PERSPECTIVE

Documenting Quality Improvement and Patient Safety Efforts: The Quality Portfolio. A Statement from the Academic Hospitalist Taskforce

Benjamin B. Taylor, MD, MPH[1], Vikas Parekh, MD[2], Carlos A. Estrada, MD, MS[1], Anneliese Schleyer, MD, MHA[3], and Bradley Sharpe, MD[4]

[1]University of Alabama at Birmingham and Birmingham Veterans Affairs Quality Scholars Program, Birmingham, AL, USA; [2]University of Michigan Medical School, Ann Arbor, MI, USA; [3]University of Washington, Seattle, WA, USA; [4]University of California, San Francisco, CA, USA.

Physicians increasingly investigate, work, and teach to improve the quality of care and safety of care delivery. The Society of General Internal Medicine Academic Hospitalist Task Force sought to develop a practical tool, the *quality portfolio*, to systematically document quality and safety achievements. The quality portfolio was vetted with internal and external stakeholders including national leaders in academic medicine. The portfolio was refined for implementation to include an outlined framework, detailed instructions for use and an example to guide users. The portfolio has eight categories including: (1) a faculty narrative, (2) leadership and administrative activities, (3) project activities, (4) education and curricula, (5) research and scholarship, (6) honors, awards, and recognition, (7) training and certification, and (8) an appendix. The authors offer this comprehensive, yet practical tool as a method to document quality and safety activities. It is relevant for physicians across disciplines and institutions and may be useful as a standalone document or as an adjunct to traditional promotion documents. As the Next Accreditation System is implemented, academic medical centers will require faculty who can teach and implement the systems-based practice requirements. The *quality portfolio* is a method to document quality improvement and safety activities.

INTRODUCTION

Continuous improvement of quality and safety in healthcare is a national priority, and exemplary calls for action are available.[1–6] In light of mounting pressures to improve care delivery and given the classic tripartite missions of research, education, and clinical care, academic medical centers face significant challenges in developing effective quality improvement and patient safety leaders and programs. At academic medical centers, an increasing number of physicians investigate, teach, and work to improve the quality of care and the safety of care delivery.[7–9]

Academic medicine promotion guidelines call for documentation of scholarly activity.[10] Those engaged in quality and safety have the traditional pathways on how to document scholarly activity including rigorous research methods and communication in the peer-reviewed literature. According to a recent report of academic hospitalists nationwide, mentorship and institutional support are necessary for scholarship productivity.[11,12] However, although viewed favorably by chairs of medicine, traditional pathways for fostering the professional advancement, promotion, or tenure for medical school faculty members rarely embrace quality and safety improvement efforts/achievements.[12]

In the midst of the efforts to create leaders[13] or improve quality and safety in academic medical centers, we found no standardized method for documenting quality and safety improvement activities. Hence, we report the formative development, content, and potential uses of the *quality portfolio* as a tool to systematically document activities and achievements in quality improvement and patient safety.

FORMATIVE DEVELOPMENT OF THE QUALITY PORTFOLIO

Overview

The Society of General Internal Medicine (SGIM)[14] and the Association of Chiefs of and Leaders of General Internal

Medicine (ACLGIM)[15] created the Academic Hospitalist Taskforce in 2006 with a goal of establishing a professional venue for academic hospitalists. The Taskforce's raison d'être includes the promotion of scholarly activity and career development for academic hospitalists in education, research, patient care, and leadership. Two authors (BS, VP) chaired the task force and leveraged the diversity and expertise of the membership. The need of creating the quality portfolio evolved from a consensus conference of key stakeholders.[16]

We first reviewed the literature on educator portfolios for academic promotion[17–20] and used the educators' portfolio as a model. Educator portfolios are an accepted tool for documenting achievement and success in education.[10,17–19,21] Taskforce members reviewed sample educator portfolios from their own and other institutions, using them as a guide for developing the quality portfolio.

Stakeholders' Input

We established a candidate list of content domains for the quality portfolio. We drafted prototypes populated with activities from task force members and used an iterative process to revise the main domains. We vetted early versions of the portfolio at the authors' institutions including division directors, department chairs, administrators, and leaders in quality and safety. We spoke with leaders in academic medicine regarding the structure and potential implementation of the quality portfolio.

We vetted the final product with relevant external stakeholders. The final review included 15 leaders from 10 institutions, including 8 division chiefs and 5 chairs or vice chairs, with 10 leaders at the professor level representing a diversity of roles including: director for education, associate dean for faculty affairs, and associate dean for curriculum. In 2009, SGIM, ACLGIM, and the Association of Professors of Medicine endorsed the quality portfolio. The final product received positive feedback, which was not universal, including explicit recognition that the quality portfolio is a useful tool for documenting accomplishments in quality improvement and patient safety.

THE QUALITY PORTFOLIO

Overview

The quality portfolio contains six distinct categories including: (1) leadership and administrative activities, (2) project activities, (3) education and curricula, (4) research and scholarship, (5) honors, awards, and recognition, and (6) training and certification (see Table 1). The quality portfolio, template instructions, and an example to guide users are publicly available.[22]

Table 1. Quality Portfolio Components

Component	Description
Faculty narrative	• Outlines role, philosophy, and approach to quality improvement and patient safety
Leadership and administrative activities	• Lists leadership roles and summarizes roles and responsibilities
Project activities	• Describes quality improvement and patient safety projects: • Project title, timeframe, and time commitment • Goals and members • Outcomes, results, and dissemination
Education and curricular activities	• Documents teaching activities and curriculum development in quality improvement and patient safety • Teaching activity, class title, and curriculum • Time commitment • Description, goals, format, structure, and teaching role • Learners • Evaluation (learners, curriculum), dissemination
Research and scholarship	• Documents research and scholarship activities in quality improvement and patient safety • Publications, grants and contracts, enduring educational materials
Honors, awards, and recognition	• Lists award name, organization, and criteria for selection
Training and certification	• Lists training and certification specific for quality improvement or patient safety
Appendix	• Includes include pertinent or supporting information not otherwise contained in the portfolio

Faculty Narrative

The portfolio begins with a brief narrative and reflective summary that outlines the faculty member's role in and approach to quality improvement or patient safety. The narrative should comment on the individual philosophy, successes, challenges, future directions, and goals in terms of quality improvement or patient safety. For example, a faculty member may describe participation in and leadership of a multidisciplinary team, a rapid cycle of changes, and other approaches. The recommended length is one to two paragraphs.

Leadership and Administrative Activities

Successful quality improvement requires strong and focused leadership. Faculty should list their involvement in leadership roles. Some examples of leadership roles in quality and safety include: chief quality officer, director of quality for a division or department, leader of a root-cause analysis or process improvement team, and leader of quality and safety curriculum development, among others. For each role, faculty should provide the leadership or administrative title and summarize the roles and responsibilities including a short description of the team. The recommended length is two to three lines for each leadership role.

Project Activities

Faculty should describe their activities in quality improvement or patient safety projects. Specifically, describe the: project title, main goals, time commitment and duration of the project, role and contributions, outcomes and results, and any dissemination activities (v. gr.: a medical center process improvement initiative or participation in a national collaborative initiative[23,24]). The outcomes and results are probably the most important aspect of this section. Faculty should describe how project effectiveness was measured and provide the results. We recommend the use of formal methods for communicating the results with statistical process control, time series, dashboards with benchmarks, or other relevant methods. The results can also be qualitative in nature.

Education and Curricular Activities

Faculty should document the specific direct teaching activities and curriculum development in teaching quality improvement and patient safety. For direct teaching or curriculum development, provide: (1) the teaching activity, (2) the time commitment, (3) a description of the activity (goals, format, teaching role), (4) the number and description of the learners, (5) the evaluation (summative and formative), and (6) dissemination if any. Creation of the curriculum content for the Academic Hospitalist Academy[25] and other educational activities[26,27] at the national level are two examples disseminated in the peer-reviewed literature.

Research and Scholarship

We recommend the inclusion of a summary description of the research and scholarship activities outlining the thematic area, focus, broader impact, and relevance. The framework by Boyer and Glassick provides guidance for organizing scholarship in quality improvement or patient safety.[28,29] The four categories of scholarship include discovery, integration, application, and teaching.[28]

The main activities include: publication and presentations of peer-reviewed work, receipt of grants or contracts, and creation of enduring educational materials. In addition, other scholarship activities include publications in other venues, abstracts and posters presentations, invited presentations, and reviewer for peer-reviewed publication. A growing number of journals focus on improvement science,[30] national organizations offer funding opportunities,[31,32] and the Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines provide guidance for communication.[33,34]

Honors, Awards, and Recognition

Quality improvement or patient safety work may be recognized with awards and honors. Faculty should list such recognition. Also, quality improvement efforts may be recognized in less formal ways, with letters of recognition from peer-reviewed journals (for reviewer's role), supervisors, executives, or others invested in improving care delivery.

Training and Certification

Faculty should include any additional training specific for quality improvement or patient safety. For example, national organizations offer training in quality and patient safety.[25,35,36] The Department of Veterans Affairs also offers 1–2 years of post-graduate training.[20,21,37]

Appendix

The quality portfolio concludes with an appendix to include pertinent or supporting information not otherwise contained in the portfolio. Faculty should consider including qualitative evidence of project activity success, learner evaluations of teaching or curriculum development, microsystems assessment,[38] storyboard presentations, and letters or unsolicited feedback about participation in quality improvement or patient safety activities.

QUALITY PORTFOLIO:IMPLICATIONS

Physicians, many of whom are hospitalists, now spend significant time involved in quality improvement and patient safety work. As these physicians apply for promotion or advancement, they need a mechanism for documenting their efforts and achievements.[2] The quality portfolio fills a present void in the existing system of specifically documenting excellence in quality improvement and patient safety. It offers a standard way to document the breadth and depth of the work of those engaged in improvement efforts. We envision the quality portfolio being used as either a stand-alone document or as an adjunct to the curriculum vita or other documentation formats such as the education, service, or research portfolios. It is not meant to replace, but rather to augment, the current methods of documentation of academic productivity. We encourage local adaptation and implementation.

The quality portfolio, similar to the educator's portfolio,[17,18,20,39,40] has the potential to serve different uses both for individuals and institutions. Specifically, the quality portfolio may be used to:

- document excellence or achievement in quality/safety to aid in promotion,
- demonstrate productivity for periodic evaluations of performance,
- guide individual faculty development through self-reflection and mentorship, and

- raise the value of quality improvement in one's home institution by providing a standardized format for comparative and peer review of quality and safety activities.

Few academic medical centers now include specific quality improvement and safety activities as a way to document excellence in innovation.[41–43] We are also aware that the Veterans Affairs Quality Scholars program has used, for the past 12 years, a reporting format to track the activities fellows are involved in.[37,44,45] We plan to examine the penetration and use of the quality portfolio in academic promotion.

The quality portfolio is not for everyone, and not every project can be considered scholarly activity. We acknowledge that not everyone involved in improvement work will, should, or wants to be promoted. During the development of the quality portfolio and presentations at national meetings, leaders also expressed a strong sentiment that promotions committees would view the portfolio unnecessary at their institutions. In particular, other ways to document excellence are available for faculty in clinician-educators tracks. The quality portfolio is a way to document and acknowledge the contributions of those who excel but do not fit the traditional paradigms or accepted metrics for promotion.[3,16,46] The need for physician leadership and the current unmet demand in fostering the careers of those engaged in quality improvement and patient safety is starting to be recognized.[3,47]

We acknowledge limitations of the current version of the quality portfolio. The quality portfolio was developed by physicians in academic medical centers. A more rigorous and systematic approach could have resulted in a different version of content or detail. We presume that the quality portfolio may also benefit those seeking to document success in quality improvement or patient safety across other disciplines. The general principles may apply to other professions, especially with the increased attention of inter-professional education.[48–50] Future directions include the definition of specific milestones, competencies, and curricula for quality and safety improvement in the continuum of medical education.[51,52] As the Next Accreditation System is implemented,[53] academic medical centers will require faculty who can teach and implement the systems-based practice requirements.

CONCLUSION

The quality portfolio fills a present void in the existing system of documenting scholarly activities in quality improvement and patient safety. We are continuing our dissemination efforts; the quality portfolio was included in the inaugural Academic Hospitalist Academy[25]—a formal training experience for junior faculty looking to succeed in academic medicine. We encourage faculty members and division and department leaders to review and use the quality portfolio. We welcome your feedback on experiences with its use as well as suggestions for improvement. A sample version of a completed quality portfolio is available online.

Corresponding Author: *Carlos A. Estrada, MD, MS; Division of General Internal Medicine University of Alabama at Birmingham, 732 Faculty Office Tower, 510 20th Street South, Birmingham, AL 35294-3407, USA (e-mail: cestrada@uab.edu).*

REFERENCES

1. **Dhalla IA, Detsky AS.** Aligning incentives for academic physicians to improve health care quality. JAMA. 2011;305(9):932–3.
2. **Stevens DP, Kirkland KB.** The role for clinician educators in implementing healthcare improvement. J Gen Intern Med. 2010;25(Suppl 4):S639–43.
3. **Shojania KG, Levinson W.** Clinicians in quality improvement: a new career pathway in academic medicine. JAMA. 2009;301(7):766–8.
4. **Shojania KG, Silver I, Levinson W.** Continuing medical education and quality improvement: a match made in heaven? Ann Intern Med. 2012;156(4):305–8.
5. **Wong BM, Levinson W, Shojania KG.** Quality improvement in medical education: current state and future directions. Med Educ. 2012;46(1):107–19.
6. **Shine KI.** Patient safety strategies: a call for physician leadership. Ann Intern Med. 2013;158(5 Pt 1):353–4.
7. **Neeman N, Sehgal NL.** Perspective: a road map for academic departments to promote scholarship in quality improvement and patient safety. Acad Med. 2012;87(2):168–71.
8. **Neeman N, Sehgal NL, Davis RB, Aronson MD.** Quality improvement and patient safety activities in academic departments of medicine. Am J Med. 2012;125(8):831–5.
9. **Leykum LK, Parekh VI, Sharpe B, Boonyasai RT, Centor RM.** Tried and true: a survey of successfully promoted academic hospitalists. J Hosp Med. 2011;6(7):411–5.
10. **Beasley BW, Wright SM.** Looking forward to promotion: characteristics of participants in the Prospective Study of Promotion in Academia. J Gen Intern Med. 2003;18(9):705–10.
11. **Reid MB, Misky GJ, Harrison RA, Sharpe B, Auerbach A, Glasheen JJ.** Mentorship, productivity, and promotion among academic hospitalists. J Gen Intern Med. 2012;27(1):23–7.
12. **Staiger TO, Wong EY, Schleyer AM, Martin DP, Levinson W, Bremner WJ.** The role of quality improvement and patient safety in academic promotion: results of a survey of chairs of departments of internal medicine in North America. Am J Med. 2011;124(3):277–80.
13. **Lee TH.** Turning doctors into leaders. Harv Bus Rev. 2010;88(4):50–8.
14. Society of General Internal Medicine (SGIM). Available at http://www.sgim.org/ Accessed May 24, 2013.
15. Association of Chiefs and Leaders in General Internal Medicine (ACLGIM). Available at http://www.sgim.org/aclgim/. Accessed May 24, 2013.

16. **Flanders SA, Centor B, Weber V, McGinn T, Desalvo K, Auerbach A.** Challenges and opportunities in academic hospital medicine: report from the academic hospital medicine summit. J Gen Intern Med. 2009;24(5):636–41.

17. **Beasley BW, Simon SD, Wright SM.** A time to be promoted. The Prospective Study of Promotion in Academia (Prospective Study of Promotion in Academia). J Gen Intern Med. 2006;21(2):123–9.

18. **Atasoylu AA, Wright SM, Beasley BW, et al.** Promotion criteria for clinician-educators. J Gen Intern Med. 2003;18(9):711–6.

19. **Fleming VM, Schindler N, Martin GJ, DaRosa DA.** Separate and equitable promotion tracks for clinician-educators. JAMA. 2005;294(9):1101–4.

20. **Lindemann JC, Beecher AC, Morzinski JA, Simpson DE.** Translating family medicine's educational expertise into academic success. Fam Med. 1995;27(5):306–9.

21. **Beasley BW, Wright SM, Cofrancesco J Jr, Babbott SF, Thomas PA, Bass EB.** Promotion criteria for clinician-educators in the United States and Canada. A survey of promotion committee chairpersons. JAMA. 1997;278(9):723–8.

22. Academic Hospitalist Taskforce Quality Portfolio Rationale and Development. Society of General Internal Medicine (SGIM), Association of Chiefs and Leaders in General Internal Medicine (ACLGIM).Available at: http://www.sgim.org/aclgim-tools–programs/quality-portfolio. Accessed May 24, 2013.

23. Society of Hospital Medicine. Project BOOST, Better Outcomes for Older adults through Safe Transitions. Available at: http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/project_boost_background.cfm. Accessed May 24, 2013.

24. **Maynard GA, Budnitz TL, Nickel WK, et al.** 2011 John M. Eisenberg Patient Safety and Quality Awards. Mentored implementation: building leaders and achieving results through a collaborative improvement model. Innovation in patient safety and quality at the national level. Jt Comm J Qual Patient Saf. 2012;38(7):301–10.

25. The Academic Hospitalist Academy. Society of Hospital Medicine (SHM), Society of General Internal Medicine (SGIM), Association of Chiefs and Leaders in General Internal Medicine (ACLGIM).Available at: http://www.academichospitalist.org/. Accessed May 24, 2013.

26. **Haidet P, Cherry R, Clark M, O'Sullivan S, Yang C.** An interprofessional team-based learning module in quality improvement concepts. MedEdPORTAL; 2012. Available from: www.mededportal.org/publication/9074. Accessed May 24, 2013.

27. **Reed D, Wittich C, Drefahl M, McDonald F.** A quality improvement curriculum for internal medicine residents. MedEdPORTAL; 2009. Available from: www.mededportal.org/publication/7733. Accessed May 24, 2013.

28. **Boyer EL.** The scholarship of teaching: from "scholarship reconsidered: priorities of the professoriate". Coll Teach. 1991;39(1):11–3.

29. **Glassick CE.** Reconsidering scholarship. J Public Health Manag Pract. 2000;6(1):4–9.

30. **Peña A, Taylor BB, Patrician P, Estrada CA.** Journal venues for safety and quality improvement publications. SGIM Forum. 2011;34(8):10–1. Available at: http://www.sgim.org/File%20Library/SGIM/Resource%20Library/Forum/2011/SGIM-August-2011-Web-1-.pdf. Accessed May 24, 2013.

31. Agency for Healthcare Research and Quality. AHRQ Research Funding Priorities. Available at: http://www.ahrq.gov/fund/ragendix.htm. Accessed October 20, 2012.

32. Robert Wood Johnson Foundation. Program areas. Quality/Equality. Available at: http://www.rwjf.org/en/about-rwjf/program-areas/quality-equality/programs-and-grants.html. Accessed May 24, 2013.

33. **Ogrinc G, Mooney SE, Estrada C, et al.** The SQUIRE (Standards for QUality Improvement Reporting Excellence) guidelines for quality improvement reporting: explanation and elaboration. Qual Saf Health Care. 2008;17(Suppl 1):i13–32.

34. **Davidoff F, Batalden P, Stevens D, Ogrinc G, Mooney S.** Publication guidelines for quality improvement in health care: evolution of the SQUIRE project. Qual Saf Health Care. 2008;17(Suppl 1):i3–9.

35. Institute for Healthcare Improvement, IHI Open School. Available at: http://www.ihi.org/offerings/IHIOpenSchool/Pages/default.aspx. Accessed May 24, 2013.

36. Society of Hospital Medicine Leadership Academy. Available at: http://www.hospitalmedicine.org/Content/NavigationMenu/Events/SHMLeadershipAcademies1/SHM_Leadership_Acade.htm. Accessed May 24, 2013.

37. **Splaine ME, Ogrinc G, Gilman SC, et al.** The Department of Veterans Affairs National Quality Scholars Fellowship Program: experience from 10 years of training quality scholars. Acad Med. 2009;84(12):1741–8.

38. Clinical Microsystems. The Dartmouth Institute, Geisel School of Medicine at Dartmouth, Dartmouth-Hitchcock Medical Center, Dartmouth College. Available at: http://www.clinicalmicrosystem.org. Accessed June 19, 2013.

39. **Simpson D, Hafler J, Brown D, Wilkerson L.** Documentation systems for educators seeking academic promotion in U.S. medical schools. Acad Med. 2004;79(8):783–90.

40. **Kuhn GJ.** Faculty development: the educator's portfolio: its preparation, uses, and value in academic medicine. Acad Emerg Med. 2004;11(3):307–11.

41. Systems Innovation, Quality Improvement & Patient Safety Portfolio. QI Portfolio for Academic Advancement. Department of Medicine, University of California San Francisco. Available at: http://medicine.ucsf.edu/safety/overview/portfolio.html and http://medicine.ucsf.edu/safety/docs/dom-qiportfolio-201104.pdf. Accessed May 24, 2013.

42. **Lowenstein SR.** Guide to preparing a dossier for promotion or tenure. University of Colorado School of Medicine. Office of Faculty Affairs. Available at: http://www.ucdenver.edu/academics/colleges/medicalschool/facultyAffairs/Documents/DossierBuildingGuide2010.pdf. Accessed May 24, 2013.

43. Silver Book: Professional Development Guide for the Faculty of the Johns Hopkins University School of Medicine, 4th Edition, 2011. Available at: http://www.hopkinsmedicine.org/som/faculty/policies/silverbook. Accessed May 24, 2013.

44. **Estrada CA, Dolansky MA, Singh MK, et al.** Mastering improvement science skills in the new era of quality and safety: the Veterans Affairs National Quality Scholars Program. J Eval Clin Pract. 2012;18(2):508–14.

45. **Patrician PA, Dolansky M, Estrada C, et al.** Interprofessional education in action: the VA quality scholars fellowship program. Nurs Clin N Am. 2012;47(3):347–54.

46. **Zeidel ML, James BC.** Improving the quality of health care in America: what medical schools, leading medical journals, and federal funding agencies can do. Am J Med. 2002;112(2):165–7.

47. **Pronovost PJ, Miller MR, Wachter RM, Meyer GS.** Perspective: physician leadership in quality. Acad Med. 2009;84(12):1651–6.

48. **O'Leary KJ, Sehgal NL, Terrell G, Williams MV.** Interdisciplinary teamwork in hospitals: a review and practical recommendations for improvement. J Hosp Med. 2012;7(1):48–54.

49. **Armstrong G, Headrick L, Madigosky W, Ogrinc G.** Designing education to improve care. Jt Comm J Qual Patient Saf. 2012;38(1):5–14.

50. Interprofessional Education Collaborative. Core competencies for interprofessional collaborative practice: report of an expert panel. 2011. Available at: https://www.aamc.org/newsroom/newsreleases/2011/187064/ipec.html. Accessed May 24, 2013.

51. **Weinberger SE, Pereira AG, Iobst WF, Mechaber AJ, Bronze MS.** Competency-based education and training in internal medicine. Ann Intern Med. 2010;153(11):751–6.

52. **O'Leary KJ, Afsar-Manesh N, Budnitz T, Dunn AS, Myers JS.** Hospital quality and patient safety competencies: development, description, and recommendations for use. J Hosp Med. 2011;6(9):530–6.

53. **Nasca TJ, Philibert I, Brigham T, Flynn TC.** The next GME accreditation system–rationale and benefits. N Engl J Med. 2012;366(11):1051–6.