

## The challenge of communication in interpreted consultations in diabetes care:

a mixed methods study

### Abstract

#### Background

The experience of diabetes care for individuals from minority ethnic groups, particularly individuals of Bangladeshi origin, shows they are at a significant disadvantage.

#### Aim

To identify the challenges of interpreted consultations for healthcare providers and to explain the disadvantage experienced by patients from minority groups who have diabetes.

#### Design and setting

Comparison of 12 interpreted consultations with 24 consultations involving fluent English speakers in four primary healthcare centres in Tower Hamlets, east London, UK.

#### Method

Content analysis of video recordings of routine diabetes review consultations in primary care, involving 36 patients, nine nurses or healthcare assistants, and six interpreters.

#### Results

Interpreted consultations were as long as same-language consultations but patients said less. The incidence of misunderstandings was similar but patients in interpreted consultations asked fewer questions. Indicators of social distance in interpreted consultations included less humour and less discussion of the patient's feelings or personal circumstances. Patients in interpreted consultations were less likely to raise issues unrelated to diabetes, to discuss their own ideas about health, or to talk about clinical parameters. Providers commonly addressed English-speaking patients directly but usually addressed patients through interpreters using the third person. Interpreters sometimes changed the meaning or did not translate speech, and they added their own comments.

#### Conclusion

The findings explain some of the known problems of diabetes care for individuals from ethnic minorities. Effective training for interpreters and care providers is needed to reduce social distance and to facilitate patients' involvement in self-management.

#### Keywords

communication; diabetes mellitus; ethnic groups; multilingualism; primary health care.

### INTRODUCTION

In 2012, diabetes was estimated to affect 3.1 million individuals in the UK and to consume 4% of the NHS budget.<sup>1</sup> Individuals from minority ethnic communities are five times more likely than others to have type 2 diabetes.<sup>2</sup> In east London, where this study was carried out, the prevalence of type 2 diabetes has been found to be 3.5% for white individuals, 11% for South Asian individuals, and 8% for black individuals.<sup>3</sup>

National audits of care show geographical variability in carrying out nine crucial tests at annual diabetes review:<sup>4,5</sup> measurements of weight, blood pressure, smoking status, glycosylated haemoglobin (HbA1c), urinary albumin, serum creatinine, and cholesterol, and secondary damage to the eyes and feet. There is also variability across ethnic groups. Among those with type 2 diabetes, white patients have been shown to be more likely than other ethnic groups to have completed all of these care processes.<sup>5</sup> Encouraging self-management of diabetes is an important priority for care providers, and an important part of diabetes review is to inform and motivate patients in this task.<sup>6</sup>

Although community leaders may disagree,<sup>7</sup> some evidence suggests poorer awareness of diabetes and its complications in minority ethnic communities.<sup>8</sup> In one study, individuals of Pakistani and South Asian origin living in Edinburgh were found to be more likely to blame their external environment than themselves for their diabetes.<sup>9</sup> Chronic kidney disease in black

and South Asian patients with diabetes is more severe than in white patients, whose glycaemic control is also better.<sup>3</sup>

Dissatisfaction with diabetes care among patients and others of Bangladeshi origin has been found in studies in Bradford,<sup>10</sup> Cardiff,<sup>11</sup> and east London.<sup>7</sup> Frustration by healthcare providers is also reported in these studies. Socioeconomic and educational differences that are associated with ethnicity may explain some of the differences in experiences of care, but it is clear that much of this difficulty stems from communication problems where different languages are involved. Responders in the study of east London specifically cite difficulties experienced in consultations involving interpreters,<sup>7</sup> and there is some evidence that patients' presentation of themselves as knowledgeable, morally responsible individuals is more difficult when patients and providers do not share the same language.<sup>12-14</sup>

With over 300 languages spoken in London alone and an estimated 300 000 individuals in the UK without functional English to permit communication with a health service provider,<sup>15</sup> it is unsurprising that provision of professional interpreter services in the NHS is both common and costly.<sup>16</sup> Yet there have been no significant published studies involving direct observation of interpreted consultations in the UK, although some work of this sort has been done on consultations with UK patients for whom English is a second language.<sup>17,18</sup>

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## How this fits in

There are ethnic variations in the quality of diabetes care and satisfaction with diabetes care in the UK, with South Asian patients being particularly likely to report disadvantage. Studies of interpreted consultations outside the UK have identified a number of challenges that these pose. This study found that interpreted consultations for diabetes care differ from similar same-language consultations, with greater social distance between the care provider and patient and less involvement of patients in discussing clinical indicators. Effective training for interpreters and those working with them is needed to facilitate non-English-speaking patients' involvement in self-managing their condition.

This contrasts with research from the US and elsewhere, which provides some evidence about common difficulties in communicating through interpreters. Much of this work involves Hispanic speakers in the US, the relevance of which for other settings and cultures is unknown. Such studies have found that interpreted consultations, when compared with same-language encounters, involve less affective talk, less discussion of the patient's personal circumstances or 'lifeworlds', and less investigation by providers of patients' knowledge or health beliefs.<sup>19-21</sup> Patients in interpreted consultations are often less active, asking fewer questions,<sup>19,21,22</sup> and interpreters have sometimes been found to either answer patients' questions themselves without translating them, or fail to translate or answer them.<sup>12,22</sup> Errors, omissions, misunderstandings, and inaccuracies in translation have been documented, particularly where informal rather than professional interpreters are used.<sup>12,13,19,23,24</sup> Health service providers commonly do not address the patient directly, instead address the interpreter,<sup>25</sup> and professional interpreters commonly take on the role of 'co-diagnosticians', aligning themselves with the perspectives of healthcare providers rather than patients.<sup>12,20,26</sup> Providing extra time for interpreted consultations, splitting talk up so that it is delivered in smaller chunks, and frequently checking understanding has been recommended.<sup>27,28</sup>

This article reports data from the first study in the UK involving direct observation of interpreted consultations, comparing these with same-language consultations.

The research studied routine review consultations for diabetes care, largely carried out by nurses in primary care settings, occurring in east London where a significant proportion of the population (and of those with diabetes) is of Bangladeshi origin. Content analysis of video-recorded consultations is used to provide insight into the challenges they present and the relevance of recommendations on how to work with interpreters in a UK context.<sup>27,28</sup>

## METHOD

This is an analysis of a subset of data from a larger collection of 57 video- and audiorecorded consultations with patients receiving diabetes care in primary care settings in London in 2010-2011. This article considers 36 consultations occurring within the London borough of Tower Hamlets, excluding consultations where the patient was not fluent in English but did not require an interpreter. The aim of the study is to compare interpreted with fluent same-language consultations. In Tower Hamlets, 148 adult patients with diabetes, with appointments mostly for routine review meetings with nurses or healthcare assistants in four practices, were invited to take part. Twenty-eight percent (41/148) did not attend their appointment; 49 of 107 attenders (46%) agreed to participate and filled in a brief form in which they were asked to indicate their demographic data, including ethnicity. Nurses, interpreters, and other providers of care were separately informed of the study and consented to take part, with written consent being obtained for all those directly involved.

English-language recordings were transcribed in English by a professional transcriber. Where a language other than English was involved, a translator and one of the research team viewed and listened to the audio and video recordings together. The translator verbalised in English the non-English passages, which were sometimes replayed several times. This translated talk was itself audiorecorded and then transcribed and added in italics to the English transcripts.

A coding scheme (Table 1) for content analysis was developed by all three researchers and applied to the transcripts by two of the researchers, using NVivo9 software. They independently coded groups of four transcripts at a time, discussing any discrepancies and refining coding definitions until an acceptable Cohen's kappa statistic measuring inter-rater reliability was achieved for all codes (the final overall kappa was 0.84). Codes were

**Table 1. Coding scheme for categorising the utterances of speakers**

Code	Definition
Misunderstanding	Not understanding another speaker, plus repairs of misunderstanding
Check understanding	Checking another speaker has understood, or asking for clarification of what has been said
Questions	Questions (excludes rhetorical questions)
Health education	Advisory information about diabetes and diabetes care (patients' speech excluded)
Motivation	Patient's motivation or willpower to engage in self-care or change health-related behaviour
Praise	Praising the other person for health-related actions or knowledge
<b>Patworld</b>	Any speech coded at any of the four codes below
1. Humour	Humorous moments, laughter, light-hearted banter
2. Lifeworld	Social chit chat, personal context of the patient, their family, or friends. Mention of special events such as Ramadan or birthdays outside the health and social care system
3. Feelings	Reports of, or questions about, emotional states. Emotionally expressive interjections
4. Employment	Patient's employment, work or job-seeking efforts
<b>All clinical</b>	Any speech coded at any of the 14 codes below [all of which are for diabetes-related talk only]
1. Blood tests	Blood tests
2. BP	Blood pressure
3. Cholesterol	Cholesterol
4. Exercise	Exercise
5. Eyes	Eyes and eye checks
6. Feet	Feet and foot checks
7. Flu	Flu vaccine
8. Food	Food and diet
9. Kidney	Kidney and kidney complications
10. Medications	Medications and how to use them
11. Smoke	Smoking
12. Sugar and HbA1c	Sugar/HbA1c levels
13. Urine test	Urine tests
14. Weight	Weight, BMI
Medical other	Medical or health problems unrelated to diabetes
<b>Patient's speech only</b>	
PClinPar	Patient evaluates or gives information about how they are doing on diabetes-related clinical parameters (such as those included under 'All clinical'), excluding talk about health behaviour or behaviour change
Epistemic	Patient's knowledge, beliefs, or ideas about the workings of their body or health/illness. This includes material sometimes called 'lay health beliefs' and includes expressions of not knowing enough, or much, about these things
<b>Interpreted consultations only</b>	
Meaning changed	Where attempted translations change the meaning of what was said in the other language
Talk not translated	Significant messages that are not translated
Other than translated	Any interpreter speech that is not an attempted translation of what another speaker has said

*BMI = body mass index. BP = blood pressure. HbA1c = glycosylated haemoglobin. Patworld = patient world. PClinPar = patient clinical parameters.*

applied to whole paragraphs only, with each paragraph representing a turn-at-talking by a speaker. Boxes 1 and 2 show examples of talk coded under selected codes.

Of 12 consultations that involved interpreters, 10 involved patients of Bangladeshi origin, the other two being

with a (Jordanian) Arabic speaker and an Urdu speaker (whose first language was Pashto). The rest involved patients with varying degrees of fluency in English. In this article, the 12 interpreted consultations are compared with 24 consultations with patients whose English was judged

## Box 1. Examples of selected codes (non-English speech in italics)

### Interpreted

#### Misunderstanding

**Language Line (LL):** *'You don't want to smoke or do you still want to carry on smoking?'*

**P:** *'I am smoking cigarettes.'*

**LL:** *'Do you want to leave it now or carry on?'*

**P:** *'I'm keen to stop.'*

**LL:** *'They can help you quit smoking if you want to.'*

**P:** *'What thing is that?'*

**LL:** *'They can help you if you want to quit smoking.'*

(Patient 35)

#### Health education

**Interpreter (I):** *'The main problem with Bengali people is that when we walk we don't walk fast enough. When you walk fast your heart beats faster, you sweat, you feel tired, and that is exercise. We people — we walk but we walk at such a slow pace it does not do anything for us.'*

(Patient 42)

#### Motivation

**P:** *'OK my dear I am doing whatever they asked me to do. They gave tablets, I am having the tablets.'*

(Patient 8)

#### Praise

**N:** 'OK. That's good. So it's really important that she keeps that up.'

(Patient 8)

#### Humour

**P:** *'I take medications without knowing their names [laughs].'*

(Patient 46)

#### Lifeworld

**N:** 'I know she doesn't read English, but possibly her family will be able to explain it to her.'

**I:** *'You have people at home that know English, your children can read English?'*

**P:** 'Yes.'

(Patient 8)

#### Feelings

**N:** 'And she's lost weight from doing it, so that's fantastic!'

**I:** *'She is saying it's good that you are doing it.'*

**P:** *'Yes it's for my benefit not for her.'*

**I:** 'For her there's benefits.'

(Patient 8)

#### Medical other

**P:** *'But my this, for this I can't sleep all night.'*

**I:** *'Today she will not talk about this, today is for diabetes.'*

**P:** *'Every few moments inside my throat this happens all night, inside it itches, its not that big doctor gave I had, it itches and does khek khek, it is embarrassing in front of people.'*

**N:** 'How does she feel about that?'

**I:** 'She said it's not a problem, and she's talking about her other, er dyspepsia her symptoms.'

**N:** 'OK. Not related to diabetes?'

**I:** 'No.'

**N:** 'No? OK. All right.'

(Patient 8)

#### Patient clinical parameters

**P:** *'My wife doesn't know how to use the machine. If it's low I can tell its low. I can't walk, I sweat and shake.'*

(Patient 12)

#### Epistemic

**N:** 'What does she understand that diabetes is?'

**I:** *'What do you understand that diabetes is? What is diabetes?'*

**P:** *'I don't understand any of this.'*

**I:** *'But your husband had diabetes. Do you understand it? Do you understand what diabetes is? Can you tell me?'*

**P:** 'No.'

**I:** 'No, she can't tell.'

(Patient 11)

### English

**Patient (P):** '[pause] blood sugar?'

**Nurse (N):** 'Blood pressure.'

**P:** 'Blood pressure, sorry.'

(Patient 41)

**N:** 'Well, it is important to eat regularly, you know, even if it's a small amount. And you're happy with, you know, you have a small amount, 'cos obviously not having food will only cause more problems.'

(Patient 45)

**P:** 'Yeah, I really want to do it, it just always seems to be that I can, I can never get a minute.'

(Patient 43)

**N:** 'So that's doing extremely well; it was six point four, okay, which is fantastic.'

**P:** 'Oh, that's the best I've ever had!'

**N:** 'Yeah? That's amazing. So you've done really well.'

(Patient 2)

**P:** 'So I'll be getting those Viagra put on my next prescription?'

**N:** 'I've given you them there.'

[...]

**P:** 'Yeah, my girlfriend will be happy.'

**N:** 'Sorry?'

**P:** [chuckles]

**N:** 'Good, OK. Well, let's hope you are as well [laughter].'

(Patient 41)

**P:** 'I played golf Sunday I couldn't find my golf shoes so I bought a new pair.'

(Patient 19)

**P:** 'I don't know [pause] you know? I wish I could just, erm [pause] I wish I could just forget it, but I can't!'

(Patient 6)

**P:** 'Talking about the arthritis'

**N:** 'Mmn?'

**P:** 'I'm on ibuprofen and co-codamol, right?'

**N:** 'Mmn.'

**P:** 'When I used to take one it'd be fine, it'd kill the pain.'

**N:** 'Right.'

**P:** 'Right? But now I'm finding I need to take more and more.'

**N:** 'OK.'

**P:** 'And mixing the two, I'm a bit worried about it.'

(Patient 2)

**P:** 'Alright, it's gone, to be honest with you, it's gone really well. You know it's erm, gone down really well and the weight's coming off and you know I'm trying everything [laughs].'

(Patient 34)

**P:** 'Well, I [pause] er [pause] sometimes have pains in my lower intestine.'

**N:** 'Mhm.'

**P:** 'Which I understand may be caused by the metformin or the simvastatin, or perhaps by both [pause].'

**N:** 'Mhm, mhm.'

**P:** 'But they're not severe enough to make me want to change things.'

(Patient 23)

## Box 2. Extracts from interpreted consultations (non-English speech shown in italics)

### Interpreter changes the meaning of what was said

Patient (P): *'Yes I do understand.'*

Interpreter (I): 'Confused, yeah ... that's what he said.'  
(Patient 13)

Nurse: 'So, shall we check her blood pressure now? Just see how that is?'

I: *'She will check your blood pressure.'*  
(Patient 8)

P: *'I want to control everything, but I am not able to do so.'*

I: 'So she's saying she would like to you control both her [pause] um, focus on both the weight and the cholesterol.'  
(Patient 42)

### Talk not translated by the interpreter

P: *'She [nurse] does so much but I don't believe anything is helping.'*  
(Patient 42)

P: *'Eight ten teeth are falling out.'*

I: *'Why are your teeth falling out?'*

P: *'I don't know they just fell out quick.'*

I: *'What's happening to your eyes?'*

P: *'I don't know I can't see, I can't see close up. When I put my glasses on I can't see.'*  
(Patient 27)

### 'Other' than translated speech

Daughter (acting as interpreter): 'So we're like willing to like get some time for that, because we both enjoy swimming and that's like it's quite effective in terms of losing weight!'  
(Patient 26)

I: *'These small changes if you make them, you should still make them and it will be good. For example, you are telling me that you do regular exercise but then you eat a bit too much and you also have your biscuits and croissants. If you do this, you will see no results. So that's why you can't just do one thing, you have to look at it all round and then you'll see your result.'*  
(Patient 42)

by the authors to be fluent. All but one of these fluent consultations involved a patient for whom English was their first language, 18 being with white, three with black, and three with Asian patients. Nine different care providers were involved, of whom seven were nurses. Two patients were seen by healthcare assistants (one of these consultations was interpreted, the other not). Nurses were asked to indicate their ethnicity and all either identified as being of black African or white English origin, with the exception of one nurse who was Indian (Hindu rather than Muslim) and one healthcare assistant who was of Bangladeshi origin but carried out her

consultation in English. Six interpreters were involved, one of whom communicated by phone link ('Language Line'). All but one of the interpreted consultations (where an adult daughter interpreted) involved a professional interpreter who shared the ethnic origin and language of the patient, with the exception of the Pashto speaker, where the interpreter had Urdu as a first language and the patient was speaking Urdu as a second language.

Quantitative analysis was carried out using SPSS (version 16), with exported NVivo9 spreadsheets indicating the number of words coded under each coding theme. Supplementary analysis of word distributions was carried out using Wordsmith Tools (version 5.0), software developed for computational linguistics and used in keyword analysis.

## RESULTS

Table 2 shows that, although there was no significant difference in the time taken by interpreted and same-language consultations, patients who spoke English produced 3.6 times the number of words produced by patients in interpreted consultations.

Table 3 demonstrates that, while patients' misunderstanding and their attempts to check understanding were not significantly different across the two groups, patients in same-language consultations were more likely to produce utterances that included questions or that involved discussion of health education or of their own motivation to engage in health-related behaviour, and to participate in praise for health-related actions or knowledge. With the exception of employment, all of the patient world 'patworld' codes (Table 1) more frequently applied to patient speech in same-language consultations, with more humorous moments and discussions of feelings and of 'lifeworld' topics, as defined by the researchers (Table 1). A number of diabetes-related clinical topics were discussed more in same-language consultations. Patients in interpreted consultations devoted less speech to medical issues unrelated to diabetes ('medical other') and there was less talk about patients' own ideas about the workings of their bodies or of health and illness ('epistemic'), as well as less patient involvement in evaluating or informing about diabetes-related clinical parameters (patient clinical parameters) (Table 1).

Table 4 shows that providers were more likely to produce utterances containing humour and to talk about feelings with their English-language patients, so that

**Table 2. Who speaks how many words, and how long does the consultation last?<sup>a</sup>**

	Interpreted	English	Mean difference	95% CI	P-value
Patient words	620.8	2263.7	-1642.9	-2169.5 to -1116.3	<0.001
Provider words	2344.9	3105.3	-760.4	-2003.8 to 483.0	ns
Length of consultation (minutes)	33.4 <sup>b</sup>	30.2	3.2	-6.4 to 12.8	ns

ns = not significant. <sup>a</sup>Numbers show averages per consultation. <sup>b</sup>Excludes patient 13 whose consultation was 114 minutes long, as the patient had a 'hypo' and required urgent care on the spot.

**Table 3. Number of words coded (patients' words only)<sup>a</sup>**

Code	Interpreted	English	Mean difference	95% CI	P-value
Misunderstanding	30	28	2	-36 to 40	ns
Check understanding	15	10	5	-10 to 20	ns
Questions	101	220	-119	-231 to -6	0.039
Motivation	83	419	-336	-565 to -106	0.006
Praise	0	17	-17	-28.5 to -4.6	0.009
<b>Patworld</b>	110	887	-777	-158 to -1104	<0.001
1. Humour	10	207	-197	-307 to -86	0.001
2. Lifeworld	73	637	-564	-840 to -287	<0.001
3. Feelings	26	299	-273	-456 to -90	0.005
4. Employment	14	100	-86	-246 to 75	ns
<b>All clinical</b>	499	1701	-1202	-1657 to -748	<0.001
1. Blood tests	16	58	-42	-72 to -10	0.011
2. BP	21	52	-31	-79 to 17	ns
3. Cholesterol	20	42	-22	-72 to 30	ns
4. Exercise	79	139	-60	-172-53	ns
5. Eyes	36	48	-12	-70 to 46	ns
6. Feet	18	77	-59	-144 to 26	ns
7. Flu	14	3	11	-5 to 26	ns
8. Food	71	307	-236	-373 to 98	0.002
9. Kidney	2	30	-28	-49 to -7	0.010
10. Medications	144	648	-504	-757 to -251	<0.001
11. Smoke	9	63	-54	-186 to 78	ns
12. Sugar and HbA1c	180	699	-519	-831 to -206	0.002
13. Urine test	14	27	-13	-46 to 21	ns
14. Weight	25	157	-132	-242 to -22	0.021
Medical other	86	397	-311	-574 to -46	0.023
<b>Patient's speech only</b>					
PCLinPar	55	317	-262	-438 to -87	<0.001
Epistemic	46	397	-351	-514 to -186	<0.001
<b>Interpreted consultations only</b>					
Meaning changed	71				
Talk not translated	457				

BP = blood pressure. HbA1c = glycosylated haemoglobin. ns = not significant. Patworld = patient world. PCLinPar = patient clinical parameters. <sup>a</sup>Numbers show averages per consultation.

overall their talk about 'patient world' was significantly less common in interpreted consultations.

The findings about humour are supported in the Wordsmith analysis shown in Table 5, which also shows that the usage of personal pronouns was different in interpreted consultations. The higher usage of the third person by providers in interpreted consultations is largely because they address the patient through the interpreter rather than directly. Thus, a concordance analysis showed that 'does he' is the most common two-word phrase associated with providers' usage of 'he' in these consultations (33 times), and the most common verbs occurring before 'him' in provider talk in these consultations are 'see', 'ask', 'give', 'tell', and 'help'. Patients are also more likely to use the third person in interpreted consultations.

Tables 3 and 4 also show that substantial

amounts of both provider and patient talk contained passages either that were not translated by the interpreter or where the meaning of what was said was changed. Looking at this in terms of the proportion of speech passages ('utterances') involved, 307/920 (33.4%) utterances made by patients in the 12 interpreted consultations contained some talk that was not translated, and 674/1644 (41.0%) utterances from the providers contained some talk that was not translated. Interpreters also quite commonly spoke about topics that did not involve an attempted or actual translation of what another speaker had said ('other than translated' speech); 685/2057 (33.3%) utterances by interpreters involved this kind of material.

## DISCUSSION

### Summary

Interpreted consultations did not last longer than consultations with fluent English speakers. Patients in interpreted consultations spoke less than did English-speaking patients, perhaps because interpreters took up some of the time available. However, there was no significant overall difference for nurses' (providers') speech, suggesting that the extra time taken by interpreters affected patients more than nurses.

The reduction in speech affected certain topics more than others. Patients in interpreted consultations were less likely to talk about their own ideas about diabetes and less likely to talk about clinical topics related to diabetes, although this did not hold true for providers' talk about clinical topics. A number of differences reflected the social distance between provider and patient introduced by the lack of a shared language. For example, interpreted consultations were relatively humourless and involved less discussion of the patients' life circumstances ('lifeworld') and less talk about patients' feelings. The Wordsmith findings about personal pronouns indicate that providers rarely addressed non-English-speaking patients directly. Overall, there were fewer questions from patients in interpreted consultations.

These patients were less likely than English-speaking patients to raise issues with providers that appeared unrelated to their diabetes (see differences for the 'medical other' code in Table 3), and it is clear that interpreters may play a role in determining the relevance of passages of this sort (see examples under 'medical other' in Box 1). Interpreters, in fact, had a great deal of latitude in the consultations,

**Table 4. Number of words coded (providers' words only)<sup>a</sup>**

Code	Interpreted	English	Mean difference	95% CI	P-value
Misunderstanding	48	43	5	27 to -45	ns
Check understanding	10	35	-25		
Questions	776	1071	-295	-754 to 166	ns
Health education	747	735	12	-551 to 575	ns
Motivation	148	299	151	-401 to 99	ns
Praise	63	165	102	-223 to 18	ns
<b>Patworld</b>	162	505	-343	-577 to -108	0.005
1. Humour	38	199	-151	-216 to -84	<0.001
2. Lifeworld	88	268	-180	-362 to 3	ns
3. Feelings	63	161	-98	-189 to -6	0.037
4. Employment	0	56	-56	-165 to 53	ns
<b>All clinical</b>	2085	2536	-451	-1617 to 715	ns
1. Blood tests	80	171	-91	-198 to 16	ns
2. BP	190	142	48	-116 to 211	ns
3. Cholesterol	130	104	26	-70 to 122	ns
4. Exercise	250	195	55	-148 to 259	ns
5. Eyes	197	49	148	-92 to 387	ns
6. Feet	83	81	2	-109 to 113	ns
7. Flu	60	19	41	-30 to 112	ns
8. Food	308	350	-42	-318 to 232	ns
9. Kidney	64	76	-12	-91 to 66	ns
10. Medications	638	1051	-413	-1224 to 399	ns
11. Smoke	33	59	-26	-115 to 63	ns
12. Sugar and HbA1c	973	1255	-282	-1271 to 708	ns
13. Urine test	82	71	11	-73 to 93	ns
14. Weight	162	252	-90	-309 to 128	ns
Medical other	128	306	-178	-366 to 10.3	ns
<b>Interpreted consultations only</b>					
Meaning changed	222				
Talk not translated	2225				

BP = blood pressure. HbA1c = glycosylated haemoglobin. ns = not significant. Patworld = patient world.

<sup>a</sup>Numbers show averages per consultation.

engaging in talk with either provider or patient about topics that they, the interpreter, deemed relevant, sometimes not translating utterances of one speaker into the other speaker's language, and sometimes changing the meaning of utterances in translations.

#### Strengths and limitations

This is the first significant study involving

**Table 5. Laughter and personal pronoun usage by type of consultation<sup>a</sup>**

Code	Interpreted	English	Mean difference	95% CI	P-value
<b>Providers</b>					
laughs	4	8	-4	-7 to -2	0.004
he, his, him, she, her, hers	94	7	87	55 to 118	<0.001
you, you'll, your, yours, you're, you've	60	204	-144	-199 to -90	<0.001
<b>Patients</b>					
laughs	1	9	-8	-12 to -5	<0.001
he, his, him, she, her, hers	3	15	-12	-21 to -4	0.005
you, you'll, your, yours, you're, you've	5	40	-45	-52 to -18	<0.001

<sup>a</sup>Numbers show average words per consultation.

direct observation of interpreted consultations in the UK. This method avoids the problems of relying on self-reported behaviour, which are evident in existing UK studies.<sup>7,10,11</sup> The relevance of the study for consultations about other conditions, for settings other than primary care, for other types of provider such as doctors, and for other ethnic groups remains to be established by further research. These routine review consultations usually followed a standard protocol with a predefined agenda and lasted longer than consultations occurring in 10-minute time slots with GPs. In addition, they involved professional interpreters for the most part; communication where family members act in this role may be different.<sup>29</sup>

It is possible that some of the discrepancies in the amount of speech were mitigated by providing more frequent consultations for patients requiring interpreters. Anecdotally, some of the nurses suggested to the researchers that they thought they did this, although there is no other evidence that this occurred. Nor is the success of this strategy known if it did occur; it would be reasonable for repeat visits of this sort to cause some dissatisfaction among patients. It contrasts with recommendations in guides to working with interpreters<sup>27,28</sup> that longer appointments with such patients should be booked.

#### Comparison with existing literature

Several differences identified in this study may help explain the dissatisfaction with diabetes care identified in other studies of South Asian groups in the UK.<sup>7,10,11</sup> Self-management of diabetes is hard work, involving both cognitive skills and emotional work, arguably best assisted when care providers can connect with the 'lifeworlds' of patients.<sup>30</sup> It is concerning that there is a relative lack of engagement of the emotional and personal lives of patients in interpreted consultations. Humour, for example, can lighten emotional burdens and promote solidarity but the subtleties of timing and body language it requires are hard to achieve without a shared language. In addition, given the discrepancies in delivery of diabetes-care processes that disadvantage patients from minority ethnic communities,<sup>5</sup> and the incidence of poorly controlled diabetes in the population of South Asian individuals with diabetes,<sup>3</sup> it is concerning that patients in interpreted consultations are involved less in discussions of several clinical indicators.

Some of the practices identified in this study may be regarded by one or more

participants as helpful. For example, interpreters answering patients' questions without translating them for providers to answer may think that they are saving valuable time. The finding that interpreters often add material of their own supports a view of them as 'co-diagnosticians',<sup>12,20,26</sup> but the extent to which this is done may be quite reasonable and safe, given the regular experience some of them have in participating in these routine reviews, during which considerable knowledge of diabetes may have accumulated. On the other hand, it is hard for healthcare providers to monitor the quality of interpreters' provision of information to patients if this talk is not translated.

#### Implications for research and practice

While this study focused on diabetes, the authors believe many of the challenges identified are generic to interpreted consultations. Recommendations for working with interpreters,<sup>27,28</sup> if implemented, may go some way towards addressing the challenges that this study has revealed, reducing the social distance of interpreted consultations and helping with patient involvement, which is an essential component of self-management.<sup>6</sup> These include, for example, recommendations to:

- look at the patient when you are speaking and when the patient is speaking to the interpreter;
- address the patient directly as 'you' rather than addressing the patient in the third person through the interpreter;
- from time to time, summarise what you think the patient is saying and ask for this summary to be translated so that the patient can confirm or deny its accuracy;
- split talk up into small 'chunks' so that it can be translated before delivering the next 'chunk';
- ask the interpreter what was said in the other language, if an extended passage of talk occurs that appears not to have been translated; and
- not engage the interpreter in talk in English without explaining the topic of talk to the patient and translating it if relevant.

However, unless such recommendations are widely implemented and their effectiveness evaluated by well-designed studies, it seems likely that suboptimal communication will occur in consultations where the language of provider and patient is not shared.

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#### Ethical approval

The study was approved by London — Surrey Borders Regional Ethics Committee (Ref: 10/H0806/27).

#### Provenance

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#### Competing interests

The authors have declared no competing interests.

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