The content of talk about health conditions and medications during appointments involving interpreters

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Introduction. Interpreters often join immigrants and physicians to permit communication.

Objective. To describe the content of talk about health problems and medications during clinical encounters involving interpreters [professionals (PI) or family members (FI)].

Methods. We analysed one regularly scheduled encounter for each of 16 adult patients with their family physician and their usual interpreter (10 with a PI and 6 with a FI). A different PI, not involved in the consultations, translated the non-English or French parts. We coded all utterances about each medical problem and each medication using six health problem and 16 medication topics from MEDICODE, a validated coding scheme.

Results. Physicians and patients addressed an average of 3.6 problems and 3 medications per encounter. No psychosocial problems were discussed in encounters involving FIs. On average, three topics were discussed per problem. In order of frequency, they were follow-up, explanations of the condition, non-drug management, consequences, self-management and emotions about the problem. Encounters involving PIs were more likely than encounters with FIs to include discussions of emotions about the problem (42% versus 4%, \( P = 0.001 \)) and indications for follow-up (88% versus 28%, \( P < 0.001 \)). An average of 6.5 topics was discussed per medication. Commonest topics discussed were medication class, how the drug was being used, achieved effect and expected effect.

Conclusions. One can address multiple problems and share vital information even in the presence of a language barrier. When FIs are interpreting, physicians would do well to make a particular effort to bring the patient’s psychological and emotional issues into the interaction.

Keywords. Communication skills, cultural diversity, family medicine, prescribing.

Introduction

To provide effective medical care, physicians must accomplish the core tasks of gathering information about health problems, giving explanations and planning treatment.1 In primary care, an average of three problems are addressed in a single visit.2 During at least half of the visits to family physicians, treatment includes medication. Fifty-five per cent of patients receive at least one prescription at a single visit with their GP.3

Language barriers are increasingly prevalent between physicians and patients and are one of the most important factors in explaining health disparities among immigrants.4 One way to improve access to and quality of care is to have an interpreter during health care consultations.5 The literature generally recommends professional interpreters (PIs) as they are trained, have knowledge of medical terms and of the medical system and are thought to be more certain to interpret what both the patient and the physician say,6,7 do so more accurately8 and ensure confidentiality.9 In fact, several studies of informal interpreters advise against using family or ad hoc interpreters due to inaccuracy of the translation, omissions, etc.10

Before we can work to improve communication with patients who attend physician visits with an interpreter, we firstly need to describe the content of their medical encounters with a PI and to identify the deficiencies in information exchange. Secondly, we need
to include encounters with untrained interpreters and to identify deficiencies in information exchange because most interpreted encounters involve untrained interpreters and some patients requiring interpreters prefer the presence of a family member (FI) or close friend over a PI or other non-PI, feeling that they are more trustworthy\textsuperscript{11} and helpful.\textsuperscript{9}

We conducted an observational study of encounters between adult patients, their usual interpreter and their family physician in Montreal, Canada. The main purposes of the study were to describe and compare encounters involving trained interpreters (PI) and FIs and to elicit the perceptions of physicians and interpreters about the role of the interpreter. In this paper, we report on the topic content within two main domains of medical encounters: health problems and medications. We have used (MEDICODE)\textsuperscript{12}a system developed and validated by two of us (CR and MTL) to analyse communication.

Methods

Participants

Physicians working in two primary care clinics in Montreal who consented to participate were asked to identify adult patients who usually come with an interpreter, either a PI or a FI from June 2004 to January 2005. The research associate (RA) then sought the consent of the PIs or FIs who accompanied these patients. Consenting interpreters sought the consent of the patients. In all, 22 physician-interpreter–patient triads agreed to participate. Some physicians and PIs interacted with more than one patient. There were 18 physicians, 16 interpreters and 22 patients in the study.

Recruitment

An interpreter telephoned all identified patients to briefly explain the project before the day of the consultation and asked them to come 30 minutes earlier than their appointment with the physician for a detailed explanation of the research. The RA explained the project to the patient through the interpreter. All physicians, interpreters and patients gave written consent.

Settings

Clinics were chosen because they serve many immigrants. At Clinic A, 27\% of adult patients reported being unable to speak English or French well enough to talk with their doctor; at Clinic B, the prevalence was 49\%.\textsuperscript{13} Physicians at both clinics are paid a salary and appointments last ~30 minutes.

Data Collection

We video recorded one regularly scheduled encounter involving a family physician, a patient and his or her usual interpreter. Of the 22 recorded consultations, 12 involved a PI from the Montreal interregional interpreters bank (a government programme) who had undergone 45 hours of training and passed formal linguistic competence testing. The 10 FI \textit{ad hoc} interpreters (FIs) were brought by the patient.

A different PI who was not involved in the consultations listened to each of the recordings and translated the non-English or French parts in the presence of the RA who pressed for accuracy and asked for clarification when meaning was not clear to her. Then, the entire clinical consultations were transcribed in French or English depending on the language used by the physician and the interpreter during the encounter.

We were unable to find a PI to translate two of the encounters involving FIs because of the small number of persons in Montreal speaking the languages involved. Because of technical problems with four recordings, we analysed 16 consultations, 10 with a PI and 6 with a FI (see Table 1 for details). The six excluded consultations were as varied in the languages involved and the nature of the medical conditions addressed as the 16 analysed.

Data analysis

The MEDICODE grid is a validated descriptive tool dedicated to the thematic analysis of discussions about health problems and medications during medical consultations. It includes content themes selected on the basis of their pertinence in primary care practice and the literature about the content of communication about medication.\textsuperscript{12} The instrument contains 19 content themes about problems and 40 about medications. In this analysis, by grouping some themes together and excluding others that did not appear in our data, we used six themes for health problems (follow-up, explanation, non-drug management, consequences, encouragement of self-management and emotions about the problem) and 15 for medications (listed in Table 3). Two people (ER and TS) performed the coding separately and met to reach consensus when there were differences.

We chose the problem and the medication as our units of analysis for this study for the following reasons: firstly, from our clinical experience, we knew that more than one problem and/or medication were likely to be discussed per visit. Therefore, an analysis by interview would not allow us to describe the content of the discussion specific to each problem and each medication. Secondly, the committee of experts serving as consultants in the development of MEDICODE was of the opinion that discussion regarding a medication would vary more as a function of the characteristics of the problem and the drug than as a function of physician or patient characteristics.\textsuperscript{12} The results are thus presented as percentages of health problems or medications for which the themes are discussed and not as percentage of encounters as is usually seen in doctor–patient communication studies.
Statistical analyses
We computed the frequencies of each content category and performed bivariate analyses comparing data from encounters with PIs and FIs and new and renewed medications. We also compared theme discussion rates for the most common problems and medications. All tests were two-tailed and the $P$ value was set at 0.05.

Results
Physicians were mainly female ($n = 12$) as were patients ($N = 13$) and interpreters ($n = 12$). The four male interpreters were all FIs (son-in-law, husband, brother and son). There were five patients’ languages: Punjabi ($n = 9$), Bengali ($n = 2$), Vietnamese ($n = 2$), Tamil ($n = 2$) and Dari ($n = 1$). The first four languages were among the 10 most requested languages for interpretations in the Montréal area during the study period. Many patients could understand some English and when there was a FI, this person was often more fluent in English than in French.

Patients involved in encounters with PIs were different from patients with FIs. Nine of the 10 spoke Punjabi and 7 were refugee claimants: persons awaiting a hearing to assess whether their claims to be a refugee will be accepted and they will be allowed to stay in Canada. None of the patients with FIs were refugee claimants. The small number of cases made it impossible for us to carry out meaningful multivariate analyses to statistically distinguish the effects of the kind of interpreter (PI or FI) from the effects of being a refugee claimant or of speaking Punjabi.

Health problems raised
Table 1 provides a summary of the characteristics of the 16 encounters. Physicians and patients addressed a total of 58 problems during 16 consultations, an average of 3.6 problems per encounter (range 1–8), 3.5 and 4.2 with PIs and FIs, respectively. Pain was an issue in 13 of the 16 encounters (Cases 1–4, 6–8, 10–12 and 14–16). Psychosocial issues (anxiety, depression,
post traumatic stress disorder and risk of deportation) were addressed in six encounters (Cases 2, 4, 6, 7, 9 and 10). No psychosocial problems were discussed with FIs. Cardiovascular disease and/or diabetes affected seven patients (Cases 3, 7, 8, 11, 13, 14 and 16), but only two patients reported any associated symptoms.

**Problem themes discussed**

In Table 2, we present the frequency with which the six themes were discussed for each problem. For the total 58 problems, five of the six themes were discussed for at least 45% of the problems. An average of three themes was discussed per problem (data not shown). The patterns of theme discussion differed for the three commonest problems. Discussions about cardiac conditions were least likely to include explanations of the condition \( (P < 0.001) \), expression of/ enquiries about emotions about the problem \( (P < 0.001) \), non-drug management \( (P < 0.05) \) or self-management \( (P < 0.001) \). Discussions of psychosocial problems were most likely to include explanations \( (P < 0.001) \) and discussions of emotions about the problem \( (P < 0.001) \), as detailed in Table 2.

Compared to encounters with FIs, encounters involving PIs were more likely to include discussions of the patient’s emotions about the problem \( (42\% \text{ versus } 4\%, P < 0.001) \) and indications for follow-up \( (88\% \text{ versus } 28\%, P < 0.001; \text{ data not shown in Tables}) \). Moreover, when discussing pain, emotions about the problem were discussed 63\% of the time in encounters involving PIs but never with FIs. There were no differences in rates of discussion of the other four themes (data not shown).

**Medications discussed**

Physicians and/or patients discussed at least one medication during all of the encounters. Of the 48 medications discussed during 16 interviews, an average of three medications was discussed per encounter \( (\text{range } 1–8) \), 2.7 and 3.5 with PIs and FIs, respectively. Of these, 38 were medications the patient was already taking although doses were changed for three, 8 were prescribed for the first time during the encounter and 2 were discussed but not prescribed. Patients may have been taking more cardiovascular and endocrine medications than we have recorded here. As we report below, physicians and patients did not name all the medications that the patient was taking or that the physician was renewing. Therefore, if the physician said ‘I am renewing your diabetes pills’, we recorded one endocrine medication even though more than one oral hypoglycaemic may have been prescribed.

**Medication themes discussed**

On average, 6.5 of the 16 medication themes were addressed per medication \( (\text{range } 1–15) \). Table 3 provides percentages of medications for which themes were discussed for both new medications and renewed medications. Compared to renewals of existing medications, discussions of a new medication or a change in dose of an existing medication were more likely to include information about alternatives \( (55\% \text{ versus } 20\%, P < 0.05) \), cost \( 46\% \text{ versus } 6\%, P < 0.001 \), adverse reactions \( (55\% \text{ versus } 20\%, P < 0.05) \) and attitudes towards the medication \( (73\% \text{ versus } 17\%, P < 0.0001) \).

**Discussion**

We are reporting on the content of primary care visits involving family physicians, immigrants and an interpreter. The study has several limitations because the participants are not representative of the whole population of patients who have interpreters, their

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**Table 2**

<table>
<thead>
<tr>
<th>Problem themes</th>
<th>Themes discussed per problem (as %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total, ( N = 58 )</td>
</tr>
<tr>
<td>Follow-up</td>
<td>62</td>
</tr>
<tr>
<td>Explanation</td>
<td>55</td>
</tr>
<tr>
<td>Non-drug management</td>
<td>52</td>
</tr>
<tr>
<td>Consequences</td>
<td>48</td>
</tr>
<tr>
<td>Self-management</td>
<td>45</td>
</tr>
<tr>
<td>Emotions about the problem</td>
<td>26</td>
</tr>
</tbody>
</table>

\*\( P < 0.05 \); \**\( P < 0.001 \).

**Table 3**

<table>
<thead>
<tr>
<th>Medication themes</th>
<th>Themes discussed per medication (as %)</th>
<th>Total, ( N = 48 )</th>
<th>New or changed, ( n = 11 )</th>
<th>Renewed, ( n = 35 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>40</td>
<td>36</td>
<td>43</td>
<td></td>
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<tr>
<td>Class</td>
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<td>82</td>
<td>86</td>
<td></td>
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<tr>
<td>Alternative</td>
<td>30</td>
<td>55*</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Patient question</td>
<td>36</td>
<td>55</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>34</td>
<td>73***</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Strength</td>
<td>23</td>
<td>27</td>
<td>20</td>
<td></td>
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<tr>
<td>Expected effect</td>
<td>70</td>
<td>91</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Adverse reactions</td>
<td>32</td>
<td>55*</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>15</td>
<td>46**</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>17</td>
<td>36</td>
<td>11</td>
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<tr>
<td>Objectives</td>
<td>37</td>
<td>60</td>
<td>31</td>
<td></td>
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<tr>
<td>How being used</td>
<td>85</td>
<td>NA</td>
<td>89</td>
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<td>How to use</td>
<td>51</td>
<td>64</td>
<td>49</td>
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<td>Duration</td>
<td>15</td>
<td>9</td>
<td>17</td>
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<tr>
<td>Achieved effect</td>
<td>78</td>
<td>NA</td>
<td>80</td>
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</table>

\*\( P < 0.05 \); \**\( P < 0.001 \); \***\( P < 0.0001 \).
interpreters or family physicians. Almost all of our pa-
tients were from South Asia, most were women and
44% were refugees compared to the 9% of new arriv-
als in Canada who are refugees.15 All of our PIs were
women compared to 83% in the US.16 In Canada,
50% of family physicians are women compared to the
75% in our population.

On the other hand, a major strength is our use of
a validated instrument to code these three-person in-
terviews. We have shown that even a shorter version
of the MEDICODE coding instrument allowed us to
shed light on the nature and frequency of discussions
of health problems and medications. Another strength
is our focus on a population that are usually excluded
from medical communication studies: those who need
interpreters. Our sample is of modest size, but we
present analyses of actual clinical discussions of 58
health problems and 48 medications.

The high prevalence of cardiovascular disease and
diabetes in our patients is to be expected because
81% are members of a group with a high prevalence
of these conditions: South Asians.17,18 Although many
of our patients had diabetes, hypertension and hyper-
lipidemia, the fact that these conditions were asym-
ptomatic in all but two patients could explain the lower
number of themes discussed for the cardiac problem
category as well as the lower number of themes
broached regarding medications in the cardiac class.
Considering the generally asymptomatic and long-
term evolution of this type of problem, it is not sur-
prising that more acute problems having a perceived
direct influence on the patient’s quality of life are at-
tended to during the encounter. Our findings call at-
tention however to the risk of not addressing
important issues related to the optimal management of
chronic diseases (problem understanding and concerns,
self-management and lifestyle changes) as well as man-
agement of their related long-term medications. The
problems they actually complained of—back and limb
pains, headaches, insomnia, worry and depression—
and that were attended to during these encounters are
similar to those of poor uninsured primary care patients
in the USA who reported their most common chronic
medical problems to be headaches, chronic
back problems, arthritis and problems with mood.19

We observed differences in the themes discussed be-
tween encounters involving FIs and PIs. Emotions were
discussed less often when FIs were present, in part be-
cause doctor–patient–FI triads did not discuss any psy-
chosocial problems. However, even when addressing
pain, emotions about the problem were discussed 63% of
the time with a PI and never with a FI. These find-
ings suggest that with a FI, there may be two barriers
to the discussion of emotions: one that blocks discus-
sion of psychosocial problems and one that limits dis-
cussion of emotional aspects of patient problems in
general. However, we cannot attribute the differences
observed to the kind of interpreter given the other dif-
ferences between the two groups (gender of the inter-
preter and immigrant status of the patient) and the
small size of the sample. Nevertheless, given these find-
ings, physicians would be well advised to actively seek
to elicit patients’ emotional reactions and mental health
concerns when a FI is interpreting.

Clinicians should feel encouraged by our finding that
their colleagues addressed a large number of themes
per medication and that the proportion of medications
for which each of the 16 themes is raised is high com-
pared to analyses by others of unilingual encoun-
ters.20–22 The physicians in our study and their working
conditions are atypical of most primary care physicians
in two ways that may have facilitated communication.
Firstly, the physicians have chosen to work with this
particularly vulnerable population and likely try harder
than others to ensure care. Secondly, the payment
method (salary) and clinic organization enable physi-
cians to spend approximately three times longer (30 mi-
utes) with each patient than the reported average
length of primary care encounters.23 The differences in
the patterns of discussions between new or changed
medications and renewed medications confirm the find-
ings of Richard and Lussier’s previous study24 as well
as that of others.25 It is interesting to note that discus-
sions of alternatives, attitudes and costs occur more fre-
cently with new prescriptions. Even in technically
difficult encounters in the presence of an interpreter, it
seems possible to talk about complex themes, such as
alternatives and attitudes towards medications.

Conclusions

Our study provides evidence that one can address
multiple problems and share vital information with pa-
tients even in the presence of a language barrier given
the will and skill of the participants and the support
of health care organization structures. The almost
complete absence of discussion of mental health prob-
lems or even emotions about biomedical problems
when FIs are interpreting should lead physicians to
make a particular effort to bring the patient’s psycho-
logical and emotional issues into the interaction. This
study reinforces the usefulness of MEDICODE that
was originally created for the quantitative analysis of
larger samples of medical encounters.

Declaration

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