

“What Questions Do You Have?”: Teaching Medical Students to Use an Open-Ended Phrase for Eliciting Patients’ Questions

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ABSTRACT

Patients frequently do not understand health information received in clinical settings, yet rates of question-asking by patients are low, particularly for patients with lower health literacy skills. Experts recommend that health care professionals attempt to elicit patients’ questions by using an open-ended phrase, such as “What questions do you have?” as opposed to a closed-ended phrase like, “Do you have any questions?” We compared question-eliciting techniques used during video-recorded observed structured clinical examinations among medical students who had completed a mostly didactic curriculum on health literacy and clear communication ($n = 46$) to students who completed a newer longitudinal problem-based communication curriculum ($n = 32$). Students were not aware that they were being observed for specific communication skills. Compared to controls, students in the intervention group were more likely to spontaneously attempt to elicit questions from a standardized patient (65.2% vs. 84.4%, $p = .06$), and were significantly more likely to use an open-ended phrase to do so (6.7% vs. 51.9%, $p = .0002$). The longitudinal communication skills curriculum was successful in creating long-term patient-centered question-eliciting habits. Further research is needed to determine whether eliciting questions with an open-ended technique result in patients asking more or different clarifying questions during the closing phase of clinical encounters. [**HLRP: Health Literacy Research and Practice. 2022;6(1):e12-e16.**]

Patients frequently do not understand health information or instructions (Hersh et al., 2015; Klingbeil & Gibson, 2018; Nielsen-Bohlman et al., 2004). For example, about 50% of information is forgotten by patients immediately, and one-half of what they do recall is incorrect (Kessels, 2003; McCarthy et al., 2012). To improve patients’ understanding, health care professionals are taught to elicit questions that patients or caregivers might have, but the means for doing so has received little attention. Rates of question-asking by patients are generally low (Meijers et al., 2020; Murtagh et al., 2013), with the lowest rates for patients who are older, have less education (Meijers et al., 2020), and have lower literacy (Katz et al., 2007). Specifically, patients frequently do not ask questions in the closing phase of encounters (Judson et al., 2013). Although this may cause frustration for doctors (Arnold et al., 2012), primary care physicians in one study attempted to elicit clarifying questions in only 25% of encounters (White et al., 1994).

Health profession educators (Coleman et al., 2013), and health literacy experts (Brega et al., 2013; Coleman, Hudson,

et al., 2017) recommend an open-ended approach, such as “What questions do you have?” to elicit questions, because this may help create an invitation and expectation that patients have questions. Using a closed-ended phrase like, “Do you have any questions?” is inadequate because patients may more easily say “no,” despite lacking understanding. Medical students (Coleman et al., 2016), and family medicine residents (Coleman, Peterson-Perry, et al., 2017) espoused plans to adopt open-ended phrasing after a communication training in which it was recommended. Family medicine residents also reported successfully incorporating the open-ended format into practice after a series of workshops (Coleman, Peterson-Perry, et al., 2017). Prior to participating in a one-time multimodal training on the use of the Teach-Back technique to check understanding, 92% of nurses and other health professionals endorsed asking, “Do you have any questions?”; at 2 and 10- to 12-months follow-ups only about 50% reported using this closed-ended phrasing, and the authors noted that many had replaced it with an open-ended phrase (Klingbeil & Gibson, 2018). We could find no studies directly compar-

ing the use of closed-ended to open-ended methods for eliciting patients' potential questions during the closing phase of medical encounters.

Our study aimed to determine the long-term effectiveness of a curriculum teaching medical students to elicit patients' questions using an open-ended technique, and whether the use of closed-ended phrasing when eliciting questions is associated with discouraging nonverbal body language.

METHODS

We conducted a retrospective cohort study comparing question-eliciting strategies used during objective structured clinical examinations (OSCEs) between the last class of medical students to complete an older pre-clerkship episodic curriculum on health literacy and clear communication (matriculated 2013, control) to the first two classes of students to complete a newer longitudinal/partially integrated communication curriculum (matriculated 2014 and 2015, intervention). Episodic curricula involve discrete moments of instruction over time, whereas longitudinal/integrated curricula thread content more continuously over time (Coleman, 2011). Both the old and new communication curricula were required components of the medical school curriculum.

Old Curriculum

Prior to 2014, pre-clerkship doctor-patient communication training at our institution occurred as part of a weekly 1-hour large group didactic and 1-hour small group experiential series called *Principles of Clinical Medicine*, which ran through the first 2 years of the curriculum. In this setting, students received 1 hour of health literacy and clear communication large group didactic training in the first year, consisting of watching the video, "Health Literacy and Patient Safety: Help Patients Understand" (American Medical Association Foundation, 2007), followed by a 30-minute facilitated large group discussion, neither of which included

instruction on question-eliciting. About 1 year later, this cohort read an article about health literacy (Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, 1999), which also did not contain information about question-eliciting; the cohort also attended an additional 1 hour of didactic instruction, which included a recommendation to elicit patients' questions using an open-ended phrase. This was immediately followed by 1 hour of small group faculty-facilitated experiential training, which included practice eliciting questions using an open-ended phrase as part of a role-play activity. Anecdotally, students receiving this curriculum were felt to lack some aspects of patient-centered communication skills, as observed during later clerkship-based assessments.

New Curriculum

Based on advances in adult learning theory and curriculum design (Cushing, 2015; Fink, 2003; Sahu et al., 2019), we transformed the entire medical curriculum into a competency-guided model in 2014, with the ultimate goal of producing graduates who would be better equipped to handle anticipated changes in medical knowledge and health care delivery in the coming decades. As part of this change, a weekly small group problem-based, flipped classroom Clinical Skills Lab (Sahu et al., 2019) was developed for delivering a longitudinal curriculum integrating communication skills, professionalism, ethics training, and other clinical skills. This move away from passive learning experiences toward more individualized active learning was more consistent with theoretical frameworks such as Vygotsky's Zone of Proximal Development (Cushing, 2015), and strategies for creating significant learning (Fink, 2003; Sahu et al., 2019). Students receiving this newer curriculum participated in five 2-hour small group workshop-style sessions focusing on health literacy and clear communication, over 18 months, three of which included content related to question-eliciting

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Disclosure: The authors have no relevant financial relationships to disclose.

Received: September 21, 2020; Accepted: January 21, 2021

doi:10.3928/24748307-20211206-01

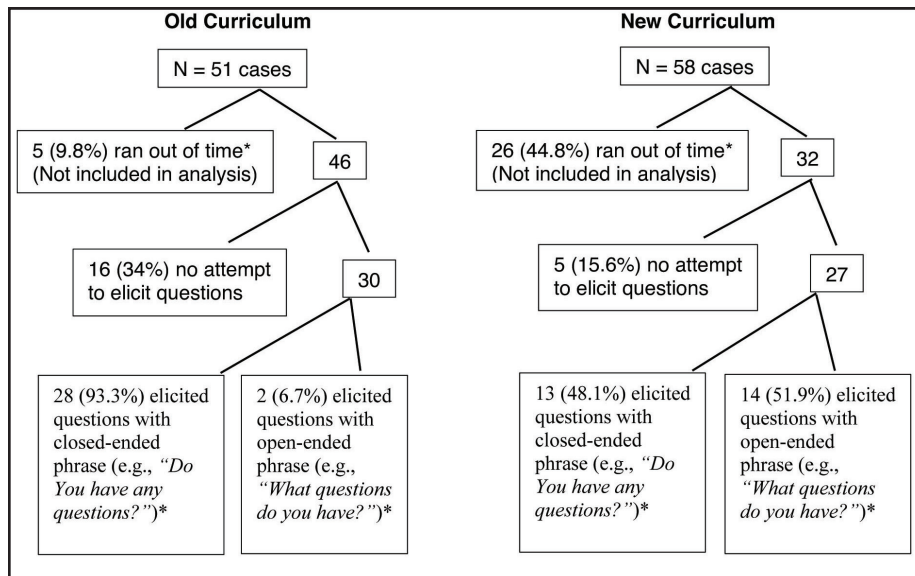


Figure 1. Question-eliciting behaviors: old curriculum and new curriculum. * $p < .05$.

using an open-ended phrase (Table A), with the goal of making such question-eliciting a “habit” to be demonstrated during every patient encounter. During several OSCE-like assessments on unrelated clinical skills during the training period, standardized patients used a scoring rubric to provide students feedback on whether they had elicited potential questions using an open-ended phrase.

We gathered observational data from video-recorded OSCEs in both cohorts during their required 4-week core clerkship in family medicine, if it was their first clinical rotation, to avoid potential confounding by other clinical experiences. Students in both cohorts completed several OSCE cases with trained standardized patients on a variety of common topics. Students were not informed that they would be assessed on specific communication skills. A family medicine faculty evaluator silently observed the encounters from within the room. Students were allowed 11 minutes to complete each encounter, and they received a 2-minute warning via overhead speaker.

We defined the closing phase of the encounter as the period after the student had conveyed a plan to the patient. We coded students’ attempts to elicit questions during the closing phase; whether an open- or closed-ended phrase was used; and whether encouraging (defined as nodding one’s head up and down, smiling, or raising one’s eyebrows), discouraging (swiveling one’s head from side to side in a “no” motion, or frowning or furrowing one’s brow), or neutral (no discernable emotional change) nonverbal body language was used at the time of eliciting questions. Body language was coded as indeterminate if the coder was unable to see the student’s

gestures or facial expressions clearly. Two authors (C.C. and F.S-T. independently viewed and rated the first 10 cases. Interrater reliability (k) was 1.0 for eliciting questions, and 0.7 for nonverbal signaling at the time of eliciting questions. After additional training, case videos were reviewed, and data were extracted by one of the authors. When uncertainties arose, a second author (C.C.) independently reviewed the video, and disagreements were resolved by consensus.

We compared percentages of students in each cohort using open- or closed-ended phrases,

and the use of each phrasing compared to the type of body language observed, using Chi-squared tests. The study was approved by the Institutional Review Board at Oregon Health & Science University.

RESULTS

Video data were available for 15 students who completed 51 cases in the control cohort (mean 3.4 cases per student), and 13 students who completed 58 cases in the intervention cohort (mean 4.5 cases). We did not collect students’ demographic data. The student ran out of time before attempting to elicit questions in 5 (9.8%) control group cases, and 26 (44.8%) intervention group cases ($p = .0001$). Because we could not determine whether students in these cases would have attempted to elicit questions if they had not run out of time, these cases were not included in subsequent analyses. A total of 46 control and 32 intervention cases were ultimately analyzed. Of these, students ended the encounter without attempting to elicit questions in 16 (34.8%) control group cases and 5 (15.6%) intervention group cases ($p = .06$). When students did attempt to elicit questions, they used a closed-ended phrase, such as “Do you have any questions?” in 28 of 30 attempts (93.3%) in the control group, and 13 of 27 attempts (48.1%) in the intervention group; an open-ended phrase, such as “What questions do you have?” was used in 2 cases (6.7%) in the control group, and 14 cases (51.9%) in the intervention group ($p = .0002$) (Figure 1).

To determine whether phrasing was associated with nonverbal body language, we pooled data for all 57 cases in which students attempted to elicit questions (30 cases in the

control group plus 27 cases in the intervention group). We did not include cases in which we were unable to assess body language (1 with a closed-ended phrase and 3 with open-ended phrases). In 6 of the 40 cases (15%) in which a closed-ended phrase was used, the student displayed discouraging nonverbal communication, whereas discouraging nonverbal communication was seen in none of the 13 cases in which an open-ended phrase was used ($p = .14$).

DISCUSSION

Question-asking by patients is a potentially important but underresearched aspect of patient-provider communication. This is the first known study designed to examine the recommended use of open-ended phrasing such as “What questions do you have?” to elicit patients’ questions, the first to examine the use of nonverbal communication when eliciting these questions, and is one of few to evaluate the long-term effects of a curriculum encouraging clear communication best practices (Coleman, Peterson-Perry, et al., 2017). A strength of this study is that students were assessed on the spontaneous use of a clear communication tactic, without being aware it would be evaluated, reducing the likelihood of social desirability bias and increasing the likelihood that observed behaviors represent habits. Our data may underestimate the influence of the new curriculum because more of the intervention group ran out of time before being able to elicit questions.

STUDY LIMITATIONS

Potential limitations include generalizability, given that the single institution studied has a unique health communication curriculum, which included 10 hours of instructional time related to health literacy and clear communication techniques, and was designed to produce long-term communication habits. Other institutions may, however, be able to apply a similar approach within their existing curricular structure. Our control group received limited instruction related to question-eliciting using an open-ended phrase, with only one didactic session, one skill-building session, and no assessments related to this topic, which was typical of many medical school curricula at the time (Coleman & Appy, 2012). In contrast, the intervention group received substantially different and more instruction. It is likely that the small group seminar format, longitudinal exposures, repeat practice, and repeat assessment with feedback contributed to the increased effectiveness of the intervention curriculum (Cushing, 2015; Fink, 2003; Sahu et al., 2019; Zeng et al., 2020); however, our study design did not allow us to evaluate the relative contributions of these curricular elements. In addition, not every

student completed the same cases, which could introduce bias; however, eliciting questions would have been appropriate for all encounters. Finally, our evaluation of nonverbal communication ascribed meaning to specific head movements and facial expressions generally accepted in North America as being discouraging or encouraging; however, this may differ by culture or gender, potentially affecting the validity or generalizability of our results.

In control group cases with students who received limited didactic and experiential training, 34.8% did not even attempt to elicit questions from the standardized patient, and 93.3% of those who did used a closed-ended phrase. This indicates that traditional large group didactics and one-time skill-building sessions are not sufficient for developing the habitual use of these skills. In addition, the use of a closed-ended phrase was associated with a trend toward the use of discouraging nonverbal communication, further supporting the recommendation to use open-ended phrasing. In contrast, students receiving the newer longitudinal curriculum with multiple small group discussions, practice, and assessments demonstrated a trend toward more attempts to elicit questions, and spontaneously used open-ended phrasing in over half of attempts, representing what we believe to be the first evidence for the teaching of a clear communication “habit” among health care trainees. Longitudinal small group experiential learning activities hold promise for producing patient-centered clear communication habits. Future studies should explore which curricular elements are most important for developing and maintaining such habits and should examine whether open-ended phrasing results in more or different question-asking by patients.

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Table A

New Longitudinal Health Literacy & Clear Communication Curriculum, OHSU School of Medicine, 2014-15

All sessions were 2-hour faculty-facilitated small group structured workshops, occurring as part of a weekly Clinical Skills Lab series spread over 18 months. Assessment methods included multiple choice tests, and periodic OSCE-like Clinical Skills Assessments. Content related to question-eliciting is underlined

1st year, week 9: Intro to Health Literacy

Learning Objectives:

- Describe the importance of literacy to health communication for all patients.
- Define the term "health literacy."
- Discuss the prevalence of low health literacy and how all patients are at risk for communication errors.
- Describe reasons why physicians cannot reliably tell who has low health literacy in any given medical encounter.
- Describe reasons why a "universal precautions" approach to health communication is recommended when working with all patients.
- Discuss the physician's responsibility for providing clear actionable information.

Instructional Methods:

- Read session study guide.
- Complete HRSA "Effective Communication Tools for Healthcare Professionals" online modules (currently unavailable).
- Participate in workshop, including discussion of using open-ended phrase to elicit patients' questions.

1st year, week 11: Clear Communication and Plain Language

Learning Objectives:

- Define "clear communication," "plain language," "jargon," "numeracy," and "universal precautions for safe communication."
- Identify medical jargon when used by others.
- Describe the rationale and evidence for limiting the amount of information given at any one time.
- Produce written health communication at a 5th-6th grade reading level.

Instructional Methods:

- Read session study guide
- Read "Health Literacy in Primary Care Practice" (Hersh et al., 2015).
- Complete NIH online plain language training module (since modified).
- Participate in workshop.

1st year, week 13: Confirm Understanding and Close the Encounter

Learning Objectives:

- Describe the rationale for actively confirming patients' understanding of medical information.
- Describe a variety of teach-back strategies.
- Demonstrate a high quality teach-back technique.
- Use OHSU's Modified 4 Habits for Patient-Centered Care observation checklist to assess teach-back technique.
- Express the attitude that patients' understanding is the responsibility of the clinician.

Instructional Methods:

- Read session study guide (includes discussion of rationale for eliciting patients' questions using open-ended technique).
- Participate in workshop (includes practice eliciting questions using an open-ended phrase).

2nd year, week 4: Integrating Health Literacy, Culturally Responsive Care, and Limited English Proficiency

Learning Objectives:

- Describe how OHSU's Modified 4 Habits for Patient-Centered Care model supports the integration of health literacy, culturally responsive care, and limited English proficiency in clinical communication.
- Apply best practices in the areas of health literacy, culturally responsive care, and limited English proficiency in a clinical scenario.

Instructional Methods:

- Read session study guide
- Participate in workshop (includes discussion of rationale for eliciting patients' questions using open-ended technique).

2nd year, week 9: Numeracy and Communication of Risk

Learning Objectives:

- Define and describe numeracy.
- Identify typical numeracy skills and deficits of US adults.
- Identify best practices for explaining risk.
- Explain risk using clear communication techniques.

Instructional Methods:

- Read session study guide.
- Complete CDC online module, "Using Numbers and Explaining Risk" (CDC TRAIN, n.d.).
- Participate in workshop.

Note. OHSU = Oregon Health & Science University.