A research coding method for the basic patient-centered interview

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ABSTRACT

Objective: To develop a more reliable coding method of medical interviewing focused on data-gathering and emotion-handling.
Methods: Two trained (30 h) undergraduates rated videotaped interviews from 127 resident-simulated patient (SP) interactions. Trained on 45 videotapes, raters coded 25 of 127 study set tapes for patient-centeredness. Guetzkow's U, Cohen's Kappa, and percent of agreement were used to measure raters' reliability in unitizing and coding residents' skills for eliciting: agenda (3 yes/no items), physical story (2), personal story (6), emotional story (15), using indirect skills (4), and general patient-centeredness (3).
Results: 45 items were dichotomized from the earlier, Likert scale-based method and were reduced to 33 during training. Guetzkow's U ranged from 0.00 to 0.087. Kappa ranged from 0.86 to 1.00 for the 6 variables and 33 individual items. The overall kappa was 0.90, and percent of agreement was 97.5%. Percent of agreement by item ranged from 84 to 100%.
Conclusions: A simple, highly reliable coding method, weighted (by no. of items) to highlight personal elements of an interview, was developed and is recommended as a criterion standard research coding method.
Practice implications: An easily conducted, reliable coding procedure can be the basis for everyday questionnaires like patient satisfaction with patient-centeredness.

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1. Introduction

There has been considerable interest in training students, residents, and practitioners in patient-centered care [1,2], in part due to associated positive health and other outcomes for patients [3–6]. Patient-centered care shares a strong relationship to patient satisfaction [7,8]. It is considered a vital component of high-quality in health care organizations seeking to establish high patient satisfaction scores [9–11]. The Institute of Medicine's *Quality Chasm* report defined patient-centered care as "respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions" [12].

For this report of a coding procedure for patient-centered interviewing, we first faced the dilemma of definition. A common observation is that the first two of three functions of patient-centered interviewing (data-gathering; emotion-handling) occur early in the interview while the third function, informing and motivating patients, occurs later, the latter also usually taught at a later time in training [13]. Therefore, we opted here to focus on a coding procedure for just the first two functions, what we call the *basic patient-centered interview,* defined in the behavioral terms in Table 1 and expanded upon elsewhere [14]. We call it 'basic' because this initial part of the interview does not fully represent material related to the third function [13]. The basic interview focuses just on enhancing communication and maximizing the provider-patient relationship [15]. Because the coding method presented here stems directly from an evidence-based patient-centered method associated with both improved learning and improved patient outcomes, its importance to communication scholars is enhanced [2,16,17].

To demonstrate learning of the evidence-based patient-centered method above, the authors' group in 1998 reported a rigorous rating method [2]. Six graduate students (Communication or Psychology) rated audio- and video-tapes of residents' interactions with real and simulated patients. The detailed procedure for rating basic patient-centered interviewing skills, available from the authors, had eleven variables, each rated on an 11-point Likert-type scale. While objective with raters exhibiting acceptable levels of accuracy (mean deviation from criterion standard ratings ranged from 0.87 to 1.37 points) and consistency (mean deviation from paired raters' ratings from 0.70 to 0.98

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Table 1
Evidence-Based Patient-Centered Interviewing Method: 5 steps with 21 substeps.

STEP 1 – Setting the Stage for the Interview
    1. Welcome the patient
    2. Use the patient's name
    3. Introduce yourself and identify specific role
    4. Ensure patient readiness and privacy
    5. Remove barriers to communication (sit down)
    6. Ensure comfort and put the patient at ease

STEP 2 – Chief Concern/Agenda Setting
    1. Indicate time available
    2. Forecast what you would like to have happen in the interview; e.g., check blood pressure
    3. Obtain list of all issues patient wants to discuss; e.g., specific symptoms, requests, expectations, understanding
    4. Summarize and finalize the agenda; negotiate specifics if too many agenda items

STEP 3 – Opening the History of Present Illness (HPI)
    1. Start with open-ended beginning question focused on Chief Concern
    2. Use 'nonfocusing' open-ended skills (Attentive Listening): silence, neutral utterances, nonverbal encouragement
    3. Obtain additional data from nonverbal sources: nonverbal cues, physical characteristics, autonomic changes, accouterments, and environment

STEP 4 – Continuing the Patient-Centered History of Present Illness (HPI)
    1. Elicit Physical Symptom Story – Obtain description of the physical symptoms using Focusing open-ended skills
    2. Elicit Personal and Social Story – Develop the more general personal/social context of the physical symptoms using Focusing open-ended skills
    3. Elicit Emotional Story – Develop an emotional focus using Emotion-seeking skills
    4. Respond to Feelings/Emotions – Address the emotion(s) using Emotion-handling skills
    5. Expand Story – Continue eliciting further personal and emotional context, address feelings/emotions using Focusing open-ended skills, Emotion-seeking skills, Emotion-handling skills

STEP 5 – Transition to the Doctor-Centered History of Present Illness (HPI)
    1. Brief summary
    2. Check accuracy
    3. Indicate that both content and style of inquiry will change if the patient is ready

points), efforts to develop a simpler, more objective procedure with greater reliability and efficiency are reported here.

The present study, a subset of a large interventional study [18], thus posed a second dilemma. Needing to code several hundred videotaped interactions of the basic patient-centered interview, how did we establish greater reliability, while using non-medical coders to control costs, and still capture the key personal, emotional, and empathic skills learners must acquire. After reviewing many good methods in the literature, we decided that we needed to develop our own coding method. Our aim was to code just the basic interview and to dichotomize items to enhance reliability but, to avoid losing information, to use multiple dichotomized items to represent the many personal, emotional, and empathic skills of interviewing; see Table 2.

2. Methods

2.1. Design, setting, and participants

For the research reported here, residents were evaluated once in a modern Simulation Center where they were videotaped interviewing standardized patients (SP). Twelve SPs were primarily female (n = 8), Caucasian (n = 11), and ranged in age from 38 to 58. The residents (n = 127) were mostly male (n = 77) and international graduates (n = 70) with the following ethnicity: Asian (n = 63, 48%), Caucasian (n = 34, 27%), Black (n = 6, 5%), Hispanic/Latino (n = 2, 1%), and another race or ethnicity (n = 24, 19%). At the time of data collection, residents had from zero to 3 years of training in patient-centered interviewing training, providing a wide range of skills for coders to evaluate. Each resident conducted three total interviews for the larger study, only the one involving data-gathering and emotion-handling are reported here; the other two concern informing and motivating

and a behavioral health treatment model, for both of which we are developing dichotomous rating systems to be reported later [18].

Residents interviewed SPs during May, June, or August over the course of three consecutive years (2012–2014). Each SP was trained for a total of 20 h; SPs subsequently received approximately 6.5 h of training/year and their fidelity to the scenarios was verified. SPs were paid for their participation through a Health Resources and Services Administration grant. The instructions, scenarios, and scripts that SPs received are available from the authors. The project was approved by the university Institutional Review Board.

2.2. Procedure

Residents were evaluated in a scenario designed to test basic patient-centered interviewing skills, those for data gathering and relationship building [13]. Residents (n = 127) were videotaped in the interaction with a SP, resulting in 127 videotapes for coding. Each interview was allotted 15 min, and took place in rooms of a modern Simulation Center designed to simulate a real examination room. Video cameras were out of the view of both the SP and resident. SPs never interviewed more than 6 residents in one day to minimize participant fatigue.

Two students, independent of the study, were trained to rate resident-SP interactions by the authors. Over the course of two months, coders met with trainers two times per week for a total of 30 h. Coders were trained on a small selection of pilot videotapes from the larger grant project and from tapes of Year 1 medical students from their patient-centered interviewing training. Videotapes were reviewed in person, and discrepancies in coders' identification of the content and ratings (both from each other and from the trainers) were discussed until coding agreements could be reached and there was clarity on definitions, necessary to reduce subjectivity in evaluations. Trained coders required approximately 30 min per tape which were approximately 12 min in duration (range