

# Physicians' Attitudes and Beliefs About Deaf Patients

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**Background:** We wanted to validate reports that deaf persons have difficulty obtaining medical care by comparing physicians' attitudes towards these patients with physicians' attitudes toward their patients in general.

**Methods:** Two questionnaires were randomly distributed to physicians attending continuing medical education conferences at the University of Michigan during a 3-month period. The questionnaires were identical except that one asked about deaf patients and the other about patients in general. The questions assessed the respondent's perceptions of communication with patients, attitudes toward their patients, knowledge of current information about deaf people, and demographics.

**Results:** One hundred sixty-five physicians responded, 94 to the general questionnaire and 71 to the deaf questionnaire. The two physician groups were similar demographically, but 165 differed significantly in communication and attitude variables. Physicians receiving the questionnaire focusing on deaf patients reported greater difficulties in understanding ( $P < 0.001$ ) and maintaining free-flowing conversations ( $P < 0.001$ ), and that these patients had more difficulty understanding them ( $P < 0.001$ ), trusted them less ( $P < 0.001$ ), asked them to repeat statements more often ( $P < 0.001$ ) and were less likely to understand the diagnosis and recommended treatments ( $P < 0.001$ ). Physicians also reported feeling less comfortable with deaf patients ( $P < 0.001$ ) and that they asked fewer questions ( $P < 0.001$ ). Physicians were more likely to say that deaf patients rely on interpreters ( $P = 0.040$ ), get frustrated easily ( $P < 0.001$ ), and are harder to communicate with ( $P < 0.001$ ).

There were no significant differences between the two groups in knowledge about deaf people. All physicians, however, displayed ignorance about their legal obligations under the Americans with Disabilities Act to provide interpreters for their deaf patients.

**Conclusions:** Physicians surveyed about deaf patients reported significantly greater difficulties communicating with and different attitudes toward these patients than physicians surveyed about their patients in general. All physicians were unaware of their obligations under the Americans with Disabilities Act to provide interpreters for deaf patients. Research is needed to determine whether physician attitudes and beliefs affect the actual quality of care they deliver to deaf patients. (J Am Board Fam Pract 1996;9:167-73.)

Hearing loss is the second most prevalent chronic condition in the United States.<sup>1</sup> More than 20 million Americans have hearing loss, and as the population ages, this number will rise.<sup>2</sup> Ten percent of these persons are profoundly deaf<sup>1</sup> and rely on either lipreading or American Sign Language for communication.

The limited amount of research available on the health status of deaf persons suggests that

they have altered health care utilization patterns and poorer perceived health status. It is unclear the role that poor physician-patient communication, inadequate health care information, coexisting chronic medical conditions, cultural differences, and other factors play in this situation.<sup>3</sup>

Studies have found that deaf patients' knowledge of health information is either less than their hearing counterparts or is incorrect and incomplete.<sup>4,5</sup> Similarly, inadequate communication presents a barrier to deaf persons receiving health care.<sup>4,6,7</sup> Inability to communicate effectively with physicians might cause inadequate explanations, misunderstandings of treatments, frustration on both sides, and more time spent in consulta-

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tion.<sup>4,7,8</sup> As a result of physicians' general lack of knowledge and understanding about deafness and its implications, physicians might underestimate the intelligence of deaf patients and give reassurances or oversimplified explanations.<sup>8</sup> Most medical schools do not address issues of stereotyping and labeling of these patients.<sup>9</sup> In fact, most health care personnel know little about deafness and how deaf persons communicate.<sup>6</sup>

Ebert and Heckerling<sup>10</sup> reported that although physicians understood the benefits of sign language interpreters, only a minority of them used interpreters when caring for deaf patients. Subconscious sociocultural stereotypes play a role in how physicians make clinical decisions.<sup>11,12</sup> Physicians' judgment seems to be influenced by the nature of the relationship with the patient, characteristics of the patient, and characteristics of the physician. Physicians' reactions to such patient characteristics as social class, sex, physical appearance, and ethnicity result from lifelong conditioning in which stereotypes have been firmly entrenched in the belief system.<sup>13</sup> It is possible that preconceived cultural beliefs about people with disabilities affect the way physicians behave toward deaf patients.

This study, based on a physician survey, was designed to investigate whether physicians perceive deaf patients differently from their patients in general. Such differences might help explain the altered health care utilization patterns of these persons and would have implications for training programs for physicians and medical students.

## Methods

### Sample

All but 8 physician participants in the study attended medical conferences organized by the University of Michigan Center for Continuing Medical Education (CME) in Ann Arbor, Mich, in various locations around the state (including Traverse City, Mackinac Island, and Ann Arbor). Physicians attending the conferences practiced in a wide range of specialties, but the majority were primary care physicians in family practice and internal medicine.

The remaining 8 physicians were otolaryngologists who were selectively recruited to study whether the physicians attending the conferences had attitudes toward deaf persons that were different from those of other physicians. The otolaryngologists were members of the University of

Michigan Otolaryngology Department and a 5-person private practice in Ann Arbor.

### Questionnaire Design

Questionnaire items\* were selected, where possible, from previously validated questionnaires, such as those used in the Rand Corporation Survey and the National Health Interview Survey. Additional questions were developed to address the issue of physician-patient communication with deaf persons. All questions were divided into four areas of interest regarding the responding physicians: their general communication techniques and styles, their attitudes toward their patients, their knowledge of information about deaf people, and their demographic characteristics. The communication section focused on how well physicians believed they communicated with their patients. The attitude section asked questions to ascertain how comfortable physicians felt around their patients, whether their patients trusted them, and whether their patients got frustrated easily. The knowledge section included socioeconomic and health care-related questions about deaf people. Finally, the demographics section asked about the number of deaf patients in the respondent's practice as well as demographic characteristics of the responding physicians.

We believed that asking each physician the same questions about both their deaf patients and all their patients in general would cause respondents to normalize their answers. Thus, two versions of the questionnaire were designed. In one version, questions were only about the physicians' deaf patients, and in the other, questions were only about the physicians' patients in general. To be consistent, the former questionnaire focused on patients with a profound hearing loss. The questions and statements were specifically designed to address the issues we were looking at. So that all physicians considered the same population when completing the survey, the phrase "deaf and hard-of-hearing" was defined at the beginning as follows:

"Deaf and hard-of-hearing people comprise 10 percent of the American population. For the purpose of this study 'deaf and hard-of-hearing' refers to people who have a profound or total

\*A copy of the survey instrument is available from the authors upon request.

**Table 1. Sample Demographics of Responders (n = 165).**

Characteristics	Responses
Men (%)	76
Average age (years)	43
Married (%)	86
Specialty (%)	
Family practice-general practice	35
Internal medicine	35
Otolaryngology	7
Other*	23
Average number of years in practice (years)	13
Have ever treated deaf and hard-of-hearing patients in career (%)	96
Have a deaf or hard-of-hearing family member (%)	38
Religion	
Protestant (%)	47
Catholic (%)	25
Other (%)†	22
Board certified (%)	76
Race, white (%)‡	87

\*Other specialties, including obstetrics-gynecology, anesthesiology, emergency medicine, neurology, otolaryngology, pathology, surgery.

†Other religions: Jewish (5%), none (9%) and unlisted (8%).

‡Other races: Asian (5%), African-American (2%), Hispanic (1%), and unlisted (1%).

hearing loss and who rely either on lipreading or sign language for language comprehension."

The two survey instruments were identical except for the statement, "I don't like treating deaf and hard-of-hearing patients because I can't talk well with them," that was left out of the general survey. There were thus 37 questions in the deaf questionnaire and 36 in the general questionnaire. Physicians could respond to the statements using Likert rating scales of 1 to 7, with 1 being "strongly agree," "very often," "very comfortable," or "very well," and 7 being "strongly disagree," "not often at all," "very uncomfortable," or "not well at all."

The questionnaires were pretested on a group of 80 physicians attending a University of Michigan CME course. Physicians took about 10 minutes to complete the questionnaire. There were no difficulties associated with the announcement or distribution of the questionnaire, but ambiguities in several statements were found. These statements were changed to clarify their content, and the revised survey instrument was used for this study.

### Questionnaire Administration

Equal numbers of both questionnaires were randomly mixed by the investigators before being given to the University of Michigan Continuing Medical Education Center. The director of the center gave a precounted set of surveys to a staff person responsible for distributing the questionnaire at each conference. To maximize consistency in the administration of the questionnaires, each staff person received the same set of instructions, which included a statement of the basic purpose of the study (to understand how physicians interact with their patients) along with a script to read to the physician audience. The staff person was also instructed to record the number of questionnaires distributed and completed. Physicians returned the completed questionnaires to the staff person. There were no additional steps used to persuade physicians to complete the questionnaires. No information was available about physicians who did not complete the questionnaire.

### Analysis

After initial descriptive analysis, differences between the physician responses regarding patients in general and deaf patients with respect to demographics, communication techniques, attitudes, and knowledge were tested using chi-square analysis and Student's t-tests. Although not presented, the effects of the specialty, demographic, and experience variables (both practice-based and personal) did not alter any findings when included in analysis.

### Results

#### Demographics

A total of 165 physicians responded to the survey; 94 completed the general questionnaire and 71 the deaf questionnaire. The overall response rate to this onetime request was 38 percent. The demographic characteristics of the participants are shown in Table 1. Univariate analysis demonstrated no demographic differences between the respondents in the two survey groups.

#### Communication

Physicians who completed the deaf questionnaire reported more difficulties communicating with patients than did the comparison group (Table 2). They were also more likely to report they did not

**Table 2. Communication of Physicians with Deaf Patients Compared with All Patients.**

Questionnaire Item*	Deaf Patients†	All Patients†	P Value
How well do you think your patients understand you?	3.8	2.5	< 0.001
How well do you understand your patients?	3.5	2.5	< 0.001
How well do your patients trust you?	2.8	2.2	0.001
How well are you able to maintain a free-flowing conversation with your patients?	4.6	2.2	< 0.001
How often do your patients interrupt you to ask questions?	4.3	4.0	NS
How often do your patients ask you to repeat something?	3.8	4.6	0.001
My patients usually understand my diagnosis and recommended treatment.	3.3	2.6	< 0.001

\*In the deaf questionnaire, the words deaf and hard-of-hearing were inserted before the word patient in each of the questions.

†Numbers are averaged on a scale from 1 to 7, with 1 indicating very comfortable, strongly agree, extremely well, or very often and 7 indicating very uncomfortable, strongly disagree, not well at all, and not often at all.

understand their patients ( $P < 0.001$ ) and to believe their patients did not trust them ( $P = 0.001$ ). There was no difference in how often patients were perceived to interrupt to ask questions, although physicians who answered the general questionnaire were more likely to report their patients asked them to repeat something ( $P = 0.001$ ).

### Attitudes and Beliefs

Table 3 presents the responses to the attitude and belief statements for each group. Whereas physicians who received the general questionnaire reported feeling more comfortable with their patients ( $P < 0.001$ ), those who received the deaf questionnaire reported they communicated less easily with their deaf patients ( $P < 0.001$ ). Similar to the difference in level of patient trust, those who received the deaf questionnaire rated a lower level of patient trust toward all physicians ( $P = 0.003$ ). There was no significant difference between the two groups responding to the statement, "Hearing impairment is an invisible handicap."

### Knowledge

There was no significant difference between the two groups on any of the items in knowledge of current information about deaf persons. Respondents to both questionnaires, however, disagreed

equally with the statement: "The Americans with Disabilities Act (ADA) requires that doctors provide deaf and hard-of-hearing patients with interpreters in doctor's offices at the doctor's expense" (mean 4.8 for both groups on a 1-7 Likert scale, with 1 being agree strongly and 7 being disagree strongly).

### Discussion

Our results suggest there are differences in the way physicians view deaf patients compared with their perception of patients in general. That physicians were more likely to complete the questionnaire if they received the general survey (equal numbers of both questionnaires were distributed, but a higher percentage of general

questionnaires were completed) further supports this finding. Such differences, if they do exist, have serious implications in view of the current emphasis on equal access to care for people with disabilities.

### Communication

Physicians who received the deaf questionnaire reported numerous communication difficulties, including a feeling that deaf patients had trouble understanding them. Perhaps it is harder for physicians to maintain a free-flowing conversation with these patients. It is interesting, however, to note these physicians also reported that deaf patients ask them to repeat statements less often than other patients, contrary to what one would expect if communication were unclear. It is possible that deaf persons might be fearful or shy when seeing physicians, or that the cultural norms of the deaf community, an absence of interpreters, or an inability of the physician or patient to communicate clearly because of the language barrier could contribute to fewer questions being asked.

The finding that physicians have trouble communicating with and understanding their patients is consistent with the results of previously published research.<sup>3,6,12</sup> Common perceptions by deaf persons and physicians regarding the diffi-



culties of their interactions support the existence of the problem and the need to address it.

Another interesting finding was that physicians who responded to the general questionnaire were more likely to report that their patients trusted them. Our previous research has shown that, despite the communication difficulties, deaf patients trust their physicians as much as hearing patients do.<sup>3</sup> Reasons for the difference in physicians' perceptions are unclear, as is whether these perceptions affect their treatment of deaf patients.

### Attitudes

Physicians who filled out the deaf questionnaire reported a lower level of comfort when seeing these patients. Whether this lowered comfort level is the result of previous difficult experiences communicating with deaf persons or is due to negative attitudes about deaf persons is unknown. Interestingly, there was no difference between physicians who care for many deaf patients and those who care for only a few, suggesting that exposure to deaf patients does not improve this feeling. Whether this discomfort also occurs with other types of language barriers (other non-English-speaking adults have similar problems obtaining health care<sup>7</sup>) is unknown. Similarly, it is unknown whether physicians respond differently to different types of disability. It is possible that the differences between our two groups were due to the attitudes toward all disabilities, not just hearing loss. Further research is necessary to determine the effect of these issues.

It is possible that the deaf community, a well-described minority,<sup>14,15</sup> has unique cultural beliefs regarding health care. Our unpublished research suggests, for example, that deaf persons have different attitudes and beliefs about acquired immunodeficiency syndrome (AIDS) compared with hearing persons. If so, the unique perceptions of deaf persons might affect how physicians interact with them.

Physician attitudes and styles could also explain the greater frequency of physician visits that deaf

**Table 3. Attitudes and Beliefs of Physicians Toward Deaf Patients Compared with Attitudes and Beliefs Toward All Patients.**

Questionnaire Item*	Deaf Patients†	All Patients†	P Value
How comfortable do you feel around your patients?	2.8	1.8	< 0.001
Most patients rely on interpreters to communicate with doctors.	4.5	5.1	0.040
Your patients get frustrated easily.	4.2	5.2	< 0.001
I communicate easily with my patients.	4.3	2.2	< 0.001
My patients ask a lot of questions.	4.5	3.3	< 0.001
My patients trust doctors.	3.6	3.1	0.003
My patients worry they receive the wrong treatment because of problems communicating with doctors.	3.6	5.0	< 0.001
Hearing impairment is an invisible handicap.	3.3	2.9	NS

\*In the deaf questionnaire, the words deaf and hard-of-hearing were inserted before the word patient in each of the questions or statements.

†These numbers reflect averages on a scale from 1 to 7, with 1 indicating very comfortable, strongly agree, extremely well, or very often, and 7 indicating very uncomfortable, strongly disagree, not well at all, and not often at all.

patients are known to make.<sup>3,16</sup> If deaf patients do not understand what they have been told or if physicians do not consider these patients' belief systems when making treatment recommendations, they might make return visits in an attempt to meet their health care needs.

### Knowledge

Although there was no difference between the two groups about their knowledge of the deaf population, physicians as a group disagreed with the statement: "The Americans with Disabilities Act (ADA) requires that doctors provide deaf and hard-of-hearing patients with interpreters in the doctor's office at the doctor's expense." This indicates that physicians are not aware of their legal obligations under the Americans with Disabilities Act. If true, education is needed for providers to facilitate health care access for deaf patients and avoid legal complications. We know of two lawsuits (one in Michigan and one in California) which have been filed by deaf patients who claim their physician failed to provide interpreter services. It is anticipated that the use of interpreters will benefit the physician-patient relationship, although its impact on health care utilization and outcomes are unknown. Some evidence suggests interpreters could actually increase the use of the

health care system by deaf persons.<sup>3</sup> Anecdotal evidence in the deaf community would suggest that poor communication between deaf persons and their physicians results in poorer outcomes; however, this outcome has not been investigated in controlled studies. Such studies are sorely needed.

### **Limitations**

We recognize several limitations of this study, including sample bias, small absolute differences, and different interpretations to some responses of study questions. First, physicians who take part in surveys at CME conferences might not be representative of the general population of physicians. Moreover, physicians who received the deaf questionnaire might have discarded it if they had no deaf patients.

Second, only 38 percent of physicians invited to participate in the survey completed the questionnaire. Where there are multiple contacts with people to whom the questionnaire is distributed, 38 percent would be considered quite low. This onetime request was made to a group of attendees who were also being deluged with information and other requests, however, and as no additional efforts were made to encourage participation, we consider our response rate to be acceptable. Nevertheless, it is possible that the respondents were not typical of all physicians at the conferences. Furthermore, because we have no information about those who did not complete the questionnaire, we cannot tell whether there are measurable differences between those who did and did not complete the questionnaire.

Third, although there were numerous significant differences between the respondents' answers to the two questionnaires, for some statements the absolute numbers were not that different. For example, the mean score for how much physicians thought their patients in general trusted them was 3.1, and the mean score for how much physicians thought their deaf patients trusted them, was 3.6. The two means are relatively close, although statistically different. The clinical importance of these cases might be less than when a wider spread occurred between the means. That there was a statistically significant difference with almost every question, however, supports the conclusion that physicians do view

deaf persons differently.

Fourth, the wording of the statements could have affected the responses in unintended ways. Unfortunately, the English language is inconsistent with words related to hearing loss. People who are hearing impaired are often considered deaf and vice versa. Although the phrase "deaf and hard-of-hearing" was defined in our survey, physicians might still have used internal perceptions of deafness and included patients with mild hearing loss when they gave their responses. For example, a few physicians in both groups listed that they had treated hundreds of deaf patients. We suspect that these physicians included all patients with hearing loss. The recurrent differences, however, between the two physician groups suggest that physicians do view their deaf patients differently; the similarities of both survey results regarding physician knowledge about deafness supports this conclusion. Moreover, if physicians did include patients with milder hearing loss, our findings are even more impressive; physicians are likely to have greater difficulty with persons with more severe hearing loss.

Fifth, physician responses could have been affected by the way the questionnaires were distributed. Questionnaires were distributed at each conference by different people, and although these people had the same set of instructions, it is possible they were not consistent in their delivery. Moreover, those who distributed the questionnaires were not blinded to the purpose of the study.

### **Conclusions**

We found significant differences in the way physicians responded to questions about patients compared with their general patients. Further research is required to pinpoint specific reasons for the difficulty in the deaf patient-provider relationship, including whether the difficulties are unique to the deaf patient population, to all non-English speaking populations, or to patients with all types of disabilities. Once these reasons have been described, efforts can be directed toward improving interactions between deaf patients and their physicians.

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