

Use of Short Essays to Address Core Competencies in Medical School Pathology Education

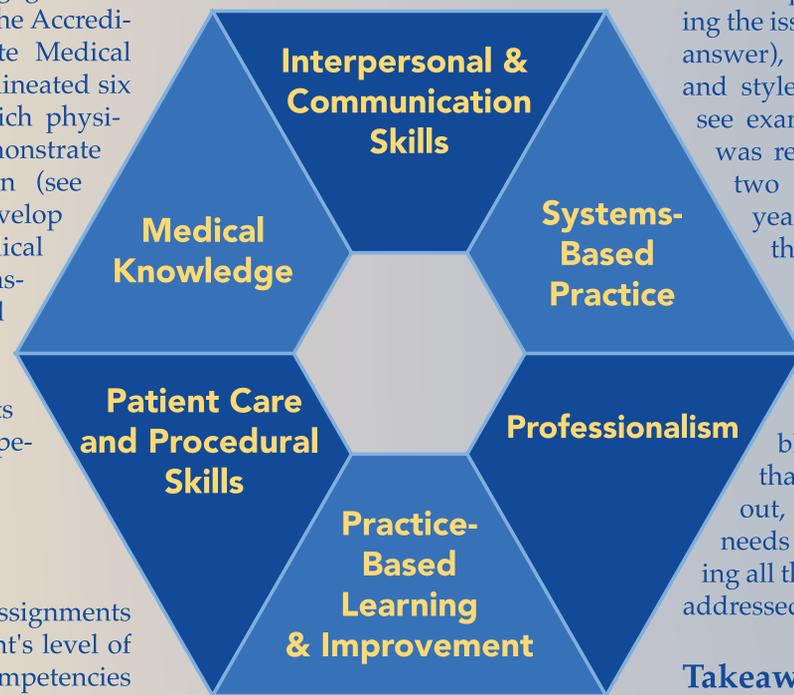
Purpose

The goal of graduate medical education is not just the transference of medical and clinical knowledge, but also the cultivation of successful, engaged, and enlightened professionals. The Accreditation Council for Graduate Medical Education (ACGME) has delineated six “core competencies” in which physicians-in-training must demonstrate understanding and acumen (see Figure). Our goal was to develop a pathology-based medical school narrative writing assignment series, integrated into the PMD 410C-D team-based learning sessions, with the assignments mapped to one or more competency areas.

Findings

Extant narrative writing assignments were assessed for the student's level of engagement with the core competencies of the ACGME and analyzed in a comparative matrix. Additional narrative assignments were developed to address competencies that were underrepresented (e.g., practice-based learning). A “modular” essay matrix was developed, which allowed for rotation of essay prompts based on topics covered, core competencies addressed, and course structure needs. While the competencies addressed in each essay were not explicitly shared with the students, the feedback has been positive, with students recognizing (both in their writing assignments and in course evaluations) the intersectionality of pathology-related medical knowledge and other domains of medical education.

Figure: The six ACGME Core Competencies



Description

Incorporation of the core competencies into an already overfull pathology curriculum is a challenge. Out-of-class short writing assignments have been deployed in team-based learning (TBL) curricula elsewhere, but to our knowledge this is the first such work that has specifically addressed the ACGME Core Competencies in a systematic and comprehensive way. Practice-based learning was one of the core competencies that was under-represented by our short essays. More essays were developed to address this core competency.

Students were asked to complete the writing assignments prior to the associated TBL sessions, and the responses were assessed both for sophistication and complexity of thought in addressing the issues (often with no single right answer), and for clarity of expression and style (grammar, punctuation, etc; see examples at right). Each student was required to respond to at least two of the twelve prompts each year, which accounted for 5% of their final course grade.

By better understanding and mapping competencies to specific prompts, we were able to develop a more flexible “modular” system of essays that could be swapped in and out, depending on the course needs for a given year, while ensuring all the core competencies were still addressed over the course duration.

Takeaways

While pathology education has been typically approached with heavy emphasis on medical knowledge, our work shows that there are opportunities to incorporate all aspects of physician core competencies while increasing student engagement with material and topics. This approach reinforces for students that the traditionally “soft” or “humanistic” parts of medicine are not relegated to special sessions but are instead an integral component to becoming a competent and successful physician, regardless of specialty area. Further, a systematic approach to evaluation of a curricular element can illuminate gaps in learning outcomes and lead to a more adaptable teaching tool.

Cohort 1	TBL 1: Pathology of Acute & Chronic Lung Disease		<p>TBL 2 Upper Gastrointestinal Pathology: A 52-year-old woman complains of vague abdominal pain and undergoes an upper endoscopy, which reveals a diffuse effacement of her rugal folds. Multiple biopsies are taken and submitted to the pathologist along with a requisition form that states “Abdominal pain” for the clinical history. The pathologist then makes a diagnosis of diffuse type gastric adenocarcinoma. As a direct consequence of this diagnosis, the patient is then scheduled for total gastrectomy. As she is being placed under general anesthesia in the operating room, the pathologist receives a phone call from the patient’s oncologist, who asks if there is any chance that the tumor present in patient’s stomach could actually be metastatic lobular carcinoma. It turns out that the patient has a history of widely metastatic lobular carcinoma in multiple different anatomic sites. Because the two tumor types have very similar morphologic appearances, the now very upset pathologist immediately calls into the operating room and asks that the surgery be cancelled while several immunostains are performed on the gastric biopsies to confirm the site of origin. When the immunostains are reviewed the next day, the determination is made that this tumor is indeed metastatic lobular carcinoma rather than gastric carcinoma. As is so often the case in medicine, this is an example of how numerous errors can align to result in a bad outcome (or a narrowly avoided bad outcome). It is essential to analyze errors made in medicine so we can minimize the likelihood that they happen again. What are the errors you can identify in the course of this patient’s care? What could have been done differently by each one of the parties involved?</p>	<p>For sample essay responses, please contact the authors.</p>
	TBL 2: Upper Gastrointestinal Pathology			
	TBL 3: Valvular Disease and Cardiomyopathies			
	TBL 4: Vasculitis			
Cohort 2	TBL 1: Lower Gastrointestinal Pathology		<p>TBL 2 Lung Pathology and Mediastinal Masses: Two patients arrive at the interventional radiology clinic a few hours apart on the same day, each with lung masses requiring imaging-guided biopsy. Both patients have almost identical first and last names. The radiology technician becomes confused because of the similarities in the patient names, and uses the same patient label for all of the specimens obtained from both biopsy procedures on both patients, failing to use one set of patient labels entirely. The error is caught in the pathology laboratory during specimen accessioning, as different sets of biopsies for the same patient do not typically come on the same day, and any such irregularities are confirmed with the submitting doctor’s office. While it would be ideal to simply have the procedures entirely repeated for each patient, this may not be feasible in some settings. What if, for instance, one of the sets of biopsies contains a precious specimen wherein a suspicious lesion was entirely removed and therefore cannot be sampled again? What if one set of biopsies contains cancer, while the other does not? Can you envision any methods by which we could definitively ascertain which set of biopsies belongs to which patient? If so, what are they?</p>	<p>For sample essay responses, please contact the authors.</p>
	TBL 2: Lung Pathology and Mediastinal Masses			
	TBL 3: Myocardial Infarctions and Heart Failure			
	TBL 4: Renal Pathology			
Cohort 3	TBL 1: Medical and Neoplastic Hepatic Pathology		<p>TBL 4 Prostate and Breast Pathology: You are a first-year pathology resident taking your first night of call. You receive a page from a laboratory technician about a mislabeled specimen in which the specimen is labeled with information for Patient Smith, but the accompanying paperwork is for Patient Johnson. The hospital policy is that the pathology resident on call has final say as to whether a mislabeled specimen can be re-labeled and processed or not. Therefore, the pathology resident can reject the specimen or accept the specimen. What do you see as the risks to the patient, his or her health care providers, and the hospital in allowing a mislabeled specimen to be re-labeled and processed? What would be your decision be in the following situations (a-d)? Would you be influenced either way if an attending caring for the patient insisted that you allow the specimen to be processed? Similarly, would you be influenced either way if the individual who procured the specimen seemed very confident or very uncertain in describing how the mix-up had happened? Explain your reasoning.</p> <p>a. A CSF fluid specimen for staging a 2-year-old outpatient with acute leukemia. b. A blood specimen for a CBC on a 43-year-old inpatient with cellulitis. c. A soft tissue biopsy for microbiology culture obtained in the OR on a 19-year-old woman with osteosarcoma. d. A blood specimen for a pre-operative BMP (basic metabolic panel) on a 10-year-old who lives 2 hours from the medical center.</p>	<p>For sample essay responses, please contact the authors.</p>
	TBL 2: Pulmonary Infections			
	TBL 3: Pancreaticobiliary Pathology			
	TBL 4: Prostate and Breast Pathology			