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Osteopathic manipulative treatment use among family medicine residents in a teaching clinic

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Abstract

Context: Osteopathic Principles and Practice (OPP), including osteopathic manipulative treatment (OMT) is the core foundation of the education provided by osteopathic medical schools. Multiple studies performed over the past 25 years have demonstrated that a dwindling number of osteopathic physicians utilize OMT in their practice, despite 95% of osteopathic family physicians perceiving OMT as an effective treatment modality.

Objectives: The objective of this study is to quantify how often OMT is being performed by residents in an osteopathically recognized family medicine training clinic and to identify the perceived barriers to performing OMT.

Methods: Fifteen family medicine residents were given access to an anonymous written survey for three 2 week periods. The survey allowed them to input the total number of patient encounters for their half clinic day, the encounters in which OMT was perceived to be appropriate, the encounters in which OMT was performed, and the reasoning for encounters in which OMT was not performed. Surveys were collected anonymously, and data were input into a datasheet in which results were calculated.

Results: A total of 101 survey responses were collected for a total of 304 patient encounters. OMT was performed in 5/304 (1.6%) encounters, yet it was perceived to be appropriate in 60/304 (19.7%) encounters. The primary documented reason that OMT was deferred was due to time

constraints (42/50 responses, or 70.0% of the encounters in which OMT was deemed appropriate).

Conclusions: This study highlights time as the main reason OMT is deferred by residents in a teaching clinic. This provides insight into potential interventions in a training clinic to increase the use of OMT by family medicine residents.

Keywords: family medicine; osteopathic manipulative treatment; resident.

Osteopathic Principles and Practice (OPP) is part of the core educational foundation of osteopathic medical schools. Osteopathic manipulative treatment (OMT) is a core treatment model of patients with varying complaints and pathology within that OPP foundation.

Studies performed over the last quarter of a century have demonstrated that osteopathic physicians utilize OMT on a small percentage of patients despite the perception of OMT being an effective modality [1–5]. A 2005 study which surveyed trainees in family medicine in Arkansas, Missouri, Oklahoma, and Texas found that among the 155 respondents from American Osteopathic Association (AOA)-accredited programs, 97.4% felt OMT to be an effective treatment modality for somatic dysfunction and 82.2% felt OMT to be effective in treating systemic illness [3]. An earlier 1997 study that surveyed 1055 osteopathic family physicians throughout the United States found that 95% of respondents perceived OMT as an effective treatment modality, but among those surveyed, 32.1% reported utilizing OMT on less than 5% of their patients [6]. These numbers were reflected in other studies both local and national. In a 2003 study that surveyed osteopathic physicians of all specialties in Ohio, 75% of the 871 respondents reported utilizing OMT fewer than 10 times during the week prior to the survey [1]. In a 2002 survey of osteopathic physicians nationwide, 30.2% of the 375 family physician respondents reported utilizing OMT on less than 5% of their patients [4]. In more recent data from a study published in 2021 by Healy et al. [5], 77.7% of 1683 survey respondents from the AOA's 2018 practice survey reported utilizing OMT on less than 5% of their patients, and 56.9% reported no OMT use.

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Attempts to delineate the factors that may contribute to or detract from OMT use in practice also utilized survey-based data gathering. The 2005 survey of family medicine trainees showed that among DO respondents, 92.8% AOA-accredited family medicine programs planned to utilize OMT compared to 84.2% in Accreditation Council for Graduate Medical Education (ACGME)-accredited programs (all data predates the ACGME merger) [3]. Spaeth and Pheley [2] found that the use of OMT by attending physicians correlated to the satisfaction with training that they receive in their residency more closely than the training provided in their preclinical years in medical school. Additionally, graduates of osteopathic medical colleges after 1985 were less likely to utilize OMT in their practice compared to earlier graduates in the 1997 study [6]. Residents also reported that receiving more OMT and OPP-related didactic sessions in training made them more likely to continue utilizing these modalities in practice upon graduation from residency [2]. More immediate barriers included lack of time (73.9% of Healy et al. [5] respondents), followed by lack of institutional support (41.5%) and lack of confidence/proficiency (40.2%) [5]. Lack of reimbursement was also noted at 38.1% [5].

As an osteopathically recognized family medicine residency program, OMT is integrated into our curriculum. However, we constantly seek to improve the integration of OMT into patient care among our residents. Our literature review did not identify a recent study that looked at OMT use among residents specifically. Our objective with this study is to quantify the amount of OMT performed by residents in an outpatient family medicine clinic and to identify the perceived barriers to OMT use in that setting.

Methods

This was deemed to be a quality improvement project and exempt by the University of Michigan Health-West Institutional Review Board (IRB), thus no IRB number was assigned. The project did not require funding, and this was not a clinical trial that would require registry. The consent of study participants was implied by completion of the anonymous survey. Potential study participants were informed of the purpose of the study, the investigators involved, and the predicted duration prior to the surveys being made available.

A survey was conducted over three 2 week periods between the dates of April 2021 and June 2021 among 15 family practice residents, all of whom are in designated osteopathic recognition positions. This was done to ensure variability of resident involvement due to residents rotating on clinic-specific 4 week rotations. Surveys were completed by residents after each half-day in the clinic. Participation was optional. The surveys evaluated the total patient encounters for the session, encounters in which OMT was utilized, encounters in which the physician felt that OMT was appropriate, and reasoning for encounters in which OMT was not performed. The survey template can be

Table 1: Raw data on the survey responses with the frequency OMT was performed or felt to be appropriate shown as percentages of total encounters.

Category	Number of responses	Percent of total encounters
Surveys	101	
Patient encounters	304	
Encounters with OMT performed	5	1.6
Encounters that provider felt were OMT candidates	60	19.7

OMT, osteopathic manipulative treatment.

found in Appendix A. The surveys were anonymous and placed in a closed box upon completion. These surveys were not previously validated but were developed solely for use in this study.

The data were collected and input into a spreadsheet by the investigators (JF, LZ). Simple calculations were completed based on that data (GC).

Results

A total of 101 survey responses were collected for a total of 304 patient encounters. The raw data on the encounters can be found in Table 1. The total number of encounters in which OMT was performed was 5/304 (1.6% of total encounters), and the number of encounters in which the provider felt that OMT would have been appropriate was 60/304 (19.7% of total encounters). Figure 1 includes a graphic representation of the previously mentioned data. The reason given for OMT not being performed was evaluated against the number of encounters in which OMT was felt to be appropriate, which can be found in Table 2. The highest reported reason that OMT was not performed was due to time restrictions, with the number of responses being 42/50 (70.0% of OMT-appropriate encounters). This was followed distantly by faculty staffing at 3/50 (5.0%), physician comfort at 2/50 (3.3%), patient comfort at 2/50 (3.3%), and finally room/OMT table availability at 1/50 (1.7%). There were several comments made in the "Other" category, which can be found in Table 3. These reasons varied and provided some additional insight into what was behind a decision to defer or not perform OMT.

Discussion

Our survey found that there is a significant discrepancy between the number of encounters that providers felt were appropriate for OMT and the number of encounters in which OMT was performed (19.7 vs. 1.6% respectively). By far, the most common reason OMT was not performed was

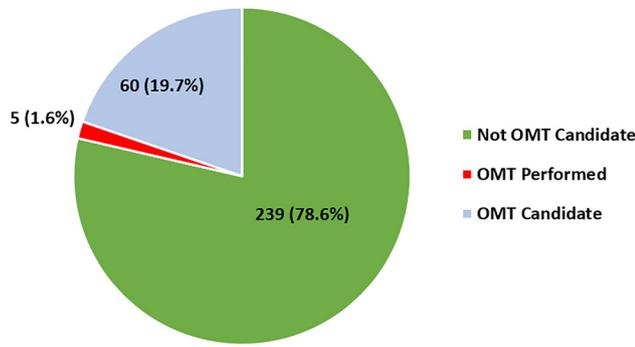


Figure 1: Graphic representation of survey responses with the frequency in which OMT was performed or felt to be appropriate shown as the percentages of total encounters.

Table 2: Data demonstrating the reasons OMT was not performed during an encounter after the patient was identified as a candidate.

Reason OMT was not performed	Number of total	Percentage of total
Faculty staffing	3	5.0
Time restriction	42	70.0
Room/OMT table availability	1	1.7
Physician comfort with OMT	2	3.3
Patient comfort with OMT	2	3.3

OMT, osteopathic manipulative treatment.

Table 3: Comments made under “Other” for reasons that OMT was not performed after the patient was identified as a candidate.

“Other” reasons OMT was not performed
Interpreter patient with multiple complaints; patient requiring X-ray (sic)
New patient with ED follow-up
New patient encounter
DM/HTN visit
2 referrals to PT: knee pain was complicated and not the primary visit concern; Achilles pain scheduled f/u to reevaluation (sic) and OMT and referred to PT
Patient had to leave
Patient declined OMT for knee pain
Patient opted for injection instead
Not very familiar with limb

DM/HTN, diabetes mellitus/hypertension; ED, emergency department; OMT, osteopathic manipulative treatment; PT, physical therapy.

due to time constraints (70.0%). The “Other” category and the answers in Table 3 ranged from provider-related deferment of treatment to patient choice.

The findings of this survey are consistent with a prior study showing that OMT is being performed on <5% of patient encounters in the outpatient setting [1]. It is also not surprising that time constraints were the top reason that

OMT was deferred in our study. Frequently, our residents have told us that time was a reason that they were unable to address all patient concerns with the level of detail that we would prefer as physicians. This also correlated closely with findings among practicing physicians in the study by Healy et al. [5] Our residents have the advantage of supervising physicians versed in OMT integration in family medicine available during their continuity patient time, which correlated with a relatively low report of faculty staffing as a limiting factor at 5% (3/60). Future interventions will be able to be developed with the knowledge that time is the primary limitation in our residents’ utilization of OMT.

This study does have limitations. This is a study conducted by survey, so it was unable to be blinded. The residents were aware that the study was being performed. We attempted to limit any influence that the survey may have on the encounters by ensuring that the surveys were anonymous. Other limitations include the sample size of the study. We anticipated a sample size of 500 patient encounters, and the result was 304 encounters. Contributing factors include patient no-shows and residents not always completing a survey following a clinic session. Due to an initial low response volume, the original data gathering period of two 2 week periods was extended to a third 2 week period. Also, this study was based on self-reported data that could have resulted in recall error from the residents surveyed. Another potential bias is that in our residency program we have residents that focus additional time learning and performing osteopathic manipulation in preparation for a neuromusculoskeletal medicine fellowship. They generally perform OMT more frequently than the other family medicine residents. Finally, this study was performed during the spring of 2021, during the COVID-19 pandemic; therefore, the residents had integrated tele- or virtual visits during their half days and may have sought to limit close contact with patients if possible. The study design did not specifically ask if there were COVID-19–related factors that prevented residents from performing OMT.

The proposed next steps with this project will be for program faculty to introduce an intervention with the goal of increasing residents’ integration of OMT into their continuity patient care. We have opportunities to address both the concern for time as well as residents excluding 78.6% (239/304) of patients due to not considering them candidates for OMT. We did not ask details about the exclusion of patients as OMT candidates, but this is a potential area for further study. We have not yet involved other osteopathically recognized programs at our institution. If we are able to demonstrate improvement with an intervention

among our own program, we would also seek to incorporate that intervention among other specialties.

Conclusions

The results of our survey, while not unexpected, are still significant. In a training program that has osteopathic recognition and pursues regular incorporation of OMT in practice, residents are performing significantly less OMT than they perceive to be warranted. This survey study may provide the background needed for changes to a residency curriculum to increase utilization of OMT by residents in the future.

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that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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