Evaluating Geriatrics In the Medical School Curriculum: Using Student Journals

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"I really enjoy the conversations I have with the elderly as part of the Doctoring course, but my comfort in interacting with them as a health care provider is still low…the more exposure I get to the elderly, however, the less averse the idea of working with older patients becomes…the most significant change in my thinking about the elderly was the acknowledgement of a couple of misconceptions…"

This article discusses the experiences of first-year medical students with older patients in the "Doctoring" course in the fall of 2007, as well as their responses to aging content integrated into the curriculum. We developed an evaluation project to assess the impact of the new curriculum and its aging content. Rather than rely solely on a quantitative survey of pre-post attitude change related to the curricular changes, we elicited students' reflections on the relevance of the geriatrics curriculum to their medical education, their emerging identities as physicians-in-training, and their experiences via entries in weekly journals.

The goals of this journaling project were threefold. First, we hoped to analyze successes and opportunities for improvement within the new geriatrics curriculum. Second, we attempted to gauge students' changing views regarding the prospect of caring for elders. Finally, we aimed to shed light on the "meta-theme" of students' development towards becoming medical professionals. The integration of geriatrics content within the redesigned medical school curriculum has been developed with Donald W. Reynolds Foundation support, now completing the second year of a four-year grant. We recruited eight first-year volunteers in the spring of 2007 to write weekly journal entries on their reactions to and evaluations of aging-related course content and exposure to older patients. We wanted to know: "How have medical students responded to the recent inclusion of geriatrics within the new curriculum at Brown Medical School?"

Our interdisciplinary team adopted a qualitative approach inspired by anthropological field methods and increasingly used in health services research to "code" the journals. These journals also enabled faculty to capture students' responses to curriculum in real time, allowing for mid-course corrections.

Although previous analyses of medical student responses to geriatrics curricula used quantitative surveys, [1] qualitative strategies have gained greater recognition in recent years. The AGS (American Geriatrics Society) competencies guided the development of a coding structure to evaluate medical student responses to a geriatrics curriculum at the University of Cincinnati. [3, 4] Medical students at the University of Missouri-Kansas City paired with elderly "mentors" kept reflective journals limited to this component of the geriatrics curriculum. [2] Web-based geriatrics portfolios developed at the University of Michigan tracked students' mastery of geriatrics curriculum, but did not allow for students' reflections.[5] To the best of our knowledge, our project is the first attempt to qualitatively analyze medical students' responses to a geriatrics curriculum without using a survey instrument or an *a priori* guide to coding responses. We chose to better understand students' range of experiences by asking them to reflect and write about them.

Methods

After obtaining Brown University IRB approval, we asked the MD class of 2010 for volunteers via e-mail. Interested students came to an informational meeting. Prospective participants returned for individual meetings to review and sign the consent document. Students who successfully completed the semester's journal assignments were provided a modest honorarium. Two members of our team conducted all correspondence with journalers throughout the semester. Weekly emails to the participants were sent with journal assignments consisting of two standard questions. (Table 1) During most weeks the team added a third question, tailored to that week's content. For example, in the middle of the Doctoring course, the third question asked students to assess their interviewing skills. (Table 2) Student names were replaced by code numbers. Each week our team correspondents acknowledged receipt of the journals and frequently provided feedback.

Eight student journalers began the project; four students completed the semester. When the semester was over, all journalers, including those who had dropped out, were invited to a "thank you lunch" to gain feedback. Students who had not completed the project were asked their reasons for stopping; most cited competing responsibilities and course work demands. Recruitment of journalers has continued. We have just completed two more semesters of journaling in which both first and second-year medical students participated, and we expanded the journaling project to the clerkship years in 2008-2009.

Coding committee and process

All journals were first reviewed by the two team members who ensured that names and identifying information

Table 1. Standard Journal Questions

1. What are your experiences, reactions, and insights related to the geriatrics content you have received in your medical school courses?
2. What are your experiences, reactions, and insights regarding the older patients (> or = 65) you have encountered in your community mentoring through the Doctoring course? (This includes standardized patients.) You may also report on encounters you may have with the elderly in other settings. You may wish to compare your experiences with older patients to experiences with younger patients.

of students and others named in the reports were eliminated. Journals were transformed into a standard format and distributed to our interdisciplinary analysis team (a health services researcher, gerontologist, medical anthropologist, and two geriatrics-trained physicians). The team members read the journals numerous times to develop an analytic "coding structure," i.e., a list of relevant and common thematic elements.[6] The initial coding structure emerged from preliminary readings of journal transcripts between fall 2007 and spring 2008, and was based largely on a division between didactic (i.e., students' coursework) and experiential (i.e., clinical contacts with older patients) content. Codes also identified topics, such as students' social and cultural backgrounds, their perspectives on ageism, and their views regarding the care of geriatric patients. Weekly team meetings involved a line-by-line review of the coded transcripts to discuss each team member's rationale for assigning a given code to specific material. As the team progressed through the journals, the coding structure was revised and refined. During this process, the team gained familiarity with the narrative material and developed consensus about code definitions. Throughout this process, a detailed "audit trail" documented team decisions, alterations in codes, and emerging themes.

The development of a coding structure to identify themes arose in a manner similar to that described by Weston et al. for the analysis of qualitative data. Weston stressed three main principles for the analysis of qualitative data:

1. "Coding is not what happens before the analysis, but comes to constitute an important part of the analysis. There is a reciprocal relationship between the development of a coding system and the understanding of a phenomenon.
2. A team builds codes and coding builds a team through the creation of shared interpretation and understanding of the phenomenon being studied.
3. Collaboration in qualitative research requires a kind of rigor that a lone or independent researcher might not be aware of or need." [6]

In keeping with Weston's principles, themes and subthemes generated from the conceptual framework of our initial coding structure were revised during each meeting. Both the initial coding structure and the identification of new themes required consensus among the group. Finally, the interdisciplinary nature of our team fostered vigorous discussion and led to rigorous development of codes and themes.

Table 2. Additional (Third) Journal Questions

Wk 1:	3rd question not asked
Wk 2:	Do you see a clinical application of course content this week, especially as it might pertain to older people?
Wk 3:	What has been most surprising or unexpected about what you've learned regarding dementia or memory loss?
Wk 4:	How might stereotypes you hold influence your care of older patients?
Wk 5:	How might aspects of culture (your own and that of the older patients you see) affect how you interact with them?
Wk 6:	Do you see particular challenges and/or opportunities in counseling older persons on psychiatric issues?
Wk 7:	Write about how alcohol and/or drug abuse might pose different issues for an older person and/or for the clinician treating him or her.
Wk 8:	In assessing your interviewing skills at this point, are you noticing any particular challenges or satisfactions in interviewing older as compared to younger patients?
Wk 9:	What are your thoughts about the hospital experience for older patients?
Wk 10:	Please discuss special concerns older patients might have with diabetes.
Wk 11:	How did the epidemiology/quantitative reasoning course content help you to understand aging populations?
Wk 12:	Please reflect on how your interviewing skills improved over this year and how your approach to older patients may be different than that with younger patients.
Wk 13:	Looking back over your experience in the community last year, what observations or insights have you developed regarding the care of older persons?
and	Please describe whether and/or how the course content in MedMicroID may have particular relevance to older persons compared to younger persons.
Wk 14:	Please write about how your exposure to older patients over this academic year may have changed your level of interest in working with older patients in the future.
Wk 15:	Thinking back to the beginning of the year, please write about any new insights you've had about older patients that you might not have predicted then. For instance, do you look at older people differently now? If so, how?

STUDENTS' RESPONSES TO THE GERIATRICS CURRICULUM

The overall goals of this medical student journaling project were threefold. First, we hoped to analyze successes and opportunities for improvement within the new geriatrics curriculum by gauging students' responses. This analysis led to mid-course corrections, e.g., discussion with the relevant course directors to streamline and better integrate the delivery of geriatrics content during didactic sessions. Student suggestions for additional content were also noted:

> *"I would have liked to hear about how anxiety manifests in older patients. Perhaps there are different concerns that older patients have. Also, I would have liked to hear about how receptive older patients are to psychotherapy and cognitive behavior therapy."*

Based on positive comments, the anatomy lab "treasure hunt," in which experienced geriatrician faculty members used cadavers to demonstrate findings unique to geriatrics patients, was expanded in the project's second year. Particular successes within the first-year didactic curriculum, such as the inclusion of geriatric patient guest lecturers and patient videos, were noted with enthusiasm. One student put it this way:

> "*But with a simple procedure that was done, we saw this woman walk briskly in weeks, without a walker and without assistance. We cannot doubt the power of the elderly to recover.*"

The second goal was to gauge students' responses to the prospect of caring for elders. Students wrote eloquently about stereotypes (e.g., ageism), challenges in caring for the elderly (e.g., multiple comorbidities, polypharmacy, and complex psychosocial situations), gratifying aspects of geriatrics (e.g., learning about older patients' fascinating life stories), and the relevance of their own individual and cultural backgrounds to caring for the elderly. One student wrote:

> "*Care for the elderly is a crucial part of my culture, as we view the elderly not only as sources of wisdom and experience, but also our living legacy; we exist in many ways because of them, and because of this it is our obligation to care for them."*

Students often expressed surprise at their lack of awareness:

> *"What really didn't occur to me before this year was striving for healthy aging. I had encountered older patients, but it was always in the hospital setting. I didn't know that there was assisted living. Perhaps because my family believes that older people need to be taken care of by their children, I had never thought that independence could be a positive attribute for an older person."*

Another student noted:

> "*Outside of the geriatric content, we seem to study perfect systems. This integration provides a good opportunity to appreciate the inevitable complexities of all our patients—young and old."*

Third, we examined the "metatheme" of students' development towards becoming medical professionals. Part of this development involves an appreciation of the challenges and uncertainties inherent in patient care, especially in geriatrics. Where students sometimes commented on the complexity of care for older patients, they also recognized that complexity was a part of the practice of medicine. One student wrote:

> *I feel that…the most important 'take-home message' for me is that it's a person that I am treating, not a medical chart or series of symptoms."*

Students' responses to journaling

In addition to the journals, feedback from students at the "thank you lunch" provided additional perspectives. Students liked the regular chance to reflect on the week's studies and clinical encounters; they enjoyed writing as a contrasting relief to memorization and science. Students took seriously their contributions to the improvement of the curriculum. They witnessed the curriculum changing and understood that they had a hand in its evolution. One of the journalers subsequently expressed a view that we heard from others:

> *"…though on busy weeks [journaling] is an extra thing to do, it was also nice to have a reason to do some reflective thinking and writing."*

The few negative perceptions from students included running out of new things to say, feeling too pressured by coursework to spend time writing, and feeling constrained by the questions asked.

Overall, the excitement and apprehension of these students about entering the medical profession comes through in the journals, even among those students who were not interested in geriatric medicine as a career. It is hoped that this type of self-reflection, as exemplified by the following journal excerpt, contributes to the development of the medical student journalers as emerging medical professionals:

> *"I hate that my grandmother's last hospital visit was characterized by doctors who didn't listen…this introspective process has helped me to see the real importance of communication and understanding. I hope the geriatric integration helps Brown produce the type of physicians that I would want caring for my grandmother."*

Implications

Implications for Medical Students

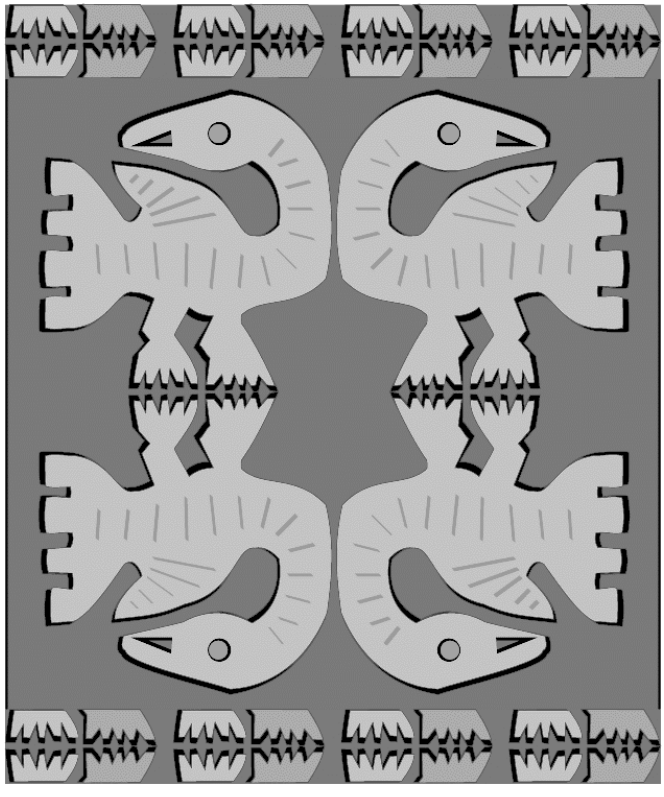
What are some of the preliminary lessons learned from this medical student journaling project? First, qualitative research methods offer insights which are difficult or impossible to obtain using quantitative strategies.[8] For example, students reflected thoughtfully about the contribution of the geriatrics curriculum to their medical education. For many students, even those entering pediatrics, exposure to geriatrics was felt to have honed their interviewing skills and increased their comfort in caring for complicated, frail patients. For students contemplating careers involving geriatric patients (e.g., primary care and surgical specialties), this early exposure to geriatrics generated recognition of its crucial importance to high-quality patient care. For students considering geriatrics as a career, integration of geriatrics appeared to increase their interest.

Implications for faculty

The preliminary lessons learned for faculty and community mentors are compelling. Courses with an uneven or ineffective approach to integrating geriatrics into the curriculum were identified so that adjustments could be made. Students generated ethical questions about the intensity of medical care (especially at the end of life) and resource allocation, even when not specifically asked to comment on these weighty issues. This focus suggests that increased attention to such ethical themes may be warranted. Students also seemed to arrive at the independent conclusion that, while not ev-

ery medical student will graduate as a geriatrician, a basic knowledge of geriatrics is essential in almost any medical discipline. Finally, students appreciated the opportunity to participate in the journaling process: they were stakeholders in the geriatrics curriculum.

Overall, the message from students was: "Give us geriatrics content, as long as it is well-integrated and allows time for thoughtful discussion." At the very least, even among those students without an interest in geriatrics, the habit of thoughtful interviewing accompanied by attentive listening during the patient encounter and active reflection after the patient encounter will serve them well. This evaluation journaling project is an example of a valuable research tool to inform the education of and clinical impact on medical students. This ongoing effort to qualitatively assess insights from medical student journalers, even as they enter their clerkship years, will continue to inform the integration of geriatrics content within the Warren Alpert Medical School curriculum.



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Disclosure of Financial Interests

All authors. Grant Support: Donald W. Reynolds Foundation.

Aman Nanda, MD. Grant Support: Amgen. Consultant: Forrest Pharmaceuticals.

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