



The Art of Team Science: Interdisciplinary Perspectives from Sports, Architecture, and Other Fields

Alexis Rotondo; Ralph A. Gigliotti, Daniel B. Horton, Nancy E. Reichman

Background/Impact: It has become increasingly apparent that high-impact biomedical research requires collaborative cross-disciplinary teamwork. Biomedical researchers may not receive adequate training on strategies for engaging in these types of collaborations; however, they are increasingly motivated to collaborate across disciplines to secure grant funding and conduct high impact research. The findings from this study add to the evolving knowledge of the science of team science through insights and lessons from professionals outside biomedical science that might otherwise be overlooked in traditional biomedical training and research settings. The objective of this study was to identify common practices and approaches to teamwork across the varied fields of athletics, biotechnology, aerospace, architecture, performing arts, and cybersecurity that could inform the understanding of team dynamics and performance in a biomedical setting.

Methods: This study consisted of a review of recorded videos from six events in the seminar series, "Secrets of Successful Team Building: What Can Academia Learn from Non-Academia?" sponsored by the team science core of the NJ ACTS CTSA hub. Each event featured panelists and speakers from a different field.

Participants were asked to address a set

of five questions about team success, conflict management, maintenance of team integrity through member and project transitions, and primary leadership challenges. Comments and responses from participants were recorded in an Excel spreadsheet, curated, and synthesized to provide both practical lessons for the functioning of biomedical research teams and general themes that might be relevant and applicable to training and instruction in the science of team science.

Results: Common themes derived from the interviews included cultivating environments that celebrate both personal and group achievement, responding to conflict in ways that are swift and objective; and developing a unified culture that invokes an understanding and knowledge of others' roles for smoother transition in times of change.

