REVIEW ARTICLE

Mandating a Simulation Component to Osteopathic Family Medicine Training

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Abstract: Osteopathic Family Medicine has evolved throughout time. With the advent of new technology and new educational training methods, Graduate Osteopathic Family Medicine Education could benefit from mandating a Simulation component in their training of residents. Simulation is an ACGME Residency Requirements for General Surgery, Anesthesia, Emergency Medicine, Pediatrics, and Gastroenterology fellowship. This article seeks to show why the American College of Osteopathic Family Physicians should mandate a simulation curriculum for their residency. This simulation training component can be used in a variety of ways, including procedural training, or a simulation curriculum involving weekly simulated scenarios and debriefing sessions. Research has shown that simulation is a vital means of learning and improving medical education.

INTRODUCTION

Simulation training has proven to be instrumental to the successful training of professionals in high stress occupations. Osteopathic Family Medicine training is a high stress environment, where a resident is exposed to patient safety risks daily. Simulation in Graduate Medical Education (GME) has increased, and research is actively being done to show its benefits. A simulation component to Osteopathic Family Medicine should be implemented to ensure we are teaching our residents in the optimal learning environment. This article seeks to detail why a simulation component should be mandated for Osteopathic Family Medicine training. The simulation component can vary from program to program based on need and assessment of each individual institution. The simulation component can be a simulated case involving a trainee and a standardized patient, a mannequin with a debriefing session, or it can be a simulation curriculum.

Research shows that adult learners incorporate knowledge by different methods than younger learners. People with advanced degrees are often good at "single loop learning," which has included problem solving and memorization.[1] In order for adult learning to occur, people must reflect critically on their own behavior.[1] This type of learning is known as "double loop learning" and can be achieved in a simulated environment. The reflective nature of adult learning can be achieved during a simulated case's debriefing session, where the trainee can reflect on the specific scenario. It can also be seen after a family medicine resident is observed during a simulated procedure. These types of self-evaluation are a critical component to adult learning.

SIMULATION

COMMUNICATION SKILLS

Studies show that in the U.S., 29% of malpractice claims are due to missed diagnoses.[2] A Simulation Based Medical Education (SBME) curriculum can provide a training environment that encourages patient safety. It allows the family medicine resident to practice in a nonjudgmental training environment that encourages communication and professionalism among all members of the medical team. Other medical professionals can train together and discuss with other members of the team if they agree on the diagnosis or treatment for the patient. The trainee is one part of the whole medical team that is all equally important to avoid possibly fatal medical errors. Sixty percent of medication errors are caused by mistakes in interpersonal communication.[3] With these frightening statistics, it is important to train our osteopathic family medicine residents in communication skills that can be improved with simulation training.

Simulation scenarios can help improve trainees' interprofessional and interpersonal communication skills. The lack of communication (by physicians) can hurt the quality of care, drive up costs, and increase the risk of lawsuits.[4] With the implementation of the Delivery System Reform Incentive Program (DSRIP) in New York in 2016, physicians will be judged on the quality of their service. Clinics where physicians train will have to teach their residents the importance of proper communication with their patients. These communication skills can be improved upon in a simulated setting.

Medical educators have an obligation to provide optimal treatment and to ensure patients' safety and well-being.[5] A mandated simulation curriculum can ensure that proper communication is taught and procedures are done appropriately before a real life patient is at risk.

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CONVERSATIONS

CRITICAL CONVERSATIONS

According to the authors of "Critical Conversations, Tools for Talking when Stakes are High," these conversations occur when there are opposing opinions, strong emotions, and high stress.[6] These conversations happen to osteopathic family medicine interns and residents frequently in the clinical setting. The way to deal with these conversations can be learned and mastered in a simulated setting. Many medical surveys have shown that medical professionals have witnessed members of their team taking shortcuts, exhibiting incompetence, or breaking rules.[6] In a simulated scenario, a resident can be exposed to one of these scenarios and can see how they acted in the video debriefing session. They can then reflect on their behavior.

CRUCIAL CONVERSATIONS

"Dialogue Heals, the Seven Crucial Conversations for the Healthcare Professional," states that most patient errors can be avoided by learning to communicate well.[7] The authors suggest that the crucial conversations for the healthcare professional (need) to master are: broken rules, lack of support, mistakes, incompetence, poor teamwork, disrespect, and micromanagement.[7] These are all areas that osteopathic family medicine residents encounter daily. All of these crucial conversations can be reenacted in a simulated setting where the resident can learn what to do when faced with these situations in the clinical setting. They can become familiar with these topics and learn how to face them head on. Medical educators can benefit by proving that their family medicine residents have been through a simulation curriculum before graduation.

TRAINING TOOL

Simulation can also be used to teach and test cultural competence. Cultural competence for non-traditional family structures is important in modern society.[8] Certain populations require extra attention to mental health needs.[8] According to Dr. Cianciaruso, in "Culturally competent care for nontraditional family structures," physicians need to be informed about and sensitive to [the] special concerns[8] of different patient populations. Simulated scenarios where family medicine residents encounter diverse populations could be developed to train physicians on different populations, and assess for further needs training.

Simulation in GME has been used frequently to test how a family medicine resident accurately performs a specific procedure. There are many types of medical simulators, ranging in price from ones a faculty member can make at little costs, to manikins that cost over a million dollars. The simulators range from engaging task trainers to full body, computer driven manikins.[9] Procedures can be practiced and observed by attending physicians in a simulated environment before patients are at risk. The Accreditation Council for Graduate Medical Education (ACGME) requires that General Surgery Residents master simulated procedures before a patient is exposed to these procedures. A checklist can be used during the debriefing process and can serve as a reminder and an evaluation tool to the resident and faculty member. This checklist can be used during the debriefing session to reflect each trainee's hospital protocol for each procedure.

MEDICAL EDUCATION

In a study by Shanks et al. most respondents felt that simulators should be used to learn, refine and acquire (technical) and procedural skills.[10] New research has shown that graduate medical trainees can obtain desired skills in a controlled simulated environment.[11] Simulation in medical education has become more advanced throughout the years, and has encompassed more specialties.

The American Heart Association has used simulators to test students in Advanced Cardiac Life Support (ACLS) and Basic Life Support (BLS) for years. Residents trained on simulators were more likely to adhere to [ACLS] protocol than those who received standard training for cardiac arrest patients.[12] A simulation curriculum can be used as a tool to assess medical knowledge on specific disease states.[12] According to Okuda et al., multiple studies have demonstrated the effectiveness of simulation in the teaching of basic science, clinical knowledge, procedural skills, teamwork and communication (in the) Graduate Medical Education (GME) level.[12]

By adding a mandated simulation component to Osteopathic Family Medicine; medical educators can identify impaired trainees and provide a module for remediation. According to the ACGME 2011 Duty Hour Standards, there must be an honest and accurate reporting of all elements of resident training and patient care.[14] Simulation can be part of this training element for osteopathic family medicine. According to the AOA traits of professionalism, physicians must demonstrate competence, commitment to improving patient care, leadership, ethical practice, and accountability.[15] All of these traits can be taught and in a simulated environment.

With the Single Accreditation System for the AOA/ACGME, now is the best opportunity for Osteopathic Family Medicine programs to mandate a simulation component to their standards of residency. According to Ogden et al, in Graduate Medical Education, a comprehensive simulation program should become as natural to medical education as teaching rounds and morning report.[16] A simulation curriculum would provide a tool that the osteopathic family medicine community can use to ensure resident's master communication, procedural and professionalism skills.

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