Addressing disparities in medicine through medical curriculum change: a student perspective

Cultural competency training has been a focus of medical schools for some time. An essential step in developing culturally competent physicians, effective cultural competency training has previously been researched at medical schools. Before forming a diversity task force to head cultural competency training, one medical school utilized medical student volunteers to review current teaching material and provide suggestions to increase cultural competency training. A study group consisting of three faculty members and 29 medical students was formed on a voluntary basis during the summer of 2020. Based on medical student opinion and reviewed teaching materials, learning tools were created to guide medical curricular updates. This experience resulted in the formation of four teaching tools: a didactic lecture checklist to include more diverse patient populations; case-based learning objectives that focus on social determinants of health; a facilitator question script to encourage group discussion and student feedback on the given clinical cases; and a student reflection form on the effects of race, gender, and socioeconomic status on patients and medical professionals in the clinical setting.

Updating the medical school curriculum is a constant and ongoing process. Forming a diversity task force to guide these changes and regularly review medical teaching materials will help train physicians ready to care for a diverse patient population. In addition, the use of the suggested teaching tools may help guide the review process for such committees at other medical schools.

Methodology of tool creation

A study group consisting of three faculty members and 29 medical students was formed on a voluntary basis during the summer of 2020. Within the study group, three focused subgroups reviewed methods related to didactic lectures, case-based and clinical skills learning, and clinical curriculum. Students self-selected into each subgroup. Because this was a volunteer effort, there were no measures to ensure that each subgroup contained students from various social statuses, ethnicities, or cultural backgrounds. Additionally, there were no measures to ensure that each subgroup had an equal number of participants. The final subgroups contained 14 students in the didactic subgroup, 11 in the case-based learning subgroup, and four in the clinical curriculum subgroup.

Medical students selected the following articles to review and discuss within the study groups [1–14]. These articles were selected based on what medical students felt necessary to include or discuss when reviewing medical school curricula. This research was also utilized to bolster a presentation to the medical school administration on the importance of medical curricular updates [1–14].

The study group systematically reviewed all lecture material, clinical cases, and medical images utilized in
teaching materials. In addition, verbal feedback from medical students on difficult situations encountered while on clinical rotation (such as racism or microaggressions) was utilized to help develop the student reflection form.

Based on the study group’s work, we recommend changes to the preclinical curriculum, including updated learning material via the faculty checklist, additional case-based learning objectives, and the facilitator question script.

Teaching tools

Didactic faculty checklist

This checklist (Figure 1) prompts teaching faculty to reconsider images they are including and examine whether the presented content perpetuates stereotypes about underrepresented groups. Furthermore, it guides teaching faculty to ensure that referenced images and other sources are up-to-date and evidence-based.

Case-based learning objectives

To develop clinical decision-making skills, many medical schools now include case-based learning as a means for students to apply information learned in the classroom to simulated patient scenarios. Therefore, we developed additional case objectives (Figure 2) for medical schools with already established patient cases that facilitators may include at the beginning of each patient case. The list of additional objectives breaks down each social determinant of health into a teaching objective and items that highlight race, gender, sexual diversity, and more.

Facilitator question script

In order to further supplement small-group case-based learning courses, a suggested facilitator question script was developed (Figure 3). This script details a series of questions to be asked of small groups during case-based learning courses. Its purpose is to encourage small group facilitators to initiate discussions regarding race, social determinants of health, and cultural competency. Engaging in dialog in small groups could be a promising method to hone critical thinking skills when discussing sensitive topics. We anticipate that medical schools will develop comprehensive faculty training in order to ensure that student-facilitator encounters take place in a supportive environment where students have the opportunity to make mistakes and learn from one another.

Student reflection form

This form (Figure 4) is intended to be utilized for students who are on clinical rotations. Its purpose is to help students think about their role in the medical system and address various health disparities, racism in healthcare, or microaggressions. The authors felt it was important to prompt the students to reflect on how they might practice medicine differently as a physician so that students are proactively thinking about how they may prevent or address these situations as they continue in their medical careers. These forms may be submitted to the dean’s office, a diversity task force office that develops medical curricula, and/or physician mentors (if the medical school has a mentorship program in place). This tool may be utilized to determine how frequently students encounter difficult situations regarding race, gender, or socioeconomic status and which clinical rotation sites have these encounters happen more frequently. With this knowledge, they may determine if additional support, mentorship, or training would be needed in the medical curricula as a whole or within specific training sites. It may be utilized as a tool to help students anchor their cultural competency training to real-world scenarios. If utilized as a jumping-off point for discussion with senior faculty (senior medical students or physicians who have trained in cultural competency), this tool can extend cultural competency training to clinical rotations.
Limitations and future considerations

Student involvement was based upon voluntary signup, which resulted in a limited study cohort. This study may be improved by receiving feedback from the entire student body. Future research includes statistical analysis on the effectiveness of these tools in improving cultural competency and developing more objective tools for assessing the cultural competency of medical curricula.

One limitation of these curricular changes is their lack of focus on racial minorities. Although these tools may be expanded to include many other marginalized groups, focus on all minority groups and overlap within these groups (such as Black transgender patients) must be considered. Additional exploration focusing on the implicit bias regarding these factors would be beneficial to expanding these proposed curriculum changes. Furthermore, the investigation of social determinants of health within the realm of osteopathic manipulative medicine was not examined. Considerations for curriculum change specific to osteopathic manipulative training in medical school is another avenue of curricular change that should be explored. Finally, the student reflection form is only utilized to identify racial, gender, and socioeconomic disparities. Although there is space for students to discuss other disparities, this tool can be expanded to prompt students to reflect on disparities with the LGBTQIA+ communities, patients with disabilities, etc.

The student reflection form is best utilized when there is protected time for students to navigate these situations.
1. Regarding Practical Application of Treatment
   a. Which treatments are ideal for this case?
   b. Which treatments are more likely to be used due to practicality, costs, insurance status? (possible financial barriers to treatment)
   c. Were all possible treatment options discussed for this patient? (i.e. dialysis at home vs. at a center)
   d. Was the patient resistant or hesitant about taking medications? If so, how can physicians work through this?

2. Considering differential diagnoses outside of race/ gender/ socioeconomic status
   a. What makes certain diagnoses more likely? Why?
   b. What makes certain diagnoses less likely? Why?

3. Incorporating inclusive language
   a. What is the terminology when discussing gender and sexual diversity?
   b. What is the difference between race and ethnicity?

4. Gathering student interest
   a. What topics would you like to see addressed in future cases?
   b. Which current events are relevant to healthcare?

5. Providing student support and encouraging participation
   a. Are there any questions that were not answered regarding the case?
   b. Was the medical school living library (see below) one of the resources used when discussing this case?

Student Reflection Form:

"Racism can be defined as organized systems within societies that cause avoidable and unfair inequalities in power, resources, capacities and opportunities across racial or ethnic groups."  

Microaggressions are “everyday subtle put-downs directed towards a marginalized group which may be verbal or non-verbal and are typically automatic”.

Required Responses
1. Reflect on an experience during your rotation in which you felt challenged (ethically, emotionally, spiritually) due to observed or experienced racism / microaggressions / racial disparities / gender inequality / socioeconomic disparity, or any other disparity you encountered. If you have not experienced the above, describe a pathology/disease process that you learned about within the rotation in which racial / gender / socioeconomic inequalities are prominent and affect health outcomes (include references).

2. How do you think this experience / gained knowledge will affect your practice of medicine in the future?

Optional Questions
1. Explain the details of a difficult interaction with an attending / resident / patient that you didn’t know how to navigate.
2. How often have you witnessed racism in this clerkship?
   (none / rarely / a few times / every week / every day)
3. How often have you felt discriminated against during this clerkship?
   (none / rarely / a few times / every week / every day)

with a physician mentor. If left unaddressed, there is a missed opportunity for students to learn how to effectively address problems such as racism or microaggressions within the workspace. Mentorship groups can be formed around this feedback form to support medical students if they encounter difficult situations while on clinical training (microaggressions against themselves or anyone else in the medical setting). A small group of medical students may meet with their mentor after each rotation to discuss the results of their reflection forms and gain feedback from peers and (cultural competency trained) physician mentors. After each year, these responses may be compiled from all students and reviewed by a diversity task force committee to determine if any updates to cultural competency training are required, especially training in the preclinical years.

Furthermore, the authors feel that a panel discussion provided to medical students just before embarking on clinical rotations may offer a pivotal opportunity to prepare students to handle microaggressions or other similarly complex scenarios in the workplace. Those students who submitted reflection forms the prior year may wish to speak...
to rising third-year medical students on the best way to handle these difficult scenarios. A cultural competency-trained physician may moderate these student panelists. The authors propose a three-tiered approach — student reflection, small group discussion, and facilitated panel discussion — to rising third-year students in order to provide robust cultural competency training in the clinical years to anchor training to real-life scenarios. A diversity task force from which all of these initiatives may be organized will greatly support the organizational structure needed in updating medical curricular changes.

Conclusions

Other medical schools may utilize the presented teaching tools to evaluate and update the medical school curriculum to include more diverse patient populations. The didactic faculty checklist (Figure 1) prompts faculty to include a more diverse patient population in lecture settings. The case-based learning objectives (Figure 2), facilitator question script (Figure 3), and student reflection form (Figure 4) may be utilized to prompt discussions on how the topics of cultural competency, health equity, and social determinants of health manifest in a clinical setting. The authors propose the addition of a diversity task force to implement curricular changes focusing on cultural competency training and continuous updates to teaching materials. These resources and proposals may be utilized by medical schools looking to update cultural competency training in medical school curricula.

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