

## Longitudinal Training Program in Population Health to Reduce Health Disparities

Problem/Needs assessment: The social determinants of health (SDH), conditions in which people are born, live, and age, lead to health disparities. National organizations are interested in physicians addressing the SDH. However, physicians often have a limited understanding of the SDH and few medical schools have curricula in how to address these factors.

Program objective: To improve students' knowledge and confidence in addressing SDH, we developed a longitudinal curriculum for students to better understand disparities and the needs of underserved populations.

Description of the program: The first medical student class (MS2019) to participate occurred from June 2017-June 2018. The curriculum consists of a series of 10 modules focused on SDH including food insecurity, transportation, and housing. Each module is required and includes a pre-learning activity, an experiential activity, and an evaluation assignment. The modules are delivered during the clinical clerkships in the third year of medical school. We collaborated with community organizations throughout the city of Winston-Salem to create meaningful, experiential activities, such as delivering meals in low-income neighborhoods or working at a shelter.

Evaluation/Assessment: We conducted pre and post surveys to evaluate the change in students' knowledge and confidence. We also administered the post survey to the MS2018 class who served as a control group by not receiving the curriculum. We used Mann-Whitney and Wilcoxon Rank Sum to evaluate for change in students' knowledge and confidence and differences between the MS2019 (curriculum) and MS2018 (control). Between June 2017-June 2018, 118 students participated. From pre to post, students reported a significant improvement in knowledge in how to effectively engage with community organizations (63.6% vs 16.1% reported a high/somewhat high knowledge,  $p < 0.001$ ) and comfort negotiating a care plan with patients from underserved populations (72.9% vs 29.7% reported high/somewhat high confidence,  $p < 0.001$ ). We found that students who participated (MS2019) compared to those who did not (MS2018) reported being more knowledgeable (mean rank 109.8 vs 64.0,  $p < 0.001$ ) and comfortable (mean rank 101.2 vs 78.9,  $p < 0.001$ ).

Conclusions and lessons learned: A major barrier to reducing health disparities is physicians' limited knowledge of the unique needs of low-income populations. A longitudinal curriculum that combined didactic learning and community engagement in the SDH improved students' self-reported confidence and knowledge with working with underserved populations. Future research should focus on how the curriculum changes students' behaviors in caring for underserved populations.