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Intrateam Coverage Is Common, Intrateam Handoffs Are Not

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We have traditionally viewed continuity of care with a particular intern as important for high-quality inpatient care, but this continuity is difficult to achieve. As we move to a model of team rather than individual continuity, information transfers between team members become critical.

When discontinuity between the primary team and a cross-covering team occurs, this informational continuity is managed through formal handoffs.[1] Accordingly, there has been ample research on handoffs between different teams,[2–5] but there has been little published literature to date to describe handoffs between members of the same team. Therefore, we set out (1) to learn how interns view intrateam handoffs and (2) to identify intern-perceived problems with intrateam handoffs.

MATERIALS AND METHODS

This was a cross-sectional survey study done at a 500-bed academic medical center affiliated with a large internal medicine residency program. The survey was developed by the study team and reviewed for content and clarity by our chief residents and by 2 nationally known medical educators outside our institution. Study participants were internal medicine interns. Interns in this program rotate through 3 hospitals and do 7 to 8 ward months. The call schedules are different at each site (see Supporting Information, Appendix A, in the online version of this article). Opportunities for intrateam coverage of 1 intern by another include clinics (1/week), days off (1/week), some overnight periods, and occasional educational conferences. When possible, daily attending rounds include the entire team, but due to clinics, conferences, and days off, it is rare that the entire team is present. Bedside rounds are done at the discretion of the attending. The survey (see Supporting Information, Appendix B, in the online version of this article) included questions regarding situations when the respondent was covering his or her cointern's patients (*cointern* was defined as another intern on the respondent's same inpatient ward team). We also asked about situations when a cointern was covering the respondent's patients. For those questions, we considered answers of >60% to be a majority. We distributed this anonymous survey on 2 dates (January 2012 and March 2012) during regularly scheduled conferences. We mainly report descriptive findings. We also compared the percentage of study participants reporting problems when covering cointerns' patients to the percentage of study participants reporting problems when cointerns covered their (study participants') patients using χ^2, with significance set at $P < 0.05$. This study was designated as exempt by the institutional review board.

RESULTS

Thirty-four interns completed the survey out of a total of 44 interns present at the conferences (response rate = 77%). There were 46 interns in the program, including categorical, medicine-pediatrics, and preliminary interns. The mean age was 28 (standard deviation 2.8). Two-thirds of respondents were female, and 65% were categorical.

Difference Between Intra- and Interteam Handoffs

Eighty-eight percent felt that a handoff to a cointern was different than a handoff to an overnight cross-cover intern; many interns said they assumed their cointerns had at least some knowledge of their patients, and therefore put less time and detail into their handoffs. When covering for their cointern, 47% reported feeling the same amount of responsibility as for their own patients, whereas 38% of interns reported feeling much or somewhat less responsible for their cointerns' patients and the remainder (15%) felt somewhat or much more responsible.

Knowledge of Cointern's Patients

Most (65%) interns reported at least 3 days in their last inpatient ward month when they covered a cointern's patient that had not been formally handed off to them. Forty-five percent of respondents reported seldom or never receiving a written sign-out on their cointern's patients.

Respondents were asked to think about times before they had covered their cointern's patients. Sixty-eight percent of respondents reported knowing the number 1 problem for the majority of their cointern's patients.

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TABLE 1. Percentage of Interns Reporting Problems With Cross-Coverage by Their Cointern or While They Were Covering for Their Cointern

	What Problems Have You Noticed...	
	While Respondent Covers a Cointern's Patient?	After Respondent's Patients Were Covered by Cointern?
Missed labs	18%	33%
Missed consult recommendations	21%	30%
Missed exam changes	42%	27%
Forgot to follow-up imaging	27%	30%
Forgot to order labs or imaging	42%*	70%*
Failure to adjust meds	27%	27%
Unexpected family meeting/phone calls	61%*	30%*
Did not understand the plan from cointern's notes	45%	27%

*$P < 0.05$.

Twenty-four percent reported having ever actually seen the majority of their cointern's patients. Only 3% of respondents said they had ever examined the majority of their cointern's patients prior to providing coverage.

Perceived Problems With Intrateam Coverage

While covering a cointern's patients, nearly half reported missing changes in patients' exams and forgetting to order labs or imaging. More than half reported unexpected family meetings or phone calls. In contrast, respondents noted more problems when their cointern had covered for them (Table 1). Seventy-nine percent felt that patient care was at least sometimes delayed because of incomplete knowledge due to intrateam coverage.

DISCUSSION

In our program, interns commonly cover for each other. This intrateam coverage frequently occurs without a formal handoff, and interns do not always know key information about their cointern's patients. Interns reported frequent problems with intrateam coverage such as missed lab results, consult recommendations, and changes in the physical exam. These missed items could result in delayed diagnoses and delayed treatment. These problems have been identified in interteam handoffs as well.[6,7] Even in optimized interteam handoffs, receivers fail to identify the most important piece of information about 60% of the patients,[8] and our results mirror this finding.

The finding that fewer than a quarter of the respondents have ever seen the majority of their cointerns' patients is certainly of concern. This likely arises from several inter-related factors: reduced hours for housestaff, schedules built to accommodate the reduced hours (eg, overlapping rather than simultaneous shifts), and the choice of some attendings to not take the entire team around to see every patient. In institutions where bedside rounds as a team are the norm, this finding will be less applicable, but others across the country have noticed this trend[9,10] and have tried to counteract it.[11] This situation has both patient care and educational implications. The main patient care implication is that the other team members may be less able to seamlessly assume care when the primary intern is away or busy. Therefore, intrateam coverage becomes much more like traditional cross-coverage of another team's patients, during which there is no expectation that the covering person will have ever seen the patients for whom they are assuming care. The main educational implication of not seeing the cointerns' patients is that the interns are seeing only half the patients that they could otherwise see. Learning medicine is experiential, and limiting opportunities for seeing and examining patients is unwise in this era of reduced time spent in the hospital.

Limitations of this study include being conducted in a single program. It will be important for other sites to assess their own practices with respect to intrateam handoffs. Another limitation is that it was a cross-sectional survey subject to recall bias. We may have obtained more detailed information if we had conducted interviews. We also did not quantify the frequency of missed labs, consult recommendations, and physical examination changes that occurred during intrateam coverage. Finally, we did not independently verify the problems identified by the interns.

Some possible strategies to address this issue include (1) treating intrateam handoffs like interteam handoffs by implementing a formal system, (2) better utilizing senior residents/faculty when interns are covering for each other, (3) using bedside attending rounds to increase the exposure of all team members to the team's patients, (4) block scheduling to avoid absences due to clinics,[12] and (5) better communication and teamwork training to increase team awareness of all patients.[13]

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