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Service quality implications of dental undergraduate outreach teaching for Primary Care Trusts in England, UK.

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Objective: Primary Care Trusts (PCTs) assumed new responsibilities for dentistry in 2005. In dental education it has been suggested that more emphasis is made of primary care outreach schemes. The paper considers the service quality implications of dental outreach teaching for PCTs with particular reference to access and acceptability. ***Research Design and Clinical Setting:*** A pilot of outreach teaching for Manchester undergraduates in relation to adult dental care began in 2001. Six groups of eight students, working in pairs, spent one day per week in one of three community dental clinics in socially deprived areas. The evaluation of the first year used data from 908 patient treatment summaries, 139 patient questionnaires, and records of patient attendance. ***Main Outcome Measures:*** Access and acceptability measured by patients' demographic characteristics, patients' attendance at the clinics; patients' reasons for attendance, use of services and satisfaction with the service. ***Results:*** In terms of access, the new service was used by local patients. Their main reasons for attending were convenience, a dental problem, free treatment, lack of access to a dentist, and lay referral. Some 41 percent attended initially because of an emergency, 30 percent said that if they had not attended the clinic they would have gone nowhere or did not know where they would have gone, and 49 percent had not attended a dentist for more than two years. In terms of acceptability most patients were positive about being treated by a student, 96 percent thought the quality of care excellent or good, and the same percentage said they would return to the clinic. The main areas of criticism were waiting times and appointments. ***Conclusions:*** Students can provide an accessible and acceptable local primary care dental service for adult patients in socially deprived areas as part of their undergraduate learning, and in a way that complements the existing services.

Key words: Primary care, service quality, undergraduate teaching

Introduction

In England dentistry is rising up the agenda of Primary Care Trusts (PCTs), the bodies responsible for commissioning local health services. The NHS Plan focuses on improving access to primary care dental services (Department of Health, 2000). The Health and Social Care Act 2003 means that PCTs assumed responsibility for local commissioning of primary dental care in 2005 (Department of Health, 2004). These NHS services are currently operated by general dental practitioners (GDPs) contracted to the NHS or by salaried practitioners employed by PCTs. Testing new contractual and service arrangements for primary care dentistry began with the introduction of Personal Dental Services (PDS) pilots (Goodwin *et al*., 2003) and is continuing via "Options for Change" field sites (Department of Health, 2002). PCTs will be concerned to ensure the quality of any new services they initiate. Maxwell (1984, 1992) identifies six facets of health care quality, which include among them access and acceptability. Access is concerned with whether people can get a service when they need it and any barriers to this, for example distance, inability to pay or waiting. Acceptability includes how caringly the service is delivered and what the patient thinks of it.

Dental education in the UK is also changing (Elkind and Blinkhorn, 2001). Although most dentists work in primary care (Bradnock and Pine, 1997) their training is based in the secondary care setting of a dental hospital. "Options for Change" (Department of Health, 2002) proposed that future dental education should focus on developing the skills needed in practice, with greater use of primary care outreach schemes throughout undergraduate training. The Chief Dental Officer has recently announced funding for consortia of Dental Schools to develop outreach teaching. As part of this process of modernising dental education, Dental Schools will be seeking partnerships with their local PCTs to deliver the changes.

The University Dental Hospital of Manchester (UDHM) has led the way in developing clinical training in primary care. Since 1974 the teaching of Paediatric Dentistry, and more recently Orthodontics, has been based in local health centres in partnership with the Community Dental Services (CDS) (a salaried service currently run by PCTs) in Greater Manchester (Holloway and Dixon, 1977; Blinkhorn, 2002). The most recent innovation is the strategy to develop outreach teaching in relation to the comprehensive care of adult patients. A three year pilot project to test the feasibility of the strategy

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started in September 2001. The purpose of this paper is to consider the quality implications of dental outreach teaching for PCTs, with particular reference to access and acceptability, from a patient perspective.

In relation to service objectives, the strategy to develop dental education in primary care is designed to:

- relocate the service from a secondary care setting to a primary care setting;
- improve local access to primary dental care in socially deprived areas;
- complement existing services by attracting those who cannot or will not attend a GDP.

The outreach course is run jointly by UDHM and its CDS partners from Manchester PCTs and Salford PCT. In the first year of the pilot, academic year 2001/2, the PCTs provided teaching facilities on two days per week at each of three community dental clinics: Cornerstone Centre and Harpurhey Health Centre in North Manchester, and Ordsall Health Centre in Salford.

Prior to the pilot, fourth year students treated adult primary care patients in Restorative Dentistry clinics in the Dental Hospital for five sessions a week. For the new course two of these sessions were transferred to the community dental clinics. Six groups of eight students worked in pairs on one whole day per week for the academic year, alternating the operator and assistant role. The Manchester clinics operated as a traditional CDS service. The Salford clinic was a PDS pilot site. The community dental clinics are located in socially deprived areas with poor oral health, and inadequate access to general dental services. Each has four surgeries, with a reception and waiting area, plus X-ray facilities.

Students offer adults a wide range of treatments free of charge. The service is by appointment, but emergencies (both adults and children) are also seen. Patients give informed consent to student treatment. Patients who are unsuitable for students because of the type of care required are offered an alternative primary care service or referred to secondary care. Experienced primary care dentists provide the teaching and supervision, with support from dental nurses. The University participates in the appointment of the teaching staff. Laboratory services are provided by UDHM.

Design

A multifaceted evaluation was undertaken. Ovretveit (1997) defines evaluation as a comparative judgement of the value of an intervention in relation to criteria, for the purpose of making better-informed decisions about how to act. Here the concern is with summative evaluation to aid decision-makers decide whether or not to continue a service or policy by summing up the effects of an intervention. Ethical approval was obtained from the local Ethics Committee. The data reported here are drawn from a patient questionnaire, summaries of patient treatment, and a record of patient attendance, all from the first year of the pilot. The operational definition of access includes patient age, gender, distance from centre, emergency/non-emergency contact, reasons for attending, availability of alternative dental services and patient demand. The operational definition of acceptability includes patients' views of the quality of care received, of treatment by a student, and of required improvements to the service, together with their intention to return.

Summaries of patient treatment

The students completed a summary of patient treatment recording anonymised information about the patient including age, gender, postcode, and the initial contact with the clinic. The intention was to have a record of every patient treated during 2001/2. Some 908 patient summaries were provided by students, but it is likely that under-recording occurred. In addition, some items of information were missing from some summaries. Data in the tables are based on the information actually recorded.

Patient attendance record

The clinics kept a record of patient attendance for the days the students provided the service. For each day they recorded the number of patients booked into the clinic, the number who did not attend (DNA), the number of patient cancelled appointments (PCA), the number of patients who attended as emergencies or drop-ins, and the total number of patients seen in the clinic.

Patient questionnaires

In 2002 patients were asked to complete a single sheet anonymous questionnaire. The purpose was to gain information about patients' reasons for attending the clinic, their use of dental services, and their view of the service offered. The intention was that clinic reception staff would distribute the questionnaires to 50 consecutive adult patients (aged 16 and above) at each clinic to fill in at the end of their appointment. Some 139 questionnaires were actually completed.

Aspects of the evaluation which consider the educational objectives of the project are reported elsewhere (Elkind, Potter, Watts *et al.*, 2005; Elkind, Blinkhorn, Duxbury 2005, in press).

Findings

Patient characteristics

Table 1 shows that the majority of attenders (58%) were female. In a service intended for adults, 75 percent of the patients were aged between 16 and 64, and nine percent were aged 65 and above, but 16 percent were children, seen as emergencies. In all 41 percent of the patients made their initial contact with the service on an emergency or drop-in basis, 55 percent did so by appointment and four percent were referred.

In terms of the recorded postcodes (Table 2) most patients who attended the community dental clinics lived locally, either in the same postcode area as the clinic or in one adjacent to it. Some 97 percent of patients treated at Ordsall lived in the local area, as did 90 percent at Harpurhey and 82 percent at Cornerstone.

Attendance

As expected some start-up problems in relation to building the patient base were experienced, particularly at Cornerstone and Harpurhey, where the service was completely new. Following some local advertising patient

Table 1. Patients' Characteristics

Characteristic	Variable	% Patients
Age (n=844*)	0-4 years	3
	5-15 years	13
	16-64 years	75
	65+ years	9
Gender (n=888*)	Male	42
	Female	58
Initial contact (n=823*)	Emergency/drop-in	41
	Appointment	55
	Referral	4

*Number of patient sumaries providing the information out of the 908 completed

Table 2. Local Access

Clinic Location	Patient Postcode	% Patients
Ordsall	M5	65
(n=249*)	Adjacent to M5	32
	Other	3
Cornerstone	M11	57
(n=322*)	Adjacent to M11	25
	Other	18
Harpurhey	M9	58
(n=233*	Adjacent to M9	32
	Other	10

*Number of patients summaries providing the information out of the 908 completed

Table 3. Patient Attendance in Term 4

Mean number of patients per day	Ordsall	Cornerstone	Harpurhey
	n	n	n
Patients booked	22	23	22
Failed to attend	4	3	2
Patient cancelled	3	2	2
Emergencies/drop-in	3	2	2
Patients seen	18	19	19

Table 4. Patients' Perspective

Question	Patient Response (n=139)	%
If you hadn't come here for dental care, where would you have gone?	A dental practice	39
	Another dental clinic	10
	The Dental Hospital	16
	Nowhere	13
	Don't know	17
	Other	5
Before you came here, when did you last see a dentist?	Within the last 6 months	17
	Within the last 2 years	33
	Within the last 3 years	9
	More than 3 years ago	40
What do you think of the quality of the care you have had so far?	Excellent	71
	Good	25
	Fair	3
	Poor	1
If you needed to see a dentist again in the future, would you come back here or go somewhere else?	Come back here	96
	Go somewhere else	-
	Don't know/depends/either	4

demand reached satisfactory levels. This problem was not experienced at Ordsall because the PDS service had already begun several months previously.

The academic year is divided into four terms of ten weeks each. Table 3 looks at the position by Term 4. Although the clinics varied in the rate at which they booked patients initially, by the final term all three were booking a mean of 22 to 23 a day. High rates of failed and cancelled appointments were experienced throughout the year, representing about a fifth to a third of the patients initially booked, depending on the clinic. This was only partly ameliorated by patients attending as emergencies or drop-ins. The effect was that the mean number of patients actually seen was 18 or 19 per day in Term D. However, on a day to day basis the actual number of patients booked depended on the procedures to be undertaken, while the number of non-attenders or emergencies was unpredictable.

Patient perspective

In reply to an open question about why they had decided to attend the clinic, patients' most frequent responses were the recommendation of a family friend or colleague (19%), because they were in pain or otherwise needed treatment (14%), the convenience of the clinic (14%), the availability of free treatment (13%), or that they did not have a dentist or were dissatisfied with their previous dentist (11%). Other factors included professional referral, both dental and non-dental (8%), seeing information or an advertisement about the clinic (7%), a wish to help the students (7%), and the expectation of satisfactory treatment (4%). Comments included:

"Heard so much about the care and attention" (Ordsall)

"I need new false teeth badly and it's near home" (Cornerstone)

"Because I can't afford the dentists" (Harpurhey)

Table 4 shows that when asked a closed question about where they would have gone as an alternative, only 39 percent said they would have gone to a dental practice. Twenty six percent indicated they would have chosen another NHS dental service (a clinical or the Dental Hospital), but 35 percent said they would have gone nowhere or did not know where they would have gone. Asked when they last saw a dentist, 49 percent said they had not seen a dentist for more than two years.

Table 4 demonstrates that 71 percent of patients thought the quality of care they had received so far was excellent and 25 percent thought it good. Only four percent said they found it fair or poor. Asked about their intentions if they needed to see a dentist again 96 percent said they would return to the clinic.

In reply to an open question, 'How do you feel about being treated by a dental student?' most patients gave a positive response such as 'OK' 'no problem', 'very pleased' (64%). Other positive responses included the view that the students were doing a good job (11%), or being at ease or confident (9%). Some referred to the reassurance of supervision (8%) or noted that everyone has to learn (4%). However a small proportion were more negative, saying that it was 'alright' (5%) that they were worried or doubtful (4%) or that the process was time consuming (4%).

"It's OK. They are very caring and gentle and I know they are overseen by an expert. Consultations can be quite lengthy though" (Ordsall)

"Had very good care. No problems at all" (Cornerstone)

"They've done a good job" (Harpurhey)

In reply to the open question 'How could this service be made better for you?' 43 percent said they were satisfied with the service as it was or made other positive remarks, and about a quarter made no comment. Of those who did make a suggestion, the main focus was on various aspects of appointments and waiting, including a shorter time between appointments (7%), 'less waiting' or quicker treatment (6%), and the provision of the service on different days or times (4%). Other factors included the facilities available (4%) and location (1%).

"It was a long wait between visits (about 5 weeks). I would have preferred it to be sooner" (Ordsall)

"Not so many visits and visits not as long as they are" (Cornerstone)

"Get appointments right" (Harpurhey)

Discussion

In terms of access, the evaluation demonstrates that the new service was taken up by patients who lived near the clinic. Their main reasons for attending were convenience, having a dental problem, the availability of free treatment, lack of access to a dentist, or lay referral. Initial attendance was often because of an emergency. As an alternative, only four in ten patients would have gone to a dental practice. A quarter would have chosen other NHS services but three in ten said they would have gone nowhere or did not know where they would have gone. Moreover half had not seen a dentist for more than two years and most of these had not done so for three years or more. Overall these findings indicate that the service goals of the strategy concerned with accessibility were being met. These were relocating the service from secondary to primary care, improving local access for patients in socially deprived areas, and attracting those who do not attend a GDP. Although intended for adults, the service also provided access to emergency treatment for children.

In addition, patients indicated they found the service acceptable. Most were positive about being treated by a student, considered the quality of care to be excellent or good, and said they would return to the clinic in future. Although only a very small minority expressed lack of confidence in student treatment, it should be noted that such patients are unlikely to return after the initial experience. The main areas of criticism were waiting times and appointments. Among the factors that contribute to these problems are the speed at which the students work and the turnaround time for laboratory work. Clinics inform patients of the likely progress of their treatment prior to starting, and the small number who have unrealistic

expectations of the service are identified as unsuitable for student treatment and referred to another service.

Non-attendance by patients also contributes to delay. The organisation of the clinics and the organisation of the students' work were affected by the pattern of attendance. Some patients miss individual appointments during the course of their treatment, while others, especially those seeking pain relief only, may fail to complete treatment (Elkind *et al*., 2003). To improve attendance, clinics variously provide patient information about what to expect, send reminders, identify patients who can attend at short notice, and define persistent non-attenders as unsuitable for student treatment and refer them elsewhere. However a high level of non-attendance is a general problem for CDS clinics.

Access to NHS dentistry is among the indicators contributing to the performance ratings of PCTs (Commission for Health Improvement, 2003). In socially deprived areas such access may be problematic because of a less mobile population, and difficulties in recruiting dentists to work in the area. In 2005 PCTs became legally responsible for commissioning primary care dental services that are responsive to local need and improve access (Department of Health, 2004). This pilot demonstrates that an outreach teaching programme for dental students can provide an accessible and acceptable local dental service for adult patients in disadvantaged areas, and in a way that complements existing services. Thus in this way, outreach teaching not only enables the Dental School to enhance the curriculum (Elkind, Blinkhorn, Watts *et al.*, 2003) and provide students with a positive experience (Elkind, Blinkhorn, Duxbury *et al.*, 2005), it also benefits both the PCT and the patients.

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