A Critical Disconnect: Residency Selection Factors Lack Correlation With Intern Performance

What factors makes a good resident? Perhaps that is the million dollar question. The eternal hope is that factors identified during the residency selection process can be used to predict future performance. Factors used previously have included standardized test scores, clinical grades and performance during the residency interview. The authors suggest identifying these factors may be even more important with USMLE Step I becoming a pass/fail exam. One possibility is the Standard Letter of Evaluation (SLOE), but it is acknowledged that even these important assessments can contain bias. The authors even question the utility of the resident interview based on previous research. Taking data from five Emergency Medicine residency programs, a dataset containing information on residents from 2010-2018 was obtained. The primary outcome was milestone levels achieved by end of intern year. A total of 418 residents dropped down to 213 for final analysis due to lack of data points. What mattered most? SLOE global assessment had a small positive correlation (0.08) only with milestone PC11 (Anesthesia and Acute Management). Other factors such as USMLE score, clinical grades and rank had no effect. USMLE Step II had a small correlation (0.01) with medical knowledge. Interestingly an advanced degree had a negative partial correlation (-0.19) with milestone ICS1 (Patient Centered Communication).

- Christopher Sampson, MD

Does a Standardized Discharge Communication Tool Improve Resident Performance and Overall Patient Satisfaction?

Ensuring patients understand their discharge diagnosis and the recommended next steps in their care is an essential component of an ED visit. This paper describes a single-center prospective observational pre-and post-intervention study done by faculty's direct observation of resident discharge performance. The authors hypothesized that education on the discharge process and implementation of the "DC HOME" mnemonic would improve resident compliance with the critical portions of the discharge conversation. The intervention was a presentation of the 6 components of the comprehensive discharge plan and the DC HOME mnemonic introduction. The authors found that there was a significant improvement in 5 of 6 components. The discharge diagnosis was given in 95.5% of resident discharge conversations pre-intervention and 100% post intervention, a non-statistical significant improvement. The most significant change was discussing health and lifestyle modifications and identifying obstacles after discharge, which occurred in 24 and 22.5% of the pre-intervention conversations and 96.5 and 100% post-intervention, respectively. Patients' satisfaction with the discharge process increased from 85.5% being very satisfied with the discharge process to 98% post-intervention. The conversation's length also increased from 162 seconds to 244 seconds. This study's largest potential limitation is the potential for a large observer bias affecting resident behavior in the discharge process. While residents were not aware that they were being observed for a study, they had received training on using the DC HOME mnemonic and were aware they were being observed on their ability to implement the mnemonic in the discharge process. Importantly, while there was a significant increase in patient satisfaction with the discharge process for the observed encounters, there was no departmental evaluation of satisfaction with the discharge process. As the DC HOME educational intervention was implemented for all resident providers across the department, one would expect a similar increase in patient satisfaction with the department's discharge process. Overall this study demonstrated that education on the discharge conversation by utilizing a standard DC HOME mnemonic, lecture, and simulated cases could lead to better compliance of the key components of the discharge process and lead to improved patient satisfaction with the discharge conversation.

- Christopher Freeman, MD

An Investigation on the Perceptions of Practicing Interdisciplinary Health Professionals on Rapid Cycle Deliberate Practice Simulation

Rapid Cycle Deliberate Practice (RCDP) is a form of simulation which uses micro debriefing with deliberate practice creating a format of "pause, debrief, rewind, and repeat" during the case. The learners perform a task, pause to receive expert feedback based on established standards, then reset to previous time point to correct their actions. The aim of this study is to investigate perspectives on RCDP among interprofessional team members of practicing adult emergency medicine healthcare professionals. Clinical faculty and staff from a new freestanding emergency department consisting of a physician, nurse practitioner, respiratory therapist, charge nurse, nurses, patient care technicians and a unit secretary were the selected participants. The RCDP case focused on the Advanced Cardiovascular Life Support protocol for shockable rhythms with ventricular tachycardia. Throughout the progress of the case, the instructors paused to provide coaching, correct feedback or positive reinforcement depending on the performance of the participants. Then, the case was reset to the previous time point to allow the participants to repeat the sequence to correct the behavior. This process was continued until the participant behavior met the established standards. The participants were divided into 4 focus groups to discuss their experience and reactions of the RCDP case. A total of 45 participants took part in the simulation and 25 of them actively contributed to the discussion. While many participants felt that RCDP interrupted the work flow and concentration, they also felt that it allowed for a more effective learning and less stressful simulation experience compared to traditional simulation. In addition, they felt having interdisciplinary experience allowed them to work in their respective roles and to develop cohesiveness as a team. This study shows that RCDP may have role in simulation for learners especially in high acuity cases where behavior change based on established standards is important. Although it might be difficult initially for learners to get used to this format, with repeated exposure, RCDP may help with better experiential learning and recollection.

- Amrita Vempati, MD

Quarterly Medical Education UPdate

Machine Scoring of Medical Students' Written Clinical Reasoning: Initial Validity Evidence

This paper offers a glimpse into the future of assessment. The authors studied "diagnostic justification essays," 600-word argumentative essays written by M3 students. The students were given a case and had to explain how they arrived at a final diagnosis, and were rated on their differential diagnosis, recognition and use of findings, and thought processes. While these essays serve as performance-based assessments that could provide unique insight into our trainees' clinical reasoning, they require a lot of expert time to score and are somewhat subjective with significant inter-rater variability. The authors sought to apply machine learning (ML) to provide a rapid and precise way to score these. To establish accuracy, they compared ML results to faculty-assigned scores, archived academic performance data (e.g. USMLE scores), and novel scores assigned by trained research assistants. 700 essays completed by 414 students were analyzed. There were no strong associations detected between the ML scores and the main outcome measures, though some interesting patterns emerged in the domains analyzed by each method. Major drawbacks of the study included use of the same set for training and scoring, and a small overall data set. Overall, the paper is a nice demonstration on how technology could enable assessment methods that are currently considered impractical. It also emphasizes the lack of a gold-standard method to benchmark trainee performance.

- Nikhil Goyal, MD

Linking Patient Care Ownership and Professional Identity Formation through Simulation

The goal of this study was to explore the link between patient ownership and professional identity formation (PIF). There is some evidence that PIF may be related to an individual feeling responsible for a patient's care. Little research in the medical context has been done to explore how ownership and PIF are linked. At the Medical College of Georgia, third-year medical students participated in a high-fidelity simulation case where they managed a patient with asthma in mild distress. Each student served in the role of primary physician for the case. The student managed the case by themselves without other students in the room. An actor playing the role of nurse was instructed to refer to the student as "doctor." After the case, students were asked to participate in voluntary focus groups (12 each of seven students) lasting up to 30 min. Qualitative analysis was performed using latent content analysis. Thematic saturation was reached after 7 focus groups. All 12 focus groups were conducted as planned. They found students described a consistent process. First, the clear increase in responsibility generated a feeling of disorientation. This was followed by reconceptualization where the disorientation led to reflection on prior experience and abilities, self-assessment of abilities through a new lens of being responsible for a patient, and decision-making. Ownership changed their understanding of the physician role. Finally, reprioritization occurred. In this step students identified new gaps in knowledge and internally changed the value of skills and knowledge they had previously obtained. In this study simulation proved to be a trigger for progression of professional identity formation for third-year medical students. The simulation case seemed to provide adequate stimulation for the process to occur. The model also demonstrated the importance of patient care ownership as part of professional identity formation.

- Aaron Danielson, MD, MAS