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SURVEY ON OUTPATIENT INTEGRATED TREATMENT BETWEEN WESTERN AND TRADITIONAL MEDICINE AFTER THE ESTABLISHMENT OF SPECIALIZED CLINICS AT UNIVERSITY MEDICAL CENTER HO CHI MINH CITY – CAMPUS 3

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ABSTRACT

Objectives: To describe the outpatient treatment patterns at the University Medical Center Ho Chi Minh City – Campus 3 after the establishment of specialized clinics. This study aimed to characterize the prevalence of integrative Traditional Medicine (TM) – Western Medicine (WM) models, pharmacological prescription profiles, and the distribution of non-pharmacological therapies.

Methods: A descriptive cross-sectional study was conducted using 21,525 eligible electronic medical records from outpatient visits between April 1, 2024, and March 31, 2025. The unit of analysis was each outpatient visit. Data on integrative treatment patterns, pharmacological prescriptions, and non-pharmacological therapies were collected. Descriptive statistics were used to calculate frequencies and percentages.

Results: Of 21,525 outpatient visits, the integrative TM-WM model was the most prevalent pattern (50.82%). TM drugs were prescribed in 87.20% of visits (with finished products predominating at 70.80%), while WM drugs were prescribed in 54.41%. The most common WM drug group was cardiovascular drugs (23.86%); the most common TM herbal categories were Qi tonifying (17.58%) and blood tonifying (11.71%). TM procedures accounted for the majority of non-pharmacological therapies (64.59%), led by thread embedding acupuncture (23.38%) and electroacupuncture (10.14%).

Conclusion: The outpatient treatment model at the specialized clinics is highly integrative, characterized by the modernization of TM drug use, pharmacological coordination between TM and WM, and a foundational reliance on evidence-based non-pharmacological TM therapies. These findings provide a basis for optimizing clinical protocols, health policy planning, and future research in integrative medicine.

Keywords: Integrative medicine, Traditional Medicine, outpatient, drug utilization, non-pharmacological therapies.

1. INTRODUCTION

The integration of Traditional Medicine (TM) with Western Medicine (WM) is a growing global trend, strongly advocated by the World Health Organization as a crucial strategy to enhance healthcare accessibility and outcomes [1]. In Vietnam, this approach is not only encouraged but is a central component of national health policy, aimed at harmonizing the strengths of both systems to provide comprehensive patient care [2]. This paradigm marks a significant shift from viewing TM as an alternative practice to embracing it as a complementary and integral part of the modern healthcare framework.

In response to this strategic direction, the University Medical Center Ho Chi Minh City – Campus 3 recently established a series of specialized outpatient clinics. This initiative aims to leverage the precise diagnostic capabilities of WM with the holistic and comprehensive therapeutic principles of TM. While previous studies in Vietnam have investigated treatment patterns in inpatient TM settings, there is a lack of comprehensive data describing the practical application of this integrated model in a large-scale, specialized outpatient context. Understanding the current therapeutic

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landscape, including how frequently integrative care is utilized, which medications are prescribed, and what non-pharmacological therapies are employed, is essential for optimizing clinical protocols, guiding policy, and planning future medical training.

Therefore, this study was conducted to provide a detailed, descriptive overview of the outpatient treatment situation at the University Medical Center Ho Chi Minh City – Campus 3 following this reorganization. Specifically, this research aims to characterize the patterns of care across three key domains: the prevalence of integrative TM-WM treatment models, the profile of pharmacological prescriptions from both systems, and the distribution of non-pharmacological therapies provided to outpatients.

2. METHODS

2.1. Study design

This was a descriptive cross-sectional study using data extracted from electronic outpatient medical records from April 1, 2024, to March 31, 2025, at the University Medical Center Ho Chi Minh City – Campus 3.

2.3. Study population

The study employed a total sampling method. During the study period, a total of 21,656 outpatient electronic medical records were collected. After excluding 131 records that lacked information on the primary diagnosis or treatment indications, 21,525 records met the eligibility criteria and were included in the analysis.

The starting date of April 1, 2024, was selected because it marked the completion of the establishment of specialized clinics at the hospital, including General Medicine, Traditional Medicine, Pediatrics Clinic, Traditional Medicine Ophthalmic and Otorhinolaryngologic Clinic, Traditional Medicine Gynecology Clinic, Traditional Medicine Aesthetics Dermatology, Nutrition Clinic, Integrative Oncology Clinic, and Allergy and Immunology Clinic.

Revisit cases were not excluded; therefore, a patient who attended multiple visits during the study period was counted multiple times. The unit of analysis was each outpatient visit.

2.3. Study variables and indicators

The study variables were divided into three major domains corresponding to the therapeutic activities: integrative treatment patterns, pharmacological treatment, and non-pharmacological treatment.

The integrative treatment pattern reflected the type of therapy applied in each outpatient visit, with each visit regarded as an independent observation. Treatment forms were classified into TM alone, WM alone, and integrative WM-TM. A visit was defined as integrative when at least one TM and one WM intervention were prescribed during the same encounter, regardless of whether they involved drug or non-drug therapies.

For WM drugs, each prescribed active ingredient or pharmaceutical product was coded and classified according to Circular No. 15/VBHN-BYT issued by the Ministry of Health in 2024. Each active substance or preparation was counted as one prescription item, and the proportion (%) of each drug group was calculated by dividing the number of recorded items in that group by the total number of WM prescription items.

For TM drugs, data were separated by dosage form (decoctions and finished products). Herbal ingredients in decoction prescriptions were categorized according to Circular No. 15/VBHN-BYT, issued by the Ministry of Health in 2025. Each herb in a prescription was counted as one item; thus, the total recorded counts reflected the total number of individual herbal ingredients prescribed in the study sample. The proportion (%) of each TM drug category was calculated as the number of recorded herbal items in that category divided by the total number of herbal items prescribed.

Non-pharmacological therapies were recorded based on the total number of procedure counts for both TM and WM. The proportion (%) of each procedure type was determined by dividing the number of counts for that procedure by the total number of non-pharmacological procedure counts.

2.4. Data processing and analysis

Data were extracted from the Netconn electronic medical record system of the University Medical Center Ho Chi Minh City – Campus 3, including lists of prescribed drugs and procedures performed during each outpatient visit. After extraction, the data were reviewed, cleaned, and coded to remove duplicate or incomplete entries. The data processing followed three main steps: step 1, standardization of input data, including unifying drug names, active ingredients, and pharmacological groups according to official Ministry of Health classifications (Circular No. 15/VBHN-BYT); step 2, categorization of treatment types into TM alone, WM alone, and integrative TM-WM treatments; step 3, descriptive computation of study variables, including total outpatient visits, total drug prescription counts, total non-drug procedure counts, and the proportion (%) of each drug or procedure category within the overall dataset.

Descriptive statistical analyses were performed using Microsoft Excel 365. Quantitative variables were presented as frequencies (%).

2.5. Ethical considerations

The study protocol was reviewed and approved by the Ethics Committee in Biomedical Research of the University of Medicine and Pharmacy at Ho Chi Minh City (Approval No. 1817/ĐHYD-HĐĐĐ, dated April 17, 2025).

3. RESULTS

3.1. Integrative treatment patterns of Western and Traditional Medicine

Among 21,525 outpatient visits, the integrative treatment combining WM and TM accounted for the largest proportion, representing 50.82% of all cases (Figure 1).

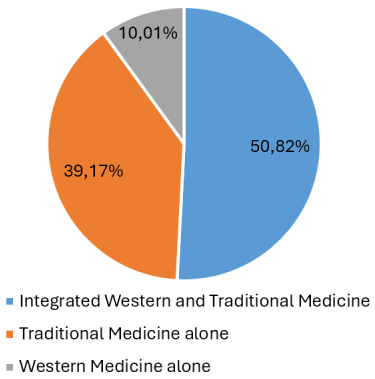

Figure 1. Integrative treatment patterns of Western and Traditional Medicine (N = 21,525)

3.2. Drug Treatment Profile

In the 21,525 outpatient visits, TM drugs accounted for 87.20% and WM drugs for 54.41%. Combined use of both treatment systems was observed in 45.74% of visits. For TM prescriptions, finished products predominated (70.80%), while decoctions were prescribed in 35.03% of cases.

Table 1. Drug treatment characteristics (N = 21,525)

Drug Category	Frequency (%)
Western Medicine drugs	11,712 (54.41%)
Traditional Medicine drugs	18,770 (87.20%)
- Decoction	7,541 (35.03%)
- Finished Traditional Medicine Products	15,229 (70.80%)
Combining Western and Traditional Medicine drugs	9,846 (45.74%)

Based on the total recorded counts of individual drug items in WM prescriptions, cardiovascular drugs were most frequently prescribed (23.86%), followed by gastrointestinal (17.83%) and analgesics - antipyretics - NSAIDs - medications for gout and musculoskeletal disorders (16.95%) (Figure 2).

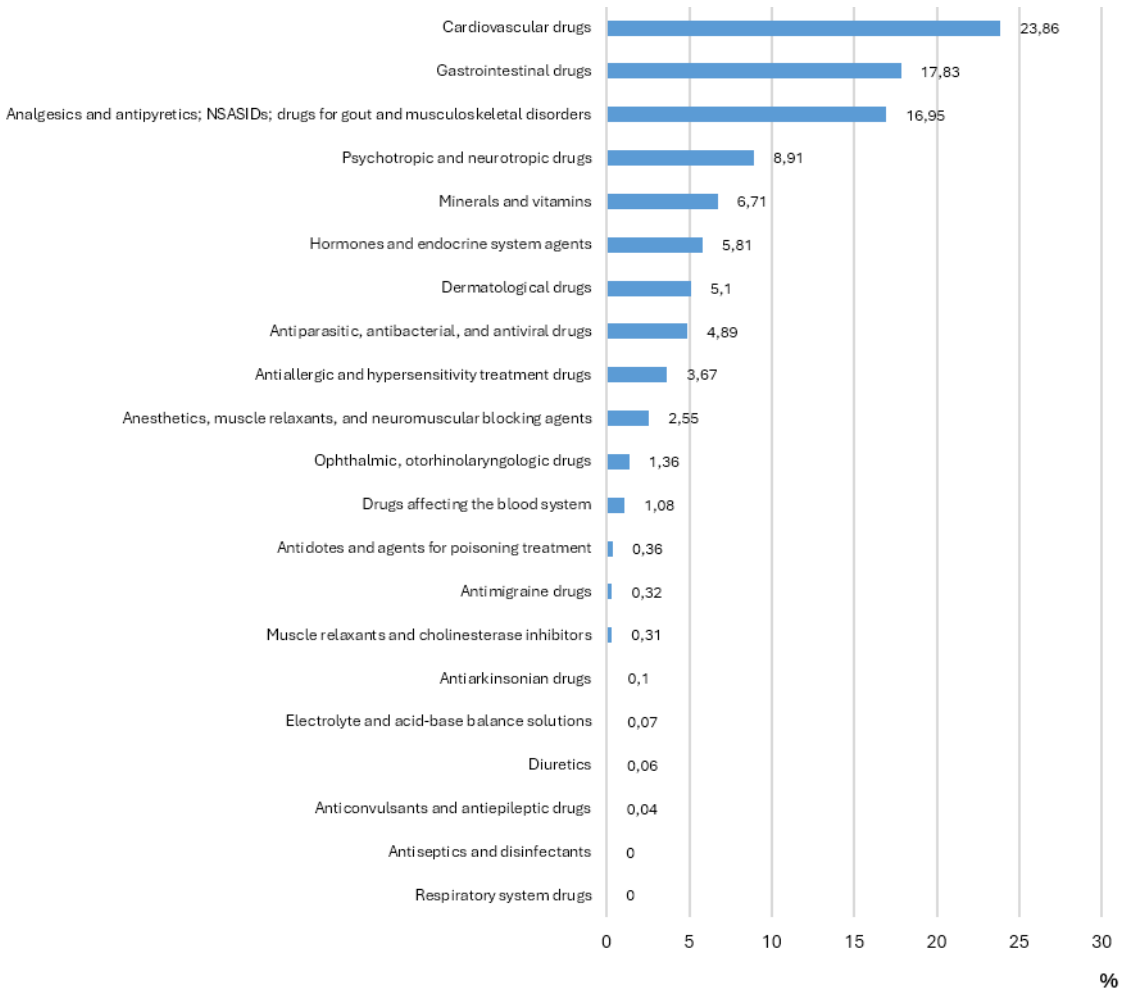

Figure 2. Distribution of Western Medicine drug groups (N = 31,465)

Considering total recorded counts of individual herbal items in decoction prescriptions, the five most frequently used categories were Qi tonifying drugs (17.58%), blood tonifying drugs (11.71%), blood activating and stasis resolving drugs (8.37%), dampness draining and diuretic drugs (7.07%), and Qi regulating drugs (6.20%) (Figure 3).

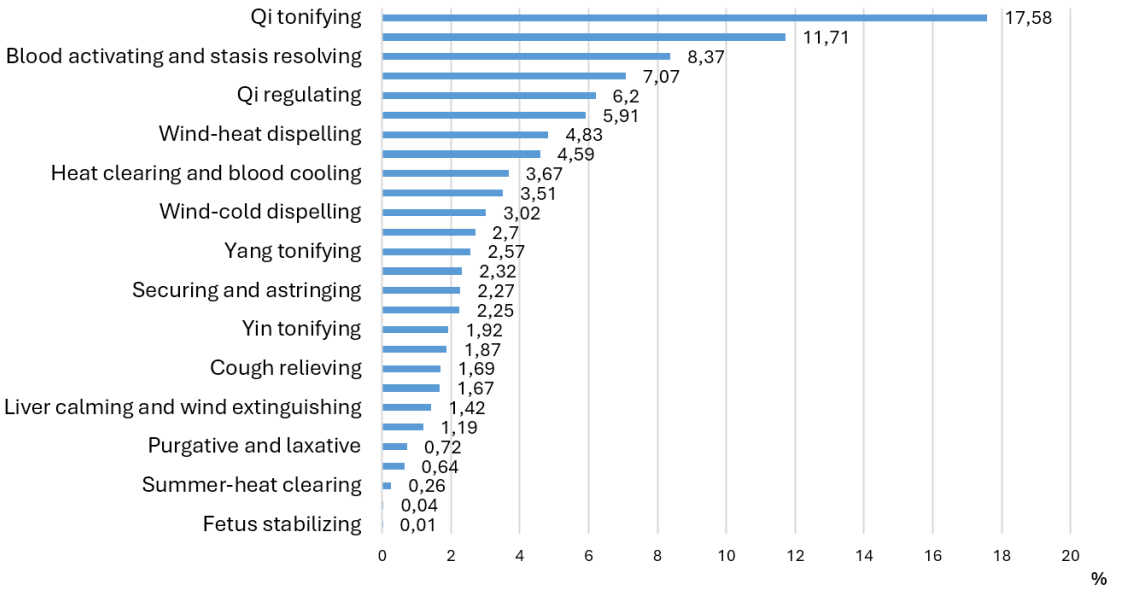

Figure 3. Distribution of Traditional Medicine drug groups (N = 77,854)

3.3. Non-pharmacological Treatment Profile

Among total recorded counts of non-pharmacological treatment procedures, TM procedures accounted for the majority of interventions (64.59%), while WM procedures comprised 35.41%. For TM, the five most frequently used therapies were thread-embedding acupuncture (23.38%), electroacupuncture (10.14%), massage and acupressure (9.69%), moxibustion (7.72%), and filiform needle acupuncture (4.46%).

In contrast, physical therapy and rehabilitation procedures dominated among WM approaches (33.17%), with dermatologic and aesthetic procedures (2.15%) and nursing procedures (0.09%) being far less standard.

Table 2. Distribution of non-pharmacological therapies (N = 12,538)

Non-pharmacological therapy	Frequency (%)
Traditional Medicine procedures	8,098 (64.59%)
- Thread embedding acupuncture	2,932 (23.38%)
- Electroacupuncture	1,271 (10.14%)
- Massage and acupressure	1,215 (9.69%)
- Moxibustion	968 (7.72%)
- Filiform needle acupuncture	559 (4.46%)
- Hot compress therapy	554 (4.42%)
- Auricular acupuncture	159 (1.27%)
- Herbal compress therapy	91 (0.73%)
- Laser acupuncture	85 (0.68%)
- Acupoint injection therapy	66 (0.53%)
- Plum-blossom needle therapy	51 (0.41%)
- Bloodletting	39 (0.31%)
- Needle-free electroacupuncture	39 (0.31%)
- Nasal steam inhalation	19 (0.15%)
- Orthopedic manipulation	15 (0.12%)
- Herbal soaking	14 (0.11%)
- Cupping therapy	12 (0.10%)
- Yang-sheng exercises	9 (0.07%)
Western Medicine procedures	4,440 (35.41%)
- Physical therapy and rehabilitation procedures	4,159 (33.17%)
- Dermatologic and aesthetic procedures	270 (2.15%)
- Nursing procedures	11 (0.09%)

4. DISCUSSION

The study found that the integrative treatment of TM and WM accounted for the highest proportion, at 50.82%. This high rate of integrative treatment demonstrates a significant shift in clinical thinking, moving from viewing TM as an alternative method to an integrated one. This combination is a strategic step to leverage the strengths of both medical systems, especially in the context of the newly established specialized clinics, which require accurate WM diagnosis and comprehensive TM treatment. Comparison with previous studies conducted on inpatients in TM departments also shows this integrative trend is consistent and aligns with general practice, with a high proportion, such as 78.8% at Dak Lak Traditional Medicine Hospital in 2021 and 82.2% at Huu Nghi Hospital in 2022 [3-4]. Our result is somewhat lower; this difference can be explained by the study population consisting mainly of outpatients, who often have milder or more stable conditions, allowing for the use of TM alone. This indicates that physicians at the

study site have proactively developed parallel treatment protocols. Combined with the new strategic direction to establish specialized clinics, this reinforces the finding that the integrative model is a systematic strategy to leverage and optimize the strengths of both medical systems to deliver the most significant benefit to patients.

The results showed a high proportion of patients using TM drugs (87.20%), with finished TM products being predominant (70.80%) compared to decoctions (35.03%). This is similar to the situation of TM drug use in other hospitals, such as the Hanoi Traditional Medicine Hospital (2018) at 56.59% with finished products accounting for 76.3%, and Can Tho (2022) at 75.4% with finished products accounting for 55.3% [5-6]. This finding highlights the central role of TM pharmacotherapy in the treatment protocols at specialized TM healthcare institutions. The popularity of finished products can be seen as a sign of a dual shift. From the patient's perspective, the convenience, ease of use, and storage of finished products help improve treatment adherence, especially for outpatients. From the standpoint of the health system and physicians, finished products allow for dosage standardization, ensure quality control of raw materials and product safety, and help make large-scale drug management and supply within the hospital more efficient.

A deeper analysis of the prescribed drug groups shows a clinically rational combination. The most frequently used TM drug groups in our study were “Qi tonifying”, “blood tonifying”, and “blood activating and stasis resolving drugs”, indicating a treatment focus on enhancing physical condition, treating debility, and correcting bodily disorders. This is also a primary goal in the coordinated treatment of chronic diseases. The most frequently used WM drug groups were “cardiovascular drugs”, “gastrointestinal drugs”, and “analgesics and antipyretics; NSAIDs; drugs for gout and musculoskeletal disorders”, further confirming that patients visiting the department often suffer from complex chronic diseases and multimorbidity. This combination reflects a comprehensive treatment strategy in which WM drugs are used to control underlying conditions and acute symptoms, thereby creating conditions for TM to exert its supportive and restorative effects. However, prescribing multiple combined drugs also poses significant challenges to pharmacological safety. Combining drugs from two different medical systems requires physicians to have extensive knowledge of both modern pharmacology and the properties of TM drugs to predict and prevent adverse drug interactions [7]. This reality highlights the urgent need for further in-depth clinical research on drug interactions and the development of specific practice guidelines to ensure maximum patient safety, especially in the context where prescription control and regulation remain a challenge in Vietnam.

Regarding non-pharmacological treatment, TM procedures accounted for 64.59%, with thread-embedding acupuncture (23.38%), electroacupuncture (10.14%), and massage and acupressure (9.69%) being the most commonly used methods. This preference is not coincidental but is reinforced by a growing body of scientific evidence. Many clinical studies in Vietnam have demonstrated the effectiveness of these methods, such as electroacupuncture combined with massage and acupressure in treating cervicobrachial syndrome due to cervical spondylosis, and treating low back pain due to spondylosis [8-9] or evaluating the effectiveness of thread embedding acupuncture in treating pain and other internal diseases (sleep disorders, allergic rhinitis, etc.) [10-12]. Mechanistically, WM has clarified that acupuncture and similar methods act as neuromodulatory therapy. They act on the peripheral and central nervous systems, stimulating the release of endogenous analgesics, modulating neurotransmitters, and complex brain networks involved in pain processing and perception [13]. Prioritizing these non-pharmacological therapies reflects a comprehensive treatment strategy, particularly valuable in managing chronic conditions, especially chronic pain. By providing an effective, safe, and low-side-effect analgesic solution, these methods help reduce patient dependence on pain medications, especially NSAIDs, which have many adverse effects on the gastrointestinal and cardiovascular systems when used long-term.

With a large sample size (N=21,525), this study has provided a comprehensive and reliable data picture of the treatment situation at a major TM hospital. These results can serve as a basis for developing integrated TM-WM treatment protocols, planning policies for the supply of herbal medicines or technical services, and guiding training programs for TM physicians. However, the study still has some limitations that need to be acknowledged. The retrospective, descriptive, cross-sectional design allows only the description of the current situation and cannot evaluate treatment effectiveness or establish causal relationships. Furthermore, as this is a single-center study, the results may not be fully representative of all TM facilities nationwide due to differences in disease patterns, resources, and patient population characteristics.

5. CONCLUSION

The study has successfully outlined a diverse and integrative outpatient treatment model between TM and WM. This model is characterized by the modernization of TM drug use, a sophisticated pharmacological coordination between the two systems, and the foundational role of evidence-based non-pharmacological therapies. The research results not only affirm the value and position of TM within the healthcare system but also set essential directions for future training, scientific research, and health policy planning to improve the quality of public healthcare further.

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