was 64.8% and improved to 74.5% at in-clerkship training ($P < .001$). In looking at individual domains of RIME, improvements were seen for all domains except interpreter: reporter 55.7% to 67.6% ($P = .002$), interpreter 74.3% to 62.8% ($P = .001$), manager 68.0% to 82.5% ($P < .0001$), and educator 62.5% to 85.1% ($P < .0001$). The pattern of improvement was not statistically different between remote versus in-person training groups. The majority of students agreed or strongly agreed that the online training improved their understanding of clerkship expectations (66.0% of remote versus 75.0% of in-person training groups, $P = .604$).

Discussion: In this study of frame-of-reference training for students, we found a significant increase in proportion of cases rated correctly from baseline to in-clerkship training. The lack of improvement in the interpreter domain likely reflects the challenges posed by clinical reasoning required for interpreter, which is a component of RIME students are most uncomfortable with during preclinical years, and a skill most heavily emphasized in the medicine clerkship. Repeating the training module at the end of the medicine clerkship may have shown different results. Our finding that student perception regarding usefulness of the training was similar between remote versus in-person training is worth noting because faculty time and effort, which are often seen as barriers to many educational efforts, in this case did not significantly improve effectiveness of training.

Significance: While much of the effort to improve clinical evaluations has focused on rater training, this study assessed whether training students can improve their understanding of clerkship expectations. Our findings show that a brief, online, frame-of-reference training tool can improve student understanding of different levels of clinical performance.

Correspondence should be addressed to Sarang Kim, Rutgers Robert Wood Johnson Medical School, 125 Paterson St., CAB Suite 2300, New Brunswick, NJ 08901; email: sarang.kim@rutgers.edu.

Author affiliations: S. Kim, L. Copeland, E. Cohen, C.A. Terregino, A. Pradhan, Rutgers Robert Wood Johnson Medical School; J. Galt, Rutgers Robert Wood Johnson Library of the Health Sciences

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References

Qualitative Assessment of Medical Student Concerns About the COVID-19 Pandemic: A Multicenter Study Exploring Medical Student Perspectives
Somtochukwu Ukwuani, Nicole Kloosterman, Catherine Hammack-Aviran, JD, MA, Mario Davidson, PhD, and Luke Finck, EdD

Purpose: Medical school poses numerous stressors and challenges that can affect student well-being. Medical students are a vulnerable population within the system and may have a difficult time reporting concerns and questions to administration, particularly during the COVID-19 pandemic. We aimed to highlight medical student perspectives by assessing the priorities and most pressing concerns of medical students during the global pandemic via an online questionnaire.

Methods: This is a cross-sectional qualitative study using a survey of medical students in 21 medical schools throughout the United States. Qualitative responses to open-ended questions assessing student’s concern during the pandemic were analyzed as part of a standardized iterative approach. All data were reviewed by 2 members of the research team, who independently used an inductive process to identify emergent themes. The data were analyzed and then coded by 2 authors who independently reviewed and applied codes to the 1 transcript and then met to compare code applications, resolved disagreements, and revised the codebook. The coders then independently coded designated sections of each transcript, maintaining periodic intercoder agreement at >80% on 23.8% of responses.

Results: In total, 1,005 responses were collected. Seven core themes were identified regarding medical student concerns about the COVID-19 pandemic: medical education training, missed events not related to medical education training, financial considerations, student value and contribution, health and safety, systemic concerns, and topics not otherwise covered. COVID-19 had caused many concerns for medical students particularly as it relates to education and health and safety. One hundred one (10.05%) students expressed concern about their own personal safety, safety of direct contacts (111; 11.04%), safety of society (77; 7.66%), and access to personal protective equipment (60; 5.97%). Additionally, 481 (47.86%) respondents cited undergraduate medical training, 149 (14.82%) cited the United States Medical Licensing Examination training, 172 (17.11%) cited transition to graduate training, and 25 (2.49%) cited other educational concerns as their primary concerns during the pandemic.

Discussion: This survey represents the most comprehensive assessment of U.S. medical students’ concerns during the first wave of COVID-19 in the United States. As key stakeholders in this evolving curriculum, it is imperative to ensure that medical students feel adequately protected and supported in their current roles through transparency in evolving educational curricula, tuition and other financial aid, community wellness initiatives, and personal health and safety measures.

Significance: The long-lasting nature of this pandemic reinforces the need...
to develop interventions and strategies within medical education that are tailored to addressing the concerns and values of medical students. Programs should continue to harness the feedback from their student body to ensure their ongoing safety, welfare, and education. Student insight during these unprecedented times can help continue to guide response efforts for present and future public health crises. As the pandemic enters its second wave and conversations about vaccine distribution begin, programs can better address these emerging topics by including medical students in the conversation.

Correspondence should be addressed to Nicole Kloosterman, Vanderbilt University School of Medicine, 1161 21st Ave. S. #D3300, Nashville, TN 37232; email: nicole.kloosterman@vanderbilt.edu.

Author affiliations: S. Ukwuani, Vanderbilt University School of Medicine; N. Kloosterman, Vanderbilt University School of Medicine; C. Hammack-Aviran, Vanderbilt University Medical Center; M. Davidson, Vanderbilt University Medical Center; L. Finck, Vanderbilt University School of Medicine.

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Ethical approval: This study was approved by the institutional review board (IRB) at Vanderbilt University Medical Center (IRB# 200535). IRB approval or exemption was obtained at all partner institutions.

Results: Of 12,389 students, 3,826 responded (31%). The most common pandemic experiences were limited access to physical activity and outdoor spaces (68%), tension between personal safety and professional duty (38%), and financial strain (30%). Black and Hispanic students were 2.3 times as likely to experience financial strain compared to other racial groups (P < .0001).

Students’ top 3 concerns were a loved one getting sick (70%) and COVID-19 impacts on society (44%) and their clinical training (35%). Only 17% reported personal health as a top concern. Most (54%) felt stronger in their resolve to be a physician, and only 14% were now more likely to choose a frontline specialty.

Over half (54%) were satisfied with access to school support, but Black and other racial minority students reported lower satisfaction (P = .004). While most were satisfied with mental (51%) and student health (43%) access, those living in the same state as their school during the pandemic were more satisfied than those living out of state (53% vs 46%, P = .001 and 44% vs 36%, P = .0001, respectively). Additionally, Black and Asian students reported lower satisfaction with mental (P < .0001) and student health (P = .0005) access than other racial groups. Nearly half (47%) were satisfied with academic advising, with no differences by race or in-state status.

Notably, 17% reported a family member being diagnosed with COVID-19, 4% were diagnosed with COVID-19 themselves, and 4% experienced a COVID-19-related death of a loved one. Black and Hispanic students were 1.8 times as likely to report these personal experiences with COVID-19 compared to other racial groups (P < .0001). Students reported an increase in self-care (41%), negative coping mechanisms (41%), and caregiver stress (24%). There were no significant differences across sex, race, or marital status.

Discussion: This is the first national study to describe U.S. medical student experiences during a global pandemic or national emergency. Students were more concerned about their loved ones’ health and the societal impact of COVID-19 than their own personal health. Additionally, the pandemic reaffirmed most students’ decision to pursue medicine. Interestingly, while students reported an increase in negative coping mechanisms and caregiver stress, they also reported increased self-care, possibly related to additional time gained from removal from clinical responsibilities. Moving forward, these disparate experiences with financial strain, caregiver stress, COVID-19 illness, and school support resources must inform how medical schools develop programming to support all students, with special attention to racial minorities and out-of-state students who may be disproportionately affected.

Significance: The COVID-19 pandemic continues to bring out unprecedented changes to U.S. medical student education and well-being. This study highlighted racial differences in experiences with financial strain and COVID-19 diagnoses that may reflect socioeconomic inequalities exacerbated by the pandemic. Given the ongoing pandemic, medical schools are tasked with adapting resources to support these unique experiences and vulnerable groups.

Correspondence should be addressed to Wei Wei Lee, University of Chicago Medical Center, 5841 S. Maryland Ave., MC3051, Chicago, IL 60637; email: wlee6@uchicago.edu.