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Addressing health literacy through clear health communication: A training program for internal medicine residents

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ABSTRACT

Objective: To develop, pilot, and test the effectiveness of a clear health communication curriculum to improve resident knowledge, attitudes, and skills regarding health literacy.
Methods: Thirty-one internal medicine residents participated in a small group curriculum that included didactic teaching, practice with a standardized patient, and individualized feedback on videotaped encounters with real patients. Outcomes were assessed using a pre-post survey and a communication skills checklist.
Results: Mean knowledge scores increased significantly from 60.3% to 77.6% ($p < 0.001$). Residents also reported increased familiarity with the concept of health literacy (mean response 3.2 vs. 4.5 on a 5 point scale), importance placed on health literacy (4.2 vs. 4.9), frequency of considering health literacy in patient care (3.3 vs. 4.0), and confidence in communicating with low literacy patients (3.3 vs. 4.1) (all $p < 0.001$). Use of plain language increased significantly from 33% to 86% ($p = 0.023$). There were nonsignificant increases in the use of teach-back (0–36%, $p = 0.116$) and encouraging questions (0–14%, $p = 0.502$).
Conclusion: Training in clear health communication improves resident knowledge, attitudes, and skills regarding health literacy.
Practice implications: The increased use of clear health communication techniques can significantly improve the care and outcomes of vulnerable patients with limited health literacy.

1. Introduction

Health literacy is the ability to obtain, process, and understand basic health information and services needed to make appropriate health decisions [1]. Limited health literacy is common and has a significant impact on public health [2,3]. Patients with limited health literacy may have difficulty locating providers and services, understanding written medical information, communicating with health care providers, and implementing self-care instructions. This translates into a series of adverse outcomes, including increased hospitalizations [4,5], decreased preventive health care [6,7], poorer overall health status [8–10], and higher mortality rates [10–13]. Limited health literacy may also partially explain racial disparities in outcomes [14].

A key strategy to reduce the impact of low health literacy is through improved provider-patient communication. Experts recommend a "universal precautions" approach that utilizes clear health communication practices with all patients, since most patients benefit from information that is presented in easy to understand ways [15]. Suggested clear health communication techniques include: (1) speak in plain, non-medical language, (2) confirm understanding using "teach-back" by having patients repeat information back in their own words, and (3) encourage questions using an open-ended approach: "What questions do you have?" rather than "Do you have any questions?" [15–17].

Reports issued by the American Medical Association [18] and the Institute of Medicine [19] call for greater efforts to educate health care professionals about health literacy and effective low-literacy communication techniques, yet there have been few published curricula in this area [20–24]. Prior research shows that internal medicine residents rarely consider health literacy in patient care [25], commonly overestimate patients' literacy levels [26], and may feel ineffective in communicating clearly with low literacy patients [27]. In addition, studies have

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documented infrequent use of clear health communication techniques by residents [28–30]. This information, coupled with the known adverse consequences of limited health literacy, supports the need for health literacy training in residency education.

We sought to develop and test a health literacy curriculum for internal medicine residents at the University of Pittsburgh focused on the use of clear health communication techniques. The goals of the curriculum were: (1) to improve internal medicine resident knowledge and attitudes regarding health literacy, and (2) to increase the frequency with which internal medicine residents utilize clear health communication techniques in clinical practice.

2. Methods

2.1. Study design

A pre-post study design was used to determine the effectiveness of the curriculum.

2.2. Intervention

First, we performed a targeted needs assessment to determine baseline resident use of clear health communication techniques by reviewing previously recorded resident-patient encounters. In total, 25 patient encounters were reviewed from academic year 2010 to 2011, including PGY1, PGY2, and PGY3 internal medicine residents. Over 2/3 (68%) of residents used some form of medical jargon or vague terms in their visits. Examples of jargon included: neuropathy, nonsteroidal, innervated, fracture, bronchodilator, basal, systemic, degenerative disease, LDL, and cessation. Vague terms used included: fasting, diet, and "negative" test result. No teach-back was observed in any of the encounters, and none of the residents encouraged questions using an open-ended approach ("What questions do you have?"). Thirty-two percent of residents asked, "Do you have any questions?" (closed–ended), and 40% used an ambiguous question such as "Alright?", "Okay?" or "Sound okay?" to confirm understanding. These results are consistent with other studies [28–32] and confirm that residents commonly use medical jargon or vague terms that patients may find difficult to understand and do not routinely confirm understanding using teach-back or encourage questions effectively. Based on these results, we went on to develop a health literacy curriculum aimed at improving resident use of clear health communication techniques, described below.

2.3. Curriculum overview

Groups of 3–5 residents met for 2 h weekly for three weeks during their ambulatory rotation with a faculty preceptor who had undergone training in clear health communication techniques and health literacy skills. All second year residents whose ambulatory rotation occurred between September 2011 and June 2012 participated in the curriculum and its evaluation. The residents who attended these health literacy sessions had already completed a 12 h medical interviewing course during their intern year which emphasized interviewing efficiency and rapport-building through the use of open-ended interviewing skills, emotion-seeking and emotion-handling skills, and agenda-setting. The health literacy curriculum utilized a combination of didactic training, practice with a standardized patient (SP), and individualized feedback on videotaped patient encounters to improve resident knowledge, attitudes, and skills (Table 1).

Table 1
Curriculum overview.

	Component	Time	Content
Week 1	Didactic session	1 h	Pre-test Health literacy overview ACP Foundation video Review of clear health communication skills
	Practice with standardized patient	1 h	Explain new diagnosis of diabetes Counsel on appropriate lifestyle changes Instruct patient on new medication
Weeks 2–3	Review of videotaped patient encounters	4 h	Feedback on communication skills Standardized checklist Post-test

2.4. Didactic session

The 45-min didactic session covered core health literacy concepts as derived from the medical literature [15–17]. The session included a general overview of health literacy, review of the American College of Physicians (ACP) Foundation Health Literacy video [33], and a description of suggested clear health communication techniques:

1) Speak in plain, nonmedical language. Example: *high blood pressure* instead of *hypertension*.
2) Confirm understanding using "teach-back" by having patients repeat information back in their own words. Example: "*I want to be sure that I explained your medication correctly. Can you tell me how you are going to take this medicine?*"
3) Encourage questions using an open-ended approach "*What questions do you have?*" rather than "*Do you have any questions?*"

2.5. Standardized patient encounter

pt?>Following the didactic session, residents had the opportunity to practice the clear health communication techniques with an SP in a small group setting (average of 3–5 residents with 1 facilitator). A peer-reviewed, publicly available health literacy case was revised to reflect current clinical practices and health literacy concepts [34]. The case involves a middle-aged female with a new diagnosis of type 2 diabetes. Residents were asked to use the suggested clear health communication techniques to perform a series of tasks: (1) explain the patient's new diagnosis of diabetes, (2) counsel the patient on appropriate lifestyle changes, and (3) instruct the patient on starting metformin. One task was assigned to each resident with 15 min allocated to practice each task.

A skills-based approach to communication was chosen as an educational method as it closely approximates "real life" while providing a safe environment for the practice of communication skills. It also allows for observation and feedback of a practice interview, which encourages acquisition of new skills and changes in learners' behaviors [35]. The hope is that with practice and skill acquisition, attitudinal growth toward patients with low health literacy will also occur.

The experiential session was a structured experience using time-outs. One trainee interviewed the SP, while the others observed the encounter for communications skills that facilitated and hindered discussion, focusing on clear health communication skills specifically. The time-outs involved an iterative reflective process with feedback by self-reflection, peers, faculty,