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Inter-professional projects promote and strengthen interdisciplinary collaboration

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What problem was addressed?

Basic science research and clinical practice frequently inform each other, but a persistent communication gap impedes collaborative efforts between clinicians and scientists.¹ To date, a long-term effective strategy to ameliorate this deficit remains unknown. One approach is to foster inter-professional collaboration early in graduate and professional training. The curriculum proposed here utilizes this approach in order to promote communication between graduate and medical students while concurrently augmenting knowledge for both groups of students in regards to embryological development of human model organisms used in basic science research. We anticipate that this early collaboration for students will have long-lasting beneficial effects for these interactions.

What was tried?

For this project, each collaborative interdisciplinary group (n=12) consisted of one graduate student, one medical student, and a clinician. This group compared developmental features between model organisms and humans, which culminated in a collaborative poster presentation. All participants were surveyed at the beginning of the course, immediately after course completion, and four months after its completion. The survey instruments were used to measure the degree to which interdisciplinary communication, knowledge confidence in histology, and knowledge confidence in embryology increased due to participation in the course. Ultimately, we were interested in assessing the longevity of these gains.

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What lessons were learned?

Graduate students reported a statistically significant increase in confidence talking to medical students and clinicians after participation in the program. There was a positive, but not significant, trend in the confidence of medical students in communicating with graduate students and clinicians. Interestingly, after a four month follow-up survey, the medical students had maintained their increase in comfort discussing science with other professionals and students, while the graduate students returned to their original comfort levels. Students successfully learned material in a new environment and were exposed to concepts they would not have otherwise encountered. Medical student understanding of model organism development increased substantially, likely improving a common deficit of knowledge with concepts in these areas. Students and faculty alike strongly endorsed this project and expressed interest in participating in similar activities in the future. While inter-professional relationships are not a substitute for didactic lectures on fundamental concepts, this is a well-received and effective model for supplemental learning. Overall, the curriculum proposed here may be adapted to facilitate interdisciplinary communication and collaboration for students or individuals from disparate professional backgrounds.

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