INNOVATIONS IN EDUCATION AND CLINICAL PRACTICE

Ambulatory Morning Report

Can It Prepare Residents for the American Board of Internal Medicine Examination?

Suzanne Wenderoth, MD, Fred Pelzman, MD, Byron Demopoulos, MD

We assessed the ability of a novel ambulatory morning report format to expose internal medicine residents to the breadth of topics covered by the American Board of Internal Medicine (ABIM) exam. Cases were selected by the Ambulatory Assistant Chief Residents and recorded in a logbook to limit duplication. We conducted a retrospective review of 406 cases discussed from July 1998 to July 2000 and cataloged each according to the primary content area. The percentage of cases in each area accurately reflected that covered by the ABIM exam, with little redundancy or over-selection of esoteric diseases. Our data suggest that a general medicine clinic is capable of exposing house staff to the wide breadth of internal medicine topics previously thought to be unique to subspecialty clinics.

KEY WORDS: postgraduate education; ambulatory care; internal medicine residency; morning report.
J GEN INTERN MED 2002;17:207-209.

Morning report is one of the most ubiquitous and educationally useful conferences employed by internal medicine training programs, but it is being adapted to the outpatient setting with mixed success.¹⁻³ Critics argue that case selection is arbitrary, focusing on rare or uncommon presentations of diseases.⁴⁻⁶ This is a significant problem, because the ABIM examination cites as its goals "to assure competence in the diagnosis and treatment of common conditions" and "to assure excellence in a broad domain of internal medicine."⁷ House staff surveys indicate a preference for chief residents to preside over the conference, and rank evaluation of resident performance by program directors as the least important goal of the seminar.^{1,8} Despite this, chairmen, chiefs of medicine, and subspecialist faculty routinely lead morning report at many institutions.^{1,3,8} This conference format has been blamed for the patchy case selection, relying on a "sponge model" in which residents are passive recipients of didactic

lectures based on anecdotal evidence rather than of a more problem-based learning approach in which medical literature is used as the foundation.^{6,9} The presence of division chiefs, chairmen, and subspecialty faculty may also have an insidious effect on the breadth of cases chosen for discussion.

At the New York Presbyterian Hospital-Weill Cornell Medical, we adapted a morning report to the ambulatory setting to address these concerns. The purpose of the current study is to retrospectively assess the ability of 1 morning report format to expose residents to the breadth of general as well as subspecialty topics covered by the ABIM exam.

METHODS

Our institution teaches outpatient medicine to 135 house staff through a weekly afternoon continuity clinic and a series of ambulatory block rotations, totaling 12 months for primary care residents and 6 months for categorical residents. The organization of the morning report is described elsewhere.¹⁰ The conference is facilitated by the Ambulatory Assistant Chief Resident, one of a rotating group of senior residents who serve in this capacity for 2 to 3 months. Their responsibilities include: surveying house staff cases, selecting suitable ones for presentation, reviewing relevant literature, and leading the discussions. Cases discussed are recorded in a logbook to enhance selection of a wide array of topics while avoiding duplication. General internal medicine faculty are routinely present while chairmen, division chiefs, and subspecialty faculty attend only rarely.

To determine the scope and depth of the curriculum, we conducted a retrospective review of cases discussed from July 1998 to July 2000. Cases recorded in the logbook were cataloged according to the primary content area covered, and the percentages were compared to those covered by the American Board of Internal Medicine (ABIM) examination. Most fit clearly into a single category, but occasional overlap occurred. For example, a discussion of pneumonia might have been classified as either infectious or pulmonary disease. We selected the common ambulatory medicine text used most frequently by our house staff to serve as a reference for assigning categories.¹¹

Received from the Department of Medicine, Weill Medical College of Cornell University, New York, NY.

Address correspondence and requests for reprints to Dr. Wenderoth: Cornell Internal Medicine Associates, Weill Medical College of Cornell University, 505 East 70th St., HT-4, New York, NY 10021 (e-mail: swendero@med.cornell.edu).

RESULTS

Prior survey data indicate a high level of satisfaction with the methods of case selection and with the leadership role of residents in facilitating interactive discussions; this data has been published elsewhere.¹⁰ The results of our current study assessing the breadth of topics selected are presented in Table 1. Over the 24-month period, 30 conferences were cancelled due to holidays or institutional scheduling conflicts and 56 were filled with other educational activities such as seminars on computer-based literature searching techniques. In the remaining 256 days, 406 cases were discussed in depth, averaging 1.6 per day.

DISCUSSION

While only 1 or 2 cases were presented at each morning report, the curriculum covered all major categories listed in the standard text, mimicked remarkably well the proportions represented by the ABIM exam, and some additional topics as well. Prior survey data indicate that residents prefer to discuss a few cases in depth, and other authors who have found declining case number in their morning reports attribute this trend to increased didactic content.^{1,6,8} If fewer cases are to be discussed each day, the variety must necessarily increase. It is an impressive feature of the general medicine clinic to be able to supply such a variety of cases capable of bridging information from so many subspecialty domains. We are unaware of any other studies that catalog the subspecialty content of a general medicine clinic's morning report.

The senior resident's use of a logbook appeared to effectively prevent redundancy of cases and over-selection of esoteric ones. Within Endocrinology alone, we covered aspects of diabetes and thyroid disease twice as often as all other endocrine diseases combined, reflecting the frequency seen in outpatient practice. This is relevant

because 45% of residents surveyed in university-based training programs indicated that they planned to pursue a generalist career.⁸ While residents say they prefer discussing common medical conditions, 1 study reported that 4 of the 7 most common clinical diagnoses were never presented at morning report.^{1,5} The 12.5% of cases labeled "miscellaneous" reflects an expanded curriculum including alternative medicine, newly released medications, and geographic-specific topics that escape standard textbooks, such as West Nile Virus and the new Lyme Disease vaccine.

Our study has a number of limitations. Cross-content areas of the tabulated data can not be addressed well. The "pulmonary" category appeared to be covered far less often than required by the ABIM examination, but this was a function of the case assignment method. Most cases in this topic area focused on pneumonia, bronchitis, and tuberculosis and were thus categorized as "infectious disease." The hematology/oncology areas were also under-represented. This may reflect the fact that malignancy diagnosis and management remains fairly uncommon in most general medicine clinics and is emphasized heavily during the inpatient experience at our institution.³ Further, we used, for convenience, the most common ambulatory text in our clinic to aid in categorizing cross-content areas, but this is an unvalidated tool. Additionally, our data spans 2 years of morning reports while each resident only has 6 to 12 months of ambulatory exposure over a 3-year period. We do not have prospective data on individual residents' topic exposures; we assume individual exposures would roughly approximate our tabulated cumulative data. While we have amassed prior survey data validating our teaching format, the current study assesses only the breadth of case selection and compares it to the content of the ABIM exam. We do not report on ABIM passage rates because many inpatient rotations clearly affect these rates, and the ambulatory morning report constitutes only a small portion of the cumulative education during residency.

Our teaching residents did not intentionally pick cases to mimic the ABIM exam content; the close correlation between the exam's content and our morning report format was only realized when the data were examined retrospectively. We conclude that an urban general medicine clinic may serve as a valuable resource for exposing residents to numerous subspecialty domains and that the use of dedicated ambulatory teaching residents is an appropriate mechanism to facilitate such broad case selection in a morning report curriculum. Training programs could use a breakdown of ABIM questions as a template for choosing cases to discuss in morning report, and our data suggest that a general medicine clinic would lend itself ideally to such a strategy.

REFERENCES

1. Ways M, Kroenke K, Umali J, Buchwald D. Morning report. A survey of resident attitudes. *Arch Intern Med*. 1995;155:1433-7.

Table 1. Categories of Ambulatory Medicine Topics and Content of ABIM Exam

Ambulatory Medicine Topics	Cases, n (%)	% ABIM
Cardiovascular disease	52 (12.8)	14
Gastroenterology	49 (12)	10
Pulmonary disease	19 (4.6)	10
Infectious disease	50 (12.3)	9
Rheumatology/orthopedics	31 (7.6)	8
Endocrinology/metabolism	37 (9.1)	7
Oncology	18 (4.4)	7
Nephrology/urology	21 (5.2)	6
Hematology	17 (4.1)	6
Allergy/immunology	9 (2.2)	5
Neurology	12 (3)	4
Psychiatry	18 (4.4)	4
Dermatology	9 (2.2)	3
Miscellaneous	51 (12.5)	2
Obstetrics/gynecology	7 (1.7)	2
Ophthalmology	6 (1.5)	2

2. Spickard A, Hales JB, Ellis S. Outpatient morning report: a new educational venue. *Acad Med*. 2000;75:197.
3. Malone MM, Jackson TC. Educational characteristics of ambulatory morning report. *J Gen Intern Med*. 1993;8:512-4.
4. Barbour GL, Young MN. Morning report: role of the clinical librarian. *JAMA*. 1986;255:1921-2.
5. Ramratnam B, Kelly G, Mega A, Tikemeier P, Schiffman FJ. Determinants of case selection at morning report. *J Gen Intern Med*. 1997;12:263-6.
6. Parrino TA, Villaneuva AG. The principles and practices of morning report. *JAMA*. 1986;256:730-3.
7. American Board of Internal Medicine. Information Booklet for the Certification Examination in Internal Medicine 1999-2000. Philadelphia, Pa: American Board of Internal Medicine; 1999.
8. Gross CP, Donnelly GB, Reisman AB, Sepkowitz KA, Callahan MA. Resident expectations of morning report: a multi-institutional study. *Arch Intern Med*. 1999;159:1910-4.
9. Pupa LE, Carpenter JL. Morning report: a successful format. *Arch Intern Med*. 1985;145:897-9.
10. Demopoulos B, Pelzman F, Wenderoth S. Ambulatory morning report: an underutilized educational modality. *Teach Learn Med*. 2001;13:49-52.
11. Barker LR, Burton JR, Zieve PD. Principles and Practices of Ambulatory Medicine, 5th Ed. Baltimore, Md: Williams and Wilkins; 1999.