Check for updates

Start Here: Incorporating Interprofessional Teaching into a Curriculum for Intensive Care Unit Residents

Camille R. Petri, M.D.^{1,2} and Asha Anandaiah, M.D.^{1,2}

¹Division of Pulmonary and Critical Care, Beth Israel Deaconess Medical Center, Boston, Massachusetts; and ²Harvard Medical School, Boston, Massachusetts

ORCID IDs: 0000-0003-4120-3069 (C.R.P.); 0000-0003-1796-1230 (A.A.)

Current undergraduate medical education requires the integration of interprofessional education (IPE) into the formal curriculum (1), with the goal of promoting teamwork and collaborative patient care. However, this effort has yet to be systematically championed during residency training, leaving a gap in reinforcement of this essential skill for medical trainees (2). In addition, little published data exists about effective ways to implement IPE in the dynamic clinical training environment of graduate medical education (3–5). This is particularly pertinent in the intensive care unit (ICU), where interprofessional teamwork is essential to the provision of complex patient care and is associated with improved patient outcomes (6). In this issue of ATS Scholar, Kubbara and

colleagues describe one approach to the implementation of IPE for residents in the ICU (7). In response to residents' request for structured learning opportunities, the authors developed a recurring, 4-week lecture series that incorporated content

delivered by critical care or nephrology advanced practice providers, physical or occupational therapists, ICU pharmacists, and registered dietitians, in addition to lectures given by physician teachers. Using a mixed methods approach, the authors subsequently explored the effect of this curriculum from the perspective of both learners and interprofessional team members (IPMs). Although they found no significant change in resident assessments of working on an interprofessional team, faculty engagement in teaching, or overall educational value of the rotation, focus group participants endorsed the value of interprofessional teaching (IPT) for disseminating specialized knowledge, promoting mutual respect, and improving patient care. Focus groups also revealed challenges with this model of IPT, including limited IPM availability for teaching and some residents' preference to prioritize learning from physicians during the limited educational time within a busy clinical rotation. The study authors should be lauded for creating a simple yet innovative IPT

ATS Scholar Vol 5, Iss 4, pp 479–481, 2024 Copyright © 2024 by the American Thoracic Society DOI: 10.34197/ats-scholar.2024-0128ED

This article is open access and distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives License 4.0. For commercial usage and reprints, please e-mail Diane Gern.

initiative with features designed to promote feasibility and sustainability, including short lectures (i.e., 20-25 min), a recurring schedule, prepared slide decks on topics within the realm of speakers' expertise, and limiting the number of lectures given by a single provider. Furthermore, the inclusion of IPMs in a didactic teaching series, a setting conventionally reserved for physician teachers, not only elevates their role as educators (as the study authors describe) but also addresses the need for designated time and space for teaching noted by IPMs in prior studies (8). Last, the presence of attending critical care physicians during the IPM lectures was a notable feature of this intervention that modeled interprofessional respect and collaboration.

The focus group analysis provides rich descriptions of the experiences of both learners and "teachers" and highlights both important benefits of IPT and key challenges, including conflicts with the IPM mandate of clinical productivity and some residents' prioritization of physician teaching. The revealed challenges can be proactively addressed by other programs that wish to start a similar curriculum; for example, efforts to ensure buy-in from both physician learners and interprofessional ICU leadership to support their staff in this activity may allow program leaders to circumvent some of these issues.

There are notable limitations to this study. In particular, the absence of nurses and respiratory therapists, arguably the most high-profile IPMs in the ICU, is glaring and leaves open the question whether this model can be effective for these key interprofessional groups. From a study design perspective, the use of resident evaluations to quantify attitudes or learning from the didactic lecture series was not well matched, considering that the questions reported do not specifically pertain to the curriculum, the teachers, or the learners. Although the focus group analysis provided more insights, the study would have benefited from more rigorous outcomes, including resident learning or behavior outcomes. From a methodologic perspective, having a physician conduct the IPM focus group may have limited the insights gathered from this group.

Despite these challenges, the authors have highlighted the role and feasibility of IPE in graduate medical education settings. The study results are generally consistent with limited prior studies on this topic. The finding of Kubbara and colleagues that residents are open to learning from nonphysician teachers complements prior studies which showed that IPMs generally endorse the concept and practice of IPT and are both quite enthusiastic about and confident in teaching medical trainees (8). A prior ICU IPE model described by Cooper and colleagues likewise indicated enthusiasm for this learning approach (5). The feasibility of this standardized didactic curriculum adds to our understanding of different approaches to resident teaching by IPMs, including a virtual platform (9) and focusing on specific activities requiring collaboration and quality improvement, such as ventilator liberation protocols (10), in contrast to teaching on rounds, which is reported not to occur routinely (11). Indeed, this study by Kubbara and colleagues suggests that IPT may be better experienced by both teacher and learner in a formal didactic setting, outside of rounds. In light of the benefits of IPE in terms of learning outcomes in the undergraduate medical setting (12, 13), we have advocated for similar inclusion and recognition of

IPMs as teachers in graduate medical education (14). With this study, Kubbara and colleagues have shown us the ease with which ICU educators can implement and incorporate interprofessional teachers into an ICU didactic curriculum. Future studies should try to link the incorporation of interprofessional providers in formal resident ICU curricula to behavior and/or attitudes of both residents and IPMs outside of a discrete teaching session so that we may better understand how learning enhances teamwork and clinical care.

<u>Author disclosures</u> are available with the text of this article at www.atsjournals.org.

REFERENCES

- Liaison Committee on Medical Education. LCME principles for education to develop interprofessional collaborative skills (Element 7.9). 2018 [accessed 2021 Oct 26]. Available from: https://lcme.org/wp-content/uploads/filebase/white_papers/IP-Collaborative-Skills_Element-7.9_ 2018-06-18.docx.
- Accreditation Council on Graduate Medical Education. Internal medicine milestones. 2020 [accessed 2024 Nov 8]. Available from: https://www.acgme.org/globalassets/pdfs/milestones/internal medicinemilestones.pdf.
- 3. Al Achkar M, Hanauer M, Colavecchia C, Seehusen DA. Interprofessional education in graduate medical education: survey study of residency program directors. *BMC Med Educ* 2018;18:11.
- Siuba MT, Bauer SR, Mireles-Cabodevila E. Continuous medical education changes practice: one year after smart and salt-ed. *Crit Care Explor* 2019;1:e0017.
- Cooper AZ, Byrd C, Elefritz JL, Gerlach AT, Hinduja A, McCallister J, et al. All together now: implementation of an interprofessional critical care educational curriculum. ATS Scholar 2021;2: 304–308.
- 6. Kim MM, Barnato AE, Angus DC, Fleisher LA, Kahn JM. The effect of multidisciplinary care teams on intensive care unit mortality. *Arch Intern Med* 2010;170:369–376.
- 7. Kubbara A, Wong J, Capp K, Woldegerima S, Sundberg MA, Olson A, *et al.* Moving towards interprofessional teaching in the ICU: a mixed methods study. *ATS Scholar* 2024;5:559–574.
- Petri CR, Beltran CP, Russell K, FitzGerald J, Sullivan AM, Anandaiah AM. "A lot to offer": nurses as educators for medical residents in an academic medical center intensive care unit. *J Contin Educ Health Prof* 2024;44:180–186.
- Hampton SF, Carlbom D, Steinkruger S, Heshelman KA, Askevold J, Hogle JM, et al. Interprofessional education module on post-intensive care syndrome for internal medicine residents. ATS Scholar 2022;3:324–331.
- Rak KJ, Kahn JM, Linstrum K, Caplan EA, Argote L, Barnes B, et al. Enhancing implementation of complex critical care interventions through interprofessional education. ATS Scholar 2021;2:370–385.
- Petri CR, Beltran CP, Sullivan AM, Anandaiah A. Who is teaching residents in the intensive care unit? Perceptions of interprofessional teaching at an academic medical center. ATS Scholar 2023;4:320–331.
- Reeves S, Perrier L, Goldman J, Freeth D, Zwarenstein M. Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database Syst Rev* 2013;2013: CD002213.
- Guraya SY, Barr H. The effectiveness of interprofessional education in healthcare: a systematic review and meta-analysis. *Kaohsiung J Med Sci* 2018;34:160–165.
- 14. Petri CR, Anandaiah A. The case for interprofessional teaching in graduate medical education. *ATS Scholar* 2022;3:20–26.