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Medical School



The influence of psychological safety on feedback conversations in general practice training

Ajjawi R, Bearman M, Sheldrake M, Brumpton K, O'Shannessy M, Dick M, French M, Noble C Medical Education 2022;56:1096-1104. PMID:35852726

Feedback is a cornerstone of clinical education, yet how to provide feedback to maximize learning has not been clearly established. It has been suggested that when learners feel psychologically safe, they are more open about their learning process and more engaged in the feedback process. This study examined the conditions needed for psychological safety and the impact of psychological safety on feedback conversations in the clinical setting.

This is a qualitative study drawing on interviews and diaries collected from 12 medical trainees over the course of 12 weeks in a rural general practice setting. They conducted thematic analysis to analyze the transcripts of the interviews and diary entries.

Three different groups of factors were described by trainees as impacting psychological safety:

1. Intrapersonal factors, such as intrinsic anxiety, confidence, or openness. One of the trainees profiled demonstrated a high level of anxiety about "bothering" her seniors or taking up too much of their time.
2. Interpersonal factors, meaning the relationships established between the learner and the educator. Is the educator approachable and friendly? Is the educator vulnerable about her own mistakes and learning process? Educators that seemed rushed, rigid, or spoke in a belittling way eroded psychological safety.
3. Sociocultural factors, including the local culture of the workplace, how busy the clinical setting is, and the broader culture of medicine. Learners felt comfortable asking for feedback on specific patient care-related questions, but less so on their own performance. Scheduling specific times to provide feedback away from the clinical setting was noted to improve psychological safety.

Psychological safety is complex and includes aspects brought by the trainee and the environment as well as the supervisor. Being friendly and approachable are helpful, but not sufficient to ensure safety. The clinical setting seems to invite discussion and feedback about patient-related care but does not foster feedback on learner performance.

-Rebecca Leece, MD (PGY-3) / Aaron Danielson MD MAS

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Using Learning Analytics to Examine Differences in Assessment Forms From Continuous Versus Episodic Supervisors of Family Medicine Residents

Lee ASO, Donoff C, Ross S. J Grad Med Educ. 2022 Oct;14(5):606-612. PMID: 36274777

In this paper, the authors take advantage of their family medicine residency structure to address whether continuity of supervision can impact resident assessment. This is an important question for GME, as it's often assumed that longer-term faculty-resident pairs (i.e. continuous supervisors, CS) are superior to shorter relationships (by episodic supervisors, ES). By virtue of our shift schedules, EM is more susceptible to this bias than most other specialties: It is unusual for a single faculty to have multiple, sequential shifts with the same resident and therefore most of our faculty tend to fall into the "ES" category. If CS is a superior framework, should we look at creative scheduling protocols to promote this?

The authors looked at resident assessments created by CS faculty and compared them to assessments created by ES faculty. They used a convenience sample based on the structure of their program, where residents are assigned to a single faculty continually for their first 6 months, then half-day per week with the same faculty for the rest of residency. These faculty were considered CS, all others were considered ES. They found significant differences in the assessment domains addressed by each type of faculty; in general, more complex and higher-level behaviors were addressed by CS more than ES. The authors postulate that CS may develop more trust with their residents, and therefore are more likely to endorse these behaviors. Extending this further, a resident who is predominantly assessed by ES may be less likely to be deemed competent compared to the resident who worked with CS. These findings may have important implications for how our CCCs determine resident competence, and how operational decisions may lead to bias in resident assessment. There is opportunity to study

this question in our field, it's possible that EM faculty have a different approach to entrustment.

-Nikhil Goyal, MD



Resting and Recharging: A Narrative Review of Strategies to Improve Sleep During Residency Training

Redinger J, Kabil E, Forkin KT, Kleiman AM, Dunn LK. J Grad Med Educ. 2022 Aug;14(4):420-430. PMID: 35991104

Are there evidence-based interventions that can reduce the negative physiologic effects of night shift work? To answer this question, authors thoroughly combed the literature and found 28 original articles with a great deal of heterogeneity of study design. Given that systematic analysis of the data was not possible with these limitations, a narrative approach was utilized to discuss their results.

Non-pharmacologic interventions were explored including work hour limitations, strategic scheduling, napping, paging efficiency, and sleep hygiene education. As expected, scheduling interventions which protected sleep time in any form resulted in more total sleep and improved performance on psychomotor testing, though many studies highlight the possible impacts on education.

Pharmacologic interventions including stimulants, non-benzodiazepines, antihistamines, and melatonin were reviewed. While surveys reported frequent utilization of these pharmacotherapies by residents, there was limited evidence to support their efficacy given a lack of prospective randomized controlled trials.

While there appears to be no pharmacologic quick-fix for sleep deprivation, non-pharmacologic interventions show promise. Utilizing technology innovations, changes in faculty supervision policies, and improved institutional scheduling offer the biggest opportunities for growth in this area.

-Carmen Wolfe, MD



Palliative and end-of-life care education in Canadian emergency medicine residency programs: A national cross-sectional survey

Baylis J, Harris DR, Chen C, Ting DK, Clark K, Kwan A, Crawford S, Willisroft D. CJEM. 2019 Mar;21(2):219-225. PMID: 30698132

In the aftermath of a global pandemic, there have been multiple studies demonstrating an excess mortality due to the effects of the COVID-19 pandemic on: patient access to care, exacerbation of underlying comorbidities, and aggravating the known regional and cultural health disparities within our communities. A study published within the Lancet in 2022 delineates an estimated cumulative excess death of 1.13 million as of a result of the pandemic in the USA alone. Despite this increase in mortality and death, there is a growing body of literature demonstrating multiple gaps in formal end-of-life care (EOL) instruction at both undergraduate and graduate level of medical education, with some studies citing an average of “just 17 hours of EOL instruction in four years of training.”

This cross-sectional survey of program directors of both the Canadian College of Family Physicians emergency medicine (CCFP(EM)) and the Royal College of Physicians and Surgeons of Canada emergency medicine (RCPSC-EM) explores the number of Canadian EM residency programs with structured palliative and EOL curriculum.

Investigators utilized a modified Dillman approach, with a 15-question survey sent by email to the respective leadership at each program site. With an average response rate of 72.2% (26 responses from the total 36 programs), only 39% of programs had structured EOL curriculum delivered primarily through lecture or seminar format, and a rare 3.8% of programs mandated formal clinical palliative rotations for their trainees. Secondary outcomes exploring barriers to delivering said curriculum were additionally investigated in this survey, revealing lack of time (84.6%) and curriculum development concerns (80.8%) as the primary impediments to instruction.

While this study is limited by a small sample size of primarily Canadian EM programs, its results corroborate and underscore the lack of formal EOL instruction within graduate medical education. To address an estimated shortage of 18,000 palliative care physicians in the United

States, the Institute of Medicine's 2014 report on *Dying in America* beckoned medical schools, accrediting boards, and state regulatory agencies to change certification requirements to include EOL instruction - moreover, that *all* physicians undergo training to meet basic competencies in palliative care. Lest we forget a pandemic's burdening effect on our healthcare system, this study serves as an important initial step to improving our delivery of palliative care in EM.

-Shreyans Sanghvi, DO (MedED Fellow) / Benjamin Cooper, MD, MEd



Diagnostic Reasoning of Resident Physicians in the Age of Clinical Pathways

Congdon M, Clancy CB, Balmer DF, Anderson H, Muthu N, Bonafide CP, Rasooly IR. J Grad Med Educ. 2022 Aug;14(4):466-474. PMID: 35991115

The development of diagnostic reasoning is a critical skill learned in residency; typically evolving over time supported by clinical exposure and faculty feedback/discussion. In many specialties and settings, clinical pathways now exist to standardize patient evaluation and management, often according to evidence-based recommendations. Concern exists that the increasing use of protocolized care may impact the development of residents' clinical reasoning abilities as they are further removed from the diagnostic and decision-making aspects of patient care. This study was done at a single, large pediatric residency program and asked, “How do residents perceive the tradeoffs between clinical pathways and diagnostic reasoning?” Highly utilized clinical pathways exist at this site for most common pediatric conditions and provide algorithms for evaluation and management; including order sets, nursing protocols, patient education, and discharge instructions. Voluntarily recruited senior residents participated in semi-structured 45–60-minute interviews which were transcribed and de-identified. Information obtained was broken into categories, coded, and analyzed using a “basic interpretive qualitative approach.” 9 of 19 invited residents participated and some key themes emerged. Pathways were described as being more useful in guiding management/treatment vs. making diagnostic decisions; specifically, they were cited as helpful to prevent looking up or memorizing specific details such as dosing. Residents felt pathways were a useful educational tool for junior

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residents and students but were also aware of the need to understand the underlying rationale vs. just following protocols.

Another useful aspect identified was to expedite clinical care through order sets and protocols associated with a specified pathway (even if that specific pathology was in question). Residents did express concerns that starting down a particular path can lead to anchoring and premature closure, however also noted instances where they were able to reconsider a diagnosis when a patient did not adhere to the expected course. Overall, the main concerns identified with clinical pathway usage was the distancing of residents from deliberate decision making and the introduction of cognitive bias. Clinical pathways were thought be effective as an efficiency tool and also noted to have potential educational benefit. Though this was a single center pediatric study, this issue is applicable across disciplines and clinical educators would do well to continue probing resident comprehension of underlying pathology, decision making, and using pathways as a “jumping off” point for teaching.

-Amy Stubbs, MD



Taking Leave During Residency: Types of Absences and Subsequent Delays and Variations in Physical Medicine and Rehabilitation Medical Board Pass Rates

McDeavitt JT, Appelbaum NP, Raddatz MM, Driscoll SW, Kinney CL. . Am J Phys Med Rehabil. 2022 Jul 1;101(7 Suppl 1):S30-S34. PMID: 35706116

When a resident needs to take a leave of absence (LOA) this can be a stressful time for both the resident and their program director. Previous beliefs were the interruption in training could detrimentally affect board exam results and prior research has shown that in general delays in taking specialty board exams leads to decreased passing scores. In July 2021, the American Board of Medical Specialties stated that residents must be allowed a minimum of 6 weeks of leave for parental, caregiver or medical reasons at least once during training if needed.

A recent study was performed among Physical Medicine and Rehabilitation (PM&R) residents to investigate both why a leave of absence was taken and how it affected their performance on part I and part II of their board exams. In PM&R, board certification is composed of a part I exam which assesses medical knowledge, which could be compared to the American Board of Emergency Medicine qualifying exam. Part II assesses the application of medical knowledge in its application to patient care through a series of patient vignettes.

A time period from 1998-2020 was examined. Of the 10,803 graduates in PM&R, 6.0% (643) extended their training seven or more days, which was considered a LOA. The range of leave varied from one week to over three and a half years. The demographics of those taking leave were predominantly female (67%) with a starting age in residency between 25 and 34 years. Good geographic representation was found. The four main identified categories for a LOA were parental leave (191), academic concerns/remediation (108), and personal health (73). A large number of reasons for the leave were unidentified (271).

When comparing the reason for taking the LOA and board pass rate, a significant influence was found. Not surprising those taking leave for academic concerns had a lower part I board pass rate. Most importantly those taking a LOA for parental reasons or health concerns did not have a significantly different part I pass rate when compared to peers who did not take a LOA. When examining part II pass rates those who took a parental leave had a higher pass rate than their peers. Health concerns also did not affect the part II pass rate. Again, those who took a LOA for academic concerns or unidentified did have lower pass rates on part II than their peers.

This study provides important data and hopefully helps to destigmatize leave especially when taken for personal health or parental concerns. This information is limited in its application to emergency medicine (EM) because it was studied among the PM&R residents, but hopefully could be an important piece of data when designing leave policies for EM residency programs.

-Christopher Sampson, MD

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