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FEATURE ARTICLE

Medical education and human trafficking: using simulation

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ABSTRACT

Healthcare providers have the potential to play a crucial role in human trafficking prevention, identification, and intervention. However, trafficked patients are often unidentified due to lack of education and preparation available to healthcare professionals at all levels of training and practice. To increase victim identification in healthcare settings, providers need to be educated about the issue of trafficking and its clinical presentations in an interactive format that maximizes learning and ultimately patient-centered outcomes. In 2014, University of Louisville School of Medicine created a simulation-based medical education (SBME) curriculum to prepare students to recognize victims and intervene on their behalf. The authors share the factors that influenced the session's development and incorporation into an already full third year medical curriculum and outline the development process. The process included a needs assessment for the education intervention, development of objectives and corresponding assessment, implementation of the curriculum, and finally the next steps of the module as it develops further. Additional alternatives are provided for other medical educators seeking to implement similar modules at their home institution. It is our hope that the description of this process will help others to create similar interactive educational programs and ultimately help trafficking survivors receive the care they need.

Abbreviations: HCP: Healthcare professional; M-SIGHT: Medical student instruction in global human trafficking; SBME: Simulation-based medical education; SP: Standardized patient; TIC: Trauma-informed care

Introduction

Human trafficking is a public-health crisis in the USA (US) and victims are consistently under-recognized by healthcare providers [1]. The National Human Trafficking Resource Center Hotline documented 8042 cases of reported trafficking during the year 2016 [2]. Many victims are receiving medical care while being trafficked; in fact, US studies of trafficking survivors have found 25–88% of victims interact with a healthcare professional (HCP) while they are being exploited [3–5]. Because they are uniquely positioned to interact with victims, healthcare providers have the potential to play a crucial role in human trafficking prevention, identification, and intervention [4].

Unfortunately, trafficked patients are often unidentified due to lack of education available to HCPs at all levels of training and practice [6,7]. A survey of medical professionals including physicians, nurses, social workers, and physician assistants found that 63% of respondents did not have training on human trafficking identification and intervention [8]. To improve victim identification and quality of care in healthcare settings,

providers need to be educated about the issue of trafficking, including its clinical presentations. The topic requires an interactive format that maximizes HCP learning, hones communications skills, and focuses on patient-centered outcomes [7,9,10].

Educating healthcare professionals on the topic cannot be limited to one subspecialty as trafficking victims have a wide variety of physical symptoms. Trafficked persons may present to any specialist and commonly have symptoms ranging from but not limited to malnutrition, post-traumatic stress disorder, addiction, sexual violence, abdominal pain, and assault. To reach the widest range of subspecialties, education must occur during undergraduate medical education and focus on practical aspects of providing care for trafficked persons as well as identifying elements of trafficking.

Current medical education curriculum is dense; adding another topic to the ever expanding body of medical knowledge may appear challenging. There are limitations on time and resources, as well as the ability to engage students who may be fatigued from information overload. To create practical change in

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care for trafficked patients, future providers must not only acquire knowledge of what defines trafficking, but also demonstrate skills of trauma-informed care (TIC). TIC acknowledges that trauma is prevalent and highlights best practices to avoid re-traumatizing patients as they navigate the healthcare system. Medical students need the opportunity to practice these complex communication skills in a clinical setting.

Simulation provides this practice by inviting learner trial and error in a safe environment, before high-risk patient encounters. Additionally, simulation facilitates immediate feedback and assessment of skills and knowledge gaps. In 2011, the AAMC published its survey on *Medical Simulation in Medical Education* highlighting the growing trend of using simulation-based medical education (SBME) in residency programs as well as medical schools [11]. That same year a meta-analysis demonstrated that SBME with deliberate practice was valued as superior to traditional clinical medical education [12]. SBME allows the learner to make a mistake and hone clinical skills in a controlled environment that would otherwise be volatile and dangerous for the patient in a real-life scenario. Examples of SBME success can be found in lessons caring for similar vulnerable populations including intimate partner violence victims and survivors [13].

This article outlines the creation of a SBME curriculum on human trafficking. The authors share the factors that influenced the session's development and incorporation into an already full third-year medical curriculum and outline the development process. The process included a needs assessment for the education intervention, development of objectives and corresponding assessment, implementation of the curriculum, and finally the next steps of the module as it develops further. Additional alternatives are provided for other medical educators seeking to implement similar modules at their home institution. Of note, this article does not provide preliminary evaluation data or a granular level of detail on learning objectives, but rather is intended to provide a general overview of the authors' process in an introductory fashion.

Needs assessment

During the initial stage of curriculum development, the authors reviewed the extant literature on human trafficking medical education and medical education modalities. A 2012 review of human trafficking health education indicated that more curricula are needed, with 27 existing human trafficking educational resources [14]. Several of these resources were targeted for nursing students. The authors' academic institution did not have didactic material on human trafficking and did not have significant funding or time allocated for new clinical education topics.

In response to this gap in medical education, the authors developed a curriculum for third-year medical students, Medical Student Instruction in Global Human Trafficking (M-SIGHT). M-SIGHT is a multi-modal instructional module, using online learning, medical documentation, and standardized patient (SP) -based simulation to prepare students to recognize victims and intervene on their behalf.

The authors wanted to ensure that all medical students received human trafficking training, but needed to determine where it could be strategically positioned within the core curriculum. Every medical student, regardless of their chosen specialty must be able to recognize and intervene on behalf of victims, and for that reason, the authors felt that the content was best placed in the core undergraduate medical curriculum [10].

To accomplish this, the authors chose to replace an existing pediatric clerkship activity with the M-SIGHT module. The curriculum was incorporated into an existing SBME framework and replaced one of the older simulation cases that did not feature complex socio-economic topics.

This minimized concerns for adding additional hours to medical education and increasing the resources needed for case implementation.

No additional financial resources were directed to the implementation of M-SIGHT. For the pilot year, careful consideration was taken to ensure that faculty time, staff time, SP salary, instructional modalities, electronic survey tools, and statistical software did not exceed resources allocated to the previous activity in the clerkship. Additional funding was obtained from outside agencies for program evaluation with the intent to follow results from students to measure growth. However, none of the additional funding was needed for development of the curriculum.

Objectives and assessment

Once the curricular home was established, objectives and corresponding assessment tools were then developed. The goal of M-SIGHT was to prepare every graduating medical student with the knowledge needed to identify human trafficking victims, the skills to communicate with victims and other HCPs, and the resources to refer patients to local agencies. Objectives were designed to ensure an increase in the understanding of the definition of human trafficking, the ability to access resources for referral, and demonstration of documentation of signs and symptoms of trafficking. These changes in knowledge and skills were measured by written assessments and SP checklists developed by the authors.

During the simulation, learners were not expected to confirm that the patient had been trafficked.

Rather, the scenario was designed to arouse suspicion for abuse in the form of trafficking and prompt students to practice disclosing confidentiality, building trust, and developing an action plan to address the patient's immediate needs. One principal point for this simulation was to reinforce that healthcare's role is not immediate forceful removal of trafficked persons against their will, but rather a focus on survivor empowerment and meeting their stated needs through a trauma-informed approach [15–17].

The simulation portion allowed practice of communication skills with the standardized patient (SP) and included immediate verbal feedback from the SP on the student's communication skills based on a checklist of ideal communication strategies. The feedback was a direct assessment of their communication skills, with a focus on their ability to provide sensitive, trauma-informed care.

Communication skills as well as cognitive processing were also evaluated through written communication in the form of medical documentation. Students documented the encounter using the United States Medical Licensing Examination (USMLE) Step 2 Clinical Skills format. These notes were later reviewed by educators for the evidence of signs and symptoms presented by the patient. The medical documentation demonstrated what the student viewed as red flags and what actions she or he would take in a clinical setting. The note prompted students to develop an assessment and plan for the trafficked person and reflect on what resources and interdisciplinary collaboration may be necessary for comprehensive care.

Following the encounter and note writing, an online module was presented to the students. The post-encounter learning module focused on knowledge acquisition. The didactic material defined human trafficking, reviewed its scope, and confirmed that the standardized patient was indeed being trafficked. The module reinforced trauma-informed communication strategies that aid in building patient trust and provided resources for supportive service referrals, such as the National Human Trafficking Hotline, and local anti-trafficking organizations and victim services. The online software also included a pre- and post-module assessment to measure knowledge acquisition, providing a baseline for what students knew about trafficking before, and then after.

Implementation

Early in the pediatrics clerkship a forensic medicine lecture imparted basic facts about human trafficking in addition to other topics. Learners were not explicitly made aware that the human trafficking content would be addressed in a subsequent SP encounter, though they were aware that all medical school lecture material is subject to later clinical correlations and assessment.

In writing the SP-based simulation case the authors chose to adapt an existing adolescent communication case to fit a scenario of a patient being sex trafficked. The social history, physical signs, and the patient's affect were changed to include several pertinent warning signs such as those listed in Table 1.

The case displays an adolescent female who presents with classic symptoms of an STI as well as some common characteristics of victims of human trafficking, such as poor eye contact, reluctance to communicate with physician, and inconsistencies in story. Physical signs include a tattoo suggestive of branding and signs of physical trauma. Learners interacted with the SP in a one-on-one manner. In this encounter, students were not expected to diagnose the exact STI or identify the patient as a victim of human trafficking. Rather, they were expected to exercise principles of adolescent communication which were taught early in the clerkship. The principles included trauma-informed care, ensuring confidentiality, asking non-judgmental and open-ended questions, and progressing from less invasive, open-ended questions to more invasive questioning in accordance with the American Association of Pediatrics Home environment, Education and employment, Eating, peer-related Activities, Drugs, Sexuality, Suicide/depression, and Safety from injury and violence (HEEADSSS) assessment [18].

Following the encounter, learners received verbal feedback from SPs. The SPs were instructed to focus feedback on communication skills, including how much trust was built between the student and patient. The SPs were not instructed to provide additional details on the circumstances that brought their character to the clinic; they did not disclose during or after the interview that they were victims of trafficking. The SP feedback allowed for student insight into their level of comfort with TIC and avoided compromising the next activity of note writing.

Table 1. Human trafficking warning signs and symptoms for a pediatric sex trafficking simulation case, University of Louisville.

Affect
Evasive
Avoids eye contact
Speaks quietly
Answers only in short phrases
Inconsistent in providing information
History
Unstable relationship with parents
Patient under the age of 18, residing with older boyfriend
Not attending school
Unable to recall number of sexual partners
Physical exam
Cigarette burn
Tattoo

After the feedback, students were instructed to document the clinical encounter. The note sections allowed students to write the patient's history as well as clinical findings they observed on physical exam.

Once the note was completed students were instructed to complete an online module. The module was created by the authors using software packages available at their university. It began with a pre-assessment quiz, measuring the learner's suspicion for the case they recently finished, and assessing their prior knowledge of trafficking. The module's content provided context on local and national impact of trafficking and directed them to resources at both levels. This didactic material also re-introduced definitions of human trafficking and examples of trauma-informed communication. Information was presented in text and video to maximize participant engagement and appeal to multiple styles of learning. Following the didactic portion was a post-assessment quiz that featured the same questions as earlier in order to measure knowledge acquisition.

Next steps and lessons learned

To improve health outcomes of trafficked persons, the authors hope that by sharing the steps of their curriculum development, other undergraduate medical institutions will design similar anti-human trafficking education. Once data collection and assessment is complete the authors intend to publish and share the responses as an analysis of the module's efficacy.

This curriculum development and implementation occurred over 16 months. With each cohort, student responses were collected for curriculum evaluation. Though measures were designed to assess the skills gained and refined during this clinical simulation, there were potential limitations in the design of the evaluation portion. For instance, the pre- and post-assessment quiz featured essentially the same questions, and although students were never provided with the answers, this may introduce concern regarding testing phenomenon. A more appropriate post-assessment would have included analogous, rather than identical questions.

Additionally, there was limited follow up with the participants in the preceding months and years to assess behavioral changes in clinical practice. When evaluating a newly implemented curriculum on human trafficking, institutions should ideally assess the degree of change in clinician behavior; measuring whether, in the long-term, they utilize new screening techniques or assess patient encounters with trafficking signs in mind [6].

For future adaptation, the authors noted several aspects that could be altered or varied when creating similar anti-trafficking modules in other medical education institutions. In most academic institutions, time is a highly-valued commodity and resources are important when proposing any new curricular content for consideration. To implement similar platforms efficiently, each institution must examine its curriculum and determine the most appropriate home. It is advisable to consider how this content could complement or replace existing curriculum, since additional instructional time is rarely available. For example, consider pairing human trafficking content with related topics like trauma-informed care, difficult communication, refugee care, overuse injuries, sexually transmitted infections, or intimate partner violence, among others.

There is a wide array of methods for creating human trafficking simulations, ranging from the mixed use of mannequin and SP to exclusively utilizing SPs for the role of patient and trafficker.

Simulation centers should employ whichever resources are available to enact these scenarios, while focusing on providing learners the opportunity to recognize subtle signs of trafficking and master communication skills needed to address it.

Conclusion

Current providers and their professional students have gaps in their ability to handle complex clinical scenarios related to human trafficking. Simulation allows for introduction of this cutting edge topic in a fashion that facilitates learning. This simulation curriculum is intended to counter future missed opportunities by providing a controlled and interactive environment for learners to develop their skills. The module's goals are to prepare students to identify and treat a trafficked patient in a trauma-informed manner. This curriculum teaches students through three domains: patient communication in simulation, cognitive processing through documentation, and knowledge acquisition through a didactic module. By providing a general overview of the process, the authors hope to inspire other medical educators to design innovative human trafficking curricula.

Disclosure statement

The authors have no conflicts of interest to report.

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