

Sitting at the Bedside: Patient and Internal Medicine Trainee Perceptions



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BACKGROUND: Sitting at the bedside may strengthen physician-patient communication and improve patient experience. Yet despite the potential benefits of sitting, hospital physicians, including resident physicians, may not regularly sit down while speaking with patients.

OBJECTIVE: To examine the frequency of sitting by internal medicine residents (including first post-graduate year [PGY-1] and supervising [PGY-2/3] residents) during in-patient encounters and to assess the association between patient-reported sitting at the bedside and patients' perceptions of other physician communication behaviors. We also assessed residents' attitudes towards sitting.

DESIGN: In-person survey of patients and email survey of internal medicine residents between August 2019 and January 2020.

PARTICIPANTS: Patients admitted to general medicine teaching services and internal medicine residents at The Johns Hopkins Hospital.

MAIN MEASURES: Patient-reported frequency of sitting at the bedside, patients' perceptions of other communication behaviors (e.g., checking for understanding); residents' attitudes regarding sitting.

KEY RESULTS: Of 334 eligible patients, 256 (76%) completed a survey. Among these 256 respondents, 198 (77%) and 166 (65%) reported recognizing the PGY-1 and PGY-2/3 on their care team, respectively, for a total of 364 completed surveys. On most surveys (203/364, 56%), patients responded that residents "never" sat. Frequent sitting at the bedside ("every single time" or "most of the time," together 48/364, 13%) was correlated with other positive behaviors, including spending enough time at the bedside, checking for understanding, and not seeming to be in a rush ($p < 0.01$ for all). Of 151 residents, 77 (51%) completed the resident survey; 28 of the 77 (36%) reported sitting

frequently. The most commonly cited barrier to sitting was that chairs were not available (38 respondents, 49%).

CONCLUSIONS: Patients perceived that residents sit infrequently. However, sitting was associated with other positive communication behaviors; this is compatible with the hypothesis that promoting sitting could improve overall patient perceptions of provider communication.

KEYWORDS: Patient-physician communication; Etiquette-based medicine; Professionalism.

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BACKGROUND

Simple behaviors, such as sitting at the bedside, may improve the quality of clinician communication.^{1–5} Sitting has been associated with improved patient communication skill ratings, higher patient satisfaction scores, and the perception of a greater amount of time spent at the bedside.^{1–3,6,7} Sitting is a key component of "etiquette-based medicine," proposed behaviors to promote professional and respectful communication with patients.⁸

Despite the potential benefits of physicians sitting during patient encounters, many inpatient physicians do not regularly do so.^{1,9} One study found that hospitalist physicians sat less than 20% of the time during observed patient interactions.¹ Barriers to sitting may include inadequate access to chairs and physician hesitance, as doctors may perceive sitting as unimportant or time-consuming.^{2,3,10}

It is also uncertain to what extent sitting at the bedside is beneficial for patients cared for on teaching services in which providers round on patients in teams.¹¹ One study found that residents randomized to stand during rounds received more favorable communication scores from patients compared to residents randomized to sitting.¹¹ Understanding

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communication practices among resident physicians is important given that physicians develop enduring habits during training.¹² Furthermore, the Association Council for Graduate Medical Education requires that residencies train and assess residents on interpersonal and communication skills.¹³

The primary aim of this analysis was to determine the frequency of sitting by internal medicine residents as assessed by patient report and to evaluate for associations between sitting at the bedside and other perceived communication behaviors such as checking for patient understanding and listening without interrupting. We hypothesized that patient-reported sitting would correlate with other positive communication behaviors. We also examined the attitudes of residents towards sitting.

METHODS

Study Design, Setting, and Subjects

We conducted separate cross-sectional surveys of hospitalized patients and internal medicine residents. We originally planned these surveys as baseline assessments prior to a planned intervention to increase sitting at the bedside. For patient surveys, we aimed for at least 250 completed surveys based on sample size calculations for the intervention. To date, we have deferred the intervention due to the COVID-19 pandemic.

Eligible patients were admitted to one of seven resident teaching teams on four general medicine floors at The Johns Hopkins Hospital between August 1, 2019, and January 10, 2020. Patients seen by the same medical staff team for at least 2 days were eligible to participate. Exclusion criteria included altered mental status, primary language other than English, inability to communicate (e.g., aphasia), and visual impairment that precluded patients from recognizing pictures of physicians. When patients are non-communicative, communicating with their care-partners is critical. Thus, for such patients, we included family members (using the same exclusion criteria), when family members were present at the bedside.

All internal medicine residents were eligible to participate in the resident survey. Teaching teams typically consist of an attending, 2 supervising residents in post-graduate year (PGY) 2 or 3, 3–4 interns (PGY-1), and occasional medical students. In general, PGY-1s see patients in-person before morning rounds. Full teams then usually round together on a subset of patients. The attending and the PGY-2/3 then see the remaining patients. In addition, PGY-1s and PGY-2/3s generally make additional visits throughout the day for updates and discussions.

Patient Surveys

Six trained, non-clinician staff members (three clinical customer service coordinators, a patient experience coach, and two research associates) administered surveys in private

patient rooms. Prior to approaching a patient, surveyors asked the patient's nurse about the patient's ability to communicate relevant to the survey, and, if not, whether a family member was at the bedside.

Surveyors approached patients on the first weekday of their eligibility, and returned if patients were unavailable. Surveyors generally required about 5 minutes in patient rooms. If a clinical staff member needed to enter the room while the survey was in progress, surveyors would depart until the patient was again alone and available. Because our PGY2/3s change blocks on Tuesdays and PGY1s change blocks on Thursdays, we did not survey patients for the first 4 days (Tuesday–Friday) of a resident schedule-block to ensure adequate interactions with all team members. While we hoped to cover all weekdays, our surveyors' schedules were limited by other work commitments. Due to this, surveyors were available to meet patients on approximately 60% of weekdays. This resulted in some eligible patients being discharged without having been approached. Surveyors' availability was not linked to clinical work and is expected to have been randomly distributed.

Surveyors stated that the survey was intended to help our hospital improve patient communication and that patients' identities would not be shared with their medical team. Patients tend to meet many physicians during a hospital stay and sometimes cannot identify specific physicians nor understand what roles they play (e.g., attending vs. resident).¹⁴ Given our study's focus on internal medicine residents, we only surveyed patients who could recognize resident team members. After providing verbal consent, eligible patients were asked to identify the primary residents (PGY-1 and PGY-2/3) assigned to them using sheets containing pictures of 25 PGY-1s and 16 PGY-2/3s. Survey items assessed patient perceptions of frequencies along a 5-point Likert-type scale ("never," "rarely," "sometimes," "most of the time," "every single time"). Patients were asked about the frequency of sitting as well as other communication behaviors, including checking for understanding, seeming to be in a rush, and interrupting the patient (Appendix 1). Surveyors entered patient responses directly into Qualtrics software (Provo, UT).

Resident Surveys

Resident surveys (Appendix 2) were conducted online via Qualtrics software. Surveys were open November 2019–January 2020. As an incentive, we offered the resident firm (one of four equal-sized program subdivisions) with the highest response rate a wireless speaker for their workroom. Residents were asked about their frequency of sitting at the bedside, barriers to sitting, and attitudes towards sitting along the same 5-point Likert-type scale as above.

Analysis

Descriptive statistics were calculated separately for patient and resident surveys. In bivariate analysis, patient survey items

asking about sitting frequency were dichotomized by aggregating “never,” “rarely,” and “sometimes” compared to “most of the time” or “every single time.” After initial data exploration and prior to any statistical evaluations, we selected this approach in order to ensure a meaningful distribution between groups given that few residents were described as sitting “every single time.” Because items asking patients about other communication behaviors were skewed towards the most desirable options, we dichotomized these items by aggregating the 4 least desirable options versus the single most desirable option, consistent with the approach often used to report Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores and in other literature examining etiquette-based medicine.^{10,15} Because the role of a PGY1 is distinct from that of a PGY2/3, we analyzed both roles independently as well as combined. For the resident surveys, we aggregated responses “every single time” and “most of the time” compared to the other options. We used Fisher’s exact test when the number of observations in a cell was less than 10, and chi-squared tests elsewhere.

As a sensitivity analysis, we performed logistic regressions using random effects and population-averaged models to adjust variance for the effect of clustering within residents. As another sensitivity analysis, we dichotomized the sitting variable identically to the other variables (sitting every single time compared to all other responses).

Finally, the patient surveys asked separately about whether residents sat for visits any time or only for visits for important updates or when speaking with patient and family together; however, because the results on these questions were very similar (78% identical responses), we only performed comparative analysis on the survey item about sitting for any visit.

The Johns Hopkins University Institutional Review Board reviewed this project and determined that the study was a quality improvement and not human subjects research (IRB00184753).

RESULTS

Patient Surveys

Of the 528 patients screened for eligibility, 194 (37%) were excluded as summarized in Fig. 1. Of the remaining 334 patients, surveys were completed by, or on behalf of, 256 (76%). Most respondents were patients (230/256, 90%) rather than caregivers (15/256, 6%); few surveys (11/256, 4%) did not indicate whether the respondent was a patient or caregiver. Among these 256 patient surveys, 198 (77%) and 166 (65%) reported recognizing the PGY-1 and PGY-2/3, respectively, for a total of 364 completed surveys. (Throughout, we refer to surveys, whether filled out by patients themselves, by a family member, or unknown, as “patient surveys.”) Most residents (108/151, 72%) had at least one patient survey completed about their performance; the median number of surveys per resident was 3 (interquartile range: 1–4). Surveys were evenly

distributed across the four medical units, across weekdays (ranging from 17 to 22% per weekday) and across the 5-month survey period, with the exception that a slightly higher percentage (26%) were completed in December, when we had encouraged surveyor coverage to reach our originally intended sample size.

Because we promised patient confidentiality, we did not collect specific demographic data on surveyed patients. However, we expect surveyed patients’ demographic characteristics to resemble those of the overall population of discharges from these units. In 2019, the median age of patients discharged from these units was 58 years old (IQR: 44–69); 52% were male, and the racial and ethnic distribution of patients was 55% Black Non-Hispanic, 34% White Non-Hispanic, 2% Hispanic, and 7% other racial identities (including multi-racial, Asian, American Indian, and Native Hawaiian/Pacific islander).

Patients overall reported that neither PGY-1 nor PGY-2/3 residents frequently sat when visiting the bedside (Table 1). Most patient surveys (203/364, 56%) indicated that residents “never” sat, and only 13% (48/364) indicated that residents sat “most of the time” or “every single time” (together referred to as frequently). A slightly higher percentage of patient surveys (60/364, 16%) indicated that residents frequently sat when giving important updates or speaking with the patient and their family.

In contrast, patients reported that residents often engaged in other positive communication behaviors. The majority of patient surveys indicated that residents always (“every single time”) allowed patients to speak without interrupting (275/364, 76%), checked for complete understanding (221/364, 61%), and spent enough time at the bedside (196/364, 54%). Most patient surveys (213/364, 59%) reported that residents “never” seemed to be in a rush.

The association between sitting at the bedside and other positive communication behaviors is summarized in Table 2. Patient surveys indicated that 88% (42/48) of residents who frequently sat spent enough time at the bedside in contrast to only 49% (154/316) of residents who sat infrequently (Fisher’s exact $p < 0.01$). Similarly, patient surveys indicated that 96% (46/48) of frequently sitting residents checked for understanding, compared to only 55% (175/316) of those who sat infrequently (Fisher’s exact $p < 0.01$). Finally, 83% (40/46) of residents who sat frequently were “never” in a rush, in contrast to only 55% (173/316) of those who sat infrequently (Fisher’s exact $p < 0.01$). When analyzing PGY-1 s and PGY-2/3 s separately, we observed similar associations between the frequency of sitting and other communication behaviors.

The pattern of results was unchanged in sensitivity analyses which (1) adjusted variance to account for clustering within residents (Appendix 3) and (2) dichotomized as sits every single time vs. not (results not shown).

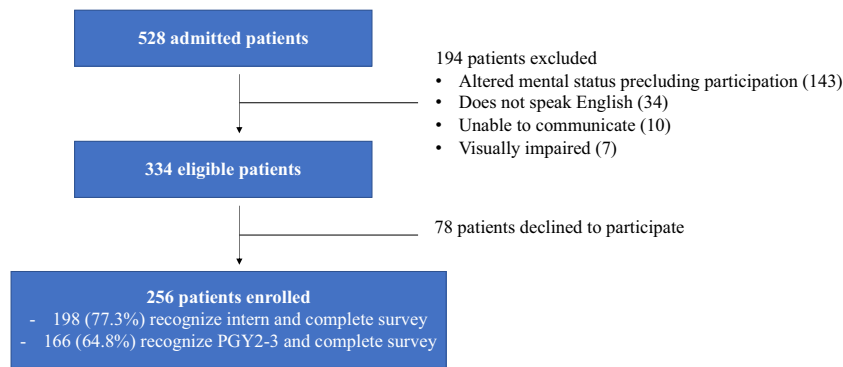


Fig. 1 Flow of patient participants through study

Resident Surveys

Of 151 residents, 77 (51%) completed the resident survey. These 77 included 39 (51%) women, 37 (48%) men, and 1 (1%) preferring not to answer; 16 to 25 respondents per each resident firm: 31 (40%) PGY-1 s, 25 (32%) PGY-2 s, and 21 (27%) PGY-3 s.

Only 36% (28/77) of respondents reported that they sit “every single time” or “most of the time” when interacting with a patient at the bedside. The most commonly cited barriers for not sitting (Table 3) were that chairs were not consistently available (38 respondents, 49%) and that chairs were available but were covered in something, such as medical supplies (29 respondents, 38%). Only 2 respondents (3%) reported that attendings and residents did not encourage sitting, and only 1 individual (1%) said that they felt that sitting

would not make the patient interaction a positive one. Among the residents who indicated “other” reasons for not sitting, free-text responses included that sitting can introduce workflow inefficiencies (e.g., one is not able to transcribe a note while speaking to a patient). Residents reported that they were most likely to sit outside of teaching (attending) rounds during a goals-of-care conversation (74 respondents, 96%) or when giving major updates to the plan of care (58 respondents, 75%).

The relationships between self-reported sitting at the bedside and attitudes towards sitting are described in Table 4. Ninety-six percent (27/28) of residents who reported sitting at the bedside frequently (“most of the time” or “every single time”) felt that sitting increases patient satisfaction, in contrast to 65% (32/49) of residents who reported sitting infrequently

Table 1 Communication Behaviors of Residents Reported on Patient Surveys*

	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Most of the time</i>	<i>Every single time</i>	
Surveys for all residents (N= 364)						
<i>Physician sits</i>	When visiting bedside any time	203 (55.8%)	62 (17.0%)	51 (14.0%)	18 (4.9%)	30 (8.2%)
	During important updates or talking with patient and family	210 (57.7%)	51 (14.0%)	43 (11.8%)	11 (3.0%)	49 (13.5%)
<i>Physician</i>	Spends enough time at bedside	2 (0.5%)	11 (3.0%)	69 (19.0%)	86 (23.6%)	196 (53.8%)
	Checks for complete understanding	6 (1.6%)	9 (2.5%)	67 (18.4%)	61 (16.8%)	221 (60.7%)
	Allows patient to talk without interrupting	10 (2.7%)	1 (0.3%)	20 (5.5%)	58 (15.9%)	275 (75.5%)
	Seems to be in a rush	213 (58.5%)	48 (13.2%)	80 (22.0%)	8 (2.2%)	15 (4.1%)
Surveys about PGY-1 s (N= 198)						
<i>Physician sits</i>	When visiting bedside any time	110 (55.6%)	32 (16.2%)	32 (16.2%)	8 (4.0%)	16 (8.1%)
	During important updates or talking with patient and family	120 (60.6%)	22 (11.1%)	28 (14.1%)	5 (2.5%)	23 (11.6%)
<i>Physician</i>	Spends enough time at bedside	0 (0.0%)	5 (2.5%)	38 (19.2%)	47 (23.7%)	108 (54.6%)
	Checks for complete understanding	2 (1.0%)	7 (3.5%)	44 (22.2%)	27 (13.6%)	118 (59.6%)
	Allows patient to talk without interrupting	6 (3.0%)	0 (0.0%)	14 (7.1%)	36 (18.2%)	142 (71.7%)
	Seems to be in a rush	113 (57.1%)	23 (11.6%)	49 (24.8%)	5 (2.5%)	8 (4.0%)
Surveys about PGY-2/4 s (N= 166)						
<i>Physician sits</i>	When visiting bedside any time	93 (56.0%)	30 (18.1%)	19 (11.5%)	10 (6.0%)	14 (8.4%)
	During important updates or talking with patient and family	90 (54.2%)	29 (17.5%)	15 (9.0%)	6 (3.6%)	26 (15.7%)
<i>Physician</i>	Spends enough time at bedside	2 (1.2%)	6 (3.6%)	31 (18.7%)	39 (23.5%)	88 (53.0%)
	Checks for complete understanding	4 (2.4%)	2 (1.2%)	23 (13.9%)	34 (20.5%)	103 (62.1%)
	Allows patient to talk without interrupting	4 (2.4%)	1 (0.6%)	6 (3.6%)	22 (13.3%)	133 (80.1%)
	Seems to be in a rush	100 (60.2%)	25 (15.1%)	31 (18.7%)	3 (1.8%)	7 (4.2%)

*Analysis conducted on unit of individual survey; multiple patient surveys were collected for some residents.

Table 2 Association Between Sitting at Bedside and Other Communication Behavior on Patient Surveys*

Surveys for all residents (N = 364)			
Other bedside behavior	Sitting at bedside		p
	Every single time or most of time (N = 48)	Never to sometimes (N = 316)	
Spends enough time at bedside every single time	42 (87.5%)	154 (48.7%)	< 0.001
Checks for complete understanding every single time	46 (95.8%)	175 (55.4%)	< 0.001
Allows patient to talk without interrupting every single time	45 (93.8%)	230 (72.8%)	0.002
Never seems to be in a rush	40 (83.3%)	173 (54.7%)	< 0.001
Surveys about PGY-1 s (N = 198)			
Sitting at bedside			
Other bedside behavior	Every single time or most of time (N = 24)	Never to sometimes (N = 174)	p
Spends enough time at bedside every single time	21 (87.5%)	87 (50.0%)	0.001
Checks for complete understanding every single time	23 (95.8%)	98 (54.6%)	< 0.001
Allows patient to talk without interrupting every single time	21 (87.5%)	121 (69.5%)	0.09
Never seems to be in a rush	19 (79.2%)	94 (54.0%)	0.03
Surveys about PGY-2/3 s (N = 166)			
Sitting at bedside			
Other bedside behavior	Every single time or most of time (N = 24)	Never to sometimes (N = 142)	p
Spends enough time at bedside every single time	21 (87.5%)	67 (47.2%)	< 0.001
Checks for complete understanding every single time	23 (95.8%)	80 (56.3%)	< 0.001
Allows patient to talk without interrupting every single time	24 (100.0%)	109 (76.8%)	0.005
Never seems to be in a rush	21 (87.5%)	79 (55.6%)	0.003

*Analysis conducted on unit of individual survey when multiple patient surveys collected for a single resident.

(Fisher's exact $p = 0.002$). Self-reported sitting frequency was not associated with other reported attitudes about sitting ($p = 0.06$ in both cases) (Table 4).

DISCUSSION

In this study, patients reported that only 13% of residents sat down at the bedside most or all of the time. However, frequent sitting at the bedside was associated with patients' perception of other positive communication behaviors, including spending enough time at the bedside, checking for understanding, and not seeming to be in a rush. A minority, but a higher percentage (36%), of residents perceive themselves to sit most

or all of the time in their bedside interactions with inpatients.

Two prior inpatient studies have found that sitting at the bedside is associated with positive patient perceptions of communication behaviors, although both of these studies examined attending hospitalist physicians rather than trainees.^{1,2} We are not aware of previous studies demonstrating the benefits of physician trainees sitting down at the bedside. Notably, our findings differ from a recent study examining the behavior of internal medicine residents on patient-physician communication ratings.¹¹ In a cluster-randomized crossover trial in

Table 3 Perceived Barriers to Sitting During Patient Encounters Reported on Resident Surveys (N = 77)

Identified barrier	Frequency (%)
Chairs are not consistently available on the general floors	38 (49.4%)
I can find a chair, but it is usually covered in something (papers, medical supplies, etc.)	29 (37.7%)
I don't want to sit on the patient's bed	23 (29.9%)
If I sit down the patient interaction will take longer	20 (26.0%)
Other	15 (19.5%)
Infectious precautions make it difficult to sit down	14 (18.2%)
I can do an effective job without sitting	10 (13.0%)
It is a bad time	4 (5.2%)
My attendings/supervising residents don't emphasize sitting	2 (2.6%)
I feel that the patient interaction won't be a positive one	1 (1.3%)

Table 4 Association Between Self-Reported Sitting at Bedside and Other Attitudes Among Residents (N = 77)

Attitudes towards sitting	Self-reported sitting at bedside		p
	Every single time or most of the time (N = 28)	Never to sometimes (N = 49)	
Patient interaction will take longer every single time or most of the time if I sit	3 (10.7%)	15 (30.6%)	0.06
Sitting increases patient satisfaction every single time or most of the time	27 (96.4%)	32 (65.3%)	0.002
Attendings and supervising residents encourage sitting every single time or most of the time	17 (60.7%)	19 (38.8%)	0.06

which medicine residents were assigned to either sit or stand during teaching team rounds, residents assigned to stand received higher communication ratings on 2 out of 5 patient survey items. There are several possibilities for these discrepant findings. First, our study did not focus on behavior during rounds, and it is possible that the benefit of sitting primarily occurs in smaller-group interactions, such as an admission history or a goals-of-care conversation. Second, the patient surveys differed between studies and were relatively brief in both cases. More comprehensive assessments may be helpful to further characterize situations where sitting is beneficial.

In our study, the discrepancy between patient and resident-reported frequent sitting may reflect that physicians overestimate how often they sit. A prior study at our institution found that PGY-1 residents sat during only 10% of patient interactions observed by trained staff.⁹ Similar discrepancies may exist for attending hospitalist physicians: a study of observed patient encounters found that hospitalists sat less than 20% of the time,¹ whereas, in a different study, over 60% of hospitalists reported that they “always or usually” sit down.¹⁰

Increasing access to chairs might promote sitting given that residents frequently cited not having an empty chair. Inadequate availability of chairs has been reported elsewhere.² In one study, sitting by physicians increased from 25 to 32% of encounters after chairs were added to emergency department rooms.³ However, the impact of introducing chairs in the inpatient hospital setting has not been studied.

Resident education may also be effective at promoting sitting given that attitudes towards sitting were associated with self-reported behavior. However, studies examining the impact of educational interventions on physician communication behaviors have had mixed results. Communication skills training has been associated with sustained improvements on a communication skills checklist among residents.¹⁶ Orloski et al.³ found that a brief video on the importance of sitting did not influence provider behavior in the emergency department in isolation, but that providers were more likely to sit when exposed to the video and when chairs were placed in the room.

Our work is subject to several limitations. First, this was a single-site study at a large urban academic medical center with private rooms. Second, the modest response rate to our resident survey (although comparable to other surveys in the literature) may reflect non-response bias and should be interpreted cautiously.¹⁷ Third, we analyzed patient and resident-reported perceptions of behavior as opposed to the behavior observed by trained staff. However, our findings are similar to those from a prior study at our institution in which trained observers were used.⁹ Moreover, the presence of observers may influence behavior. Fourth, housestaff were rated by different numbers of patients which could skew our findings according to those housestaff most often rated by patients; however, our sensitivity analysis indicates this was not likely the case. Our study was also not designed to examine additional sources of variation, such as potential effects of

clinician-patient racial concordance; this is an important avenue for future studies. Fifth, we only surveyed patients who could recognize resident physicians, and these patients may differ from those that cannot.¹⁸ Sixth, we chose to include both patients and family members in our study, but our sample of family members was ultimately too small to evaluate for a unique effect among this group.

Finally, in assessing for associations between sitting and desirable perceptions of communication behavior, we chose, at the outset, to specifically examine for associations between frequent sitting and desirable communication outcomes. This represents a strength by providing evidence to evaluate the hypothesis that sitting down promotes better communication, but it also opens up to the limitation that if a moderate or low level of sitting is associated with desirable communication scores, we may fail to detect it. Moreover, it remains uncertain how sitting figures into the causal model of patient satisfaction with provider communication. It is possible that sitting does not directly lead to improved communication, but that sitting is a proxy for other characteristics, such as physician conscientiousness or agreeableness.

In sum, patients in our study indicated that most residents rarely sit at the bedside. However, the association between frequent sitting and positive perceptions of communication provides additional support for the hypothesis that sitting improves communication. Future studies should evaluate the direct effect of sitting down on provider communication for the key population of medical trainees and for medical providers in general.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11606-021-07231-4>.

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Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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