

Clinical audit

The impact of hearing on communication

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Summary

The study was designed to assess the impact of hearing impairment on communication between older hospital patients and medical staff and to see whether intervention to improve hearing influences perceived communication. Structured interviews were held with 200 mentally alert elderly hospital in-patients before and after the introduction of voice amplifiers and acetate cards depicting a hearing problem. Prior to intervention 22% of patients rated communication with their doctor as poor or unsatisfactory. Following intervention there was a significant improvement (Chi-square $p=0.006$), with only 6% of patients reporting communication with their doctor as poor or unsatisfactory. Most of the patients who felt communication was unsatisfactory could not hear what was being said. We conclude that simple measures can improve the number of older patients hearing what their doctor says and improve their perception of communication with the hospital doctor.

Keywords: communication; elderly; hearing

Communication is the key foundation to a satisfactory patient–doctor relationship. In taking a history, doctors may arrive at a diagnosis even before clinical examination begins. Communication requires a satisfactory approach to the patient, the ability to listen and give sufficient time to the patient to recount their story, and finally a competent interrogation by the doctor to clarify the patient’s account and to extract relevant information.¹

For doctors, communication is an art which is hopefully acquired and developed with practice. Problems in communication may arise in several areas independent of the doctor’s skill in communication, eg, insufficient time available, patients unable to give a clear history due to delirium or cognitive impairment, dysphasia, and last but by no means least, difficulty in hearing due to presbycusis.² Presbycusis is age-associated hearing loss. It is almost always symmetrical and usually starts in the high frequency range. Hearing aids benefit most patients. Since most females have higher frequency voices than males, people with presbycusis may find it easier to hear male voices than female. If a patient is unable to hear what is being said this may adversely affect communication with their doctor, leading to disappointment and frustration on the part of the

patient. In addition, it has been shown that there is a significant correlation between auditory acuity and performance of older people in completing mental status questionnaires, suggesting that the cognitive capability of older people may be underestimated because of their reduced sensory acuity.³ This may lead to delays in diagnosis or even misdiagnosis. We have looked at the effect of hearing impairment on patients’ satisfaction with communication with their medical staff.

Methods

The study was approved by the Wirral district’s ethics committee. In phase 1, 100 elderly in-patients (68 women, mean age 81 years, range 70–90) on two acute wards in the department of medicine for the elderly were interviewed by a doctor not involved in their medical care. All patients scored 8/10 or more on an abbreviated mental test score,⁴ and were fully recovered from their acute illness. A questionnaire was administered and the responses recorded. Both male and female doctors administered the questionnaire in equal numbers.

In phase 2, another 100 elderly in-patients (72 women, mean age 82, range 72–97,) were interviewed in the same wards under the same conditions as those in phase 1, following the introduction of the use of voice amplifiers (Model Speechmaster manufacturer Universal Aids Ltd, UK; figure 1) and acetate cards placed above the beds to identify patients with a hearing problem (figure 2). The patients on both wards were looked after by a total of eight doctors (four of whom were women). The majority of nursing staff (98%) were female.



Figure 1 Voice amplifier

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Figure 2 Acetate card placed above the bed to identify patient with a hearing problem



Results

In phase 1, 22% of patients rated communication with their doctor as poor/very poor/unsatisfactory (table 1). In phase 2 there was a significant improvement (Chi square $p=0.006$), with only 6% of patients reporting communication with their doctor as poor/unsatisfactory (table 1). There was a significant difference between patients' perception of communication with nurses and doctors in phase 1, with nurses scoring significantly better than doctors (Chi square $p=0.001$) However, in phase 2 there was no significant difference between doctors and nurses. There was no significant difference in patients' perceptions of communication with nurses between phases 1 and 2.

There was a slight improvement between phases 1 and 2 in patients' understanding of what was said when the doctor spoke but this was not significant (Chi square $p=0.08$, table 2). There was no significant difference between phases 1 and 2 in patients' perception of whether the doctor understood them when speaking to them (table 2), nor was there any difference in patients being asked if they had any questions or given enough time to speak. There was a significant difference between

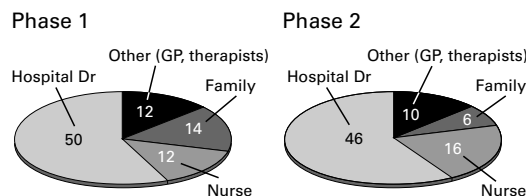


Figure 3 Response to the question: "From whom have you learnt most about your diagnosis and treatment?"

phases 1 and 2 in the patients' opinion of whether communication could be improved with medical staff. In phase 2 fewer patients felt that communication could be improved (Chi square $p=0.0001$) (table 2).

The majority of patients (figure 3) had learnt most about their diagnosis from their hospital doctor, followed by the nursing staff. However, some patients in both phases 1 and 2 felt they had learnt most from their own family or general practitioner or therapists. There was no significant difference between phases 1 and 2.

Although most patients (74) in phase 1 could hear what was being said (figure 4), 26 said they could not hear, of whom 18 did not let the doctor know. Of the 22 patients who felt communication with their doctor had been poor/very poor/unsatisfactory, 20 could not hear what was being said. In phase 2 there was a significant improvement (figure 4) with only nine patients not hearing what the doctor said (Chi square $p=0.0016$). In phase 2, 20 patients in phase 2 had informed the doctor of a hearing difficulty and 18 patients made use of the amplifier. There was no significant difference between phases 1 and 2 in patients knowing what their diagnosis was or wanting the doctor to discuss diagnosis with their family (table 3). However, in phase 2, there was an improvement in patient understanding of why they were taking their tablets (Chi square $p=0.004$), although 34 patients in phase 2 still did not know why they took their tablets.

Table 1 Patients' ratings of communication

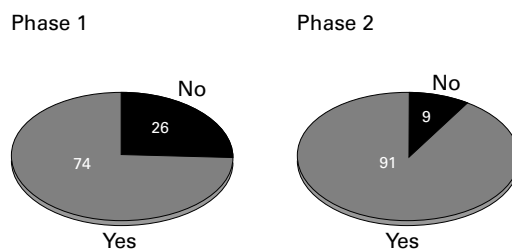
	Good	Satisfactory	Unsettling	Poor	Very poor
<i>Phase 1</i>					
How do you feel communication with your hospital doctor has been?	36	42	3	16	3
How do you feel communication with your nurse has been?	52	42	0	6	0
<i>Phase 2</i>					
How do you feel communication with your hospital doctor has been?	78	14	4	4	0
How do you feel communication with your nurse has been?	76	20	2	2	0

Table 2 Patients' understanding

	Phase 1			Phase 2		
	Yes	No	DK	Yes	No	DK
Did you understand what was said when the doctor spoke to you?	74	22	4	84	12	4
Do you think the doctor understood you when you spoke to them?	74	14	12	78	6	16
Did they give you enough time to speak?	74	24	2	84	14	2
Have you been asked if you have any other questions you need answering?	46	48	6	50	44	6
Do you think communication with medical staff could be improved?	34	52	12	11	79	10

DK= don't know

Figure 4 Response to the question: "Could you hear what the doctor said?"



Prior to admission 27 patients (phase 1) and 21 (phase 2) used hearing aids. Only 24 patients (phase 1) and 19 patients (phase 2) had brought their hearing aids into hospital, and of these, five (phase 1) and three (phase 2) were non-functioning.

Discussion

Several studies have indicated that approximately 25% of people between 65 years and 74 years of age, and almost 50% of those 75 years of age or older, experience hearing difficulties.²⁻⁵ Age-related presbycusis is a complex disorder involving loss of speech processing and discrimination as well as perception of pure tones. Many patients with presbycusis will benefit from amplification of sound. Whilst some older patients will have sought help from hearing aids prior to hospital admission some will not⁶ and some patients will not have their hearing aid in hospital. Inability to hear what is being said leads to dissatisfaction and the feeling that communication with medical staff could be improved (table 2). Communication with the nursing staff was initially significantly more satisfactory than with doctors (table 1). This may reflect the increased time that nursing staff spend with the patients, although it is also possible that the nursing staff had taken the time and effort to establish the patient's ability to hear. In addition it is possible that doctors use 'medical jargon' more frequently than nursing staff, contributing to communication difficulties.

In phase 2, with the use of voice amplifiers and acetate cards, more patients reported being able to hear the doctor and not surprisingly communication with the doctor was felt to be significantly better than in phase 1 with fewer patients thinking that communication could be improved (table 2). Unfortunately, there was no significant improvement in patients understanding what was said when the doctor spoke, or knowing what the diagnosis was. Moreover, many patients felt they had learnt most about their diagnosis and treatment from people

other than the doctor (figure 3). This suggests that there is a lot of room for improvement and perhaps the introduction of written explanations for some conditions maybe helpful. There was a significant improvement in patients understanding why they were taking their tablets but even so 34 patients in phase 2 did not know why they were taking them. For older patients, who are more likely to have multiple pathologies and therefore taking several drugs, this is a particular problem. It is impossible to entirely exclude the possibility that the perceived improvement in communication in phase 2 was due to the medical staff making more time and effort in their communication, independent of the voice amplifiers. The contribution is, however, likely to be small. First, the medical staff on the two wards were blind to the phase 2 audit being completed. Second, these are very busy acute wards and medical staff had the same workload in both phases; they are therefore unlikely to have been able to spend more time with their patients.

Doctors working with older patients should be aware of the high prevalence of presbycusis and specifically enquire whether patients can hear, as not all patients will volunteer that they have problems hearing. Identification of such patients using a sign above their beds (provided they have no objection) will be useful for all hospital staff, and voice amplifiers should be readily available to facilitate communication where such a problem is identified. Most complaints by patients about doctors deal with problems of communication.⁷ The commonest complaint is that doctors do not listen to them.⁸ Although most patients in this study (158) felt that they had been given sufficient time to talk to the doctor, some (42) felt that they had not. With the increasing workload on hospital doctors and no increase in resources it is difficult to see how this issue can be adequately addressed. It might be useful for doctors to try and ensure that at the end of every communication with the patient they routinely ask if the patient has any questions. In this study less than 50% of patients had been asked (table 2). Most but not all patients would like the doctor to discuss their diagnosis with their family (table 3). Doctors should not assume that they have their patient's permission to talk to their family but directly enquire with the patient whether they have permission. Not all patients and their relatives have the same opinion on information and treatment.⁹

This study has shown that simple measures can improve the number of older patients hearing what the doctor says, their perception

Table 3 Patients' knowledge of their illness

	Phase 1			Phase 2		
	Yes	No	DK	Yes	No	DK
Do you know what your diagnosis is?	66	18	16	74	20	6
Would you like your doctor to discuss the diagnosis with your family?	74	16	10	66	32	2
Do you know why you take your tablets?	46	28	26	66	30	4

DK=don't know

of communication with the hospital doctor, and their knowledge of why they are taking their tablets. Communication is a two-way process and both parties need to understand what the other is saying. Improving the ability of the patient to hear not surprisingly improved communication, although not in all areas. The study suggests that further interventions to improve communication are required (box). There is evidence that changing doctors' behaviour and communication skills can be achieved with teaching.¹⁰ In order to learn, however, doctors need to be aware that there is a problem and therefore a need to improve. Poor communication is not only frustrating to the patient but may impair the ability of doctors to reach a speedy diagnosis and appropriate management plan, with adverse clinical effects.

Interventions suggested

- include tactics on recognising and dealing with hearing impairment in the elderly in hospital doctor induction programmes
- use of corporate deafness awareness programmes
- use appropriate quiet environments for consultations to improve signal to noise ratio
- identify patients with hearing difficulty by the use of an acetate (depicting an ear) above their bed (if the patient is agreeable to this)
- ensure use of a hearing aid in such patients if available
- use voice amplifiers if necessary
- enquire at the end of a patient discussion whether they have any questions and understand what the doctor has said
- consider the use of written information about the disease and treatment

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Medical Anniversary

Sir George Still, 27 February 1868

Sir George Frederic Still (1868–1941) was born in Holloway, London, son of a surveyor of customs. He was educated at Merchant Taylors' School, Caius College, Cambridge and Guy's where he qualified in 1893. He became a physician at Great Ormond Street and the first professor of paediatrics at King's College.

He will be remembered for describing Still's disease, juvenile rheumatoid arthritis, for which he earned his MD (Cantab 1896) before he was 30 years old, while still a registrar at Great Ormond Street Hospital. The features are symmetrical fusiform joint swelling, lymphadenopathy, splenomegaly, uveitis and a maculopapular rash, more often in girls. Patients are rheumatoid-factor negative but a subset may be antinuclear antibody positive.

Still became physician to the King and to the Duke and Duchess of York and wrote a popular textbook of paediatrics. He died on 28 June 1941. — *DG James*