IN BRIEF

- This is the first comparative study of patient satisfaction with different out-of-hours dental services.
- There was overall service satisfaction, particularly with the dentist-patient encounter, but walk-in out-of-hours services were perceived as harder to access than those based on telephone access.
- Walk-in emergency treatment sessions may also be cost-inefficient, since almost half of attending patients felt they would have been 'happy with advice plus a reliable appointment when surgeries re-opened'.
- Some key questions are suggested that might be included in a shorter and more meaningful satisfaction instrument for out-of-hours dental patients.
- For better service design, future research should try to explan the main sources of dissatisfaction.

The effectiveness of out-of-hours dental services: II. patient satisfaction

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Objective To compare patients' satisfaction with four types of out-of-hours emergency dental service, including both 'walk-in' and telephone-access services.

Basic design Postal questionnaire survey of patients who had attended weekend emergency dental services. Patient satisfaction measured using an adapted version of a questionnaire developed for assessing out-of-hours medical services.

Setting Two health authorities in South Wales, UK.

Subjects The 411 patients who saw a dentist and completed the patient satisfaction questionnaire.

Results The quality of the dentist-patient encounter was similar across services, with most patients being satisfied with the dentist's attitude and manner, the explanations and advice given, and having to see an unfamiliar dentist. Satisfaction was lower, and differed more across services in relation to service accessibility and delays in getting to see a dentist out-of-hours. The walk-in services were perceived as the least accessible: around 40% said they had problems contacting a dentist when the surgery was closed (compared with 16% and 29% in the other two, telephone-access services). Only 12-14% of telephone-access patients said they would be 'happy with advice plus a reliable appointment when surgeries re-opened', whereas almost half of walk-in patients thought this.

Conclusions Despite overall satisfaction with the dentist-patient encounter, there was relative dissatisfaction with the accessibility of all services, especially the walk-in services. Out-of-hours dental services should be better designed to reflect patients' needs: the need for telephone advice as well as face-to-face consultations, and greater awareness that theoretically available services may be difficult to access unless public expectations and awareness are raised.

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INTRODUCTION

In the UK, out-of-hours dental services for people with emergency dental problems are provided in a wide variety of ways.[1] The first paper in this series has shown that patient-reported health outcomes were not related to service type, suggesting that neither the treatment setting nor the type of dentist seen has a significant impact on the chances of getting symptom relief.[2] Although symptom relief is accepted as one of the main aims of out-of-hours or emergency dental care, there are various reasons for trying to understand and measure satisfaction with the overall experience of seeking and receiving care.

First, within the range of criteria that define the quality of primary care, good access arrangements and the clear and sensitive provision of advice and information are known to be highly valued by patients.[3,4] In previous studies of the importance of different dental service attributes 'dentist sensitivity', in particular whether the dentist 'responds to your pain, discusses your fears and helps to overcome them',[5] and the 'dentist's manner' have been rated as highly important (second most important, after the dentist's technical skills).[6] For out-of-hours medical care there is evidence that aspects of the process of care, such as waiting times and 'whether the doctor seems to listen', even more strongly determine people's preferences for different models of care.[7,8] Second, patient satisfaction has been a recognised goal in NHS policy-making for many years, with national strategies often expressed in terms of 'meeting patients' expectations' or 'respecting consumer sovereignty'.[9-11]

Lastly, and most importantly, it is known that many emergency dental patients seek advice and reassurance as much as relief from symptoms.[12] Satisfaction, through good advice and effective reassurance, can not only lead to better compliance with subsequent care,[13] but may also encourage more confident self-care or more informed care-seeking in the future. It is therefore of utmost importance to understand and assess how well different out-of-hours service arrangements meet these different expectations.

METHOD

The results presented in this paper are based on a postal follow-up survey of emergency dental patients who had attended four weekend services in two health authorities (Bro Taf and Gwent) in South Wales, UK (in late 1999 early 2000). The overall aim of the survey was to measure the effectiveness of different NHS

Table 1 Percentage of patients attending each service who agreed or disagreed with each satisfaction statement (continued on next page)

Satisfaction statements		% who agree (strongly agree)				% who disagree (strongly disagree)			
		Dental hospital	CDS clinic	Rotas for reg'd	Rotas for all	Dental hospital	CDS clinic	Rotas for reg'd	Rotas for all
Choice of type of care:									
1	I felt I was given a real choice of type of care.	N57(18)	N55(26)	61(30)	59(21)	N29(13)	N22(11)	18(3)	24(11)
2	I felt I was given enough information to be able to decide between these types of care.	N43(17)	N61(23)	61(29)	65(20)	N32(6)	N19(8)	10(4)	20(8)
3	The person who answered the phone wanted me to accept a type of care I did not want.	N15(9)	N14(7)	5(3)	9(3)	N62(31)	N66(36)	82(54)	80(41)
4	I would have been happy with advice plus a reliable appointment when surgeries re-opened.	45(10)	46(10)	12(5)	14(4)	35(16)	40(25)	79(39)	81(42)
Continuity of care (seeing usual dentist):									
5	I would have been completely happy to see any dentist.	96(43)	93(52)	83(48)	88(52)	6(3)	1(0)	5(0)	7(1)
6	It did not matter whether I saw my own dentist.	79(35)	77(42)	72(35)	80(46)	12(0)	7(5)	15(4)	9(1)
7	I would have preferred to see my usual dentist if possible.	45(14)	44(14)	61(25)	45(19)	20(6)	35(12)	14(3)	30(14)
8	In emergencies, it does not matter at all whether I see my usual dentist.	88(52)	88(61)	87(57)	93(60)	7(2)	4(3)	5(2)	4(1)
Contact arrangements:									
9	It was difficult to get through on the telephone.	N18(12)	N24(14)	10(4)	32(17)	N48(12)	N55(33)	84(40)	60(18)
10	The person who answered the telephone gave all the necessary advice.	N44(16)	N60(29)	81(35)	78(23)	N29(16)	N12(7)	8(3)	15(9)
11	The person who took the message seemed to completely understand the problem.	N30(7)	N56(31)	76(34)	69(24)	N17(10)	N8(4)	8(3)	15(7)
12	The arrangements for contacting a dentist when the surgery is closed could be improved.	54(24)	64(42)	26(11)	50(22)	9(6)	20(4)	48(22)	36(11)
13	I did not have any problems contacting a dentist when the surgery was closed.	29(16)	36(16)	77(33)	60(18)	38(19)	40(18)	16(8)	29(13)
Acceptability of visiting clinic/surgery:									
14	It was very easy to get to the dental clinic/surgery.	86(36)	81(40)	82(34)	67(20)	7(0)	8(3)	10(1)	20(7)
15	If possible, I would have preferred to have had a visit from the dentist.	3(0)	17(4)	9(2)	15(6)	80(17)	60(22)	73(28)	70(21)
16	I thought the dentist was right to ask me to come to the dental clinic/surgery.	73(32)	84(33)	88(41)	88(35)	6(3)	3(0)	2(1)	3(2)
Delay until visit:									
17	I would have preferred to see the dentist at the dental clinic/surgery sooner.	38(22)	38(25)	16(6)	38(17)	25(3)	36(15)	51(19)	40(12)
18	I was worried because it took a long time to see the dentist at the dental clinic/surgery.	16(8)	12(6)	5(2)	17(6)	64(11)	76(37)	84(32)	69(24)

out-of-hours dental care arrangements, both in terms of oral health gain/pain relief and patient satisfaction. A full description of the survey method and the characteristics of the services and attending patients has been presented in the first paper.[2]

The results presented here are based on responses to an adapted patient satisfaction instrument, which was originally developed for out-of-hours medical care patients. Follow-up questionnaires were sent to 859 consenting patients, and they were mostly (90%) completed within four weeks of their episode of emergency care, median 15 days after. They were completed by the parents of children aged less than 14. The satisfaction questions followed a number of questions about the patient's characteristics, who travelled for the emergency visit and how, the costs associated with the visit, any difficulties in obtaining care, post-emergency visit care, and self-reported oral health and oral health gain.

Patient satisfaction instrument

The Patient Satisfaction with Out-of-hours Care (PSOC) instrument incorporated in the follow-up questionnaire comprises 34 agree/disagree statements, covering seven dimensions of the care-seeking process and dentist-patient encounter (Table 1). It was adapted from the questionnaire developed by McKinley and colleagues for evaluating out-of-hours primary medical care,[14] and which has subsequently been used to compare the effectiveness of various models of out-of-hours care, such as GP co-operatives and deputising services.[15-17] The questionnaire was adapted simply by replacing any references to 'the doctor' with 'the dentist', and any references to 'medical centre' with 'dental clinic/surgery'. Also, since so little is known about the value of telephone advice, compared with face-to-face care, the following statement item was added: 'I would have been happy with advice plus a reliable appointment when surgeries re-opened' (Q4). Unfortunately there was insufficient time to pilot the adapted dental version of the questionnaire before use in the main survey (the survey had to be conducted in a period when the services were not changing); however, qualitative pilot work had indicated the face validity of most of the instrument's sub-scales in emergency dental as well as medical patients.[12]

Table 1 (Cont.) Percentage of patients attending each service who agreed or disagreed with each satisfaction statement

	Satisfaction statements	% who agree (strongly agree)				% who disagree (strongly disagree)			
		Dental hospital	CDS clinic	Rotas for reg'd	Rotas for all	Dental hospital	CDS clinic	Rotas for reg'd	Rotas for all
Dentist's attitude and manner:									
19	I thought the dentist was reluctant to offer treatment.	20(9)	9(6)	10(2)	8(4)	75(26)	82(43)	88(48)	81(43)
20	I think the dentist could have examined me a little more carefully.	14(6)	9(6)	6(1)	14(6)	78(28)	82(43)	86(49)	77(44)
21	I thought the dentist made me feel guilty about contacting them.	3(3)	1(0)	6(0)	10(3)	89(51)	93(62)	90(61)	86(49)
22	The dentist made me feel that I was wasting their time.	5(5)	4(0)	3(0)	7(3)	86(51)	93(59)	94(63)	89(53)
23	I think the dentist was a little rushed.	18(10)	8(1)	7(2)	17(6)	76(38)	82(53)	86(53)	77(47)
Dentist's explanation of the problem:									
24	I am totally satisfied with the explanation the dentist gave me.	93(43)	89(49)	87(46)	82(45)	7(0)	5(4)	4(1)	7(2)
25	The dentist gave me very clear advice about when to get more help.	83(26)	89(43)	87(46)	88(41)	9(0)	4(3)	3(0)	4(1)
26	I understand my problem much better after talking to the dentist.	69(23)	68(37)	68(32)	71(32)	9(3)	8(4)	10(2)	10(2)
27	I would have liked the dentist to tell me a little more about my treatment or problem.	25(11)	25(6)	10(1)	22(6)	43(9)	54(25)	70(23)	66(19)
28	The treatment or advice the dentist recommended has helped me get better.	66(16)	77(38)	74(29)	78(34)	16(8)	11(4)	11(3)	10(4)
29	I felt very much better after talking to the dentist.	68(14)	71(37)	71(30)	60(19)	13(8)	11(3)	12(2)	11(3)
Overall patient satisfaction:									
30	If possible, I would prefer to see a different dentist next time.	3(3)	5(4)	6(2)	6(3)	70(32)	77(43)	83(50)	78(40)
31	I intend to follow every detail of this dentist's advice.	78(33)	78(35)	74(25)	78(29)	6(3)	6(3)	6(0)	3(0)
32	Overall, I was delighted with everything about the care I received.	78(30)	80(44)	77(45)	75(42)	5(0)	9(4)	10(2)	11(4)
33	I am not completely happy with the care I received.	17(3)	19(10)	11(3)	22(8)	64(32)	77(43)	79(46)	66(31)
34	The out of hours service I received could not be improved.	35(10)	47(22)	57(23)	46(18)	46(18)	31(15)	16(5)	37(12)

Shaded cells show percentages of dissatisfied patients (ie agreement with negatively worded statements, or disagreement with positively worded statements). Note that the percentage agreeing or disagreeing includes the percentage who strongly agree or strongly disagree.
[N] = some attitude statements are not relevant to the walk-in services, and these percentages should probably be ignored: Q1 to 3 because at no point are patients offered any choice between different types of care; Q9 to 11 the walk-in services have no explicit arrangements for either providing telephone advice or for making emergency appointments over the telephone.
Item response rates: 95-98% (Qs 14, 24, 32) 84-89% (Qs 2, 3, 4, 9, 10, 11, 12, 13) the remaining questions 90-94%, of the 411 who made a reasonable attempt at the instrument.

RESULTS AND DISCUSSION

Response rates

A total of 423 patients completed the follow-up questionnaire, representing 49% of the 859 patients sent a follow-up questionnaire (or 39% of the 1,074 patients on weekends that could in theory have been followed up ie questionnaire mailing not coinciding with Christmas, and timely receipt of consent from initial questionnaires). Of the completers, 411 (97%; or 48% of those sent a questionnaire) made a reasonable attempt at completing the PSOC questions. Since some patients did not respond to all 34 questions, the item response rates for some questions and sub-scales were lower (see footnotes to Fig.1 and Table 1). The item-response rates in the two rota-based services were above 90% for all but three questions. However, both lower response rates and smaller absolute base numbers (n = 31 to 44) mean that the results for the dental hospital should be viewed with considerable caution.

Sub-scale scores

Figure 1 shows the mean satisfaction sub-scale scores, by service type. The scores are unweighted averages of the 5-point Likert responses to particular statements, scaled to lie between zero (lowest possible satisfaction) and 100 (highest possible satisfaction).

Scores relating to the quality of the dentist-patient encounter ('communication and management', 'dentist's attitude', and 'continuity of care') are consistently above 60 and, for most services, lie between 70 and 85. One way analysis of variance revealed no significant differences between services in either their mean 'communication and management' or their 'dentist's attitude' score (Table 2). In contrast, mean scores indicating more widespread dissatisfaction – scores less than 50 – were evident in relation to access to care, especially for the two walk-in emergency services.

On six of the seven sub-scales the rotas for registered scored highest, while for five of them the dental hospital walk-in service scored lowest. However, on most sub-scales these differences are not statistically significant (Table 2). Although patients attending the rotas for registered were the least satisfied with their continuity of care (though not significantly so) this may reflect patients' ideal expectations more than their actual service experiences. Registered patients would be expected to have stronger preferences for seeing their usual dentist since they actually have a usual dentist.

Given the apparent similarities in their systems for contacting the dentist (see box of first paper[2]), it is interesting that patients attending the rotas for all are so much less satisfied with access arrangements (as well as the 'delay until seen', the 'initial contact person', and the 'acceptability of attending the clinic/surgery') than those attending the rotas for registered patients (Table 2). This might be related to the rotas for all employing a more restrictive triage algorithm, involving designated treatment sessions (and therefore perhaps longer waits for patients to be seen), and covering a larger geographical area than the Cardiff rotas for registered patients. (Virtually all callers to the Cardiff rotas received a return call from a dentist, whereas patients calling the Gwent rotas for all,

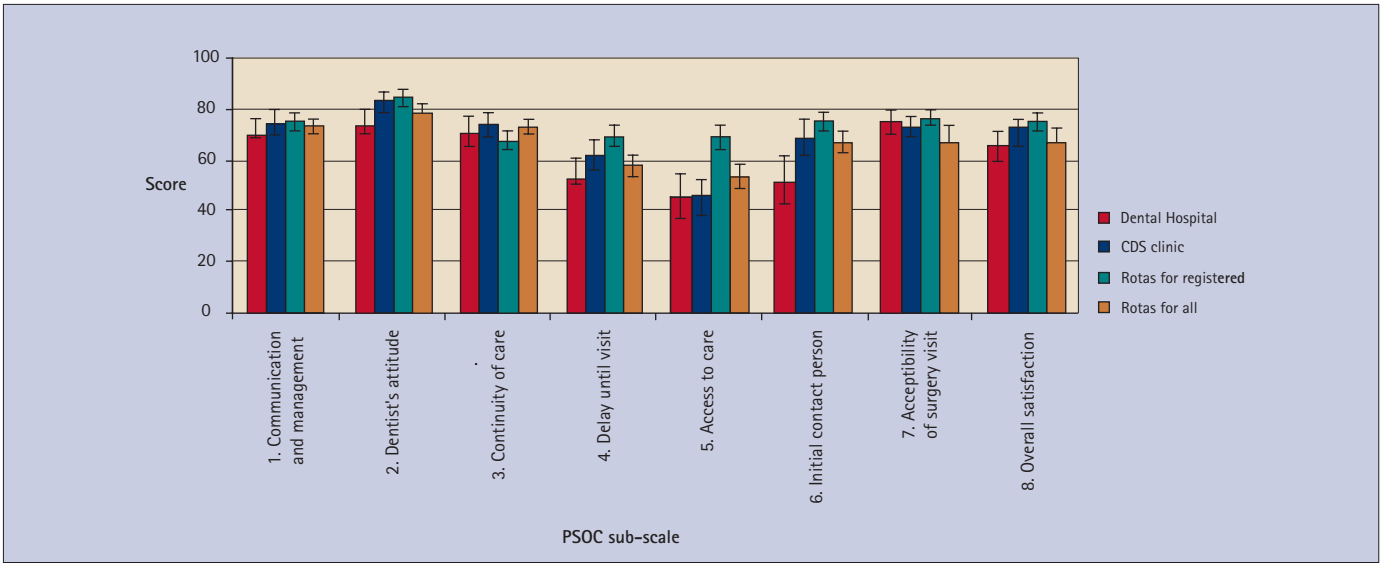

Fig. 1 Mean satisfaction sub-scale scores by service type

Error bars show 95% confidence intervals. Questions which contribute to each sub-scale are: Communication and management Qs 24,25,26,27,28,29,31; Dentist's attitude Qs 19,20,21,22,23; Continuity of care Qs 5,6,7,8; Delay until seen Qs 17,18; Access to care Qs 9,12,13; Initial contact person Qs 10, 11; Acceptability of attendance Qs 14,15,16; Overall satisfaction Qs 30,32,33,34.

who were not in pain or had not suffered a dental injury, were informed that their problem was not an emergency. Further, in Gwent those in pain who had not tried painkillers were advised to take some and call back if they did not help.)

Responses to individual questions: quality of the dentist–patient encounter

Although the most reliable comparison between services uses the sub-scale scores, there are some interesting patterns of agreement or disagreement for particular questions. In relation to the quality of the dentist-patient encounter, satisfaction across all services seems high. Few (7% or less) felt that the dentist made them feel guilty for contacting them (Q21) or that they were wasting the dentist's time (Q22). Overall, most patients (82-93%) were 'totally satisfied' with the dentist's explanation (Q24) and gained clear advice about when to get more help (Q25). Also – perhaps a key service quality indicator – less than 5% expressed a strong preference for seeing a different dentist next time (Q30). While a small minority expressed a preference for seeing their usual dentist, the two statements that yielded the most agreement (of all 34 questions) were those about being happy to see any dentist, especially in an emergency (Q5, Q8). This contrasts with studies of routine dental care, where choice of or familiarity with the dentist appears to be a key determinant of satisfaction.[18]

However, responses to some other statements raise potential concerns. Fourteen to 18% of patients at the dental hospital and the rotas for all, felt that the dentist could have examined them more carefully (Q20) or that the dentist was 'a little rushed' (Q23). Almost a third of patients (29-32%) in all services could not agree that they understood their problem much better after talking to the dentist (Q26). Over a tenth of patients in all four services did not think that the dental treatment or advice given had helped them get better (Q28), or that they felt better afterwards (Q29).

Clinically, some of these reactions may be inevitable: some acute dental problems are not amenable to definitive treatment out-of-hours. However, with the exception of those seen by the rotas for registered patients, about a quarter of patients (22%-25%) said that they 'would have liked the dentist to tell [them] a little more about [their] treatment or problem'. Thus, although there may be some for whom the dentist will not be able to do very much (in terms of symptom-relieving treatment), a considerable proportion of patients appear not to be getting the amount of information or advice hoped for.

Responses to individual questions: service accessibility

Compared with the mostly positive perceptions of the dentist-patient encounter, the questions about access arrangements reveal considerable dissatisfaction for many patients. The individual question responses also reinforce the differences highlighted by the sub-scale scores, especially between the walk-in and telephone-access services.

A significant proportion of patients at all four services reported having 'problems contacting a dentist when the surgery is closed'; almost two-fifths (38% and 40%) of those attending the two walk-in services. Even for the two telephone-access dental rotas a significant proportion (10% and 32%) of patients found it difficult to get through on the telephone (Q9) (although this may reflect difficulties obtaining the number itself rather than the system's responsiveness to calls made).

Also, with the exception of patients attending the rotas for registered patients, over a third (38%) of patients attending the other three services would have preferred to see the dentist sooner than they did. Fewer, however, were worried about the delay, and without examining each individual's case it is difficult to define what is acceptable and unacceptable. Most people in severe dental pain want to be seen sooner rather than later, so for the purpose of guiding service improvement the value of these questions is debatable.

Unfortunately, some of the questions about contact arrangements (Q10 and Q11) imply that all out-of-hours dental services involve telephone-based access, via call-handlers, and then speaking to a dentist; but many do not. Even for those services that involve telephone access, patients may end up speaking to a number of different people: the call-handler, the clinic receptionist/nurse, as well as the dentist, and sometimes the dentist's husband or wife. It is therefore difficult for respondents to know which person or call the question refers to, or indeed whether 'the person who answered the telephone' should be giving advice (Q10) or be required to understand the problem (Q11) (rather than just taking down the caller's details to pass on to the dentist). In retrospect, these questions should have been either omitted or replaced with other questions more suited to the different ways that out-of-hours dental services are provided.

Table 2 One-way analysis of variance between service types of PSOC sub-scale scores, with post-hoc multiple comparison tests.

	ANOVA:		Gabriel's test* (α= 0.05):		
	F	p	Sig. different pairs	Mean diff.	p
1. Communication and management	0.9	0.42	none	-	-
2. Dentist's attitude	2.2	0.09	none	-	-
3. Continuity of care	2.7	0.04	none	-	-
4. Delay until seen	6.4	<0.001	Rotas for reg'd and Dental Hospital	16.7	0.002
			Rotas for reg'd and Rotas for all	11.7	0.001
5. Access to care	14.3	< 0.001	Rotas for reg'd and Dental Hospital	23.7	<0.001
			Rotas for reg'd and CDS Sunday am	23.8	<0.001
			Rotas for reg'd and Rotas for all	15.7	<0.001
6. Initial contact person**	6.7	< 0.001	Rotas for reg'd and Rotas for all b	8.4	0.04
7. Acceptability of attendance at surgery	2.9	0.04	Rotas for reg'd and Rotas for all	6.4	0.03
8. Overall satisfaction	2.9	0.03	none	-	-

*Gabriel's test for multiple comparisons is used because the groups are of different sizes.
**For satisfaction with the initial contact person there were large significant differences between the mean scores for the Dental Hospital and all three of the other service types. These results have been omitted as erroneous since there is no obvious "initial contact person" in this service (especially by telephone - it is purely a walk-in service).\

Future questionnaire development might also refine questions about accessibility, to distinguish which aspects of the service arrangements caused access problems for example: was it low/no awareness of the existence of the service amongst patients; poor communication of contact arrangements in dentists' out-of-hours answering machine messages; poor knowledge of the contact arrangements amongst local GPs or pharmacists etc; or perhaps a cumbersome process of several calls and call-backs before getting to speak to a dentist? However, such information might ultimately be better collected from open-ended questions.

Choice of type of care

Whereas people seeking medical care out-of-hours may be offered a range of types of care – telephone advice, home visit by a GP, or an invitation to attend an out-of-hours medical centre – dental patients usually have a more restricted range of options out-of-hours. Unregistered patients in particular may either have to attend an emergency clinic (if one is run locally), or wait until surgeries re-open on Monday. Therefore the questions about the choice of care offered (Q1-3) are probably of dubious meaning to many out-of-hours dental patients, and the responses should be treated with some caution.

Overall satisfaction with the services

Most patients attending all four services expressed overall satisfaction, and very few expressed dissatisfaction (Q30 and Q32). Over three quarters were 'delighted with everything about the care [I] received' (Q32). Despite this, many thought there was scope for service improvement. Of patients seen at the dental hospital, at the CDS clinic and at the rotas for all, between 31% and 46% thought the service could be improved (Q34) but, without an open-ended 'How?' question, such percentages are hard to interpret. Also, between 11% (rotas for registered) and 22% (rotas for all) were 'not completely happy' with the care received.

Limitations of this survey

The possibility of response bias due to low response rates has already been discussed in the first paper on health outcomes, but is not thought to be high.[2] However, both poor response rates and low base numbers mean that dental hospital service data must be treated with some caution. In contrast with previous analyses using the same questionnaire (and larger samples),[15,16] our sub-scale scores have not adjusted for the age, sex, registration status or other patient characteristics. Registered (ie more regular) dental attenders are generally more satisfied with dental care,[19] and this may be an important confounder of our results. Given the response rates, and sample sizes that do not allow multivariate analyses, some may regard this survey as useful pilot work rather than a conclusive comparative study of these services.

An additional, if obvious, limitation is that such surveys only capture the experiences of those who managed to get dental care out-of-hours. A fuller picture of the actual and perceived accessibility of particular service arrangements would also need to identify those people with acute dental problems who sought and failed to get dental care out-of-hours, and who possibly resorted to waiting until surgeries re-opened, or who gave up trying to contact a dentist altogether and instead saw a GP or attended a hospital A & E department.

Although the validity and reliability of the PSOC instrument have been well demonstrated with the patient group for which it was designed,[14,16] its validity and reliability for measuring satisfaction amongst out-of-hours dental patients cannot be assumed. Nevertheless, the generally high levels of completion of most of the satisfaction questions give some support for its validity in this survey. Low response rates combined with high proportions of 'neutral' responses to particular questions were taken to indicate particular questions that were less meaningful for some dental patients (especially those about the choice of type of care (Q1-3), Q9-11 for those attending walk-in services, and Q15, since home visits by dentists out-of-hours are especially unlikely). In retrospect some questions also seem to invite comparisons with an ideal hypothetical service, rather than what the patient thought of the service that they actually attended. If satisfaction surveys are mostly intended to inform potential service improvements, such questions (eg Q5-8) should simply be dropped (ie no workable arrangements for organising out-of-hours dental care can ever avoid the likelihood of seeing dentists that the patient does not know). More comprehensive pilot work would have revealed some of these problems in advance. However, given the potential variety of emergency care pathways amongst these four services, a choice would still have to be made between having a single standard instrument – parts of which are inappropriate for some – or a suite of instruments that are adapted to different care pathways or service types.

This research suggests several key questions that could be useful in a brief questionnaire for monitoring patients' experiences of out-of-hours dental care: Q30, Q28, Q25, and on accessing care, Q13 and Q14. For genuine pointers to service improvement, negative responses could be followed up with open-ended questions (such as, for Q13, 'what were the problems you had contacting the dentist?'). Only through such efforts can services distinguish whether improvements need to be made in local publicity, call-handling, dentists' telephone advice training, or clinic location and sign-posting.

CONCLUSION

With any 'measure' of patient satisfaction it is difficult to define what scores warrant the label 'dissatisfaction' or 'satisfaction', or the proportion of dissatisfied patients that should prompt action to improve services. However, they can identify relative differences in overall satisfaction between services, and also a broad indication of whether a particular service is as accessible as it should be, whether dentists' advice is as clear as it could be, and other discrepancies between intended and actual service standards.

For most patients, the quality of the dentist-patient encounter relative to the perceived quality of access arrangements seems to

be good. Over three-quarters of patients in all four services were 'delighted with everything about the care [they] received', and 6% or less said they would prefer to see a different dentist next time. The lack of significant differences in the quality of the dentist-patient encounter between service types is also consistent with the similarity in oral health outcomes that the first paper revealed.[2]

The important finding is that walk-in services (here, those services specifically intended for unregistered patients) are – paradoxically – perceived to be much harder to access than services initially contacted by telephone. While some of this difference may be due to these services being poorly publicised (combined with unregistered patients being less well informed about all types of dental service), it may also reflect dissatisfaction with having to visit a dental clinic for all problems, even just for advice. Almost half of walk-in patients reported that they would have been happy with advice plus a reliable appointment when surgeries re-opened. This is arguably inequitable and, assuming that face-to-face contacts are more expensive to provide, also probably an inefficient means of providing out-of-hours emergency care.

More research is needed on how telephone advice and triage is best employed for emergency dental patients, and analysis of the current use of NHS Direct could provide useful insights. Then services can be redesigned to allow convenient access to seeing a dentist for those who need to be examined urgently, but for others, provide authoritative advice about self-care and how to get a reliable appointment when surgeries re-open.

Finally, reminder phone calls to questionnaire recipients revealed several stories that say more about current out-of-hours dental care arrangements than any satisfaction instrument can reveal. One survey respondent, a father of a 12-year-old boy, had not felt compelled or able to seek dental care until his son had passed out due to his dental pain. Another man with toothache had been in so much pain, and so pessimistic about the availability of dental care at weekends, that he had tried to pull his tooth out himself with a pair of pliers.

That these stories come from a part of the UK where out-of-hours services actually exist and (in the opinion of the authors) are relatively well-publicised, should be of great concern. Improvements in the design of services need to be supported by more concerted efforts to raise public expectations that dental care is available out-of hours, and specific awareness of how and when to access that care. An important step in this direction would be the adoption of national principles and standards of service design (like those established for all non-dental emergency care[20,21]).

This research has specifically questioned the value and *de facto* accessibility of walk-in treatment sessions for providing out-of-hours dental care. It also raises a broader policy issue: should NHS dental registration status determine access to different dental services in an emergency? Even if it were easy to register with an NHS dentist (which, in many areas, it increasingly is not [22,23]), having separate emergency services for registered and unregistered patients arguably compounds the already fragmented nature of dental services[24] and adds to the public's existing confusion about the meaning of NHS registration.[25] Providing separate emergency dental services is also out of step with changes in the rest of primary care, towards emergency services that are more patient-focussed and locally integrated.[26] Lastly, as further analysis of the cost of these services in South Wales will explore, it may ultimately be more cost-effective to provide a single 'universal access' service for everyone in an area.

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