (78841)	50	+ 13	12,5,4	**
+ fān mài xū (番麦须, 番麥鬚)	Urinary frequency (78841)	67	+ 1	7,2,10	**
+ huángjīn guì (黄金桂, 黃金桂)	Scanty or infrequent menstruation (6261)	32	+ 2	10,11,12	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	30	+ 6	10,4,7	**
+ xiānmáo (仙茅, 仙茅)	Urinary frequency (78841)	28	+ 13	12,11,1	**
+ yī zhī xiāng (一枝香, 一枝香)	Urinary frequency (78841)	25	+ 16	4,12,10	**
tánxiāng (檀香, 檀香) <i>Santalum album L.</i>	Other chest pain (78659)	16	7	1,2,3	**
	Chest pain (7865)	15			
	Peptic ulcer, site unspecified (533)	12			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	7			
	Gastritis and duodenitis (535)	5			
	Palpitations (7851)	3			
	Cardiac dysrhythmia, unspecified (4279)	2			
	Abdominal pain (7890)	2			
	Unspecified functional disorder of intestine (5649)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Cough (7862)	2			
	Chest pain, unspecified (78650)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	59	+ 1	8,10,9	**
+ chāngpú (菖蒲, 菖蒲)	Cardiac dysrhythmia, unspecified (4279)	46	+ 18	6,5,8	**
+ chuān xīn lián (穿心莲, 穿心莲)	Other chest pain (78659)	46	+ 3	2,1,6	*
+ chuānxiōng (川芎, 川芎)	Chest pain (7865)	42	+ 4	11,1,2	**
+ dīngxiāng (丁香, 丁香)	Peptic ulcer, site unspecified (533)	40	+ 19	1,11,10	**
+ fān xiè yè (番泻叶, 番泻叶)	Cardiac dysrhythmia, unspecified (4279)	44	+ 22	1,8,11	**
+ hé huān pí (合欢皮, 合欢皮)	Cardiac dysrhythmia, unspecified (4279)	41	+ 18	8,9,10	**
+ jiàng zhēn xiāng (降真香, 降真香)	Cardiac dysrhythmia, unspecified (4279)	52	+ 6	1,2,6	**
+ qiànshí (芡实, 芡实)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 8	8,1,7	**
+ shí chāngpú (石菖蒲, 石菖蒲)	Palpitations (7851)	58	+ 18	11,1,3	**
+ yán hú suǒ (延胡索, 延胡索)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	47	+ 4	8,5,3	**
+ yù jīn (郁金, 鬱金)	Other chest pain (78659)	66	+ 4	5,6,2	**
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Other chest pain (78659)	41	+ 3	1,2,10	*
táorén (桃仁, 桃仁) <i>Semen Persicae</i>	Endometriosis, site unspecified (6179)	7	4	6,10,8	*****
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Leiomyoma of uterus, unspecified (2189)	3			
	Infertility, female, of unspecified origin (6289)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Chronic rhinitis (4720)	2			
	Unspecified pruritic disorder (6989)	2			
	Polycystic ovaries (2564)	2			
+ chì sháo (赤芍, 赤芍)	Endometriosis, site unspecified (6179)	42	+ 21	6,10,8	*****
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Rectal prolapse (5691)	41	+ 3	6,5,8	**
+ mǔlì (牡蛎, 牡蠣)	Endometriosis, site unspecified (6179)	42	+ 15	10,2,6	*****
+ mù zéi cǎo (木贼草, 木賊草)	Rectal prolapse (5691)	42	+ 2	4,6,3	****
tiānhuā (天花, 天花) <i>Fructus Trichosanthis</i>	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	12	5	6,5,8	*****
	Polydipsia (7835)	7			
	Cough (7862)	6			
	Unspecified functional disorder of stomach (5369)	3			
	Headache (7840)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Glycosuria (7915)	2			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Chronic pharyngitis (4721)	2			
	Malignant neoplasm of salivary gland, unspecified (1429)	2			
	Chronic rhinitis (4720)	2			
	Other chest pain (78659)	2			
+ guā lóu gēn (栝蒌根, 栝蒌根)	Polydipsia (7835)	55	+ 11	7,6,8	****
+ niúbàng zǐ (牛蒡子, 牛蒡子)	Hypertrophy of tonsil with adenoids (47410)	25	+ 2	1,8,10	*****
+ ǒu jié (藕节, 藕節)	Polydipsia (7835)	46	+ 6	6,5,7	**
+ shā rén (砂仁, 砂仁)	Psoriasis and similar disorders (696)	43	+ 20	11,6,8	*****
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	58	+ 16	6,3,7	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
tiānmá (天麻, 天麻) <i>Rhizoma Gastrodiae</i>	Headache (7840)	9	15	5,1,8	****
	Other sleep disturbances (78059)	5			
	Occlusion and stenosis of unspecified precerebral artery without mention of cerebral infarction (43390)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	5			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	4			
	Concussion, unspecified (8509)	4			
	Cough (7862)	3			
	Pain in joint, other specified sites (71948)	3			
	Unspecified essential hypertension (4019)	3			
	Paralysis agitans (3320)	3			
	Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus (34690)	2			
	Dizziness and giddiness (7804)	2			
	Quadriplegia, unspecified (34400)	2			
	Meniere's disease, unspecified (38600)	2			
	Neurasthenia (3005)	2			
+ gǎoběn (藁本, 藁本)	Occlusion and stenosis of unspecified precerebral artery without mention of cerebral infarction (43390)	56	+ 2	5,9,11	****
+ jiāng cán (僵蚕, 僵蚕)	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	49	+ 15	1,6,5	***
+ niúxī (牛膝, 牛膝)	Occlusion and stenosis of unspecified precerebral artery without mention of cerebral infarction (43390)	65	+ 4	5,3,9	****
+ ròu cōng róng (肉苁蓉, 肉苁蓉)	Occlusion and stenosis of carotid artery without mention of cerebral infarction (43310)	55	+ 13	5,7,6	****
+ shuāng gōu téng (双钩藤, 雙鉤藤)	Occlusion and stenosis of carotid artery without mention of cerebral infarction (43310)	86	+ 15	5,1,4	**
+ tiān nán xīng (天南星, 天南星)	Epilepsy, unspecified, without mention of intractable epilepsy (34590)	12	+ 5	5,3,2	**
+ zéxiè (泽泻, 澤瀉)	Meniere's disease, unspecified (38600)	42	+ 1	5,7,6	****
tiānméngdōng (天门冬, 天門冬) <i>Radix Asparagi</i>	Polydipsia (7835)	8	9	5,9,8	****
	Cough (7862)	7			
	Unspecified functional disorder of intestine (5649)	3			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	3			
	Unspecified pruritic disorder (6989)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Other sleep disturbances (78059)	3			
	Chronic rhinitis (4720)	3			
	Unspecified functional disorder of stomach (5369)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Constipation (5640)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Throat pain (7841)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
+ bái qián (白前, 白前)	Cough (7862)	24	+ 5	5,8,7	***
+ bǎi bù (百部, 百部)	Cough (7862)	52	+ 16	5,8,3	****
+ běi shāshēn (北沙参, 北沙参)	Cough (7862)	17	+ 9	9,8,6	****
+ běi yīn chén (北茵陈, 北茵陈)	Cough (7862)	9	+ 1	9,8,7	*
+ dānshēn (丹参, 丹参)	Contact dermatitis and other eczema, unspecified cause (6929)	12	+ 4	8,9,7	****
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	29	+ 22	6,9,1	****
+ shāshēn (沙参, 沙参)	Cough (7862)	19	+ 9	9,8,5	****
+ xuánshēn (玄参, 玄参)	Oral aphthae (5282)	18	+ 21	5,7,6	****
tiān nán xīng (天南星, 天南星) <i>Rhizoma Arisaematis Praeparata</i>	Cough (7862)	4	5	5,8,2	**
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Chronic pharyngitis (4721)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Chronic rhinitis (4720)	2			
	Malignant neoplasm of salivary gland, unspecified (1429)	2			
	Benign neoplasm of nervous system, part unspecified (2259)	2			
	Benign essential hypertension (4011)	2			
+ bái jiāng cǎn (白僵蚕, 白僵蚕)	Facial nerve disorder, unspecified (3519)	26	+ 15	7,6,8	**
+ chuān wū (川乌, 川乌)	Benign essential hypertension (4011)	4	+ 10	5,1,3	**
+ hé huān pí (合欢皮, 合欢皮)	Benign essential hypertension (4011)	13	+ 18	5,3,4	**
+ shān dòu gēn (山豆根, 山豆根)	Chronic pharyngitis (4721)	4	+ 3	1,2,12	**
+ sū zǐ (苏子, 蘇子)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	+ 16	8,9,10	**
+ tiān má (天麻, 天麻)	Epilepsy, unspecified, without mention of intractable epilepsy (34590)	12	+ 15	5,3,2	**
+ xiān chá (仙楂, 仙楂)	Benign essential hypertension (4011)	7	+ 17	12,1,5	*
+ xián fēng cǎo (咸丰草, 咸丰草)	Chronic rhinitis (4720)	12	+ 3	8,9,5	*
tíng lì zǐ (葶苈子, 葶藶子) <i>Semen Lepidii ; Semen Descurainiae</i>	Cough (7862)	14	16	4,8,11	***
	Allergic rhinitis, cause unspecified (4779)	13			
	Upper respiratory tract hypersensitivity reaction, site unspecified (4788)	7			
	Stridor (7861)	6			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Other and unspecified diseases of upper respiratory tract (4789)	5			
	Chronic nasopharyngitis (4722)	5			
	Acute nasopharyngitis [common cold] (460)	4			
	Chronic rhinitis (4720)	2			
	Asthma, unspecified type, unspecified (49390)	2			
	Unspecified disease of respiratory system (5199)	2			
	Acute upper respiratory infections of unspecified site (4659)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
+ huángshuǐ qié (黄水茄, 黄水茄)	Malignant neoplasm of bronchus and lung, unspecified (1629)	45	+ 1	8,11,3	**
tōng cǎo (通草, 通草) <i>Medulla Tetrapanacis</i>	Unspecified pruritic disorder (6989)	7	1	4,5,11	***
	Dyspepsia and other specified disorders of function of stomach (5368)	5			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	5			
	Unspecified functional disorder of intestine (5649)	4			
	Other sleep disturbances (78059)	3			
	Headache (7840)	2			
	Lumbago (7242)	2			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	2			
	Edema (7823)	2			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	2			
	Myalgia and myositis, unspecified (7291)	2			
+ huángjīn guì (黄金桂, 黄金桂)	Dyspepsia and other specified disorders of function of stomach (5368)	11	+ 2	10,8,5	*
+ yīn chén (茵陈, 茵陈)	Other chronic hepatitis (57149)	8	+ 1	6,5,11	***
tǔ fú líng (土茯苓, 土茯苓) <i>Rhizoma Smilacis Glabrae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	17	3	5,4,1	****
	Unspecified pruritic disorder (6989)	12			
	Leukorrhea, not specified as infective (6235)	5			
	Pruritus and related conditions (698)	4			
	Prurigo (6982)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Urticaria, unspecified (7089)	3			
	Dermatophytosis of unspecified site (1109)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	88	+ 12	5,11,4	*
+ bái huá shé shé cǎo (白花蛇舌草, 白花蛇舌草)	Contact dermatitis and other eczema, unspecified cause (6929)	44	+ 3	11,12,7	****
+ bái xiān pí (白鲜皮, 白鲜皮)	Unspecified pruritic disorder (6989)	25	+ 12	5,1,6	***
+ dà qīng yè (大青叶, 大青葉)	Contact dermatitis and other eczema, unspecified cause (6929)	29	+ 3	11,6,10	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ dàxiǎo jì (大小蓟, 大小薊)	Infection of kidney, unspecified (5909)	43	+ 6	11,1,12	***
+ dīng shù xiù (丁竖朽, 丁豎朽)	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	30	+ 1	8,5,4	**
+ gāncǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	66	+ 14	3,8,2	****
+ jīnchán (金蟬, 金蟬)	Contact dermatitis and other eczema, unspecified cause (6929)	42	+ 18	5,4,11	***
+ mǔdānpí (牡丹皮, 牡丹皮)	Contact dermatitis and other eczema, unspecified cause (6929)	43	+ 21	5,4,6	****
+ mù tōng (木通, 木通)	Contact dermatitis and other eczema, unspecified cause (6929)	33	+ 1	5,4,1	***
+ qiānlǐ guāng (千里光, 千里光)	Contact dermatitis and other eczema, unspecified cause (6929)	17	+ 3	4,5,1	**
+ sāng bái pí (桑白皮, 桑白皮)	Contact dermatitis and other eczema, unspecified cause (6929)	49	+ 16	4,1,2	****
+ wēilíng xiān (威灵仙, 威靈仙)	Gouty arthropathy (2740)	90	+ 10	7,10,5	****
tùsīzǐ (菟丝子, 菟絲子) <i>Semen Cuscutae</i>	Lumbago (7242)	8	13	3,5,4	*****
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	7			
	Absence of menstruation (6260)	7			
	Leiomyoma of uterus, unspecified (2189)	3			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	3			
	Disorders of menstruation and other abnormal bleeding from female genital tract (626)	2			
	Infertility, female, of unspecified origin (6289)	2			
	Other sleep disturbances (78059)	2			
	Dysmenorrhea (6253)	2			
	Irregular menstrual cycle (6264)	2			
	Impotence of organic origin (60784)	2			
	Polycystic ovaries (2564)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified disorder of lacrimal system (3759)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
	Symptomatic menopausal or female climacteric states (6272)	2			
+ gǔ suì bǔ (骨碎补, 骨碎補)	Lumbago (7242)	42	+ 4	7,8,4	****
wàn diǎn jīn (万点金, 萬點金) <i>Radix Illicis Asprellae</i>	Other chest pain (78659)	14	16	2,3,4	**
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	7			
	Headache (7840)	5			
	Chest pain (7865)	5			
	Pain in joint, other specified sites (71948)	5			
	Cough (7862)	4			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pain in joint, shoulder region (71941)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified chronic liver disease without mention of alcohol (5719)	2			
	Palpitations (7851)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Other sleep disturbances (78059)	2			
+ biǎn bó (扁柏, 扁柏)	Cough (7862)	19	+ 6	1,6,3	**
+ chuān qī (川七, 川七)	Other chest pain (78659)	45	+ 6	8,11,6	**
+ dà dīng huáng (大丁癢, 大丁癢)	Other chest pain (78659)	18	+ 12	3,1,2	**
+ dīng shù xiù (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	44	+ 1	4,5,3	**
+ xuèjié (血竭, 血竭)	Chest pain (7865)	50	+ 6	5,2,3	**
wángbùliúxíng (王不留行, 王不留行) <i>Semen Vaccariae</i>	Cough (7862)	7	4	10,9,11	**
	Dyspepsia and other specified disorders of function of stomach (5368)	7			
	Absence of menstruation (6260)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Chronic rhinitis (4720)	4			
	Unspecified pruritic disorder (6989)	4			
	Other sleep disturbances (78059)	4			
	Anemia of mother, unspecified as to episode of care or not applicable (64820)	3			
	Other chest pain (78659)	2			
	Pain in joint, hand (71944)	2			
	Pain in joint, other specified sites (71948)	2			
	Acute nasopharyngitis [common cold] (460)	2			
	Excessive or frequent menstruation (6262)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Chronic pharyngitis (4721)	2			
	Headache (7840)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ bàn zhī lián (半枝蓮, 半枝蓮)	Allergic rhinitis, cause unspecified (4779)	7	+ 3	9,8,10	**
+ běi bǎnlángēn (北板藍根, 北板藍根)	Dyspepsia and other specified disorders of function of stomach (5368)	10	+ 3	9,10,11	*
+ dà fù pí (大腹皮, 大腹皮)	Dyspepsia and other specified disorders of function of stomach (5368)	8	+ 7	2,4,10	**
+ dīng xiāng (丁香, 丁香)	Dyspepsia and other specified disorders of function of stomach (5368)	12	+ 19	3,2,11	**
+ fó shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	44	+ 7	1,10,5	**
+ máo dōng qīng (毛冬青, 毛冬青)	Cough (7862)	14	+ 3	5,4,1	*
+ sān léng (三棱, 三棱)	Absence of menstruation (6260)	11	+ 4	4,5,3	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ shén qū (神麴, 神麴)	Dyspepsia and other specified disorders of function of stomach (5368)	49	+ 17	9,10,2	**
+ yìmǔcǎo (益母草, 益母草)	Excessive or frequent menstruation (6262)	78	+ 4	3,4,2	**
+ zào jiǎo cì (皂角刺, 皂角刺)	Unspecified disorder of lactation, unspecified as to episode of care or not applicable (67690)	23	+ 5	6,11,12	**
wēilíng xiān (威灵仙, 威靈仙) <i>Radix et Rhizoma Clematidis</i>	Gouty arthropathy (2740)	8	10	7,8,5	****
	Klippel-Feil syndrome (75616)	7			
	Pain in joint, multiple sites (71949)	5			
	Pain in joint, lower leg (71946)	5			
	Monoplegia of upper limb (3444)	4			
	Myalgia and myositis, unspecified (7291)	4			
	Monoplegia of upper limb affecting unspecified side (34440)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pain in joint, shoulder region (71941)	3			
	Gout, unspecified (2749)	3			
	Pure hypercholesterolemia (2720)	2			
	Benign essential hypertension (4011)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Malignant neoplasm of retina (1905)	68	+ 15	7,6,8	****
+ dānshēn (丹参, 丹参)	Benign essential hypertension (4011)	48	+ 4	11,1,2	****
+ dǎodì wúgōng (倒地蜈蚣, 倒地蜈蚣)	Gouty arthropathy (2740)	41	+ 3	7,11,5	****
+ tǔ fúlíng (土茯苓, 土茯苓)	Gouty arthropathy (2740)	90	+ 3	7,10,5	****
+ xī liǎn cǎo (豨莶草, 豨莶草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	63	+ 10	10,11,9	**
wū méi (乌梅, 烏梅) <i>Fructus Mume</i>	Chronic rhinitis (4720)	5	8	10,8,7	***
	Allergic rhinitis, cause unspecified (4779)	4			
	Unspecified psychophysiological malfunction (3069)	3			
	Acute sinusitis, unspecified (4619)	3			
	Unspecified sinusitis (chronic) (4739)	3			
	Other sleep disturbances (78059)	3			
	Polydipsia (7835)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Unspecified functional disorder of stomach (5369)	2			
	Prurigo (6982)	2			
	Unspecified pruritic disorder (6989)	2			
	Pain in joint, other specified sites (71948)	2			
	Glycosuria (7915)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bǎihé (百合, 百合)	Unspecified psychophysiological malfunction (3069)	90	+ 9	7,6,10	***
+ hóng qū (红麴, 紅麴)	Pure hypercholesterolemia (2720)	44	+ 17	3,10,4	***
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Chronic rhinitis (4720)	7	+ 12	10,8,7	***
wū tián (乌甜, 烏甜) <i>Herba Solani Nigri</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	6	3	10,11,12	*
	Flatulence, eructation, and gas pain (7873)	6			
	Cough (7862)	5			
	Unspecified disease of pancreas (5779)	4			
	Other chest pain (78659)	4			
	Unspecified pruritic disorder (6989)	3			
	Chronic pharyngitis (4721)	3			
	Calculus of gallbladder with acute cholecystitis, without mention of obstruction (57400)	3			
	Headache (7840)	3			
	Urinary frequency (78841)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Other voice and resonance disorders (78449)	2			
	Pain in joint, other specified sites (71948)	2			
	Chronic rhinitis (4720)	2			
+ gāoliángjiāng (高良姜, 高良薑)	Unspecified functional disorder of intestine (5649)	13	+ 19	1,12,11	*
+ nǚzhēn zǐ (女贞子, 女貞子)	Unspecified disease of pancreas (5779)	42	+ 9	3,10,9	*
+ sāng yè (桑叶, 桑葉)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	41	+ 2	3,2,4	*
+ xiánfēng cǎo (咸丰草, 咸豐草)	Cough (7862)	7	+ 3	10,8,9	*
+ zhīmǔ (知母, 知母)	Unspecified disease of pancreas (5779)	44	+ 11	10,11,12	*
+ zhū dǎn (猪胆, 豬膽)	Chronic rhinitis (4720)	24	+ 3	10,11,8	*
wū yào (乌药, 烏藥) <i>Radix Linderae</i>	Acute gastritis, without mention of hemorrhage (53500)	9	7	11,12,10	****
	Urinary frequency (78841)	7			
	Inguinal hernia, without mention of obstruction or gangrene, unilateral or unspecified (not specified as recurrent) (55090)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Endometriosis, site unspecified (6179)	4			
	Flatulence, eructation, and gas pain (7873)	3			
	Gastric ulcer (531)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pain in joint, other specified sites (71948)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Other sleep disturbances (78059)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Infertility, female, of unspecified origin (6289)	2			
	Dysmenorrhea (6253)	2			
+ bǎihé (百合, 百合)	Acute gastritis, without mention of hemorrhage (53500)	46	+ 9	9,7,5	****
+ bèimǔ (贝母, 貝母)	Acute gastritis, without mention of hemorrhage (53500)	73	+ 5	4,5,3	****
+ cāngěr zǐ (苍耳子, 蒼耳子)	Allergic rhinitis, cause unspecified (4779)	42	+ 2	12,11,1	****
+ chuān liàn zǐ (川楝子, 川楝子)	Endometriosis, site unspecified (6179)	58	+ 7	12,11,10	****
+ dīngxiāng (丁香, 丁香)	Gastric ulcer (531)	9	+ 19	11,10,12	**
+ fùpénzǐ (覆盆子, 覆盆子)	Urinary frequency (78841)	58	+ 8	12,11,4	***
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Endometriosis, site unspecified (6179)	65	+ 6	12,11,10	**
+ mùxiāng (木香, 木香)	Endometriosis, site unspecified (6179)	63	+ 7	10,11,12	****
+ pú huáng (蒲黄, 蒲黃)	Endometriosis, site unspecified (6179)	61	+ 6	12,9,11	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	61	+ 2	10,8,3	**
wú míng yì (无名异, 無名異) <i>Pyrolisite</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	10	4	11,10,12	**
	Other chest pain (78659)	8			
	Pain in joint, other specified sites (71948)	4			
	Cough (7862)	4			
	Headache (7840)	4			
	Lumbago (7242)	3			
	Unspecified gingival and periodontal disease (5239)	2			
	Unspecified pruritic disorder (6989)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Pain in joint, lower leg (71946)	2			
	Unspecified disorder of globe (3609)	2			
	Absence of menstruation (6260)	2			
	Unspecified disorder of autonomic nervous system (3379)	2			
+ gǔ suì bǔ (骨碎补, 骨碎補)	Superficial injury of face, neck, and scalp except eye (910)	61	+ 4	12,5,1	**
+ hān qiào cǎo (蚰壳草, 蚰殼草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 12	11,3,10	**
+ huíxiāng (茴香, 茴香)	Headache (7840)	10	+ 19	10,1,11	**
+ jù mài (瞿麦, 瞿麥)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	14	+ 1	11,10,12	**
+ liú jì nú (刘寄奴, 劉寄奴)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	29	+ 4	11,10,12	**
wú zhūyú (吴茱萸, 吳茱萸) <i>Fructus Evodiae</i>	Other quadriplegia (34409)	50	19	11,4,5	****
	Monoplegia of upper limb affecting unspecified side (34440)	26			
	Classical migraine (3460)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Acute gastritis, without mention of hemorrhage (53500)	2			
+ chénxiāng (沉香, 沉香)	Other quadriplegia (34409)	72	+ 7	1,11,4	*
+ chuān xīn lián (穿心莲, 穿心莲)	Other quadriplegia (34409)	53	+ 3	5,11,4	*
+ dàsuàn (大蒜, 大蒜)	Other quadriplegia (34409)	52	+ 24	5,4,7	*
+ gégēn (葛根, 葛根)	Classical migraine (3460)	54	+ 2	7,11,1	****
+ héshǒuwū (何首乌, 何首乌)	Unspecified essential hypertension (4019)	43	+ 9	1,5,7	****
+ hóng téng (红藤, 红藤)	Other quadriplegia (34409)	54	+ 3	5,4,1	*
+ mù tōng (木通, 木通)	Monoplegia of upper limb affecting unspecified side (34440)	41	+ 1	4,5,1	***
+ qiānnián jiàn (千年健, 千年健)	Monoplegia of upper limb affecting unspecified side (34440)	47	+ 10	3,11,4	**
+ ròu cōng róng (肉苁蓉, 肉苁蓉)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	41	+ 13	11,5,1	****
+ xīyáng cān (西洋参, 西洋参)	Other quadriplegia (34409)	66	+ 14	11,5,1	*
+ xiè bái (薤白, 薤白)	Other quadriplegia (34409)	57	+ 7	1,11,12	***
wǔ bèi zǐ (五倍子, 五倍子) <i>Galla Chinensis</i>	Urinary frequency (78841)	3	8	10,7,3	*
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Other urinary incontinence (78839)	2			
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	47	+ 6	6,7,5	*
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	50	+ 11	5,7,3	*
wǔ jiā pí (五加皮, 五加皮) <i>Cortex Acanthopanax</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	14	10	5,11,6	***
	Pain in joint, lower leg (71946)	9			
	Lumbago (7242)	5			
	Pain in joint, other specified sites (71948)	4			
	Klippel-Feil syndrome (75616)	3			
	Myalgia and myositis, unspecified (7291)	3			
	Pain in joint, multiple sites (71949)	3			
	Benign essential hypertension (4011)	2			
	Other chest pain (78659)	2			
+ bái huā shé shé cǎo (白花蛇舌草, 白花蛇舌草)	Headache (7840)	2	+ 3	5,4,11	****
	Other chronic hepatitis (57149)	68			
+ dà fēng téng (大风藤, 大风藤)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	24	+ 2	3,1,4	*
+ dān shēn (丹参, 丹参)	Other chronic hepatitis (57149)	44	+ 4	5,3,6	****
+ jiǔ céng tǎ (九层塔, 九层塔)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	22	+ 7	10,11,8	**
+ qiānnián jiàn (千年健, 千年健)	Klippel-Feil syndrome (75616)	24	+ 10	6,10,5	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ suānzǎo rén (酸枣仁, 酸棗仁)	Other sleep disturbances (78059)	45	+ 18	2,3,11	***
+ yìzhì rén (益智仁, 益智仁)	Hyperplasia of prostate (600)	59	+ 13	4,3,2	***
wǔ líng zhī (五灵脂, 五靈脂) <i>Faeces Troglodyter</i>	Acute gastritis, without mention of hemorrhage (53500)	18	4	5,6,4	****
	Dyspepsia and other specified disorders of function of stomach (5368)	16			
	Unspecified functional disorder of intestine (5649)	4			
	Absence of menstruation (6260)	3			
	Headache (7840)	3			
	Acute myocardial infarction of unspecified site, episode of care unspecified (41090)	3			
	Abdominal pain, other specified site (78909)	2			
	Other chest pain (78659)	2			
	Gastritis and duodenitis (535)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ cǎo dòukòu (草豆蔻, 草豆蔻)	Dyspepsia and other specified disorders of function of stomach (5368)	56	+ 20	8,6,2	*
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Endometriosis, site unspecified (6179)	44	+ 6	8,9,6	**
wǔ wèi zǐ (五味子, 五味子) <i>Fructus Schisandrae Chinensis</i>	Other urinary incontinence (78839)	7	8	9,5,8	*****
	Other sleep disturbances (78059)	5			
	Other chronic hepatitis (57149)	5			
	Cough (7862)	4			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	4			
	Pure hypercholesterolemia (2720)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Urinary frequency (78841)	3			
	Palpitations (7851)	2			
	Chronic rhinitis (4720)	2			
+ bái huā lián (白花莲, 白花蓮)	Other chronic hepatitis (57149)	46	+ 12	8,5,7	*
+ bái huā shé shé cǎo (白花蛇舌草, 白花蛇舌草)	Other chronic hepatitis (57149)	84	+ 3	5,6,7	****
+ hé shǒu wū (何首乌, 何首烏)	Other chronic hepatitis (57149)	41	+ 9	8,5,9	****
+ sāng piāo xiǎo (桑螵蛸, 桑螵蛸)	Other urinary incontinence (78839)	48	+ 8	9,11,5	**
+ shān zhū yú (山茱萸, 山茱萸)	Other chronic hepatitis (57149)	32	+ 8	9,8,7	****
+ xiān máo (仙茅, 仙茅)	Other chronic hepatitis (57149)	7	+ 13	1,11,9	**
+ yì zhì rén (益智仁, 益智仁)	Hyperplasia of prostate (600)	94	+ 13	4,2,3	***
xī liǎn cǎo (豨莶草, 豨莶草) <i>Herba Siegesbeckiae</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	17	10	3,4,1	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Poisoning by other and unspecified general anesthetics (9684)	14			
	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	11			
	Monoplegia of upper limb (3444)	5			
	Benign essential hypertension (4011)	4			
	Lumbago (7242)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Diabetes mellitus (250)	2			
	Unspecified essential hypertension (4019)	2			
	Sciatica (7243)	2			
+ cǎo juémíng (草决明, 草决明)	Benign essential hypertension (4011)	42	+ 11	6,7,8	**
+ dú huó (独活, 獨活)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	19	+ 10	5,7,8	**
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	50	+ 2	6,9,7	**
+ jù mài (瞿麦, 瞿麥)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	41	+ 1	10,11,9	**
+ liú jì nú (刘寄奴, 劉寄奴)	Poisoning by other and unspecified general anesthetics (9684)	20	+ 4	1,3,9	**
+ qiānghuó (羌活, 羌活)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	45	+ 2	11,9,12	**
+ rèndōng téng (忍冬藤, 忍冬藤)	Rheumatoid arthritis (7140)	19	+ 10	7,4,5	**
+ sāng bái pí (桑白皮, 桑白皮)	Poisoning by other and unspecified general anesthetics (9684)	98	+ 16	4,8,3	**
+ sāng jì shēng (桑寄生, 桑寄生)	Poisoning by other and unspecified general anesthetics (9684)	42	+ 10	3,7,6	**
+ sāng yè (桑叶, 桑葉)	Poisoning by other and unspecified general anesthetics (9684)	41	+ 2	5,4,3	**
+ sīguā luò (丝瓜络, 絲瓜絡)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	53	+ 10	9,11,10	**
+ wēilíng xiān (威灵仙, 威靈仙)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	63	+ 10	10,11,9	**
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	98	+ 11	5,7,8	**
+ xià kū huā (夏枯花, 夏枯花)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	54	+ 11	4,1,11	*
+ xù duàn (续断, 續斷)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	76	+ 13	11,2,9	**
+ zào jiǎo cì (皂角刺, 皂角刺)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	86	+ 5	11,1,3	**
+ zéxiè (泽泻, 澤瀉)	Benign essential hypertension (4011)	55	+ 1	1,5,3	**
xīyáng cǎn (西洋参, 西洋參) <i>Radix Panacis Quinquefolii</i>	Dyspepsia and other specified disorders of function of stomach (5368)	8	14	11,8,10	*
	Other sleep disturbances (78059)	5			
	Flatulence, eructation, and gas pain (7873)	4			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Constipation (5640)	2			
	Headache (7840)	2			
	Unspecified functional disorder of intestine (5649)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
	Other chest pain (78659)	2			
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	41	+ 6	6,5,7	*
+ qīng hāo (青蒿, 青蒿)	Other sleep disturbances (78059)	10	+ 23	8,10,7	*
+ suānzǎo rén (酸枣仁, 酸枣仁)	Other sleep disturbances (78059)	48	+ 18	10,2,8	*
+ wú zhūyú (吴茱萸, 吴茱萸)	Other quadriplegia (34409)	66	+ 19	11,5,1	*
xìxīn (细辛, 細辛) <i>Radix et Rhizoma Asari</i>	Allergic rhinitis, cause unspecified (4779)	37	19	1,12,11	*****
	Chronic rhinitis (4720)	11			
	Allergic rhinitis (477)	10			
	Acute sinusitis, unspecified (4619)	7			
	Unspecified sinusitis (chronic) (4739)	4			
	Chronic nasopharyngitis (4722)	3			
	Nasal polyps (471)	3			
	Unspecified nasal polyp (4719)	2			
	Chronic sinusitis (473)	2			
	Cough (7862)	2			
+ chái hú (柴胡, 柴胡)	Allergic rhinitis, cause unspecified (4779)	42	+ 2	1,11,12	*****
+ fú hǎi shí (浮海石, 浮海石)	Allergic rhinitis, cause unspecified (4779)	49	+ 5	12,1,2	**
+ gāoliángjiāng (高良姜, 高良薑)	Allergic rhinitis, cause unspecified (4779)	48	+ 19	12,1,11	**
+ lóng yǎnhuā (龙眼花, 龍眼花)	Allergic rhinitis, cause unspecified (4779)	47	+ 1	1,2,12	**
+ mǔdānpí (牡丹皮, 牡丹皮)	Chronic rhinitis (4720)	40	+ 21	1,11,12	*****
+ mù tōng (木通, 木通)	Allergic rhinitis, cause unspecified (4779)	50	+ 1	10,11,1	***
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	88	+ 2	11,12,1	***
+ sāng bái pí (桑白皮, 桑白皮)	Allergic rhinitis, cause unspecified (4779)	51	+ 16	1,12,2	*****
+ shēng má (升麻, 升麻)	Unspecified gingival and periodontal disease (5239)	47	+ 2	12,1,11	*****
+ xìng rén (杏仁, 杏仁)	Allergic rhinitis, cause unspecified (4779)	46	+ 16	1,11,2	*****
xià kūcǎo (夏枯草, 夏枯草) <i>Spica Prunellae</i>	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	50	11	5,3,4	****
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Goiter, unspecified (2409)	4			
	Other sleep disturbances (78059)	3			
	Unspecified essential hypertension (4019)	3			
	Pain in joint, other specified sites (71948)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Allergic rhinitis, cause unspecified (4779)	2			
	Headache (7840)	2			
	Benign essential hypertension (4011)	2			
+ bā jì tiān (巴戟天, 巴戟天)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	52	+ 13	11,5,8	****
+ bàn xià (半夏, 半夏)	Other sleep disturbances (78059)	54	+ 5	5,4,10	****
+ bǐ zǐ cǎo (笔仔草, 筆仔草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 11	5,10,7	*
+ bīng láng (檳榔, 檳榔)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	63	+ 24	5,7,8	****
+ chén pí (陈皮, 陳皮)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	84	+ 7	5,3,12	****
+ chì xiǎo dòu (赤小豆, 赤小豆)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 1	5,4,7	***
+ chuān mù tōng (川木通, 川木通)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	76	+ 1	5,3,8	*
+ chuān qī (川七, 川七)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	83	+ 6	8,9,5	****
+ chuān shān lóng (穿山龙, 穿山龍)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 10	5,3,11	*
+ chuān xīn lián (穿心莲, 穿心蓮)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61	+ 3	5,7,3	*
+ dān shēn (丹参, 丹參)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61	+ 4	3,4,5	****
+ dīng shù xiǔ (丁竖朽, 丁豎朽)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 1	5,8,11	**
+ dù zhōng (杜仲, 杜仲)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 13	5,7,8	****
+ fān xiè yè (番泻叶, 番瀉葉)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 22	5,8,7	**
+ gé gēn (葛根, 葛根)	Benign essential hypertension (4011)	47	+ 2	8,7,5	****
+ gǔ yá (穀芽, 穀芽)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	61	+ 17	5,4,8	**
+ hóng huā (红花, 紅花)	Unspecified essential hypertension (4019)	40	+ 4	3,7,4	****
+ hǔ zhàng (虎杖, 虎杖)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	55	+ 1	5,3,2	***
+ huái huā (槐花, 槐花)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	60	+ 6	5,7,3	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jí lí (蒺藜, 蒺藜)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	70	+ 15	3,4,7	****
+ júhóng (橘红, 橘红)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	71	+ 7	7,5,8	***
+ liú jì nú (刘寄奴, 劉寄奴)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	74	+ 4	5,7,11	**
+ lóngdǎn cǎo (龙胆草, 龍膽草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	73	+ 12	9,10,5	***
+ wǔ bèi zǐ (五倍子, 五倍子)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	50	+ 8	5,7,3	*
+ xī liǎn cǎo (豨莶草, 豨莶草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	98	+ 10	5,7,8	**
+ yīmǔcǎo (益母草, 益母草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	68	+ 4	3,4,5	****
+ yuǎnzhi (远志, 遠志)	Benign essential hypertension (4011)	44	+ 18	5,12,11	****
xià kǔ huā (夏枯花, 夏枯花) <i>Spica Prunellae</i>	Pain in joint, other specified sites (71948)	12	11	5,8,7	*
	Unspecified disorder of globe (3609)	9			
	Hyperparathyroidism (2520)	8			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	8			
	Headache (7840)	4			
	Other sleep disturbances (78059)	4			
	Allergic rhinitis, cause unspecified (4779)	4			
	Unspecified pruritic disorder (6989)	4			
	Other chest pain (78659)	3			
	Pain in joint, shoulder region (71941)	3			
	Chronic pharyngitis (4721)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Chronic rhinitis (4720)	2			
	Cough (7862)	2			
	Pain in joint, lower leg (71946)	2			
	Influenza with pneumonia (4870)	2			
+ báitóuwēng (白头翁, 白頭翁)	Pain in joint, other specified sites (71948)	51	+ 3	8,7,9	*
+ báizhī (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	10,11,8	*
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	48	+ 2	7,8,9	*

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ hēi pú huáng (黑蒲黄, 黑蒲黄)	Endometriosis, site unspecified (6179)	46	+ 6	5,7,4	*
+ mì mēng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	43	+ 21	5,12,7	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	58	+ 6	12,7,8	*
+ ruí rén (蕤仁, 蕤仁)	Unspecified disorder of lacrimal system (3759)	70	+ 9	4,2,12	*
+ suānzǎo rén (酸枣仁, 酸枣仁)	Other sleep disturbances (78059)	46	+ 18	4,7,2	*
+ xī liǎn cǎo (豨薟草, 豨薟草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	54	+ 10	4,1,11	*
xiān chá (仙楂, 仙楂) <i>Fructus Crataegi</i>	Unspecified functional disorder of intestine (5649)	5	17	5,7,12	*
	Alcoholic fatty liver (5710)	5			
	Benign essential hypertension (4011)	4			
	Pure hyperglyceridemia (2721)	4			
	Pure hypercholesterolemia (2720)	4			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Residual hemorrhoidal skin tags (4559)	3			
	Mixed hyperlipidemia (2722)	3			
	Unspecified essential hypertension (4019)	2			
	Constipation (5640)	2			
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Chronic rhinitis (4720)	25	+ 1	8,5,3	*
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	68	+ 2	7,6,9	*
+ huàshí cǎo (化石草, 化石草)	Calculus of kidney (5920)	43	+ 1	11,8,7	*
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	31	+ 22	1,2,6	*
+ máhuáng (麻黄, 麻黄)	Mixed hyperlipidemia (2722)	42	+ 2	1,6,5	*
+ shānzhā (山楂, 山楂)	Mixed hyperlipidemia (2722)	19	+ 17	12,5,11	*
+ tiān nán xīng (天南星, 天南星)	Benign essential hypertension (4011)	7	+ 5	12,1,5	*
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	50	+ 16	10,8,11	*
xiānhè cǎo (仙鹤草, 仙鹤草) <i>Herba Agrimoniae</i>	Residual hemorrhoidal skin tags (4559)	14	6	7,8,3	***
	Hematuria (5997)	12			
	Excessive or frequent menstruation (6262)	6			
	Epistaxis (7847)	6			
	Hypertrophy of uterus (6212)	5			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Absence of menstruation (6260)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified pruritic disorder (6989)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ huái huā (槐花, 槐花)	Residual hemorrhoidal skin tags (4559)	41	+ 6	7,6,5	***
+ sān lèng (三棱, 三棱)	Hypertrophy of uterus (6212)	44	+ 4	12,1,3	***
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	56	+ 2	12,2,1	**
+ yù mǐ xū (玉米须, 玉米鬚)	Hematuria (5997)	23	+ 1	7,8,5	*
xiānmáo (仙茅, 仙茅) <i>Rhizoma Curculiginis</i>	Unspecified functional disorder of intestine (5649)	2	13	11,10,1	**
	Headache (7840)	2			
+ dì yú (地榆, 地榆)	Unspecified functional disorder of intestine (5649)	4	+ 6	7,10,9	**
+ jiūcài zǐ (韭菜子, 韭菜子)	Unspecified functional disorder of intestine (5649)	14	+ 13	7,8,9	**
+ ròudòukòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	12	+ 8	7,11,6	**
+ shí wěi (石苇, 石葦)	Proteinuria (7910)	5	+ 1	10,11,12	*
+ suǒ yáng (锁阳, 鎖陽)	Urinary frequency (78841)	28	+ 13	12,11,1	**
+ wǔwèizǐ (五味子, 五味子)	Other chronic hepatitis (57149)	7	+ 8	1,11,9	**
+ yù mǐ rǔi (玉米蕊, 玉米蕊)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	7	+ 1	11,12,1	*
xiánfēng cǎo (咸丰草, 咸豐草) <i>Herba Bidentis</i>	Chronic rhinitis (4720)	6	3	8,10,9	*
	Unspecified functional disorder of intestine (5649)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Cough (7862)	3			
	Throat pain (7841)	3			
	Unspecified pruritic disorder (6989)	2			
	Headache (7840)	2			
	Unspecified gingival and periodontal disease (5239)	2			
	Influenza with pneumonia (4870)	2			
	Unspecified disorder of globe (3609)	2			
	Other sleep disturbances (78059)	2			
+ mù tōng (木通, 木通)	Disorders of urea cycle metabolism (2706)	11	+ 1	10,7,4	*
+ tiān nán xīng (天南星, 天南星)	Chronic rhinitis (4720)	12	+ 5	8,9,5	*
+ wū tián (乌甜, 烏甜)	Cough (7862)	7	+ 3	10,8,9	*
+ zhǐ jù zǐ (枳椇子, 枳椇子)	Unspecified functional disorder of intestine (5649)	9	+ 3	10,8,5	*
xiāng fù (香附, 香附) <i>Rhizoma Cyperi</i>	Absence of menstruation (6260)	11	7	7,3,6	*****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	6			
	Other chest pain (78659)	4			
	Benign neoplasm of skin, site unspecified (2169)	3			
	Dysmenorrhea (6253)	3			
	Other sleep disturbances (78059)	2			
+ bái chūn gēn (白椿根, 白椿根)	Absence of menstruation (6260)	58	+ 12	5,11,6	*
+ dìng jīng cǎo (定经草, 定經草)	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	42	+ 1	3,11,12	*
xiāng rú (香薷, 香薷) <i>Herba Moslae</i>	Headache (7840)	8	2	7,8,5	**
	Fever (7806)	5			
	Cough (7862)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Heat stroke and sunstroke (9920)	2			
	Throat pain (7841)	2			
	Other sleep disturbances (78059)	2			
+ dàn dòu chǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	45	+ 2	7,5,6	**
+ qīng hāo (青蒿, 青蒿)	Fever (7806)	9	+ 23	7,8,5	**
+ zǐ sū gěng (紫苏梗, 紫蘇梗)	Unspecified functional disorder of intestine (5649)	15	+ 7	5,6,7	**
xiǎohuixiāng (小茴香, 小茴香) <i>Fructus Foeniculi</i>	Chronic glomerulonephritis with unspecified pathological lesion in kidney (5829)	45	19	5,3,4	****
	Inguinal hernia, without mention of obstruction or gangrene, unilateral or unspecified (not specified as recurrent) (55090)	3			
	Hernia of unspecified site without mention of obstruction or gangrene (5539)	2			
+ chì fú líng (赤茯苓, 赤茯苓)	Chronic glomerulonephritis with unspecified pathological lesion in kidney (5829)	49	+ 1	5,7,4	**
xiǎojīn yīng (小金櫻, 小金櫻) <i>Rosa taiwanensis Nakai</i>	Urinary frequency (78841)	9	8	3,5,7	*
	Enuresis (3076)	3			
	Leukorrhea, not specified as infective (6235)	2			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ báiguǒ (白果, 白果)	Urinary frequency (78841)	13	+ 16	11,4,5	*
+ dà jīn yīng (大金櫻, 大金櫻)	Urinary frequency (78841)	29	+ 8	7,8,9	*
+ dàxiǎo jì (大小薊, 大小薊)	Urinary frequency (78841)	25	+ 6	5,7,9	*
xiè bái (薤白, 薤白) <i>Bulbus Allii Macrostemonis</i>	Palpitations (7851)	27	7	11,10,8	***
	Chest pain (7865)	16			
	Other chest pain (78659)	6			
	Unspecified hypertensive heart disease without heart failure (40290)	5			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Hiccough (7868)	4			
	Unspecified pleural effusion (5119)	3			
	Heartburn (7871)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Hiccough (7868)	76	+ 20	11,8,1	***
+ dīng shù xiù (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	94	+ 1	3,4,2	**
+ hǔ zhàng (虎杖, 虎杖)	Unspecified hypertensive heart disease without heart failure (40290)	93	+ 1	4,11,10	***
+ mǔlì (牡蛎, 牡蠣)	Unspecified hypertensive heart disease without heart failure (40290)	49	+ 15	1,5,11	***
+ shuǐ dīngxiāng (水丁香, 水丁香)	Unspecified hypertensive heart disease without heart failure (40290)	92	+ 1	11,10,4	*
+ wú zhūyú (吴茱萸, 吴茱萸)	Other quadriplegia (34409)	57	+ 19	1,11,12	***
+ yìyī rén (薏苡仁, 薏苡仁)	Chest pain (7865)	31	+ 1	1,11,10	***
xīn yí (辛夷, 辛夷) <i>Flos Magnoliae</i>	Acute sinusitis, unspecified (4619)	15	2	5,1,7	*****
	Allergic rhinitis, cause unspecified (4779)	15			
	Chronic rhinitis (4720)	14			
	Allergic rhinitis (477)	13			
	Chronic nasopharyngitis (4722)	6			
	Acute sinusitis (461)	4			
	Allergic rhinitis due to other allergen (4778)	3			
	Cough (7862)	2			
	Chronic sinusitis (473)	2			
+ bái xiān pí (白鲜皮, 白鲜皮)	Allergic rhinitis (477)	80	+ 12	7,6,5	***
+ bài jiàng cǎo (败酱草, 败酱草)	Chronic rhinitis (4720)	42	+ 3	8,5,4	***
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	72	+ 18	5,6,4	**
+ chénxiāng (沉香, 沉香)	Allergic rhinitis (477)	40	+ 7	1,10,2	*
+ hǎi jīnshā (海金沙, 海金沙)	Allergic rhinitis (477)	43	+ 1	5,1,4	*
+ jiégěng (桔梗, 桔梗)	Chronic nasopharyngitis (4722)	43	+ 5	5,2,1	*****
+ jīnchán (金蝉, 金蟬)	Chronic rhinitis (4720)	36	+ 18	5,4,8	***
+ máhuáng (麻黄, 麻黄)	Allergic rhinitis, cause unspecified (4779)	48	+ 2	1,7,8	*****
+ mǎchǐxiàn (马齿苋, 馬齒莧)	Chronic rhinitis (4720)	46	+ 3	6,5,7	**
+ mù zéi cǎo (木贼草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	41	+ 2	8,7,4	***
+ quán xiē (全蝎, 全蠍)	Allergic rhinitis (477)	48	+ 15	5,4,2	*
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	61	+ 2	5,3,4	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ xuèjié (血竭, 血竭)	Allergic rhinitis (477)	46	+ 6	4,5,7	**
+ zào jiǎo cì (皂角刺, 皂角刺)	Unspecified sinusitis (chronic) (4739)	22	+ 5	5,4,6	*****
xìng rén (杏仁, 杏仁) <i>Semen Armeniacae Amarum</i>	Other chest pain (78659)	50	16	5,7,8	*****
	Chest pain (7865)	9			
	Cough (7862)	7			
	Allergic rhinitis, cause unspecified (4779)	7			
	Chronic rhinitis (4720)	2			
+ bàn xià (半夏, 半夏)	Calculus of gallbladder and bile duct without cholecystitis, without mention of obstruction (57490)	43	+ 5	2,3,10	*****
+ huáng jīn guì (黄金桂, 黄金桂)	Bronchitis, not specified as acute or chronic (490)	52	+ 2	11,1,10	*
+ sāng yè (桑叶, 桑葉)	Cough (7862)	43	+ 2	3,2,1	*****
+ xì xīn (细辛, 細辛)	Allergic rhinitis, cause unspecified (4779)	46	+ 19	1,11,2	*****
xiōng qióng (芎藭, 芎藭) <i>Radix Chuanxiong</i>	Absence of menstruation (6260)	5	4	1,3,11	**
	Peptic ulcer, site unspecified (533)	4			
	Unspecified functional disorder of stomach (5369)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Headache (7840)	3			
	Disorders of function of stomach (536)	2			
	Constipation (5640)	2			
	Peptic ulcer, site unspecified (533)	13			
xù duàn (续断, 續斷) <i>Radix Dipsaci</i>	Lumbago (7242)	11	13	11,10,2	*****
	Absence of menstruation (6260)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Pain in joint, multiple sites (71949)	3			
	Other chest pain (78659)	3			
	Chronic rhinitis (4720)	2			
	Myalgia and myositis, unspecified (7291)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Headache (7840)	2			
	Pain in joint, lower leg (71946)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	16			
+ biē jiǎ (鳖甲, 鱉甲)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	16	+ 9	9,11,10	***
+ huà shí cǎo (化石草, 化石草)	Calculus of kidney (5920)	46	+ 1	5,3,6	**
+ liú jì nǚ (刘寄奴, 劉寄奴)	Lumbago (7242)	49	+ 4	11,2,1	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	68	+ 6	1,2,11	***
+ shí hú (石斛, 石斛)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	67	+ 9	3,1,2	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	57	+ 2	12,10,2	**
+ xī liǎn cǎo (豨莶草, 豨莶草)	Other specified anomalies of muscle, tendon, fascia, and connective tissue (75689)	76	+ 10	11,2,9	**
xuánfùhuā (旋覆花, 旋覆花) <i>Flos Inulae</i>	Unspecified functional disorder of intestine (5649)	8	5	9,8,10	**
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	5			
	Gastrojejunal ulcer (534)	5			
	Flatulence, eructation, and gas pain (7873)	4			
	Cough (7862)	4			
	Peptic ulcer, site unspecified (533)	3			
	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53490)	3			
	Other chest pain (78659)	3			
	Unspecified functional disorder of stomach (5369)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	3			
	Unspecified chronic bronchitis (4919)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Other sleep disturbances (78059)	2			
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	38	+ 2	8,9,7	**
+ pàngdàhǎi (胖大海, 胖大海)	Pain in joint, other specified sites (71948)	10	+ 5	7,8,6	**
xuánshēn (玄参, 玄参) <i>Radix Scrophulariae</i>	Other sleep disturbances (78059)	3	21	1,2,3	*****
	Throat pain (7841)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	3			
	Constipation (5640)	2			
	Benign essential hypertension (4011)	2			
	Chronic nasopharyngitis (4722)	2			
	Chronic pharyngitis (4721)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
+ běi shāshēn (北沙参, 北沙参)	Cough (7862)	11	+ 9	3,2,1	****
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	36	+ 22	1,3,2	****
+ tiānméngdōng (天门冬, 天门冬)	Oral aphthae (5282)	18	+ 9	5,7,6	****
xuèjié (血竭, 血竭) <i>Resina Draconis</i>	Chest pain (7865)	12	6	4,8,5	**
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	9			
	Chronic hepatitis (5714)	5			
	Disorders of menstruation and other abnormal bleeding from female genital tract (626)	4			
	Allergic rhinitis (477)	4			
	Pain in joint (7194)	3			
	Migraine (346)	2			
	Chronic rhinitis (4720)	2			
	Headache (7840)	2			
	Disorders of function of stomach (536)	2			
+ chénxiāng (沉香, 沉香)	Chest pain (7865)	20	+ 7	5,4,1	*
+ chuān shān lóng (穿山龙, 穿山龙)	Chest pain (7865)	19	+ 10	3,2,5	*
+ dàn dòuchǐ (淡豆豉, 淡豆豉)	Gastrojejunal ulcer (534)	45	+ 2	5,7,4	**
+ dīngxiāng (丁香, 丁香)	Peptic ulcer, site unspecified (533)	15	+ 19	6,5,8	**
+ huángshuǐ qié (黄水茄, 黄水茄)	Chronic hepatitis (5714)	49	+ 1	4,5,3	**
+ mòyào (没药, 没药)	Chest pain (7865)	16	+ 4	1,5,2	**
+ wàn diǎn jīn (万点金, 万点金)	Chest pain (7865)	50	+ 16	5,2,3	**
+ xīn yì (辛夷, 辛夷)	Allergic rhinitis (477)	46	+ 2	4,5,7	**
+ zào jiǎo cì (皂角刺, 皂角刺)	Chronic hepatitis (5714)	14	+ 5	5,6,3	**
yā shé huáng (鸭舌黄, 鸭舌黄) <i>Phylla nodiflora (L.) Greene</i>	Allergic rhinitis, cause unspecified (4779)	8	3	8,7,10	*
	Flatulence, eructation, and gas pain (7873)	5			
	Chronic rhinitis (4720)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified pruritic disorder (6989)	3			
	Other sleep disturbances (78059)	3			
	Headache (7840)	3			
	Cough (7862)	2			
	Throat pain (7841)	2			
	Other chest pain (78659)	2			
	Glossitis (5290)	2			
yán hú suǒ (延胡索, 延胡索) <i>Rhizoma Corydalis</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	17	4	5,6,7	*****

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Dysmenorrhea (6253)	6			
	Other chest pain (78659)	6			
	Klippel-Feil syndrome (75616)	6			
	Polymyalgia rheumatica (725)	4			
	Peptic ulcer, site unspecified (533)	4			
	Abdominal pain (7890)	4			
	Lumbago (7242)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Insomnia with sleep apnea, unspecified (78051)	2			
	Contusion of chest wall (9221)	2			
+ bái jí (白芨, 白芨)	Peptic ulcer, site unspecified (533)	45	+ 6	3,5,1	****
+ dīng shù xiǔ (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	58	+ 1	4,5,6	**
+ jiàng zhēn xiāng (降真香, 降真香)	Other chest pain (78659)	58	+ 6	7,5,6	**
+ pú huáng (蒲黃, 蒲黃)	Dysmenorrhea (6253)	41	+ 6	1,10,11	****
+ ròu dòu kòu (肉豆蔻, 肉豆蔻)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	56	+ 8	7,8,11	**
+ shā rén (砂仁, 砂仁)	Peptic ulcer, site unspecified (533)	65	+ 20	8,3,6	*****
+ shén qū (神麴, 神麴)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	43	+ 17	3,6,8	****
+ suān zǎo rén (酸枣仁, 酸枣仁)	Other sleep disturbances (78059)	42	+ 18	3,10,8	*****
+ tán xiāng (檀香, 檀香)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	47	+ 7	8,5,3	**
yè jiāo téng (夜交藤, 夜交藤) <i>Caulis Polygoni Multiflori</i>	Other sleep disturbances (78059)	34	18	11,10,9	****
	Symptomatic menopausal or female climacteric states (6272)	3			
	Absence of menstruation (6260)	2			
	Chronic rhinitis (4720)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Benign essential hypertension (4011)	2			
	Unspecified pruritic disorder (6989)	2			
	Sleep disturbances (7805)	2			
	Headache (7840)	2			
+ chuān xīn lián (穿心莲, 穿心蓮)	Other sleep disturbances (78059)	43	+ 3	11,10,3	*
+ gān cǎo (甘草, 甘草)	Other sleep disturbances (78059)	52	+ 14	10,8,9	****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ jīguānhuā (鸡冠花, 雞冠花)	Other sleep disturbances (78059)	46	+ 6	9,11,3	*
+ shí chāngpú (石菖蒲, 石菖蒲)	Other sleep disturbances (78059)	51	+ 18	5,8,7	****
yī tiáo gēn (一条根, 一條根) <i>Flemingia prostrata</i> Roxb. f. ex Roxb.	Neuralgia, neuritis, and radiculitis, unspecified (7292)	11	2	10,11,9	***
	Arteritis, unspecified (4476)	8			
	Lumbago (7242)	6			
	Allergic rhinitis, cause unspecified (4779)	3			
	Pain in joint, other specified sites (71948)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Anemia, unspecified (2859)	2			
	Palpitations (7851)	2			
+ dà dīng huáng (大丁癩, 大丁癩)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	+ 12	8,7,9	**
+ jiǔ céng tǎ (九层塔, 九層塔)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	14	+ 7	9,8,10	**
yī zhī xiāng (一枝香, 一枝香) <i>Anotis ingrata</i> (wall.) hook. f.	Urinary frequency (78841)	24	16	4,3,2	**
	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	17			
	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney (5839)	7			
	Lumbago (7242)	6			
	Hyperplasia of prostate unspecified (6009)	4			
	Frequency of urination and polyuria (7884)	3			
+ dīng shù xiù (丁豎朽, 丁豎朽)	Unspecified hypertensive heart disease without heart failure (40290)	47	+ 1	8,5,4	**
+ fān mài xū (番麥須, 番麥鬚)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	73	+ 1	3,7,4	**
+ gǒu jǐ (狗脊, 狗脊)	Lumbago (7242)	46	+ 13	3,11,8	**
+ máo dōng qīng (毛冬青, 毛冬青)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	32	+ 3	3,4,7	*
+ sāng zhī (桑枝, 桑枝)	Lumbago (7242)	59	+ 10	11,1,3	**
+ shí hú (石斛, 石斛)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	52	+ 9	1,5,4	**
+ suǒ yáng (锁阳, 鎖陽)	Urinary frequency (78841)	25	+ 13	4,12,10	**
+ tiānhuā (天花, 天花)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	58	+ 5	6,3,7	**
+ xiān chá (仙楂, 仙楂)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	50	+ 17	10,8,11	*
+ yìzhì rén (益智仁, 益智仁)	Hyperplasia of prostate unspecified (6009)	66	+ 13	4,1,3	**
+ yù mǐ ruǐ (玉米蕊, 玉米蕊)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	43	+ 1	4,5,3	*

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
yí wú (宜梧, 宜梧) <i>Elaeagnus oldhamii</i> Maxim	Lumbago (7242)	6	2	3,4,5	*
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Cervicalgia (7231)	2			
	Myalgia and myositis, unspecified (7291)	2			
yìmǔcǎo (益母草, 益母草) <i>Herba Leonuri</i>	Absence of menstruation (6260)	15	4	3,8,9	****
	Chronic renal failure (585)	8			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	6			
	Dysmenorrhea (6253)	4			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	4			
	Leiomyoma of uterus, unspecified (2189)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Irregular menstrual cycle (6264)	3			
	Infertility, female, of unspecified origin (6289)	2			
	Unspecified pruritic disorder (6989)	2			
	Leukorrhea, not specified as infective (6235)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ dīng shù xiù (丁竖朽, 丁竖朽)	Chronic renal failure (585)	63	+ 1	8,4,3	**
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	58	+ 1	3,4,5	*
+ wángbùliúxíng (王不留行, 王不留行)	Excessive or frequent menstruation (6262)	78	+ 4	3,4,2	**
+ xià kūcǎo (夏枯草, 夏枯草)	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified (40490)	68	+ 11	3,4,5	****
+ zélán (泽兰, 泽兰)	Absence of menstruation (6260)	51	+ 4	3,4,10	****
yìyì rén (薏苡仁, 薏苡仁) <i>Semen Coicis</i>	Contact dermatitis and other eczema, unspecified cause (6929)	18	1	8,6,5	*****
	Leukorrhea, not specified as infective (6235)	8			
	Unspecified pruritic disorder (6989)	7			
	Urticaria (708)	6			
	Pruritus and related conditions (698)	5			
	Contact dermatitis and other eczema (692)	3			
	Actinic keratosis (7020)	3			
	Other specified disorders of liver (5738)	3			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
+ bái chūn gēn (白椿根, 白椿根)	Leukorrhea, not specified as infective (6235)	42	+ 12	5,6,4	*
+ báiguǒ (白果, 白果)	Leukorrhea, not specified as infective (6235)	54	+ 16	1,11,10	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ bǎnlángēn (板藍根, 板藍根)	Viral warts (0781)	54	+ 3	5,8,9	****
+ shānzhā (山楂, 山楂)	Pure hypercholesterolemia (2720)	47	+ 17	8,5,12	*****
+ shé chuáng zǐ (蛇床子, 蛇床子)	Leukorrhea, not specified as infective (6235)	46	+ 13	12,1,8	***
+ xiè bái (薤白, 薤白)	Chest pain (7865)	31	+ 7	1,11,10	***
yìzhì rén (益智仁, 益智仁) <i>Fructus Alpiniae Oxyphyllae</i>	Hyperplasia of prostate (600)	53	13	4,3,1	***
	Unspecified functional disorder of intestine (5649)	3			
	Polyuria (78842)	3			
	Hyperplasia of prostate unspecified (6009)	3			
	Postgastric surgery syndromes (5642)	2			
	Frequency of urination and polyuria (7884)	2			
	Other sleep disturbances (78059)	2			
	Urinary frequency (78841)	2			
+ bǎihé (百合, 百合)	Unspecified functional disorder of intestine (5649)	49	+ 9	7,3,5	***
+ biējia (鳖甲, 鳖甲)	Hyperplasia of prostate (600)	62	+ 9	3,1,2	***
+ bǔ gǔ zhī (补骨脂, 補骨脂)	Hyperplasia of prostate (600)	57	+ 13	4,1,5	***
+ fó shǒu gān (佛手柑, 佛手柑)	Dyspepsia and other specified disorders of function of stomach (5368)	55	+ 7	4,5,3	***
+ gǔ jīng cǎo (谷精草, 穀精草)	Postgastric surgery syndromes (5642)	54	+ 11	4,7,3	**
+ mài yá (麦芽, 麥芽)	Postgastric surgery syndromes (5642)	56	+ 17	4,6,3	***
+ màntuóluó huā (曼陀罗花, 曼陀羅花)	Hyperplasia of prostate (600)	56	+ 16	4,1,3	*
+ shén qū (神麴, 神麴)	Postgastric surgery syndromes (5642)	52	+ 17	3,11,4	***
+ wǔ jiā pí (五加皮, 五加皮)	Hyperplasia of prostate (600)	59	+ 10	4,3,2	***
+ wǔwèizǐ (五味子, 五味子)	Hyperplasia of prostate (600)	94	+ 8	4,2,3	***
+ yī zhī xiāng (一枝香, 一枝香)	Hyperplasia of prostate unspecified (6009)	66	+ 16	4,1,3	**
yīn chén (茵陈, 茵陳) <i>Herba Artemisiae Scopariae</i>	Allergic rhinitis, cause unspecified (4779)	7	1	11,1,4	****
	Unspecified fetal and neonatal jaundice (7746)	5			
	Peptic ulcer, site unspecified (533)	5			
	Chronic rhinitis (4720)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Headache (7840)	3			
	Unspecified pruritic disorder (6989)	2			
	Malignant neoplasm of liver, not specified as primary or secondary (1552)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Constipation (5640)	2			
	Other sleep disturbances (78059)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Cough (7862)	2			
	Unspecified gingival and periodontal disease (5239)	2			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
+ báimáo gēn (白茅根, 白茅根)	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	73	+ 6	10,5,4	****
+ běi yīn chén (北茵陈, 北茵陳)	Unspecified viral hepatitis without mention of hepatic coma (0709)	11	+ 1	1,4,2	*
+ huángqí (黄耆, 黃耆)	Other injury to liver without mention of open wound into cavity (86409)	55	+ 14	2,1,5	****
+ tōng cǎo (通草, 通草)	Other chronic hepatitis (57149)	8	+ 1	6,5,11	***
+ zhūlǐng (猪苓, 豬苓)	Malignant neoplasm of tongue, unspecified (1419)	8	+ 1	5,11,4	***
+ zǐ cǎogēn (紫草根, 紫草根)	Unspecified fetal and neonatal jaundice (7746)	87	+ 21	5,9,10	**
yín yáng huò (淫羊藿, 淫羊藿) <i>Herba Epimedii</i>	Impotence of organic origin (60784)	6	13	12,9,10	****
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Infertility, female, of unspecified origin (6289)	3			
	Unspecified disorder of male genital organs (6089)	3			
	Other osteoporosis (73309)	2			
	Absence of menstruation (6260)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Chronic rhinitis (4720)	2			
	Pain in joint, other specified sites (71948)	2			
+ dìng jīng cǎo (定经草, 定經草)	Infertility, female, of unspecified origin (6289)	40	+ 1	10,12,9	*
+ gǔ suì bǔ (骨碎补, 骨碎補)	Klippel-Feil syndrome (75616)	16	+ 4	7,6,5	****
+ hú táo (胡桃, 胡桃)	Impotence of organic origin (60784)	8	+ 13	6,12,8	*
+ sānqī (三七, 三七)	Diabetes mellitus (250)	50	+ 6	5,10,9	****
yúxīngcǎo (鱼腥草, 魚腥草) <i>Herba Houttuyniae</i>	Cough (7862)	16	3	1,5,3	****
	Chronic rhinitis (4720)	14			
	Acute sinusitis, unspecified (4619)	10			
	Chronic nasopharyngitis (4722)	5			
	Chronic bronchitis (491)	3			
	Acute sinusitis (461)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Chronic sinusitis (473)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Pneumonia due to respiratory syncytial virus (4801)	2			
	Influenza with pneumonia (4870)	2			
	Allergic rhinitis (477)	2			
+ báijiāngcán (白僵蚕, 白殭蠶)	Pneumonia due to respiratory syncytial virus (4801)	77	+ 15	8,7,2	***
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	61	+ 18	4,5,3	**
+ hóngguā (红花, 紅花)	Rectal prolapse (5691)	59	+ 4	2,4,5	****
+ huái huā (槐花, 槐花)	Anal fissure (5650)	49	+ 6	11,10,12	****
+ huángshuǐ qié (黄水茄, 黄水茄)	Secondary malignant neoplasm of lung (1970)	45	+ 1	5,4,8	**
+ jīnchán (金蝉, 金蟬)	Pneumonia due to respiratory syncytial virus (4801)	50	+ 18	5,4,8	****
+ shí hú (石斛, 石斛)	Unspecified functional disorder of intestine (5649)	41	+ 9	3,4,5	****
yù jīn (郁金, 鬱金) <i>Radix Curcumae</i>	Other chest pain (78659)	14	4	5,6,2	****
	Cough (7862)	7			
	Other sleep disturbances (78059)	4			
	Chronic rhinitis (4720)	4			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4			
	Unspecified essential hypertension (4019)	4			
	Unspecified functional disorder of intestine (5649)	4			
	Pain in joint, other specified sites (71948)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Unspecified nonpsychotic mental disorder (3009)	2			
	Bronchitis, not specified as acute or chronic (490)	2			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Contusion of chest wall (9221)	2			
+ báizhú (白朮, 白朮)	Other chest pain (78659)	50	+ 14	5,3,4	****
+ chuān qī (川七, 川七)	Other chest pain (78659)	59	+ 6	5,9,4	****
+ guā lóu rén (栝蒌仁, 栝蒌仁)	Other chest pain (78659)	49	+ 5	5,7,8	****
+ tánxiāng (檀香, 檀香)	Other chest pain (78659)	66	+ 7	5,6,2	**
yù lǐ rén (郁李仁, 郁李仁) <i>Semen Pruni</i>	Unspecified pruritic disorder (6989)	5	22	1,12,2	**
	Other chest pain (78659)	4			
	Unspecified disorder of globe (3609)	4			
	Pain in joint, hand (71944)	4			
	Unspecified functional disorder of intestine (5649)	4			
	Cough (7862)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Headache (7840)	2			
	Pain in joint, other specified sites (71948)	2			
	Dyspepsia and other specified disorders of function of stomach (5368)	2			
	Flatulence, eructation, and gas pain (7873)	2			
	Influenza with pneumonia (4870)	2			
yùmǐ rui (玉米蕊, 玉米蕊) <i>Corn kernel</i>	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	7	1	3,5,1	*
	Benign essential hypertension (4011)	5			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	4			
	Unspecified functional disorder of intestine (5649)	3			
	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	2			
	Other sleep disturbances (78059)	2			
	Pure hypercholesterolemia (2720)	2			
	Chronic pyelonephritis without lesion of renal medullary necrosis (59000)	2			
+ bì xiè (萆薢, 萆薢)	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled (25010)	63	+ 1	8,10,9	*
+ jiàng zhēn xiāng (降真香, 降真香)	Other nonspecific abnormal results of function study of cardiovascular system (79439)	45	+ 6	6,5,4	*
+ sānqī (三七, 三七)	Diabetes mellitus (250)	42	+ 6	5,4,9	*
+ sāng yè (桑叶, 桑叶)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	57	+ 2	4,6,5	*
+ shuǐ dīngxiāng (水丁香, 水丁香)	Chronic renal failure (585)	65	+ 1	5,3,10	*
+ xiānmáo (仙茅, 仙茅)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	7	+ 13	11,12,1	*
+ yī zhī xiāng (一枝香, 一枝香)	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	43	+ 16	4,5,3	*
yùmǐ xū (玉米须, 玉米须) <i>Stigma Maydis</i>	Unspecified functional disorder of intestine (5649)	5	1	8,5,7	*
	Cough (7862)	5			
	Other sleep disturbances (78059)	4			
	Headache (7840)	4			
	Unspecified disorder of globe (3609)	3			
	Allergic rhinitis, cause unspecified (4779)	3			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified pruritic disorder (6989)	2			
	Constipation (5640)	2			
	Chronic rhinitis (4720)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Urinary frequency (78841)	2			
	Influenza with pneumonia (4870)	2			
	Throat pain (7841)	2			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
	Unspecified functional disorder of intestine (5649)	6			
+ chì fúlíng (赤茯苓, 赤茯苓)	Edema (7823)	6	+ 1	5,8,7	*
+ chixiǎodòu (赤小豆, 赤小豆)	Unspecified disorder of globe (3609)	47	+ 21	7,10,5	*
+ mì mēng huā (密蒙花, 密蒙花)	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled (25051)	50	+ 2	4,6,5	*
+ sāng yè (桑叶, 桑葉)	Chronic renal failure (585)	62	+ 1	5,3,1	*
+ xiānhè cǎo (仙鹤草, 仙鶴草)	Hematuria (5997)	23	+ 6	7,8,5	*
yùzhú (玉竹, 玉竹) <i>Rhizoma Polygonati Odorati</i>	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	10	9	11,10,1	*****
	Other sleep disturbances (78059)	8			
	Allergic rhinitis, cause unspecified (4779)	7			
	Dyspepsia and other specified disorders of function of stomach (5368)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Cough (7862)	3			
	Other chest pain (78659)	3			
	Other acne (7061)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Stomatitis and mucositis (ulcerative) (5280)	2			
	Constipation (5640)	2			
	Headache (7840)	2			
	Unspecified alcohol-induced mental disorders (2919)	58	+ 18	1,2,3	*****
+ fú shén (茯神, 茯神)	Unspecified functional disorder of intestine (5649)	14	+ 9	3,4,1	****
+ shí hú (石斛, 石斛)	Benign essential hypertension (4011)	15	18	12,11,5	****
yuǎnzhì (远志, 遠志) <i>Radix Polygalae</i>	Unspecified essential hypertension (4019)	13			
	Other sleep disturbances (78059)	8			
	Absence of menstruation (6260)	6			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Tinnitus, unspecified (38830)	4			
	Palpitations (7851)	4			
	Hemangioma of other sites (22809)	2			
	Intracerebral hemorrhage (431)	2			
+ bǎihé (百合, 百合)	Other sleep disturbances (78059)	45	+ 9	9,11,5	****
+ fáng jǐ (防己, 防己)	Benign essential hypertension (4011)	42	+ 10	8,5,9	***
+ héshǒuwū (何首乌, 何首乌)	Unspecified essential hypertension (4019)	50	+ 9	11,5,12	****
+ liánzǐ xīn (莲子心, 蓮子心)	Other sleep disturbances (78059)	31	+ 18	8,5,9	**
+ mì mēng huā (密蒙花, 密蒙花)	Unspecified disorder of globe (3609)	46	+ 21	5,12,10	**
+ xià kūcǎo (夏枯草, 夏枯草)	Benign essential hypertension (4011)	44	+ 11	5,12,11	****
zào jiǎo cì (皂角刺, 皂角刺) <i>Spina Gleditsiae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	9	5	6,3,8	****
	Unspecified pruritic disorder (6989)	6			
	Chronic rhinitis (4720)	5			
	Unspecified sinusitis (chronic) (4739)	4			
	Allergic rhinitis, cause unspecified (4779)	4			
	Chronic hepatitis (5714)	4			
	Contact dermatitis and other eczema (692)	3			
	Cough (7862)	3			
	Unspecified nasal polyp (4719)	2			
	Allergic rhinitis (477)	2			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	2			
	Other acne (7061)	2			
	Pruritus and related conditions (698)	2			
+ bái xiān pí (白鲜皮, 白鮮皮)	Chronic hepatitis (5714)	66	+ 12	6,3,7	***
+ bài jiàng cǎo (败酱草, 敗醬草)	Chronic rhinitis (4720)	46	+ 3	8,9,10	***
+ chāngpú (菖蒲, 菖蒲)	Chronic rhinitis (4720)	60	+ 18	5,6,4	**
+ jiǔ céng tǎ (九层塔, 九層塔)	Chronic rhinitis (4720)	11	+ 7	3,12,8	**
+ wángbùliúxíng (王不留行, 王不留行)	Unspecified disorder of lactation, unspecified as to episode of care or not applicable (67690)	23	+ 4	6,11,12	**
+ xī liǎn cǎo (豨薟草, 豨薟草)	Neuralgia, neuritis, and radiculitis, unspecified (7292)	86	+ 10	11,1,3	**
+ xīn yí (辛夷, 辛夷)	Unspecified sinusitis (chronic) (4739)	22	+ 2	5,4,6	****
+ xuèjié (血竭, 血竭)	Chronic hepatitis (5714)	14	+ 6	5,6,3	**

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
zélán (泽兰, 澤蘭) <i>Herba Lycopi</i>	Unspecified functional disorder of intestine (5649)	14	4	4,10,8	****
	Absence of menstruation (6260)	8			
	Allergic rhinitis, cause unspecified (4779)	3			
	Headache (7840)	3			
	Dysmenorrhea (6253)	3			
	Anorexia (7830)	2			
	Endometriosis, site unspecified (6179)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Polycystic ovaries (2564)	2			
	Cough (7862)	2			
	Chronic rhinitis (4720)	2			
	Lumbago (7242)	2			
+ běi bǎnlángēn (北板蓝根, 北板藍根)	Unspecified functional disorder of intestine (5649)	41	+ 3	4,12,10	*
+ fó shǒu gān (佛手柑, 佛手柑)	Unspecified functional disorder of intestine (5649)	46	+ 7	9,8,10	****
+ hēi pú huáng (黑蒲黄, 黑蒲黃)	Absence of menstruation (6260)	41	+ 6	12,5,8	**
+ qiáomài (荞麦, 蕎麥)	Unspecified functional disorder of intestine (5649)	30	+ 17	1,12,4	*
+ yìmǔcǎo (益母草, 益母草)	Absence of menstruation (6260)	51	+ 4	3,4,10	****
zé qī (泽漆, 澤漆) <i>Euphorbia helioscopia L.</i>	Cough (7862)	5	1	5,7,6	*
	Flatulence, eructation, and gas pain (7873)	4			
	Chronic rhinitis (4720)	4			
	Other chest pain (78659)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Unspecified functional disorder of intestine (5649)	3			
	Pain in joint, other specified sites (71948)	3			
	Benign essential hypertension (4011)	3			
	Pure hypercholesterolemia (2720)	2			
	Headache (7840)	2			
+ fáng jì (防己, 防己)	Edema (7823)	40	+ 10	5,7,8	*
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	45	+ 1	4,5,3	*
zé xiè (泽泻, 澤瀉) <i>Rhizoma Alismatis</i>	Edema (7823)	5	1	1,5,7	*****
	Other sleep disturbances (78059)	5			
	Benign essential hypertension (4011)	5			
	Unspecified functional disorder of intestine (5649)	5			
	Dizziness and giddiness (7804)	4			
	Chronic rhinitis (4720)	3			
	Alcoholic fatty liver (5710)	2			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified disorder of globe (3609)	2			
	Unspecified vertiginous syndromes and labyrinthine disorders (3869)	2			
	Headache (7840)	2			
	Other chest pain (78659)	2			
	Meniere's disease, unspecified (38600)	2			
	Cough (7862)	2			
	Pure hypercholesterolemia (2720)	2			
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	53	+ 2	7,5,6	*****
+ hǔ zhàng (虎杖, 虎杖)	Pure hypercholesterolemia (2720)	70	+ 1	5,2,4	****
+ tiānmá (天麻, 天麻)	Meniere's disease, unspecified (38600)	42	+ 15	5,7,6	****
+ xī liǎn cǎo (豨莶草, 豨莶草)	Benign essential hypertension (4011)	55	+ 10	1,5,3	**
zhīmǔ (知母, 知母) <i>Rhizoma Anemarrhenae</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	4	11	10,7,8	*****
	Headache (7840)	4			
	Flatulence, eructation, and gas pain (7873)	4			
	Influenza with pneumonia (4870)	3			
	Unspecified pruritic disorder (6989)	3			
	Cough (7862)	3			
	Chronic rhinitis (4720)	3			
	Throat pain (7841)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Constipation (5640)	2			
	Pain in joint, other specified sites (71948)	2			
	Absence of menstruation (6260)	2			
	Pain in joint, shoulder region (71941)	2			
+ shígāo (石膏, 石膏)	Unspecified disease of the salivary glands (5279)	44	+ 11	5,6,7	*****
+ wū tián (乌甜, 烏甜)	Unspecified disease of pancreas (5779)	44	+ 3	10,11,12	*
zhīzǐ (梔子, 梔子) <i>Fructus Gardeniae</i>	Unspecified nonpsychotic mental disorder (3009)	29	11	5,7,9	*****
	Other sleep disturbances (78059)	18			
	Contact dermatitis and other eczema, unspecified cause (6929)	4			
	Acute gastritis, without mention of hemorrhage (53500)	4			
	Other chest pain (78659)	2			
	Unspecified pruritic disorder (6989)	2			
+ dìhuáng (地黄, 地黄)	Unspecified nonpsychotic mental disorder (3009)	41	+ 21	6,5,7	*****

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ gégēn (葛根, 葛根)	Benign essential hypertension (4011)	49	+ 2	7,5,9	*****
+ shí chún (石菖, 石菖)	Unspecified nonpsychotic mental disorder (3009)	41	+ 12	5,7,6	*
zhǐ jù zǐ (枳椇子, 枳椇子) <i>Semen Hoveniae</i>	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (25000)	7	3	10,8,5	*
	Other chest pain (78659)	7			
	Pain in joint, other specified sites (71948)	5			
	Unspecified pruritic disorder (6989)	4			
	Cough (7862)	4			
	Chronic pharyngitis (4721)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified viral hepatitis without mention of hepatic coma (0709)	2			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	2			
+ báitóuwēng (白头翁, 白头翁)	Pain in joint, other specified sites (71948)	21	+ 3	8,7,10	*
+ dēngxīncǎo (灯心草, 灯心草)	Edema (7823)	7	+ 1	10,7,5	*
+ hóng huā (红花, 红花)	Rectal prolapse (5691)	43	+ 4	5,7,4	*
+ kǔshēn gēn (苦参根, 苦参根)	Unspecified pruritic disorder (6989)	16	+ 12	5,7,10	*
+ pú huáng (蒲黄, 蒲黄)	Endometriosis, site unspecified (6179)	54	+ 6	12,8,11	*
+ tánxiāng (檀香, 檀香)	Other chest pain (78659)	41	+ 7	1,2,10	*
+ xiānfēng cǎo (咸丰草, 咸丰草)	Unspecified functional disorder of intestine (5649)	9	+ 3	10,8,5	*
zhǐqiào (枳壳, 枳壳) <i>Fructus Aurantii</i>	Flatulence, eructation, and gas pain (7873)	10	7	5,9,8	*****
	Headache (7840)	5			
	Allergic rhinitis, cause unspecified (4779)	5			
	Other chest pain (78659)	5			
	Cough (7862)	5			
	Contusion of chest wall (9221)	4			
	Chest pain (7865)	3			
	Unspecified functional disorder of intestine (5649)	2			
+ bái jī (白芨, 白芨)	Flatulence, eructation, and gas pain (7873)	71	+ 6	10,5,7	****
+ chuān qī (川七, 川七)	Other chest pain (78659)	41	+ 6	8,7,9	****
+ jīnèijīn (鸡内金, 雞內金)	Flatulence, eructation, and gas pain (7873)	65	+ 17	5,3,4	****
+ rénshēn (人參, 人參)	Allergic rhinitis, cause unspecified (4779)	42	+ 14	3,7,4	****
+ shí húsuī (石胡荽, 石胡荽)	Allergic rhinitis, cause unspecified (4779)	54	+ 2	5,3,2	**
zhǐshí (枳实, 枳實) <i>Fructus Aurantii Immaturus</i>	Constipation (5640)	9	7	6,7,8	*****
	Flatulence, eructation, and gas pain (7873)	8			
	Cough (7862)	7			
	Unspecified functional disorder of stomach (5369)	7			

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Unspecified pruritic disorder (6989)	4			
	Pain in joint, hand (71944)	3			
	Neuralgia, neuritis, and radiculitis, unspecified (7292)	3			
	Headache (7840)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	3			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Other sleep disturbances (78059)	3			
	Chronic renal failure (585)	2			
	Unspecified disease of pancreas (5779)	2			
	Unspecified functional disorder of intestine (5649)	2			
+ hónghuā (红花, 紅花)	Rectal prolapse (5691)	67	+ 4	5,7,6	*****
+ hòupò (厚朴, 厚朴)	Constipation (5640)	32	+ 20	5,6,8	*****
+ huǒ má rén (火麻仁, 火麻仁)	Constipation (5640)	62	+ 22	1,12,5	***
zhì gāncǎo (炙甘草, 炙甘草) <i>Radix et Rhizoma Glycyrrhizae Praeparata cum Melle</i>	Enuresis (3076)	9	14	8,3,4	*****
	Urinary frequency (78841)	8			
	Allergic rhinitis, cause unspecified (4779)	7			
	Cough (7862)	6			
	Secondary malignant neoplasm of lung (1970)	3			
	Nephrotic syndrome with unspecified pathological lesion in kidney (5819)	2			
	Unspecified functional disorder of stomach (5369)	2			
	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53190)	2			
	Chronic rhinitis (4720)	2			
zhū dǎn (猪胆, 豬膽) <i>Fellis Suis</i>	Chronic rhinitis (4720)	14	3	8,11,7	*
	Chronic sinusitis (473)	10			
	Cough (7862)	4			
	Allergic rhinitis, cause unspecified (4779)	3			
	Constipation (5640)	3			
	Acute sinusitis, unspecified (4619)	3			
	Allergic rhinitis (477)	2			
	Unspecified sinusitis (chronic) (4739)	2			
	Unspecified functional disorder of intestine (5649)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
+ bài jiàng cǎo (败酱草, 败酱草)	Chronic rhinitis (4720)	49	+ 3	8,9,10	*
+ dōngguā zǐ (冬瓜子, 冬瓜子)	Chronic rhinitis (4720)	40	+ 1	3,5,8	*
+ huángshuǐ qié (黄水茄, 黄水茄)	Chronic rhinitis (4720)	17	+ 1	4,3,8	*
+ jīnchán (金蝉, 金蟬)	Chronic rhinitis (4720)	58	+ 18	11,8,5	*
+ wū tián (乌甜, 烏甜)	Chronic rhinitis (4720)	24	+ 3	10,11,8	*
zhū líng (猪苓, 豬苓) <i>Polyporus</i>	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled (25090)	2	1	5,4,7	***
	Other sleep disturbances (78059)	2			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Oliguria and anuria (7885)	2			
	Urinary frequency (78841)	2			
+ biān xù (篇蓄, 篇蓄)	Cystitis, unspecified (5959)	4	+ 1	5,7,4	**
+ cāngzhú (苍术, 蒼朮)	Unspecified functional disorder of stomach (5369)	6	+ 20	7,8,5	***
+ mài yá (麦芽, 麥芽)	Ostium secundum type atrial septal defect (7455)	36	+ 17	5,8,1	***
+ yīn chén (茵陈, 茵陳)	Malignant neoplasm of tongue, unspecified (1419)	8	+ 1	5,11,4	***
zhú rú (竹茹, 竹茹) <i>Caulis Bambusae in Taenia</i>	Acute gastritis, without mention of hemorrhage (53500)	18	5	11,8,10	****
	Gastritis and duodenitis (535)	18			
	Other sleep disturbances (78059)	4			
	Dyspepsia and other specified disorders of function of stomach (5368)	3			
	Flatulence, eructation, and gas pain (7873)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Allergic rhinitis, cause unspecified (4779)	2			
	Unspecified hypertension complicating pregnancy, childbirth, or the puerperium, unspecified as to episode of care or not applicable (64290)	2			
+ huái huā (槐花, 槐花)	Hemorrhoids (455)	44	+ 6	9,11,5	***
+ púgōngyīng (蒲公英, 蒲公英)	Acute gastritis, without mention of hemorrhage (53500)	41	+ 3	5,6,1	****
zǐ cǎo (紫草, 紫草) <i>Radix Arnebiae</i>	Contact dermatitis and other eczema, unspecified cause (6929)	18	21	5,1,8	***
	Unspecified pruritic disorder (6989)	6			
	Unspecified functional disorder of intestine (5649)	4			
	Urticaria, unspecified (7089)	4			
	Dermatophytosis of unspecified site (1109)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Acne varioliformis (7060)	2			
	Actinic keratosis (7020)	2			
+ huái huā (槐花, 槐花)	Contact dermatitis and other eczema, unspecified cause (6929)	31	+ 6	7,8,10	***

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ zīsū gěng (紫苏梗, 紫蘇梗)	Unspecified functional disorder of intestine (5649)	46	+ 7	1,5,10	**
zǐ cǎo gēn (紫草根, 紫草根) <i>Radix Arnebiae</i>	Unspecified pruritic disorder (6989)	18	21	10,11,1	**
	Unspecified chronic liver disease without mention of alcohol (5719)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Actinic keratosis (7020)	4			
	Urticaria, unspecified (7089)	4			
	Dermatophytosis of unspecified site (1109)	2			
	Headache (7840)	2			
	Pruritus and related conditions (698)	2			
	Contact dermatitis and other eczema (692)	2			
+ héshǒuwū (何首乌, 何首烏)	Unspecified pruritic disorder (6989)	40	+ 9	5,6,8	**
+ yīn chén (茵陈, 茵陳)	Unspecified fetal and neonatal jaundice (7746)	87	+ 1	5,9,10	**
zǐ hé chē (紫河车, 紫河車) <i>Placenta Hominis</i>	Infertility, female, of unspecified origin (6289)	12	14	10,12,11	**
	Endometriosis, site unspecified (6179)	10			
	Other ovarian failure (2563)	8			
	Dyspepsia and other specified disorders of function of stomach (5368)	7			
	Absence of menstruation (6260)	6			
	Unspecified disorders of menstruation and other abnormal bleeding from female genital tract (6269)	6			
	Allergic rhinitis, cause unspecified (4779)	4			
	Dysmenorrhea (6253)	2			
	Unspecified breast disorder (6119)	2			
zǐ huā dì dīng (紫花地丁, 紫花地丁) <i>Herba Violae</i>	Neuralgia, neuritis, and radiculitis, unspecified (7292)	13	3	10,9,8	***
	Other chest pain (78659)	5			
	Chronic rhinitis (4720)	4			
	Unspecified pruritic disorder (6989)	4			
	Other voice and resonance disorders (78449)	4			
	Unspecified disease of pancreas (5779)	3			
	Allergic rhinitis, cause unspecified (4779)	3			
	Headache (7840)	3			
	Unspecified nasal polyp (4719)	3			
	Flatulence, eructation, and gas pain (7873)	2			
	Stridor (7861)	2			
	Absence of menstruation (6260)	2			
	Cough (7862)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
	Rectal prolapse (5691)	2			
+ bái dòukòu (白豆蔻, 白豆蔻)	Unspecified disease of hair and hair follicles (7049)	55	+ 20	6,8,5	***
+ bài jiàng cǎo (败酱草, 败酱草)	Unspecified pruritic disorder (6989)	20	+ 3	5,8,4	***
+ bì xiè (萆薢, 萆薢)	Rectal prolapse (5691)	70	+ 1	10,8,7	***
+ hóng huā (红花, 红花)	Rectal prolapse (5691)	48	+ 4	5,4,3	***
zǐ sū (紫苏, 紫蘇) <i>Perilla frutescens</i>	Contact dermatitis and other eczema, unspecified cause (6929)	11	2	7,5,1	***
	Urticaria, unspecified (7089)	9			
	Unspecified functional disorder of intestine (5649)	7			
	Allergic rhinitis, cause unspecified (4779)	4			
	Unspecified pruritic disorder (6989)	4			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	3			
	Contact dermatitis and other eczema (692)	2			
	Chronic rhinitis (4720)	2			
	Pruritus and related conditions (698)	2			
+ chán tuì (蝉蜕, 蟬蛻)	Urticaria, unspecified (7089)	55	+ 2	7,9,8	***
+ fó shǒu gān (佛手柑, 佛手柑)	Unspecified functional disorder of intestine (5649)	46	+ 7	8,1,9	***
+ gān cǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	53	+ 14	8,7,5	***
+ lù lù tōng (路路通, 路路通)	Allergic rhinitis, cause unspecified (4779)	44	+ 10	4,5,3	***
+ qiáo mài (荞麦, 蕎麥)	Unspecified functional disorder of intestine (5649)	43	+ 17	7,5,1	*
+ zǐ sū gěng (紫苏梗, 紫蘇梗)	Unspecified functional disorder of intestine (5649)	23	+ 7	5,7,8	**
zǐ sū gěng (紫苏梗, 紫蘇梗) <i>Caulis Perillae</i>	Urticaria (708)	10	7	5,4,1	**
	Urticaria, unspecified (7089)	10			
	Unspecified functional disorder of intestine (5649)	6			
	Cough (7862)	6			
	Headache (7840)	4			
	Unspecified pruritic disorder (6989)	3			
	Contact dermatitis and other eczema, unspecified cause (6929)	2			
	Prurigo (6982)	2			
	Pruritus and related conditions (698)	2			
	Influenza with pneumonia (4870)	2			
+ bái wēi (白薇, 白薇)	Urticaria, unspecified (7089)	13	+ 23	5,6,7	**
+ gān cǎo (甘草, 甘草)	Urticaria (708)	93	+ 14	4,5,3	**
+ jīn qián cǎo (金钱草, 金錢草)	Unspecified functional disorder of intestine (5649)	29	+ 1	1,2,5	**
+ kǔ shēn (苦参, 苦參)	Urticaria, unspecified (7089)	46	+ 12	5,7,4	**
+ qín jiāo (秦艽, 秦艽)	Headache (7840)	13	+ 10	5,2,1	**

Table 3.2. (Continued)

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ quán xiē (全蝎, 全蠍)	Urticaria (708)	54	+ 15	5,4,3	*
+ shí hú (石斛, 石斛)	Unspecified functional disorder of intestine (5649)	41	+ 9	5,1,4	**
+ shuāng gōu téng (双钩藤, 雙鉤藤)	Urticaria, unspecified (7089)	16	+ 15	5,4,2	**
+ xiāng rú (香薷, 香薷)	Unspecified functional disorder of intestine (5649)	15	+ 2	5,6,7	**
+ zǐ cǎo (紫草, 紫草)	Unspecified functional disorder of intestine (5649)	46	+ 21	1,5,10	**
+ zǐ sū (紫苏, 紫蘇)	Unspecified functional disorder of intestine (5649)	23	+ 2	5,7,8	**
+ zǐ sū yè (紫苏叶, 紫蘇葉)	Urticaria, unspecified (7089)	32	+ 2	10,1,2	**
zǐ sū yè (紫苏叶, 紫蘇葉) <i>Folium Perillae</i>	Unspecified pruritic disorder (6989)	24	2	5,10,11	****
	Urticaria, unspecified (7089)	12			
	Peptic ulcer of unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, without mention of obstruction (53390)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Edema (7823)	3			
	Unspecified functional disorder of intestine (5649)	2			
	Urticaria (708)	2			
	Chronic rhinitis (4720)	2			
+ jīn chán (金蝉, 金蟬)	Urticaria, unspecified (7089)	46	+ 18	1,2,5	***
+ lián qiáo (连翘, 連翹)	Unspecified pruritic disorder (6989)	47	+ 3	9,8,4	****
+ zǐ sū gēng (紫苏梗, 紫蘇梗)	Urticaria, unspecified (7089)	32	+ 7	10,1,2	**
zǐ sū zǐ (紫苏子, 紫蘇子) <i>Fructus Perillae</i>	Cough (7862)	7	16	5,1,2	*
	Unspecified pruritic disorder (6989)	7			
	Unspecified functional disorder of intestine (5649)	5			
	Contact dermatitis and other eczema, unspecified cause (6929)	5			
	Urticaria, unspecified (7089)	5			
	Allergic rhinitis, cause unspecified (4779)	4			
	Chronic rhinitis (4720)	4			
	Influenza with pneumonia (4870)	4			
	Prurigo (6982)	3			
	Headache (7840)	2			
	Flatulence, eructation, and gas pain (7873)	2			

Herb and pairs	Therapeutic use (ICD-9)	Score	Class	Month	Usage
+ báizhī (白芷, 白芷)	Allergic rhinitis, cause unspecified (4779)	47	+ 2	11,1,10	*
+ gāncǎo (甘草, 甘草)	Contact dermatitis and other eczema, unspecified cause (6929)	44	+ 14	8,4,7	*
+ jīnchán (金蟬, 金蟬)	Urticaria, unspecified (7089)	43	+ 18	1,5,4	*
+ mù zéi cǎo (木賊草, 木賊草)	Allergic rhinitis, cause unspecified (4779)	61	+ 2	4,12,1	*
zǐ wǎn (紫菀, 紫菀) <i>Radix et Rhizoma Asteris</i>	Bronchitis, not specified as acute or chronic (490)	21	16	1,10,11	***
	Cough (7862)	10			
	Allergic rhinitis, cause unspecified (4779)	6			
	Constipation (5640)	4			
	Chronic rhinitis (4720)	4			
	Chronic pharyngitis (4721)	2			
	Unspecified functional disorder of intestine (5649)	2			

PART 2: CANINE DISORDERS

Chapter 4

HEAD AND NECK

Eyes, ears, nose and tongue are in the head for perceptions of sight, sound, smell and taste. The brain also sits inside the skull for cognition. Impairments in regions of the head and neck therefore inflict various diseases on dogs. The number of canine diseases with a prevalence greater than 2.5% is 94 (O'Neill et al., 2014a; VetCompass, 2019), 30 of which affect the head and neck. From the numbers, we realize that the region is among the areas of the body pet owners should pay their attention to. The diseases, listed in the order of their prevalence in the table of this chapter, belong to eight organ systems: 1) gastrointestinal system diseases which include periodontal disease, retained deciduous tooth, dental disease, epulis, foreign body – oral, halitosis, mass lesion – oral cavity; 2) ocular diseases including conjunctivitis, cataract, keratoconjunctivitis sicca, tear duct abnormality, blindness, distichiasis, uveitis; 3) respiratory system diseases including infectious canine tracheobronchitis, respiratory tract infection, upper, brachycephalic airway obstruction syndrome, sneezing, reverse sneezing; 4) integumentary diseases including mass lesion – eyelid, entropion; 5) auditory diseases including otitis externa, aural hematoma, vestibular disease, ear disorder; 6) nervous system diseases including seizure disorder, epilepsy, cognitive dysfunction; 7) endocrine diseases including hypothyroidism; and 8) cardiovascular system diseases including cerebrovascular accident. We will elucidate CHEG herbal strategy for the auditory diseases in this chapter. Herbal strategies for other systems of diseases will be discussed in later chapters on an organ system per chapter basis. For example, the strategy for ocular diseases is discussed in Chapter 12, which ushers in feline disorders.

4.1. UTILIZATION OF BLOOD-HEAT CLEARING, RESPIRATORY-HEAT CLEARING OR DIAPHORETIC HERBS FOR AUDITORY CONDITIONS

The disease diagnoses that were reported in the recent epidemiological study of pet dogs (O'Neill et al., 2014a; VetCompass, 2019) are in terms of the VeNom Codes, which are a set of standardized nomenclature for clinical veterinary medicine developed and maintained by the VeNom Coding Group (www.venomcoding.org). The VeNom diseases affecting head and neck are listed in their order of prevalence in the first column of Table 4.1. The diseases in the second column of Table 4.1 are the ICD-9 (International Statistical Classification of Diseases and Related Health Problems, 9th revision, the World Health Organization) equivalents of those in the first column. If an exact match between VeNom and ICD-9 could not be found, an ICD-9 disease closest to the VeNom disease was used. The last column in the table are the CHEG recipes returned by the neural machine translation deep learning model given the ICD-9 diseases in the second column. Note that in language translation, a sentence in one language may be translated into a sentence in the other language in many legitimate ways. For example, in English, we can write sentences in active or passive voice. We can rewrite a sentence using synonyms without changing the meaning. Likewise, given a disease input (*cf.* a source sentence), the neural machine translation model outputs top recipes (target sentences), representing the best recipe (best translation), second best recipe (second best translation), third best, and so on. This is why we show multiple recipes per disease in the table.

In an output recipe, the value inside the parentheses following an herb gives its proportion in the recipe. We simply multiply the value with the dose in grams in the fourth column of Table 3.1 to get the grams of the herb. For example, for a pet weighing 18 Kg, the dose is 1.0 gram from Table 3.1. We then multiply 1.0g to 1, 0.6, 0.5, 0.4, 0.4, 0.3 in the parentheses of the first recipe in Table 4.1 in the next page to get 1g, 0.6g, 0.5g, 0.4g, 0.4g, 0.3g for xuánshēn, dìhuáng, mǔdānpí, bèimǔ, xià kūcǎo and liánqiáo, respectively. The number of serves per day and number of days per therapy are 4.1 and 9.5 according to Table 3.1 for the pet at 18 Kg. In short, to get CHEG dose in grams, we simply multiply the values in the parentheses in Table 4.1 with the grams from the row of the pet weight in Table 3.1.

According to the VeNom coding, diseases can be grouped into 15 organ systems, eight of which have been shown in the beginning of the chapter. We present the diseases from head to toe for both dogs and cats in the book so that it is convenient for the reader to quickly locate ailments and recipes. The anatomic grouping from head to toe gives us only eight groups: head/neck, thorax, abdomen, vertebral column, pelvis, anus, limb and others. To find patterns or regularities in the neural machine translation outputs, we

Table 4.1. CHEG recipes for diseases affecting head and neck in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Otitis externa	Infective otitis externa (380.1)	xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), xià kūcǎo (0.4), liánqiáo (0.3)
		xuánshēn (1), dìhuáng (0.7), mùdānpí (0.6), bèimǔ (0.5), xià kūcǎo (0.5), liánqiáo (0.4), huáng qín (0.4)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), xià kūcǎo (0.4), liánqiáo (0.3), huáng qín (0.3)
		xuánshēn (1), dìhuáng (0.7), mùdānpí (0.6), bèimǔ (0.5), jīnyínhuā (0.5), xià kūcǎo (0.4), liánqiáo (0.4), huáng qín (0.4)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), jīnyínhuā (0.4), xià kūcǎo (0.3), liánqiáo (0.3), huáng qín (0.3)
		xuánshēn (1), dìhuáng (0.7), mùdānpí (0.6), bèimǔ (0.5), jīnyínhuā (0.5), xià kūcǎo (0.4), liánqiáo (0.4), shān zhīzǐ (0.4), gāncǎo (0.4)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), jīnyínhuā (0.4), xià kūcǎo (0.3), liánqiáo (0.3), shān zhīzǐ (0.3), gāncǎo (0.2)
Periodontal disease	Gingival and periodontal diseases (523)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), xīxīn (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
Conjunctivitis	Conjunctivitis, unspecified (372.30)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		júhuā (1), dìhuáng (0.6), fǎng fēng (0.5), gǒuqǐzǐ (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
Infectious canine tracheobronchitis (Kennel Cough)	Bronchitis, not specified as acute or chronic (490)	jiégěng (1), bái qián (0.7), zǐ wǎn (0.6), bǎi bù (0.5), jīngjiè (0.5), chénpí (0.4), gāncǎo (0.4)
		dānshēn (1), gāncǎo (1), bǎihé (1), jiégěng (1), hǎi gé (1), zhīzǐ (1), huáng qín (1)
		dānshēn (1), gāncǎo (1), xìngrén (1), zhīmù (1), jīnyínhuā (1), qián hú (1), huáng qín (1)
		dānshēn (1), gāncǎo (1), bǎihé (1), hǎi gé (1), zhīzǐ (1), huáng qín (1)
		jiégěng (1), bái qián (0.6), zǐ wǎn (0.5), bǎi bù (0.4), jīngjiè (0.4), chénpí (0.3), gāncǎo (0.3)
		báizhǐ (1), máhuáng (0.7), hē zǐ (0.6), cāngěr zǐ (0.5), guīzhǐ (0.5), bòhé (0.4)
		báizhǐ (1), máhuáng (0.6), hē zǐ (0.5), cāngěr zǐ (0.4), guīzhǐ (0.4), bòhé (0.3)
		báizhǐ (1), máhuáng (0.7), hē zǐ (0.6), cāngěr zǐ (0.5), guīzhǐ (0.5)
Cataract	Senile cataract (366.1)	huángqí (1), chì shǎo (0.8), zhì gāncǎo (0.8), zhīmù (0.7), fùzǐ (0.7), máhuáng (0.6), huángbō (0.6)
		jīnyínhuā (1), dāngguī (0.7), xuánshēn (0.6), gāncǎo (0.5), chì shǎo (0.5), dǎodi wúgōng (0.4), huángqí (0.4)
		huángqí (1), chì shǎo (0.6), zhì gāncǎo (0.5), fùzǐ (0.4), máhuáng (0.4)
		huángqí (1), chì shǎo (0.7), zhì gāncǎo (0.6), zhīmù (0.5), fùzǐ (0.5), máhuáng (0.4), huángbō (0.4)
		huángqí (1), chì shǎo (0.8), zhì gāncǎo (0.8), zhīmù (0.7), fùzǐ (0.7), máhuáng (0.6), huángbō (0.6), plus acupuncture
		jīnyínhuā (1), dāngguī (0.7), niúxī (0.6), xuánshēn (0.5), chì shǎo (0.5), zhì gāncǎo (0.4), dǎodi wúgōng (0.4), huángqí (0.4)

Table 4.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		huángqí (1), chì shǎo (0.7), zhì gāncǎo (0.6), zhīmù (0.5), fūzǐ (0.5), mǎhuáng (0.4), huángbò (0.4), plus acupuncture
		jīnyínhuā (1), dāngguī (0.7), niúxī (0.6), xuánshēn (0.5), gāncǎo (0.5), chì shǎo (0.4), dàodì wúgōng (0.4), huángqí (0.4)
Retained deciduous tooth	Disturbances in tooth eruption (520.6)	gāncǎo (1), bái jí (1), bèimǔ (1), hǎipiāoxiǎo (1)
		gāncǎo (1), bái jí (1), bèimǔ (1), yán hú suǒ (1), hǎipiāoxiǎo (1)
		lú gēn (1), bèimǔ (0.6), pípá yè (0.5), jiégèng (0.4), liánqiáo (0.4), huáng qín (0.3), gāncǎo (0.3), huánglián (0.3)
		lú gēn (1), bèimǔ (0.6), pípá yè (0.5), jiégèng (0.4), liánqiáo (0.4), huáng qín (0.3), gāncǎo (0.3)
		lú gēn (1), bèimǔ (0.6), pípá yè (0.5), jiégèng (0.4), guā lóu rén (0.4), liánqiáo (0.3), huáng qín (0.3)
		lú gēn (1), bèimǔ (0.6), pípá yè (0.5), jiégèng (0.4), guā lóu rén (0.4), liánqiáo (0.3), huáng qín (0.3), gāncǎo (0.3)
		lú gēn (1), bèimǔ (0.6), pípá yè (0.5), jiégèng (0.4), guā lóu rén (0.4), liánqiáo (0.3), huáng qín (0.3), huánglián (0.3)
Seizure disorder	Epilepsy unspecified (345.9)	huángqí (1), chì shǎo (0.3), fǎng fēng (0.2), dàhuáng (0.1)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.2), dàhuáng (0.1)
		huángqí (1), chì shǎo (0.5), fǎng fēng (0.3)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.3), dàhuáng (0.2)
		huángqí (1), chì shǎo (0.6), fǎng fēng (0.4)
		huángqí (1), chì shǎo (0.5), fǎng fēng (0.3), dàhuáng (0.2)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.3)
		huángqí (1), chì shǎo (0.3), fǎng fēng (0.2), xìxīn (0.1), huánglián (0.1)
Mass lesion - eyelid	Benign neoplasm of eyelid, including canthus (216.1)	xià kūcǎo (1), mùlǐ (0.7), chǎihú (0.6), huáng qín (0.5), gāncǎo (0.5)
		xià kūcǎo (1), mùlǐ (0.7), chǎihú (0.6), huáng qín (0.5), jiāng cán (0.5), gāncǎo (0.4)
		mùlǐ (1), xià kūcǎo (0.7), chǎihú (0.6), huáng qín (0.5), jiāng cán (0.5), gāncǎo (0.4)
		xuánshēn (1), mùlǐ (0.7), xià kūcǎo (0.6), chǎihú (0.5), huáng qín (0.5), jiāng cán (0.4), gāncǎo (0.4)
		xià kūcǎo (1), mùlǐ (0.7), bèimǔ (0.6), chǎihú (0.5), huáng qín (0.5), jiāng cán (0.4)
		xià kūcǎo (1), mùlǐ (0.7), bèimǔ (0.6), chǎihú (0.5), huáng qín (0.5), jiāng cán (0.4), gāncǎo (0.4)
		xià kūcǎo (1), mùlǐ (0.7), chǎihú (0.6), huáng qín (0.5), gāncǎo (0.5), bái jiè zǐ (0.4)
		xuánshēn (1), mùlǐ (0.7), xià kūcǎo (0.6), chǎihú (0.5), huáng qín (0.5), gāncǎo (0.4)
		xuánshēn (1), mùlǐ (0.7), bèimǔ (0.6), xià kūcǎo (0.5), chǎihú (0.5), huáng qín (0.4), jiāng cán (0.4), gāncǎo (0.4)
Keratoconjunctivitis sicca (KCS, Dry Eye)	Keratoconjunctivitis sicca, not specified as Sjogren's (370.33)	gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xìxīn (0.3), huánglián (0.3)
		shù dìhuáng (1), shānzhūyú (0.6), shānyào (0.5), mǔdānpí (0.4), fúlíng (0.4), zéxiè (0.3)
		gǒuqǐzǐ (1), júhuā (0.7), dìhuáng (0.6), fǎng fēng (0.5), dāngguī (0.5), xìxīn (0.4), huánglián (0.4)
		dìhuáng (1), gǒuqǐzǐ (0.6), júhuā (0.5), dāngguī (0.4), fǎng fēng (0.4), xìxīn (0.3), huánglián (0.3)
		dìhuáng (1), gǒuqǐzǐ (0.7), júhuā (0.6), dāngguī (0.5), fǎng fēng (0.5), xìxīn (0.4), huánglián (0.4)
Aural (ear) hematoma	Disorder of pinna, unspecified (380.30)	tǔ fúlíng (1), jīnyínhuā (1)
		tǔ fúlíng (1), jīnyínhuā (1), liánqiáo (1)
		jīnyínhuā (1), liánqiáo (0.7), púgōngyīng (0.6)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		tù fùlíng (1), jīnyínhuā (1), liánqiáo (1), púgōngyīng (1)
		jīnyínhuā (1), liánqiáo (0.7), zihuādidīng (0.6), púgōngyīng (0.5)
		tù fùlíng (1), jīnyínhuā (1), liánqiáo (1), zihuādidīng (1), púgōngyīng (1)
		tù fùlíng (1), jīnyínhuā (0.7), liánqiáo (0.6), zihuādidīng (0.5), púgōngyīng (0.5)
		tù fùlíng (1), jīnyínhuā (0.7), liánqiáo (0.6), zihuādidīng (0.5), púgōngyīng (0.5), yīyǐ rén (0.4)
		jīnyínhuā (1), liánqiáo (0.7), zihuādidīng (0.6), púgōngyīng (0.5), báizhǐ (0.5), zào jiǎo cì (0.4), bèimǔ (0.4), jiégēng (0.4), jīngjiè (0.4), gāncǎo (0.4)
Respiratory tract infection, upper (URTI)	Acute upper respiratory infections of unspecified site (465.9)	bǎi bù (1), zǐ wǎn (0.8), xīng rén (0.8), dàodì wúgōng (0.7), jiégēng (0.7), jīngjiè (0.6), máhuáng (0.6), kuàndōng huā (0.6), gāncǎo (0.6), liánqiáo (0.6)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), liánqiáo (0.1), dàhuáng (0.1)
Vestibular disease	Vestibular neuronitis (386.12)	xuánshēn (1), dìhuáng (0.7), mài mén dòng (0.6), bēi shāshēn (0.5), yùzhú (0.5)
		báisháo (1), dìhuáng (0.7), mài mén dòng (0.6), mǔlì (0.5), zhì gāncǎo (0.5), ējiāo (0.4), guǐbǎn (0.4), biējiǎ (0.4), wǔwèizǐ (0.4), huǒ má rén (0.4)
		báisháo (1), dìhuáng (0.6), mài mén dòng (0.5), mǔlì (0.4), zhì gāncǎo (0.4), ējiāo (0.3), guǐbǎn (0.3), biējiǎ (0.3), wǔwèizǐ (0.2), huǒ má rén (0.2)
		báisháo (1), dìhuáng (0.7), mài mén dòng (0.6), mǔlì (0.5), zhì gāncǎo (0.5), ējiāo (0.4), guǐbǎn (0.4), biējiǎ (0.4), huǒ má rén (0.4)
		báisháo (1), dìhuáng (0.7), mài mén dòng (0.6), mǔlì (0.5), zhì gāncǎo (0.5), ējiāo (0.4), guǐbǎn (0.4), biējiǎ (0.4)
		báisháo (1), dìhuáng (0.7), mài mén dòng (0.6), wǔwèizǐ (0.5), huǒ má rén (0.5), mǔlì (0.4), zhì gāncǎo (0.4), ējiāo (0.4), guǐbǎn (0.4), biējiǎ (0.4)
Epilepsy	Epilepsy, unspecified, without mention of intractable epilepsy (345.90)	báisháo (1), dìhuáng (0.7), mài mén dòng (0.6), huǒ má rén (0.5), mǔlì (0.5), zhì gāncǎo (0.4), ējiāo (0.4), guǐbǎn (0.4), biējiǎ (0.4)
		tiānmá (1), báisháo (0.7), dìhuáng (0.6), diào téng gōu (0.5), jùhuā (0.5), dāngguī (0.4), niúxī (0.4), báizhǐ (0.4), gǎoběn (0.4)
		tiānmá (1), báisháo (0.7), dìhuáng (0.6), diào téng gōu (0.5), jùhuā (0.5), dāngguī (0.4), gǎoběn (0.4), niúxī (0.4), báizhǐ (0.4)
		tiānmá (1), báisháo (0.7), dìhuáng (0.6), gōu téng (0.5), tiānhuā (0.5), niúxī (0.4), báizhǐ (0.4), háng jú (0.4), zhìqiào (0.4), dāngguī (0.4), mǎn jīng zǐ (0.3)
		tiānmá (1), báisháo (0.7), dìhuáng (0.6), diào téng gōu (0.5), jùhuā (0.5), dāngguī (0.4), mǎn jīng zǐ (0.4), gǎoběn (0.4), niúxī (0.4), báizhǐ (0.4)
		tiānmá (1), báisháo (0.7), dìhuáng (0.6), gōu téng (0.5), tiānhuā (0.5), niúxī (0.4), báizhǐ (0.4), háng jú (0.4), mài mén dòng (0.4), dāngguī (0.4), gǎoběn (0.3)
Dental (tooth) disease	Unspecified disorder of the teeth and supporting structures (525.9)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.3), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)

Table 4.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Cognitive dysfunction	Cerebral degeneration, unspecified (331.9)	chuānxiōng (1), chì sháo (0.7), guàn zhòng (0.6), júhuā (0.5), màn jīng zǐ (0.5), bòhé (0.4), shēng má (0.4), xīn yí (0.4)
		júhuā (1), màn jīng zǐ (0.7), bòhé (0.6), chuānxiōng (0.5), chì sháo (0.5), shēng má (0.4), xīn yí (0.4)
		chì sháo (1), guàn zhòng (0.7), júhuā (0.6), màn jīng zǐ (0.5), bòhé (0.5), chuānxiōng (0.4), shēng má (0.4), xīn yí (0.4)
		júhuā (1), màn jīng zǐ (0.7), bòhé (0.6), chì sháo (0.5), guàn zhòng (0.5), shēng má (0.4), xīn yí (0.4)
		chì sháo (1), guàn zhòng (0.7), júhuā (0.6), màn jīng zǐ (0.5), bòhé (0.5), shēng má (0.4), xīn yí (0.4)
		júhuā (1), màn jīng zǐ (0.6), bòhé (0.5), chuānxiōng (0.4), chì sháo (0.4), shēng má (0.3), xīn yí (0.3)
		chuānxiōng (1), chì sháo (0.7), júhuā (0.6), màn jīng zǐ (0.5), bòhé (0.5), shēng má (0.4), xīn yí (0.4)
Tear duct abnormality	Disorders of lacrimal system (375)	gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.4), fǎng fēng (0.3), dāngguī (0.3), xīxīn (0.2), huánglián (0.2)
		gǒuqǐzǐ (1), júhuā (0.5), dihuáng (0.3), fǎng fēng (0.2), dāngguī (0.2), xīxīn (0.2), huánglián (0.1)
		gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.7), dihuáng (0.6), fǎng fēng (0.5), dāngguī (0.5), xīxīn (0.4), huánglián (0.4)
Epulis	Other specified periodontal diseases (523.8)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
Hypothyroidism	Unspecified acquired hypothyroidism (244.9)	xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégēng (0.5), liánqiáo (0.4), shān zhǐzǐ (0.4), xìngrén (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégēng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), zhǐzǐ (0.4), dàhuáng (0.4)
		xuánshēn (1), mǔlì (0.6), bèimǔ (0.5), jiégēng (0.4), liánqiáo (0.4), zhì gāncǎo (0.3), zhǐzǐ (0.3), dàhuáng (0.3)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégēng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), zhǐzǐ (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégēng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), shān zhǐzǐ (0.4)
		xuánshēn (1), mǔlì (0.6), bèimǔ (0.5), zhì gāncǎo (0.4), jiégēng (0.4), liánqiáo (0.3), shān zhǐzǐ (0.3), xìngrén (0.3)
Entropion	Entropion, unspecified (374.00)	shú dihuáng (1), shānzhūyú (0.7), shānyào (0.6), wǔwèizǐ (0.5), ròuguì (0.5), gǒuqǐzǐ (0.4), zhìqiào (0.4), fú shén (0.4), dǎng shēn (0.4), júhuā (0.4)
		gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.7), dihuáng (0.6), fǎng fēng (0.5), dāngguī (0.5), xīxīn (0.4), huánglián (0.4)
		shú dihuáng (1), shānzhūyú (0.7), shānyào (0.6), mǔdǎnpí (0.5), fúling (0.5), zéxiè (0.4), wǔwèizǐ (0.4), shí chāngpú (0.4), gǒuqǐzǐ (0.4), mì měng huā (0.4), júhuā (0.3)
Foreign body - oral (mouth)	Foreign body in mouth (935.0)	bèimǔ (1), jiégēng (0.6), liánqiáo (0.5), xuánshēn (0.4), gāncǎo (0.4), mǔlì (0.3), zhǐzǐ (0.3)
		gāncǎo (1), jiégēng (0.6), liánqiáo (0.5), xuánshēn (0.4), bèimǔ (0.4), mǔlì (0.3), zhǐzǐ (0.3)
		gāncǎo (1), jiégēng (0.7), liánqiáo (0.6), xuánshēn (0.5), bèimǔ (0.5), mǔlì (0.4), zhǐzǐ (0.4)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		gāncǎo (1), jiégěng (0.7), liánqiáo (0.6), xuánshēn (0.5), mǔlì (0.5), bèimǔ (0.4), zhīzǐ (0.4)
		bèimǔ (1), jiégěng (0.7), liánqiáo (0.6), xuánshēn (0.5), gāncǎo (0.5), mǔlì (0.4), zhīzǐ (0.4)
		gāncǎo (1), jiégěng (0.7), liánqiáo (0.6), xuánshēn (0.5), bèimǔ (0.5), zhīzǐ (0.4)
		gāncǎo (1), jiégěng (0.6), liánqiáo (0.5), xuánshēn (0.4), mǔlì (0.4), bèimǔ (0.3), zhīzǐ (0.3)
Ear disorder	Unspecified disorder of ear (388.9)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
Brachycephalic airway obstruction syndrome (BAOS)	Chronic airway obstruction, not elsewhere classified (496)	xìng rén (1), máhuáng (0.6), bànxià (0.5), chénpí (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		xìng rén (1), máhuáng (0.6), bànxià (0.5), chénpí (0.4), tǐng lì zǐ (0.4), gāncǎo (0.3), shēngjiāng (0.3)
		xìng rén (1), máhuáng (0.6), bèimǔ (0.5), qián hú (0.4), guā lóu rén (0.4), gāncǎo (0.3)
		xìng rén (1), máhuáng (0.6), bànxià (0.5), chénpí (0.4), dàhuáng (0.4), gāncǎo (0.3), shēngjiāng (0.3)
Blindness	Unspecified visual loss (369.9)	gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.4), fǎng fēng (0.3), dāngguī (0.3), xīxīn (0.2), huánglián (0.2)
		gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.6), dihuáng (0.4), dāngguī (0.3), fǎng fēng (0.3), xīxīn (0.2), huánglián (0.2)
Sneezing	Symptoms involving respiratory system and other chest symptoms (786)	guā lóu rén (1), xiè bái (0.7), bànxià (0.6)
		gāncǎo (1), jiégěng (0.6), liánqiáo (0.5), xuánshēn (0.4), mǔlì (0.4), bèimǔ (0.3), zhīzǐ (0.3)
		gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔlì (0.4), bèimǔ (0.4), liánqiáo (0.3), zhīzǐ (0.3)
		gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔlì (0.5), bèimǔ (0.5), liánqiáo (0.4), zhīzǐ (0.4)
		gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), bèimǔ (0.4), liánqiáo (0.4), mǔlì (0.3), zhīzǐ (0.3)
		gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔlì (0.4), bèimǔ (0.4), zhīzǐ (0.3), liánqiáo (0.3)
		gāncǎo (1), jiégěng (0.6), liánqiáo (0.5), xuánshēn (0.4), bèimǔ (0.4), mǔlì (0.3), zhīzǐ (0.3)
		gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔlì (0.5), bèimǔ (0.5), zhīzǐ (0.4), liánqiáo (0.4)
Halitosis	Symptoms involving head and neck (784)	shén qū (1)
		shén qū (1), mài yá (1)
		mùxiāng (1), shā rén (1), huòxiāng (1)
		shén qū (1), mài yá (1), huòxiāng (1)
		mùxiāng (1), shā rén (1), shén qū (1), huòxiāng (1)
Distichiasis	Other congenital anomalies of eyelids, lacrimal system, and orbit (743.69)	dānshēn (1), dihuáng (1), juémíngzǐ (1), mùdǎnpí (1), chì shǎo (1), zhīmǔ (1), mài mén dòng (1), júhuā (1), huáng qín (1), jí lí (1), màn jīng zǐ (1)
		dānshēn (1), dihuáng (1), juémíngzǐ (1), mùdǎnpí (1), chì shǎo (1), zhīmǔ (1), mài mén dòng (1), júhuā (1), huáng qín (1), màn jīng zǐ (1), dāng shēn (1)
		dihuáng (1), gǒuqǐzǐ (0.7), júhuā (0.6), dāngguī (0.5), fǎng fēng (0.5), xīxīn (0.4), huánglián (0.4)
		dihuáng (1), mùdǎnpí (0.7), chì shǎo (0.6), fǎng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), zhīzǐ (0.4), liánqiáo (0.4), huáng qín (0.4), gāncǎo (0.4)

Table 4.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		dānshēn (1), dīhuáng (1), juémíngzī (1), mùdānpí (1), chì shǎo (1), zhīmù (1), mài mén dōng (1), júhuā (1), huáng qín (1), màn jīng zǐ (1) dānshēn (1), dīhuáng (1), juémíngzī (1), mùdānpí (1), chì shǎo (1), chē qián zǐ (1), zhīmù (1), mài mén dōng (1), júhuā (1), huáng qín (1), jí lí (1) dīhuáng (1), mùdānpí (0.7), chì shǎo (0.6), fǎng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), liánqiáo (0.4), huáng qín (0.4), gāncǎo (0.4) dīhuáng (1), mùdānpí (0.7), chì shǎo (0.6), fǎng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), liánqiáo (0.4), huáng qín (0.4), chántuì (0.4), gāncǎo (0.4)
Cerebrovascular accident (CVA)	Cerebral artery occlusion, unspecified with cerebral infarction (434.91)	qiǎnghuó (1), hòupò (0.5), zhīshí (0.3), huáng qín (0.2), huánglián (0.2), dàhuáng (0.2) qiǎnghuó (1), hòupò (0.2), zhīshí (0.1), dàhuáng (0.1) qiǎnghuó (1), hòupò (0.5), zhīshí (0.3), dàhuáng (0.2) qiǎnghuó (1), hòupò (0.4), zhīshí (0.3), huáng qín (0.2), huánglián (0.1), dàhuáng (0.1) qiǎnghuó (1), hòupò (0.4), zhīshí (0.3), dàhuáng (0.2) qiǎnghuó (1), hòupò (0.6), zhīshí (0.4), huáng qín (0.3), huánglián (0.3), dàhuáng (0.2) qiǎnghuó (1), hòupò (0.4), zhīshí (0.2), dàhuáng (0.1)
Mass lesion - oral cavity	Benign neoplasm of lip oral cavity and pharynx (210)	shú dīhuáng (1), shānzhūyú (0.7), shānyào (0.6), mùdānpí (0.5), fúlíng (0.5), zéxiè (0.4) shú dīhuáng (1), shānzhūyú (0.7), shānyào (0.6), wǔwèizǐ (0.5), ròuguì (0.5), gǒuqǐzǐ (0.4), zhīqiào (0.4), fú shēn (0.4), dǎng shēn (0.4), júhuā (0.4) huángqí (1), jī xuè téng (0.7), wū líng zhī (0.6), gǒuqǐzǐ (0.5), dǎngguī (0.5), tùsǐzǐ (0.4), fùpénzǐ (0.4), bǎ jǐ tiān (0.4) xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégěng (0.5), liánqiáo (0.4), zhīzǐ (0.4) shú dīhuáng (1), shānzhūyú (0.7), shānyào (0.6), wǔwèizǐ (0.5), ròuguì (0.5), gǒuqǐzǐ (0.4), zhīqiào (0.4), dǎng shēn (0.4), júhuā (0.4) shú dīhuáng (1), shānzhūyú (0.7), shānyào (0.6), wǔwèizǐ (0.5), mùdānpí (0.5), fúlíng (0.4), zéxiè (0.4) xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégěng (0.5), zhīzǐ (0.4), liánqiáo (0.4) xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégěng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), zhīzǐ (0.4) shú dīhuáng (1), shānzhūyú (0.7), shānyào (0.6), wǔwèizǐ (0.5), ròuguì (0.5), gǒuqǐzǐ (0.4), zhīqiào (0.4), jiānghuáng (0.4), dǎng shēn (0.4)
Uveitis	Unspecified iridocyclitis (364.3)	chē qián zǐ (1), gǒuqǐzǐ (0.7), tùsǐzǐ (0.6), fùpénzǐ (0.5), wǔwèizǐ (0.5) gǒuqǐzǐ (1), júhuā (0.7), dīhuáng (0.6), fǎng fēng (0.5), dǎngguī (0.5), xīxīn (0.4), huánglián (0.4) dīhuáng (1), gǒuqǐzǐ (0.6), júhuā (0.5), dǎngguī (0.4), fǎng fēng (0.4), xīxīn (0.3), huánglián (0.3)
Reverse sneezing	Symptoms involving respiratory system and other chest symptoms (786)	guā lóu rén (1), xiè bái (0.7), bànxià (0.6) gāncǎo (1), jiégěng (0.6), liánqiáo (0.5), xuánshēn (0.4), mǔlì (0.4), bèimǔ (0.3), zhīzǐ (0.3) gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔlì (0.4), bèimǔ (0.4), liánqiáo (0.3), zhīzǐ (0.3) gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔlì (0.5), bèimǔ (0.5), liánqiáo (0.4), zhīzǐ (0.4) gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), bèimǔ (0.4), liánqiáo (0.4), mǔlì (0.3), zhīzǐ (0.3) gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔlì (0.4), bèimǔ (0.4), zhīzǐ (0.3), liánqiáo (0.3) gāncǎo (1), jiégěng (0.6), liánqiáo (0.5), xuánshēn (0.4), bèimǔ (0.4), mǔlì (0.3), zhīzǐ (0.3) gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔlì (0.5), bèimǔ (0.5), zhīzǐ (0.4), liánqiáo (0.4)

decide to look at the diseases organ system by organ system because similarity in recipes should be larger for diseases within organ systems than within body parts. That the head and neck, which performs multiple functions, suffers from eight systems of diseases is a justification of the above argument. In our discussion, we will therefore focus on a system of diseases per chapter for the remaining 15 chapters in the book. Readers who prefer organ system grouping of diseases and recipes can refer to Parts 2 and 3 section headings to locate the diseases and recipes. In this chapter, we start with auditory diseases in dogs and cats and the associated CHEG recipes.

The diseases affecting the ear or auditory in dogs are otitis externa, aural hematoma, vestibular disease and ear disorder. Note the same four diseases affect the ear of cats. We first collect all the CHEG recipes in Table 4.1 for these auditory diseases. We then identify the heaviest and second heaviest herbs in each recipe. That is, we get the most important pair of herbs in each of the recipes. We next identify the therapeutic class of the herb for the herbs in the selected pairs. The classes here are those introduced in Chapter 2 (see also Table 3.2 of Chapter 3). We plot the inter-pairings of the classes of the selected pairs in Figure 4.1. From the network of herb classes, we find that blood-heat clearing herbs such as *dìhuáng* and *xuánshēn* pair with each other or with hematinic herbs such as *báisháo* in the treatment of auditory diseases in dogs and cats. The other strategy of CHEG therapy is by admixing two respiratory-heat clearing herbs such as *jīnyínhuā*, *tǔ fúlíng* and *liánqiáo*. Another mode of treatment is combination of diaphoretic herbs such as *báizhǐ* with *qì* tonifying herbs such as *zhì gāncǎo* or with skin-damp-heat clearing herbs such as *huáng qín*. Note that *báisháo* is used for Meniere's disease in the herb dictionary Table 3.2. Selection of strategies depends on manifestations of the patient. If the pet manifests an inflammation or elevated body temperature, we would prescribe various heat clearing herbs. If the pet looks debilitated, we would consider inclusion of *qì* tonifying herbs in the recipe, and so on.

Auditory

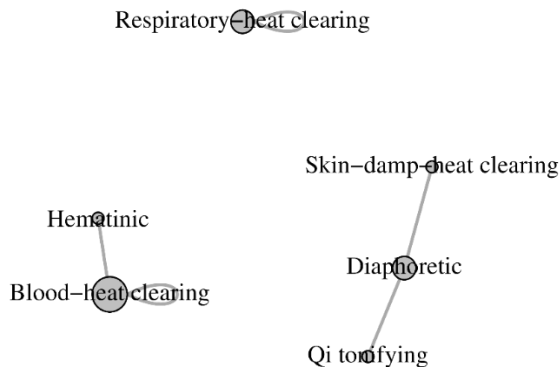


Figure 4.1. Combination of herb classes for auditory diseases.

Let's always sort and position the herbs in a recipe by their weights. Namely, the first herb is the heaviest, the second is the second heaviest and the last herb is the lightest. If a recipe comprising seven herbs is divided into three parts with the first part containing the first and the second herbs, the second part containing the third to the fifth herbs and the third part the last two herbs, then Figure 4.1 discloses the classes and their combinations of the herbs in the first part of the recipes for auditory diseases. What about the second and third part? It turns out that herbs of the second part are expectorant herbs such as *bèimǔ*, *qí* tonifying herbs such as *zhì gāncǎo*, *yin* nourishing herbs such as *mài mén dōng*, blood-heat clearing herbs such as *mǔdānpí* or interior-dampness removing herbs such as *shā rén* and that herbs of the third part are laxative herbs such as *dà huáng*, *yin* nourishing herbs such as *biējiǎ*, skin-damp-heat clearing herbs such as *huáng qín* or respiratory-heat clearing herbs such as *liánqiáo* and *púgōngyīng*. Note that, according to Table 3.2, *shā rén* treats vertiginous syndromes and labyrinthine disorders and that *huáng qín* combines with *jīnyínhuā* or *mǔdānpí* for the treatment of cutaneous conditions such as dermatitis. In sum, herbs other than the heaviest pair play supporting roles, enhancing the effects of the heaviest pair directly through the various, alternative heat clearing herbs or indirectly through *qí* and *yin* tonifying herbs. The class graph of Figure 4.1, together with the supporting and strengthening principle, serves as a template for an herbal practitioner to compose CHEG recipes for any auditory diseases.

4.2. INTONATION OF CHEG RECIPES FOR DIFFERENT ORGAN SYSTEMS OF DISEASES

Once we know how to pair, how about the rate of drop in the weights of the component herbs from the heaviest to the lightest herb in a recipe? In linguistics, the frequency of every word in a document or corpus is counted. Words are then ranked by their frequencies. When word frequencies, f , are plotted against word ranks, r , it is found that the relationship can be described by the formula $f \sim r^{-\alpha}$, where α , called Zipf's exponent, is a constant greater than zero (Zipf, 1949). What is interesting is that corpora of different sources or books by different authors give different α values (Serrano et al., 2009; Thurner et al., 2015). Recall that herbs are words and recipes are sentences in our analogy between CHEG herbalism and linguistics. Once we make the equivalence between herb weight and word frequency, it should therefore not be surprising to find that recipes for different organ systems of diseases have different α values. Indeed, if we

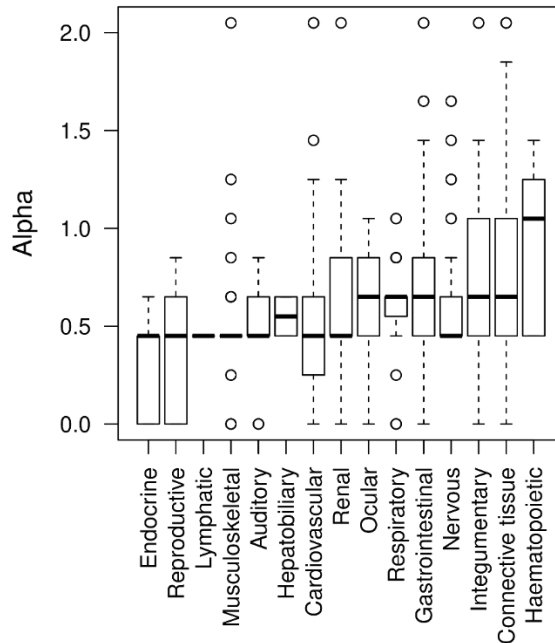


Figure 4.2. Zipf's exponents of recipes for diseases of different organ systems, ordered from left to right in increasing average Zipf's exponents.

plot the α values of the recipes for all the canine and feline diseases in the book, we find in Figure 4.2 that certain systems of diseases such as endocrine diseases have lower α values than other systems of diseases such as hematopoietic diseases. The mean of the auditory disease α values is equal to 0.52. To compose a recipe for the auditory disease, let's decide the number of herbs, N , first. Let's say N equals seven. The relative importance of the seven herbs will be reflected in their relative weights in the recipe. From Figure 4.1, we know that blood-heat clearing or respiratory-heat clearing herbs play important roles. They, if chosen, should therefore be among the heaviest. Once we have their relative importance in mind in an order from 1 to 7, the relative weights are determined by $r^{-0.52} = 1.0, 0.7, 0.6, 0.5, 0.4, 0.4$ and 0.4 for $r = 1, 2, 3, \dots, 7$. Since the exponent act on individual recipes, we call them intonation, reminiscent of the intonation of a sentence in speech.

Note that as Zipf's exponents are positive, the smallest exponent approaches zero. If we plug in a vanishing exponent to the Zipf's formula, the frequency distribution is flat, meaning that different words appear in the text at equal chances. In our case, small exponent values indicate component herbs of roughly the same weights in the recipe. That is, the primary, secondary, tertiary herbs/pairs in the recipe cannot be clearly differentiated. This scenario most likely occurs when the disease gives a hard time, because of e.g., variable manifestations of the disease, to the herbalist so that the herbalist has no other better ideas. An example of this is that CHEG recipes for malignant

neoplasms were found to have an average exponent value smaller than those for benign neoplasms (Chiu et al., 2012). A second explanation for a uniform distribution of herb weights in a recipe is that choices of the primary herbs/pairs for the disease vary from herbalist to herbalist. As what the deep learning model learned represents the way of prescription by the collection of the five thousand herbalists in Taiwan, if the herbalists lacked of a consensus about the best choice of herbs for a disease, the deep learning model simply outputs herbs of similar weights to reflect the dissensus. We will address the issue of N , i.e., the size of a recipe, in Chapter 12, which starts Part 3 of the book. A tantalizing hint here is that there exists a relationship between exponent values and recipe sizes.

Chapter 5

THORAX

The thorax region of the pets houses the heart, lungs and thymus gland. There are five common canine diseases that involve the chest. The five diseases indeed affect the respiratory and cardiovascular systems. The diseases of the respiratory system are infectious canine tracheobronchitis and upper respiratory tract infection. The diseases of the cardiovascular system are heart murmur, heart disease and mitral valve disorder. The diseases in their order of prevalence and the associated CHEG recipes are shown in the table of the chapter. In addition, we discuss the herbal strategy for the respiratory system diseases in this chapter. Herbal strategy for the cardiovascular system diseases will be delineated in the thorax chapter of the feline disorders.

5.1. COMBINATIONS OF DIAPHORETIC, EXPECTORANT AND QI TONIFYING HERBS FOR RESPIRATORY CONDITIONS

Let's show the table of the thoracic diseases and the corresponding recipes first in the next page. We notice in Table 5.1 that some of the diseases, such as upper respiratory tract infection and sneezing, appeared before in the head and neck diseases in Table 4.1 of the last chapter. It is because both the nose and lungs comprise the respiratory system. However, the nose is in the head and neck region whereas the lungs are in the thorax. It is part of the reason we decided to discuss herbal strategics system by system as organ systems are more specific than anatomic regions.

When we combine dogs' and cats' common respiratory system diseases, we get a total of 11 distinct respiratory system diseases in dogs and cats. They are: infectious canine tracheobronchitis, upper respiratory tract infection, brachycephalic airway obstruction syndrome, sneezing, reverse sneezing, coughing, cat flu, dyspnea finding, rhinitis, feline asthma (feline allergic airway disease) and pleural effusion. Those that do

not appear in Table 5.1 above will appear in the thorax chapter of Part 3. From each of the top recipes for each of the 11 diseases we extracted the heaviest and second heaviest herbs, corresponding to the most important pair in the recipe.

Table 5.1. CHEG recipes for diseases affecting thorax in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Heart (cardiac) murmur	Undiagnosed cardiac murmurs (785.2)	báisháo (1), dìhuáng (0.7), mùdānpí (0.6), ějiāo (0.5), dāngguī (0.5), dàzǎo (0.4), niúxī (0.4), xiāng fù (0.4), huángbò (0.4)
		báisháo (1), dìhuáng (0.7), mùdānpí (0.6), ějiāo (0.5), dāngguī (0.5), dàzǎo (0.4), niúxī (0.4), xiāng fù (0.4)
Infectious canine tracheobronchitis (Kennel Cough)	Bronchitis, not specified as acute or chronic (490)	jiégěng (1), bái qián (0.7), zǐ wǎn (0.6), bǎi bù (0.5), jīngjiè (0.5), chénpí (0.4), gāncǎo (0.4)
		dānshēn (1), gāncǎo (1), bǎihé (1), jiégěng (1), hǎi gé (1), zhīzǐ (1), huáng qín (1)
		dānshēn (1), gāncǎo (1), xìng rén (1), zhīmù (1), jīnyínhuā (1), qián hú (1), huáng qín (1)
		dānshēn (1), gāncǎo (1), bǎihé (1), hǎi gé (1), zhīzǐ (1), huáng qín (1)
		jiégěng (1), bái qián (0.6), zǐ wǎn (0.5), bǎi bù (0.4), jīngjiè (0.4), chénpí (0.3), gāncǎo (0.3)
		báizhǐ (1), máhuáng (0.7), hē zǐ (0.6), cāngěr zǐ (0.5), guīzhī (0.5), bòhè (0.4)
		báizhǐ (1), máhuáng (0.6), hē zǐ (0.5), cāngěr zǐ (0.4), guīzhī (0.4), bòhè (0.3)
		báizhǐ (1), máhuáng (0.7), hē zǐ (0.6), cāngěr zǐ (0.5), guīzhī (0.5)
Heart (cardiac) disease	Heart disease, unspecified (429.9)	rénshēn (1), chuānxiōng (0.7), bànxià (0.6), guā lóu rén (0.5), màn jīng zǐ (0.5), gānjiāng (0.4)
		zhì gāncǎo (1), guīzhī (0.7), guā lóu rén (0.6), suānzǎo rén (0.5), chuānxiōng (0.5), bànxià (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), guā lóu rén (0.5), màn jīng zǐ (0.5), ròu dòu gēn (0.4), gānjiāng (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), guā lóu rén (0.5), gānjiāng (0.5), màn jīng zǐ (0.4), ròu dòu gēn (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), wú zhūyú (0.5), guā lóu rén (0.5), màn jīng zǐ (0.4), gānjiāng (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), wú zhūyú (0.5), xiāng fù (0.5), guā lóu rén (0.4), màn jīng zǐ (0.4), gānjiāng (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), wú zhūyú (0.5), xiāng fù (0.5), guā lóu rén (0.4), màn jīng zǐ (0.4), ròu dòu gēn (0.4), gānjiāng (0.4)
		rénshēn (1), chuānxiōng (0.7), bànxià (0.6), wú zhūyú (0.5), xiāng fù (0.5), guā lóu rén (0.4), gānjiāng (0.4), màn jīng zǐ (0.4), ròu dòu gēn (0.4)
Respiratory tract infection, upper (URTI)	Acute upper respiratory infections of unspecified site (465.9)	bǎi bù (1), zǐ wǎn (0.8), xìng rén (0.8), dàodì wúgōng (0.7), jiégěng (0.7), jīngjiè (0.6), máhuáng (0.6), kuàndōng huā (0.6), gāncǎo (0.6), liánqiáo (0.6)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), liánqiáo (0.1), dàhuáng (0.1)
Mitral valve disorder	Mitral valve disorders (424.0)	dānshēn (1), gāncǎo (1), báisháo (1), bǎihé (1), mài mén dòng (1), huángqí (1), dāng shēn (1)
		dānshēn (1), gāncǎo (1), bǎihé (1), jiégěng (1), hǎi gé (1), zhīzǐ (1), huáng qín (1)
		dānshēn (1), gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúling (1), mài mén dòng (1)
		dānshēn (1), gāncǎo (1), báisháo (1), shí hú (1), bǎihé (1), mài mén dòng (1)
		dānshēn (1), gāncǎo (1), báisháo (1), shí hú (1), bǎihé (1), chē qián zǐ (1), fúling (1), mài mén dòng (1)
		dānshēn (1), gāncǎo (1), báisháo (1), dì gù pí (1), dìhuáng (1), zhīmù (1), mài mén dòng (1), shú dìhuáng (1)
		dānshēn (1), gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúling (1), huángqí (1), dāng shēn (1)
		dānshēn (1), gāncǎo (1), báisháo (1), shí hú (1), bǎihé (1), chē qián zǐ (1), fúling (1), huángqí (1), dāng shēn (1)

We next identified the therapeutic classes of the extracted herbs. We drew an edge between two classes if they were ever in a pair. The result is shown in Figure 5.1, from which we see combinations of diaphoretic herbs such as máhuáng, báizhǐ and gégēn, expectorant herbs such as jiégěng and bái qián and qi tonifying herbs such as gāncǎo and báizhú for the treatment of respiratory system diseases. Note that, in the CHEG dictionary of Table 3.2, máhuáng, báizhǐ, gégēn, gāncǎo and báizhú individually treat rhinitis, nasopharyngitis or cough and that jiégěng and bái qián individually treat cough, nasopharyngitis, rhinitis, pharyngitis, throat pain, bronchitis, acute upper respiratory infections or allergic alveolitis and pneumonitis in humans. It is interesting to note that a diaphoretic herb combines with the other diaphoretic herb in an herb pair, so does an expectorant herb. A qi tonifying herb does not pair with the other qi tonifying herbs, suggesting that qi tonifying herbs play a supportive role in the recipe.

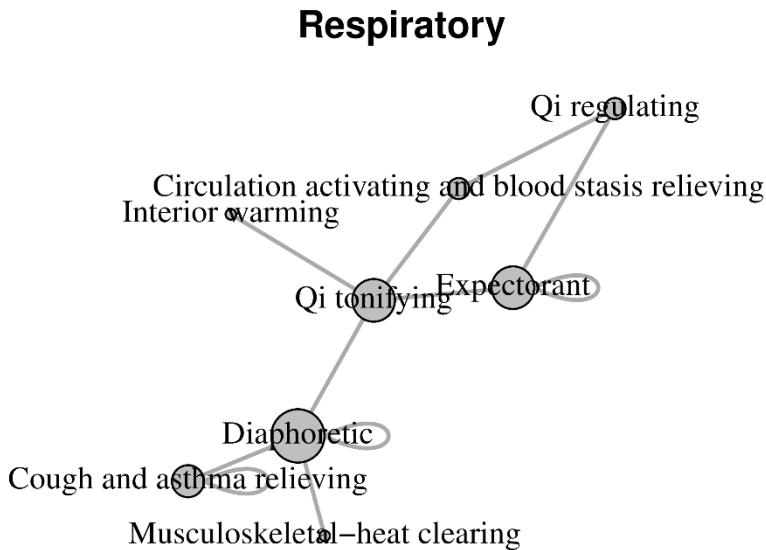


Figure 5.1. Combination of herb classes for respiratory diseases.

The mean of the Zipf's exponents of the recipes for respiratory system diseases is 0.59 and the mean recipe size is 7.6. So, when we construct a CHEG recipe, the proportional weights of the component herbs will be 1.0, 0.7, 0.5, 0.4, 0.4, 0.4, 0.3 and 0.3 from $r^{-0.59}$ for r running from 1 to 8, corresponding to the most important herbs, the second most important, ..., and so on. Choices of the heaviest pair of herbs are guided by Figure 5.1. Herbs 3 to 6 are found to be expectorant herbs such as jiégěng, bànxià and bèimǔ, skin-damp-heat clearing herbs such as huáng qín, qi regulating herbs such as chénpí and diaphoretic herbs such as cāngě zǐ. The lightest two herbs are found to be usually gāncǎo, dàhuáng or shēngjiāng for qi tonifying, purgation and diaphoresis, respectively. Notice that, in CHEG dictionary Table 3.2, bèimǔ treats a plethora of respiratory conditions including cough, bronchitis, rhinitis, chronic disease of tonsils and

adenoids, and nasopharyngitis, chénpí treats cough, rhinitis and nasopharyngitis, and that cāngě zǐ pairs with bànxià, huáng qín or shēngjiāng for the treatment of allergic rhinitis. Again, the herbs other than the heaviest two are supportive in the sense that they address the secondary signs and symptoms of the disease such as phlegm or reinforcing the actions of the heaviest two herbs. Note that the recipe size, i.e., the number of herbs in a recipe, 8 here is the largest among the recipes for different organ systems of diseases as we will see in Figure 12.2 of Chapter 12. Although many herbs make up the recipe, the ratio of the lightest to the heaviest component weight is less than one third. The combination of a large Zipf's exponent and a large recipe size may indicate many, variant minor manifestations (i.e., signs and symptoms) accompanying the disease. Again, herbs of classes in Figure 5.1, and other herbs supporting and reinforcing them, can be considered as a starting point while we are devising CHEG recipes for respiratory diseases including emergent coronavirus diseases in mammals and birds. With the starting template, choices of specific herbs depend on disease manifestations such as fever, coughing and/or dampness in the patient.

Chapter 6

ABDOMEN

The abdomen of the pet has a large volume, accommodating not only the digestive system but also the reproductive and renal systems. Twenty-four diseases affect the abdominal region of the dog, involving seven physiological systems. They are: 1) gastrointestinal system diseases including diarrhea, vomiting, gastroenteritis, gastritis, colitis, enteritis, dietary indiscretion – foreign body ingestion, canine hemorrhagic gastroenteritis, pancreatitis, nematode (i.e., roundworm) infestation, inflammatory bowel disease; 2) renal diseases including urinary incontinence, urinary tract infection, renal failure – chronic; 3) reproductive system conditions including pyometra, dystocia, and pregnancy; 4) integumentary diseases including neoplasm – mammary, mass lesion – mammary, mass lesion – abdominal; 5) endocrine diseases including hyperadrenocorticism, diabetes mellitus; 6) connective tissue diseases including hernia – umbilical; and 7) hepatobiliary diseases including hepatopathy (i.e., liver disorder). The diseases in order of prevalence and their CHEG recipes are shown in the table of the chapter. In discussing, we focus on gastrointestinal system diseases and the associated herbal strategies and recipes. The abdominal chapter of the cat part will discuss the related hepatobiliary diseases.

6.1. COMBINATIONS OF QI TONIFYING, EXPECTORANT AND RESPIRATORY-HEAT CLEARING HERBS FOR GASTROINTESTINAL CONDITIONS

The 24 abdominal diseases in decreasing prevalence are shown in Table 6.1 in the following page.

The gastrointestinal system give rise to 29 common diseases in dogs and cats: diarrhea, vomiting, gastroenteritis, gastritis, colitis, enteritis, dietary indiscretion –

foreign body ingestion, canine hemorrhagic gastroenteritis (HGE), pancreatitis, nematode (roundworm) infestation, inflammatory bowel disease (IBD), anal sac impaction, anal sac infection, incontinence – fecal, periodontal disease, retained deciduous tooth, dental (tooth) disease, epulis, foreign body – oral (mouth), halitosis, mass lesion – oral cavity, diarrhea finding, trichobezoar, constipation, mass lesion – abdominal, parasite infestation – cestodes (tapeworms), anal disorder finding, pharyngeal disorder finding, tongue (lingual) disorder. Note that periodontal disease and constipation are gastrointestinal system diseases because the digestive tract starts from the mouth and ends at the anus.

Table 6.1. CHEG recipes for diseases affecting abdomen in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Diarrhea	Diarrhea (787.91)	rénshēn (1), bànxià (1), gānjiāng (1)
		gānjiāng (1), rénshēn (0.7), bànxià (0.6)
		báizhú (1), gānjiāng (0.7), dǎng shēn (0.6), zhì gāncǎo (0.5)
Vomiting	Vomiting alone (787.03)	rénshēn (1), bànxià (1), gānjiāng (1)
		bànxià (1), gānjiāng (1)
		rénshēn (1), bànxià (1), gānjiāng (1), huáng qín (1), huánglián (1)
		bànxià (1), gānjiāng (1), dǎng shēn (1)
		bànxià (1), gānjiāng (1), huáng qín (1), huánglián (1), dǎng shēn (1)
Gastroenteritis	Other and unspecified noninfectious gastroenteritis and colitis (558.9)	báizhú (1), fúling (1)
		báizhú (1), báisháo (1), fúling (1), huáng qín (1)
		báizhú (1), báisháo (1), fǎng fèng (1), chénpí (1)
		báizhú (1), shā rén (0.6), mùxiāng (0.4), huáng qín (0.3), huánglián (0.3)
Gastritis	Unspecified gastritis and gastroduodenitis (535.5)	fúling (1), bànxià (0.5), fùzǐ (0.3), xixīn (0.2), dàhuáng (0.2)
		fúling (1), bànxià (0.5), fùzǐ (0.3), xixīn (0.2), mài yá (0.2), dàhuáng (0.2)
		fúling (1), bànxià (0.6), fùzǐ (0.5), xixīn (0.4), dàhuáng (0.4)
		fúling (1), bànxià (0.5), fùzǐ (0.3), xixīn (0.2), shēngjiāng (0.2), dàhuáng (0.2)
Urinary incontinence	Urinary incontinence, unspecified (788.30)	zhì gāncǎo (1), yìzhì rén (0.7), fùpénzǐ (0.6)
		zhì gāncǎo (1), yìzhì rén (0.7), fùpénzǐ (0.6), fùzǐ (0.5)
		zhì gāncǎo (1), fùzǐ (0.7), yìzhì rén (0.6), fùpénzǐ (0.5)
		zhì gāncǎo (1), yìzhì rén (0.7), gānjiāng (0.6), fùpénzǐ (0.5), fùzǐ (0.5)
		zhì gāncǎo (1), fùzǐ (0.7), gānjiāng (0.6)
		zhì gāncǎo (1), yìzhì rén (0.7), gānjiāng (0.6), fùpénzǐ (0.5)
		zhì gāncǎo (1), fùzǐ (0.7), yìzhì rén (0.6), gānjiāng (0.5), fùpénzǐ (0.5)
		zhì gāncǎo (1), yìzhì rén (0.7), fùpénzǐ (0.6), fùzǐ (0.5), gānjiāng (0.5)
Colitis	Ulcerative colitis, unspecified (556.9)	bài jiàng cǎo (1), huái huā (0.7), báizhú (0.6), mùdǎnpí (0.5), hòupò (0.5), huáng qín (0.4), gégēn (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), yìyī rén (0.7), báizhú (0.6), mùdǎnpí (0.5), fùzǐ (0.5), hòupò (0.4), huáng qín (0.4), huái huā (0.4)
		bài jiàng cǎo (1), yìyī rén (0.7), báizhú (0.6), mùdǎnpí (0.5), fùzǐ (0.5), hòupò (0.4), huáng qín (0.4), gégēn (0.4)
		bài jiàng cǎo (1), huái huā (0.7), báizhú (0.6), dì yú (0.5), mùdǎnpí (0.5), hòupò (0.4), huáng qín (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), huái huā (0.7), báizhú (0.6), hòupò (0.5), fúling (0.5), huáng qín (0.4), gégēn (0.4), gāncǎo (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), huái huā (0.7), báizhú (0.6), mùdǎnpí (0.5), hòupò (0.5), fúling (0.4), huáng qín (0.4), gégēn (0.4), gāncǎo (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), huái huā (0.7), báizhú (0.6), báizhǐ (0.5), dì yú (0.5), hòupò (0.4), huáng qín (0.4), gāncǎo (0.4), fùzǐ (0.4)
		dì yú (1), huái huā (0.7), báizhú (0.6), báisháo (0.5), fǎng fèng (0.5), fúling (0.4), bài jiàng cǎo (0.4), huáng qín (0.4), gāncǎo (0.4)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2)
Urinary tract infection	Urinary tract infection, site not specified (599.0)	báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3), huáshí (0.3)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4), huáshí (0.4)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2), huáshí (0.2)
Hernia - umbilical	Umbilical hernia without mention of obstruction or gangrene (553.1)	xiǎohuixiāng (1), chuān liǎn zǐ (1), mùxiāng (1), wú zhūyú (1), yán hú suǒ (1), lizhī hé (1)
		xiǎohuixiāng (1), chuān liǎn zǐ (1), mùxiāng (1), wú zhūyú (1), yán hú suǒ (1), lizhī hé (1), jú hé (1)
		xiǎohuixiāng (1), chuān liǎn zǐ (1), mùxiāng (1), wú zhūyú (1), yán hú suǒ (1), wū yào (1), lizhī hé (1), jú hé (1)
		xiǎohuixiāng (1), chuān liǎn zǐ (1), mùxiāng (1), wú zhūyú (1), yán hú suǒ (1), wū yào (1), lizhī hé (1), dāngguī (1), jú hé (1)
		xiǎohuixiāng (1), chuān liǎn zǐ (1), mùxiāng (1), wú zhūyú (1), yán hú suǒ (1), qīng pí (1), xiāng fù (1), zhīqiào (1), wū yào (1), lizhī hé (1), jú hé (1)
Enteritis	Other and unspecified noninfectious gastroenteritis and colitis (558.9)	báizhú (1), fúlíng (1)
		báizhú (1), báisháo (1), fúlíng (1), huáng qín (1)
		báizhú (1), báisháo (1), fǎng fēng (1), chénpí (1)
		báizhú (1), shānrén (0.6), mùxiāng (0.4), huáng qín (0.3), huánglián (0.3)
Renal (kidney) failure - chronic	Chronic kidney disease (585)	báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), zhì gāncǎo (0.3), máhuáng (0.2)
		báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), zhì gāncǎo (0.3), máhuáng (0.2), dàhuáng (0.2)
		báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), chixiǎodòu (0.3), zhì gāncǎo (0.2), máhuáng (0.2), dāngguī (0.2)
Pyometra	Unspecified inflammatory disease of uterus (615.9)	gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), zéxiè (1), lóngdǎn cǎo (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), zéxiè (1), lóngdǎn cǎo (1)
		chuān liǎn zǐ (1), yán hú suǒ (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), lóngdǎn cǎo (1)
		dihuáng (1), dāngguī (0.7), shí chāngpú (0.6), ējiāo (0.5), wū yào (0.5), bì xiè (0.4), chuānxiōng (0.4), àiyè (0.4)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), xiāng fù (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), zéxiè (1), lóngdǎn cǎo (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), zéxiè (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), lóngdǎn cǎo (1)
		báisháo (1), dihuáng (0.7), mùdānpí (0.6), ējiāo (0.5), dāngguī (0.5), dàzǎo (0.4), niúxī (0.4), xiāng fù (0.4), huángbó (0.4)
Neoplasm - mammary	Malignant neoplasm of breast (female), unspecified (174.9)	bàn zhī lián (1), báihuāshé shé cǎo (1)
		bàn zhī lián (1), báihuāshé shé cǎo (0.7), huángqí (0.6), púgōngyīng (0.5), dāng shēn (0.5), dānshēn (0.4), hé huān pí (0.4), bèimǔ (0.4), yè jiāo téng (0.4)
		bàn zhī lián (1), báihuāshé shé cǎo (0.7), huángqí (0.6), púgōngyīng (0.5), dāng shēn (0.5), dānshēn (0.4), hé huān pí (0.4), yè jiāo téng (0.4), zhīmǔ (0.4)
		bàn zhī lián (1), báihuāshé shé cǎo (0.7), huángqí (0.6), púgōngyīng (0.5), dāng shēn (0.5), hé huān pí (0.4), yè jiāo téng (0.4), zhīmǔ (0.4), jīnyínhuā (0.4)
Mass lesion - mammary	Benign neoplasm of breast (217)	tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), mǔlì (1), bèimǔ (1), xià kūcǎo (1)
		tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), gāncǎo (1), mǔlì (1), bèimǔ (1), jīnyínhuā (1), guā lóu rén (1)
		tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), gāncǎo (1), bèimǔ (1), guā lóu rén (1), púgōngyīng (1)
		tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), mǔlì (1), bèimǔ (1), xià kūcǎo (1), guā lóu rén (1)
		tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), gāncǎo (1), bèimǔ (1), jīnyínhuā (1), guā lóu rén (1), liánqiào (1)

Table 6.1. (Continued).

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		tiānhuā (1), niúbàng zǐ (1), xuánshēn (1), gāncǎo (1), mǔlì (1), bèimǔ (1), jīnyínhuā (1), guā lóu rén (1), liánqiáo (1)
Dystocia	Unspecified indication for care or intervention related to labor and delivery, unspecified as to episode of care or not applicable (659.90)	báizhú (1), huáng qín (0.6), chuānxiōng (0.5), báisháo (0.4), dāngguī (0.4), chái hú (0.3), zhīzǐ (0.3)
		báizhú (1), huáng qín (0.6), chuānxiōng (0.4), báisháo (0.3), dāngguī (0.3), chái hú (0.2), zhīzǐ (0.2)
		báizhú (1), báisháo (0.6), huáng qín (0.5), dāngguī (0.4), chuānxiōng (0.4), chái hú (0.3), zhīzǐ (0.3)
		báizhú (1), báisháo (0.6), huáng qín (0.4), dāngguī (0.3), chuānxiōng (0.3), chái hú (0.2), zhīzǐ (0.2)
		báizhú (1), báisháo (0.6), huáng qín (0.5), chuānxiōng (0.4), dāngguī (0.4), chái hú (0.3), zhīzǐ (0.3)
Pregnancy	Normal delivery (650)	dāngguī (1), shēngjiāng (0.6), ějiāo (0.5)
		dāngguī (1), ějiāo (0.6), shēngjiāng (0.5)
		dāngguī (1), ějiāo (0.6), shēngjiāng (0.5), zhì gāncǎo (0.4)
		dāngguī (1), shēngjiāng (0.6), ějiāo (0.5), zhì gāncǎo (0.4)
Dietary indiscretion - foreign body ingestion	Food poisoning, unspecified (005.9)	gégēn (1), huáng qín (0.6), gāncǎo (0.5), huánglián (0.4)
		gégēn (1), gāncǎo (0.6), huáng qín (0.5), huánglián (0.4)
		gégēn (1), gāncǎo (0.6), huáng qín (0.4), huánglián (0.3)
		gégēn (1), huáng qín (0.6), huánglián (0.5), gāncǎo (0.4)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), máhuáng (0.3)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), shígāo (0.3), máhuáng (0.3)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), jīnyínhuā (0.3), huánglián (0.3)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), jīnyínhuā (0.3), huánglián (0.3)
Canine hemorrhagic gastroenteritis (HGE)	Acute gastritis, with hemorrhage (535.01)	báimáo gēn (1), zhīzǐ (0.5), jīnyínhuā (0.3), huáng qín (0.2), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), jīnyínhuā (0.5), zhīzǐ (0.3), huáng qín (0.2), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), jīnyínhuā (0.6), zhīzǐ (0.4), huáng qín (0.3), huángbò (0.3), huánglián (0.2)
		báimáo gēn (1), jīnyínhuā (0.4), zhīzǐ (0.3), huáng qín (0.2), huángbò (0.1), huánglián (0.1)
		báimáo gēn (1), jīnyínhuā (0.6), zhīzǐ (0.5), huáng qín (0.4), huángbò (0.4), huánglián (0.3)
		báimáo gēn (1), jīnyínhuā (0.5), shān zhīzǐ (0.3), àiyè (0.2), liánqiáo (0.2), fáng fēng (0.2), diào téng gōu (0.1), huáng qín (0.1), huángbò (0.1), huánglián (0.1)
		báimáo gēn (1), jīnyínhuā (0.6), shān zhīzǐ (0.4), àiyè (0.3), liánqiáo (0.3), fáng fēng (0.2), diào téng gōu (0.2), huáng qín (0.2), huángbò (0.2), huánglián (0.1)
		báimáo gēn (1), jīnyínhuā (0.5), shān zhīzǐ (0.3), àiyè (0.2), hǎipiāoxiǎo (0.2), huáng qín (0.2), huángbò (0.1), huánglián (0.1)
		báimáo gēn (1), jīnyínhuā (0.6), shān zhīzǐ (0.4), àiyè (0.3), liánqiáo (0.3), fáng fēng (0.2), diào téng gōu (0.2)
		báimáo gēn (1), jīnyínhuā (0.6), shān zhīzǐ (0.5), àiyè (0.4), liánqiáo (0.4), fáng fēng (0.3), diào téng gōu (0.3)
		fúling (1), bànxià (0.6), fūzǐ (0.5), xīxīn (0.4), dàhuáng (0.4)
		chái hú (1), bànxià (0.7), báisháo (0.6), zhīshí (0.5), huáng qín (0.5), dàzǎo (0.4), shēngjiāng (0.4), dàhuáng (0.4)
Pancreatitis	Acute pancreatitis (577.0)	chái hú (1), bànxià (0.7), báisháo (0.6), zhīshí (0.5), huáng qín (0.5), dàzǎo (0.4), shēngjiāng (0.4)
		chái hú (1), huáng qín (0.7), bànxià (0.6), báisháo (0.5), zhīshí (0.5), dàzǎo (0.4), shēngjiāng (0.4), dàhuáng (0.4)
		chái hú (1), bànxià (0.7), báisháo (0.6), zhīshí (0.5), huáng qín (0.5), dàzǎo (0.4), shēngjiāng (0.4), dàhuáng (0.4)
		chái hú (1), bànxià (0.7), báisháo (0.6), zhīshí (0.5), huáng qín (0.5), dàzǎo (0.4), shēngjiāng (0.4)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Hepatopathy (liver disorder)	Chronic liver disease and cirrhosis (571)	shān zhīzǐ (1), yīn chén (0.6), huáng qín (0.5), dàhuáng (0.4)
		shān zhīzǐ (1), yīn chén (0.6), dàhuáng (0.5), huáng qín (0.4)
		shān zhīzǐ (1), yīn chén (0.6), dàhuáng (0.5), hǎipiāoxiǎo (0.4), huáng qín (0.4)
		shān zhīzǐ (1), yīn chén (0.7), dàhuáng (0.6), hǎipiāoxiǎo (0.5), huáng qín (0.5)
		shān zhīzǐ (1), yīn chén (0.7), dàhuáng (0.6), shānzhā (0.5), hǎipiāoxiǎo (0.5), huáng qín (0.4)
Nematode (roundworm) infestation	Ascariasis (127.0)	shān zhīzǐ (1), yīn chén (0.7), dàhuáng (0.6), shānzhā (0.5), hǎipiāoxiǎo (0.5)
		hòupò (1), zhīshí (0.2), dàhuáng (0.1)
		bànxià (1), fùzǐ (0.4), fúlíng (0.3), xīxīn (0.2), dàhuáng (0.1)
		bànxià (1), fùzǐ (0.3), fúlíng (0.2), xīxīn (0.1), dàhuáng (0.1)
		bànxià (1), fùzǐ (0.4), fúlíng (0.2), xīxīn (0.1), dàhuáng (0.1)
Hyperadrenocorticism (Cushing's disease)	Cushing's syndrome (255.0)	bànxià (1), fùzǐ (0.5), fúlíng (0.3), xīxīn (0.2), dàhuáng (0.2)
		bànxià (1), fùzǐ (0.2), fúlíng (0.1), xīxīn (0.1), dàhuáng (0)
		báizhú (1), báisháo (1), fùzǐ (1), fúlíng (1)
		báizhú (1), báisháo (1), fùzǐ (1), fúlíng (1), dǎng shēn (1)
		báizhú (1), zhì gāncǎo (1), fùzǐ (1), fúlíng (1), gānjiāng (1)
Diabetes mellitus	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (250.00)	báizhú (1), zhì gāncǎo (1), fùzǐ (1), guīzhī (1)
		báizhú (1), zhì gāncǎo (1), fùzǐ (1), gānjiāng (1)
		báizhú (1), zhì gāncǎo (1), fùzǐ (1), guīzhī (1), fúlíng (1), gānjiāng (1)
		báizhú (1), báisháo (1), fùzǐ (1), fúlíng (1), gānjiāng (1)
		báizhú (1), zhì gāncǎo (1), fùzǐ (1), guīzhī (1), fúlíng (1)
Mass lesion - abdominal	Abdominal or pelvic swelling mass or lump (789.3)	báizhú (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), huángqí (1), dǎng shēn (1)
		báizhú (1), báisháo (1), zhì gāncǎo (1), fùzǐ (1), fúlíng (1), gānjiāng (1)
		dàn zhú yè (1), guā lóu gēn (0.6), dìhuáng (0.5), fúlíng (0.4), mài mén dòng (0.4), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.3)
		dàn zhú yè (1), guā lóu gēn (0.6), dìhuáng (0.5), fúlíng (0.4), mài mén dòng (0.4), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.3), dàhuáng (0.2)
		dàn zhú yè (1), guā lóu gēn (0.6), dìhuáng (0.5), fúlíng (0.4), mài mén dòng (0.4), dàhuáng (0.3), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.2)
Inflammatory bowel disease (IBD)	Ulcerative enterocolitis (556)	xià kūcǎo (1)
		xià kūcǎo (1), gāncǎo (0.2)
		xià kūcǎo (1), xuánshēn (0.7), mǔlǐ (0.6), bèimǔ (0.5)
		xià kūcǎo (1), xuánshēn (0.6), mǔlǐ (0.5), bèimǔ (0.4)
		xià kūcǎo (1), xuánshēn (0.8), mǔlǐ (0.8), bèimǔ (0.7)
		fúlíng (1), bài jiàng cǎo (0.7), yīyī rén (0.6), báizhú (0.5), mùdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4)
		fúlíng (1), bài jiàng cǎo (0.7), yīyī rén (0.6), báizhú (0.5), mùdānpí (0.5), yán hú suǒ (0.4), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4)
		fúlíng (1), bài jiàng cǎo (0.8), yīyī rén (0.8), báizhú (0.7), mùdānpí (0.7), fùzǐ (0.6), hòupò (0.6), huáng qín (0.6)
		fúlíng (1), bài jiàng cǎo (0.8), báizhú (0.8), mùdānpí (0.7), yán hú suǒ (0.7), fùzǐ (0.6), hòupò (0.6), huáng qín (0.6), gégēn (0.6)
		fúlíng (1), bài jiàng cǎo (0.7), yīyī rén (0.6), báizhú (0.5), mùdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4), gégēn (0.4)
		fúlíng (1), bài jiàng cǎo (0.8), yīyī rén (0.8), báizhú (0.7), mùdānpí (0.7), fùzǐ (0.6), hòupò (0.6), huáng qín (0.6), huái huā (0.6)
		fúlíng (1), bài jiàng cǎo (0.7), yīyī rén (0.6), báizhú (0.5), mùdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4), huái huā (0.4)

Again, let's try to find any strategies guiding the various herbal recipes for the gastrointestinal system diseases. Figure 6.1 shows the combinations of herbs in recipes for the 29 gastrointestinal diseases. We see the network of herb pairs consists of hubs forming subnetworks. For example, expectorant herbs such as bànxià and jiégēng combine not only with the other expectorant but also with qì tonifying herbs such as zhì gāncǎo, diaphoretic herbs such as báizhǐ, exterior-dampness removing herbs such as

fúlíng and interior warming herbs such as fùzǐ and gānjiāng. Similarly, respiratory-heat clearing herbs such as jīnyínhuā and bài jiàng cǎo combine with themselves or with hematinic herbs such as dāngguī and báisháo. Alternatively, blood-heat clearing herbs such as xuánshēn pair with qì tonifying herbs such as gāncǎo and huángqí. Note that, in dictionary Table 3.2, any one of bànxià, zhì gāncǎo, fúlíng, fùzǐ, gānjiāng, jīnyínhuā, bài jiàng cǎo, dāngguī, báisháo, gāncǎo and huángqí alone treats gastrointestinal diseases. Different modes of combinations can reflect differences in the disease manifestations such as inflammation, infection, wastes/biofluid excess, nutrition deficiency and bleeding.

The mean exponent and size of the recipes for the gastrointestinal system diseases are 0.63 and 6.5, respectively. So, the proportional weights should be 1.0, 0.7, 0.5, 0.4, 0.4, 0.3 and 0.3 for a typical, seven-herb CHEG recipe for a gastrointestinal disease according to the Zipf’s law formula. The top three herbs for the third to the fifth heaviest herbs in such a recipe are huáng qín, xuánshēn and shārén for skin-damp-heat clearing, blood-heat clearing and interior-dampness removing, respectively. The top two herbs for the two lightest herbs in such a recipe are dàhuáng and xīxīn for purgation and interior warming, respectively. Note again that huáng qín, shārén and dàhuáng are annotated in Table 3.2 for the treatment of gastrointestinal diseases. From the values of the mean exponent and size relative to those of other disease systems (*cf.* Figures 4.2 and 12.2), the consensus in the prescriptions for gastrointestinal diseases by the herbalists is above moderate, if we regard a large exponent as consensus.

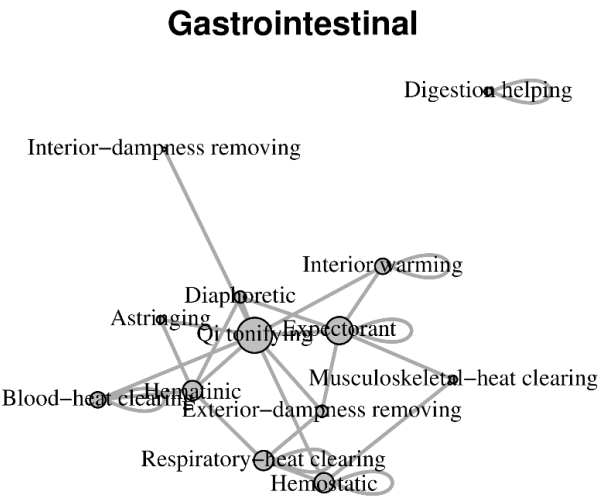


Figure 6.1. Combination of herb classes for gastrointestinal diseases.

Chapter 7

SPINAL COLUMN

The spinal column is central to not only the skeleton but also the nervous system. Four common diseases in the dog strike the spinal column, affecting the musculoskeletal system. They are: intervertebral disc disorder, pain – spinal, spondylosis, and lumbar spine disorder. Cats rarely suffer from diseases of the spinal column. We discuss the musculoskeletal system diseases and the associated herbal strategies and recipes in this chapter.

7.1. COMBINATIONS OF QI TONIFYING AND CIRCULATION ACTIVATING AND BLOOD STASIS RELIEVING HERBS FOR MUSCULOSKELETAL CONDITIONS

Let's show the table on the next page so that impatient readers can quickly jump to the recipes they need. Note that it is not uncommon that acupuncture is prescribed as part of the CHEG therapy for musculoskeletal conditions.

Twelve common diseases affect the musculoskeletal system in dogs and cats. They are osteoarthritis (i.e., degenerative joint disease, DJD), lameness, cruciate disease, patellar luxation, hip dysplasia, stiffness, intervertebral disc disorder, pain – spinal, spondylosis, lumbar spine disorder, arthritis and fracture finding. As before, we identify the therapeutic classes of the leading herbs in each recipe. The inter-pairing of the classes is shown in Figure 7.1. We see qi tonifying herbs such as báizhú, huángqí, gāncǎo and dǎng shēn and circulation activating and blood stasis relieving herbs such as niúxī and dānshēn as the two network hubs, to which hematinic herbs such as báisháo and dānggū, exterior-dampness removing herbs such as fúlíng, blood-heat removing herbs such as dìhuáng, interior warming herbs such as fùzǐ and yang tonifying herbs such as gǒu jǐ and bǔ gǔ zhī connect. Note that, in CHEG dictionary Table 3.2, huángqí and dānshēn are

used for monoplegia of upper limb, dǎng shēn for syncope and collapse, niúxī, fùzǐ and bǔ gǔ zhī for pain in joint, and gǒu jǐ for lumbago. Note also that a qi tonifying herb combines with the other qi tonifying herbs for the treatment of musculoskeletal system diseases.

Table 7.1. CHEG recipes for diseases affecting spinal column in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Intervertebral disc disorder	Intervertebral disc disorders (722)	báizhú (1), báisháo (0.7), fùzǐ (0.6), fúlíng (0.5), dǎng shēn (0.5)
		niúxī (1), báisháo (0.7), dùzhòng (0.6), guizhī (0.5), gǔ suì bǔ (0.5), xù duàn (0.4), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4)
		báizhú (1), fúlíng (0.7), zhì gāncǎo (0.6), gānjiāng (0.5), niúxī (0.5), fùzǐ (0.4), guizhī (0.4)
		báizhú (1), fúlíng (0.7), zhì gāncǎo (0.6), gānjiāng (0.5), niúxī (0.5), ròuguì (0.4), fùzǐ (0.4)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), zhīshí (0.5), ròuguì (0.4), fùzǐ (0.4)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), gānjiāng (0.5), ròuguì (0.4), fùzǐ (0.4)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), zhīshí (0.5), guizhī (0.4), fùzǐ (0.4)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), fùzǐ (0.5), guizhī (0.4), gānjiāng (0.4)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), gānjiāng (0.5), fùzǐ (0.4), guizhī (0.4)
Pain - spinal	Pain in thoracic spine (724.1)	dānshēn (1), dihuáng (0.7), héshǒuwū (0.6), fúlíng (0.5), dǎng shēn (0.5), kuàndōng huā (0.4), báizhú (0.4), báisháo (0.4), qiàncǎo (0.4), dāngguī (0.4)
		dānshēn (1), dihuáng (0.7), héshǒuwū (0.6), fúlíng (0.5), dǎng shēn (0.5), kuàndōng huā (0.4), báizhú (0.4), qiàncǎo (0.4), dāngguī (0.4)
		dānshēn (1), dihuáng (0.6), héshǒuwū (0.5), fúlíng (0.4), dǎng shēn (0.4), kuàndōng huā (0.3), báizhú (0.3), qiàncǎo (0.3), dāngguī (0.2)
		dānshēn (1), dihuáng (0.7), héshǒuwū (0.6), fúlíng (0.5), dǎng shēn (0.5), kuàndōng huā (0.4), báizhú (0.4), mùguā (0.4), qiàncǎo (0.4), dāngguī (0.4)
		dānshēn (1), dihuáng (0.7), héshǒuwū (0.6), fúlíng (0.5), dǎng shēn (0.5), kuàndōng huā (0.4), báizhú (0.4), mùguā (0.4), báisháo (0.4), qiàncǎo (0.4), dāngguī (0.3)
		dānshēn (1), báisháo (0.6), dihuáng (0.5), fúlíng (0.4), huángjīng (0.4), kuàndōng huā (0.3), bái biāndòu (0.3), qiàncǎo (0.3), dāngguī (0.2)
		dānshēn (1), dihuáng (0.7), héshǒuwū (0.6), fúlíng (0.5), dǎng shēn (0.5), kuàndōng huā (0.4), báizhú (0.4), qiàncǎo (0.4), sīgūa luò (0.4), dāngguī (0.4)
		dānshēn (1), dihuáng (0.6), héshǒuwū (0.5), fúlíng (0.4), dǎng shēn (0.4), kuàndōng huā (0.3), báizhú (0.3), mùguā (0.3), qiàncǎo (0.2), dāngguī (0.2)
		báizhú (1), báisháo (1), fùzǐ (1), fúlíng (1), dǎng shēn (1)
Spondylosis	Spondylosis of unspecified site, without mention of myelopathy (721.90)	báizhú (1), báisháo (0.7), fùzǐ (0.6), fúlíng (0.5), dǎng shēn (0.5)
		báizhú (1), báisháo (1), fùzǐ (1), fúlíng (1), dǎng shēn (1), plus acupuncture
		báizhú (1), fúlíng (0.8), niúxī (0.8), zhì gāncǎo (0.7), fùzǐ (0.7), guizhī (0.6), gānjiāng (0.6)
		báizhú (1), fúlíng (0.6), zhì gāncǎo (0.5), gānjiāng (0.4), niúxī (0.4), ròuguì (0.3), fùzǐ (0.3)
		báizhú (1), fúlíng (0.7), zhì gāncǎo (0.6), gānjiāng (0.5), niúxī (0.5), fùzǐ (0.4), guizhī (0.4)
		báizhú (1), zhì gāncǎo (0.7), zhīshí (0.6), fúlíng (0.5), niúxī (0.5), fùzǐ (0.4), guizhī (0.4), plus acupuncture
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúlíng (0.5), dǎng shēn (0.5)
		báizhú (1), báisháo (0.8), fùzǐ (0.8), fúlíng (0.7), dǎng shēn (0.7)
		báizhú (1), fùzǐ (0.7), báisháo (0.6), fúlíng (0.5), dǎng shēn (0.5)
Lumbar spine disorder	Unspecified disease of spinal cord (336.9)	báizhú (1), fúlíng (0.6), zhì gāncǎo (0.5), gānjiāng (0.4), niúxī (0.4), ròuguì (0.3), fùzǐ (0.3)
		báizhú (1), fúlíng (0.7), zhì gāncǎo (0.6), gānjiāng (0.5), niúxī (0.5), ròuguì (0.4), fùzǐ (0.4)
		báizhú (1), fúlíng (0.7), zhì gāncǎo (0.6), gānjiāng (0.5), niúxī (0.5), fùzǐ (0.4), guizhī (0.4)
		báizhú (1), fúlíng (0.6), zhì gāncǎo (0.5), gānjiāng (0.4), niúxī (0.4), fùzǐ (0.3), guizhī (0.3)
		báizhú (1), fúlíng (0.7), niúxī (0.6), zhì gāncǎo (0.5), zhīshí (0.5), guizhī (0.4), fùzǐ (0.4)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúlíng (0.5), dǎng shēn (0.5)
		báizhú (1), báisháo (0.8), fùzǐ (0.8), fúlíng (0.7), dǎng shēn (0.7)

As to the Zipf’s exponents and recipe sizes, their means are 0.46 and 7.3, respectively. In comparison to the mean values of other systems of diseases (*cf.* Figures 4.2 and 12.2), musculoskeletal system diseases demand many herbs with large doses, suggesting that

musculoskeletal system diseases are refractory in the viewpoint of the CHEG herbalists in Taiwan. A typical recipe for musculoskeletal diseases has the dose ratio of 1.0, 0.7, 0.6, 0.5, 0.5, 0.4 and 0.4 for its component herbs from the heaviest to lightest. The secondary herbs, i.e., the third to the fifth heaviest herbs, in such a recipe are qi tonifying herbs, exterior-dampness removing or circulation activating and blood stasis relieving herbs such as zhì gāncǎo, fúlíng and niúxī, respectively. The tertiary herbs, i.e., the lightest herbs, in such a recipe are usually dāngguī, dǎng shēn or fùzǐ for hematinic, qi tonifying and interior warming, respectively.

Musculoskeletal

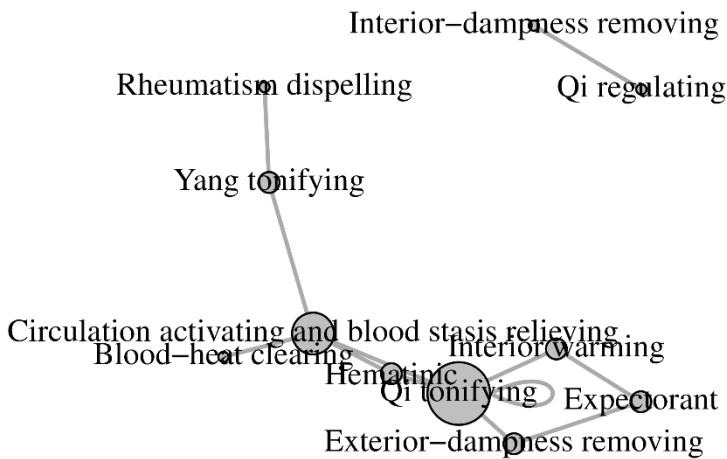


Figure 7.1. Combination of herb classes for musculoskeletal diseases.

Chapter 8

PELVIS

In the pelvis of pets reside the renal and reproductive systems. Three canine diseases commonly arise in the region, affecting two organ systems. They are: 1) reproductive system diseases including prostatic disorder and vaginitis and 2) musculoskeletal system diseases including hip dysplasia. In this chapter, in addition to the pelvic diseases and corresponding recipes, we discuss reproductive system diseases and the associated herbal strategies and recipes. The renal system diseases will be addressed in the feline pelvis chapter.

8.1. COMBINATIONS OF HEMOSTATIC, BLOOD-HEAT CLEARING, QI TONIFYING, HEMATINIC AND INTERIOR WARMING HERBS FOR REPRODUCTIVE SYSTEM CONDITIONS

The three conditions inflicted on canine pelvis are shown in Table 8.1 below together with the human equivalent conditions and CHEG recipes prescribed by the neural machine translation deep learning model which utilized the health insurance dataset containing seven million CHEG reimbursement claims.

Combining the common reproductive system conditions in dogs and cats, we have six conditions: pyometra, dystocia, pregnancy, prostatic disorder, vaginitis, estrus. The former five affect dogs and the last one cats. From the recipes of the deep learning model output, we identify both heaviest herbs and their classes in each recipe. Because we know which herb pairs with which herb in the recipe, we construct the class pairing network of the important herbs for reproductive system conditions shown in Figure 8.1. From the network, we find, first of all, hemostatic herbs such as àiyè and báimáo gēn pair with

Table 8.1. CHEG recipes for diseases affecting pelvis in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Prostatic disorder	Unspecified disorder of prostate (602.9)	fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), mǔlì (0.4), lónggǔ (0.4)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), xīxīn (0.4)
		huángqí (1), shānzhūyú (0.8), shānyào (0.8), niúxī (0.7), dùzhòng (0.7), chì fúlíng (0.6), chē qián zǐ (0.6), fǎng jì (0.6), zhì gāncǎo (0.6), fùzǐ (0.6), gǒuqǐzǐ (0.5)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), ròuguì (0.5), wú zhūyú (0.5), xīxīn (0.4)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), mǔlì (0.4), xīxīn (0.4), lónggǔ (0.4)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), mǔlì (0.4), lónggǔ (0.4), xīxīn (0.4)
		huángqí (1), shānzhūyú (0.8), shānyào (0.8), niúxī (0.7), dùzhòng (0.7), chì fúlíng (0.6), chē qián zǐ (0.6), fǎng jì (0.6), zhì gāncǎo (0.6), fùzǐ (0.6), jiùcài zǐ (0.5)
Hip dysplasia	Congenital dislocation of hip, unilateral (754.30)	zhì gāncǎo (1), gānjiāng (0.7), fùzǐ (0.6)
		zhì gāncǎo (1), gānjiāng (0.6), fùzǐ (0.5)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), mài mén dōng (1)
		zhì gāncǎo (1), fùzǐ (0.7), gānjiāng (0.6)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), mài mén dōng (1)
		gāncǎo (1), báizhú (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), chénpí (1), huángqí (1), gégēn (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), chénpí (1), huángqí (1), dǎng shēn (1)
Vaginitis	Vaginitis and vulvovaginitis, unspecified (616.10)	báimáo gēn (1), àiyè (0.6), zhīzǐ (0.4), jīnyínhuā (0.3), hǎipiāoxiǎo (0.3), huáng qín (0.2), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.4), jīnyínhuā (0.3), huáng qín (0.3), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.5), jīnyínhuā (0.4), huáng qín (0.4), huángbò (0.3), huánglián (0.3)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.5), jīnyínhuā (0.4), hǎipiāoxiǎo (0.4), huáng qín (0.3), huángbò (0.3), huánglián (0.3)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.4), shān zhīzǐ (0.3), báisháo (0.3), hǎipiāoxiǎo (0.2), jīnyínhuā (0.2), huáng qín (0.2), huángbò (0.2), huánglián (0.1)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.5), shān zhīzǐ (0.4), báisháo (0.4), hǎipiāoxiǎo (0.3), jīnyínhuā (0.3), huáng qín (0.3), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.5), shān zhīzǐ (0.4), báisháo (0.4), jīnyínhuā (0.3), hǎipiāoxiǎo (0.3), huáng qín (0.3), huángbò (0.2), huánglián (0.2)
		báimáo gēn (1), àiyè (0.6), zhīzǐ (0.4), shān zhīzǐ (0.3), báisháo (0.3), jīnyínhuā (0.2), hǎipiāoxiǎo (0.2), huáng qín (0.2), huángbò (0.2), huánglián (0.1)

each other, and that blood-heat clearing herbs such as dìhuáng pair with qì tonifying herbs such as gāncǎo and báizhú or with hematinic herbs such as dāngguī and báisháo for the treatment of reproductive system conditions. In addition, interior warming herbs such as fùzǐ and gānjiāng are found to pair with themselves in the treatment. Note that, in Table 3.2 of Chapter 3, àiyè, dāngguī, báisháo and gānjiāng are used for menstrual

conditions and that dihuáng pairs with gāncǎo or báizhú mainly for dermatitis and constipation. The seemingly discrepant pairings arise because the aforementioned six reproductive system conditions are less commonly encountered in CHEG therapy than dermatitis and constipation.

The mean values of the Zipf's exponents and recipe sizes of the reproductive system condition recipes are 0.43 and 7.4, respectively. Compared with those for other disease systems shown in Figures 4.2 and 12.2, we see that a recipe for reproductive system conditions required many component herbs with heavy doses because the component weights from the heaviest to lightest decay slowly: 1.0, 0.7, 0.6, 0.6, 0.5, 0.5 and 0.4. The heaviest two herbs for such a recipe can be chosen from such classes of herbs as hemostatic, blood-heat clearing, qi tonifying, hematinic and interior warming herbs as discussed above. The third to the fifth heaviest herbs are usually respiratory-heat clearing, exterior-dampness removing or musculoskeletal-heat clearing herbs such as jīnyínhuā, chē qián zǐ and zhīzǐ, respectively, depending on the disease manifestations. The lightest two herbs are likely to be skin-damp-heat clearing herbs such as huángbò and huánglián, both of which are indicated for menstruation related conditions in the CHEG dictionary of Table 3.2.

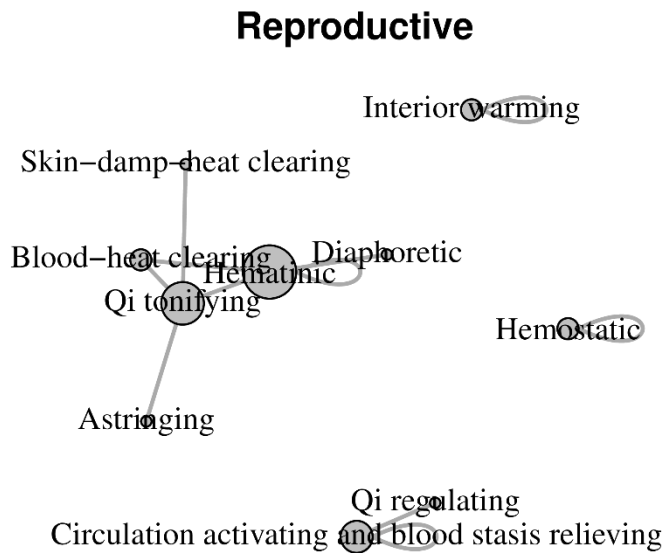


Figure 8.1. Combination of herb classes for reproductive diseases.

Chapter 9

ANUS AND PERINEAL AREA

The anus ends the digestive tract starting from the mouth. Dogs have three common diseases of the anus and perineum. They are anal sac impaction, anal sac infection and incontinence – fecal. We have discussed the gastrointestinal diseases in Chapter 6. Let's turn to the hematopoietic diseases and the associated strategies and recipes with CHEGs in this chapter. The lymphatic diseases will be discussed in the anal chapter of the feline disorders.

9.1. UTILIZATION OF DIAPHORETIC AND BLOOD-HEAT CLEARING HERBS FOR HEMATOPOIETIC CONDITIONS

Table 9.1 lists the diseases and recipes in order of diseasing prevalence in dogs (VetCompass, 2019).

Only two diseases of the hematopoietic system are common in dogs. They are mast cell tumor and histiocytoma (cutaneous). There is not a hematopoietic system disease with a prevalence above 2.5% in cats. So, based on the recipes for the two diseases we construct the network about how the leading herbs pair in the recipes. The result shown in Figure 9.1 shows that diaphoretic herbs such as báizhǐ pair with skin-damp-heat clearing herbs such as huáng qín or with qì tonifying herbs such as zhì gāncǎo or that blood-heat clearing herbs such as xuánshēn combine with endopathic wind calming herbs such as mǔlǐ in the treatment of common hematopoietic diseases.

Table 9.1. CHEG recipes for diseases affecting anus and perineal area in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Anal sac impaction	Abscess of anal and rectal regions (566)	jīnyínhuā (1), liánqiáo (0.6), gāncǎo (0.4)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), jīnyínhuā (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), jīnyínhuā (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), jīnyínhuā (0.2), dàhuáng (0.1)
Anal sac infection	Abscess of anal and rectal regions (566)	jīnyínhuā (1), liánqiáo (0.6), gāncǎo (0.4)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), jīnyínhuā (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), jīnyínhuā (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), jīnyínhuā (0.2), dàhuáng (0.1)
Incontinence - fecal	Incontinence of feces (787.6)	fùzǐ (1), gānjiāng (0.6), cōng bái (0.5), rénshēn (0.4), ròuguì (0.4), wú zhūyú (0.3), xīxīn (0.3)
		fùzǐ (1), gānjiāng (0.6), cōng bái (0.5), ròuguì (0.4), wú zhūyú (0.4), xīxīn (0.3)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), mùlì (0.4), lónggǔ (0.4)
		fùzǐ (1), gānjiāng (0.7), cōng bái (0.6), rénshēn (0.5), ròuguì (0.5), wú zhūyú (0.4), xīxīn (0.4)
		fùzǐ (1), gānjiāng (0.6), cōng bái (0.5), rénshēn (0.4), ròuguì (0.4), wú zhūyú (0.3)
		fùzǐ (1), gānjiāng (0.6), cōng bái (0.5), rénshēn (0.4), ròuguì (0.4), wú zhūyú (0.3), mùlì (0.3), lónggǔ (0.3)

The mean Zipf’s exponent of the recipes for the hematopoietic diseases is large at 0.91 and the mean size is small at 6.1, which suggests specificity of CHEG recipes in the treatment of the hematopoietic diseases. A typical recipe for the hematopoietic diseases will have a dose ratio for its component herbs in the following: 1.0, 0.5, 0.4, 0.3, 0.2 and 0.2. The secondary herbs of such a recipe can be interior dampness removing and expectorant herbs such as shā rén, bèimǔ and jiégěng. The tertiary, i.e., lightest two, herbs are dàhuáng, tiānhuā and zhǐzǐ for laxative, expectorant and musculoskeletal-heat clearing, respectively. Note that, in Table 3.2 of Chapter 3, zhǐzǐ is used to treat nonpsychotic mental disorder and that shā rén and tiānhuā are combined to treat

psoriasis – an autoimmune disease. Such a combination appears again in Chapter 11 when we discuss integumentary diseases.

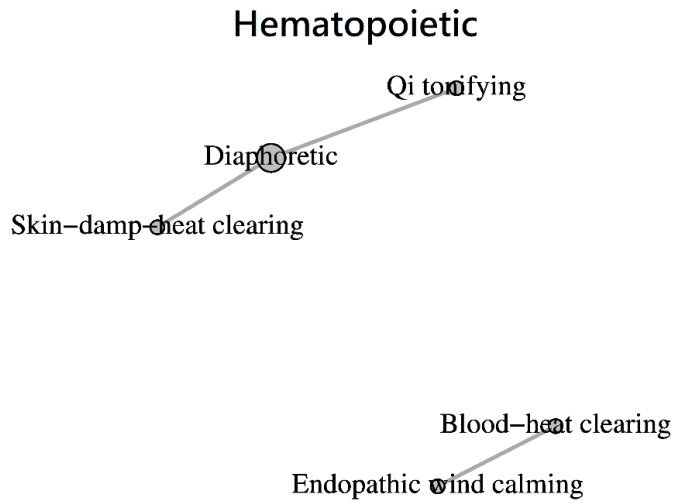


Figure 9.1. Combination of herb classes for hematopoietic diseases.

Chapter 10

LIMB

The limbs are responsible for movement of the pet. Impairments in the limb therefore affect the musculoskeletal system. Dogs have 11 common diseases in the limb belonging to two organ systems: 1) musculoskeletal system diseases including osteoarthritis (degenerative joint disease, DJD), lameness, cruciate disease, patellar luxation, hip dysplasia, stiffness and 2) integumentary system diseases including nail clip, claw injury (traumatic), pododermatitis, interdigital cyst and paronychia. Musculoskeletal diseases were discussed in Chapter 7. Integumentary diseases will not be discussed until next chapter where there are more integumentary conditions. Nervous system diseases are our center of attention in this chapter.

10.1. COMBINATIONS OF DIAPHORETIC, QI TONIFYING, HEMATINIC OR BLOOD-HEAT CLEARING HERBS FOR NERVOUS SYSTEM CONDITIONS

We show the 11 diseases and the associated recipes by deep learning in the table on the following page. Note that acupuncture is frequently prescribed, together with CHEG herbs, for musculoskeletal and connective tissue conditions.

Four nervous system diseases afflict dogs: seizure disorder, epilepsy, cognitive dysfunction and noise phobia while three nervous system diseases affect cats: seizure disorder, cognitive dysfunction and neurological (nervous system) disorder. Some diseases overlap and the number of different nervous system diseases in pets is five. From the recipes for the five diseases we are able to build the network showing what kind of herbs combine with what kind of herbs in the treatment of the nervous system diseases. The result shown in Figure 10.1 indicates that diaphoretic herbs such as júhuā, màn jīng zǐ and shēngjiāng, qi tonifying herbs such as báizhú and huángqí, hematinic herbs such as

báisháo or blood-heat clearing herbs such as chì sháo join with one another in the treatment of nervous system diseases. Also, according to the CHEG dictionary of Table 3.2, júhuā, màn jīng zǐ and shēngjiāng treat headache and báizhú and báisháo treat nonpsychotic mental disorder in humans.

Table 10.1. CHEG recipes for diseases affecting limb in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Nail clip	Other specified diseases of nail (703.8)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), jīnyínhuā (0.2), dàhuáng (0.2)
Osteoarthritis (degenerative joint disease, DJD)	Osteoarthritis unspecified whether generalized or localized (715.9)	bànxià (1), fúlíng (0.7), fùzǐ (0.6), xīxīn (0.5), dàhuáng (0.5)
		dàhuáng (1)
		bànxià (1), fùzǐ (0.6), fúlíng (0.4), xīxīn (0.3), dàhuáng (0.3)
		hòupò (1), zhìshí (0.2), dàhuáng (0.1), huǒ má rén (0.1)
		bànxià (1), fùzǐ (0.5), fúlíng (0.3), xīxīn (0.2), dàhuáng (0.2)
		bànxià (1), fùzǐ (0.4), xīxīn (0.3), dàhuáng (0.2)
Claw injury (traumatic)	Finger injury (959.5)	bànxià (1), fúlíng (0.6), fùzǐ (0.5), xīxīn (0.4), dàhuáng (0.4)
		mòyào (1), rǔxiāng (1), yán hú suǒ (1), guìzhī (1), plus acupuncture
		mòyào (1), rǔxiāng (1), yán hú suǒ (1), guìzhī (1), guìzhī (1)
		mòyào (1), rǔxiāng (0.7), yán hú suǒ (0.6), guìzhī (0.5), plus acupuncture
		jīnyínhuā (1), dāngguī (0.8), niúxī (0.8), xuánshēn (0.7), gāncǎo (0.7), chì sháo (0.6), dàodi wúgōng (0.6), huángqí (0.6), plus acupuncture
		jīnyínhuā (1), dāngguī (0.8), niúxī (0.8), xuánshēn (0.7), chì sháo (0.7), zhì gāncǎo (0.6), dàodi wúgōng (0.6), huángqí (0.6), plus acupuncture
Pododermatitis	Other acariasis (133.8)	jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.4)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.5)
		púgōngyīng (1), jīnyínhuā (0.6), liánqiáo (0.4), gāncǎo (0.3)
		púgōngyīng (1), jīnyínhuā (0.6), liánqiáo (0.5), gāncǎo (0.4)
		jīnyínhuā (1), liánqiáo (0.6), púgōngyīng (0.5), gāncǎo (0.4)
		jīnyínhuā (1), liánqiáo (0.7), púgōngyīng (0.6), niúbàng zǐ (0.5), gāncǎo (0.5), fáng fēng (0.4), jīngjiè (0.4)
Lameness	Abnormality of gait (781.2)	huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), chén pí (0.4), dāngguī (0.4)
		huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), chén pí (0.4), dāngguī (0.4), shù dìhuáng (0.4)
		huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), chén pí (0.4), dāngguī (0.4), shù dìhuáng (0.4), chuānxiōng (0.4)
		huángqí (1), chuānxiōng (0.7), tiānmá (0.6), báizhǐ (0.5), fǎng fēng (0.5), qiānghuó (0.4), màn jīng zǐ (0.4), gǎoběn (0.4), xīxīn (0.4)
		huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), chén pí (0.4), dāngguī (0.4), shù dìhuáng (0.4), shēngjiāng (0.4)
		huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), fúlíng (0.4), chén pí (0.4), dāngguī (0.4), shù dìhuáng (0.4), chuānxiōng (0.3)
		huángqí (1), dāng shēn (0.7), shēng má (0.6), báizhú (0.5), zhì gāncǎo (0.5), chái hú (0.4), chén pí (0.4), dāngguī (0.4), shù dìhuáng (0.4), chuānxiōng (0.4), shēngjiāng (0.3)
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), xù duàn (0.5), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4)
Cruciate disease	Old disruption of anterior cruciate ligament (717.83)	niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), xù duàn (0.5), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4), plus acupuncture
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), xù duàn (0.5), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4), plus acupuncture
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), dāngguī (0.5), mùguā (0.4), xù duàn (0.4), mòyào (0.4), rǔxiāng (0.4)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), dāngguī (0.5), mùguā (0.4), xù duàn (0.4), mòyào (0.4), rǔxiāng (0.4), plus acupuncture
		niúxī (1), báisháo (0.7), dùzhōng (0.6), guìzhī (0.5), gǔ suì bǔ (0.5), xù duàn (0.4), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4)
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), mùguā (0.5), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4)
		niúxī (1), báisháo (0.7), guìzhī (0.6), gǔ suì bǔ (0.5), mùguā (0.5), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4), plus acupuncture
		niúxī (1), báisháo (0.7), dùzhōng (0.6), guìzhī (0.5), gǔ suì bǔ (0.5), dāngguī (0.4), mùguā (0.4), xù duàn (0.4), mòyào (0.4), rǔxiāng (0.4)
		niúxī (1), báisháo (0.7), dùzhōng (0.6), guìzhī (0.5), gǔ suì bǔ (0.5), xù duàn (0.4), mùguā (0.4), dāngguī (0.4), mòyào (0.4), rǔxiāng (0.4), plus acupuncture
Patellar luxation	Dislocation of patella, closed (836.3)	gǔ suì bǔ (1), bǔ gǔ zhī (1), xù duàn (1), plus acupuncture gǔ suì bǔ (1), bǔ gǔ zhī (1), xù duàn (1)
Interdigital cyst	Carbuncle and furuncle of hand (680.4)	xià kǔcáo (1), gāncǎo (0.2)
		jīnyínhuā (1), dāngguī (0.7), xuánshēn (0.6), gāncǎo (0.5), chì sháo (0.5), dàodì wúgōng (0.4), huángqí (0.4)
		báizhī (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), chì sháo (0.4), dàodì wúgōng (0.3), huángqí (0.3)
Hip dysplasia	Congenital dislocation of hip, unilateral (754.30)	zhì gāncǎo (1), gānjiāng (0.7), fùzǐ (0.6)
		zhì gāncǎo (1), gānjiāng (0.6), fùzǐ (0.5)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), mài mén dōng (1)
		zhì gāncǎo (1), fùzǐ (0.7), gānjiāng (0.6)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), mài mén dōng (1)
		gāncǎo (1), báizhú (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), huángqí (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), chénpí (1), huángqí (1), gégēn (1), dǎng shēn (1)
		gāncǎo (1), báisháo (1), shí hú (1), chē qián zǐ (1), fúlíng (1), dàn dòuchǐ (1), chénpí (1), huángqí (1), dǎng shēn (1)
Stiffness	Stiffness of joint not elsewhere classified (719.5)	sāng jìshēng (1), gōu jǐ (0.7), bā jǐ tiān (0.6), niúxī (0.5), gāncǎo (0.5)
		sāng jìshēng (1), gōu jǐ (0.7), wú jiǎ pí (0.6), bā jǐ tiān (0.5), niúxī (0.5), gāncǎo (0.4)
		sāng jìshēng (1), gōu jǐ (0.7), bā jǐ tiān (0.6), niúxī (0.5), gāncǎo (0.5), xù duàn (0.4)
		sāng jìshēng (1), gōu jǐ (0.7), wú jiǎ pí (0.6), bā jǐ tiān (0.5), niúxī (0.5), gāncǎo (0.4), plus acupuncture
Paronychia	Onychia and paronychia of finger (681.02)	yùzhú (1), dìhuáng (0.7), jīnyínhuā (0.6), yīn chén (0.5), huáng qín (0.5), mùdānpí (0.4), zǐcǎo (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), huáng qín (0.4), zǐcǎo (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), zǐcǎo (0.4), huáng qín (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), zǐcǎo (0.4), huáng qín (0.4), gāncǎo (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), huáng qín (0.4), gāncǎo (0.4), zǐcǎo (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), zǐcǎo (0.4), gāncǎo (0.4), huáng qín (0.4)
		yùzhú (1), dìhuáng (0.7), mùdānpí (0.6), jīnyínhuā (0.5), yīn chén (0.5), huáng qín (0.4), zéxiè (0.4), gāncǎo (0.4)

Nervous

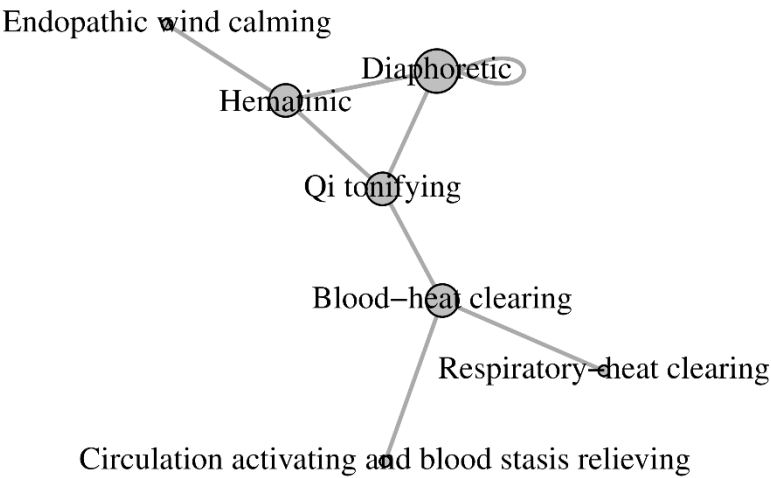


Figure 10.1. Combination of herb classes for nervous system diseases.

The mean Zipf’s exponent, 0.64, and mean recipe size, 6.5, of the recipes for the nervous system diseases, in comparison to those of other disease systems, suggest that the nervous system diseases are tractable by the CHEG therapeutics. The secondary herbs are diaphoretic, blood-heat clearing and exterior-dampness removing herbs such as *bòhé*, *chì sháo* and *fúlíng*, respectively. The tertiary herbs would be other diaphoretic herbs such as *xīn yí* and *shēng má* and other *qì* tonifying herbs such as *dǎng shēn* and *zhì gāncǎo*. The proportions of the herbs in such a recipe would go from 1.0 and 0.6, 0.5, 0.4, 0.4, 0.3 to 0.3.

Chapter 11

WHOLE BODY

Diseases can affect the whole body or anywhere of the whole body, rather than a specific sub-bodily region. Diseases can also affect behavior. We call them whole body diseases, the majority of which are integumentary diseases and connective/soft tissue diseases. There are 14 such whole body diseases in dogs. They involve six physiological systems: 1) integumentary diseases including skin cyst, dermatitis – pyotraumatic (i.e., acute moist), pyoderma, papilloma, hypersensitivity skin disorder – atopic dermatitis, intertrigo, hypersensitivity skin disorder – urticarial; 2) connective tissue diseases including obesity, lipoma; 3) hematopoietic diseases including mast cell tumor, histiocytoma; 4) musculoskeletal system diseases including arthritis; 5) nervous system diseases including noise phobia; and 6) respiratory system diseases including coughing. We discuss integumentary diseases and the associated herbal strategies and recipes in this chapter. The related connective tissue diseases will be discussed in the chapter of feline whole body diseases.

11.1. COMBINATIONS OF DIAPHORETIC, QI TONIFYING, SKIN-DAMP-HEAT CLEARING, RESPIRATORY-HEAT CLEARING AND BLOOD-HEAT CLEARING HERBS FOR INTEGUMENTARY CONDITIONS

The fourteen whole body diseases are shown in dropping prevalence in Table 11.1. Note that the numbers in parentheses were recorded to only one decimal place. That is, they were rounded to the nearest tenth. So, if we see 0, that means the actual value is below 0.05.

Table 11.1. HEG recipes for diseases affecting whole body in dogs

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Obesity	Obesity, unspecified (278.00)	hé yè (1), cǎo juémíng (0.6), máhuáng (0.5), zéxiè (0.4), dānshēn (0.4), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wàn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), máhuáng (0.4), zéxiè (0.3), dānshēn (0.3), chē qián zǐ (0.2), hǔ zhàng (0.2)
		hé yè (1), cǎo juémíng (0.6), chē qián zǐ (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), yù mǐ xū (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.7), máhuáng (0.6), zéxiè (0.5), dānshēn (0.5), chē qián zǐ (0.4), hǔ zhàng (0.4)
		hé yè (1), cǎo juémíng (0.6), máhuáng (0.5), zéxiè (0.4), dānshēn (0.4), shígāo (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wàn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), chē qián zǐ (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), shígāo (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wàn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
Lipoma	Lipoma, unspecified site (214.9)	bái jiè zǐ (1), kūn bù (0.2), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0)
		bái jiè zǐ (1), kūn bù (0.2), xià kūcǎo (0.1), bèimǔ (0.1), gāncǎo (0)
		bái jiè zǐ (1), xià kūcǎo (0.2), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0)
		bái jiè zǐ (1), kūn bù (0.2), xià kūcǎo (0.1), bèimǔ (0.1), hǎipiāoxiǎo (0), gāncǎo (0)
		bái jiè zǐ (1), kūn bù (0.3), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0.1)
		bái jiè zǐ (1), kūn bù (0.3), xià kūcǎo (0.1), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0)
		bái jiè zǐ (1), kūn bù (0.3), bèimǔ (0.2), hǎipiāoxiǎo (0.1), gāncǎo (0.1)
		bái jiè zǐ (1), xià kūcǎo (0.3), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0.1)
		bái jiè zǐ (1), kūn bù (0.3), xià kūcǎo (0.2), bèimǔ (0.1), hǎipiāoxiǎo (0.1), gāncǎo (0.1)
		bái jiè zǐ (1), xià kūcǎo (0.3), bèimǔ (0.2), hǎipiāoxiǎo (0.1), gāncǎo (0.1)
Arthritis	Rheumatoid arthritis (714.0)	báizhú (1), báisháo (0.7), fúzǐ (0.6), fúlíng (0.5), dǎng shēn (0.5)
		báizhú (1), fúzǐ (0.7), báisháo (0.6), fúlíng (0.5), dǎng shēn (0.5)
		báizhú (1), fúzǐ (0.6), báisháo (0.5), fúlíng (0.4), dǎng shēn (0.4), gāncǎo (0.3), gānjiāng (0.3)
Skin (cutaneous) cyst	Sebaceous cyst (706.2)	báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.5), huáng qín (0.4), guā lóu gēn (0.4), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), guā lóu gēn (0.2), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
Dermatitis - pyotraumatic (acute moist)	Contact dermatitis and other eczema, unspecified cause (692.9)	báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
Pyoderma	Pyoderma (686.0)	dìhuáng (1), mùdānpí (0.6), chì sháo (0.4), zhǐmù (0.3), huángbò (0.3), dǎngguī (0.2), chuānxiōng (0.2), ròuguì (0.2)
		dìhuáng (1), mùdānpí (0.7), chì sháo (0.6), fāng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), liánqiáo (0.4), huáng qín (0.4), chántuì (0.4), gāncǎo (0.4)
		dìhuáng (1), mùdānpí (0.7), chì sháo (0.6), fāng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), liánqiáo (0.4), huáng qín (0.4), gāncǎo (0.4)
		dìhuáng (1), mùdānpí (0.7), chì sháo (0.6), fāng fēng (0.5), jīnyínhuā (0.5), jīngjiè (0.4), zhǐzǐ (0.4), liánqiáo (0.4), huáng qín (0.4), gāncǎo (0.4)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		dìhuáng (1), mǔdānpí (0.7), chì sháo (0.6), zhīmù (0.5), huángbò (0.5), dāngguī (0.4), chuānxiōng (0.4)
		shígāo (1), dìhuáng (0.7), mǔdānpí (0.6), chì sháo (0.5), zhīmù (0.5), jīnyínhuā (0.4), liánqiáo (0.4), gāncǎo (0.4)
		dìhuáng (1), mǔdānpí (0.6), chì sháo (0.4), zhīmù (0.3), huángbò (0.3), dāngguī (0.2), chuānxiōng (0.2)
		dìhuáng (1), mǔdānpí (0.6), chì sháo (0.5), zhīmù (0.4), huángbò (0.4), dāngguī (0.3), chuānxiōng (0.3), ròuguì (0.3)
Papilloma	Unspecified viral infection (079.99)	bànxià (1), báisháo (0.7), huáng qín (0.6), gégēn (0.5), dàzǎo (0.5), gāncǎo (0.4), shēngjiāng (0.4)
		gégēn (1), báisháo (0.7), huáng qín (0.6), huáshí (0.5), gāncǎo (0.5)
		gégēn (1), báisháo (0.7), huáng qín (0.6), huáshí (0.5), bànxià (0.5), gāncǎo (0.4)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), máhuáng (0.3)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		bànxià (1), báisháo (0.7), huáng qín (0.6), gégēn (0.5), dàzǎo (0.5), shēngjiāng (0.4)
		bànxià (1), báisháo (0.7), huáng qín (0.6), huáshí (0.5), gégēn (0.5), gāncǎo (0.4)
		bànxià (1), báisháo (0.7), huáng qín (0.6), huáshí (0.5), gégēn (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.4)
		gégēn (1), báisháo (0.6), huáng qín (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3), shígāo (0.3), máhuáng (0.3)
Hypersensitivity (allergic) skin disorder - atopic dermatitis	Atopic dermatitis and related conditions (691)	huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.5), tiānhuā (0.3), zhì gāncǎo (0.2), shā rén (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
Coughing	Cough (786.2)	xìngrén (1), máhuáng (0.6), bànxià (0.5), chénpí (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		xìngrén (1), máhuáng (0.6), bànxià (0.4), chénpí (0.3), gāncǎo (0.3), shēngjiāng (0.2), dàhuáng (0.2)
		bànxià (1), gāncǎo (1), shí hú (1), xìngrén (1), bèimǔ (1), jiégēng (1), sāng bái pí (1), fúlíng (1), mài yá (1), jùhóng (1), bòhé (1)
		xìngrén (1), máhuáng (0.6), bànxià (0.5), hǎipiāoxiǎo (0.4), chénpí (0.4), gāncǎo (0.3), shēngjiāng (0.3)
		xìngrén (1), máhuáng (0.6), bànxià (0.5), chénpí (0.4), hǎipiāoxiǎo (0.4), gāncǎo (0.3), shēngjiāng (0.3)
		bànxià (1), gāncǎo (1), shí hú (1), xìngrén (1), bèimǔ (1), guizhǐ (1), jiégēng (1), sāng bái pí (1), fúlíng (1), mài yá (1), máhuáng (1)
		xìngrén (1), máhuáng (0.7), bànxià (0.6), chénpí (0.5), gāncǎo (0.5), shēngjiāng (0.4)
Noise phobia	Other isolated or specific phobias (300.29)	shēngjiāng (1), báisháo (0.7), guizhǐ (0.6), dàzǎo (0.5), zhì gāncǎo (0.5)
		shēngjiāng (1), guizhǐ (0.7), dàzǎo (0.6), zhì gāncǎo (0.5)
		shēngjiāng (1), guizhǐ (0.7), dàzǎo (0.6), zhì gāncǎo (0.5), fùzǐ (0.5)
		shēngjiāng (1), zhì gāncǎo (0.7), guizhǐ (0.6), dàzǎo (0.5), fùzǐ (0.5)
		shēngjiāng (1), báisháo (0.7), guizhǐ (0.6), gégēn (0.5), dàzǎo (0.5), zhì gāncǎo (0.4)
		shēngjiāng (1), báizhú (0.7), báisháo (0.6), guizhǐ (0.5), fúlíng (0.5), huángqí (0.4), dāngguī (0.4), dāng shēn (0.4), chuānxiōng (0.4), zhì gāncǎo (0.4), fùzǐ (0.3)
		shēngjiāng (1), báizhú (0.7), báisháo (0.6), guizhǐ (0.5), fúlíng (0.5), huángqí (0.4), gégēn (0.4), dāng shēn (0.4), dàzǎo (0.4), zhì gāncǎo (0.4), fùzǐ (0.3)

Table 11.1. (Continued).

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Intertrigo	Other specified erythematous conditions (695.89)	zhì gāncǎo (1), fūzǐ (0.7), gānjiāng (0.6)
		zhì gāncǎo (1), fūzǐ (0.7), shā rén (0.6), huángbò (0.5)
		báizhǐ (1), zhì gāncǎo (0.7), fūzǐ (0.6), gānjiāng (0.5)
		héchǒuwū (1), jī xuè téng (0.7), nǚzhēn zǐ (0.6), hàn lián cǎo (0.5), chì sháo (0.5), xiāng fù (0.4), yín yáng huò (0.4), tùsǐzǐ (0.4), yù jīn (0.4), chái hú (0.4)
		héchǒuwū (1), jī xuè téng (0.7), nǚzhēn zǐ (0.6), báisháo (0.5), hàn lián cǎo (0.5), xiāng fù (0.4), yín yáng huò (0.4), tùsǐzǐ (0.4), yù jīn (0.4), chái hú (0.4)
		héchǒuwū (1), jī xuè téng (0.7), nǚzhēn zǐ (0.6), hàn lián cǎo (0.5), chì sháo (0.5), xiāng fù (0.4), yín yáng huò (0.4), tùsǐzǐ (0.4), cāngěr zǐ (0.4), yù jīn (0.4), chái hú (0.3)
		héchǒuwū (1), jī xuè téng (0.7), nǚzhēn zǐ (0.6), hàn lián cǎo (0.5), chì sháo (0.5), yín yáng huò (0.4), tùsǐzǐ (0.4), xiāng fù (0.4), chái hú (0.4), yù jīn (0.4)
Mast cell tumor	Malignant mast cell tumors, lymph nodes of multiple sites (202.68)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.4), gāncǎo (0.3), shā rén (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
Histiocytoma (cutaneous)	Benign neoplasm of skin, site unspecified (216.9)	xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégēng (0.5), liánqiáo (0.4), shān zhīzǐ (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégēng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), zhīzǐ (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), jiégēng (0.5), liánqiáo (0.5), zhì gāncǎo (0.4), zhīzǐ (0.4), dàhuáng (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégēng (0.5), liánqiáo (0.4), zhīzǐ (0.4)
		xuánshēn (1), mǔlì (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégēng (0.5), liánqiáo (0.4), shān zhīzǐ (0.4), xīng rén (0.4)
Hypersensitivity (allergic) skin disorder - urticaria	Urticaria, unspecified (708.9)	huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)

Seventeen integumentary diseases affect dogs: neoplasm – mammary, mass lesion – mammary, mass lesion – abdominal, mass lesion – eyelid, entropion, nail clip, claw injury (traumatic), pododermatitis, interdigital cyst, paronychia, skin (cutaneous) cyst, dermatitis – pyotraumatic (acute moist), pyoderma, papilloma, hypersensitivity (allergic) skin disorder – atopic dermatitis, intertrigo and hypersensitivity (allergic) skin disorder – urticaria. Fourteen integumentary diseases affect cats: parasite infestation – *Otodectes cynotis*, feline eosinophilic granuloma complex, acne – Feline acne, nail clip, claw injury (traumatic), parasite infestation – fleas, wound, hypersensitivity (allergic) skin disorder, dermatitis, psychogenic dermatosis, post-operative complication – wound related, parasite infestation – ticks, pruritus and alopecia. Many of the diseases overlap so the number of unique integumentary diseases that affect dogs and cats are 29. We have been familiar with the network of herb classes. So, the plot in Figure 11.1 shows that diaphoretic herbs such as báizhǐ, qi tonifying herbs such as zhì gāncǎo, skin-damp-heat

clearing herbs such as huáng qín, respiratory-heat clearing herbs such as jīnyínhuā, blood-heat clearing herbs such as dìhuáng and musculoskeletal-heat clearing herbs such as xià kūcǎo are the major classes of herbs that combine with other classes of herbs in the treatment of integumentary diseases. Also in Table 3.2 each of báizhǐ, huáng qín, jīnyínhuā, dìhuáng and xià kūcǎo is indicated for dermatitis treatment.

Integumentary

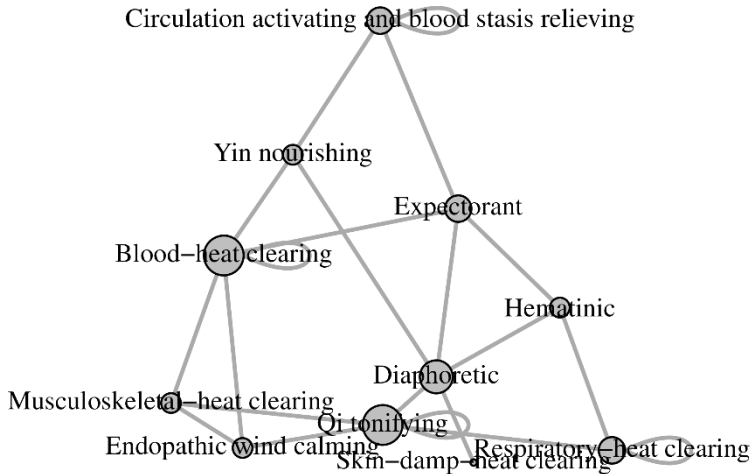


Figure 11.1. Combination of herb classes for integumentary diseases.

The mean Zipf's exponent and recipe size of the recipes for the integumentary diseases are, respectively, 0.68 and 6.1, from which a typical CHEG recipe for integumentary diseases contains six herbs with relative weights: 1.0, 0.6, 0.5, 0.4, 0.3 and 0.3. Figure 11.1 gives clues about the first two herbs. The middle two herbs are herbs of the same classes as those of the first two, or interior dampness removing herbs such as shā rén. The last two herbs are laxative or expectorant herbs such as dà huáng and tiān huā, which are presumably to help eliminate metabolic wastes from the body. In Table 3.2, shā rén and tiān huā are paired for psoriasis and dà huáng alone for dermatitis. In comparison to the mean exponents and sizes of other systems of diseases, CHEG recipes for the integumentary diseases are considered specific or consistent.

PART 3: FELINE DISORDERS

Chapter 12

HEAD AND NECK

The head and neck is crucial to the health of the pet as damage to it can severely compromise the quality of life of the patient. There are 24 common diseases affecting the head and neck of cats. They are shown in the table of the chapter in order of disease prevalence. The 24 head and neck diseases involve eight organ systems of the cat: 1) gastrointestinal system diseases including periodontal disease, dental disease, pharyngeal disorder finding, tongue disorder; 2) ocular diseases including conjunctivitis, corneal disorder finding, discharge – ocular, third eyelid/nictitating membrane disorder finding, tear duct abnormality, cataract; 3) respiratory system diseases including cat flu, upper respiratory tract infection, dyspnea finding, sneezing, rhinitis; 4) integumentary diseases including parasite infestation – *Otodectes cynotis*, feline eosinophilic granuloma complex, acne – feline acne; 5) auditory diseases including otitis externa, ear disorder; 6) nervous system diseases including seizure disorder, cognitive dysfunction; 7) endocrine diseases including hyperthyroidism; and 8) cardiovascular diseases including cerebrovascular accident. Auditory diseases were discussed in Chapter 4. Here we focus on ocular diseases and the associated strategies for the construction of the CHEG recipes. Altogether we address ocular and auditory conditions in the head and neck chapters of the book. Problems with nose and mouth relate to the respiratory and digestive systems and were respectively discussed in Chapter 5 (canine thorax) and Chapter 6 (canine abdomen) of the book.

12.1. COMBINATIONS OF BLOOD-HEAT CLEARING, DIAPHORETIC AND YIN NOURISHING HERBS FOR OCULAR CONDITIONS

Table 12.1 lists the common diseases affecting the head and neck of cats. By common, it means the disease prevalence has to be greater than 2.5% among the pet cats

who attended primary-care veterinary practices in England (O'Neill et al., 2014b; VetCompass, 2019). Eighty-one feline diseases met the prevalence requirement and 24, i.e., 30%, of them affected the head and neck region of the cat. The proportion highlights vulnerability of the head and neck in feline healthcare. Note that similar conclusion applies to canine cases.

The disease names in the first column of Table 12.1 are in the VeNom (short for veterinary *nomenclature*) codes (The VeNom Coding Group, 2013). The disease names in the second column of Table 12.1 are in the ICD-9 (short for the International Statistical Classification of Diseases and Related Health Problem, 9th revision) codes published by the World Health Organization for comparing and sharing (human) health information using standardized terms. An ICD-9 code has at least three digits, which can be followed by a period and then one or two digits for etiology or anatomy of the disease. This is, the more digits the code, the more specific the code specifies the disease. In the table, the digital codes are shown in the parentheses following the diseases. The third and also the final column of the table shows the CHEG recipes the trained deep learning model outputs when we input the ICD-9 disease in the second column. The deep learning model is the state-of-the-art neural machine translation model developed by Google for its language translation service on the Web (i.e., Google Translate). In language translation, a sentence in one language can be translated into several sentences in the other language with equal accuracy and fluency. Likewise, in the final column of the table, we show up to six top output recipes for every input disease.

The values in the parentheses behind each CHEG herb in a recipe give the relative weights of the herbs in the recipe. To get their doses in grams, we need to consult Table 3.1 in Chapter 3 where doses are converted from human at 5 g/60 Kg to a pet (cat or dog) of weight from 1 Kg to 50 Kg using the three-quarter allometric scaling and a safety factor of 2. The joint application of a conservative scaling and safety factor follows the US FDA guidance as the deep learning model was trained on human medical insurance data containing seven million ICD-9 codes and CHEG recipes and the CHEG doses were known for humans but not for pets. Let's take as an example a cat weighing 4 Kg, which is the average weight of the 140,000 cats in the epidemiological study by O'Neill et al. (2014b). So, once we have the weight, we locate the row in Table 3.1. The last three columns of the fourth row of Table 3.1 give the dose regimen of the CHEG therapy: 0.3 g, 5.9 times/day, 13.8 days. Namely, we multiply 0.3 g to the numbers in the parentheses of the recipe in Table 12.1 to get the doses in grams of the component herbs of the recipe. The recipe is to be administered to the cat patient 6 times a day (i.e., very four hours) for 14 days.

Table 12.1. CHEG recipes for diseases affecting head and neck in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Periodontal disease	Gingival and periodontal diseases (523)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), xīxīn (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), xīxīn (0.1), dàhuáng (0.1)
Conjunctivitis	Conjunctivitis, unspecified (372.30)	gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fāng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.7), dìhuáng (0.6), fāng fēng (0.5), dāngguī (0.5), xīxīn (0.4), huánglián (0.4)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), dāngguī (0.4), fāng fēng (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fāng fēng (0.4), jīnyínhuā (0.4), dāngguī (0.3), xīxīn (0.3), huánglián (0.3)
Hyperthyroidism	Thyrotoxicosis without mention of goiter or other cause (242.9)	xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), bèimǔ (0.4), chì shǎo (0.4), cháihú (0.4)
		dānshēn (1), xuánshēn (0.7), mǔlǐ (0.6), xià kūcǎo (0.5), cháihú (0.5), fú shén (0.4), yuǎnzhi (0.4), suānzǎo rén (0.4), gāncǎo (0.4)
		dānshēn (1), xuánshēn (0.7), mǔlǐ (0.6), xià kūcǎo (0.5), cháihú (0.5), fú xiǎomài (0.4), fú shén (0.4), yuǎnzhi (0.4), suānzǎo rén (0.4), gāncǎo (0.4)
		xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), bèimǔ (0.4), chì shǎo (0.4), hǎizǎo (0.4)
		xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), bèimǔ (0.4), chì shǎo (0.4), xiāng fù (0.4)
		xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), chì shǎo (0.4), cháihú (0.4), zhīzǐ (0.4)
		xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), chì shǎo (0.4), cháihú (0.4), hǎizǎo (0.4)
		xuánshēn (1), mǔlǐ (0.7), xià kūcǎo (0.6), dānshēn (0.5), dìhuáng (0.5), mùdānpí (0.4), chì shǎo (0.4), cháihú (0.4), mài mén dòng (0.4)
		dānshēn (1), xuánshēn (0.7), mǔlǐ (0.6), xià kūcǎo (0.5), cháihú (0.5), fú xiǎomài (0.4), fú shén (0.4), yuǎnzhi (0.4), suānzǎo rén (0.4), biējia (0.4), gāncǎo (0.3)
Dental (tooth) disease	Unspecified disorder of the teeth and supporting structures (525.9)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), xīxīn (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.4), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), xīxīn (0.1), dàhuáng (0.1)
Otitis externa	Infective otitis externa (380.1)	xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), xià kūcǎo (0.4), liánqiáo (0.3)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), xià kūcǎo (0.4), liánqiáo (0.3), huáng qín (0.3)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), jīnyínhuā (0.4), xià kūcǎo (0.3), liánqiáo (0.3)
		xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), jīnyínhuā (0.4), xià kūcǎo (0.3), liánqiáo (0.3), huáng qín (0.3)
Cat flu	Influenza (487)	xuánshēn (1), dìhuáng (0.6), mùdānpí (0.5), bèimǔ (0.4), jīnyínhuā (0.4), xià kūcǎo (0.3), liánqiáo (0.3), gāncǎo (0.3)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		gégēn (1), shígiāo (0.6), báisháo (0.4), dàzǎo (0.3), shēngjiāng (0.3), zhì gāncǎo (0.2), jīnyínhuā (0.2), bòhé (0.2), máhuáng (0.2)

Table 12.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Corneal disorder finding	Unspecified corneal disorder (371.9)	báizhú (1), guizhī (0.7), fúlíng (0.6), zhūlíng (0.5), zéxiè (0.5)
		báizhú (1), guizhī (0.6), fúlíng (0.5), zhūlíng (0.4), zéxiè (0.4)
		báizhú (1), fùzǐ (0.6), guizhī (0.5), gāncǎo (0.4)
		báizhú (1), fùzǐ (0.7), guizhī (0.6), gāncǎo (0.5)
		báizhú (1), fùzǐ (0.7), guizhī (0.6), fúlíng (0.5), zhūlíng (0.5), zéxiè (0.4)
		báizhú (1), fùzǐ (0.6), guizhī (0.5), fúlíng (0.4), zhūlíng (0.4), zéxiè (0.3)
		báizhú (1), fùzǐ (0.6), guizhī (0.5), dàzǎo (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		bǎi bù (1), zǐ wǎn (0.8), xīngrén (0.8), dàodì wúgōng (0.7), jiégēng (0.7), jīngjiè (0.6), mǎhuáng (0.6), kuàndōng huā (0.6), gāncǎo (0.6), liánqiáo (0.6)
Respiratory tract infection, upper (URTI)	Acute upper respiratory infections of unspecified site (465.9)	báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
		niúbàng zǐ (1), xīngrén (0.7), bèimǔ (0.6), qiānghuó (0.5), qián hú (0.5), jīngjiè (0.4), shègān (0.4), chántuì (0.4), bòhé (0.4), gāncǎo (0.4)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), liánqiáo (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), xīxīn (0.1), liánqiáo (0.1), dàhuáng (0.1)
Parasite infestation - Otodectes cynotis	Infective otitis externa, unspecified (380.10)	jīnyínhuā (1), liánqiáo (1)
		jīnyínhuā (1), liánqiáo (0.7), lóngdǎn cǎo (0.6)
		jīnyínhuā (1), liánqiáo (0.8), lóngdǎn cǎo (0.8)
		jīnyínhuā (1), liánqiáo (0.6), lóngdǎn cǎo (0.5)
		jīnyínhuā (1), liánqiáo (0.8), shān zhīzǐ (0.8), gāncǎo (0.7), dihuáng (0.7), chē qián zǐ (0.6), xià kūcǎo (0.6), jiégēng (0.6), lóngdǎn cǎo (0.6)
		jīnyínhuā (1), liánqiáo (0.8), shān zhīzǐ (0.8), gāncǎo (0.7), dihuáng (0.7), mǔdānpí (0.6), chì sháo (0.6), jiégēng (0.6), chǎihú (0.6), lóngdǎn cǎo (0.6)
		jīnyínhuā (1), liánqiáo (0.8), shān zhīzǐ (0.8), gāncǎo (0.7), dihuáng (0.7), mǔdānpí (0.6), chì sháo (0.6), jiégēng (0.6), chǎihú (0.6), lóngdǎn cǎo (0.6)
Discharge - ocular (eye)	Redness or discharge of eye (379.93)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
Feline eosinophilic granuloma complex	Other and unspecified diseases of the oral soft tissues (528.9)	huángbò (1), shā rén (0.6), gāncǎo (0.5)
		huángbò (1), shā rén (0.7), gāncǎo (0.6)
		huángbò (1), shā rén (0.6), gāncǎo (0.4)
		huángbò (1), shā rén (0.6), gāncǎo (0.5), jiégēng (0.4)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		huángbò (1), shā rén (0.6), gāncǎo (0.5), bòhé (0.4)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Dyspnea finding	Dyspnea and respiratory abnormalities (786.0)	huángqí (1), dānshēn (0.6), shēng má (0.5), zhīmǔ (0.4), jiégěng (0.4), chǎihú (0.3)
		huángqí (1), dānshēn (0.6), shēng má (0.4), zhīmǔ (0.3), jiégěng (0.3), chǎihú (0.2)
		huángqí (1), dānshēn (0.6), chuān qī (0.5), shēng má (0.4), zhīmǔ (0.4), jiégěng (0.3), chǎihú (0.3)
		huángqí (1), dānshēn (0.6), chuān qī (0.4), shēng má (0.3), zhīmǔ (0.3), jiégěng (0.2), chǎihú (0.2)
		huángqí (1), dānshēn (0.6), mài mén dòng (0.5), shēng má (0.4), zhīmǔ (0.4), jiégěng (0.3), chǎihú (0.3)
Seizure disorder	Epilepsy unspecified (345.9)	huángqí (1), chì shǎo (0.5), fǎng fēng (0.3)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.2), dàhuáng (0.1)
		huángqí (1), chì shǎo (0.6), fǎng fēng (0.4)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.3), dàhuáng (0.2)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.3)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.3), xīxīn (0.2), huánglián (0.1)
		huángqí (1), chì shǎo (0.4), fǎng fēng (0.2), xīxīn (0.1), huánglián (0.1)
Third eyelid/nictitating membrane disorder finding	Conjunctivitis, unspecified (372.30)	gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.7), dìhuáng (0.6), fǎng fēng (0.5), dāngguī (0.5), xīxīn (0.4), huánglián (0.4)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), dāngguī (0.4), fǎng fēng (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fǎng fēng (0.4), jīnyínhuā (0.4), dāngguī (0.3), xīxīn (0.3), huánglián (0.3)
Sneezing	Symptoms involving respiratory system and other chest symptoms (786)	xìngrén (1), mǎhuáng (0.6), bànxià (0.5), chénpí (0.4), gāncǎo (0.4), shēngjiāng (0.3)
		guā lóu rén (1), xiè bái (0.7), bànxià (0.6)
		xìngrén (1), mǎhuáng (0.6), bànxià (0.5), chénpí (0.4), gāncǎo (0.4)
		xìngrén (1), mǎhuáng (0.6), bànxià (0.5), chénpí (0.4), tíng lì zǐ (0.4), gāncǎo (0.3)
		guā lóu rén (1), xiè bái (0.7), bànxià (0.6), zhǐshí (0.5), guìzhī (0.5)
		xìngrén (1), mǎhuáng (0.6), bànxià (0.5), chénpí (0.4), tíng lì zǐ (0.4), gāncǎo (0.3), shēngjiāng (0.3)
Cerebrovascular accident (CVA)	Cerebral artery occlusion, unspecified with cerebral infarction (434.91)	qiānghuó (1), hòupò (0.2), zhǐshí (0.1), dàhuáng (0.1)
		qiānghuó (1), hòupò (0.5), zhǐshí (0.3), huáng qín (0.2), huánglián (0.2), dàhuáng (0.2)
		qiānghuó (1), hòupò (0.4), zhǐshí (0.3), huáng qín (0.2), huánglián (0.1), dàhuáng (0.1)
		qiānghuó (1), hòupò (0.5), zhǐshí (0.3), dàhuáng (0.2)
		qiānghuó (1), hòupò (0.4), zhǐshí (0.3), dàhuáng (0.2)
		qiānghuó (1), hòupò (0.3), zhǐshí (0.1), dàhuáng (0.1)
		qiānghuó (1), hòupò (0.4), zhǐshí (0.2), dàhuáng (0.1)
		qiānghuó (1), hòupò (0.6), zhǐshí (0.4), huáng qín (0.3), huánglián (0.3), dàhuáng (0.2)
Tear duct abnormality	Disorders of lacrimal system (375)	gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.4), fǎng fēng (0.3), dāngguī (0.3), xīxīn (0.2), huánglián (0.2)
		gǒuqǐzǐ (1), júhuā (0.5), dìhuáng (0.3), fǎng fēng (0.2), dāngguī (0.2), xīxīn (0.2), huánglián (0.1)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.5), fǎng fēng (0.4), dāngguī (0.4), xīxīn (0.3), huánglián (0.3)
		gǒuqǐzǐ (1), júhuā (0.6), dìhuáng (0.4), dāngguī (0.3), fǎng fēng (0.3), xīxīn (0.2), huánglián (0.2)

Table 12.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Pharyngeal disorder finding	Other diseases of pharynx, not elsewhere classified (478.29)	zhì gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔli (0.4), bèimǔ (0.4), liánqiáo (0.3), zhīzǐ (0.3)
		zhì gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔli (0.5), bèimǔ (0.5), liánqiáo (0.4), zhīzǐ (0.4)
		zhì gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔli (0.4), bèimǔ (0.4), zhīzǐ (0.3), liánqiáo (0.3)
		zhì gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), bèimǔ (0.4), mǔli (0.4)
		zhì gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔli (0.5), bèimǔ (0.5), zhīzǐ (0.4), liánqiáo (0.4)
		zhì gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), bèimǔ (0.4), liánqiáo (0.4), mǔli (0.3), zhīzǐ (0.3)
		zhì gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), bèimǔ (0.4), mǔli (0.4), zhīzǐ (0.3), liánqiáo (0.3)
		gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔli (0.4), bèimǔ (0.4), liánqiáo (0.3), zhīzǐ (0.3)
		gāncǎo (1), jiégěng (0.6), xuánshēn (0.5), mǔli (0.4), bèimǔ (0.4), zhīzǐ (0.3), liánqiáo (0.3)
		gāncǎo (1), jiégěng (0.7), xuánshēn (0.6), mǔli (0.5), bèimǔ (0.5), liánqiáo (0.4), zhīzǐ (0.4)
Ear disorder	Unspecified disorder of ear (388.9)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), xīxīn (0.2), dàhuáng (0.2)
Cognitive dysfunction	Senile degeneration of brain (331.2)	júhuā (1), màn jīng zǐ (0.7), bòhé (0.6), chì sháo (0.5), guàn zhòng (0.5), shēng má (0.4), xīn yí (0.4)
		júhuā (1), màn jīng zǐ (0.7), bòhé (0.6), chuānxiōng (0.5), chì sháo (0.5), shēng má (0.4), xīn yí (0.4)
		júhuā (1), màn jīng zǐ (0.6), bòhé (0.5), chì sháo (0.4), guàn zhòng (0.4), shēng má (0.3), xīn yí (0.3)
		júhuā (1), màn jīng zǐ (0.6), bòhé (0.5), chuānxiōng (0.4), chì sháo (0.4), shēng má (0.3), xīn yí (0.3)
		júhuā (1), màn jīng zǐ (0.6), bòhé (0.5), chì sháo (0.4), guàn zhòng (0.4), shēng má (0.3), xīn yí (0.3), dàhuáng (0.3)
		chì sháo (1), guàn zhòng (0.7), júhuā (0.6), gāncǎo (0.5)
Acne - Feline acne	Diseases of sebaceous glands (706)	zhì gāncǎo (1), jīnyínhuā (0.7), xuánshēn (0.6), dāngguī (0.5)
		gāncǎo (1), jīnyínhuā (0.7), xuánshēn (0.6), dāngguī (0.5)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.5), huáng qín (0.4), tiānhuā (0.4), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Rhinitis	Allergic rhinitis, cause unspecified (477.9)	gégēn (1), shígāo (0.6), jiégēng (0.5), gāncǎo (0.4), hòupò (0.4), shègān (0.3), huáng qín (0.3), cāngěr zǐ (0.3), báizhǐ (0.2), xìngrén (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), gāncǎo (0.4), báizhǐ (0.4), hòupò (0.3), shègān (0.3), huáng qín (0.3), cāngěr zǐ (0.2), xìngrén (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), gāncǎo (0.4), báizhǐ (0.3), hòupò (0.3), shègān (0.3), huáng qín (0.2), xìngrén (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), gāncǎo (0.4), hòupò (0.4), shègān (0.3), huáng qín (0.3), cāngěr zǐ (0.3), báizhǐ (0.2), xìngrén (0.2), liánqiáo (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), gāncǎo (0.4), báizhǐ (0.4), hòupò (0.3), shègān (0.3), huáng qín (0.3), cāngěr zǐ (0.2), xìngrén (0.2), liánqiáo (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), tiānhuā (0.4), gāncǎo (0.3), báizhǐ (0.3), shègān (0.3), huáng qín (0.2), xìngrén (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), gāncǎo (0.4), báizhǐ (0.3), hòupò (0.3), shègān (0.3), huáng qín (0.2), xìngrén (0.2), liánqiáo (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), chuānxiōng (0.4), gāncǎo (0.3), báizhǐ (0.3), shègān (0.3), huáng qín (0.2), xìngrén (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), chuānxiōng (0.4), gāncǎo (0.3), báizhǐ (0.3), xìngrén (0.3), shègān (0.2), liánqiáo (0.2), máhuáng (0.2)
		gégēn (1), shígāo (0.6), jiégēng (0.5), cāngěr zǐ (0.4), gāncǎo (0.4), báizhǐ (0.3), shègān (0.3), huáng qín (0.3), xìngrén (0.2), máhuáng (0.2), bòhé (0.2)
Cataract	Senile cataract (366.1)	huángqí (1), chì sháo (0.8), zhì gāncǎo (0.8), zhīmǔ (0.7), fùzǐ (0.7), máhuáng (0.6), huángbò (0.6)
		huángqí (1), chì sháo (0.8), zhì gāncǎo (0.8), zhīmǔ (0.7), fùzǐ (0.7), máhuáng (0.6), huángbò (0.6), plus acupuncture
		huángqí (1), chì sháo (0.7), zhì gāncǎo (0.6), zhīmǔ (0.5), fùzǐ (0.5), máhuáng (0.4), huángbò (0.4)
		jīnyínhuā (1), dāngguī (0.7), xuánshēn (0.6), gāncǎo (0.5), chì sháo (0.5), dàodì wúgōng (0.4), huángqí (0.4)
		huángqí (1), chì sháo (0.7), zhì gāncǎo (0.6), zhīmǔ (0.5), fùzǐ (0.5), máhuáng (0.4), huángbò (0.4), plus acupuncture
		jīnyínhuā (1), dāngguī (0.7), niúxī (0.6), xuánshēn (0.5), chì sháo (0.5), zhì gāncǎo (0.4), dàodì wúgōng (0.4), huángqí (0.4)
		jīnyínhuā (1), dāngguī (0.7), niúxī (0.6), xuánshēn (0.5), gāncǎo (0.5), chì sháo (0.4), dàodì wúgōng (0.4), huángqí (0.4)
Tongue (lingual) disorder	Diseases and other conditions of the tongue (529)	huángqí (1), chì sháo (0.6), zhì gāncǎo (0.5), zhīmǔ (0.4), fùzǐ (0.4), máhuáng (0.3), huángbò (0.3), plus acupuncture
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4)
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.4), gāncǎo (0.3)
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.5), zhì gāncǎo (0.4)
		jīnyínhuā (1), dāngguī (0.7), xuánshēn (0.6), gāncǎo (0.5)
		dāngguī (1), jīnyínhuā (0.6), xuánshēn (0.5), gāncǎo (0.4)
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), dàodì wúgōng (0.4)
		jīnyínhuā (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), chì sháo (0.4), dàodì wúgōng (0.3), huángqí (0.3)
		jīnyínhuā (1), dāngguī (0.7), xuánshēn (0.6), gāncǎo (0.5), chì sháo (0.5), dàodì wúgōng (0.4), huángqí (0.4)

Once we understand how to interpret and use the table, let's return to ocular diseases. Ten ocular diseases are common in cats and dogs. They are conjunctivitis, cataract, keratoconjunctivitis sicca, tear duct abnormality, blindness, distichiasis, uveitis, corneal disorder finding, discharge – ocular, third eyelid/nictitating membrane disorder finding. Among them, six are common in cats: conjunctivitis, corneal disorder finding, discharge – ocular, third eyelid/nictitating membrane disorder finding, tear duct abnormality, cataract while seven are common in dogs: conjunctivitis, cataract, keratoconjunctivitis sicca, tear duct abnormality, blindness, distichiasis, uveitis. From the CHEG recipes for the ten ocular diseases, we find the heaviest and second heaviest herbs and their therapeutic classes introduced in Chapter 2 and shown for each herb in Table 3.2. Since two classes of herbs were combined in the recipe, we draw an edge linking the two classes. We repeat the process to all the recipes for the ten ocular diseases. The result shown in Figure 12.1 indicates that blood-heat clearing herbs such as *dìhuáng* and *chì sháo* and diaphoretic herbs such as *júhuā* and *báizhǐ* combine with *qì* tonifying herbs such as *báizhú* and *zhì gāncǎo* or with *yin* nourishing herbs such as *gǒuqǐzǐ* in the treatment of ocular diseases. Note that in the herb and herb pairing annotation Table 3.2 of Chapter 3, *dìhuáng* and *gǒuqǐzǐ* are combined for the treatment of diabetes, which is more common than the ten ocular diseases listed above in humans. However, *júhuā* and *gǒuqǐzǐ* individually treat disorder of globe in Table 3.2.

12.2. SIZES OF CHEG RECIPES FOR DIFFERENT ORGAN SYSTEMS OF DISEASES

We discussed in Chapter 4 the falling intonation of a CHEG sentence by introducing the method of Zipf's exponent, which quantifies how fast the component herbs in a recipe drop in their doses in grams. The remaining question is how long a CHEG sentence is. That is, how many herbs make up a CHEG recipe.

In Parts 2 and 3 of the book, we list 94 common diseases in dogs and 81 common diseases in cats. Some of them overlap. For example, dogs suffer from obesity, so do cats. The number of distinct diseases is 141. The organ systems of the 141 diseases are known from the VeNom coding system. Note that some diseases such as obesity and hypertension affect the whole body. They nevertheless can be attributed to specific organ systems. For example, obesity is a problem with the connective tissue and hypertension with the cardiovascular system. We plot distributions of the sizes of the recipes for diseases of different organ systems. The result is shown in Figure 12.2. We also calculated the correlation between Zipf's exponents and recipe sizes. The Pearson correlation coefficient was found to be -0.31 , suggesting that a large Zipf's exponent tends to come with a small recipe size, and vice versa. The negative correlation is

reasonable as rapidly dropping doses (i.e., a large Zipf's exponent) of the component herbs quickly end the recipe (i.e., a small recipe size).

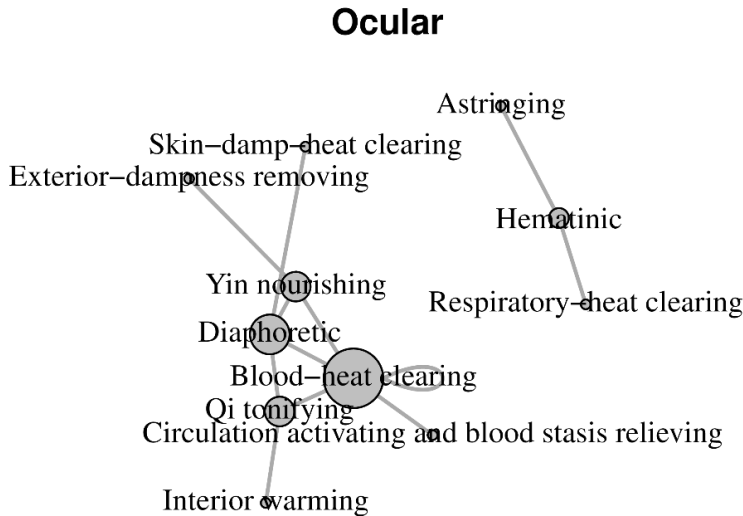


Figure 12.1. Combination of herb classes for ocular diseases.

Figure 12.1 was generated from the classes of the heaviest two herbs in the recipes for ocular diseases. Once we know the average number of herbs of the recipes, which ranges from five to eight as Figure 12.2 shows, the next question to ask is what the remaining herbs, i.e., the third heaviest to the last herbs, in the recipes do. To answer the question, we divide the remaining herbs into two parts of roughly equal size. In the case of a seven-herb (six-herb) recipe, the first part consists of the third to the fifth (fourth) herbs; the second part the last two herbs. We identify these herbs, and their associated therapeutic classes, in each part. We find that the third to the fifth herbs in the recipes for ocular diseases are diaphoretic herbs such as *fǎng fēng*, hematinic herbs such as *dāngguī* and blood-heat clearing herbs such as *dìhuáng* and *chì sháo*. The last, i.e., lightest, two herbs in such recipes are skin-damp-heat clearing herbs such as *huánglián* and *huáng qín* and interior warming herbs such as *xixīn*. In general, the heaviest two herbs in a recipe function like nouns and verbs (or objects) to define the context of a sentence. The middle herbs in the recipe work as objects (verbs), adjectives or adverbs to reinforce the context set by the nouns and verbs. The lightest herbs in the recipe work as other adjectives or adverbs to further refine the context. The successive iterations of enhancement and refinement during recipe composing aim not only to treat the disease but also to address the patient as a whole and particular individual. The herbs and their classes for systems of diseases introduced in each chapter serve as a template, from which the reader can modify to suit a patient's needs.

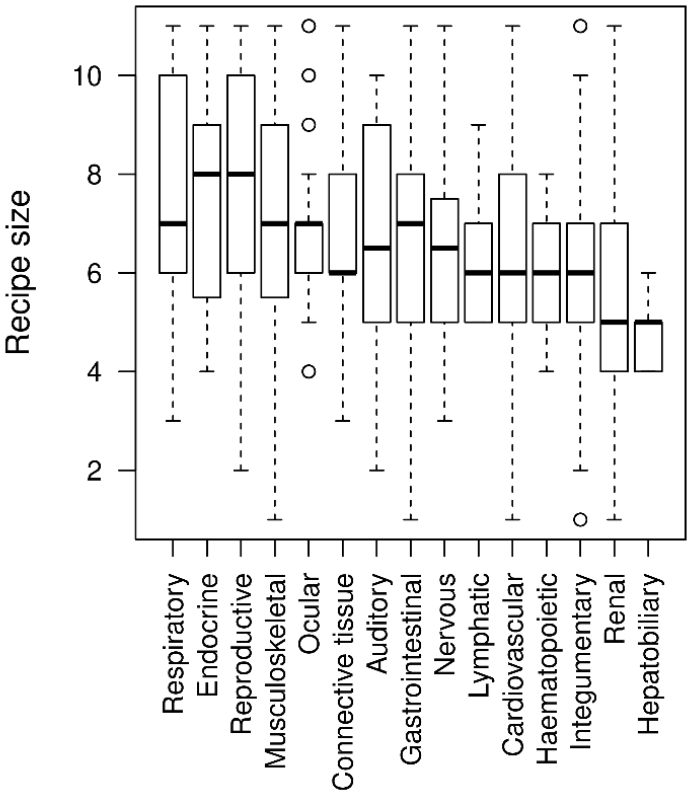


Figure 12.2. Sizes of recipes for diseases of different organ systems, ordered from left to right in decreasing average recipe sizes.

The mean Zipf's exponent and recipe size of the recipes for ocular diseases is 0.57 and 6.9, respectively. With the Zipf's formula $r^{-0.57}$ for r running from 1 to 7, a typical CHEG recipe for ocular diseases would have a dose proportion of 1.0, 0.7, 0.5, 0.5, 0.4, 0.4 and 0.3 for its component herbs. Looking at the distributions of the Zipf's exponents and recipes sizes in Figures 4.2 and 12.2, ocular diseases look to be of medium to tough ailments in the eyes of CHEG herbalists.

Chapter 13

THORAX

Eight common feline diseases concern the thorax region where reside the lungs and heart. Among the eight diseases, five are respiratory diseases including cat flu, upper respiratory tract infection, dyspnea finding, feline asthma (i.e., feline allergic airway disease, FAAD) and pleural effusion. The rest are cardiac murmur, cardiomyopathy finding and cardiac failure, affecting the heart. Respiratory diseases in pets were discussed in Chapter 5. We discuss the CHEG recipes and strategies for the cardiovascular diseases in pet cats and dogs in this chapter.

13.1. COMBINATIONS OF CIRCULATION ACTIVATING AND BLOOD STASIS RELIEVING AND QI TONIFYING HERBS FOR CARDIOVASCULAR CONDITIONS

Table 13.1 shows the eight diseases in order of disease prevalence in cats. Interpretation and use of the table were delineated in Sections 4.1 and 12.1.

Regarding cardiovascular diseases in pets, eight of them reach a prevalence above 2.5% in cat or dog populations: cerebrovascular accident, heart murmur, heart disease, mitral valve disorder, thromboembolism – aortic, cardiomyopathy finding, heart failure, systemic hypertension. Those cardiovascular diseases that prevail in cats are: thromboembolism – aortic, cerebrovascular accident, heart murmur, cardiomyopathy finding, heart failure, systemic hypertension; and those that are prevalent in dogs are: cerebrovascular accident, heart murmur, heart disease, mitral valve disorder. We build the network of herb class pairings from the deep learning recipes for the eight cardiovascular diseases as before. The result shown in Figure 13.1 reveals that circulation activating and blood stasis relieving herbs such as chuānxiōng and dānshēn and qi

tonifying herbs such as huángqí play central roles, combining with other herbs such as qiānghuó which is diaphoretic and hòupò which is interior-dampness removing in CHEG herbal therapy for cardiovascular diseases. In CHEG dictionary Table 3.2, any of the four herbs chuānxiōng, dānshēn, huángqí and hòupò is able to treat chest pain; qiānghuó treats hypertensive heart and renal disease.

Table 13.1. CHEG recipes for diseases affecting thorax in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Heart (cardiac) murmur	Undiagnosed cardiac murmurs (785.2)	dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), hónghuā (0.4), zhǐqiào (0.4), jiégěng (0.4), chǎihú (0.4), táorén (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), jīnyinhuā (0.4), hónghuā (0.4), zhǐqiào (0.4), jiégěng (0.4), chǎihú (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), jīnyinhuā (0.4), hónghuā (0.4), zhǐqiào (0.4), chǎihú (0.4), táorén (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), hónghuā (0.4), zhǐqiào (0.4), chǎihú (0.4), táorén (0.4), dāngguī (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), jīnyinhuā (0.4), zhǐqiào (0.4), jiégěng (0.4), chǎihú (0.4), liánqiáo (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), hónghuā (0.4), zhǐqiào (0.4), chǎihú (0.4), táorén (0.4), dāngguī wēi (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), jīnyinhuā (0.4), liánqiáo (0.4), huángqí (0.4), dāngguī (0.4), dāng shēn (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), hónghuā (0.4), zhǐqiào (0.4), guizhī (0.4), táorén (0.4), dāngguī (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), jīnyinhuā (0.4), hónghuā (0.4), zhǐqiào (0.4), jiégěng (0.4), táorén (0.3)
		dānshēn (1), dihuáng (0.7), hēshǒuwū (0.6), mùdānpí (0.5), chì sháo (0.5), xiōngqiōng (0.4), hónghuā (0.4), zhǐqiào (0.4), táorén (0.4), dāngguī (0.4)
Cat flu	Influenza (487)	báizhī (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		gégēn (1), shígāo (0.6), báisháo (0.4), dàzào (0.3), shēngjiāng (0.3), zhì gāncǎo (0.2), jīnyinhuā (0.2), bòhé (0.2), máhuáng (0.2)
Respiratory tract infection, upper (URTI)	Acute upper respiratory infections of unspecified site (465.9)	bǎi bù (1), zǐ wǎn (0.8), xìng rén (0.8), dàodì wúgōng (0.7), jiégěng (0.7), jīngjiè (0.6), máhuáng (0.6), kuàndōng huā (0.6), gāncǎo (0.6), liánqiáo (0.6)
		báizhī (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhī (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), xīxīn (0.3), dàhuáng (0.2)
		báizhī (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), xīxīn (0.2), dàhuáng (0.1)
		niúbàng zǐ (1), xìng rén (0.7), bèimǔ (0.6), qiānghuó (0.5), qián hú (0.5), jīngjiè (0.4), shègān (0.4), chántuì (0.4), bòhé (0.4), gāncǎo (0.4)
		báizhī (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), liánqiáo (0.1), dàhuáng (0.1)
		báizhī (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), zhīzǐ (0.2), xīxīn (0.1), liánqiáo (0.1), dàhuáng (0.1)
Cardiomyopathy finding	Cardiomyopathy (425)	huángqí (1), chuān qí (0.8), dānshēn (0.8), shí chāngpú (0.7), yuǎnzhi (0.7)
		huángqí (1), chuān qí (0.7), dānshēn (0.6), shí chāngpú (0.5), yuǎnzhi (0.5)
		huángqí (1), chuān qí (0.8), dānshēn (0.8), shí chāngpú (0.7), yuǎnzhi (0.7), yù jīn (0.6)
		huángqí (1), chuān qí (0.8), dānshēn (0.8), shí chāngpú (0.7), yuǎnzhi (0.7), dāng shēn (0.6)
		huángqí (1), chuān qí (0.8), dānshēn (0.8), shí chāngpú (0.7), fùzǐ (0.7), yuǎnzhi (0.6)
		huángqí (1), chuān qí (0.8), dānshēn (0.8), shí chāngpú (0.7), fùzǐ (0.7), guizhī (0.6), yuǎnzhi (0.6)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Dyspnea finding	Dyspnea and respiratory abnormalities (786.0)	huángqí (1), dānshēn (0.6), shēng má (0.5), zhīmǔ (0.4), jiégěng (0.4), chái hú (0.3)
		huángqí (1), dānshēn (0.6), shēng má (0.4), zhīmǔ (0.3), jiégěng (0.3), chái hú (0.2)
		huángqí (1), dānshēn (0.6), chuān qī (0.5), shēng má (0.4), zhīmǔ (0.4), jiégěng (0.3), chái hú (0.3)
		huángqí (1), dānshēn (0.6), chuān qī (0.4), shēng má (0.3), zhīmǔ (0.3), jiégěng (0.2), chái hú (0.2)
Feline asthma (Feline allergic airway disease, FAAD)	Asthma unspecified (493.9)	huángqí (1), dānshēn (0.6), mài mén dōng (0.5), shēng má (0.4), zhīmǔ (0.4), jiégěng (0.3), chái hú (0.3)
		xìng rén (1), má huáng (0.6), bàn xià (0.5), chén pí (0.4), gān cǎo (0.4), shēng jiāng (0.3)
		bái zhú (1), fù zǐ (0.6), chái hú (0.5), bái sháo (0.4), fú líng (0.4), tiān huā (0.3), shēng jiāng (0.3), dāng shēn (0.3), guì zhī (0.2), huáng qín (0.2), gān cǎo (0.2)
		bái zhú (1), fù zǐ (0.6), chái hú (0.5), bái sháo (0.4), fú líng (0.4), tiān huā (0.3), dāng shēn (0.3), guì zhī (0.3), huáng qín (0.2), gān cǎo (0.2), mǔ lì (0.2)
		bái zhú (1), fù zǐ (0.6), gān jiāng (0.5), zǐ wǎn (0.4), gān cǎo (0.4)
		xìng rén (1), má huáng (0.6), bàn xià (0.5), hǎi piāo xiǎo (0.4), chén pí (0.4), gān cǎo (0.3), shēng jiāng (0.3)
		bái zhú (1), fù zǐ (0.6), shù dì huáng (0.5), bái sháo (0.4), fú líng (0.4), bái jiè zǐ (0.3), dāng shēn (0.3), dà huáng (0.3), shēng jiāng (0.2), má huáng (0.2)
		xìng rén (1), má huáng (0.6), bàn xià (0.5), chén pí (0.4), tǐng lì zǐ (0.4), gān cǎo (0.3), shēng jiāng (0.3)
Heart (cardiac) failure	Heart failure (428)	bái zhú (1), fù zǐ (0.6), chái hú (0.5), bái sháo (0.4), fú líng (0.4), tiān huā (0.3), shēng jiāng (0.3), dāng shēn (0.3), guì zhī (0.2), huáng qín (0.2), dà huáng (0.2)
		chuān qī (1), chuān xiōng (0.6), dānshēn (0.5), chì sháo (0.4), hóng huā (0.4), jiàng zhēn xiāng (0.3)
		chuān xiōng (1), dānshēn (0.6), chì sháo (0.5), hóng huā (0.4), jiàng zhēn xiāng (0.4)
		chuān qī (1), chuān xiōng (0.7), dānshēn (0.6), chì sháo (0.5), hóng huā (0.5), jiàng zhēn xiāng (0.4)
Pleural effusion	Unspecified pleural effusion (511.9)	chuān xiōng (1), dānshēn (0.7), chì sháo (0.6), hóng huā (0.5), jiàng zhēn xiāng (0.5)
		chuān xiōng (1), xiāng fù (1), shén qū (1), zhī zǐ (1), cāng zhú (1)
		chuān xiōng (1), xiāng fù (1), shén qū (1), zhī zǐ (1), cāng zhú (1), mǎn jīng zǐ (1)
		chuān xiōng (1), xiāng fù (1), zhī qiào (1), jiégěng (1), shén qū (1), zhī zǐ (1), cāng zhú (1)

Cardiovascular

Endopathic wind-calming
Musculoskeletal heat clearing

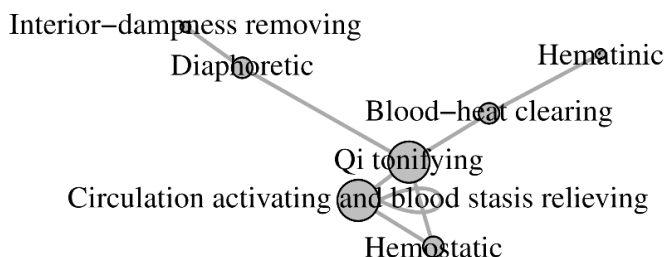


Figure 13.1. Combination of herb classes for cardiovascular diseases.

The mean Zipf's exponent and recipe size of the recipes for the cardiovascular diseases are, respectively, 0.56 and 6.3, giving rise to the relative weights for the component herbs of a typical cardiovascular CHEG recipe: 1.0, 0.7, 0.5, 0.5, 0.4, and 0.4.

In addition to the circulation activating and blood stasis relieving herbs and hematinic herbs shown in Figure 13.1, the next heaviest two herbs are commonly qi regulating herbs such as zhǐshí and expectorant herbs such as guā lóu rén and bànxià. Laxatives such as dàhuáng and tranquilizing herbs such as yuǎnzhì are also usually appended to complete the recipes for cardiovascular diseases. Note that, according to Table 3.2, zhǐshí combines with hòupò mainly for constipation, dàhuáng treats hypercholesterolemia, guā lóu rén treats chest pain and that both bànxià and yuǎnzhì treat hypertension. Based on the mean values, consistency of the CHEG recipes for cardiovascular system diseases among and within herbalists are above medium, in comparison to those for other diseases.

Chapter 14

ABDOMEN

The abdominal region of the cat harbors 22 common diseases, which affect six physiological systems. The systems of diseases are: 1) gastrointestinal diseases including vomiting, diarrhea finding, trichobezoar, constipation, gastritis, mass lesion – abdominal, gastroenteritis, colitis, parasite infestation – tapeworms, inflammatory bowel disease (i.e., IBD), roundworm infestation finding, enteritis; 2) renal diseases including renal kidney failure – chronic, urinary tract infection, inappropriate urination finding, cystitis, hematuria, azotemia; 3) reproductive system conditions including estrus; 4) endocrine diseases including diabetes mellitus; 5) cardiovascular diseases including thromboembolism – aortic; and 6) hepatobiliary diseases including hepatopathy (i.e., liver disorder). Chapter 6 of the canine disorders has already discussed the gastrointestinal diseases. This chapter focuses on hepatobiliary diseases and their associated herbal strategies and recipes.

14.1. COMBINATION OF EXTERIOR-DAMPNESS REMOVING AND MUSCULOSKELETAL-HEAT CLEARING HERBS FOR HEPATOBILIARY CONDITIONS

The 22 common diseases of the abdomen in cats and the associated CHEG recipes are shown in Table 14.1, starting from the commonest.

There is only one common hepatobiliary disease in pets, affecting both cats and dogs. It is called hepatopathy (liver disorder) in the VeNom coding system for veterinary clinicians. In the recipes for hepatopathy, the heaviest pair of herbs are yīn chén and shān zhīzǐ. The former is an exterior-dampness removing herb and the latter a musculoskeletal-heat clearing herb. The dictionary Table 3.2 indicates that yīn chén treats jaundice and viral hepatitis and that shān zhīzǐ treats chronic hepatitis. We summarize in

Figure 14.1 that CHEG strategy combines exterior-dampness removing herbs and musculoskeletal-heat clearing herbs for the treatment of hepatobiliary diseases.

Table 14.1. CHEG recipes for diseases affecting abdomen in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Renal (kidney) failure - chronic	Chronic kidney disease (585)	báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), zhì gāncǎo (0.3), máhuáng (0.2)
		báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), zhì gāncǎo (0.3), máhuáng (0.2), dàhuáng (0.2)
		báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúlíng (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), chixiǎodòu (0.3), zhì gāncǎo (0.2), máhuáng (0.2), dāngguī (0.2)
Vomiting	Vomiting alone (787.03)	rénshēn (1), bànxià (1), gānjiāng (1)
		bànxià (1), gānjiāng (1)
		bànxià (1), gānjiāng (1), dǎng shēn (1)
		rénshēn (1), bànxià (1), gānjiāng (1), huáng qín (1), huánglián (1)
Urinary tract infection (UTI)	Urinary tract infection, site not specified (599.0)	bànxià (1), gānjiāng (1), huáng qín (1), huánglián (1), dǎng shēn (1)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4)
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2), dàhuáng (0.1)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3), huáshí (0.3)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2), huáshí (0.2)
Diarrhea finding	Diarrhea (787.91)	báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4), huáshí (0.4)
		rénshēn (1), bànxià (1), gānjiāng (1)
		gānjiāng (1), rénshēn (0.7), bànxià (0.6)
		rénshēn (1), bànxià (1), gānjiāng (1), huáng qín (1), huánglián (1)
		báizhú (1), gānjiāng (0.8), dǎng shēn (0.8), zhì gāncǎo (0.7)
Trichobezoar	Foreign body in stomach (935.2)	báizhú (1), gānjiāng (0.7), dǎng shēn (0.6), zhì gāncǎo (0.5), fūzǐ (0.5)
		xuánshēn (1), dìhuáng (0.7), jīnyínhuā (0.6), liánqiáo (0.5), mài mén dòng (0.5), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), mài mén dòng (0.5), dāngguī (0.4), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), mài mén dòng (0.5), dāngguī (0.5), chuānxiōng (0.4), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), xià kūcǎo (0.5), chǎihú (0.5), mài mén dòng (0.4), dāngguī (0.4), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), xià kūcǎo (0.5), chǎihú (0.5), mài mén dòng (0.4), huáng qín (0.4), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), xià kūcǎo (0.5), mài mén dòng (0.5), dāngguī (0.4), chuānxiōng (0.4), gāncǎo (0.4)
		xuánshēn (1), báisháo (0.7), dìhuáng (0.6), xià kūcǎo (0.5), chǎihú (0.5), mài mén dòng (0.4), huáng qín (0.4), dāngguī (0.4), gāncǎo (0.4)
Constipation	Constipation, unspecified (564.00)	xuánshēn (1), gāncǎo (1), jīnyínhuā (1), dāngguī (1)
		xuánshēn (1), mùlǐ (0.6), bèimǔ (0.5), zhì gāncǎo (0.4), jiégèng (0.4), liánqiáo (0.3), shān zhīzǐ (0.3), xìngrén (0.3)
		xuánshēn (1), gāncǎo (1), chī sháo (1), jīnyínhuā (1), dāngguī (1)
		xuánshēn (1), mùlǐ (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégèng (0.5), liánqiáo (0.4), shān zhīzǐ (0.4)
		xuánshēn (1), mùlǐ (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégèng (0.5), liánqiáo (0.4), zhīzǐ (0.4)
		xuánshēn (1), mùlǐ (0.6), bèimǔ (0.5), zhì gāncǎo (0.4), jiégèng (0.4), liánqiáo (0.3), shān zhīzǐ (0.3)
		xuánshēn (1), mùlǐ (0.7), bèimǔ (0.6), zhì gāncǎo (0.5), jiégèng (0.5), liánqiáo (0.4), shān zhīzǐ (0.4), xìngrén (0.4)
		xuánshēn (1), mùlǐ (0.6), bèimǔ (0.5), zhì gāncǎo (0.4), jiégèng (0.4), liánqiáo (0.3), zhīzǐ (0.3)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Diabetes mellitus	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled (250.00)	dàn zhú yè (1), guā lóu gēn (0.6), dihuáng (0.5), fúling (0.4), mài mén dòng (0.4), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.3)
		dàn zhú yè (1), guā lóu gēn (0.6), dihuáng (0.5), fúling (0.4), mài mén dòng (0.4), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.3), dàhuáng (0.2)
		dàn zhú yè (1), guā lóu gēn (0.7), dihuáng (0.6), fúling (0.5), mài mén dòng (0.5), yùzhú (0.4), zhīmǔ (0.4), dàzǎo (0.4)
		dàn zhú yè (1), guā lóu gēn (0.6), dihuáng (0.5), fúling (0.4), mài mén dòng (0.4), dàhuáng (0.3), yùzhú (0.3), zhīmǔ (0.3), dàzǎo (0.2)
		dàn zhú yè (1), guā lóu gēn (0.7), dihuáng (0.6), fúling (0.5), mài mén dòng (0.5), dàhuáng (0.4), yùzhú (0.4), zhīmǔ (0.4)
		dàn zhú yè (1), guā lóu gēn (0.7), dihuáng (0.6), fúling (0.5), mài mén dòng (0.5), yùzhú (0.4), zhīmǔ (0.4)
Gastritis	Unspecified gastritis and gastroduodenitis (535.5)	fúling (1), bànxià (0.5), fūzǐ (0.3), xīxīn (0.2), dàhuáng (0.2)
		fúling (1), bànxià (0.5), fūzǐ (0.3), xīxīn (0.2), màiyá (0.2), dàhuáng (0.2)
		fúling (1), bànxià (0.5), fūzǐ (0.3), xīxīn (0.2), shēngjiāng (0.2)
		fúling (1), bànxià (0.5), fūzǐ (0.3), xīxīn (0.2), shēngjiāng (0.2), dàhuáng (0.2)
		jī xiāng téng (1), màiyá (0.6), láifūzǐ (0.5), zhīshǐ (0.4), chénpí (0.4), huáng qín (0.3)
		jī xiāng téng (1), màiyá (0.6), láifūzǐ (0.5), zhīshǐ (0.4), chénpí (0.4), huáng qín (0.3), huánglián (0.3)
Mass lesion - abdominal	Abdominal or pelvic swelling mass or lump (789.3)	xià kūcǎo (1)
		xià kūcǎo (1), gāncǎo (0.2)
		xià kūcǎo (1), xuánshēn (0.7), mǔlì (0.6), bèimǔ (0.5)
		xià kūcǎo (1), xuánshēn (0.6), mǔlì (0.5), bèimǔ (0.4)
		xià kūcǎo (1), xuánshēn (0.8), mǔlì (0.8), bèimǔ (0.7)
Inappropriate urination finding	Other abnormality of urination (788.69)	xià kūcǎo (1), mǔlì (0.7), bèimǔ (0.6)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.5), jīnqián cǎo (0.3), huáshí (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), jīnqián cǎo (0.4), huáshí (0.3)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2), huáshí (0.2)
Cystitis	Cystitis, unspecified (595.9)	báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3), huáshí (0.3)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), zéxiè (1), lóngdǎn cǎo (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), zéxiè (1), lóngdǎn cǎo (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), huáng qín (1), dāngguī (1), zéxiè (1), lóngdǎn cǎo (1)
		báimáo gēn (1), chē qián zǐ (0.6), báizhú (0.5), fúling (0.4), dàzǎo (0.4), shēngjiāng (0.3), shígāo (0.3), zhì gāncǎo (0.3), máhuáng (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), zéxiè (1), lóngdǎn cǎo (1)
		dihuáng (1), qín pí (0.7), fúling (0.6), huángbò (0.5), zéxiè (0.5)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), xiāng fù (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), zéxiè (1), lóngdǎn cǎo (1)
		gāncǎo (1), dihuáng (1), chē qián zǐ (1), jīnyínhuā (1), chái hú (1), bài jiàng cǎo (1), huáng qín (1), dāngguī (1), suānzǎo rén (1), lóngdǎn cǎo (1)
Gastroenteritis	Other and unspecified noninfectious gastroenteritis and colitis (558.9)	báizhú (1), fúling (1)
		báizhú (1), shā rén (0.6), mùxiāng (0.4), huáng qín (0.3), huánglián (0.3)
		báizhú (1), báisháo (1), fǎng fēng (1), chénpí (1)
		báizhú (1), báisháo (0.6), fúling (0.4), huáng qín (0.3)
		báizhú (1), shā rén (0.6), mùxiāng (0.4), huáng qín (0.3)
Estrus	Mittelschmerz (625.2)	mòyào (1), rǔxiāng (1), yán hú suǒ (1)
		chuān liǎn zǐ (1), yán hú suǒ (1)
		mòyào (1), rǔxiāng (1), yán hú suǒ (1), táo rén (1)
		chuān liǎn zǐ (1), mòyào (1), rǔxiāng (1), yán hú suǒ (1)

Table 14.1. (Continued).

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Colitis	Ulcerative colitis, unspecified (556.9)	bài jiàng cǎo (1), huái huā (0.7), bǎizhú (0.6), dì yú (0.5), hòupò (0.5), huáng qín (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), huái huā (0.7), bǎizhú (0.6), mǔdānpí (0.5), hòupò (0.5), huáng qín (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), yìyǐ rén (0.7), bǎizhú (0.6), mǔdānpí (0.5), fùzǐ (0.5), hòupò (0.4), huái huā (0.4)
		bài jiàng cǎo (1), yìyǐ rén (0.7), bǎizhú (0.6), mǔdānpí (0.5), fùzǐ (0.5), hòupò (0.4), huáng qín (0.4)
		bài jiàng cǎo (1), yìyǐ rén (0.7), bǎizhú (0.6), mǔdānpí (0.5), fùzǐ (0.5), hòupò (0.4), huáng qín (0.4), huái huā (0.4)
		bài jiàng cǎo (1), huái huā (0.7), bǎizhú (0.6), dì yú (0.5), mǔdānpí (0.5), hòupò (0.4), huáng qín (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), huái huā (0.7), bǎizhú (0.6), mǔdānpí (0.5), hòupò (0.5), fúlíng (0.4), huáng qín (0.4), fùzǐ (0.4)
		bài jiàng cǎo (1), yìyǐ rén (0.7), bǎizhú (0.6), mǔdānpí (0.5), fùzǐ (0.5), hòupò (0.4), huáng qín (0.4), gégēn (0.4)
		bài jiàng cǎo (1), huái huā (0.7), bǎizhú (0.6), hòupò (0.5), fúlíng (0.5), huáng qín (0.4), gégēn (0.4), gāncǎo (0.4), fùzǐ (0.4)
Hepatopathy (liver disorder)	Chronic liver disease and cirrhosis (571)	shān zhīzǐ (1), yīn chén (0.6), huáng qín (0.5), dàhuáng (0.4)
		yīn chén (1), dānshēn (0.7), bǎnlángēn (0.6), shān zhīzǐ (0.5), chē qián zǐ (0.5), hóngguā (0.4), huángbò (0.4), yù jīn (0.4)
		shān zhīzǐ (1), yīn chén (0.6), dàhuáng (0.5), huáng qín (0.4)
		shān zhīzǐ (1), yīn chén (0.6), dàhuáng (0.5), hǎipiāoxiǎo (0.4), huáng qín (0.4)
		shān zhīzǐ (1), yīn chén (0.7), dàhuáng (0.6), hǎipiāoxiǎo (0.5), huáng qín (0.5)
Parasite infestation - Cestodes (tapeworms)	Other cestode infection (123)	shān zhīzǐ (1), yīn chén (0.7), dàhuáng (0.6), shānzhā (0.5), hǎipiāoxiǎo (0.5), huáng qín (0.4)
		bǎizhú (1), fúlíng (0.6), zhì gāncǎo (0.5), gānjiāng (0.4)
		bǎizhú (1), fúlíng (0.6), zhì gāncǎo (0.5), gānjiāng (0.4), niúxī (0.4), fùzǐ (0.3), guìzhī (0.3)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì shǎo (0.4), jīnyínhuā (0.4), gāncǎo (0.3)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), chì shǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), chì shǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3), dàhuáng (0.3)
Inflammatory bowel disease (IBD)	Ulcerative enterocolitis (556)	huángqí (1), dāngguī (0.6), xuánshēn (0.5), gāncǎo (0.4), jīnyínhuā (0.4), niúxī (0.3), chì shǎo (0.3), dàodì wúgōng (0.3), dàhuáng (0.2)
		fúlíng (1), bài jiàng cǎo (0.8), yìyǐ rén (0.8), bǎizhú (0.7), mǔdānpí (0.7), fùzǐ (0.6), hòupò (0.6), huáng qín (0.6)
		fúlíng (1), bài jiàng cǎo (0.7), yìyǐ rén (0.6), bǎizhú (0.5), mǔdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4)
		bǎizhú (1), fúlíng (0.7), bài jiàng cǎo (0.6), gégēn (0.5), yìyǐ rén (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4)
		fúlíng (1), bài jiàng cǎo (0.8), yìyǐ rén (0.8), bǎizhú (0.7), mǔdānpí (0.7), fùzǐ (0.6), hòupò (0.6), huáng qín (0.6), huái huā (0.6)
		fúlíng (1), bài jiàng cǎo (0.7), yìyǐ rén (0.6), bǎizhú (0.5), mǔdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4), gégēn (0.4)
		fúlíng (1), bài jiàng cǎo (0.7), yìyǐ rén (0.6), bǎizhú (0.5), mǔdānpí (0.5), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4), huái huā (0.4)
Nematode (roundworm) infestation finding	Ascariasis (127.0)	fúlíng (1), bài jiàng cǎo (0.7), yìyǐ rén (0.6), bǎizhú (0.5), mǔdānpí (0.5), yán hú suǒ (0.4), fùzǐ (0.4), hòupò (0.4), huáng qín (0.4)
		hòupò (1), zhīshí (0.2), dàhuáng (0.1)
		bànxià (1), fùzǐ (0.4), fúlíng (0.3), xīxīn (0.2), dàhuáng (0.1)
		bànxià (1), fùzǐ (0.4), fúlíng (0.2), xīxīn (0.1), dàhuáng (0.1)
Hematuria	Hematuria (599.7)	bànxià (1), fùzǐ (0.5), fúlíng (0.3), xīxīn (0.2), dàhuáng (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4)
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3), huáshí (0.3)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4), huáshí (0.4)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.5), jīnqián cǎo (0.4), huáshí (0.4), pú huáng (0.3)
Thromboembolism - aortic (ATE)	Embolism and thrombosis of unspecified artery (444.9)	huángqí (1), chì shǎo (0.6), fāng fēng (0.4)
		huángqí (1), chì shǎo (0.7), zhì gāncǎo (0.6), fūzǐ (0.5), mǎhuáng (0.5)
		huángqí (1), chì shǎo (0.6), zhì gāncǎo (0.5), fūzǐ (0.4), mǎhuáng (0.4)
		huángqí (1), chì shǎo (0.6), zhì gāncǎo (0.4), fūzǐ (0.3), mǎhuáng (0.3), dàhuáng (0.2)
		huángqí (1), chì shǎo (0.6), zhì gāncǎo (0.5), zhīmǔ (0.4), fūzǐ (0.4), mǎhuáng (0.3), huángbò (0.3), dàhuáng (0.3)
		huángqí (1), chì shǎo (0.7), zhì gāncǎo (0.6), zhīmǔ (0.5), fūzǐ (0.5), mǎhuáng (0.4), huángbò (0.4)
		huángqí (1), chì shǎo (0.7), zhì gāncǎo (0.6), zhīmǔ (0.5), fūzǐ (0.5), mǎhuáng (0.4), huángbò (0.4), dàhuáng (0.4)
		huángqí (1), chì shǎo (0.6), zhì gāncǎo (0.5), fūzǐ (0.4), mǎhuáng (0.4), niúxī (0.3), chē qián zǐ (0.3), zhīmǔ (0.3), huángbò (0.2)
Enteritis	Other and unspecified noninfectious gastroenteritis and colitis (558.9)	báizhú (1), fúling (1)
		báizhú (1), shā rén (0.6), mùxiāng (0.4), huáng qín (0.3), huánglián (0.3)
		báizhú (1), báisháo (1), fāng fēng (1), chénpí (1)
		báizhú (1), báisháo (0.6), fúling (0.4), huáng qín (0.3)
Azotemia	Azotemia (790.6)	báizhú (1), shā rén (0.6), mùxiāng (0.4), huáng qín (0.3)
		hóng qū (1)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), gǒuqǐzǐ (0.5)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), gǒuqǐzǐ (0.5), zéxiè (0.4)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), hóng qū (0.5), zéxiè (0.4)
		shānzhā (1), dānshēn (0.8), héshǒuwū (0.8), juémíngzǐ (0.7), gǒuqǐzǐ (0.7), zéxiè (0.6)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), yīn chén (0.5), zéxiè (0.4)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), hǔ zhàng (0.5), gǒuqǐzǐ (0.4), zéxiè (0.4)
		shānzhā (1), dānshēn (0.7), héshǒuwū (0.6), juémíngzǐ (0.5), gǒuqǐzǐ (0.5), chái hú (0.4), zéxiè (0.4)

Hepatobiliary

Musculoskeletal—heat clearing

Exterior—dampness removing

Figure 14.1. Combination of herb classes for hepatobiliary diseases.

To complete composition of the recipe, first of all, a recipe for hepatobiliary diseases has generally five component herbs in the following ratio: 1.0, 0.7, 0.6, 0.5 and 0.4, from the mean Zipf's exponent and recipe size values of 0.55 and 4.8, respectively. Laxative herbs such as dàhuáng are usually the third heaviest herbs in such a recipe. Astringing

herbs and skin-damp-heat clearing herbs such as hǎipiāoxiāo and huáng qín make up the last two herbs, both of which are common herbs for peptic ulcer according to Table 3.2. Note that because of the small number of hepatobiliary diseases and thus the associated recipes, the consensus of the recipes for hepatobiliary diseases among herbalists can only be a conjecture.

PELVIS

Cats have two common diseases relating to the renourinary system in the pelvis. The diseases are inappropriate urination finding and urethral obstruction. Chapter table lists the feline pelvic diseases and associated herbal recipes. We discuss the strategies for all the common renourinary diseases in pets in this chapter.

15.1. COMBINATIONS OF CIRCULATION ACTIVATING AND BLOOD STASIS RELIEVING, BLOOD-HEAT CLEARING AND QI TONIFYING HERBS FOR RENAL CONDITIONS

The two diseases are shown below, together with their CHEG recipes.

Table 15.1. CHEG recipes for diseases affecting pelvis in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Inappropriate urination finding	Other abnormality of urination (788.69)	báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.5), jīnqián cǎo (0.3), huáshí (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3)
		báimáo gēn (1), niúxī (0.4), chē qián zǐ (0.3), jīnqián cǎo (0.2)
		báimáo gēn (1), niúxī (0.6), jīnqián cǎo (0.4), huáshí (0.3)
		báimáo gēn (1), niúxī (0.5), chē qián zǐ (0.3), jīnqián cǎo (0.2), huáshí (0.2)
		báimáo gēn (1), niúxī (0.6), chē qián zǐ (0.4), jīnqián cǎo (0.3), huáshí (0.3)
Urethral obstruction	Urinary obstruction (599.6)	dīhuáng (1), niúxī (0.7)
		niúxī (1), dīhuáng (0.7), chì sháo (0.6), chē qián zǐ (0.5)
		niúxī (1)
		dīhuáng (1), niúxī (0.8)
		niúxī (1), dīhuáng (0.7)
		niúxī (1), dīhuáng (0.7), chì sháo (0.6)
		niúxī (1), dīhuáng (0.8), chì sháo (0.8), chē qián zǐ (0.7)
		dīhuáng (1), niúxī (0.7), chì sháo (0.6)
		niúxī (1), dīhuáng (0.6), chì sháo (0.5), chē qián zǐ (0.4)
		dīhuáng (1), niúxī (0.7), chì sháo (0.6), chē qián zǐ (0.5)

Eleven renal diseases afflict cats and dogs frequently. Nine of them affect cats: renal failure – chronic, urinary tract infection, inappropriate urination finding, cystitis, hematuria, azotemia, urethral obstruction, polyuria and polydipsia while only three of them affect dogs: urinary incontinence, urinary tract infection, renal failure – chronic. From the numbers, we know that cats’ renal system is susceptible to diseases, relative to dogs’. The CHEG recipes for the 11 diseases are collected from the relevant tables. We then identify the heaviest herbs and also their therapeutic effects. We plot the network connecting herb classes. The result in Figure 15.1 shows that circulation activating and blood stasis relieving herbs such as *niúxī* and *dānshēn* pair with hemostatic herbs such as *báimáo gēn* or with blood-heat clearing herbs such as *dìhuáng*, which in turn pair with *qi* tonifying herbs such as *zhì gāncǎo*, in the management of renal diseases. Note that, according to the CHEG dictionary Table 3.2 of Chapter 3, *báimáo gēn* treats a variety of renourinary conditions including hematuria, dysuria, cystitis and pyelonephritis, *dìhuáng* treats diabetes and urinary frequency, and that *zhì gāncǎo* treats enuresis, urinary frequency as well as nephrotic syndrome.

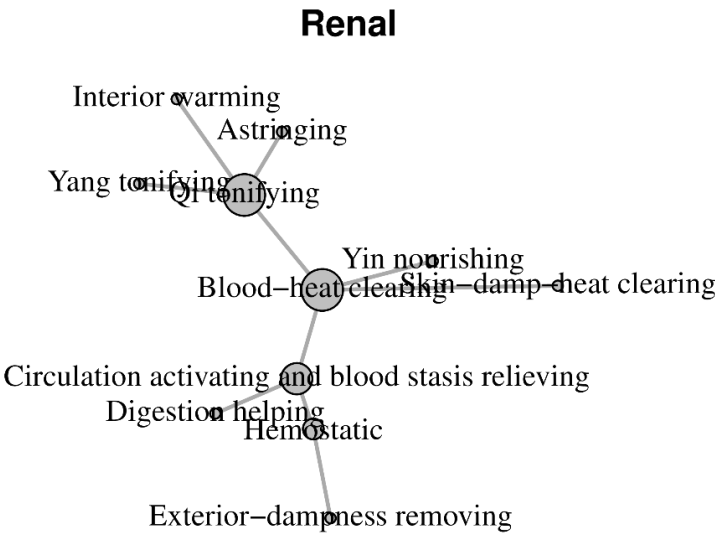


Figure 15.1. Combination of herb classes for renal diseases.

The mean Zipf’s exponent and recipe size are 0.57 and 5.6, suggesting a recipe for the renal disease with the relative proportions for its composing herbs: 1.0, 0.7, 0.5, 0.5, 0.4 and 0.4. Besides the hub herbs unraveled in Figure 15.1, the remaining herbs in a typical renal recipes are predominantly exterior-dampness removing herbs such as *chē qián zǐ*, *fúlíng*, *jīnqián cǎo*, *zéxiè* and *huáshí* and yin nourishing herbs such as *héchǒuwū* and *gǒuqǐzǐ*. Note again that in Table 3.2 *jīnqián cǎo* treats kidney stones. Comparing the mean values with those of other disease systems in Figures 4.2 and 12.2, the CHEG recipes for renal diseases by herbalists appear concordant.

ANUS AND PERINEAL AREA

The cat has only one common disease in the anus and perineal area. Its recipes are shown in the table of the chapter. The anus is part of the digestive system whose diseases were discussed in Chapter 6. In the following section we move on to discuss lymphatic diseases in pets and the associated CHEG remedies.

16.1. COMBINATION OF RESPIRATORY-HEAT CLEARING HERBS FOR LYMPHATIC CONDITIONS

Table 16.1. CHEG recipes for diseases affecting anus and perineal area in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Anal disorder finding	Other specified disorders of rectum and anus (569.4)	huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), fúlíng (0.6), mài mén dōng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu guì (0.6), ròu cōng róng (0.6), fūzǐ (0.6), fúlíng (0.6), yuǎnzhì (0.6), dǎng shēn (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.6), dǎng shēn (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), mài mén dōng (0.6), yuǎnzhì (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), mài mén dōng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fú shén (0.6), mài mén dōng (0.6), yuǎnzhì (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.6), guībǎn (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), ròu cōng róng (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.6), fūpénzǐ (0.5)
		huángqí (1), shānzhūyú (0.8), wūwèizǐ (0.8), bā jǐ tiān (0.7), shí chāngpú (0.7), dìhuáng (0.6), ròu cōng róng (0.6), fúlíng (0.6), yuǎnzhì (0.6), shù dìhuáng (0.6), guībǎn (0.5)

We show the top deep learning recipes for the anal disorder in Table 16.1.

Only one disease with prevalence greater than 2.5% affects pet cats and dogs. It is lymphoma finding, occurring in cats. We isolate the heaviest two herbs in each of the recipes for lymphoma and also identify the therapeutic classes of the isolated herbs. The isolated herbs are *báihuāshé shé cǎo* and *bàn zhī lián*, both of which are heat clearing and detoxifying, or respiratory-heat clearing in our terminology of Chapter 2. Note that both herbs are commonly used for neoplasms in humans (Wang, 2013).

The average Zipf's exponent and recipe size are 0.45 and 6.4 for the recipes for lymphatic diseases. From the formula $r^{-0.45}$ for rank r ranging from 1 to 6, we get the relative component weights for a recipe for neoplasm: 1.0, 0.7, 0.6, 0.5, 0.5 and 0.5. The middle two herbs are likely, again, respiratory-heat clearing herbs such as *jīnyínhuā* and *qì* tonifying herbs such as *huángqí* and *gāncǎo*. The lightest two herbs are also respiratory-heat clearing herbs such as *púgōngyīng* and circulation activating and blood stasis relieving herbs such as *sān léng*. In Table 3.2 which annotates herbs, *jīnyínhuā* is intended for colon cancer; *huángqí* for carcinoma in situ of digestive organs; and *púgōngyīng* for benign neoplasm of breast. The weights of the supporting herbs drop slowly, suggesting the diseases are hard to treat.

Chapter 17

LIMB

Only five diseases affect the limb of cats. Cats have less limb and spinal column problems than dogs probably because most pet cats are house cats, with no or little outdoor access. The five limb diseases involve two organ systems of the body: 1) musculoskeletal diseases including osteoarthritis, lameness finding and stiffness; and 2) integumentary diseases including nail clip and claw injury. Both systems of diseases have been discussed already. We delineate endocrine diseases in this chapter.

17.1. COMBINATIONS OF BLOOD-HEAT CLEARING, ENDOPATHIC WIND CALMING, QI TONIFYING AND HEMATINIC HERBS FOR ENDOCRINE CONDITIONS

Table 17.1 lists the diseases, and recipes, in decreasing prevalence. Notice again that acupuncture is commonly prescribed along with herbs for the treatment of musculoskeletal and connective tissue problems.

The following four endocrine diseases prevail in pets: hyperadrenocorticism (i.e., Cushing's disease), diabetes mellitus, hypothyroidism and hyperthyroidism. Two of them affect cats: diabetes mellitus and hyperthyroidism. Three of them afflict dogs: hyperadrenocorticism, diabetes mellitus and hypothyroidism. The inter pairing plot in Figure 17.1 shows that blood-heat clearing herbs such as xuánshēn combine with endopathic wind calming herbs such as mǔlǐ or that qì tonifying herbs such as báizhú and zhì gāncǎo pair with each other or with hematinic herbs such as báisháo in the management of endocrine diseases by CHEG herbal medicine. Pairing of dàn zhú yè and guā lóu gēn, both of which are musculoskeletal-heat clearing herbs, is another modality

for the endocrine disease treatment. According to Table 3.2, xuánshēn and guā lóu gēn treat diabetes and mǔlǐ treats cyst of thyroid.

Table 17.1. CHEG recipes for diseases affecting limb in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Nail clip	Other specified diseases of nail (703.8)	báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), dàhuáng (0.3)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), guā lóu gēn (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), dàhuáng (0.1)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
Osteoarthritis (osteoarthritis, degenerative joint disease (DJD))	Osteoarthritis unspecified whether generalized or localized (715.9)	bànxià (1), fú líng (0.7), fù zǐ (0.6), xī xīn (0.5), dàhuáng (0.5)
		bànxià (1), fù zǐ (0.6), fú líng (0.4), xī xīn (0.3), dàhuáng (0.3)
		dàhuáng (1)
		bànxià (1), fù zǐ (0.5), fú líng (0.3), xī xīn (0.2), dàhuáng (0.2)
		hòupò (1), zhì shí (0.2), dàhuáng (0.1), huǒ má rén (0.1)
		bànxià (1), fù zǐ (0.4), xī xīn (0.3), dàhuáng (0.2)
		bànxià (1), fù zǐ (0.5), xī xīn (0.3), dàhuáng (0.2)
Lameness finding	Abnormality of gait (781.2)	báizhú (1), fú líng (0.7), rénshēn (0.6), báisháo (0.5), fù zǐ (0.5)
		báizhú (1), fú líng (0.7), gānjiāng (0.6), dǎng shēn (0.5), zhì gāncǎo (0.5)
		báizhú (1), fú líng (0.7), gānjiāng (0.6), dǎng shēn (0.5), zhì gāncǎo (0.5), fù zǐ (0.4)
		báizhú (1), fú líng (0.7), rénshēn (0.6), báisháo (0.5), fù zǐ (0.5), niú xī (0.4), ròuguì (0.4)
Stiffness	Stiffness of joint not elsewhere classified (719.5)	sāng jìshēng (1), gǒu jǐ (0.7), wú jiǎ pí (0.6), bǎ jǐ tiān (0.5), niú xī (0.5), gāncǎo (0.4)
		sāng jìshēng (1), gǒu jǐ (0.7), wú jiǎ pí (0.6), bǎ jǐ tiān (0.5), niú xī (0.5), gāncǎo (0.4), plus acupuncture
		sāng jìshēng (1), gǒu jǐ (0.8), wú jiǎ pí (0.8), bǎ jǐ tiān (0.7), niú xī (0.7)
Claw injury (traumatic)	Finger injury (959.5)	mòyào (1), rǔxiāng (1), yán hú suǒ (1), guìzhǐ (1), plus acupuncture
		mòyào (1), rǔxiāng (1), yán hú suǒ (1), guìzhǐ (1)
		jīnyínhuā (1), dāngguī (0.8), niú xī (0.8), xuánshēn (0.7), chì sháo (0.7), zhì gāncǎo (0.6), dǎodi wúgōng (0.6), huángqí (0.6), plus acupuncture
		mòyào (1), rǔxiāng (1), yán hú suǒ (1), plus acupuncture
		mòyào (1), rǔxiāng (0.7), yán hú suǒ (0.6), guìzhǐ (0.5), plus acupuncture
		jīnyínhuā (1), dāngguī (0.8), niú xī (0.8), xuánshēn (0.7), gāncǎo (0.7), chì sháo (0.6), dǎodi wúgōng (0.6), huángqí (0.6), plus acupuncture
		jīnyínhuā (1), dāngguī (0.7), niú xī (0.6), xuánshēn (0.5), gāncǎo (0.5), chì sháo (0.4), dǎodi wúgōng (0.4), huángqí (0.4), plus acupuncture
		jīnyínhuā (1), dāngguī (0.7), niú xī (0.6), xuánshēn (0.5), chì sháo (0.5), zhì gāncǎo (0.4), dǎodi wúgōng (0.4), huángqí (0.4), plus acupuncture

The averages of the Zipf’s exponents and recipe sizes are 0.33 and 7.4, respectively. The small average Zipf’s exponent and large average recipe size suggest that endocrine diseases are among the toughest conditions to treat by the CHEG herbology, which is illustrated by the large quantity of total CHEGs in a recipe for endocrine diseases: 1.0, 0.8, 0.7, 0.6, 0.6, 0.6 and 0.5. The middle three herbs in such a recipe are usually expectorant, blood-heat clearing, interior warming and musculoskeletal-heat clearing herbs such as bèimǔ, dìhuáng, fùzǐ and xià kūcǎo, respectively. The remaining two herbs are often exterior-dampness removing and interior warming herbs such as fú líng and

gānjiāng, respectively. In Table 3.2, dihuáng and xià kūcǎo are used for diabetes and goiter, respectively.

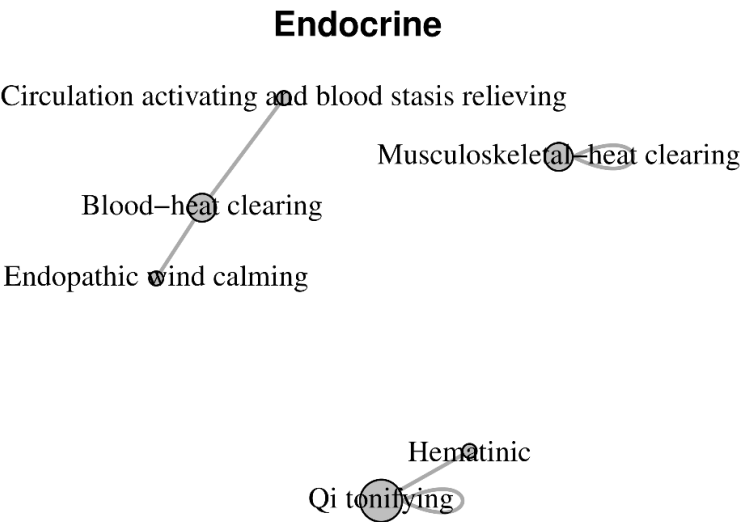


Figure 17.1. Combination of herb classes for endocrine diseases.

Chapter 18

WHOLE BODY

Nineteen diseases affect all over or anyplace of the whole body of cats. They involve seven physiological systems of diseases: 1) integumentary diseases including parasite infestation – fleas, wound, hypersensitivity (i.e., allergic) skin disorder, dermatitis, psychogenic dermatosis, post-operative complication – wound related, parasite infestation – ticks, pruritus, alopecia; 2) connective tissue diseases including obesity, abscess, weight loss, mass lesion – skin; 3) musculoskeletal system diseases including fracture finding; 4) nervous system diseases including neurological disorder; 5) renal diseases including polyuria, polydipsia; 6) cardiovascular system diseases including systemic hypertension; and 7) lymphatic diseases including lymphoma finding. We discuss connective tissue diseases and their related herbal remedies in this chapter.

18.1. COMBINATIONS OF EXPECTORANT, DIAPHORETIC, MUSCULOSKELETAL-HEAT CLEARING, EXTERIOR-DAMPNESS REMOVING AND SKIN-DAMP-HEAT CLEARING HERBS FOR CONNECTIVE TISSUE CONDITIONS

The nineteen diseases are listed in their order of prevalence below on the next page.

There are six common connective tissue diseases in pets: hernia – umbilical, obesity, lipoma, abscess, weight loss, mass lesion – skin. Among them, four affect cats: obesity, abscess, weight loss and mass lesion – skin, while three affect dogs: hernia – umbilical, obesity and lipoma. The pairing relationship of the dominant herbs in the recipes for the connective tissue diseases is shown in Figure 18.1, the way of getting which was introduced in previous chapters. The graph shows expectorant herbs such as *bái jiè zǐ* and *kūn bù* pair with each other or with musculoskeletal-heat clearing herbs such as *cǎo*

juémíng, that skin-damp-heat clearing herbs such as huáng qín combine with diaphoretic herbs such as báizhǐ, and that qi tonifying herbs such as báizhú join exterior-dampness removing herbs such as hé yè and fúlíng in the treatment of connective tissue diseases. In Table 3.2, either huáng qín, báizhǐ or fúlíng treat dermatitis.

Table 18.1. CHEG recipes for diseases affecting whole body in cats

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Parasite infestation - fleas	Insect bite, nonvenomous, of other, multiple, and unspecified sites, without mention of infection (919.4)	jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.4), jīnchán (0.3)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.5), jīnchán (0.4)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.4)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.5)
		jīnyínhuā (1), púgōngyīng (0.7), gāncǎo (0.6)
		jīnyínhuā (1), púgōngyīng (0.7), gāncǎo (0.6), jīnchán (0.5)
		jīnyínhuā (1), dǎodì wúgōng (0.7), xuánshēn (0.6), gāncǎo (0.5), chì shǎo (0.5), dāngguī (0.4)
Obesity	Obesity, unspecified (278.00)	hé yè (1), cǎo juémíng (0.6), máhuáng (0.5), zéxiè (0.4), dānshēn (0.4), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wǎn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), yùnmǐ xū (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), máhuáng (0.4), zéxiè (0.3), dānshēn (0.3), chē qián zǐ (0.2), hǔ zhàng (0.2)
		hé yè (1), cǎo juémíng (0.6), chē qián zǐ (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), chē qián zǐ (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), shígāo (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), máhuáng (0.5), zéxiè (0.4), dānshēn (0.4), shígāo (0.3), chē qián zǐ (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wǎn diǎn jīn (0.5), shígāo (0.4), chē qián zǐ (0.4), máhuáng (0.3), zéxiè (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wǎn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
		hé yè (1), cǎo juémíng (0.6), wǎn diǎn jīn (0.5), máhuáng (0.4), zéxiè (0.4), dānshēn (0.3), hǔ zhàng (0.3)
Abscess	Cellulitis and abscess of unspecified sites (682.9)	niǔxī (1), huángbò (1), cāngzhú (1), yìyǐ rén (1)
		niǔxī (1), huángbò (1), cāngzhú (1)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), tiānhuā (0.3), gāncǎo (0.2), shā rén (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
Wound	Open wound(s) (multiple) of unspecified site(s), without mention of complication (879.8)	guā lóu rén (1), xiè bái (0.7), bànxià (0.6), zhǐshí (0.5), guǐzhǐ (0.5)
		guā lóu rén (1), chuānxiōng (0.8), bèimǔ (0.8), yán hú suǒ (0.7), hòupò (0.7), xiāng fù (0.6), zhǐqiào (0.6), xiè bái (0.6)
		guā lóu rén (1), chuānxiōng (0.8), bèimǔ (0.8), yán hú suǒ (0.7), hòupò (0.7), zhǐqiào (0.6), guǐzhǐ (0.6), xiè bái (0.6)
		guā lóu rén (1), chuānxiōng (0.8), bèimǔ (0.8), yán hú suǒ (0.7), hòupò (0.7), xiāng fù (0.6), zhǐqiào (0.6), guǐzhǐ (0.6), xiè bái (0.6)
Hypersensitivity (allergic) skin disorder	Allergy, unspecified, not elsewhere classified (995.3)	gāncǎo (1), dì lóng (0.8), fǎng fēng (0.8), jiégēng (0.7), jīngjiè (0.7), yúxīngcǎo (0.6), bòhé (0.6), jiāng cán (0.6)
		gāncǎo (1), dì lóng (0.8), fǎng fēng (0.8), jiégēng (0.7), jīngjiè (0.7), yúxīngcǎo (0.6), jiāng cán (0.6), bòhé (0.6)
		gāncǎo (1), fǎng fēng (0.8), jiégēng (0.8), jīngjiè (0.7), yúxīngcǎo (0.7), dì lóng (0.6), bòhé (0.6), jiāng cán (0.6)
		gāncǎo (1), dì lóng (0.8), fǎng fēng (0.8), jiégēng (0.7), jīngjiè (0.7), yúxīngcǎo (0.6), bòhé (0.6), jiāng cán (0.6), niúbàng zǐ (0.6)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		bèimǔ (1), xuánshēn (0.6), zhì gāncǎo (0.5), jiégēng (0.4), liánqiáo (0.4), xìnggrén (0.3), shān zhīzǐ (0.3)
		gāncǎo (1), dì lóng (0.8), fǎng fēng (0.8), jiégēng (0.7), jīngjiè (0.7), yúxīngcǎo (0.6), jiāng cán (0.6), niúbàng zǐ (0.6), bòhé (0.6)
		gāncǎo (1), dì lóng (0.8), fǎng fēng (0.8), jiégēng (0.7), jīngjiè (0.7), yúxīngcǎo (0.6), púgōngyīng (0.6), bòhé (0.6), jiāng cán (0.6)
Dermatitis	Contact dermatitis and other eczema, unspecified cause (692.9)	báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
Psychogenic dermatosis	Dermatitis factitia [artefacta] (698.4)	huáng qín (1), báizhǐ (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		huáng qín (1), báizhǐ (0.5), shā rén (0.3), tiānhuā (0.2), gāncǎo (0.2), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), jīnyínhuā (0.2), dàhuáng (0.1)
		huáng qín (1), báizhǐ (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), jīnyínhuā (0.1), dàhuáng (0.1)
Post-operative complication - wound related	Postoperative infection, not elsewhere classified (998.5)	báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), huáng qín (0.2), tiānhuā (0.1), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.4), shā rén (0.3), guā lóu gēn (0.2), dàhuáng (0.1)
		báizhǐ (1), zhì gāncǎo (0.5), shā rén (0.3), huáng qín (0.2), tiānhuā (0.2), dàhuáng (0.2)
Weight loss	Loss of weight (783.21)	fúlíng (1), báizhú (0.7), báisháo (0.6), bái biǎndòu (0.5), fǎng fēng (0.5), chénpí (0.4), huáng qín (0.4)
		báizhú (1), fúlíng (0.7), bànxià (0.6), báisháo (0.5), hòupò (0.5), chénpí (0.4), huáng qín (0.4), shēngjiāng (0.4)
		fúlíng (1), báizhú (0.8), báisháo (0.8), bái biǎndòu (0.7), fǎng fēng (0.7), hòupò (0.6), chénpí (0.6), huáng qín (0.6)
		fúlíng (1), báizhú (0.7), báisháo (0.6), bái biǎndòu (0.5), fǎng fēng (0.5), chénpí (0.4), màiyá (0.4), huáng qín (0.4)
		báizhú (1), fúlíng (0.7), bànxià (0.6), báisháo (0.5), hòupò (0.5), chénpí (0.4), huáng qín (0.4), huòxiāng (0.4), shēngjiāng (0.4)
		báizhú (1), báisháo (0.6), fúlíng (0.5), huángqí (0.4), dǎng shēn (0.4), dàzào (0.3), shēngjiāng (0.3), zhì gāncǎo (0.3), fūzǐ (0.2), guizhǐ (0.2), gǎnjiāng (0.2)
Fracture finding	Fracture of unspecified bones (829)	huángqí (1), dāngguī (0.7), xuánshēn (0.6), chì shǎo (0.5), zhì gāncǎo (0.5), jīnyínhuā (0.4), dàodì wúgōng (0.4)
		huángqí (1), dāngguī (0.7), xuánshēn (0.6), chì shǎo (0.5), zhì gāncǎo (0.5), jīnyínhuā (0.4), dàodì wúgōng (0.4), plus acupuncture
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì shǎo (0.4), zhì gāncǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3)

Table 18.1. (Continued)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì sháo (0.4), jīnyínhuā (0.4), gāncǎo (0.3)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì sháo (0.4), zhì gāncǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3), dàhuáng (0.3)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì sháo (0.4), zhì gāncǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3), plus acupuncture
		huángqí (1), dāngguī (0.7), xuánshēn (0.6), zhì gāncǎo (0.5), jīnyínhuā (0.5), niúxī (0.4), chì sháo (0.4), dàodì wúgōng (0.4)
		huángqí (1), dāngguī (0.6), xuánshēn (0.5), chì sháo (0.4), zhì gāncǎo (0.4), jīnyínhuā (0.3), dàodì wúgōng (0.3), dàhuáng (0.3), plus acupuncture
		huángqí (1), dāngguī (0.7), xuánshēn (0.6), zhì gāncǎo (0.5), jīnyínhuā (0.5), niúxī (0.4), chì sháo (0.4), dàodì wúgōng (0.4), plus acupuncture
Parasite infestation - ticks	Insect bite, nonvenomous, of other, multiple, and unspecified sites, without mention of infection (919.4)	jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.4), jīnchán (0.3)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.5), jīnchán (0.4)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.4)
		jīnyínhuā (1), púgōngyīng (0.6), gāncǎo (0.5)
		jīnyínhuā (1), púgōngyīng (0.7), gāncǎo (0.6)
		jīnyínhuā (1), púgōngyīng (0.7), gāncǎo (0.6), jīnchán (0.5)
Pruritus	Unspecified pruritic disorder (698.9)	jīnyínhuā (1), dàodì wúgōng (0.7), xuánshēn (0.6), gāncǎo (0.5), chì sháo (0.5), dāngguī (0.4)
		huáng qín (1), báizhǐ (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.6), zhì gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.4), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.1), dàhuáng (0.1)
Neurological (nervous system) disorder	Unspecified disorders of nervous system (349.9)	báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), dǎng shēn (0.5)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), suānzào rén (0.5), dǎng shēn (0.4)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), dǎng shēn (0.5), gāncǎo (0.4)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), dǎng shēn (0.5), gāncǎo (0.4), gānjiāng (0.4)
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), gānjiāng (0.5), dǎng shēn (0.4)
Alopecia	Alopecia, unspecified (704.00)	báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), dǎng shēn (0.5), plus acupuncture
		báizhú (1), báisháo (0.7), fùzǐ (0.6), fúling (0.5), dǎng shēn (0.5), guizhǐ (0.4)
		biǎn bó (1), dāngguī (0.6)
		biǎn bó (1), dāngguī (0.6)
		dìhuáng (1), héshòuwū (0.7), dāngguī (0.6), shù dìhuáng (0.5), báisháo (0.5), biǎn bó (0.4)
		dìhuáng (1), héshòuwū (0.7), dāngguī (0.6), shù dìhuáng (0.5), báisháo (0.5), biǎn bó (0.4), chuānxiōng (0.4)
Systemic hypertension	Unspecified essential hypertension (401.9)	tiānmá (1)
		qiānghuó (1), hòupò (0.2), zhǐshí (0.1), dàhuáng (0.1)
		tiānmá (1), xià kūcǎo (0.7), gōu téng (0.6), chuānxiōng (0.5), dānshēn (0.5), gāncǎo (0.4), dì lóng (0.4), mǔdānpí (0.4), gǒuqízǐ (0.4), jùhuā (0.4), huáng qín (0.3)
		hóng qū (1)
		qiānghuó (1), hòupò (0.2), zhǐshí (0.1), huáng qín (0.1), huánglián (0), dàhuáng (0)
		báihuāshé shé cǎo (1), bàn zhī lián (0.7), jīnyínhuā (0.6), huángqí (0.5), gāncǎo (0.5)
Lymphoma finding	Other malignant neoplasms of lymphoid and histiocytic tissue (202)	báihuāshé shé cǎo (1), bàn zhī lián (0.7), jīnyínhuā (0.6), huángqí (0.5), púgōngyīng (0.5), gāncǎo (0.4)
		báihuāshé shé cǎo (1), bàn zhī lián (0.7), jīnyínhuā (0.6), huángqí (0.5), púgōngyīng (0.5)
		bàn zhī lián (1), báihuāshé shé cǎo (0.7), bèimǔ (0.6), xià kūcǎo (0.5), huángqí (0.5), sǎn léng (0.4), é shù (0.4)
		báihuāshé shé cǎo (1), bàn zhī lián (0.7), mǔlǐ (0.6), bèimǔ (0.5), xià kūcǎo (0.5), hǎizǎo (0.4), huángqí (0.4), dāngguī (0.4), sǎn léng (0.4)

Disease in VeNom	Disease in ICD-9	CHEG Recipes
Polyuria	Polyuria (788.42)	huángqí (1), shānzhūyú (0.8), shānyào (0.8), chuānxiōng (0.7), niúxī (0.7), ròu cōng róng (0.6), dùzhōng (0.6), fáng jǐ (0.6), zhì gāncǎo (0.6), fùzǐ (0.6), gǒuqǐzǐ (0.5)
		shānzhūyú (1), shānyào (0.7), dihuáng (0.6), mǔdānpí (0.5), fúlíng (0.5), zéxiè (0.4)
		huángqí (1), shānzhūyú (0.8), shānyào (0.8), niúxī (0.7), dùzhōng (0.7), fáng jǐ (0.6), zhì gāncǎo (0.6), fùzǐ (0.6), gǒuqǐzǐ (0.6), guǐzhǐ (0.6), fúlíng (0.5)
		shānzhūyú (1), shānyào (0.6), dihuáng (0.4), mǔdānpí (0.3), fúlíng (0.3), zéxiè (0.2), fùzǐ (0.2), guǐzhǐ (0.2)
		shānzhūyú (1), shānyào (0.6), dihuáng (0.4), mǔdānpí (0.3), fúlíng (0.3), zéxiè (0.2), ròuguì (0.2), fùzǐ (0.2)
		huángqí (1), shānzhūyú (0.8), shānyào (0.8), niúxī (0.7), dùzhōng (0.7), fáng jǐ (0.6), zhì gāncǎo (0.6), fùzǐ (0.6), gǒuqǐzǐ (0.6), fúlíng (0.6), túsǐzǐ (0.5)
Polydipsia	Polydipsia (783.5)	běi shāshēn (1), xuánshēn (1), yùzhú (1), dihuáng (1), mài mén dōng (1)
		xuánshēn (1), yùzhú (1), dihuáng (1), shāshēn (1), mài mén dōng (1)
		xuánshēn (1), yùzhú (0.2), dihuáng (0.1), shāshēn (0.1), hòupò (0), zhishí (0), mài mén dōng (0), dàhuáng (0)
Mass lesion - skin (cutaneous)	Unspecified disorder of skin and subcutaneous tissue (709.9)	dihuáng (1), bái xiān pí (0.7), dì fū zǐ (0.6), chì sháo (0.5), kǔshēn gēn (0.5), dāngguī (0.4), huái huā (0.4), cāngěr zǐ (0.4), gāncǎo (0.4)
		dihuáng (1), bái xiān pí (0.6), dì fū zǐ (0.5), chì sháo (0.4), kǔshēn gēn (0.4), dāngguī (0.3), huái huā (0.3), cāngěr zǐ (0.3), gāncǎo (0.2)
		báizhǐ (1), huáng qín (0.6), gāncǎo (0.4), shā rén (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		huáng qín (1), báizhǐ (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)
		báizhǐ (1), zhì gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), gāncǎo (0.6), shā rén (0.4), huáng qín (0.3), tiānhuā (0.3), dàhuáng (0.2)
		báizhǐ (1), huáng qín (0.5), zhì gāncǎo (0.3), shā rén (0.2), tiānhuā (0.2), dàhuáng (0.2)

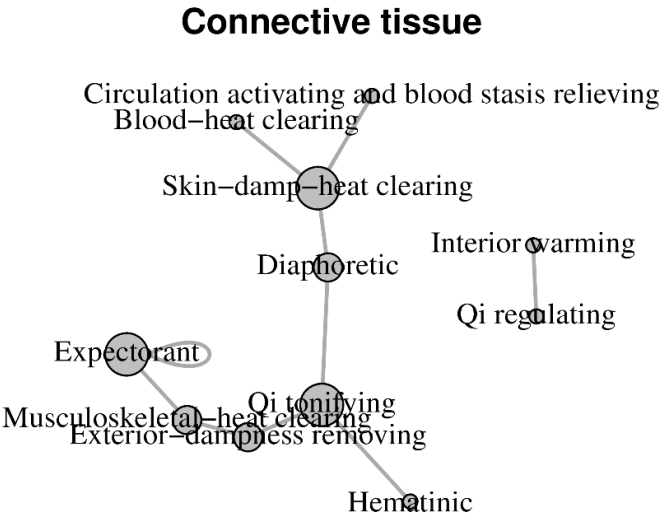


Figure 18.1. Combination of herb classes for connective tissue diseases.

The mean values of the Zipf's exponents and recipe sizes are 0.87 and 6.8, respectively. The large mean Zipf's exponent indicates that the few dominant herbs in the recipe work to treat connective tissue diseases. A typical such recipe has component herbs in the proportions: 1.0, 0.6, 0.4, 0.3, 0.3, 0.2 and 0.2. The sum of the middle three herbs equals the first herb because $0.4 + 0.3 + 0.3 = 1$, suggesting their auxiliary role in the recipe. The effects of them are found to be expectorant, diaphoretic, interior-

dampness removing or exterior-dampness removing accomplished by such herbs as bèimǔ, máhuáng, shārén and zéxiè. The lightest two herbs in the recipe are qi tonifying and laxative herbs such as gāncǎo and dàhuáng. According to Table 3.2, máhuáng is used for an assortment of skin conditions including dermatomycosis, urticarial, dermatitis and acne. Also, gāncǎo and dàhuáng treat dermatitis and shārén treats psoriasis in Table 3.2.

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ABOUT THE AUTHOR

Sun-Chong Wang, PhD

Professor

Department of Biomedical Sciences and Engineering,
National Central University, Chungli Taoyuan, Taiwan
Email: sunchong.wang@gmail.com; scwang@ncu.edu.tw

Sun-Chong Wang earned his PhD in nuclear physics from New York University. After postdoctoral research on dark matter detection at Brown University, he joined the Centre for Addiction and Mental Health / University of Toronto as a bioinformatician, working on epigenomics and complex diseases. In addition to basic biomedical research, Dr. Wang has always wanted to translate computational breakthroughs into clinical advances. He has therefore been interested in the study and use of medicinal herbs. Since 2009, Dr. Wang has successfully acquired and analyzed hundreds of millions of disease diagnoses and associated herbal prescriptions using novel bioinformatic algorithms and state-of-the-art deep learning methods. The approach is unprecedented in terms of data volume and methodology. The outcome is revolutionizing, pushing a paradigm change in the training and practices of modern Chinese herbology. Dr. Wang has coauthor publications in prestigious journals such as Physical Review Letters, Nature Genetics, Genome Biology, and Biological Psychiatry. He also published open-source software to R/Bioconductor and Android Apps to Google Play. He has authored four books in amazon.com on cross disciplines from computation and epigenomics to clinical Chinese herbology. Prof. Wang currently serves as chairman of the Department of Biomedical Sciences and Engineering, National Central University, Taiwan.

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