Measuring quality and patient satisfaction in healthcare communication with foreign-language speakers

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Healthcare services face increasing challenges to provide accessible care to an equally increasing diversity of patient populations. This is clearly reflected in the linguistic diversity of people living in Switzerland and can be seen most plainly in the country's public hospitals. After a literature review on language barriers in clinical services and the potential impact that interpreters can have in clinical outcomes, we describe how interpreters can be introduced in a primary care setting and how the quality of communication with foreign-language-speaking patients as well as their satisfaction with communication can be improved. Changes in the quality of interpreter-mediated communication, as rated by the patients themselves, can be monitored and have a beneficial impact on the quality of care. This is important at a time of growing cultural and linguistic diversity in Switzerland and other countries, which requires healthcare systems to implement high-quality professional interpreter services that ensure effective communication with foreign-language-speaking patients.

0. Introduction

Healthcare services face increasing challenges to provide accessible care to an equally increasing diversity of patient populations. This is clearly reflected in the linguistic diversity of people living in Switzerland and can be seen most plainly in the country's public hospitals, whose patients constitute a representative sample of Swiss residents.

According to national census data, ten per cent of Swiss residents are foreign-language speakers (FLS), i.e. they do not speak one of the local languages: German, French, Italian, Romansh (Lüdi & Werlen 2005). Language barriers between patients and healthcare providers are a major obstacle to the provision of quality care to culturally diverse populations. The use of interpreters has been advocated as the means to overcome them.

1. The impact of language barriers

In this article we first review the impact of language barriers in clinical services, with a special focus on patient satisfaction. We then review the existing health literature on the impact of interpreters and describe how interpreters can be introduced in a primary care setting and how the quality of communication with FLS patients, as well as their satisfaction with communication, can be improved. This latter part is based on an earlier study un-

dertaken as a quality-of-care project and re-uses some of the data collected at the time (Bischoff, Perneger, Bovier, Stalder & Loutan 2003). The final comment highlights a number of methodological issues which are the crucial to measuring FLS patient satisfaction.

1.1. The impact of language barriers on clinical outcomes

Research evidence shows that FLS patients are less likely to get appointments for medical follow-up (Sarver & Baker 2000), less likely to return for follow-up consultations (Pitkin & Baker 2000), and less likely to comply with prescriptions (David & Rhee 1998). FLS patients are also at increased risk of drug complications (Gandhi et al. 2000). In a study assessing patient centredness in medical encounters, FLS patients made fewer comments on their health condition than native English-speakers, and their comments were more likely to be ignored, with a risk of poorer medical outcomes (Rivadeneyra, Elderkin-Thompson, Silver & Waitzkin 2000). Language barriers were associated with a higher utilisation of diagnostic investigations (Hampers, Cha, Gutglass, Binns & Krug 1999), lower uptake of preventive services such as breast examinations (Woloshin, Schwartz, Katz & Welch 1997) and pap smear tests (Jacobs, Karavolos, Rathouz, Ferris & Powell 2005), as well as lower adherence to self-monitoring of blood glucose (Karter, Ferrara, Darbinian, Ackerson & Selby 2000).

1.2. The impact of language barriers on patient satisfaction

Language barriers and the absence of interpretation are correlated with lower patient satisfaction, as several studies have shown: Spanish-speaking patients were significantly more dissatisfied with provider communication than white patients (Morales, Cunningham, Brown, Liu & Hays 1999); FLS clients were less satisfied with their care in the emergency department, less willing to return to the same emergency department if they had a problem they felt required emergency care, and reported more problems with emergency care (Carrasquillo, Orav, Brennan & Burstin 1999). Patients who communicated through an ad hoc interpreter or who did not have an interpreter when they thought one was necessary were less satisfied with the patient-provider relationship (Baker, Hayes & Fortier 1998). In another study, FLS patients who had ad hoc interpreters were significantly less satisfied with their visit than language concordant patients (Lee, Batal, Maselli & Kutner 2002). A study in a different primary care clinic came to similar conclusions (David & Rhee 1998). Patients were most satisfied with professional hospital interpreters, and at significantly higher levels, than for other interpreter types (Kuo & Fagan 1999). In a systematic review of the impact of medical interpreting services on the quality of health care, Flores concludes that the highest satisfaction for FLS patients occurs with bilingual providers and trained professional interpreters (Flores 2005).

1.3. The impact of interpreters on patient-provider communication

Only few studies have evaluated the impact of interpreters on patient-provider communication. Interpreting services have been shown to improve access to health care for FLS patients (Andrulis, Goodman & Pryor 2002), and interpreters were found to be essential in bridging language barriers and play an important role in establishing patient-provider communication (Bischoff, Bovier, Rrustemi, Gariazzo, Eytan & Loutan 2003). One project was able to provide evidence that FLS patients' clinical service use and uptake of preventive services increased significantly after the introduction of professional interpreters at an HMO (Jacobs, Lauderdale, Meltzer, Shorey, Levinson & Thisted 2001). In the 2003 study, we assessed the impact of an intervention aimed at improving communication between foreign-language patients and physicians by training physicians in the use of interpreters during the consultation (Bischoff et al. 2003). The findings show that after the intervention, the quality of patient-physician communication as perceived by foreign-language patients improved significantly. The following section revisits this research and intervention project.

2. Quality-of-Care project to improve communication with FLS patients

Study setting. The study was conducted at the outpatient clinic of the Community Medicine Department, which is part of the Geneva University Hospitals, Switzerland. More than 50% of all patients attending this clinic are foreigners and about half of them are not fluent in the local language, French. The department has been using interpreters trained to work in medical settings. The interpreting service provided 60 qualified interpreters translating into and out of more than 40 languages for medical and social services dealing with foreign-language clients. The introduction of interpreters in medical services required training of not only the interpreters, but also of the health professionals who work with them. For this, several training tools were developed: a leaflet with guidelines on how to work with interpreters, a manual on interpreting designed for both interpreters and health personnel, training modules on migrant health care and interpreting for health providers, and training modules for interpreters working in medical settings (Bischoff & Loutan 1998, 1999, 2000).

Study intervention. The aim of the intervention was to improve physicians' communication skills and their ability to work with interpreters. Prior quantitative surveys on language barriers to health care in Switzerland helped to define the appropriate topics for the training curriculum. We also organized different focus groups with interpreters, involving junior physicians with no

prior experience in working with interpreters, and health professionals communicating regularly with FLS patients via interpreters. The training intervention consisted of four workshops held over a period of two months and formed part of the continuing education for junior physicians working in primary care settings. The content of the four modules is shown in table 1.

Table 1: Modules of training physicians in working with interpreters.

(1) Introduction on how to work with interpreters	planning and scheduling of interpreter-assisted consultations; structuring consultations into five steps (preparing the consultation before the patient arrives, beginning the consultation, managing communication during the consultation, finishing off the consultation; feedback after patient leaves); information on available interpreting services (languages, specialties), practicalities, payment of the interpreters
(2) Working with interpreters	the role and functions of healthcare interpreters (verbatim mediation, cultural mediation, advocacy mediation); group discussions, working out guidelines together with participants; code of ethics; background information on language barriers, migration and health; introduction of the manual on interpreting
(3) Managing emotional stress in interpreter-assisted interviewing	interpreter-aided medical interviews of patients with post-traumatic stress disorder; improving therapeutic partnership; coping with stress in triadic communication; the need for supervision
(4) Merits and drawbacks of interpreter-mediated consultations	confidentiality issues, initial mistrust, group dynamics in triadic communication, negotiating skills necessary in cross-cultural communication

Study design. A before–after intervention study was set up to measure the impact of the intervention. All consultations at the outpatient services of the Department of Community Medicine (walk-in and follow-up clinic) that took place during the scheduled study periods were included in the study. Patients and physicians rated each visit independently. Consultations of FLS and French-speaking patients were compared. In this paper we present only the patient questionnaire data; the data collected among doctors are described elsewhere (Bischoff et al. 2003).

Study instruments and variables. The outline of the self-administered patient questionnaire was based on previous patient satisfaction surveys in Geneva and drew on experience with satisfaction measurement tools used in a cross-cultural context (Table 2 lists the respective references).

Table 2 Patient satisfaction measurement instruments used.

Comparison of patient satisfaction with ambulatory visits in competing healthcare delivery settings in Geneva	*(Perneger, Etter, Raetzo, Schaller & Stalder 1996)*
Patient satisfaction in ambulatory care: validation of a scale and identification of associated factors	*(Perneger, Stalder, Schaller, Raetzo & Etter 1996)*
Measuring attributes of primary care: development of a new instrument	*(Flocke 1997)*
Methodological problems in comparing English-speaking and Spanish-speaking patients' satisfaction with interpersonal aspects of care	*(Hayes & Baker 1998)*
Interpreter use and satisfaction with interpersonal aspects of care for Spanish-speaking patients	*(Baker, Hayes & Fortier 1998)*

The patient questionnaire used Likert-scales ranging from 0 to 10 and was translated into ten languages (Albanian, Arabic, English, French, German, Italian, Portuguese, Serbo-Croatian, Spanish, and Turkish) using the following procedure: three different translators produced independent versions of the questionnaire, the translations were compared and discussed, and a final version was reached by consensus of the three translators. The questionnaires were pre-tested among a number of patients in each language group. Table 3 displays the six communication items.

Table 3: Items on communication included in the patient questionnaire.

1.	the doctor's response to the patient's needs	Not clear at all – very clear
2.	the doctor's explanations	Not clear at all – very clear
3.	the doctor's respect towards the patient	No respect – total respect
4.	communication between doctor and patient in general	Poor – excellent
5.	the process of the consultation	Poor – excellent
6.	the doctor's ability to provide information about future care	Poor – excellent

Data collection and analysis. The baseline and follow-up surveys were done during 28 half-day periods at the outpatient clinic. The availability of interpreters was identical in both surveys, the booking of an interpreter being decided by the physicians. All patients, francophone as well as FLS, were included. A research assistant informed all patients waiting for their consultation about the study and asked them whether they would agree to answer a number of questions on communication once their consultation was over. The questionnaires were administered to physicians and patients immediately after the consultations by the research assistant, and were filled out on the spot. Exclusion criteria included immediate patient transfer to other services (e.g. admission to hospital) or any serious patient condition precluding participation. Table 4 lists the different types of analyses and the statistical tests.

Table 4: Data analysis.

Measurements	**Type of analysis and statistical tests**
Before-after comparisons	contingency tables Mann Whitney tests (significance level 0.05)
Between-group comparisons	contingency tables Mann Whitney tests (significance level 0.05)
Effect of intervention	Multiple linear regression Covariates: - TIME (before intervention vs. after intervention) - LANGUAGE GROUP (francophone vs. FLS) - interaction term TIME*LANGUAGE - GEE generalized estimating equation linear models (each physician defining a cluster) - Age, sex, mother tongue, refugee status

Findings A: Demographics of patients attending the outpatient clinic. The 1016 consultations included in the study concerned 410 (40%) patients who did not speak French (=FLS) and 606 (60%) who did. FLS patients were

more likely to be women, asylum seekers, and younger than the French-speakers. The most frequent mother tongues of the FLS patients were Albanian (mainly refugees from Kosovo), Serbo-Croatian (from Bosnia), Somali, Spanish (Latin America), Arabic (Iraq, Algeria), Portuguese (Angola, Guinea-Bissau) and Farsi (Afghanistan). Half of the French speakers had a native language other than French, the most frequent among these being Spanish, Portuguese, Italian and German.

Findings B: Satisfaction with communication. FLS and francophone patients gave generally high ratings for the quality of communication during the consultation (ratings of satisfaction by patients are displayed in table 5). Differences between the items on communication were small.

Findings C: Impact of intervention. While scores among the French speakers decreased slightly between the two surveys, those of the foreign-language speakers increased significantly (see table 5). These changes are reflected in the effect of the intervention assessed by multivariate analysis measuring the differences in foreign-speaking patients before and after the intervention, and by subtracting the differences in French speakers. The effects of the intervention were statistically significant for all but one of the items on the patient satisfaction questionnaire (the physician's ability to fulfil the patient's needs).

Findings D: Qualified interpreters or ad hoc interpreters? Between the two surveys, the proportion of consultations where qualified interpreters were present increased: while the proportion of interpreter use in FLS consultations was 46% at baseline, it increased significantly in the follow-up survey to 67% ($p<0.0001$). Concurrently, the number of FLS consultations with relatives acting as proxy interpreters or with no interpreting aid at all decreased from 54% to 33% ($p<0.001$). FLS patients' ratings of the quality of communication differed according to the type of interpreters: while the overall score (i.e. the means of the six items) was lowest in consultations without (any) interpreter (8.5) and in FLS consultations involving ad hoc interpreters (8.7), it was highest in consultations with trained interpreters (8.9). Differences were statistically significant ($p<0.001$)

Table 5: Changes in the quality of communication after physicians' training on how to work with interpreters (n=1016, 1999/2000).

	FLS patients			Francophone patients			Adjusted effect of intervention [2]	
	baseline	follow-up	*p* [1]	baseline	follow-up	*p* [1]	(n=1016)	*p* [3]
According to patients	mean (sd) [4]	mean (sd)		mean (sd)	mean (sd)			
Doctor's answers to the patient's needs	8.7 (1.1)	8.9 (1.0)	*0.01*	8.6 (1.4)	8.6 (1.3)	*0.73*	0.10	*0.54*
Doctor's explanations	8.7 (1.1)	8.9 (0.9)	*0.01*	8.7 (1.1)	8.7 (1.2)	*0.30*	0.28	*0.05*
Doctor's respect towards the patient	8.8 (1.0)	9.0 (0.7)	*0.04*	9.0 (0.5)	8.8 (1.1)	*0.003*	0.40	*0.001*
Communication between patient and doctor	8.5 (1.3)	8.8 (1.0)	*0.03*	8.6 (1.2)	8.5 (1.4)	*0.27*	0.32	*0.05*
Process of the consultation in general	8.5 (1.4)	8.8 (1.0)	*0.02*	8.5 (1.4)	8.5 (1.4)	*0.40*	0.35	*0.04*
Doctor's explanations regarding the follow-up afterwards	8.6 (1.3)	8.8 (1.0)	*0.02*	8.6 (1.2)	8.5 (1.5)	*0.28*	0.33	*0.05*

[1] Mann Whitney test of differences between baseline and follow-up survey
[2] Changes in FLS patients before and after intervention, subtracting differences in French-speaking patients, adjusted for patients' age, sex, refugee status, type of consultation and clustering on physicians, estimated by GEE linear model
[3] Significance level of the coefficients in the regression model adjusted for patients' age, sex, refugee status, type of consultation and clustering on physicians
[4] Mean score and standard deviation on the 10-point Likert scales of communication items

3. Measurable improvement of communication, as perceived by FLS

Communication between primary care physicians and FLS patients, as rated by the patients themselves, may be improved by specific training sessions delivered to the physicians about how to deal with FLS patients. After the intervention, aimed at improving the physicians' ability to work with interpreters, FLS patients gave somewhat higher scores for the respect they had been shown by the physician, for communication during the consultation, and for the overall process of the consultation in general. This improvement was in all likelihood due to the health professionals' greater ease in working in partnership with interpreters, in the handling of the three-way relationship and in the migrant patient-centred approach.

The most important visible change in the physicians' behaviour was the increased demand for the assistance of professional interpreters. While during the baseline survey interpreters were booked for less than half of the consultations with FLS patients, this proportion rose to two thirds of the consultations following the training modules. This occurred without specific encouragement in the training sessions to use interpreters more often, as has been done in another project in Australia (Stolk, Ziguras, Saunders, Garlick, Stuart & Coffey 1998). We can thus conclude that the use of interpreters in consultations with FLS unable to communicate in the local language has become more systematic following the intervention. A similar tendency was also observed in other programmes aiming at improving healthcare provision for migrant patients (Singy & Weber 2001; Stolk et al. 1998).

The decrease in consultations with ad hoc interpreters (Westermeyer 1990; Woloshin, Bickell, Schwartz, Gany & Welch 1995), was another encouraging trend and also reported by others (Riddick 1998; Verrept & Louckx 1998; Westermeyer 1990). The findings confirm other studies that show patient dissatisfaction associated with the use of ad hoc interpreters (Flores et al. 2003; Lee et al. 2002; Ngo-Metzger et al. 2003; Kuo & Fagan 1999). The findings are also in line with a recent study that "demonstrates the crucial role interpreter quality plays in the way these patients perceive their health care" (Green, Ngo-Metzger, Legedza, Massagli, Phillips & Iezzoni 2005:1055).

4. Methodological discussion

Satisfaction ratings were high throughout the two evaluations and there was considerable homogeneity in the ratings of the different questions. This might partly be explained by the halo effect whereby a general positive perception influences answers to specific items. The generally high scores on the Likert-scales (by both FLS and francophone patients) confirm observations made in patient satisfaction studies that quantitative surveys "on the spot" result in higher ratings than qualitative research among patients some time after the intervention (Williams 1994). The resulting ceiling effect may have limited our ability to detect improvement in satisfaction scores. Nevertheless, the increases in satisfaction scores after the intervention amounted to about a third of a standard deviation, which can be interpreted as a moderate effect (Cohen 1988). The observed effects may have been further weakened by the limited reliability of single-item assessments.

Finally, the patient questionnaire that we developed in French, translated into ten languages and pre-tested by patients of different languages, seemed to be culturally and linguistically acceptable, but no formal assessment of its psychometric performance was conducted. Although we did not resort to the back-translation procedure recommended by several authors (Guillemin, Bombardier & Beaton 1993; Jones, Lee, Phillips, Zhang & Jaceldo 2001; Yu, Lee & Woo 2004), we went through several stages in developing and translating the patient questionnaire, including the use of a

participatory approach involving researchers and translators (Bowden & Fox Rushby 2003; Hunt & Bhopal 2003), as well as an awareness of cultural mediation (Guillemin, Bombardier & Beaton 1993) and community contact by bringing together different types of translators (Temple 2002).

5. Conclusions

In increasingly diverse patient populations there is a need to overcome language barriers faced by FLS. The implementation of interpreting services has been shown to improve both the quality of healthcare provision for and the satisfaction of FLS. Different instruments are now available for measuring differences in quality of care, quality of communication and FLS patient satisfaction. They should be used systematically before and after interventions aimed at overcoming language barriers.

Furthermore, considering the magnitude of the challenges faced by health professionals who have to communicate with FLS patients, it is recommended that the mother tongue and language proficiency of the patient be systematically recorded in the patient files. This measure is designed to prevent language barriers remaining unaddressed and poor quality of care for FLS unchanged. Finally, further quantitative research should be pursued so as to assess the impact of better interpreter use and improved FLS communication on clinical outcomes, such as better adherence to treatments or improvement of symptoms.

Changes in the quality of interpreter-mediated communication, as rated by the patients themselves, can be monitored and have an impact on the quality of care. This is important at a time of growing cultural and linguistic diversity in Switzerland and other countries, which requires healthcare systems to implement high-quality professional interpreting services to ensure effective communication with foreign-language-speaking patients.

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