



A Student-Run Clinic Serves as a Model for Increasing Patient Access to Osteopathic Manipulative Medicine

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Abstract

Student-run clinics are a common and valuable educational resource for many medical institutions. While there is literature describing student-run clinics at allopathic medical schools, there is little literature describing student-run clinics at osteopathic institutions. The Touro University Nevada Osteopathic Children's Clinic (TUNOCC) is a student-run clinic that provides opportunities for Touro University Nevada College of Osteopathic Medicine (TUNCOM) medical students to practice their osteopathic manipulative treatment (OMT). The clinic exclusively serves pediatric and obstetric patients and provides osteopathic care for common musculoskeletal and non-musculoskeletal conditions. This article describes the mission and evidence base for an osteopathic student-run clinic in which students are able to practice osteopathic manipulative medicine and offers insight into the clinic flow, student participation, and leadership.

Introduction

Osteopathic medicine, as defined by the glossary of osteopathic terminology, is a "philosophy that combines the needs of the patient with the current practice of medicine, surgery and obstetrics; emphasizes the interrelationship between structure and function, and has an appreciation of the body's ability to heal itself."¹ Osteopathic medicine serves as an adjunct to conventional (allopathic) medicine and offers additional ways to treat many common illnesses, namely through the use of osteopathic manipulative medicine. Osteopathic physicians utilize manual medicine (osteopathic manipulative treatment or OMT, also known as osteopathic manipulative medicine or OMM), which includes physical contact and maneuvering the patient, to diagnose and treat a wide range of patient conditions (somatic dysfunctions). The Touro University Nevada Osteopathic Children's Clinic (TUNOCC) is a student-run osteopathic clinic that provides osteopathic evaluation and OMT to children and pregnant women.

The clinic was founded in 2007 in Henderson, Nevada as a training venue for medical students to practice and learn OMT on two populations that

are less frequently encountered in the school curriculum. Subsequently, the non-profit clinic serves as a supplementary educational opportunity for Touro University Nevada College of Osteopathic Medicine (TUNCOM) medical students. Most students involved in student-run clinics at allopathic institutions feel that the two greatest strengths of such clinics are student education and serving the underserved.²⁻⁴ Similarly, the goals of the TUNOCC are to provide additional opportunities for medical students to gain competency in osteopathic manipulative techniques specifically targeted towards the pediatric and obstetric populations and to offer a way for patients to receive OMT regardless of their ability to pay. As an osteopathic entity, a third and essential goal of the clinic is to expose patients to osteopathy, thus increasing access to and raising awareness of the benefits of osteopathic care. Despite the fact that there are 139 listed osteopathic physicians with an active license in Henderson, only seven are specialized in OMT.⁵ Local access to OMT is limited, and TUNOCC serves as an access point to such care.

In regards to the use of OMT in the defined populations, there is research to support the benefits of OMT as a treatment modality for some of the more commonly encountered diagnoses at the

clinic. For example, OMT in pregnant women helps reduce the degree of back pain and functional deterioration associated with musculoskeletal changes,⁶ improves the comfort and quality of life during pregnancy,⁷ and has been correlated with lower rates of preterm delivery and meconium staining of amniotic fluid.⁸ In the pediatric population, OMT may improve peak expiratory flow rates in patients with asthma,⁹ reduce the time spent crying and increase time spent sleeping in infants with colic,¹⁰ and may serve as a beneficial alternative treatment for constipation.¹¹ Additionally, OMT has been shown to be safe for pediatric patients when administered by experts in the field.¹²

While various sources describe the characteristics and educational benefits of allopathic student-run clinics,^{2-4,13-15} there is a lack of literature describing osteopathic student-run clinics or their scope of practice. There is currently no model in the literature that serves as a basis of understanding how student-run clinics may operate at an osteopathic school; this article will characterize one possible implementation. This report describes how the TUNOCC functions as a student-run clinic and provides insight into the uses of OMT in such a setting.

Clinic Overview and Patient Population

As compared to allopathic student-run clinics, the TUNOCC is similar in regards to the number of rooms used, patients seen each session, clinic duration, nature of attending physician and student involvement, and community setting.² Once a week, the clinic is allotted 3-4 rooms in the TUNCOM community outpatient wellness center. Each room is equipped with an OMM table, blood pressure cuff, stethoscope, otoscope, ophthalmoscope, and common supplies. The clinic is open Wednesday evenings for 2-5 hours depending on the number of patients that arrive. Patients are seen on a walk-in, first-come, first-served basis, and on average, 6-15 patients are treated each night.

The patient population is restricted to children from birth to 16 years of age and pregnant women from 16 weeks gestation to parturition. The majority of patients seen at the clinic are under the age of 9 years. The youngest patient seen was 2 weeks old, and the oldest was 39 years old. Similar to other pediatric osteopathic clinics, the range of encountered diagnoses is wide and includes both

musculoskeletal and non-musculoskeletal complaints.¹⁶ Most commonly, visits are for conditions such as infant colic, constipation, upper respiratory infections, asthma, plagiocephaly, autism spectrum disorders, pregnancy-related low back pain, and other musculoskeletal complaints. Most patients at the TUNOCC are identified and referred by student participants or local pediatricians familiar with the clinic.

While data on the socioeconomic status of the clinic's patients have not been collected, the clinic is consistent with its allopathic colleagues in its aim to increase access to care regardless of patients' ability to pay. As such, optional monetary donations are accepted at the time of service, and each family determines the donation amount. Total nightly donations range between zero and thirty dollars and are used to purchase office supplies, snacks for the patients, and toys for the waiting area.

Clinic Flow

At the time of arrival, patients are directed to the front desk receptionist, an osteopathic student, who checks the patient in. A clinic laptop database is updated with information regarding patient name, age, chief complaint, and date of visit. Paperwork gathering demographic information is given to new patients, patient charts are retrieved for returning patients, and donations are collected. The charts are given to teams of three clinic volunteers, which consist of an upperclassman (OMS-3 or -4), and two underclassmen (OMS-1 and -2). A team accompanies a patient to a clinic room where they perform a history, physical exam, and osteopathic musculoskeletal screening exam. Upperclassmen also double as teachers, helping the first and second year students fine tune their osteopathic screening exams and diagnostic skills. Lastly, any identified somatic dysfunctions found during the exam and all pertinent findings from the history are documented in the patient's chart. After documenting the initial findings, the team then leaves the room and presents the patient case to one or two attending physicians, both of whom are members of the TUNCOM OMM department faculty. The attending physicians often pose questions to the team members regarding how their osteopathic findings are related to the underlying physiologic processes. Students then return to the room with the attending physicians and perform OMT under their direct supervision.

Once in the room, attending physicians physically reevaluate the patient and ask additional questions as needed. After their own assessment, the physician may direct students to reassess a specific somatic dysfunction if they believe it was previously misdiagnosed, or may verbally guide students through the physical maneuvers and palpation sensations as they deliver OMT to the patient. Overseeing faculty play an active role in teaching students how to physically diagnose and treat specific somatic dysfunctions. Physicians may choose to assist students with delivering OMT by offering hands over hands assistance, where supervising physicians place their hands over the hands of the student to help them perform or set up the technique correctly, or by offering verbal guidance when multiple areas are being worked on simultaneously by students and attendings. Although the OMT utilized by students is most often limited to techniques that are taught in the school curriculum, when appropriate and indicated, the physicians may teach more advanced techniques and/or alternate positioning. After the treatment, the physicians reassess the patient and document if there was improvement or resolution of the somatic dysfunction. Such reassessment by the physician is to ensure that consistent quality care is delivered to each patient. While OMT is the primary method of treatment provided, prescriptions for medications for acute infections are written if indicated.

At the conclusion of the visit, the patient is instructed to either return as needed or to return for a follow-up visit during a time indicated by the physician (no appointment reservation, treated as a walk-in). Patients are often instructed to return multiple weeks in a row to monitor for improvement or changes; consequently students have the opportunity to reassess the effectiveness of their OMT on follow-up visits. Most patients are seen for one to three visits, however, some who have more complicated conditions return frequently for ongoing osteopathic care.

Each visit lasts approximately 30-45 minutes or shorter. It is also important to note that multiple patient visits are occurring at the same time; while one team is performing the initial screening and physical exam for one patient, another team may be working with the attending physicians and administering OMT to another patient.

At the end of the night the underclassmen are given the opportunity to present their case to the other student volunteers and physicians, so as to practice and develop their basic presentation

skills. Such presentations follow the general Subjective, Objective, Assessment, and Plan (SOAP) format, with emphasis on the somatic dysfunctions encountered, osteopathic treatments administered, and the subsequent treatment outcomes. Students are encouraged to share what they learned that night, including new OMT techniques, clinical facts, or clinical pearls for addressing the pediatric and obstetric populations. Furthermore, billing and coding information is provided at this time for the upperclassmen so that they may begin to familiarize themselves with common International Classification of Disease (ICD-9) codes.

Student Involvement and Leadership

The TUNOCC is run by TUNCOM student volunteers and is overseen by two student coordinators and two OMM faculty members. The student coordinators are responsible for scheduling volunteers, supervising clinic nights, and updating and managing patient data. Volunteers sign up via an online, first-come, first-served, spreadsheet database. To gain access to the database, new participating students must attend a mandatory meeting held by the clinic coordinators and participating OMM faculty members. This meeting takes place at the beginning of the year and discusses the general format of the clinic, rules regarding professionalism, and reiterates the basic principles of osteopathic medicine. Once on the database, students are then able to sign up for specific clinic dates to participate as either a "front desk/receptionist" position, or a "1st year", "2nd year", or "3rd/4th year" clinical position. There are twelve total volunteer positions each night: three clinic teams (each comprised of an OMS-1, OMS-2, and OMS-3/OMS-4), two front desk receptionists, and one student coordinator.

Faculty members are responsible for the overall management of the clinic. This includes determining which services are offered by the clinic, the clinic operating dates and times, interfacing with school administrators, handling patient donations, and purchasing needed supplies. Additionally, faculty members aid the student coordinators with supervising clinic nights and managing patient data. Faculty are responsible for delivering quality care and appropriate treatment plans to patients, administering OMT, training new clinic coordinators and student volunteers, and teaching students during clinic nights. This includes helping students perfect OMT techniques and

guiding students through administering manipulative treatments to patients. They are also available to advise students interested in using clinic data for research purposes. Furthermore, faculty and student coordinators work together to create clinic flyers, which contain a description of the clinic and clinic hours, and are handed out by local referring pediatricians. Presentations are given at interdisciplinary organizations to aid patient recruitment, and occasionally, participating faculty will present during open seminars regarding the benefits of osteopathic care.

In addition, OMM faculty work with the coordinators to recruit volunteers to ensure that each clinic night's volunteer positions are filled. If needed, coordinators may function as an extra receptionist or will fill in unclaimed clinical positions. In 2014, 37.2% (51/137) of the 1st year class, 38.2% (52/136) of the 2nd year class, 41.3% (57/138) of the 3rd year class, and 39.2% (49/125) of the 4th year class participated; this represents approximately 39.0% of all TUNCOM students. In comparison, 57.8% of allopathic students take part in student-run clinics nationally.² Perhaps numbers are slightly lower at the TUNOCC since the specific populations may not be of interest to as many students. Nevertheless, finding ways to incorporate more volunteers and increase participation is an ongoing task.

Conclusion

Literature describes how student-run clinics provide healthcare services for many patients nationwide and serve as important educational programs.^{2-4,13-15} As such, student-run clinics are an integral part of many medical institutions. However, due to the lack of literature on osteopathic student-run clinics, the depth of their educational potential is yet to be completely recognized. This article establishes a basis for understanding how a student-run clinic at an osteopathic school may operate and outlines the sequence of events underlying the clinic flow, including how students obtain the initial history and physical and are later assisted by OMM faculty with performing OMT. In this way, osteopathic student-run clinics can serve as a means for students to practice and perfect their manipulative skills. Additionally, students are overseen by faculty members and work with faculty in managing the clinic and volunteers. As demonstrated in this article, the TUNOCC, as an osteopathic student-run clinic, is comparable to

many allopathic student-run clinics in terms of nature of student and faculty participation, clinic duration, community setting, and number of patients seen each week.² However, unlike most student-run clinics, the TUNOCC is unique in that it utilizes OMT as the main treatment modality for its patients. Although some physicians may not be trained or familiar with the use of OMT, this article identifies some of the prospective benefits for the obstetric and pediatric populations and demonstrates one way for medical students to learn and administer OMT to treat many common conditions in the defined populations.

Disclosures

The authors have no conflicts of interest to disclose.

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