

How are language barriers bridged in acute hospital care? The tale of two methods of data collection

Pamela W Garrett, Roberto Forero, Hugh G Dickson and Anna Klinken Whelan

Abstract

Objective: To explore language service provision in a pilot hospital study with two methods of data collection.

Methods: This mixed mode study design comprises a multilingual telephone survey followed by a medical records audit, undertaken at Liverpool Hospital in 2004–05.

Results: Two hundred and fifty-eight patients responded from 360 patients representing nine language groups. About a third of patients with limited English proficiency had used a professional interpreter in hospital. Concordance between the multilingual telephone survey and the medical records audit was apparent, although the telephone survey mostly showed non-significant, higher rates than the audit. While the methods showed high agreement (76%) for frequency of interpreter usage, kappa indicated only fair agreement (PABAK 0.40). Forty-eight percent of the patients preferred relatives as interpreters and 51% felt that their inability to speak English negatively affected their hospital stay.

Conclusions: Professional interpreter usage is lower than desirable in the hospital, especially in the Emergency Department. Relatives frequently interpret. Under-reporting on the medical record is suggested, implying a need for improved documentation, while possible over-reporting in the telephone survey may relate to recall bias and social acquiescence.

Aust Health Rev 2008; 32(4): 755–765

LANGUAGE IS INTEGRAL to social, cultural, and institutional integration, provides an ongoing link with a person's background, history and identity,¹⁻² and contributes significantly to a patient's construction of illness.³ Being unable to speak the dominant language excludes a person from institutional interaction, thereby disempowering them.⁴ Language facilitators, including profes-

What is known about the topic?

Despite over 30 years of professional interpreting service provision there is very little Australian evidence about the most common methods of facilitating communication in health care with people who do not speak English.

What does this paper add?

This paper provides evidence that interpreter services are not universally available and accessible for patients with limited English proficiency and that many patients use family and friends as interpreters in the health care context. Usage of interpreters is particularly problematic in the Emergency Department. The paper assesses the reliability of multilingual telephone survey data versus medical record audit data sources with respect to language service provision. It concludes that both methods have limitations, but that the overall agreement was reasonably good.

What are the implications for practitioners?

There is a need for improved procedures for identifying, documenting, prioritising, and delivering interpreters to patients with limited English proficiency. Specific strategies are needed to improve interpreter usage in the Emergency Department. The frequent usage of family and friends for interpreting may have quality and safety implications and needs to be addressed in policy and community education. Staff and patient education to ensure appropriate health care language service provision is required.

Pamela W Garrett, BSocSt, MA, Doctoral Candidate
Roberto Forero, MA, MPH, PhD, Senior Research Fellow
Simpson Centre for Health Services Research, University of NSW and Liverpool Health Service, Sydney, NSW.

Hugh G Dickson, MB BS, PhD, FACRM, FAFRM(RACP),
Professor of Aged Care and Rehabilitation and Director of
Ambulatory Care
Ambulatory Care, Liverpool Health Service and University of
NSW, Sydney, NSW.

Anna Klinken Whelan, PhD, BA(Hons), A/Professor
School of Public Health and Community Medicine, University
of New South Wales, Sydney, NSW.

Correspondence: Ms Pamela W Garrett, Simpson Centre for
Health Services Research, University of NSW and Liverpool
Health Service, Locked Bag 7103 Liverpool BC, Sydney, NSW
1871. Pam.Garrett@sswahs.nsw.gov.au

I Summary of items on language service provision available from either the multilingual telephone survey (MTS) or the medical records audit (MRA)

Items available from both MTS and MRA

1. Patient used an interpreter in hospital
2. Patient used their relative/friend as an interpreter
3. Patient used a bilingual staff member to interpret
4. Interpreter interpreted medication explanation
5. Number of times interpreter was used in hospital

Items available from MTS only

6. How much not being able to speak English affected the patient's hospital stay
7. Patient offered an interpreter in hospital
8. What stopped the patient from accepting the use of an interpreter?
9. If no interpreter used, how did the patient communicate with doctors, nurses and staff?
10. Patient preferred to use their relative/friend as an interpreter

sional interpreters, family, or bilingual staff, provide an essential communication and empowerment bridge. However, health care language service provision is fraught with issues associated with accessibility, confidentiality, trust, linguistic accuracy, cultural accuracy, bias related to cultural, political or familial affiliation, and concerns regarding the health care provider's legal and ethical duty of care.⁵⁻⁶

Language barriers decrease equity in health care by reducing access to primary care, including emergency department care; reduce patient understanding and involvement in decision making; and decrease adherence to treatment, including medications.⁷⁻¹⁰ Poor English ability is associated with poorer health outcomes.¹¹⁻¹² Use of professional interpreters for patients has been associated with increased satisfaction, improved understanding, greater participation, high levels of compliance, improved access, and fewer medical errors.¹³⁻¹⁷ Use of professional rather than "ad hoc" interpreters in health care has been recommended to ensure quality, safety, positive health outcomes, and to reduce health disparities and

discrimination.^{5,14,16,18-22} There is little Australian evidence regarding the most common methods of facilitating communication in health care with people who do not speak English. The dual purposes of this paper were to identify interpreter usage patterns in an acute hospital and to explore two methods of data collection, a multilingual telephone survey (MTS) and a medical records audit (MRA).

Methods

A mixed mode design was used to compensate for the limitations of the use of a single methodology.²³ The MTS was followed by the MRA. The questions asked in the MTS are included in the Appendix.

Approval to undertake this study was provided by the local Human Research Ethics Committee. Verbal consent was obtained from patients through the Bilingual Research Officers.

Data collection

Study participants comprised a convenience sample of patients aged over 65 years and identified on their medical record as speaking a language other than English, who attended the ED of the hospital or had been an inpatient of general medical and surgical wards between June and November 2004. The study population was 360 patients from nine major language groups. Languages included Arabic, Spanish, Italian, Greek, Cambodian, Vietnamese, Chinese, Croatian and Serbian.

Trained Bilingual Research Officers conducted telephone interviews in the relevant community language 7–14 days after the patient's discharge from hospital. Patients were asked a series of questions about their access to interpreters, preference for interpreter (professional interpreter, bilingual staff and/or relatives), how they communicated with hospital staff, proficiency in English, and whether not being able to speak English had affected their hospital stay (Appendix).

The MRA, undertaken in May 2005, comprised information about the admission status of the patient, modes of interpreter usage, frequency of

interpretation, major health problems, procedures/events, presenting problem/diagnosis, and the prescription of new medications.

Some study items were available from both methods and others were available in only one of the methods (Box 1).

Data analysis

The information derived from the MTS was linked with the MRA data through a unique identifying number, and data were de-identified for the analysis. Data were analysed with the SPSS Version 14 (SPSS Inc, Chicago, Ill, USA), STATA V8.0 (StataCorp, College Station, Tex, USA) and WINPEPI.²⁴ Cross tabulations were used to com-

pare items from each methodology. Chi-square tests and proportions were used to test the association between the results. Fisher's Exact Test was used to calculate the exact probability (*P* value) for cross-tabulations where values were small (less than five cases). A weighted kappa coefficient was used to test the reliability of the two methods in relation to the frequency of professional interpreter use. A weight of one represented perfect agreement. A weight of 0.66 was used to indicate the methods were in two-thirds agreement ("one apart"). An entry of 0.33 meant they were in one-third agreement ("two apart") and a weight of zero meant they were in complete disagreement ("three apart"). Unequal prevalence

2 Frequencies, descriptive statistics and agreement scores on the number of times an interpreter was used: medical record audit (MRA) data versus multilingual telephone survey (MTS) (*n* = 205)

		MTS frequency of interpreter usage (mean = 1.71; SD = 0.85)				
		None	Once	Twice	≥ 3 times	Total
MRA frequency of interpreter usage (mean = 1.48; SD = 0.76)	None	97	25	8	11	141
	Once	24	12	3	4	43
	Twice	5	1	2	3	11
	≥ 3 times	6	2	1	1	10
	Total	132	40	14	19	205

Overall agreement of the two methods	Agreement	Expected agreement	Kappa (95% CI)	Level of agreement
Unweighted score	54.6%	49.2%	0.11 (0.00–0.21)	Slight
Weighted score	76.0%	72.1%	0.12 (0.01–0.23)	Slight
Prevalence-adjusted bias-adjusted kappa (PABAK)			0.40	Fair

Item	MTS	MRA	χ^2 statistic and <i>P</i> value* for frequencies
How many times did the NES patient use an interpreter in hospital?	Mean = 1.71 SD = 0.86 Mode = 1	Mean = 1.48 SD = 0.76 Mode = 1	$\chi^2_9 = 10.63$ <i>P</i> = 0.30
How many times did the NES admitted patient use an interpreter in hospital?	Mean = 1.88 SD = 0.83 Mode = 1	Mean = 1.63 SD = 0.81 Mode = 1	$\chi^2_4 = 1.71$ <i>P</i> = 0.79
How many times did the NES ED patient use an interpreter in hospital?	Mean = 1.59 SD = 0.86 Mode = 1	Mean = 1.06 SD = 0.25 Mode = 1	$\chi^2_1 = 2.91$ <i>P</i> = 0.08

* *P* < 0.05 statistically significant. Grey-shaded cells indicate perfect agreement in the reported frequency of interpreter use, in each category in the two methods. NES = non-English speaking.

of interpreter usage information might result in a low kappa despite a relatively high observed total agreement.²⁵⁻²⁶ The prevalence-adjusted, bias-adjusted kappa value (PABAK) was introduced to adjust for this phenomenon (Box 2).

The data were analysed by admission status (ED versus admitted) and English proficiency levels (ie, speaks English very well/well, versus not well/not at all). Open ended (optional) survey questions were analysed using content analysis.

Results

There were 278 respondents in the MTS (77% of the study population). There were 20 medical records that could not be accessed during the study period, leaving a study population of 258 study participants (72% of the total study population). In the MTS, some did not respond as contact details were incorrect or they could not be reached after three attempts (20), some patients simply were not interested in participating (5), some terminated the interview (8), some were too unwell, were hospitalised or had passed away (15), and for others the interview was inconvenient (20). For 14 patients the reasons for not responding were not known. The non-respondent population had a greater proportion of ED patients and a greater proportion

of Chinese speakers than the respondent population. There were no differences in age or marital status. The reasons for these differences are not known, although it may be possible that the ED population may have been quite well 7–14 days after admission, and therefore less likely to be available at home for the interview.

Box 3 provides selected demographic characteristics of the 258 patients who responded. One hundred and nine patients (42.2%) were admitted. 52% were female. Ages ranged from 65–96 years with an average age of 74.6 ± 6.7 . The majority had arrived in Australia before 1990. The number of years spent in Australia ranged from 0–66 years with an average of 27 years of residency. The language groups included in the study were: Arabic, Italian, Vietnamese, Chinese, Croatian, Serbian, Spanish, Greek and Cambodian. Two hundred and five (79.4%) said they spoke English not well or not at all, nine (3.4%) said they spoke English “very well”, and 44 (17.2%) said they spoke English “well”.

Box 4 summarises the major comparable results from the MTS and the MRA.

The majority of comparisons between the two methods were not significant. A statistically significant difference was found between the two methods for admitted patients who reported speaking English well.

3 Selected demographic characteristics of language groups: admission status, English proficiency, and age group

Language group	No. (%) admitted	No. (%) speaking little/no English	No. (%) arriving in Australia after 1990	Age group (years)				Total
				65–69	70–74	75–79	80+	
Arabic	20 (42%)	39 (81%)	14 (29%)	13	14	11	10	48
Cambodian	3 (38%)	25 (93%)	3 (38%)	1	3	0	4	8
Chinese	14 (52%)	15 (58%)	5 (19%)	6	9	7	5	27
Croatian	8 (31%)	12 (92%)	7 (27%)	8	5	9	4	26
Greek	4 (31%)	34 (76%)	4 (31%)	0	6	1	6	13
Italian	16 (36%)	8 (100%)	6 (13%)	10	9	15	11	45
Serbian	6 (28%)	12 (55%)	9 (41%)	6	7	5	4	22
Spanish	19 (61%)	27 (87%)	5 (16%)	6	10	10	5	31
Vietnamese	19 (50%)	32 (84%)	7 (18%)	14	14	3	7	38
Total	109 (42%)	205 (79%)	60 (23%)	64	77	61	56	258

Usage of professional interpreters was highly associated with usage of family and friends to interpret in both the MTS ($\chi^2_1 = 42.95$; $P < 0.001$) and the MRA ($\chi^2_1 = 36.53$; $P < 0.001$).

Responses about usage of bilingual staff were considered unreliable as reporting was inconsistent; prevalence estimates were very low.

Box 2 shows the frequency of interpreter use by each of the two methods. Grey-shaded cells indicate perfect agreement in the reported frequency of interpreter usage, in each category in the two methods. The predicated agreement was 72% and

actual agreement was 76%. The weighted kappa coefficient was 0.12, a slight agreement (11.9%). The PABAK increased the level of agreement to 0.40, a fair level of agreement. The overall kappa coefficients suggest that changes are needed in order to improve the quality of language service provision data.

For the item “frequency of interpreter usage”, the mode and median in both methods was one, confirming that most patients used an interpreter only once, irrespective of their admission status. The mean was slightly higher,

4 Comparison of results available from both the multilingual telephone survey (MTS) and medical records audit (MRA): analysed by self-reported English proficiency and admission status

Item	MTS	MRA	Statistic	P value*
Non-English-speaking (NES) sample (N=205)				
NES patient used an interpreter in hospital (admitted)	32 (39.0%)	48 (58.5%)	$\chi^2_1 = 2.25$	$P = 0.133$
NES patient used an interpreter in hospital (ED)	41 (33.3%)	16 (13.0%)	$\chi^2_1 = 0.89$	$P = 0.343$
<i>NES patient used an interpreter in hospital (total)</i>	<i>73 (35.6%)</i>	<i>64 (31.2%)</i>	$\chi^2_1 = 3.82$	$P = 0.051$
NES patient used their relative/friend as an interpreter (admitted)	47 (57.3%)	49 (59.7%)	$\chi^2_1 = 3.46$	$P = 0.063$
NES patient used their relative/friend as an interpreter (ED)	79 (64.2%)	41 (33.3%)	$\chi^2_1 = 0.018$	$P = 0.894$
<i>NES patient used their relative/friend as an interpreter (total)</i>	<i>126 (61.5%)</i>	<i>90 (43.9%)</i>	$\chi^2_1 = 2.36$	$P = 0.082$
<i>NES patient used bilingual staff as an interpreter (total)</i>	<i>1 (0.5%)</i>	<i>20 (9.8%)</i>	$\chi^2_1 = 0.74$	$P = 0.90$
			Fisher's Exact Test	$P = 0.88$
<i>NES patient had an interpreter for medication explanation (n = 125) (total)</i>	<i>13 (10.5%)</i>	<i>6 (4.8%)</i>	Fisher's Exact Test	$P = 0.66$
English-speaking (ES) sample (N=53)				
ES patient used an interpreter in hospital	14 (26%)	6 (11%)	$\chi^2_1 = 11.28$	$P = 0.001$
			Fisher's Exact Test	$P = 0.003$
ES patient used their relative/friend as an interpreter	28 (52.8%)	5 (9.4%)	$\chi^2_1 = 0.36$	$P = 0.44$
			Fisher's Exact Test	$P = 0.57$
ES patient used bilingual staff as an interpreter	2 (3.8%)	2 (3.8%)	$\chi^2_1 = 0.82$	$P = 0.93$
			Fisher's Exact Test	$P = 1.0$
ES patient had an interpreter for medication explanation (n = 33)	1 (3%)	1 (3%)	Fisher's Exact Test	$P = 1$

* $P < 0.05$ statistically significant (shown in bold type). Fisher's Exact Test was used in combination with the Chi squared test when cells contained less than 5.

5 Results of data available from only the multilingual telephone survey: analysed by self-reported English proficiency and admission status

Item	ED sample	Inpatient sample	Total sample	χ^2 statistic and <i>P</i> value*
Non-English-speaking (NES) patients	(n=123)	(n=82)	(n=205)	
NES patient felt that not being able to speak English negatively affected their hospital stay	56 (45.5%)	48 (58.5%)	104 (50.7%)	$\chi^2_1 = 3.331$ <i>P</i> = 0.07
NES patient offered an interpreter in hospital	49 (39.8%)	42 (51.2%)	91 (44.4%)	$\chi^2_1 = 2.582$ <i>P</i> = 0.11
NES patient preferred to use their relative/friend as an interpreter	65 (52.8%)	34 (41.4%)	99 (48.3%)	$\chi^2_1 = 2.553$ <i>P</i> = 0.11
English-speaking (ES) patients	(n=26)	(n=27)	(n=53)	
ES patient felt that not being able to speak English negatively affected their hospital stay	11 (42.3%)	11 (40.7%)	22 (41.5%)	$\chi^2_1 = 0.013$ <i>P</i> = 0.91
ES patient offered an interpreter in hospital	9 (34.6%)	10 (37%)	19 (35.8%)	$\chi^2_1 = 0.034$ <i>P</i> = 0.85
ES patient preferred to use their relative/friend as an interpreter	12 (46.1%)	9 (33.3%)	21 (39.6%)	$\chi^2_1 = 0.91$ <i>P</i> = 0.34

**P* < 0.05 statistically significant.

reflecting the high usage of interpreters for a few patients.

Box 5 shows results of data available only from the MTS and compares admitted and ED patients. No statistically significant differences were found across admission status groups on these items.

There were 138 respondents who chose to comment in the MTS about how they felt about relatives/friends interpreting for them. One hundred and twenty two (88%) responded positively about using their relative as an interpreter. The majority felt happy, supported, at ease, confident and comfortable with their relative, and most importantly, they trusted them. Adult children, particularly daughters were most frequently used. Of those who responded negatively, four were concerned about the language ability of family members, three felt disadvantaged and distressed, two suggested it was “not good”, and one said the doctor was “not happy” about it. A further three said they believed they had no option or choice.

Of those who chose to comment on the effect of English ability on their hospital experience (125), the majority were most concerned about their inability to directly communicate with doctors

and nurses, and particularly about being unable to communicate their feelings. They expressed fear, despair, sadness, and frustration. Some were embarrassed and upset at not being able to speak English. Some said that basic care such as toileting and ordering food was an issue, while others said they did not understand medical tests. Again, their reliance on relatives for support and language facilitation was very apparent, with 34 commenting that the family was often present for very protracted periods for this purpose. Fifteen said that the hospital visit was only a short stay and therefore communication was not a significant problem. Four said that they trusted the doctors, even if they couldn't communicate with them.

Discussion

Just over a half of patients with limited English proficiency reported in the MTS that they had not been offered an interpreter during their hospital visit. Thirty years after the establishment of interpreter services in hospitals in Sydney, Australia,²⁷ it is surprising that both methods found that only

about a third of patients with limited English proficiency had used a professional interpreter in hospital. There may be many factors which predispose people to using or not using interpreters including their knowledge of the service and its availability, personal/cultural beliefs and attitudes, their previous experience of using professional interpreters and their trust and dependence on family members for language facilitation.

The MTS found that the major reasons for not using an interpreter appeared to be their preference for using relatives or friends. Of those who chose to comment, the majority felt positive about the involvement of their families in facilitating communication, although some did express very significant concerns. Interestingly, the use of relatives and friends as interpreters was also highly associated with having a professional interpreter. The use of family and friends as interpreters is not supported in policy in many countries, including Australia,²⁸ because of the well documented problems associated with linguistic accuracy, confidentiality, medical litigation and abrogation of the provider's duty of care.

We found that the MTS attained high response rates, as telephone contact details were readily available, patients were able to be rung a number of times, convenient interview times could be negotiated, the time between patient discharge and interview could be controlled, and data collation processes were relatively efficient. As interviews were conducted in the community language and the patient was in their own home, the MTS overcame problems associated with accessing respondents with poor literacy levels (in English or in their community language),²⁹ who were unwell, aged or disabled. The slightly higher proportion of ED patients in the non-response group may reflect their greater functionality, and therefore reduced availability, 7–14 days after discharge/hospital presentation. Bilingual Research Officers (BROs) reported being positively received and that people were happy to be involved in the study. The interviewing BRO helped address problems commonly associated with cross-cultural quantitative research, such as

variation in "test-wise-ness",³⁰ by carefully explaining the survey purpose and each survey question. The impact of BROs in addressing issues associated with interviewer bias, social acquiescence, politeness, and respect for authority are uncertain.^{31–33} While the endorsement by the hospital of the MTS may increase response rates, it could also make patients less willing to express dissatisfaction with services, even though confidentiality and privacy was assured.³⁴ The validity of the MTS was improved by ensuring constructs were tangible, with BROs commenting on their cross-cultural equivalence. Questions which were emotive, highly subjective, or exploratory were not included.³⁵ In this study, telephone survey ratings were generally higher than those recorded in the MRA, indicating the possibility that recall bias and social acquiescence may be factors.

MRAs are frequently used as the gold standard for technical aspects of clinical care, including drug regimens, diagnostic tests, physical examinations, interventions, and short-term outcomes.³⁶ However, one study found systematic underreporting, with discretionary documentation by providers.³⁷ Doubts especially remain as to how reliably providers document poor practice, and particular health care services have been shown to be less well documented than others.^{37,38} Legibility of record entries, a lack of information provided in the record (particularly for some emergency patients), and poor recording of the discharge process were some problems experienced in the MRA. In this study, the MRA data were generally lower than that reported in the MTS, indicating the possibility of poor documentation and underreporting of language service provision.

Overall there was reasonable concurrence between the MTS and the MRA data on common items. The kappa statistic was used to test the level of agreement of the numbers of times interpreters were used in each method. The overall percent agreement was high (76%) although the kappa coefficient was low (weighted kappa coefficient, 0.12), indicating only slight agreement on the one item which was

directly comparable, frequency of usage of interpreters. The kappa statistic may be affected by prevalence, a phenomena called “The Kappa Paradox 1”.²⁵⁻²⁶ High levels of agreement may be accompanied by a low kappa statistic resulting from an imbalance in the vertical and horizontal marginal totals, also referred to as “distance across categories”.^{25-26,39} We found that the agreement between methods increased from slight to fair when the kappa statistic was adjusted for prevalence bias (PABAK). Nevertheless, the (still) moderate level of agreement achieved under the PABAK highlights the inherent difficulties associated with this mixed mode design. In this case, the study effectively attempted to compare the recalled perceptions of patients with limited English proficiency with the documented views of providers on an item, which may or may not be considered (by them) to be important. Although the level of accuracy of each of the methods may not actually be equal, the kappa statistic assumes the same accuracy in both methods.³⁹

The one item where a statistically significant difference was found was for English-speaking patients, with the MTS finding a significantly higher usage of interpreters in hospital than was documented in the MRA. The most likely explanation is poor documentation in the medical record. This effect may well be reduced in a larger sample.

The two methods concur that usage of interpreters is statistically significantly higher for admitted than for ED patients. ED patients who do manage to access an interpreter appear more likely to use the interpreter more than once. Admitted patients are likely to access an interpreter only once. Policy states that an interpreter should be called on admission, at diagnosis, pre- and post-operatively, and on discharge.²⁸ For ED patients, an interpreter should ideally be present when they are seen by the ED physician, a policy expectation that is far from realised.

The study sample was relatively small ($n=258$), and therefore there was limited in power for more detailed analyses. As it was undertaken in

only one tertiary hospital, the findings cannot be generalised to other hospitals.

Some items such as “bilingual staff usage” could not be assessed because of inconsistent reporting, small sample sizes, or very low prevalence estimates. This may reflect the poor documentation of this item in the medical record.

“Language proficiency” is difficult to operationalise. In this study, it was assessed by asking the patients in the MTS, “How well do you speak English?” Patients may understand English but not be able to speak it; others may be unable to understand medical terminology. Some lose English ability on ageing, with illness, or in stressful situations. In our study, one in five patients assessed their English proficiency as “good” or “very good”, yet some still used health care interpreters.

Neither health care providers nor health care interpreters were asked to contribute their insights to the study. This is an area for further study.

Conclusion

Language service provision has an important role in patient safety, and in the promotion of equity in health care. Improved procedures for identifying, documenting, prioritising, and providing interpreters to patients with limited English proficiency appear to be warranted. The dearth of professional interpretation in the ED is of particular concern as this is the primary point at which the diagnosis and treatment path is initiated.⁴⁰ The poor usage of professional interpreters in the inpatient context constitutes an additional challenge for policy makers and managers.

Policies and procedures must establish a balance between patient preferences for language facilitators, the hospital's requirement for high quality communication, safety and litigation prevention and the capacity of health language services to provide interpreters for the large non-English-speaking patient population. As almost half the patients indicated a preference for using relatives to interpret, this needs to be addressed in policy, rather than ignored or

strongly advised against, as is the case in the current NSW policy.²⁸ There is an important role for family and friends in facilitating communication that is primarily social, or related to the provision of personal care and support. At a minimum, professional interpreters are required for complex health care interactions and to routinely check that significant health care information, instruction and decisions have been fully discussed and communicated with the patient and their family.

Community education in regard to interpreter service availability and usage in health care may be helpful to inform patients and their families of the rights to services and the medico-legal implications of not using professional interpreters at key points in the hospital episode. Similarly, the study indicates that additional staff education is needed to ensure more appropriate usage of the professional language services.

Information about patient language proficiency and the modes of language service provision in hospital are not routinely collected. Currently, clinical staff determine the requirement for interpreters, based on their subjective assessment of the patient's English proficiency. The collection of data on a patient's self-assessed English language proficiency, linked with interpreter service databases, would improve opportunities for effective service delivery. The systematic collection of language service provision modes would improve opportunities for priority-setting and policy development. These data would establish the parameters for improving health service outcomes and provide useful bases for future epidemiological and health service analyses.

Acknowledgements

Thanks to: Lis Young, Ken Hillman, Yvonne Santalucia, Gai Moore, Katina Varelis, Health Care Interpreter Service, Hai Phung, Katrina Ticsay, Emily May, Margaret Morris, Linda Whyte, Monica Aburto, Nancy Santiano, Margaret Donald, Claudia Hasso, Sorotana Ung, Quoc Tran, Chrissi Gotis-Graham, Silvana Moncelisi, Gordana Kalanj, Hilda Valenzuela, Hong Nguyen, Thi Hanh Tran, and Nada Petojevic.

This study was jointly funded by the Simpson Centre for Health Services Research and the Sydney Southwest Area Multicultural Service.

Competing interests

The authors declare that they have no competing interests.

References

- 1 Clyne M. Community languages: the Australian experience. Melbourne: Cambridge University Press, 1991.
- 2 Castells M. The information age: economy, society and culture. Volume 11. The power of identity. Oxford: Blackwell Publishing, 2003.
- 3 Kleinman A. Patients and healers in the context of culture. Berkeley, CA: University of California Press, 1980.
- 4 Bourdieu P. Language and symbolic power. Cambridge: Polity Press, 1992.
- 5 Vasquez C, Javier R. The problem with interpreters: communicating with Spanish-speaking patients. *Hosp Community Psychiatry* 1991; 42: 163-5.
- 6 Ozolins U. The politics of language in Australia. Melbourne: Cambridge University Press, 1993.
- 7 Derosé K, Baker D. Limited English proficiency and Latinos' use of physician services. *Med Care Res Rev* 2000; 57: 76-91.
- 8 Ferguson W, Candib L. Culture, language, and the doctor-patient relationship. *Fam Med* 2002; 34: 353-61.
- 9 Fiscella K, Franks P, Doescher M, Saver B. Disparities in health care by race, ethnicity, and language among the insured: Findings from a national sample. *Med Care* 2002; 40: 52-9.
- 10 Wilson E, Chen A, Grumbach K, et al. Effects of limited English proficiency and physician language on health care comprehension. *J Gen Intern Med* 2005; 20: 800-6.
- 11 Flores G, Abreu M, Tomany-Korman S. Limited English proficiency, primary language at home, and disparities in children's health care: how language barriers are measured matters. *Public Health Rep* 2005; 120: 418-30.
- 12 Smedley B, Stith A, Nelson A (eds). Unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: National Academies Press, 2003.
- 13 Brach C, Fraser I. Can cultural competency reduce racial and ethnic health disparities? A review and

- conceptual model. *Med Care Res Rev* 2000; 57 Suppl 1: 181-217.
- 14 Timmins C. The impact of language barriers on the health care of Latinos in the United States: a review of the literature and guidelines for practice. *J Midwifery Womens Health* 2002; 47: 80-96.
- 15 Jacobs E, Lauderdale D, Meltzer D, et al. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med* 2001; 16: 468-74.
- 16 Flores G, Laws M, Mayo S, et al. Errors in medical interpretation and their potential clinical consequences in paediatric encounters. *Pediatrics* 2003; 111: 6-14.
- 17 Baker D, Parker M, Williams M, et al. Use and effectiveness of interpreters in an Emergency Department. *JAMA* 1996; 275: 783-8.
- 18 Phelan M, Parkman S. How to do it: work with an interpreter. *BMJ* 1995; 311: 555-7.
- 19 Calderon J, Beltran R. Pitfalls in health communication: health care policy, institution, structure, and process. *MedGenMed* [Internet] 2004; 6: 9.
- 20 Morales L, Elliott M, Weech-Maldonado R, Hays R. The impact of interpreters on parents' experiences with ambulatory care for their children. *Med Care Res Rev* 2006; 63: 110-28.
- 21 Kuo D, Fagan M. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic *J Gen Intern Med* 1999; 14: 547-50.
- 22 Brough C. Language services in Victoria's health system: perspectives of culturally and linguistically diverse consumers. Melbourne: Centre for Culture Ethnicity and Health, 2006.
- 23 Galesic M, Tourangeau R, Couper M. Complementing random-digit-dial telephone surveys with other approaches to collecting sensitive data. *Am J Prev Med* 2006; 31: 437-43.
- 24 Abramson J. WINPEPI (PEPI-for-Windows): computer programs for epidemiologists. *Epidemiologic Perspectives and Innovations* [Internet] 2004; 1: 6.
- 25 Feinstein A, Cicchetti D. High agreement but low kappa: I. The problems of two paradoxes. *J Clin Epidemiol* 1990; 43: 543-9.
- 26 Byrt T, Bishop J, Carlin J. Bias, prevalence and kappa. *J Clin Epidemiol* 1993; 46: 423-9.
- 27 Garrett P, Lin V. Ethnic health policy and service development. In: J Reid, P Trompf (eds). *The health of immigrant Australia*. Sydney: Harcourt Brace Jovanovich, 1990: 339-80.
- 28 NSW Health. Interpreters — standard procedures for working with health care interpreters. (Policy Directive PD2006_053). Sydney: NSWHealth, 2006.
- 29 Chung R, Bemak F. Methodological issues and recommendations on research with at-risk youth across cultures: a case study. *Childhood* 1997; 4: 465-75.
- 30 Davis D. The meaning of menopause in a Newfoundland fishing village. *Cult Med Psychiatry* 1986; 10: 73-94.
- 31 Quine S. Questionnaires. In: C Kerr, R Taylor, G Heard (eds). *Handbook of public health methods*. Sydney: McGraw-Hill, 1998.
- 32 Kinzie J, Manson S. The use of self-rating scales in cross-cultural psychiatry. *Hosp Community Psychiatry* 1987; 38: 190-6.
- 33 Brugge D, Kole A, Lu W, Must A. Susceptibility of elderly Asian immigrants to persuasion with respect to participation in research. *J Immigr Health* 2005; 7: 93-101.
- 34 Walker A, Restuccia J. Obtaining information on patient satisfaction with hospital care: mail versus telephone. *Health Serv Res* 1984; 19: 291-306.
- 35 Bullinger M, Anderson R, Cella D, Aaronson N. Developing and evaluating cross-cultural instruments from minimum requirements to optimal models. *Qual Life Res* 1993; 2: 451-9.
- 36 Weiss K, Wagner R. Performance measurement through audit, feedback, and profiling as tools for improving clinical care. *Chest* 2000; 118 (2 Suppl): 53S-58S.
- 37 O'Neil A, Petersen L, Cook F, et al. Physician reporting compared with medical-record review to identify adverse medical events. *Ann Intern Med* 1993; 119: 370-6.
- 38 Stange K, Zyzanski S, Smith T, et al. How valid are medical records and patient questionnaires for physician profiling and health services research? A comparison with direct observation of patient visits. *Med Care* 1998; 36: 851-67.
- 39 Bruckner C, Yoder P. Interpreting kappa in observational research: baserate matters. *Am J Ment Retard* 2006; 111: 433-41.
- 40 Donovan J, d'Esparagnet E, Merton C, van Ommeren M (eds). *Immigrants in Australia: a health profile*. Ethnic Health Series No. 1. Canberra: AIHW, 1992.

(Received 8/08/07, revised 16/11/07, accepted 30/03/08) □

Appendix: The multilingual telephone survey questionnaire**Selection of questions used in analysis**

- Q1 What is your country of birth?
- Q2 Which year did you arrive in Australia?
- Q3 What is your preferred language?
- Q4 How well do you think you speak English?
1 = very well; 2 = well; 3 = not well; 4 = not at all well; 5 = not at all
- Q5 Have you been offered the use of an interpreter while you were in hospital?
1 = yes; 2 = no; 3 = not applicable
- Q6 How many times did you talk to the interpreter?
1 = once; 2 = twice; 3 = three times or more; 4 = not applicable
- Q7 What was the interpreter organised to talk to you about — medications, progress, discharge, other
1 = yes; 2 = no; 3 = not applicable
- Q8 What stopped you from accepting the use of an interpreter?
1 = I speak/understand English very well; 2 = I preferred to use my relative; 3 = other; 4 = not applicable
- Q9 How did you communicate to the doctors, nurses or to other staff in the hospital?
1 = relatives; 2 = other patients; 3 = other hospital staff; 4 = other; 5 = not applicable
- Q10 How did you feel about using that person (relative, other patient etc?)
- Q11 How much did "not being able to speak English well" affect your stay in hospital?
1 = not at all; 2 = a little bit; 3 = much; 4 = very much
- Q12 Comments (optional)



keeping you informed
an up-to-date summary of news and current affairs
affecting the health industry in Australia

www.justhealthnews.com.au