Analysis of Traditional Chinese Medicine Disease Spectrum in Outpatients among Family Doctor Contracted Residents at Community Health Service Centers in Shenzhen: A Postprint

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Abstract

Background: Developing traditional Chinese medicine (TCM) has become a crucial national strategy in China, wherein vigorously enhancing the TCM service capacity of primary-level health institutions constitutes a key component. Currently, research on the disease spectrum of TCM diagnosis and treatment in community health service institutions remains scarce.

Objective: Based on the "Classification and Codes of Traditional Chinese Medicine Diseases and Syndromes"(TCD), this study analyzes the types, quantities, and characteristics of the disease spectrum of TCM diagnosis and treatment among contracted family doctor residents in community health service centers (CHSCs) in Shenzhen during outpatient visits, aiming to evaluate the TCM diagnosis and treatment capacity of Shenzhen CHSCs and provide a theoretical basis for promoting the development of primary-level TCM services in China.

Methods: Records were extracted for contracted family doctor residents who visited outpatient clinics in Shenzhen' s 10 district CHSCs and incurred medical expenses from January 1, 2021 to June 30, 2021, including: gender, age, and disease diagnosis. Cases where TCM diagnosis and treatment was the purpose of the visit, matching medical expenses were generated, and the primary diagnosis was a TCD-coded diagnosis were included in the study, primarily involving department categories, specialty system subcategories, and TCM disease names.

Results: A total of 385,138 TCM diagnosis and treatment records were included in the study. Among them, 170,077 were male (44.16%) with a mean age of $37.5\$\pm 8.2 years; 215,061 were female (55.84\pm\$9.4$ years. The disease spectrum encompassed all seven department categories of TCD, in descending order: internal medicine 56.98%, pediatrics 20.56%, otorhinolaryngology 12.45%,

gynecology 7.95%, surgery 1.51%, orthopedics and traumatology 0.37%, and ophthalmology 0.18%. Except for tumor diseases and cancer diseases across all department categories, traumatic injuries in surgery, and canthus diseases, black cornea diseases, pupil diseases, and traumatic eye diseases in ophthalmology, the disease spectrum covered all specialty system subcategories under the seven department categories. Within each department category, the disease spectrum was concentrated in several TCM disease classifications: internal medicine comprised bi syndrome, common cold disease, cough disease, vertigo disease, insomnia disease, consumptive disease, diarrhea disease, and stomach pi disease, accounting for 93.95%; pediatrics comprised pediatric common cold disease, pediatric cough disease, pediatric diarrhea disease, pediatric abdominal pain disease, pediatric vomiting disease, and pediatric anorexia, accounting for 97.60%; otorhinolaryngology comprised throat bi disease, mouth sore disease, tonsil disease, toothache disease, tooth xuan disease, nasal congestion disease, and nasal sinusitis disease, accounting for 98.71%; gynecology comprised leukorrhea disease, hypomenorrhea disease, and dysmenorrhea disease, accounting for 94.40%; surgery comprised hidden rash disease, damp sore disease, breast nodule disease, and carbuncle disease, accounting for 94.0%; orthopedics and traumatology comprised tendon injury disease and stiff neck disease, accounting for 96.73%; and ophthalmology comprised epidemic red eye disease, sudden wind guest heat disease, and stye disease, accounting for 93.03%. The top five systems in the disease spectrum were respiratory system 54.19%, musculoskeletal system 19.05%, gynecological system 7.95%, cardiovascular and cerebrovascular system 7.15%, and digestive system 4.98%. Patients aged <15 years and 15-24 years were predominantly affected by diseases related to the respiratory and digestive tracts. With advancing age, bi syndrome, vertigo disease, headache disease, insomnia disease, fatigue, and others gradually increased. Before age 45, common cold disease was the leading condition, whereas after age 45, bi syndrome characterized by muscle and joint pain became the leading condition.

Conclusion: In recent years, with strengthened primary-level healthcare and various favorable policies, Shenzhen CHSCs have demonstrated a relatively broad disease spectrum for TCM diagnosis and treatment, yet the disease types remain relatively singular and concentrated, dominated by internal medicine diseases. The disease spectrum is primarily concentrated in five major systems: respiratory system, musculoskeletal system, gynecological system, cardiovascular and cerebrovascular system, and digestive system. There is an imperative to further enhance and expand the TCM diagnosis and treatment capacity of CHSCs to better meet the diverse health needs of residents.

Full Text

Analysis of the Traditional Chinese Medicine Disease Spectrum in Outpatient Clinics of Residents Contracted with Family Doctors in Shenzhen Community Health Service Centers

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Abstract

Background: The development of traditional Chinese medicine (TCM) has become a vital national strategy in China, with improving TCM service capacity in primary health institutions being a key component. However, few studies have examined the TCM disease spectrum in community health service institutions.

Objectives: Based on the *Classification and Codes of Diseases and Syndromes of Traditional Chinese Medicine* (TCD), this study analyzed the types, quantity, and characteristics of TCM disease spectra among outpatient visits by family doctor-contracted residents in Shenzhen Community Health Centers (CHCs). The aim was to understand the TCM diagnostic and treatment capabilities of Shenzhen CHCs and provide a theoretical basis for advancing primary-level TCM services in China.

Methods: We extracted outpatient records with incurred medical expenses from family doctor-contracted residents who visited CHCs in Shenzhen' s 10 districts between January 1, 2021 and June 30, 2021. Data included gender, age, and disease diagnosis. Cases were included if TCM diagnosis and treatment was the primary purpose, matching medical fees were generated, and the first diagnosis used TCD coding. The analysis focused on department categories, specialty system subcategories, and TCM disease names.

Results: A total of 385,138 TCM diagnosis and treatment records were included. Among these, 170,077 (44.16%) were male patients with a mean age of $37.5\$\pm8.2 years, and 215,061 (55.84\pm\$9.4$ years. The disease spectrum covered all seven TCD department categories: Internal Medicine (56.98%), Pediatrics (20.56%), Otolaryngology (12.45%), Gynecology (7.95%), Surgery (1.51%), Orthopedics (0.37%), and Ophthalmology (0.18%). Excluding tumor diseases, cancer diseases, trauma diseases in Surgery, and certain ophthalmologic conditions (canthus diseases, black cornea diseases, pupillary diseases, and traumatic eye diseases), the spectrum encompassed all specialty system subcategories under the seven department categories.

Within each department category, the disease spectrum concentrated in several TCM disease classifications: Internal Medicine was dominated by arthralgia, common cold, cough, vertigo, insomnia, consumptive disease, diarrhea, and stomach distension (93.95% of cases); Pediatrics by infantile common cold, infantile cough, infantile diarrhea, infantile abdominal pain, infantile vomiting, and infantile anorexia (97.60%); Otolaryngology by throat impediment, oral ulcers, tonsillitis, toothache, gum atrophy, allergic rhinitis, and sinusitis (98.71%); Gynecology by leukorrhea, hypomenorrhea, and dysmenorrhea (94.40%); Surgery by urticaria, eczema, breast nodules, and carbuncles (94.0%); Orthopedics by tendon injury and stiff neck (96.73%); and Ophthalmology by epidemic red eye, acute conjunctivitis, and stye (93.03%).

The top five systems in the disease spectrum were: Respiratory System (54.19%), Musculoskeletal System (19.05%), Gynecological System (7.95%), Cardiovascular and Cerebrovascular System (7.15%), and Digestive System (4.98%). Patients under 15 and aged 15-24 primarily presented with respiratory and digestive tract diseases. With increasing age, conditions such as arthralgia, vertigo, headache, insomnia, and fatigue became more prevalent. Common cold was the leading disease before age 45, while musculoskeletal arthralgia became dominant after age 45.

Conclusions: Recent efforts to strengthen primary-level healthcare and favorable policies have resulted in a broad TCM disease spectrum in Shenzhen CHCs, though disease types remain relatively concentrated, primarily in internal medicine. The spectrum focuses on five major systems: respiratory, musculoskeletal, gynecological, cardiovascular/cerebrovascular, and digestive. Further enhancement and expansion of TCM diagnostic and treatment capabilities in CHCs are needed to better meet diverse resident health needs.

Keywords: Traditional Chinese medicine diagnosis and treatment; Disease spectrum; Classification and Codes of Diseases and Syndromes of Traditional Chinese Medicine; Community health service center; Family doctor contract

Introduction

Traditional Chinese medicine offers advantages of simplicity, convenience, efficacy, and affordability, making it highly suitable for primary health institutions lacking advanced equipment. Since the 2009 State Council' s *Several Opinions on Supporting and Promoting the Development of Traditional Chinese Medicine* advocated strengthening TCM department construction in community health service centers [1], China' s 12th, 13th, and 14th Five-Year Plans have all introduced policies to vigorously develop TCM services at the primary level. The *13th Five-Year Plan for TCM Development* required that by 2020, all community health service institutions would have TCM service capacity, with TCM consultations accounting for 30% of total visits, a target increased to 35% by 2025 in the 14th Five-Year Plan [2,3]. Developing TCM has become a crucial national strategy, with enhancing TCM service capacity in primary health institutions being a key priority.

Disease spectrum analysis serves as an excellent indicator of diagnostic and treatment capabilities. The 10th Revision of the *International Classification of Diseases* (ICD-10) and the *Classification and Codes of Diseases and Syndromes of Traditional Chinese Medicine: GB/T 15657—1995* (TCD) are currently China' s standards for managing disease spectra in medical records for Western medicine and TCM, respectively, and are commonly used methods and references for disease spectrum research [4,5]. Domestic TCM disease spectrum studies have primarily focused on hospitals. For instance, Ge et al. [6] used both TCD and ICD-10 standards to analyze emergency patient visits at Shenzhen Traditional Chinese Medicine Hospital in 2019 and 2020, exploring changes in disease spectra under COVID-19. Huang [7] utilized TCD standards to analyze the TCM disease spectrum of elderly rehabilitation department inpatients from 2018-2020. In contrast, community health service institution studies have employed ICD-10-coded Western diagnoses, such as Shi et al. [8] analyzing Shanghai' s community health center disease spectrum from 2014-2018 using ICD-10 codes, and Huang [9] analyzing outpatient capacity characteristics of 13 community health institutions in Chengdu' s Wuhou District using only ICD-10 diagnostic data while excluding TCM diagnoses. Few studies have examined TCM disease spectra in community health service institutions.

To better investigate the actual TCM diagnostic and treatment capabilities at the community level amid efforts to develop primary-level TCM services, this study employed TCD classification and codes to analyze the types, quantity, and characteristics of TCM disease spectra using big data from outpatient visits by family doctor-contracted residents in Shenzhen Community Health Centers (CHCs). The aim was to understand the TCM diagnostic and treatment capabilities of Shenzhen CHCs and provide a theoretical basis for advancing primary-level TCM services in China.

Methods

Data Source Data were extracted from the "Hangchuang Community Health Service Center Business System" (developed by Chuangye Hui Kang Technology Co., Ltd.) on the unified information platform of the Shenzhen Municipal Health Commission. Records included outpatient visits by family doctor-contracted residents in Shenzhen' s 10 districts between January 1, 2021 and June 30, 2021, with incurred medical expenses. Data elements comprised gender, age, and disease diagnosis. This study was approved by the Ethics Committee of Shenzhen University Health Science Center (Approval No.: PN-202200020).

Study Subjects **Inclusion criteria:** (1) TCM diagnosis and treatment as the primary purpose of the visit with matching medical fees generated; (2) First diagnosis using TCD-coded diagnosis. Cases meeting both criteria were included.

Exclusion criteria: (1) Missing diagnosis; (2) Non-standard diagnosis not found in ICD-10 or TCD codes; (3) First diagnosis using ICD-10-coded Western medicine diagnosis; (4) First diagnosis containing both TCD disease name and ICD-10 disease diagnosis (e.g., "Common Cold Disease (Upper Respiratory Infection)"); (5) TCM preventive healthcare items, including free TCM health packages, TCM decoctions, or free TCM health treatments without charges or with mismatched diagnosis and treatment fees; (6) TCM health management services under the National Basic Public Health Service Program (3rd Edition), including TCM constitution identification and related treatments for the elderly, and TCM health services for children aged 0-36 months [10].

Age Grouping To enable comparison with related Hong Kong studies and align with China' s health statistics standards for age group classification, participants were grouped as: <15 years, 15-24 years, 25-44 years, 45-64 years, and $ $65 years [11,12].

Data Processing Collected data were entered into Excel spreadsheets by region, gender, age, and disease diagnosis. Preliminary processing utilized Excel' s filtering, splitting, and classification functions. Python programming was then employed for statistical analysis using word count methods.

Disease Classification and Codes This study utilized the *Classification and Codes of Diseases and Syndromes of Traditional Chinese Medicine: GB/T 15657–1995* (TCD) standard issued by the State Bureau of Technical Supervision, China's current standard for classifying TCM medical record data. TCD includes disease name classification and syndrome classification. Due to extremely non-standard syndrome classification documentation in this study, only TCD disease name classification was analyzed, focusing on department categories, specialty system subcategories, and TCM disease names [4]. Western disease classification followed the currently used ICD-10 standard [5].

Matching TCD and ICD-10 Diagnoses TCM and Western medicine derive from different theoretical systems with significant differences in disease nomenclature. To better understand TCD disease name classifications, extensive literature review was conducted to match TCD and ICD-10 disease diagnoses in this study. One qualified general practitioner with TCM credentials from each of the 10 districts was selected to jointly revise and verify the matching based on routine documentation practices, forming the final matching results.

Results

General Characteristics

A total of 385,138 TCM diagnosis and treatment records with standardized TCD coding were included. The cohort comprised 170,077 males (44.16%) with a mean age of $37.5\$\pm 8.2 years, and 215,061 females (55.84\pm\$9.4$ years. Age distribution was: <15 years (88,700; 23.03%), 15-24 years (24,231; 6.29%), 25-44 years (131,203; 34.07%), 45-64 years (109,420; 28.41%), and $ $65 years (31,584; 8.20%).

TCM Disease Classification

TCD Department Category Distribution The disease spectrum encompassed all seven TCD department categories, led by Internal Medicine (56.98%), followed by Pediatrics (20.56%), Otolaryngology (12.45%), Gynecology (7.95%), Surgery (1.51%), Orthopedics (0.37%), and Ophthalmology (0.18%) [Figure 1: see original paper].

TCD Specialty System Subcategories Excluding tumor diseases, cancer diseases, trauma diseases in Surgery, and certain ophthalmologic subcategories (canthus diseases, black cornea diseases, pupillary diseases, and traumatic eye diseases), the disease spectrum covered all specialty system subcategories under the seven TCD department categories (detailed results not shown).

Disease Spectrum Distribution

Diseases Accounting for $ $90% of Cases in Each Department Category Within each TCD department category, the disease spectrum concentrated in several specialty system subcategories and TCM disease classifications . In Internal Medicine, arthralgia (n=71,254), common cold (n=56,171), cough (n=38,895), vertigo (n=16,012), insomnia (n=7,753), consumptive disease (n=6,223), diarrhea (n=5,949), and stomach distension (n=3,908) accounted for 93.95% of cases. Pediatrics was dominated by infantile common cold (n=41,256), infantile cough (n=30,121), infantile diarrhea (n=1,853), infantile abdominal pain (n=1,450), infantile vomiting (n=1,367), and infantile anorexia (n=1,252), representing 97.60% of cases.

Otolaryngology cases primarily comprised throat impediment (n=36,979), oral ulcers (n=3,562), tonsillitis (n=1,865), toothache (n=1,513), gum atrophy (n=1,243), allergic rhinitis (n=1,195), and sinusitis (n=987), totaling 98.71%. Gynecology focused on leukorrhea (n=18,292), hypomenorrhea (n=5,384), and dysmenorrhea (n=5,229), accounting for 94.40%. Surgery concentrated on urticaria (n=2,857), eczema (n=1,846), breast nodules (n=428), and carbuncles (n=318), representing 94.0%. Orthopedics primarily treated tendon injury (n=771) and stiff neck (n=590), comprising 96.73%. Ophthalmology cases were mainly epidemic red eye (n=257), acute conjunctivitis (n=239), and stye (n=158), accounting for 93.03%.

Top Five Systems in TCM Diagnosis and Treatment After categorizing all TCM disease classifications, the top five systems in the disease spectrum were: Respiratory System (54.19%), Musculoskeletal System (19.05%), Gynecological System (7.95%), Cardiovascular and Cerebrovascular System (7.15%), and Digestive System (4.98%) .

Top Ten Diseases by Age Group Common cold ranked as the leading disease before age 45, while musculoskeletal arthralgia became predominant after age 45. Patients under 15 and aged 15-24 primarily presented with respiratory and digestive tract diseases. With increasing age, conditions such as arthralgia related to cervical spondylosis and lumbar disc herniation, vertigo and headache caused by hypertension, insomnia, and consumptive disease with fatigue became more prevalent .

Discussion

Broad Disease Spectrum in Shenzhen CHCs

Guangdong Province and Shenzhen have consistently prioritized TCM development. Since 2017, a project to enhance primary-level TCM service capacity has been implemented. Huang et al. [13] analyzed Guangdong' s TCM medical service system during the 13th Five-Year Plan period, showing that by 2019, 100% of community health service centers in Guangdong could provide TCM services, establishing a primary-level TCM service network. As Guangdong' s first national comprehensive TCM reform pilot zone, Shenzhen issued policies including the *Shenzhen TCM Development Plan (2013-2020)*, significantly improving TCM service accessibility and capacity [14]. Consistent with previous findings, this study demonstrates that Shenzhen CHCs possess considerable TCM diagnostic and treatment capabilities with a broad disease spectrum, covering not only all seven TCD department categories but also nearly all specialty system subcategories. This improvement is closely related to recent primary-level strengthening efforts and favorable policies.

Characteristics of the TCM Disease Spectrum

This study reveals age-specific disease spectrum patterns. Before age 45, common cold was the leading condition, while musculoskeletal arthralgia predominated after age 45. Younger patients primarily presented with respiratory and digestive diseases, whereas older patients showed increasing prevalence of arthralgia, vertigo, headache, insomnia, and fatigue. These patterns differ significantly from previous community health center Western medicine disease spectra [8,15], highlighting distinct differences between TCM and Western medicine disease spectra.

Although the study period coincided with the COVID-19 pandemic, consistent with Ge et al. [6] who noted that emergency department visits at Shenzhen Traditional Chinese Medicine Hospital had normalized by August 2020 with visit volumes comparable to 2019, Shenzhen remained at low risk for an extended period. CHCs only restricted services for febrile patients, and due to hospital-related fears and family doctor contracts, residents preferred CHC visits. Therefore, consistent with previous research [6,16], respiratory-related diseases and symptoms remained the leading category in this study's disease spectrum. The second to fifth ranking systems were: musculoskeletal conditions (cervical spondylosis, low back pain, and arthralgia), gynecological conditions (vaginitis and dysmenorrhea), cardiovascular/cerebrovascular conditions (vertigo and sleep disorders), and digestive conditions (gastric distension and diarrhea). This distribution is associated with the extensive promotion of appropriate TCM techniques in Guangdong and Shenzhen in recent years, including Chinese patent medicines, herbal decoctions, acupuncture, massage, scraping, cupping, and moxibustion [17].

Need to Strengthen TCM Diagnostic Capabilities

Due to the lack of domestic research on TCM disease spectra in community health service centers, this study compared Shenzhen CHCs with Hong Kong' s primary-level TCM clinics, which share similar cultural customs and climate [12]. Comparison of the top ten TCM diseases revealed high concordance in the 25-44 and 45-64 age groups. However, Hong Kong' s primary-level TCM clinics treated pediatric patients with psychological disorders, while patients aged 15-24 presented with acne as the leading condition and included sleep disorder patients. In contrast, this study' s corresponding age groups remained dominated by respiratory and digestive diseases. Similarly, for patients $ $65 years, Hong Kong' s primary-level TCM practice addressed not only the conditions identified in this study (musculoskeletal, respiratory, vertigo, headache, sleep disorders) but also paralysis/weakness, neurological diseases, and edema. This suggests that in Hong Kong, younger and older populations more frequently seek primary-level TCM care for appropriate conditions, possibly related to national conditions, healthcare-seeking habits, CHC recognition, and diagnostic capabilities. These findings indicate that Shenzhen CHCs should enhance publicity, expand service scope, and improve TCM diagnostic capabilities, particularly for pediatric

and geriatric populations, to enable CHCs to manage broader populations and disease spectra.

Moreover, although Shenzhen CHCs demonstrated a broad TCM disease spectrum, comprehensive analysis revealed concentrated distribution. Internal medicine accounted for 59.37% of department categories, while Surgery, Orthopedics, and Ophthalmology cases were minimal. Over 90% of case volume in each department category concentrated on several disease spectra, primarily common conditions of the respiratory, digestive, musculoskeletal, and gynecological systems. Besides concentrated disease types, the spectrum was also relatively narrow. With the vigorous development of TCM, unique TCM therapies and herbal formulas have demonstrated advantages or important adjunctive roles in treating various conditions [18-20], including stroke, chest pain, palpitations, facial paralysis, constipation, insomnia, pediatric asthma, chronic pharyngitis, menopausal syndrome, infertility, fractures, and dermatovenereology. Community health service centers, with their characteristics of accessibility, continuity, comprehensiveness, and coordination, are highly suitable for managing rehabilitation, end-of-life care, and cancer patients. TCM' s advantages in improving quality of life for cancer patients have been well-established, making it an important complement to Western medicine [21]. However, this study' s disease spectrum did not include tumor or cancer diseases, and many conditions where TCM has therapeutic advantages were rarely or never seen, consistent with Pan et al. [16] reporting that TCM general practitioners seldom encountered stroke, cancer, dermatological, or sexually transmitted diseases in daily practice.

Conclusions and Recommendations

This study demonstrates that recent primary-level strengthening efforts and favorable policies have significantly enhanced TCM diagnostic and treatment capabilities in Shenzhen CHCs, resulting in a broad disease spectrum. However, disease types remain relatively concentrated and narrow, with many TCM-advantageous conditions rarely seen. The disease spectrum for pediatric, adolescent, and elderly patients is narrower than in Hong Kong' s primary-level TCM clinics. These limitations relate to multiple factors: China' s TCM general practitioner standardized training system remains imperfect, with rapid department rotations, formalism, and preceptors unfamiliar with primary-level needs, resulting in limited knowledge and skills acquisition [22]; continuing education content is restricted, focusing primarily on internal medicine diseases and theoretical lectures [23]; general practitioners are overworked with insufficient staffing, unsupported performance assessments, and lack of equipment investment, creating disincentives for developing new techniques and services, and hindering the transformation of TCM cultural traditions into practice [24].

To further enhance primary-level TCM capabilities and better meet residents' health needs, the following measures are recommended:

1. **Increase policy support:** Provide greater policy support and guarantees for TCM services in community health institutions, extending beyond TCM health projects to include TCM diagnosis and treatment services. This includes expanding medical insurance coverage, increasing medical insurance policy 倾斜 (preferential policies) for primary-level institutions, enhancing financial support, improving incentive mechanisms, and increasing equipment investment to promote new techniques and services and expand the disease spectrum. Continue government publicity campaigns to increase resident awareness of CHC TCM services and encourage CHC utilization. Establish TCM quality control and evaluation supervision mechanisms in CHCs, incorporating TCM diagnostic capabilities into performance assessment indicators beyond current service volume metrics to better promote capability enhancement.
2. **Accelerate workforce development:** Construct an integrated training system combining academic education, TCM general practitioner standardized training, and continuing education. Design more general practitioner training curricula suitable for primary-level needs. Use relevant policies and benefits to attract and retain more graduates willing to serve in primary-level CHCs. Provide 普及性 (universal) training in appropriate TCM techniques for non-TCM-background general practitioners and nurses, such as Chinese patent medicine use, cupping, scraping, and acupoint application, gradually expanding technique varieties and training scope. Develop characteristic TCM services for stroke sequelae, physical disabilities, cancer patients, the elderly, and children based on community needs. Implement planned and purposeful "sub-specialty" enhancement programs for community TCM physicians through training courses, advanced studies, and renowned TCM physicians mentoring community practitioners, enabling them to become featured TCM specialists and better meet resident needs.
3. **Establish vertical integration mechanisms:** Fully leverage CHC advantages to shift more TCM-advantageous disease types suitable for primary-level care to the community. Establish vertical integration mechanisms where hospitals not only refer patients to CHCs but also strengthen primary-level support, enabling CHCs to "receive and manage" patients effectively. This creates a diagnosis-rehabilitation-continuous care model that promotes tiered diagnosis and treatment implementation.

Limitations

This study has several limitations: (1) Data were derived from family doctor-contracted residents rather than the entire population, which may affect results, though the large dataset and fact that contracted residents constitute the main CHC clientele should prevent substantive impact; (2) Although respira-

tory diseases were not strictly restricted during the study period, the COVID-19 pandemic may have influenced patient healthcare-seeking behavior, particularly among the elderly; (3) TCM disease nomenclature standardization remains suboptimal, and some TCM disease names are obscure, potentially causing some spectrum 偏差 (deviation), though the large dataset should prevent fundamental impact; (4) As a big data study unable to verify each case, strict inclusion criteria were applied to ensure relevance to TCM capability assessment, which may have excluded some eligible cases; (5) The study did not further analyze impacts of gender, time periods, different CHCs, or physician levels on the disease spectrum. Future research should refine data and conduct more detailed analyses to better guide clinical practice.

Conflict of Interest: None declared.

Author Contributions: Yin Zhaoxia: overall project design, manuscript writing, project coordination, funding acquisition; Kong Chongyu: literature review, data processing; Zou Xianhui: data processing; Li Chuang, Huang Yin, Feng Yang: project coordination, financial support; Wang Yunfei: initial data processing; Gong Weijie: manuscript proofreading, English abstract writing.

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Note: Figure translations are in progress. See original paper for figures.