Resident Expectations of Morning Report

A Multi-institutional Study

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Background: Morning report, a cornerstone of internal medicine residency programs for many years, involves a diverse group of teachers and learners with heterogeneous learning goals.

Methods: We distributed a self-administered, cross-sectional survey to internal medicine residents to clarify the objectives of the learners at morning report. We selected a convenience sample of internal medicine residents at community- and university-based programs. Questions were answered in a Likert scale or multiple-choice format.

Results: Residents from 13 residency programs in 7 states participated. We received 356 completed surveys, which represented a 63% response rate. The house staff in our sample preferred that half of the guest attending physicians be generalists. They indicated that the primary function of morning report should be educational, and preferred to discuss the management of a few interesting cases rather than review all patients admitted the previous day. The majority of respondents (60.8%) favored a stepwise presentation of cases to simulate the chronology of receiving information. Disease process, diagnostic workup, and evaluation of tests and procedures were all considered important topics for discussion, while medical ethics and research methods were viewed as less important. Responses varied little when stratified by sex, postgraduate year, type of residency program, subspecialty fellowship plans, or location of medical school.

Conclusions: Residents from a diverse group of programs expressed remarkably similar opinions about morning report. Consistent with the recently increased emphasis on ambulatory care and general internal medicine in residency training, they expressed a desire for about 50% of the guest attending physicians to be generalists. In addition, they preferred a style in which challenging cases were presented in a stepwise manner.

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PARTICIPANTS, MATERIALS, AND METHODS

PARTICIPANTS

We performed a cross-sectional survey of IM residents using a convenience sample of residency programs. The convenience sample was selected to ensure an equal proportion of university- and community-based programs. A letter was sent to the department chairperson and/or program director at each institution requesting permission to survey the house staff. In March 1997, anonymous, self-administered surveys were distributed to the second- and third-year residents by each program's chief resident(s) and returned to them in sealed envelopes. Chief residents were specifically instructed to avoid discussing the content of the survey with their residents. Individual responses were kept confidential. We defined programs as either university or community based; the former programs were based in a medical school's primary teaching hospital.

SURVEY CONTENT

The 23-item survey was developed with the assistance of a pilot study and 2 focus groups. Several questions were presented in a multiple-choice or fill-in style. Most were answered on a 5-point scale (ranging from least to most important). The instrument was divided into multiple domains, including purpose, teaching methods, content, and teacher characteristics. Respondents were also asked about their medical journal reading habits, fellowship plans, and demographic characteristics.

STATISTICAL ANALYSIS

A software package (STATA, version 5.0; STATA Corp, College Station, Tex) was used for data analysis. Responses to fill-in questions were summarized as means and proportions. Responses on a 5-point scale were dichotomized, and logistic regression was used for analysis of dichotomous outcome variables. Subgroup analysis was performed to investigate possible differences between the following groups of respondents: men vs women, US vs foreign medical school graduates, primary care-oriented vs fellowship-bound residents, and community- vs university-based programs. Fisher exact test was used for comparisons on 2 × 2 tables.

RESULTS

Thirteen IM residency programs in 7 states participated (15 programs were approached; 2 declined to participate). We received 356 surveys from second- and third-year residents, which represented a 63% response rate. The mean number of respondents per program was 27. The mean age of the respondents was 29 years, and 61.7% were men (Table). There was no significant difference between respondents and nonrespondents for sex (P = .93) or year of residency (P = .77). Seven of the programs were community based, and the remainder were university based. There was no significant difference in fellowship plans between residents at community- and university-based programs (44.4% and 54.8% planned to complete a fellowship, respectively; P = .07, Fisher exact test).

WHAT IS THE PURPOSE OF MORNING REPORT?

Respondents were asked to rate a list of goals for the overall purpose of morning report on a 5-point scale, with 5 being most important. Conveying medical knowledge was rated as the most important purpose of morning report (mean rating, 4.79; 95% confidence interval, 4.73-4.84), followed by promoting camaraderie (mean rating, 3.66; 95% confidence interval, 3.55-3.78), inspiring clinical research (mean rating, 3.34; 95% confidence interval, 3.22-3.47), and evaluating house staff performance (mean rating, 2.89; 95% confidence interval, 2.76-3.03). Trends were similar after stratifying by program. Conveying medical knowledge, for example, was ranked highest by residents in all 13 programs, while evaluating performance received the lowest ranking by residents in 10 of 13 programs.

WHO SHOULD DIRECT MORNING REPORT?

Of the respondents, 48% stated that morning report should be directed by the chief resident, 42% preferred a guest attending physician, and the remaining 10% indicated a preference of the department chair, program director, or a house officer.

Respondents indicated the proportion of the time that they preferred the guest attending physician to be a medical subspecialist, as represented by the gray bars in Figure 1. Overall, respondents wanted their guest attend-

<table>
<thead>
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<th>Characteristic</th>
<th>Variable*</th>
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<tbody>
<tr>
<td>Age, mean ± SD, y</td>
<td>29 ± 3</td>
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<tr>
<td>Sex</td>
<td>Male 206 (61.7)</td>
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<tr>
<td></td>
<td>Female 129 (38.3)</td>
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<td></td>
<td>Outside the United States 89 (26.3)</td>
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<td>Residency program</td>
<td>Community based 111 (31.6)</td>
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<tr>
<td></td>
<td>University based 240 (68.4)</td>
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<td>Intention to complete a subspecialty fellowship</td>
<td>Yes 172 (52.4)</td>
</tr>
<tr>
<td></td>
<td>No 156 (47.6)</td>
</tr>
<tr>
<td>No. of respondents per residency program, mean ± SD</td>
<td>27 ± 15</td>
</tr>
</tbody>
</table>

*Data are given as number (percentage) unless otherwise indicated. Percentages are given based on the respondents for the specific characteristic, not based on the total.
ing physicians to be specialists 49% of the time, with little variation across programs. The proportion of guest attending physicians at each program’s morning report who were medical subspecialists was also reported (Figure 1, black bars). There is marked variability; about half of the programs had subspecialists for most of their conferences, and the remainder had subspecialists 50% of the time or less. Thus, the programs that had a specialist about half the time were closely matched with the expectations of their house staff. There was no significant difference in the preferences of respondents who planned on doing a subspecialty fellowship and those who did not ($P = .25$). One program did not regularly have guest attending physicians and was excluded from this portion of the analysis.

**WHAT TEACHING METHODS ARE PREFERRED?**

The 2 most important methods (Figure 2) were the distribution of journal articles and the discussion of the management of challenging cases on the service. Responses varied little between residents at different programs. The least favored technique was reviewing all admissions from the previous night, which received the lowest mean score in each of the 13 programs.

When asked how cases should be presented, most respondents (60.8%) favored a stepwise presentation to simulate the chronology of receiving information. Less popular styles included presenting complete case histories before discussion (15.9%) and “bullets,” which were described as concise presentations including assessment and management plans (23.3%).

**WHAT CONTENT SHOULD BE DISCUSSED?**

Residents preferred to discuss the diagnostic evaluation of specific syndromes, disease pathophysiological characteristics, and the evaluation of tests and procedures (Figure 3). There were no significant differences in responses between residents at academic and community-based residency programs, or between residents planning subspecialty fellowships and those planning primary care careers.

**WHAT HAPPENS TO JOURNAL ARTICLES DISTRIBUTED AT MORNING REPORT?**

Respondents were asked what proportion of journal articles distributed at morning report they kept, and what proportion they actually read. They indicated that they kept an average of 74% of the articles, while actually reading 45%. There were no significant differences in reported reading habits across different subgroups (ie, residents in community- vs university-based programs [$P = .34$] or intention to complete a subspecialty fellowship vs intention to practice general IM [$P = .56$]).

**SHOULD MEDICAL STUDENTS OR INTERNS BE ALLOWED TO ATTEND?**

Of the respondents, 69.7% said that they would allow interns to be present at morning report, and 56.5% would allow medical students to attend.

**COMMENT**

Residents’ opinions should not be the sole criteria for evaluating the style and substance of morning report. Leaders of residency programs are responsible for monitoring patient care and ensuring that house staff are exposed to a broad curriculum. In addition, further research is needed to investigate the relation between teaching style and actual learning.

However, it is imperative to include input from house staff to optimize the quality of their educational experi-

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*Figure 1.* The actual and desired proportion of guest attending physicians who were medical subspecialists. The asterisk indicates $P < .05$ for actual vs desired.

*Figure 2.* Teaching methods.

*Figure 3.* The content of morning report.
ence. Recent developments in education have placed greater emphasis on assessing the needs of adult learners. \textsuperscript{13-16} Since most residents consider morning report to be an extremely important part of their training, they should be encouraged to evaluate its content and structure. \textsuperscript{7,14,17} It was our goal to study house staff from different programs to identify common themes. Despite the fact that our sample contained residents from various backgrounds, they expressed views about morning report that were remarkably similar.

A recent report\textsuperscript{18} by the Federated Council for Internal Medicine recommended an increased emphasis on ambulatory care for medical residents, with a focus on topics relevant to the general internist. The council’s “Resource Guide to Curriculum Development” concluded by stating that “... a substantial proportion of residents will eventually practice general internal medicine. The residency curriculum should prepare them for this role.” \textsuperscript{18} A substantial proportion of the residents in our sample (48%) were, in fact, intending to pursue a career in general IM. Even at the university-based residency programs, which are often more oriented to specialty medicine and tertiary care, 45.2% of the respondents planned a generalist career.

An important aspect of training residents to be generalists is to expose them to role models who are general internists. \textsuperscript{13-21} Morning report, which allows house staff and attending physicians to interact in an intellectually stimulating and comfortable environment, is an important setting in which residents encounter potential role models. At some of the institutions in our sample, however, general internists were rarely guest attending physicians. Across all institutions, respondents in our study preferred roughly a 50:50 mix of general internist and subspecialty guest attending physicians. In a conference traditionally dominated by specialists, residents in our study recognized the value of learning about IM from the generalist’s perspective, which may include a greater emphasis on longitudinal care and preventive medicine. \textsuperscript{18} Morning report, in other words, should not be the sole domain of the specialist.

Another important trend in education is an increased focus on active learning. \textsuperscript{15} By participating actively, students develop their ability to “think on their feet” and solve problems. \textsuperscript{24-26} In contrast to core curriculum lectures, in which learning is generally passive, morning report can provide a forum for active learning through group discussions about interesting cases, diagnostic and management dilemmas, and other relevant issues.

The presentation of cases in a “real time” style may facilitate active learning. This allows discussion of diagnostic reasoning as each new piece of information is revealed. After reviewing their thought processes based on the available information, participants are then asked to identify additional data that they would find helpful. In this way, hypotheses are generated and tested in an iterative manner. The residents are involved in a more realistic reconstruction of the dilemmas facing the admitting team and can be encouraged to discuss how they would have managed the case. It has been postulated that this approach not only makes discussions more interesting but also fosters clinical problem-solving skills.\textsuperscript{12,27,28} Our survey provides the first confirmation that medical residents prefer this type of learning; more than 60% preferred this method for case discussion.

Residents at every program in our sample rated the diagnostic evaluation of specific syndromes and understanding disease pathophysiological characteristics as the 2 most important topics in morning report. Medical ethics and research methods were rated quite low, yet these are crucial components in the education of any physician. Future research should address how these important topics might be incorporated into morning report in a more productive and acceptable manner. We were also surprised that our respondents did not consider bedside teaching to be an important teaching method. This was particularly discouraging, considering that previous studies\textsuperscript{20-33} have demonstrated significant deficiencies in the physical examination skills of physicians in training. Additional work is required to understand why house staff expressed such a low opinion of trips to the bedside. The residents may not have been familiar with incorporating bedside trips into morning report, or perhaps they believed that bedside teaching in other settings was adequate.

Medical education was perceived to be the primary purpose of morning report, a finding consistent with previous studies.\textsuperscript{3,34} The residents in our sample indicated that they did not want their performance evaluated during the conference, and they did not want to review every admission to the service. The environment of morning report tends to be less judgmental than attending rounds; this may improve learning and retention.\textsuperscript{13} Certainly, residents’ spectrum of knowledge and the clinical care they provide must be evaluated throughout their training. The question is whether morning report is the optimal setting for this evaluation. A 1983 survey of 124 residency programs indicated that the quality of medical care was evaluated to some degree in more than 90% of the departments’ morning reports.\textsuperscript{3} However, 60% of the respondents indicated that attending (ward) rounds were the most important setting for the assessment of patient care, and only 12% believed morning report to be the best setting.\textsuperscript{1} Previous work\textsuperscript{35-40} has established that evaluation of clinical competence and subsequent feedback are performed more effectively by an attending physician who has seen the patients personally.

Our study had several limitations. We surveyed a convenience sample of geographically diverse programs that were university and community based. Programs in the New York area were overrepresented, and it is possible that practices and expectations concerning morning report are different in other regions. In addition, surveys were distributed by proxy; chief residents may have used different techniques to ensure participation. Finally, our survey focused only on the traditional inpatient morning report. Some programs have considered adding a complementary outpatient morning report for residents who are participating in an ambulatory care rotation.\textsuperscript{41} However, most residents still spend far more time on inpatient rotations, and many programs
may not have the resources to devote to an additional conference.42

In summary, this study of residents' opinions emphasizes the importance of morning report as a "teaching" conference rather than a "work" conference. Residents from various IM training programs had similar expectations for teaching content, methods, style of case presentation, and preference for guest attending physicians. Most residents preferred that cases be presented in a stepwise manner, a style that reinforces the importance of iterative hypothesis testing. As IM residency training is evolving to prepare interns in the 21st century, future research on postgraduate medical education should evaluate the efficacy of our teaching methods. Obtaining input from house staff will be helpful in making morning report a more relevant and stimulating conference.

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REFERENCES