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# Assessing students' situational awareness: Raising the bar in the post-clerkship curriculum [1]

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**Background:** A key characteristic of successful doctors is situational awareness. Situational awareness is the ability to identify, process, and comprehend critical information about what is happening to the patient and healthcare team in the context of the patient care environment. More simply, it's knowing what is going on around you and incorporating that knowledge into your plan of care for the patient. Despite simulations, standardized patient interactions, and clerkship experiences, final year medical students are often ill-prepared for the decision-making under stress that characterizes residency. The teaching and assessment of situational awareness may help to bridge this important gap in expectations as learners move from medical school to residency.

**Proposed Project:** I serve as the project co-lead for a national cohort of medical educators focused on the development and evaluation of a framework to assess the situational awareness of 4$^{th}$ year medical learners. These behaviors, loosely adapted from SABAR (Situational Awareness Behaviorally Anchored Rating Scale) and the military and aviation literature, are based on 6 P's: **P**erception of information, **P**rocessing data, **P**rediction of outcomes, **P**rioritization of problems, **P**icking a course of action, and **P**roceeding with care. Clinical and cognitive skills, appreciation of the environment of care, and team interactions are woven into the framework. The categories and behavioral anchors in the framework define the ideal behaviors that a highly-effective 4$^{th}$ year student would demonstrate prior to the independent decision making required of interns and residents.

To date, we have built a draft framework as already described and developed an assessment tool that describes the critical elements that need to be assessed in order to determine the situational awareness of our students. We are in the pilot phase of our project, testing both the acceptability of the framework and its possible application as a self-assessment tool for students as well as a direct observation tool that residents and faculty can use to assess the situational awareness skills of our 4$^{th}$ year medical students. The next phase of this project is to refine the tool based on this feedback.

The project I propose for PTSP is to take this project to the next phase. Specifically, I will implement a national study of the effectiveness of the situational awareness tool. I will assess the feasibility and utility of the tool. I will also evaluate the validity of the tool. This will occur through the implementation of the tool at multiple institutions. The tool will be used to assess both 4$^{th}$ year students and more senior intern and resident learners. To assess validity, I will gather the results of those assessments and compare them to other measures of learner achievement and as well as level of learner training. Both the learners and the faculty assessors will be surveyed to assess their perceptions of the tool feasibility and utility.

**Impact:** The type of feedback that students receive about performance under pressure may

fundamentally change if contextualized within the concept of situational awareness. Students and their supervisors will be better able to identify the elements that lead to students being perceived as insufficiently responsive to cues that signal changes in their patient’s condition and in the environment of care. Moreover, this will lead to the development of formal curricula to teach these critical concepts. Finally, this work has the potential to improve the care provided by our learners and ultimately the practicing physicians that they become.

**Groups audience:**
President's Teaching Scholars Program

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[1] https://www.cu.edu/ptsp/assessing-students%E2%80%99-situational-awareness-raising-bar-post-clerkship-curriculum