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Short Communication

Experiential learning: Giving didactics in the virtual world

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The COVID-19 crisis has impacted us all in a myriad of ways. As clinicians, we moved to telehealth at warp speed; as researchers, many of us have projects on hold and are busily writing in the confines of our home offices (kitchen table); as educators, we learned to adapt our training programs for residents and fellows.

Pre-COVID, once a month, our faculty, advanced practice providers, fellows, rotating residents and medical students come together for a session that include a didactic lecture or two on topics relevant to pediatric rehabilitation medicine, a journal club, and a quality improvement meeting. These monthly sessions provide a great setting to learn, brainstorm and problem-solve in a relaxed environment where we also share stories, decompress, and laugh. When it became evident that we could no longer physically come together and that our trainees would be best deployed to remote work and learning, we moved our sessions to a virtual platform. While setting up our remote sessions, we ran into challenges scheduling lecturers from other pediatric divisions as they were all grappling with the COVID-19 crisis as well.

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In an eureka moment, we decided to turn the tables on the fellows. It is often the case that a young clinician gives a new didactic lecture for the first time during a job interview or shortly after they enter practice and are overwhelmed with new responsibilities. While we expect clinicians in teaching hospitals to educate trainees, we often do not spend enough effort on instructing them on the skill of teaching [1,2]. We provide didactics on how to teach but certainly giving a lecture on teaching is insufficient [3]. Therefore, we asked each of the fellows to develop lectures on general pediatric rehabilitation topics to present. They were directed that the presentation should meet the learning needs of both pediatric and physical medicine and rehabilitation residents, understanding that medical students often rotate with us and attend our lectures. Being explicit regarding the intended audience before the fellow created their didactic lecture set the stage for how the attendings would be assessing their presentations [4,5].

Each fellow was encouraged to work with their mentor as they were preparing their lectures. During our monthly session, using video conferencing software, the fellow displayed their slides through the screensharing function and were visible to the viewers to approximate the typical lecture setting. During the question and answer period, attendees asked questions and faculty chimed in when needed. Attendees were encouraged to take notes for feedback and gave brief verbal feedback

after the lectures as part of our supportive educational environment [6]. Fellows were asked to self-reflect immediately after giving their lecture. Written evaluations were collected and synthesized by the program director. Then the program and associate program directors presented the constructive feedback using the feedback sandwich method [7,8]. For example, 'the information about primitive reflexes was informative, the visual learner might appreciate a picture or video of the reflex when you are describing it. This would help solidify the important take home point you made about atypical persistence of the reflex among children with cerebral palsy. Since boards often include questions about the persistence of primitive reflexes, your focus on the topic was excellent.' After hearing the feedback and asking clarifying questions, the fellow revised their lecture and if desired could present it again for additional feedback or review it with their mentor.

Three cycles of lectures with subsequent feedback have been completed. The process was deemed universally successful by the fellows who appreciated having a polished talk in their armamentarium, while the attendees reported benefiting from the clinical review and appreciated the opportunity to provide feedback in this structured collective format. In their immediate self-reflections, the fellows were quick to recognize how their peers employed visuals and how helpful they can be, especially when technology is successfully managed and is not a cumbersome barrier to e-learning [9]. This theme of *slide formatting* was also reflected in the feedback from the attendees. A related theme of *content* dealt with the inclusion and emphasis needed in the presentations. The resident attendees were able to identify opportunities for more explanation or emphasis based on their current level of knowledge, while the attendings often noted when topics could be further emphasized as core learning and board-relevant. The final theme was *presentation style* which included pacing and perceived comfort with the content as well as noting their vocal patterns (such as saying 'umm' repeatedly). We note that this technique is aligned with recent innovations in graduate medical education [10], and is generalizable to all disciplines. Based on our experience, we recommend identifying a virtual platform that is easy to navigate, allows for both the presenter and the presenter's slides to be seen simultaneously and having a moderator following the chat. We also recommend allowing the presenter to enter the platform early to practice taking control and driving their slides. Lastly, we recommend having a back-up plan if the presenter is unable to share and advance their slides.

This experiential learning process will formally be incorporated into our curriculum quarterly so that by the end of their fellowship, each fellow will have a total of eight polished lectures. Additionally, we will embed the lectures into our annual training blocks for our residents. In times of adversity, creativity often leads to innovative solutions.

Conflict of interest

The authors have no conflicts of interest to disclose.

References

[1] Anderson MJ, Ofshteyn A, Miller M, Ammori J, Steinhagen E. "Residents as Teachers" workshop improves knowledge, confidence, and feedback skills for general surgery residents. J Surg Educ. Jul-Aug 2020; 77(4): 757–764. doi: 10.1016/j.jsurg.2020.01.010.

[2] Hayes JR, Zeman J, Johnston B, Campbell N. Outpatient teaching and feedback skills workshop for resident physicians. MedEdPORTAL. 2020 Jul 31; 16: 10930. doi: 10.15766/mep_2374-8265.10930.

[3] Stull MJ, Duvivier RJ. Teaching physicians to teach: the underappreciated path to improving patient outcomes. Acad Med. 2017 Apr; 92(4): 432–433. doi: 10.1097/ACM.0000000000001613.

[4] Watling CJ, Ginsburg S. Assessment, feedback and the alchemy of learning. Med Educ. 2019 Jan; 53(1): 76–85. doi: 10.1111/medu.13645.

[5] Kelly E, Richards JB. Medical education: giving feedback to doctors in training. BMJ. 2019 Jul 19; 366: l4523. doi: 10.1136/bmj.l4523.

[6] Telio S, Ajjawi R, Regehr G. The "educational alliance" as a framework for reconceptualizing feedback in medical education. Acad Med. 2015 May; 90(5): 609–14. doi: 10.1097/ACM.0000000000000560.

[7] Dohrenwend A. Serving up the feedback sandwich. Fam Pract Manag. 2002; 9(10): 43–6.

[8] Sarkany D, Deitte L. Providing feedback: practical skills and strategies. Acad Radiol. 2017 Jun; 24(6): 740–746. doi: 10.1016/j.acra.2016.11.023.

[9] Essilfie AA, Hurley ET, Strauss EJ, Alaia MJ. Resident, fellow, and attending perception of e-learning during the COVID-19 pandemic and implications on future orthopaedic education. J Am Acad Orthop Surg. 2020 Oct 1; 28(19): e860–e864. doi: 10.5435/JAAOS-D-20-00579.

[10] Al Achkar M, Hanauer M, Morrison EH, Davies MK, Oh RC. Changing trends in residents-as-teachers across graduate medical education. Adv Med Educ Pract. 2017 Apr 28; 8: 299–306. doi: 10.2147/AMEP.S127007.