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Abstract

Background

The new Scottish GP contract commenced in April 2018 with a stated aim of mitigating health inequalities.

Aim

To determine the health characteristics and experiences of patients consulting GPs in deprived-urban (DU), affluent-urban (AU) and remote/rural (RR) areas of Scotland.

Design and Setting

Postal survey of a random sample of adult patients from 12 practices who had consulted a GP within the previous 30 days.

Methods

Patient characteristics and consultation experiences in the three areas (DU, AU, RR) were evaluated using validated measures including the Consultation and Relational Empathy (CARE) Measure and Patient Enablement Instrument (PEI).

Results

In DU areas, multimorbidity was more common (78% vs 58% AU vs 68% RR, $p<0.01$); complex presentations were more likely (16% vs 10% AU vs 11% RR, $p<0.01$); and more consultations were conducted by telephone (42% vs 31% AU vs 31% RR, $p<0.01$).

Patients in DU areas reported lower satisfaction (82% vs 90% AU vs 86% RR, $p<0.01$); lower perceived GP empathy (mean CARE score 38.9 vs 42.1 AU vs 40.1 RR, $p<0.05$); lower enablement (mean PEI score 2.6 vs 3.2 AU vs 2.8 RR, $p<0.01$) and less symptom improvement ($p<0.01$) than those in AU or RR areas. Face-to-face consultations were associated with significantly higher satisfaction, enablement and perceived GP empathy than telephone consultations in RR areas (all $p<0.05$).

Conclusion

Four years after the start of the new GP contract in Scotland, patients' experiences of GP consultations suggest that the inverse care law persists.

How this fits in

The mitigation of health inequalities was a stated aim of the new GP contract introduced in Scotland in April 2018. This survey of patients from deprived urban, affluent urban and remote and rural areas of Scotland found that those in deprived urban areas had the greatest health needs, with higher levels of multimorbidity, complex presentations, co-existing mental-physical multimorbidity, and frequency of GP attendance. The same group also had the poorest experience of GP consultations, with lower levels of satisfaction, perceived GP empathy, enablement and symptom improvement. Solutions are required to reverse the long-standing inverse care law, which on these data would appear not have been improved by the new GP contract in Scotland.

Introduction

Population ageing and the increasing prevalence of multimorbidity pose significant challenges to healthcare services globally. In Scotland, as in the rest of the UK, workforce shortages and the enduring impact of the Covid-19 pandemic have added to these pressures[1, 2]. Meanwhile, health inequalities in Scotland are widening, with disparities not only across socioeconomic groups, but also by gender, ethnicity and geography[3]. The latter is of particular relevance in Scotland, where over 15% of the population live in remote and rural areas[3, 4].

Health inequalities are compounded by the inverse care law - first described in the NHS over 50 years ago - which states that; *'the availability of good medical care tends to vary inversely with the need for it in the population served'*[5-9]. Previous research has shown how the inverse care law operates in primary care in deprived areas of Scotland, where GP consultations are shorter, less patient-centred, have lower perceived GP empathy, lower enablement for patients with complex needs, and poorer outcomes compared with affluent areas[6-10].

Policies of reform in primary care have been central to the efforts of healthcare systems globally in addressing the challenges of population ageing, multimorbidity and health inequalities[11, 12]. A recent scoping review found considerable heterogeneity in how reform plays out in different systems, and noted that the views of patients are often overlooked in their design and evaluation[12].

In Scotland, health and social care policy is a devolved responsibility and healthcare delivery is organised within 14 regional Health Boards. In 2016, the Scottish Government abolished the Quality and Outcomes Framework (QOF) and re-organised GP practices into geographic Clusters. In April 2018 a new GP contract which further redesigned primary care services in Scotland[13], with one stated aim of reducing health inequalities. Key changes included an expansion of the primary care multidisciplinary team (MDT), designed to allow GPs to focus more time on complex multimorbid patients[13]. Previous work in deprived areas has shown that longer consultations lead to higher

enablement of patients with complex needs[14], and, when combined with a patient-centred empathic approach, improvements in quality-of-life and wellbeing[15].

The impact of the 2018 GP contract on health inequalities in Scotland – either socioeconomic or geographic – is unknown. Our recent qualitative research found that GPs in rural areas view the contract as too 'city centric', while some in deprived areas feel it has failed to free-up GP time to spend with complex patients[16, 17]. The aim of this study was to survey the health needs and experiences of patients consulting GPs in three population settings: deprived urban (DU), affluent urban (AU), and remote and rural (RR) areas of Scotland.

Methods

Study design

Postal questionnaire of patients who had recently consulted a GP in a purposive sample of 12 practices across three Health Boards in Scotland.

Sampling, recruitment and data collection

Three Health Boards were selected to give a range of geographic and socioeconomic characteristics. Four clusters were recruited from each of these Health Boards, and one practice recruited from each Cluster. A random sample of 6291 adult patients (aged ≥18 years) who had consulted a GP within the past 30 days were identified from practice records. The sample size in each practice ranged from 159-748. This depended on the size of the practice list and was weighted towards areas of high deprivation where lower response rates were anticipated. The sample size was chosen based on our previous work on GP consultations which found significant differences between affluent and deprived populations[7, 8], and on the time and resource constraints of the study.

Questionnaires were sent with a cover letter and participant information sheet and returned using stamped addressed envelopes. Due to funding and time constraints, no reminders were sent. Sampling of patients took place in the week commencing 22nd August 2022, and questionnaires were posted between 31st August and 15th September. Collection of responses ran until 30th November 2022.

Out of 6291 patients from 12 practices, 1053 responded (response rate 17%). Response rates were higher in AU areas (27%) than in RR areas (20%) and DU areas (12%). The distribution of respondents' ages differed significantly from those of non-respondents, with older patients relatively over-represented amongst respondents. There were no differences in gender profiles between respondents and non-respondents. Deprivation scores did not differ between respondents and non-respondents in the AU or RR groups, but in the DU areas the respondents were significantly less deprived than non-respondents (Supplementary Tables S1 and S2).

Instruments used

The content of the questionnaire was based the original study conducted by SWM in 2007[6]. Sociodemographic information included respondents' age, gender, employment status, living arrangement and ethnicity. Deprivation status was obtained from the Scottish Index of Multiple Deprivation (SIMD) linked with each patient's postcode, and recorded in deciles, with 1 being the most deprived and 10 the least deprived [18]. Health characteristics included self-rated general health over the past 12 months; frequency of GP attendance over the past 12 months; and current disability or long-term illness[6]. Depression and anxiety symptoms were measured using the Patient Health Questionniare-4 (PHQ-4)[19].

Multimorbidity was assessed using a checklist of 17 common chronic conditions, with space to add additional conditions not listed, as in our previous studies[6, 7]. Characteristics of the GP encounter included the consultation type (face-to-face, telephone, video, or home visit); time elapsed in weeks

since the last consultation; and the number and type of problems discussed (physical, emotional or psychological, social, administrative, or other)[6].

Patients' perception of GP empathy was assessed using the Consultation and Relational Empathy (CARE) Measure[20]. This was assessed alongside overall satisfaction with the consultation and the likelihood of recommending the doctor to family and friends[6]. Consultation outcomes included the 6-item Patient Enablement Instrument (PEI), measuring the impact of the encounter on a patient's ability to cope with and understand their health problems[21]. Perceived improvement in symptoms since the consultation was also assessed[22].

Data analysis

Descriptive analysis was performed using SPSS version 27. Practices were grouped according to whether they served mainly DU, AU, or RR areas. Differences between the three population groups were assessed using the appropriate parametric or non-parametric tests (Kruskal-Wallis, or ANOVA) with further pairwise comparisons conducted (using Mann Whitney tests, or independent t-tests) where a significant difference was found on three-way testing.

Consultation experiences were compared between face-to-face consultations (FTFC) and telephone consultations (TC). Due to low numbers, home visits (n=11) and video consultations (n=1) were excluded from these comparisons. When analysing the types of problems discussed, 'complex problems' were defined as a combination of a physical problem(s) plus a psychological and/or social problem(s)[6].

Results

The socio-demographic characteristics of the patients who took part in the survey are shown in Table 1. Sixty percent of respondents were female, which was similar across the three groups. Time elapsed since the consultation was also consistent between groups, ranging from "less than 1 week"

(9%) to "4 weeks or more" (42%), with a median response of "2-3 weeks" (32%). The DU group had a median deprivation decile score of three, compared with 10 for the AU group and five for the RR group (p<0.01). The DU group had the lowest mean age at 61 years, compared with 62 years in the AU group, and 66 years in the RR group (p<0.01). Rates of unemployment were highest in the DU group, while rates of retirement were highest in the RR group (both p<0.01).

Table 2 summarises the health characteristics of patients in the three groups. The DU group had significantly worse general health, higher rates of disability or long-term illness and higher PHQ-4 scores (depression and anxiety) than both other groups (p<0.01). There was a significantly higher proportion of patients with multimorbidity (two or more conditions) in the DU group than in both other groups (78% vs 58% AU vs 68% RR, p<0.01). Coexisting mental-physical multimorbidity was also highest in the DU group (36% vs 18% AU vs 19% RR, p<0.01). Compared with the AU group, patients in the RR group had significantly higher multimorbidity, poorer general health and higher levels of disability or long-term illness (all p<0.01).

Patterns of consulting (Table 3) differed significantly across the three groups. Patients in the DU group were most likely to have had a TC and least likely to have a FTFC in the previous 4 weeks, compared with both other groups (both p<0.01). Frequency of attendance over the past 12 months was significantly higher in the DU and RR groups than in the AU group (p<0.01).

Patients in the DU group were significantly more likely to present with three or more problems than those in both other groups (p<0.01). Complex problems were also more common in the DU group compared with both other groups (16% vs 10% AU vs 11% RR, p<0.01), whereas presentations comprising solely physical problems were least common in this group (p<0.05). The number and nature of presenting problems, and the type of consultation, did not vary significantly between the AU and RR groups.

There were significant differences in patients' consultation experiences between the three groups (Table 4). Patients in the DU group reported significantly lower satisfaction at consultation and less

symptom improvement following the consultation than both other groups, as well as significantly lower perceived GP empathy than the AU group (all $p<0.01$). Patient enablement was significantly higher in the AU group than both other groups ($p<0.01$).

Overall, FTFC (Table 5) were associated with higher ratings of empathy, enablement, satisfaction and recommendation likelihood than TC (all $p<0.05$). However, when analysed by group, only the RR group demonstrated a significant difference between TC and FTFC in terms of consultation experience.

Discussion

Summary

This study found that patients in DU areas had the greatest health needs, with higher levels of multimorbidity, complex presentations, and frequency of GP attendance compared with the other two groups. The DU group also had the poorest experience of GP consultations, with lower satisfaction, perceived GP empathy, enablement and symptom improvement compared with the AU or RR groups.

Although there were some demographic and health status differences between the AU and RR groups, there were no differences in the type of consultation, number or type of problems discussed, or most of the measures relating to consultation experience (with the exception of the PEI which was lower in the RR group).

In the RR group, FTFC were associated with better consultation experience than TC. The fact that this difference was not evident in either the DU or AU groups suggests that the significant differences in consultation experience between these groups is not attributable to the higher proportion of TC in the DU group.

Comparison with existing literature

The disparity in health needs demonstrated here are consistent with previous studies comparing deprived and affluent areas[6-8, 10, 23, 24]. Likewise, the disparity in consultation experience between deprived and affluent areas is consistent with previous studies[6-9, 11, 25]. It is noteworthy than a previous study using the same validated measures shows remarkably similar findings to the current study (although data collection methods differed, as discussed below) [6]. This suggests that little has changed over the last decade and a half to improve the quality of GP consultations in deprived areas.

While no previous studies have directly compared the three groups included in this study, higher patient satisfaction in RR areas compared with urban areas in general has been reported previously[26] matched by high GP job satisfaction in RR areas[27]. Conversely, lower patient satisfaction in DU areas has been found to be associated with lower GP job satisfaction[9].

Differences in consultation quality between FTFC and TC have been reported previously[28-30], though not specifically in RR areas. The higher rate of TC in deprived areas is consistent with a recent population-based study, which found that this difference which was not evident prior to the pandemic[31]. While higher patient satisfaction with FTFC has been shown elsewhere[28-30, 32], higher enablement and perceived GP empathy scores are new findings.

Strengths and limitations

The strengths of this study were its relatively large sample size, the use of a bespoke questionnaire including several validated measures, and the inclusion of three populations of interest that have not been directly compared before. The main limitation was the relatively low response rate of 17% (12% DU vs 27% AU vs 20% RR). This is not dissimilar to that seen in the Scottish Government's bi-annual national patient surveys which obtains overall response rates of 20-25%, with much lower rates in deprived areas[33]. The DU group was the biggest group in our survey (3611 of 6291 patients),

so the low response rate in this group reduced the overall figure considerably. We had originally planned to collect questionnaires within GP practices immediately after the consultation (where 70% response rates have been obtained[6]), but this was not possible due to the pandemic, when most FTFC in general practice stopped. Additionally, postal follow-ups were not possible due to funding constraints.

The comparison groups in this study were based on area-based deprivation scores derived from patients' postcodes (SIMD[18]), rather than individual deprivation level. The use of individual measures of socioeconomic position (such as employment and education level) may have resulted in different findings. However, SIMD scores are widely used in Scotland by researchers, Health Boards, and the Scottish Government.

In all groups, responders differed from non-responders in terms of age, and in the DU group, responders were significantly less deprived than non-responders (Supplementary Table S1). While this has implications for the generalisability of our findings, the fact that responders were the "least deprived of the deprived" suggests that the significant differences found between the DU and the other two groups may in fact be an underestimate, as has been shown elsewhere[34].

While this study repeated many measures used in our 2007 and 2016 studies[6,7], direct comparison is difficult due to the different timeframes in which responses were gathered. In the 2007 study, responses were gathered immediately after the consultation[6]. In the present study, 42% of questionnaires were completed four weeks or more after the consultation. A Finnish study has demonstrated a decline in PEI scores with time elapsed since the encounter[35] and there was some evidence of this in the current study (Supplementary Figure S1). Nevertheless, the fact that the mean time of completion post-consultation was consistent between groups supports the validity of our findings. The impact of the pandemic on GP services themselves, such as the increased reliance on telephone triage systems[31], further complicates comparisons with the 2007 and 2016 studies[6, 7].

Implications for policy, practice, and research

The key implications of this study are twofold. Firstly, the fact that FTFC were associated with better consultation experience (including perceived GP empathy) in RR areas has implications for the use of TC, since GP empathy predicts consultation outcomes[36] and may even be associated with longer term outcomes[37, 38]. Although this difference between FTFC and TC was not apparent in the urban groups, it should be noted that the analyses may be underpowered and further research is required to confirm or refute this.

Secondly, our findings suggest the persistence of the inverse care law four years on from the introduction of the contract. As discussed, we cannot make a direct comparison with previous studies[6, 7], so caution is required. However, our ongoing longitudinal analysis of the Scottish Government patient surveys from 2010-2023 will help support or refute our assertion.

A key envisaged mechanism for reducing health inequalities in the 2018 contract was the provision of longer GP consultations for patients with complex multimorbidity, made possible by reducing GP workload through the expansion of the primary care MDT. However, the contract does not directly control the way practices organise care, nor does it offer financial incentives for adopting this mechanism. The extent to which the contract has enabled GPs to spend more time with complex patients was not assessed in this study, but our recent qualitative research suggests this is not happening, especially in deprived areas[16, 17], even though evidence suggest this would be both cost-effective and beneficial to deprived multimorbid patients[14,15]. This is being further explored by ongoing research on consultation length measured by routine electronic computer records, as part of the current funded programme of research.

The Scottish GP contract is an example of the global efforts to transform the delivery of primary care, with MDT expansion being a critical component, but there is a dearth of evidence reflecting patients' experiences of these efforts[12]. Our findings, therefore, offer potential learning for all primary care systems undergoing change. Clearly, the pandemic has had a major impact on the progress of the new contract in Scotland. Nevertheless, our finding suggest that urgent steps must

be taken by the Scottish Government to reverse the inverse care law and help GPs tackle the health

inequalities that blight the lives Scotland's most vulnerable people.

Ethical approval

Ethical approval was obtained from the Wales REC 6 research ethics committee (REC reference: 21/WA/0078) and research and development approval from participating Scottish Health Boards

Competing interests

None

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Table 1. Sociodemographic characteristics of participating patients in affluent urban, deprived urban, and remote and rural areas

	Remote and Rural n=332	Affluent Urban n=273	Deprived Urban n=448	Overall group comparison (p-value)	2-way group comparisons (p-value)	
Sex: % (n)				0.491		
Male	39.8 (128)	42.8 (113)	37.9 (163)			
Female	60.2 (194)	56.4 (149)	61.9 (266)			
Other	0 (0)	0.8 (2)	0.2 (1)			
Age: mean (SD)	65.8 (14.5)	62.0 (17.6)	60.9 (14.9)	<0.001	DU vs AU	0.001
					AU vs RR	<0.001
					DU vs RR	0.405
Age group: % (n)				<0.001	DU vs AU	0.217
					AU vs RR	0.032
					DU vs RR	<0.001
<45 years	9.3 (30)	17.5 (47)	14.2 (62)			
45-64 years	31.5 (102)	29.5 (79)	40.8 (178)			
65+ years	59.3 (192)	53.0 (142)	45.0 (196)			
SIMD decile: % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	<0.001
Most deprived 1	0 (0)	0 (0)	19.5 (87)			
2	0.3 (1)	0 (0)	23.5 (105)			
3	4.2 (14)	1.5 (4)	13.0 (58)			
4	32.2 (107)	5.5 (15)	12.1 (54)			
5	20.2 (67)	2.2 (6)	6.7 (30)			
6	22.6 (75)	0.4 (1)	8.1 (36)			
7	15.1 (50)	3.3 (9)	4.9 (22)			
8	2.1 (7)	6.2 (17)	2.9 (13)			
9	3.3 (11)	15.0 (41)	6.5 (29)			
Least deprived 10	0 (0)	65.9 (180)	2.9 (13)			
Job status: % (n)				0.007	DU vs AU	0.104
					AU vs RR	0.321
					DU vs RR	0.002
Employed	34.5 (112)	40.1 (107)	39.8 (174)			
Retired	58.8 (191)	52.1 (139)	41.2 (180)			
Unemployed, looking	0.3 (1)	0.7 (2)	2.1 (9)			
Unemployed, unable	5.2 (17)	1.9 (5)	14.4 (63)			
In education	0.3 (1)	2.2 (6)	0.5 (2)			
Living arrangement: % (n)				0.120		
Alone	24.6 (80)	24.0 (64)	35.2 (153)			
With partner	68.6 (223)	69.7 (186)	53.3 (232)			
With someone else	6.8 (22)	6.4 (17)	11.5 (50)			
Time elapsed since consultation: % (n)				0.803		
Less than 1 week	9.1 (30)	8.9 (24)	8.7 (38)			
1-2 weeks	18.2 (18.2)	17.1 (46)	16.7 (73)			
2-3 weeks	28.3 (93)	34.6 (93)	33.4 (146)			
4 or more weeks	44.4 (146)	39.4 (106)	41.2 (180)			

DU: Deprived urban; AU: Affluent urban; RR: Remote and Rural
Overall group comparisons used Kruskal-Wallis tests, except for Age and SIMD where ANOVA was used.
2-way comparisons used Mann-Whitney tests, except for Age and SIMD, which used independent t-tests.

Table 2. Health characteristics of participating patients in affluent urban, deprived urban, and remote and rural areas

	Remote and Rural n=332	Affluent Urban n=273	Deprived Urban n=448	Overall group comparison (p-value)	2-way group comparisons (p-value)	
General health: % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	<0.001
Very good	15.7 (52)	21.0 (57)	8.1 (36)			
Good	32.6 (108)	43.0 (117)	23.7 (105)			
Fair	37.8 (125)	26.8 (73)	39.3 (174)			
Bad	11.8 (39)	7.7 (21)	23.0 (102)			
Very bad	2.1 (7)	1.5 (4)	5.9 (26)			
Multimorbidity (no. of conditions) : % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	0.009
0	10.2 (34)	14.7 (40)	7.0 (31)			
1	22.3 (74)	27.1 (74)	15.5 (69)			
2	20.8 (69)	26.7 (73)	23.9 (106)			
3+	46.7 (155)	31.5 (86)	53.6 (238)			
Multimorbidity (no. of conditions): mean (SD)	2.6 (1.8)	2.1 (1.6)	3.0 (2.0)	<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	0.003
Mental-physical multimorbidity: % (n)	18.7 (62)	17.6 (48)	35.6 (158)	<0.001	DU vs AU	<0.001
					AU vs RR	0.729
					DU vs RR	<0.001
Disability or long-term illness: % (n)	47.4 (153)	25.0 (68)	56.8 (251)	<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	0.010
PHQ-4 score: : % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	0.367
					DU vs RR	<0.001
Normal	72.4 (236)	69.0 (187)	48.5 (211)			
Mild (3-5)	16.6 (54)	18.1 (49)	20.5 (89)			
Moderate (6-8)	6.1 (20)	8.1 (22)	13.6 (59)			
Severe (9-12)	4.9(16)	4.8 (13)	17.5 (76)			
DU: Deprived urban; AU: Affluent urban; RR: Remote and Rural Overall group comparisons used Kruskal-Wallis tests, except for General health where ANOVA was used. 2-way comparisons used Mann-Whitney tests, except for General health, which used independent t-tests.						

Table 3. Patterns of consulting of participating patients in affluent urban, deprived urban, and remote and rural areas

	Remote and Rural n=332	Affluent Urban n=273	Deprived Urban n=448	Overall group comparison (p-value)	2-way group comparisons (p-value)	
Attendances in past year: mean (SD)	4.6 (3.6)	3.9 (4.0)	5.3 (4.3)	<0.001	DU vs AU	<0.001
					AU vs RR	0.001
					DU vs RR	0.056
Attendances in past year, grouped: % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	<0.001
					DU vs RR	0.096
1-3	45.5 (145)	57.2 (155)	38.8 (166)			
4-6	34.5 (110)	32.8 (89)	38.8 (166)			
>6	20.1 (64)	10.0 (27)	22.4 (96)			
Consultation type: % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	0.542
					DU vs RR	0.002
Face-to-face	67.7 (222)	68.0 (183)	56.8 (249)			
Telephone	30.8 (101)	31.2 (84)	42.0 (184)			
Home visit	1.5 (5)	0.4 (1)	1.1 (5)			
Video	0.0 (0)	0.4 (1)	0.0 (0)			
Number of problems: % (n)				<0.001	DU vs AU	<0.001
					AU vs RR	0.078
					DU vs RR	0.001
1	56.3 (174)	63.4 (166)	46.0 (180)			
2	34.0 (105)	29.4 (77)	36.1 (141)			
3+	9.7 (30)	7.3 (19)	17.9 (70)			
Type of problem(s): % (n)				0.018	DU vs AU	0.019
					AU vs RR	0.896
					DU vs RR	0.020
Physical	73.5 (238)	73.8 (197)	64.3 (279)			
Psychosocial	4.3 (14)	5.2 (14)	7.6 (33)			
Physical + psychosocial	10.8 (35)	9.7 (26)	16.1 (70)			
Administrative or other	11.4 (37)	11.2 (30)	12.0 (52)			

DU: Deprived urban; AU: Affluent urban; RR: Remote and Rural

Overall group comparisons used Kruskal-Wallis tests. 2-way comparisons used Mann-Whitney tests.

Table 4. Consultation experience of participating patients in affluent urban, deprived urban, and remote and rural areas

	Remote and Rural n=332	Affluent Urban n=273	Deprived Urban n=448	Overall group comparison (p-value)	2-way group comparisons (p-value)	
Satisfaction with consultation: % (n)				0.004	DU vs AU	0.003
					AU vs RR	0.696
					DU vs RR	0.009
Completely dissatisfied	2.1 (7)	2.6 (7)	5.2 (23)			
Very dissatisfied	1.8 (6)	1.8 (5)	2.5 (11)			
Fairly dissatisfied	4.0 (13)	1.5 (4)	4.7 (21)			
Neutral	6.1 (20)	4.4 (12)	5.9 (26)			
Fairly satisfied	16.4 (54)	16.2 (44)	19.2 (85)			
Very satisfied	27.4 (90)	32.5 (88)	28.4 (126)			
Completely satisfied	42.2 (139)	41.0 (111)	34.1 (151)			
Likelihood to recommend doctor: % (n)				0.276		
Definitely not	1.2 (4)	0.7 (2)	2.3 (10)			
Probably not	4.3 (14)	2.2 (6)	3.4 (15)			
Not sure	5.2 (17)	6.7 (18)	6.6 (29)			
Probably yes	23.4 (77)	23.9 (64)	26.1 (115)			
Definitely yes	66.0 (217)	66.4 (178)	61.6 (271)			
PEI score: mean (SD)	2.8 (3.4)	3.2 (3.2)	2.6 (3.1)	0.008	DU vs AU	0.007
					AU vs RR	0.029
					DU vs RR	0.508
CARE score: mean (SD)	40.1 (10.5)	42.1 (8.1)	38.9 (11.1)	0.026	DU vs AU	0.002
					AU vs RR	0.187
					DU vs RR	0.186
Effect on symptoms: % (n)				0.003	DU vs AU	0.002
					AU vs RR	0.314
					DU vs RR	0.019
No improvement or worse	24.5 (60)	24.6 (46)	31.9 (112)			
Minor improvement	21.2 (52)	18.7 (35)	21.7 (76)			
Moderate improvement	32.7 (80)	27.3 (51)	30.8 (108)			
Major improvement	21.6 (53)	29.4 (55)	15.7 (55)			

PEI: Patient Enablement Instrument; CARE: Care and Relational Empathy measure;
DU: Deprived urban; AU: Affluent urban; RR: Remote and Rural
Overall group comparisons used Kruskal-Wallis tests. 2-way comparisons used Mann-Whitney tests.

Table 5. Comparing consultation experience in FTF and telephone consultation of participating patients in affluent urban, deprived urban, and remote and rural areas

	All settings		
	Face-to-face	**Telephone**	**p-value**
Total cases: % (n)	63.9 (654)	36.1 (369)	
Satisfaction with consultation: mean (SD)	5.8 (1.5)	5.6 (1.4)	0.017
Likelihood to recommend doctor: mean (SD)	4.5 (0.8)	4.3 (1.0)	0.003
PEI score: mean (SD)	3.1 (3.3)	2.5 (3.0)	0.001
CARE score: mean (SD)	40.7 (9.9)	38.6 (11.0)	0.007
Effect on symptoms: mean (SD)	1.5 (1.1)	1.4 (1.1)	0.138
	Remote and rural		
	Face-to-face	**Telephone**	**p-value**
Total cases: % (n)	68.7 (222)	31.3 (101)	
Satisfaction with consultation: mean (SD)	5.9 (1.4)	5.6 (1.5)	0.029
Likelihood to recommend doctor: mean (SD)	4.6 (0.8)	4.3 (1.0)	0.002
PEI score: mean (SD)	3.4 (3.7)	1.6 (2.3)	<0.001
CARE score: mean (SD)	41.5 (9.3)	36.5 (12.3)	0.002
Effect on symptoms: mean (SD)	1.6 (1.1)	1.4 (1.0)	0.111
	Affluent urban		
	Face-to-face	**Telephone**	**p-value**
Total cases: % (n)	68.5 (183)	31.5 (84)	
Satisfaction with consultation: mean (SD)	5.9 (1.4)	6.0 (1.2)	0.931
Likelihood to recommend doctor: mean (SD)	4.6 (0.7)	4.4 (0.9)	0.157
PEI score: mean (SD)	3.2 (3.1)	3.3 (3.4)	0.741
CARE score: mean (SD)	42.2 (7.8)	41.8 (9.0)	0.927
Effect on symptoms: mean (SD)	1.6 (1.1)	1.8 (1.3)	0.192
	Deprived urban		
	Face-to-face	**Telephone**	**p-value**
Total cases: % (n)	57.5 (249)	42.5 (184)	
Satisfaction with consultation: mean (SD)	5.6 (1.7)	5.5 (1.6)	0.179
Likelihood to recommend doctor: mean (SD)	4.4 (0.9)	4.4 (1.0)	0.639
PEI score: mean (SD)	2.7 (3.1)	2.5 (3.1)	0.443
CARE score: mean (SD)	39.0 (11.4)	38.6 (10.7)	0.491
Effect on symptoms: mean (SD)	1.4 (1.1)	1.3 (1.1)	0.326
PEI: Patient Enablement Instrument; CARE: Care and Relational Empathy measure p-values calculated using Mann-Whitney tests			