

A Compass for Scholarship: The Scholarly Activity Expectations Rubric

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If you don't know where you are going, you will probably end up somewhere else.

—Yogi Berra

As lamented in recent discourse,^{1–6} residents' engagement with, and success in, scholarly endeavors has been variable, and although mediocre scholarship may reflect resident inability or poor faculty mentorship, it may also indicate the ambiguity and inconsistency of our expectations and how we communicate them to residents. Although we want residents to paddle vigorously toward the shores of scholarly activity, we often ask them to do so without a compass. Thus, it is no wonder that many simply lay back and float gently with the current.

Articulating the general sentiment surrounding this ambiguity in the development of residents as scholars, Ledford et al¹ suggested that “codify(ing) the goal” around scholarship expectations was 1 way programs could mitigate resident uncertainty. In other words, arming our residents with the functioning compass of consistent guidance could help to not only ensure progress but also articulate what such progress might entail.

Eliciting Expertise

We (the authors) are responsible for assisting faculty and residents across all departments in the training and mentoring of research, and we are aware of the inconsistencies and unclear expectations for our residents. To “codify the goal” for residents, we set about to establish reasonable and consistent expectations for residents' scholarship. We engaged leadership from our 10 residency and 14 fellowship programs in a half-day retreat in July 2013. Nearly 40 program and fellowship leaders and key faculty who frequently mentor residents responded to the

invitation to discuss the current state of resident scholarship at our institution.

Participants formed multidisciplinary, small groups and were asked to identify essential components and skills they believed residents should acquire through the Accreditation Council for Graduate Medical Education (ACGME) scholarly activity requirement.⁷ Each group was then asked to rate those skills in order of importance: Their top 5 skills were then reported to the full group.

Some groups identified similar skills that reflected how scholarly activity should be a tool to enhance medical knowledge and patient care competencies. Two such skills were “how to ask an answerable, relevant clinical or research question” and “how to critically review the literature.”

Not surprisingly, the lists generated by the groups reflected the ambiguity and variability plaguing the scholarly activity requirement at large. As much as faculty agreed the ACGME requirement was an opportunity for residents to expand their research and scholarship skills, the group had some difficulty articulating these skills. Some groups emphasized ambiguous yet banal skills, such as “writing skills” and “hypothesis generation.” Others set the bar much higher, stalwartly expecting residents to learn “the process from question to manuscript” and “project management, including time management, understanding the regulatory process, and understanding team roles.”

Beyond a lesson in extremes, this exercise from our half-day retreat also produced outright disagreement among faculty. Fundamentally, faculty wrestled with whether skills such as Institutional Review Board navigation and project management were part of the resident scholarly activity process or simply burdensome byproducts of it. Drawing on experiences with incredibly different resident projects, agreement was settled on the fact that “it depends on the project.” This and other discussions at the retreat reinforced the sentiment articulated by Ledford et al¹ and exposed variation in values across mentors and programs, bringing again into sharp relief the barriers that inconsistent messages can present to residents. Yet, ultimately, a compass cannot have 2 points toward North, so some sense and arrangement had to be made through the process.

Making Sense of It All

We walked away from the retreat with a mixed bag of skills identified as important and articulated with varying amounts of detail, from numerous frames of reference, and

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DOI: <http://dx.doi.org/10.4300/JGME-D-14-00235.1>

Scholarly Objective				Timeline
Clear Goals	☐ Identify a relevant clinical problem and use literature to demonstrate why the problem is important to the field. ☐	☐ Create an answerable, relevant clinical question, such as a PICO question. ☐	☐ Identify a project goal that is realistic and achievable. ☐	
Adequate Preparation	☐ Identify examples of original research which provide evidence for the clinical question, and evaluate the validity of such research. ☐	☐ Produce a thorough, critical review of literature which identifies the gap in knowledge, including the quality of results of current empirical evidence. ☐	☐ Identify purpose of the regulatory process and required steps. ☐ ☐ Complete CITI training. ☐	
Appropriate Methods	☐ Identify appropriate outlet for scholarly project (eg, abstract, poster, or manuscript). ☐ ☐ Identify requirements and guidelines, and schedule this opportunity. ☐			
Organized Results	☐ Interpret relevance to practice. ☐ ☐ Complete or collaborate on writing a poster or presentation. ☐	☐ Obtain feedback on project from mentor. ☐	☐ Ensure project is HIPAA compliant. ☐	
Effective Presentation	☐ Complete or collaborate on a presentation of the project. ☐	☐ Obtain feedback on your performance. ☐		
Reflective Critique	☐ Complete a self-assessment of poster or presentation, including degree to which goals were met and question was answered. ☐	☐ Revise and improve project based on feedback. ☐		

FIGURE

EXCERPT OF THE SCHOLARLY ACTIVITY EXPECTATIONS RUBRIC FOR RESIDENTS ENGAGING IN CLINICAL SCHOLARSHIP

representative of various types of mentors who see many types of resident projects. Because we opened this can of worms around resident scholarship, we were charged with making sense of it.

To begin, each of the meeting's final skills was broken down into observable behavioral events. For example, "how to apply, interpret, and communicate research" was separated into "demonstrate a thorough, critical review of literature," "interpret results within the context of the study," and "complete, contribute to, or collaborate on a written presentation of the project." Second, because not all residents undertake formal research to fulfill their scholarly activity requirement, skills were separated into 2 categories: those associated with research projects and those associated with nonresearch projects, such as quality improvement, case reports, and educational innovations. The nonresearch projects were labeled "clinical scholarship."

Using an established framework for identifying a rigorous approach to traditional research⁸ and clinical scholarship^{9,10} activities, we identified 6 objectives of a resident scholarly project: clear goals, adequate preparation, appropriate methods, organized results, effective presentation, and reflective critique. Each of the skills identified during the retreat was mapped onto 1 of these

components. Program leaders were asked to edit and add skills to this matrix until it supported a robust view of the critical elements of their residents' scholarly projects. The resulting document manifested into a rubric for guiding residents through a scholarly project.

Scholarly Activity Expectations Rubric

The Scholarly Activity Expectations Rubric (FIGURE) was born from this iterative, collaborative process. The rubric reflects skills that a resident could be expected to demonstrate in the development of either clinical scholarship or research. With the ability to select skills and set a timeline for completion, we developed the rubric to be easily adapted to projects of varying scale and scope, such as community-based projects,¹¹ educational innovations, or research studies.

The Scholarly Activity Expectations Rubric has the potential to be a flexible tool with multiple uses. Now being piloted as a tool to foster resident and mentor conversations around scholarly activity requirements, we also anticipate the rubric can be useful for developing nontrainee novice investigators and for assisting research mentors. We expect residents will find value in the rubric as an illuminated guide toward those scholarly shores and

toward fulfillment of their institution's expectations for scholarship. We expect mentors will view the rubric as a blueprint, supplementing their guidance and offering a menu of skills for residents to develop while they are carrying out their projects.

To be sure, successful completion of a resident's scholarly activity project must not only be marked by the set of skills associated with their final product(s) but also by recognition of the synergy between such skills and their clinical practice. When residents see scholarly activity as merely a graduation requirement, this fundamentally undermines the importance of such skills as they contribute to patient care. Yet, in practice, acquisition of the skills and behaviors associated with scholarly activity is no more than progressive completion of another set of milestones, informed by national discourse but implemented in local context. Indeed, any exercise aimed at improving the rigor of scholarly practice is worthy: Residents who are guided toward high-quality scholarship will become better consumers of scholarship for their practice.

The rubric has potential to articulate expectations in light of extreme ambiguity and disparity among residents. If it can help residents figure out where they are going, soon, all may be afforded the opportunity to get there.

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