

Communication Techniques for Patients With Low Health Literacy: A Survey of Physicians, Nurses, and Pharmacists

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Objective: To explore the self-reported techniques used by health care professionals to enhance communication with patients with low health literacy. **Methods:** A survey was administered to physicians (n=99), nurses (n=87), and pharmacists (n=121) attending continuing education programs on patient safety and health care quality. Each was asked to rate communication-enhancing strategies by frequency of use and effectiveness with patients with low health literacy. **Results:** Using simple language (94.7%), hand-

ing out printed materials (70.3%), and speaking more slowly (67.3%) were the most commonly used strategies. Strategies currently recommended by health literacy experts were less routinely used. **Conclusions:** Further research is needed that evaluates the effectiveness of communication strategies for patients with limited literacy skills within diverse clinical encounters.

Key words: health literacy, communication, patient education

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According to a recent report by the Institute of Medicine, nearly 90 million Americans have difficulty understanding and acting on health information.¹ Supported by findings from

the 2003 National Adult Literacy Survey (NALS), which offers the most precise estimate of literacy in the United States to date, 43% of adults have basic or below basic reading proficiency.² These results have raised concerns about the ability of many Americans to function adequately in health care settings.² Specifically, health literacy refers to an individual's ability to read and understand health information and use it to make appropriate health decisions. Low health literacy refers to the condition in which individuals are unable to comprehend health-related information or instructions and may fail to make appropriate decisions regarding their care. Although related, low literacy and low health literacy are not interchangeable. Low health literacy is content specific; an individual may be able to read and write in certain contexts, but struggle to comprehend the unfamiliar vocabulary and concepts found in

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health-related materials or instructions.²

Recent studies suggest that there is a clear discrepancy between the skills needed to understand and comply with health-related materials and instructions (eg, patient education brochures, medication labels, consent forms, verbal instructions, discharge instructions) and the health literacy abilities of many Americans. This problem is compounded by the increasing diversity of the US population.² Studies have linked low health literacy with delayed diagnosis,³ poor disease management skills,⁴⁻⁶ and higher health-care costs.⁷ Furthermore, the literature indicates that persons with low health literacy demonstrate a more limited understanding of their disease and have worse health outcomes.⁸⁻¹⁰ Low-income individuals, racial and ethnic minorities, the elderly, and persons living in rural areas are disproportionately hindered by low health literacy.¹

Given the strong relationship between low health literacy and poor health outcomes, it is critical that interventions be developed to empower patients to become active participants in their personal health care. To date, however, the few studies examining such interventions have mostly focused efforts on simplifying existing print materials to improve readability.¹¹⁻¹⁴ One problem with this focus is that low health literacy is more than simply a reading problem. Comprehension is a critical factor in patient decisions to seek care and the patient's ability, once care is sought, to act on the health information or instructions received. Another problem is that the interventions studied represent a passive approach to health education, relying on the patient alone to read, understand, and act on the information. Although written health materials are legitimate sources of information for many patients, they may be difficult or even inappropriate for patients with low health literacy.¹³ In fact, studies note that patients with low health literacy are more likely to rely solely on verbal instruction from their health care provider.¹⁵⁻¹⁸

Health care professionals are often not prepared to help patients overcome the shame associated with low health literacy. In addition, the health care environment often precludes efforts by providers to thoroughly explain how to treat or prevent a disease in words that patients

understand. Studies suggest that physicians, in particular, may need more training in providing understandable medical information to individuals with low health literacy.^{17,19,20} Health literacy literature offers guidance for practitioners wishing to improve their communication skills, including direction on how to simplify language or use the 'teach-back' technique (ie, requesting that patients repeat information) to confirm patient understanding.²¹⁻²⁴ However, no study has documented the range of strategies currently employed by health care providers. In this study, we explore techniques used by physicians, pharmacists, and nurses to improve communication with patients with low health literacy and the perceived effectiveness of those techniques.

METHODS

Sampling

We disseminated a written, self-administered questionnaire designed by the American Medical Association (AMA) to a convenience sample of 356 health care professionals attending plenary sessions on health literacy/health communication conducted at 12 different state and national conferences on patient safety and health care quality in 2001-2002. Respondents included 99 physicians, 87 nurses, 121 pharmacists, and 49 additional health care professionals whose profession was not identified. Those who identified an administrative role only, or whose profession was not identified (n=49), were excluded from the analyses, leaving 307 respondents available for analyses.

Data Collection

Prior to the beginning of each plenary session, all attendees were asked to complete and return a 1-page, 32-item questionnaire designed to assess the use and efficacy of techniques to improve communication with patients/clients with low health literacy. Human subjects research approval was received from the Institutional Review Board at Northwestern University for this study. Questionnaire items were developed from a review of the literature and a 2000 pilot survey of physicians attending a professional meeting. Items evaluated use in the past week of a range of techniques, including asking patients/clients to repeat information 'teach back', writing out instructions, speaking more slowly, using simple lan-

Table 1
Rank Order of Communication Techniques Routinely
Used by Respondents

Technique (N)	Routine Use	
	N	%
Using simple language (avoid technical jargon) (N=304)	288	94.7
Handing out printed materials to patients (N=300)	211	70.3
Speaking more slowly (N=306)	206	67.3
Reading aloud instructions (N=303)	179	59.1
Writing out instructions (N=301)	134	44.5
Presenting 2 or 3 concepts at a time and checking for understanding (N=306)	135	44.1
Asking patient how they will follow instructions at home (N=302)	122	40.4
Asking if patient would like family member to be in discussion (N=301)	119	39.5
Asking patients to repeat information, teach-back technique (N=304)	120	39.5
Underlining key points in patient information handout (N=295)	112	38.0
Having patient follow up with office staff to review instructions (N=292)	69	23.6
Drawing pictures (N=299)	45	15.1
Following up with telephone call to check understanding/compliance (N=299)	37	12.4
Using models to explain (N=299)	31	10.4

guage, reading aloud instructions, drawing pictures, and making follow-up telephone contacts to check understanding and compliance. Past-week use of these techniques was assessed using a 5-point Likert scale (never to always). Respondents were asked to report on the overall effectiveness of each of the techniques (yes or no). An "other" category was included for respondents to write in additional techniques not listed which they had integrated into their practice. Due to space and time limitations, no other sociodemographic information beyond profession was collected from respondents.

Analyses

Items measuring past-week use of the individual techniques were initially analyzed using their original 5 category responses, then dichotomized by collapsing the "most of the time" and "always" response categories (defined as routine use) and the "never," "rarely," or "occasionally" categories. Bivariate analyses included the use of a chi-square test of proportions to examine differences in use of the various techniques by profession. All analyses were conducted using the SPSS statistical program (SPSS Inc, Chicago, IL).

RESULTS

All but 2 of the respondents (99.2%) reported having incorporated at least one

of the identified communication techniques routinely in their clinical practice. More than two thirds (70.7%) of respondents reportedly used 5 or more communication techniques most of the time or always to enhance understanding among patients with low health literacy. Table 1 presents the rank order of communication techniques reported being routinely used by all health care professionals responding to the survey. Among the most frequently cited were using simple language (94.7%), handing out printed materials (70.3%), speaking more slowly (67.3%), and reading instructions aloud (59.1%). More frequently used techniques were more basic in nature, with little attempt by health care professionals to assess patient understanding. Of the more advanced techniques examined, none were used by a majority of those surveyed. For example, less than 40% (39.5%) of the surveyed health care professionals routinely used the teach-back technique currently recommended by health literacy advocates to improve patient-provider interaction.

Table 2 lists the frequency of use of each communication strategy by profession. There were no significant differences by profession in the routine use of simple language or avoidance of technical jargon with patients, speaking more slowly, and the use of models to

Table 2
Routine Use of Communication Techniques by Profession

Technique	MD (N=99) Routine Use %	PharmD (N=121) Routine Use %	RN (N=87) Routine Use %	P-value
Asking patients to repeat information (using teach-back technique)	35.4	27.7	60.5	<.000
Speaking more slowly	65.7	69.2	66.7	n.s.
Presenting 2 or 3 concepts at a time and checking for understanding	55.1	36.4	42.5	<.020
Asking patients how they will follow instructions at home	43.4	25.6	57.0	<.000
Using simple language (avoiding technical jargon)	98.0	91.6	95.3	n.s.
Reading aloud instructions	46.9	70.0	57.6	<.003
Handing out printed materials to patients	58.2	71.8	82.4	<.002
Underlining key points in patient information handout	35.1	31.0	50.6	<.015
Writing out instructions	53.1	22.7	65.5	<.000
Drawing pictures	30.6	6.0	9.4	<.000
Using models to explain	14.6	7.6	9.4	n.s.
Having patient follow up with office staff to review instructions	35.5	11.2	27.7	<.000
Following up with telephone call to check understanding/compliance	12.5	5.0	22.6	<.001
Asking if patient would like family member to be present at discussion	56.8	11.7	59.3	<.000

explain[SRW2]. Physicians, however, were more likely than pharmacists or nurses to report routinely presenting 2 to 3 concepts at a time and checking for understanding ($\chi^2=7.84$, $P<.020$), drawing pictures ($\chi^2=28.05$, $P<.000$), or having patients follow up with office staff to review instructions ($\chi^2=17.93$, $P<.000$). Pharmacists were the most likely of the 3 professions to report routinely reading aloud instructions ($\chi^2=11.97$, $P<.003$). Nurses

were most likely to use the teach-back technique ($\chi^2=23.43$, $P<.000$), ask patients how they would follow instructions at home ($\chi^2=20.78$, $P<.000$), hand out printed materials ($\chi^2=12.96$, $P<.002$), underline key points in printed materials ($\chi^2=8.45$, $P<.015$), write out instructions ($\chi^2=40.79$, $P<.000$), and follow up with telephone calls to check patient understanding ($\chi^2=14.03$, $P<.001$). Although physicians and nurses were equally as likely to ask patients to

Table 3
Rank Order of Perceived Effectiveness of
Communication Techniques

Technique (N) ^a	Effective	
	N	%
Using simple language (avoiding technical jargon) (N=230)	221	96.1
Asking if patient would like family member to be in discussion (N=184)	171	92.9
Asking patients to repeat information (using teach-back technique) (N=223)	207	92.8
Speaking more slowly (N=232)	211	90.9
Drawing pictures (N=154)	131	85.1
Following up with telephone call to check understanding/compliance (N=138)	117	84.8
Using models to explain (N=156)	132	84.6
Writing out instructions (N=191)	161	84.3
Reading aloud instructions (N=199)	162	81.4
Underlining key points in patient information handout (N=164)	133	81.1
Having patients follow up with office staff to review instructions (N=143)	116	81.1
Asking patients how they will follow instructions at home (N=192)	154	80.2
Presenting 2 or 3 concepts at a time and checking for understanding (N=203)	150	73.9
Handing out printed materials to patients (N=208)	153	73.6

Note.

a Respondents who had ever used the technique

include a family member in the discussion, pharmacists reported doing so less often ($\chi^2=64.95$, $P<.000$).

Several of the health care professionals completing the survey also wrote in techniques they personally used to improve communication with patients with low health literacy. Write-in responses included using videotapes, assessing patients' readiness to learn, looking patients in the eye, ensuring that patients are able to hear instructions, and asking patients to identify someone able to help with medical needs.

Respondents who identified any history of using a particular communication strategy (ie, rarely, occasionally, most of the time, or always) in practice were asked to evaluate the effectiveness of the technique. All techniques listed in the survey were perceived as effective by more than 70% of respondents who had ever employed them. Table 3 shows the rank order of strategies by perceived effectiveness. Not surprisingly, when the data were stratified to examine the difference in perceived effectiveness among respondents using the techniques rarely/occasionally versus most of the time/always (not shown),

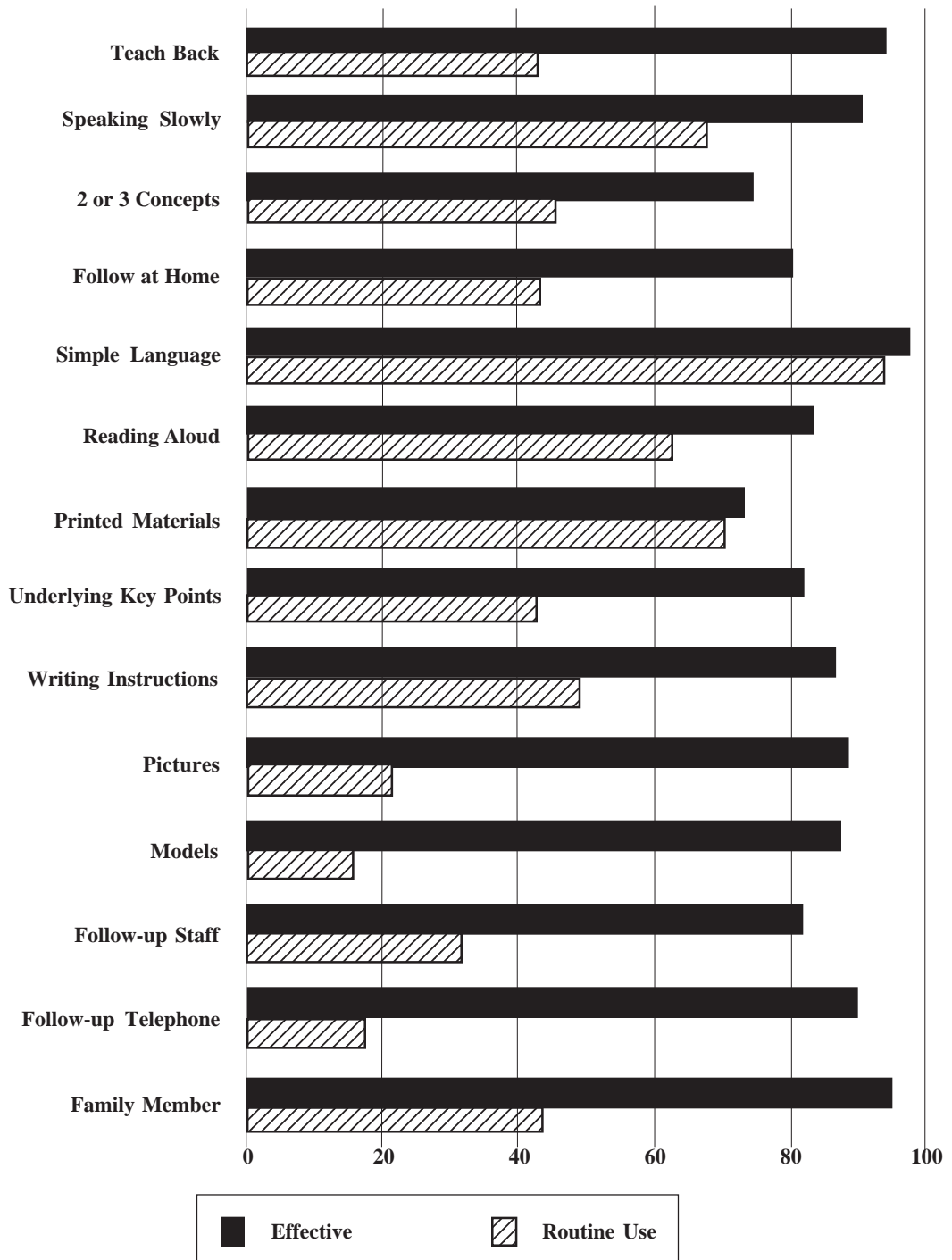
health care professionals who more often employed a technique were more likely to perceive it as effective ($P<.001$).

Figure 1 presents a comparison of routine use and perceived effectiveness of the different strategies examined (among respondents who had reported using a technique at least rarely). For most of the strategies assessed, the number of respondents reporting routine use lagged far behind the number reporting the technique effective for dealing with patients with low health literacy. The only exceptions were among the basic strategies such as using simple language and handing out printed materials to patients. Differences were most pronounced in using models or pictures to explain, asking patients to repeat information (teach-back technique), and following up with telephone call to check understanding/compliance.

DISCUSSION

Health literacy experts have repeatedly suggested that health care providers can improve communication with patients with low health literacy by employing the following techniques: slowing down; using plain,

Figure 1
Use of Communication Techniques by Efficacy
(percent)



nonmedical language; showing or drawing pictures; limiting the amount of information and repeating it; using the teach-back technique; and creating a shame-free environment.^{21,22,25,26} Our study revealed that many of these recommended strategies have been tried by physicians, nurses, and pharmacists, but are not yet routinely incorporated into clinical practice.

Among our respondents, however, providers were more likely to employ basic techniques commonly learned in medical education over more advanced strategies to improve communication with low health literate patients. For example, although a majority of respondents routinely used simple language, handed out printed material, or spoke more slowly, less than 40% regularly used the teach-back technique currently recommended by health literacy advocates. Rationale for the choice of strategies was not clear. It may be most reflective of prior training and learned strategies among health care professionals. Alternatively, physicians, pharmacists, and nurses may find basic strategies are more easily incorporated into a busy patient care routine, yet risk providing incomplete and/or unclear health information that may adversely affect patient decision making and compliance to medical instructions.²⁷

We also found significant differences in routine use for 11 of the 14 techniques among the physicians, pharmacists, and nurses surveyed. This variation among the 3 types of health care professionals may be the result of learned roles that are deeply ingrained in the professions. For instance, pharmacists may be accustomed to reading aloud instructions on prescription bottles when patients arrive at the counter to retrieve medications, but may not have the occasion to employ the other techniques in their limited interactions with patients. Similarly, our results show that physicians are more likely to use a combination of techniques to enhance patient understanding and to rely on office staff to follow up with patients and family members for assistance. The strategies more likely to be used by nurses are perhaps a representation of techniques traditionally used for patient education.

The strategies most often employed by each profession to improve communication with patients with low health literacy are an extension of their clinical role and typical interaction with patients. Inter-

vention strategies targeting specific aspects of a patient's medical care (eg, medication adherence, shared decision making, health behavior change) should take advantage of each of these professions' roles and communication styles when designing health communication interventions. Likewise, health care professionals may benefit from learning from one another regarding which communication strategies may be most effective for patients with low health literacy.

As expected, health care professionals who more frequently employed a particular technique were more likely than those who used it only rarely or occasionally to perceive it as effective in communicating with patients with low health literacy. This might reflect personal comfort with the skill required to engage a patient using a particular technique. Likewise, as professionals become more familiar with certain techniques and incorporate them into daily practice, they may become increasingly confident in both the effectiveness of certain techniques and in their abilities to communicate with patients with low health literacy. Thus, enhancing the interaction between health care professional and patient is a matter of continuing professional education.

However, just because a strategy is well liked or a health care professional is comfortable with its application, does not mean it is effective. At present, very little guidance is available to health care professionals that link a particular health communication strategy with improved knowledge, understanding, or subsequent health outcomes among patients with low health literacy.²¹ Although many health care professionals are evidently aware of the importance of provider-patient communication, research is needed to evaluate the impact of these efforts on health outcomes. This information would give health care professionals greater confidence in their methods and perhaps allow them to focus their communication strategy with patients. It is clear from our analyses, however, that belief in effectiveness alone will not guarantee use. Far more respondents rated the individual techniques as effective than were actually routinely using them in practice. This suggests the need for further research on potential role barriers (eg, time, reimbursement, self-efficacy, lack of

knowledge, skill, or experience) to the successful implementation of strategies to improve care and health outcomes for patients with low health literacy.

Our study has many limitations. Our findings are based on a survey using a convenience sample of health care professionals attending patient safety and health care quality seminars at 12 sites throughout the country. It follows that this sample is likely to be more motivated or knowledgeable on the topic of health literacy than their counterparts who were not present at the meetings. This sample then represents the best-case scenario for reported communication behaviors between health care professionals and patients with low health literacy. As a consequence, the reported data may only underestimate the need for further training and education in this area. Although our findings provide new insight into the various professions' response to the problem of low health literacy, we were unable to gather demographic data from respondents regarding age, gender, geographic location, and specific practice attributes which might influence their use of certain methods. Future studies should examine various provider and practice factors which may influence communication behaviors directed at patients with low health literacy.

The present findings have direct relevance to clinical practitioners, clinics, and pharmacy programs. Educating patients and assessing knowledge and understanding should be a systemwide endeavor, including the physician, nurse, pharmacist, and other health care professionals directly involved with the patient. Many providers may need specific education about low health literacy and its implications for the health care system, as well as strategies for communicating with patients who have low health literacy skills. Although our findings suggest many if not most health care professionals take active steps to ensure patient understanding, research efforts need to support these professionals by offering specific guidance as to how to improve their communication skills with patients with low health literacy.

Disclaimer

The views and opinions contained in this article are those of the authors and

should in no way be construed as representing the official policies of the American Medical Association.

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