Maastricht University

Resident-sensitive quality measures

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Valorization

Relevance

The relevance of the development and implementation of resident-sensitive quality measures (RSQMs) is argued in the introduction (chapter 1) and discussion (chapter 10) of this thesis. In brief, the foundation of competency-based medical education is ensuring that the outcomes of training prepare graduates to meet the needs of populations of patients.[1] For more than 40 years, a medical education research agenda that focuses on the relationship between training and patient outcomes has been advocated.[2,3] During this time, little progress has been made in implementing such an agenda. However, research articles and perspectives pieces from the past few years are hastening work in this area.[3–10] The studies presented in this thesis make important contributions to this body of work, advancing our understanding of how we may link learner outcomes and patient outcomes through developing a patient-focused approach to assessment—RSQMs. RSQMs not only provide feedback to residents about the quality of the care they provide, addressing a substantial gap in graduate medical education training,[11–14] but can also serve to assess their performance at the individual level as well as at the program level (when aggregating data for several residents). To this end, RSQMs are objective measures of performance that can help balance some of the unwanted variability in performance assessment that currently exists.[15–20] In particular, the findings presented in chapter 7 raise the question of whether RSQM data can, and should, inform assessment decisions that are made using the current prevailing approach to assessment, entrustable professional activities (EPAs). Other than RSQMs, EPAs are the only other patient-focused means of assessment described in the literature to date.

Medical education having a primary focus on the patient is not optional, as noted in chapter 10. Rather, it is the foundation of relevant medical education. This truth is moving toward center stage as health care systems internationally continue to strive for higher quality care for patients. However, graduate medical education has not traditionally placed focus on the patient but rather on the abilities of learners. Moving forward, education and training must be considered in the context of, and aligned with, health care delivery systems if future care is to meet societal needs.[21,22] With this in mind, advances such as RSQMs will make important and necessary contributions to the future of graduate medical education and health care more broadly.

Innovation

While recent perspective papers have noted the importance of using quality measure data to determine educational outcomes, little research has been done in this area.[5,6] The work of individuals who have pursued investigations in this area has tended to focus on dyads (e.g., resident and supervisor) and systems of care.[23,24] However, RSQMs focus on the individual providing care. While care is ultimately provided by teams and systems, we graduate, certify,

and credential individuals. Furthermore, individualized feedback is important to driving personal improvement. Therefore, a focus on the individual is not only innovative but also critically important.

Target Groups

RSQMs will likely be viewed as most useful by residency program leaders who are required to assess resident performance. In the United States, these program leaders are also required by the Accreditation Council for Graduate Medical Education to provide practice feedback to residents for their use in personal quality improvement efforts. As chapter 8 illustrates, RSQMs may also have notable resonance with clinical competency committee members as a type of assessment data to inform the summative assessment decisions they make about residents.

If the traditional silos of medical education and health care delivery indeed align their foci, as chapters 1 and 10 argue is paramount, RSQMs will also find applicability among health systems leaders; quality officers in care delivery systems; quality improvement scientists; and accrediting, certifying, and credentialing bodies.

While we engaged residents in the development of RSQMs, we do not yet know what their experience is with receiving feedback using RSQMs. Hopefully, residents will find RSQMs to be beneficial to their development and improvement efforts, but their reactions to RSQMs remain a key area for future research.

Finally, patients are increasingly attentive to outcomes of care and the quality of care they receive from providers and institutions. This evolution opens the door for patients and families to take interest in RSQMs in the future.

Schedule and Implementation

We have successfully studied RSQMs in a local context (i.e., single institution) and have automated the reporting of a subset of the asthma RSQMs to residents in this local setting as well. An important next step is determining how residents view and interpret RSQM performance feedback when it is provided to them.

We also need to determine whether the RSQMs developed at Cincinnati Children’s Hospital Medical Center can be applied in other institutions. To explore the generalizability of RSQMs, we are currently engaging in a multisite, multicountry study funded by the National Board of Medical Examiners’ Stemmler Fund.

As noted in chapter 5, hospital medicine and general pediatrics are the most important settings to focus on for the continued development of RSQMs. We have begun developing RSQMs for

both settings. With an eye toward generalizability beyond a single institution, the development of these measures is engaging residents and faculty from across the United States.

In addition to developing RSQMs for other settings within pediatrics, we are currently developing measures for the internal medicine general medicine inpatient wards. This work will allow us to explore differences between the types and nature of RSQMs appropriate for internal medicine and for pediatrics. Looking at a second specialty will also position us to continue expanding the development of RSQMs in other specialties.

Finally, the American Board of Pediatrics (ABP) is considering a substantially increased use of EPAs to determine residents' ability to sit for the initial certification examinations the ABP offers in general pediatrics and all pediatric subspecialties. Given the findings of chapter 7, which suggest RSQM data may be beneficial to making entrustment decisions, once further validity evidence is available, RSQMs could be useful in the ABP's expanded use of EPAs.

Activities and Products

As noted in the previous sections, several activities are currently expanding the products of the work detailed in this thesis. The work in this thesis has also been disseminated in grand rounds presentations at Cincinnati Children's Hospital Medical Center and other institutions. Additionally, this work was the focus of a webinar hosted by the Association for Medical Education in Europe (AMEE) in the fall of 2019 and was shared in a plenary presentation at the Association of American Medical Colleges' Integrating Quality Conference in 2019. Furthermore, research presentations of studies contained in this thesis have been presented at the Royal College of Physicians and Surgeons of Canada's International Conference on Residency Education in 2019, the Second World Summit on Competency-Based Medical Education at AMEE 2016, at the Pediatric Academic Societies Meeting in 2019, and at the Rogano Conference in 2016 and 2019. Presentation at several national and international conferences is also planned for 2020.

The early dissemination of RSQM work has garnered attention that has led to some of the invited presentations noted above. This work has also been discussed a few times in the past year on the KeyLIME (Key Literature in Medical Education) podcast that has a large international listenership.

References

1. Frenk J, Chen L, Bhutta ZA, et al. Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. Lancet. 2010;376(9756):1923–1958.
2. Magraw RM, Fox DM, Weston JL. Health professions education and public policy: A research agenda. J Med Educ. 1978;53(7):539–546.
3. Weinstein DF. Optimizing GME by measuring its outcomes. N Engl J Med. 2017;377(21):2007–2009.
4. Weinstein DF, Thibault GE. Illuminating graduate medical education outcomes in order to improve them. Acad Med. 2018;93(7):975–978.
5. Chahine S, Kulasegaram K, Wright S, et al. A call to investigate the relationship between education and health outcomes using big data. Acad Med. 2018;93(6):829–832.
6. Arora VM. Harnessing the power of big data to improve graduate medical education: Big idea or bust? Acad Med. 2018;93(6):833–834.
7. Gillespie C, Zabar S, Altshuler L, et al. The Research on Medical Education Outcomes (ROMEO) Registry: Addressing ethical and practical challenges of using "bigger," longitudinal educational data. Acad Med. 2016;91(5):690–695.
8. Triola MM, Hawkins RE, Skochelak SE. The time is now: Using graduates' practice data to drive medical education reform. Acad Med. 2018;93(6):826–828.
9. Caverzagie KJ, Lane SW, Sharma N, et al. Proposed performance-based metrics for the future funding of graduate medical education: Starting the conversation. Acad Med. 2018;93(7):1002–1013.
10. Smirnova A, Sebok-Syer SS, Chahine S, et al. Defining and adopting clinical performance measures in graduate medical education: Where are we now and where are we going? Acad Med. 2019; 94(5):671–677.
11. Nasca TJ, Wiess KB, Bagian JP. Improving clinical learning environments for tomorrow's physicians. N Engl J Med. 2014;370(11):991–992.
12. Wagner R, Weiss KB, Passiment ML, Nasca TJ. Pursuing excellence in clinical learning environments. J Grad Med Educ. 2016;8:124–127.
13. Weiss KB, Co JPT, Bagian JP, CLER Evaluation Committee. Challenges and opportunities in the 6 focus areas: CLER National Report of Findings 2018. J Grad Med Educ. 2018;10(4 Suppl):25–48.
14. Butler JM, Anderson KA, Supiano MA, Weir CR. "It feels like a lot of extra work": Resident attitudes about quality improvement and implications for an effective learning health care system. Acad Med. 2017;92(7):984–990.
15. Govaerts MJ, van der Vleuten CP, Schuwirth LW, Muijtjens AM. Broadening perspectives on clinical performance assessment: Rethinking the nature of in-training assessment. Adv Health Sci Educ Theory Pract. 2007;12(2):239–260.
16. Govaerts M, Schuwirth LWT, van der Vleuten CPM, Muijtjens AMM. Workplace-based assessment: Effects of rater expertise. Adv Health Sci Educ. 2011;16:151–165.
17. Kogan JR, Conforti L, Bernabeo E, Iobst W, Holmboe E. Opening the black box of clinical skills assessment via observation: A conceptual model. Med Educ. 2011;45(10):1048–1060.

18. Gingerich A, Regehr G, Eva KW. Rater-based assessments as social judgments: Rethinking the etiology of rater errors. Acad Med. 2011;86(10):S1–S7.

19. Gingerich A, Kogan J, Yeates P, Govaerts M, Holmboe E. Seeing the 'black box' differently: Assessor cognition from three research perspectives. Med Educ. 2014;48(11):1055–1068.

20. Eva KW. On the generality of specificity. Med Educ. 2003;37(7):587–588.

21. Roemer BM, Azevedo T, Blumberg B. Looking at graduate medical education through a different lens: A health care system's perspective. Acad Med. 2015; 90(9):1231–1235.

22. Sklar DP, Hemmer PA, Durning SJ. Medical education and health care delivery: A call to better align goals and purposes. Acad Med. 2017;93(3):384–390.

23. Sebok-Syer SS, Chahine S, Watling CJ, Goldszmidt M, Cristancho S, Lingard L. Considering the interdependence of clinical performance: Implications for assessment and entrustment. Med Educ. 2018;52(Suppl. 1):23–24.

24. Kalet AL, Gillespie CC, Schwartz MD, et al. New measures to establish the evidence base for medical education: Identifying educationally sensitive patient outcomes. Acad Med. 2010;85(5):844–851.