Utility of Problem-Based Learning to Teach Residents About Rapid Infusion Systems

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Learner Audience: The anesthesiology residents in our department in their clinical anesthesia years (CA-1 through CA-3) participated in the problem-based learning discussion (PBLD) on a rapid infusion system (RIS).

Background: Problem-based learning has been utilized in our department as an adjunct to the weekly didactic resident teaching conferences. These sessions previously were based on a case-presentation or clinical scenario and no previous sessions were focused on a piece of technology. A RIS is utilized at our institution for complex cases including neurosurgical cases, liver transplantation and trauma.

Needs Assessment: There is no formal training on the set-up, functioning, risks/benefits, or advantages/disadvantages of the RIS.

Hypothesis: A PBLD will improve resident knowledge on the equipment and usage of RIS.

Curriculum Design: The curriculum for the PBLD included a pre-test, case presentation, slide presentation detailing the equipment, interactive session demonstrating the equipment, and post-test (which included the same questions as the pre-test).

Outcome: Using SPSS, a paired t-test was conducted on the pre-test and post-test results and the paired differences were found to be statistically significant (p=0.000) suggesting that the PBLD on a RIS resulted in improved resident knowledge of the equipment and usage.