Teaching Cognitive Biases That Lead to Diagnostic Errors Using High-Fidelity Human Patient Simulation

The Next Level of Conversation with Learners at the Point of Care

Ghazwan Altabbaa A,C, Alyshah Kaba A,C, Jason Laberge B

Motivation

- Human error is common in healthcare, is part of the human condition, and increases with complexity, lack of familiarity, and as task demands are added. 1-3
- Diagnostic decision-making is a common physician task that is susceptible to human error. 3

Simulation Program

- The Rockview General Hospital Internal Medicine residency program extends over multiple weekly simulation sessions including in-situ sessions on the inpatient care unit.
- In-situ sessions conducted at point of care of inpatient service with scenarios based on actual patient data for the team.
- Debriefing by trained simulation instructors through a process of exploration and inquiry combined with advocacy to change mental frames and actions.
- We selected four cognitive biases based on discussion and consultation between human factors and simulation specialists taking into account practical considerations:
  - Learning objectives related to cognitive error were integrated with the existing simulation curriculum.

Integration Framework

- Due to the dynamic and adaptive nature of the simulation curriculum, a framework was developed to integrate learning objectives related to cognitive biases.
- The framework allowed for both a structured and dynamic basis for teaching about cognitive biases as part of scripted and in-situ simulation sessions.

Evaluation Plan

- Goal to quantify the positive effects of teaching about cognitive biases using patient simulation as a teaching modality.
- Currently pilot testing implemented curriculum, understanding metrics to assess, and fine tuning our debriefing approach.

Pilot Results / Next Steps

- Current pilot testing is gauging the success of: (1) instructional materials, (2) fine-tuning scenarios, (3) understanding bias-resistant mental frames, (4) developing debriefing strategies, (5) gaining insights about learning, and (6) refining the evaluation plan.
- We assessed a number of variables to gauge the potential benefits of the integrated curriculum on cognitive biases.