

# Upstanding and Interrupting Biases: Understanding Impact of Different Delivery Models and Student Identity on Learner Outcomes

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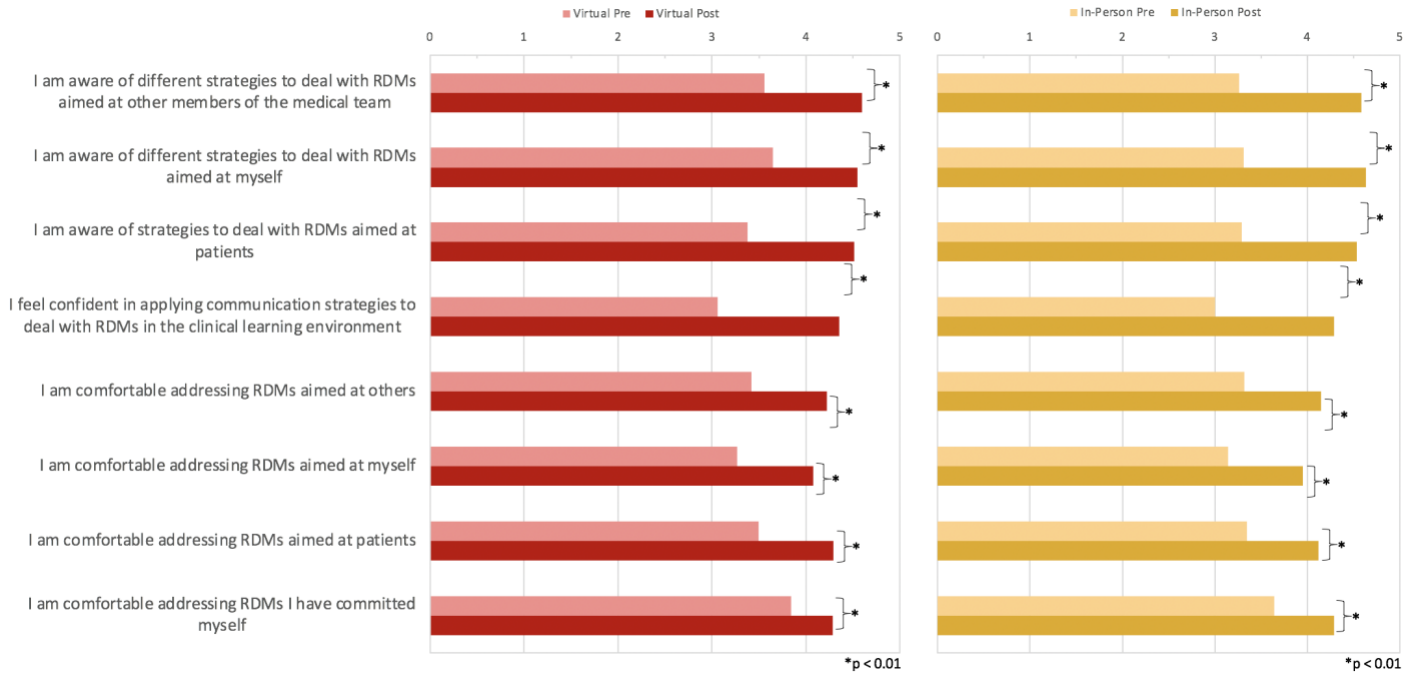
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**Introduction:** Antiracism training is imperative within medical school curricula and has been broadly adapted. Experiences of racism, discrimination, and microaggressions (RDM) have been correlated with higher rates of positive depression screening and lower satisfaction with medical training and within clinical learning environments. The power differentials faced by medical students can make acts of RDM challenging to address. Previously, we demonstrated that our RDM curriculum for medical students increased student awareness of instances of RDM, knowledge of communication strategies to mitigate RDM, and confidence to address RDM. This study examines the curriculum's efficacy among two different medical student class cohorts and two models of curriculum delivery (in-person vs virtual). Additionally, we examine the learner experience, in particular, the experience of learners who self-identify as under-represented in medicine (URM) participating in upstanding sessions, which has not been characterized. We seek to understand if learners from minoritized groups have a different perceived impact of upstander training.

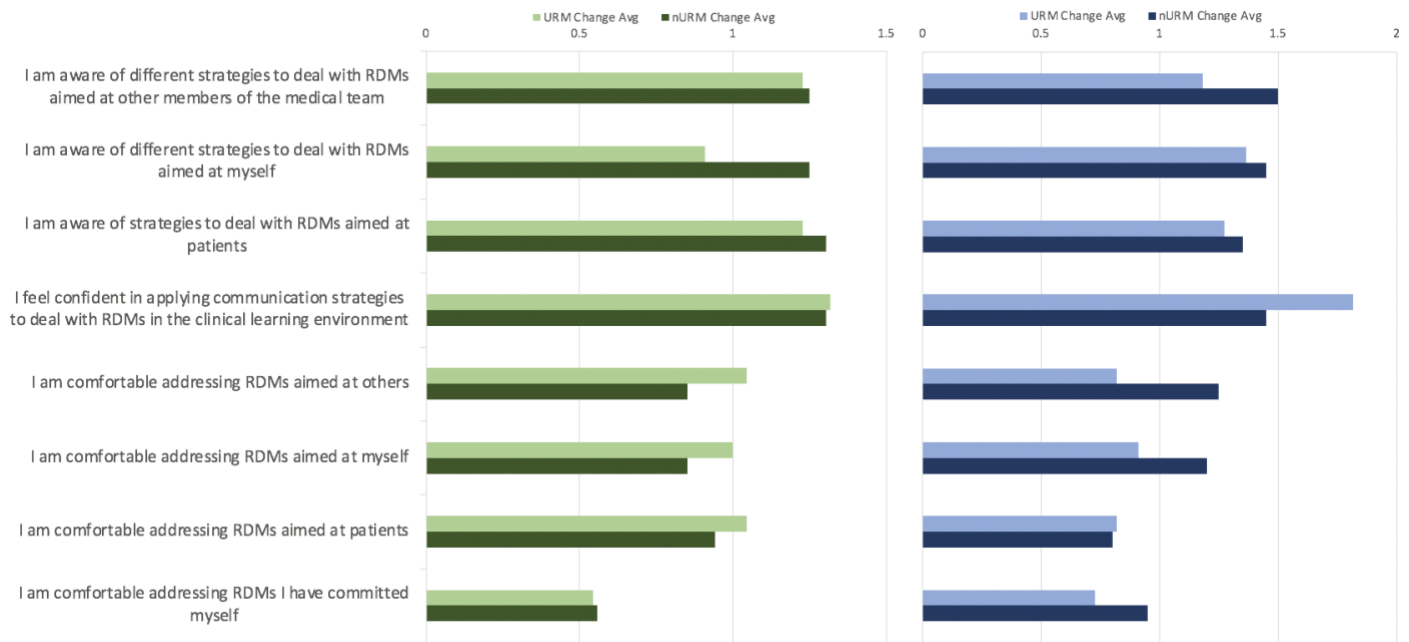
**Methods:** We are examining additional applications of our previously created case-based curriculum that was developed to practice communication responses to address RDM using an adapted 6Ds approach. Cases were collected through volunteer submission and revised to maintain anonymity. Faculty and senior medical students co-facilitated the small-group sessions. During the sessions, students reviewed the communication framework, explored their natural response strategies, and practiced all response strategies. To measure learning outcomes, anonymous pre- and post-session surveys assessing confidence and self-assessed knowledge, as measured on Likert scales, were administered for a virtual session held in January 2022 and an in-person session held in September 2022. Responses between groups were compared using t-tests.

**Results:** Of 157 participants in cohort A (Jan 2022, virtual), 121 (77%) completed the pre-session evaluation survey, 82 (53%) completed the post-session survey and 58 (37%) completed pairs of pre-and post-session surveys were identified. Of 195 participants in cohort B (Sept 2022, in-person), 149 (76%) completed the pre-session evaluation survey, 41 (27%) completed the post-session survey and 31 (21%) completed pairs of pre-and post-session surveys were identified.

In two of eight measures, cohort A (virtual) showed a statistically significant greater level in incoming knowledge about different strategies to deal with RDMs aimed at other members of the medical team (3.26 vs 3.56,  $p < 0.05$ ) and aimed at self (3.36 vs 3.64  $p < 0.01$ ) when compared to cohort B. In the remaining six measures, Cohort A (virtual) and cohort B (in-person) had a similar level of incoming knowledge. Additionally, within both cohorts, students who self-identified as URM compared to those who did not (non-URM) showed no significant difference in incoming knowledge. Both cohorts demonstrated a statistically significant increase in knowledge outcomes across all statements regardless of delivery model or URM background.



**Figure 1.** Virtual and In-Person Learners Reported Increased Knowledge and Confidence in Addressing RDMs



**Figure 2.** URM and Non-URM Learners Reported Similar Increased Knowledge and Confidence in Addressing RDMs

**Conclusion:** Across every measure, students demonstrated an increase in knowledge content and confidence on how to address instances of RDMs in the clinical environment. Learning outcomes did not differ between in-person and virtual delivery methods nor with learner background. The major limitation of this study is the small post-response rate in both sessions.