Variations in Team-Based Learning Methodology Call for Active Scholarship in Support of a Gold Standard

Riddell et al[1] provided an excellent summary of the benefits and barriers to team-based learning (TBL) in graduate medical education, as discussed in the *JGME*–Academic Life in Emergency Medicine (ALiEM) blog. While principles of TBL are well described, variations in implementation may have an impact on outcomes and successful replication in other programs. As mentioned in their article, many faculty have manipulated the TBL model to better suit the needs of their programs.[1]

At our institution, we also adapted the classic TBL framework to our needs. We are a large multisite, university-based internal medicine program that follows an 8 + 2 block schedule. We integrated TBL successfully in our academic half day within a longitudinal curriculum in ambulatory internal medicine. In a survey given 1 year after implementation, most residents acknowledged improved attention in the classroom (92%, 61 of 66); enhanced participation in didactics (89%, 58 of 65); and agreement that TBL is as good as or more effective than a traditional lecture (80%, 51 of 64). A total of 66 out of 91 residents completed the survey, and some did not answer all questions.

Our numbers echo the positive results of prior publications.[2] Several theories have been proposed in regard to why TBL is so effective.[1,3] In our opinion, it promotes a higher level of learning due to its reliance on interpersonal communication. Residents are not only required to master foundational concepts individually; they also need to demonstrate their understanding by solving clinical scenarios and teaching their teammates. Differing opinions spark discussion, further cementing learning within the group.

The main difference of our approach to TBL is the self-scored individual readiness assessment test, followed by immediate group discussion and feedback from faculty. Groups of 4 to 5 residents then begin the team-based activity. A case is presented, and after a few minutes of discussion, each group is required to explain its opinion. We intentionally create cases that have multiple correct answers to enhance the discussion that ensues. A faculty member and chief resident moderate the class discussion and emphasize the learning objectives before moving on to the next case. Test scores are not used as incentives. Instead, a lighthearted competition is triggered by giving points for correct answers and end-of-session awards for the winning team; this encourages both preparation and participation among the residents.

Time commitment from the faculty is a barrier to TBL; our sessions require a minimum of 6 to 8 hours of preparation for each. However, we have implemented a few strategies to reduce the time burden on faculty. First, in our 8 + 2 block schedule, 5 different groups of residents rotate through the clinic every 2 weeks. Since our TBL sessions are weekly, we only have to create 2 TBL sessions every 10 weeks. Second, the work is shared among a TBL-experienced faculty member and a dedicated chief resident. Third, we plan to create a 3-year curriculum so that TBL modules can be reused and updated every 3 years.

Team-based learning is an evolving pedagogy in graduate medical education, and active scholarship detailing descriptions of TBL implementation according to guidelines is necessary to grow a body of evidence in support of a gold standard.[4]

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DOI: http://dx.doi.org/10.4300/JGME-D-17-00165.1

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