Users' perception of a mobile diabetic eye-screening service

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ARTICLE POINTS

1 Screening for diabetic eye disease is essential to reduce the incidence of blindness.

2 A mobile eye-screening unit provides an easily accessible system for people with diabetes.

3 A focus group study was conducted to explore users' perception of the mobile service.

4 Patients were satisfied with the service but felt that their knowledge was lacking.

5 Health education is a key component of a screening programme and strategies need to be developed to facilitate this.

KEY WORDS

- **Mobile eye-screening**
- **Focus group**
- **Education**

Introduction

This article describes the results of a focus group that was set up to explore patients' experiences of a mobile diabetic eye-screening programme in Liverpool. Overall, patients expressed satisfaction with the easy access afforded by a mobile eye-screening service. However, patients perceived a lack of knowledge in important areas, including the processes of service provision, rationale for the service, and diabetic eye disease. The service has been developed in many ways to address patients' needs. It is suggested that more consideration be given to novel methods of patient education.

Diabetes is the most common cause of blindness in the working population in the UK (DoH, 1994; Evans et al, 1996). The St Vincent Declaration highlighted the need for screening programmes to reduce blindness due to diabetes by one third or more (WHO/IDF, 1990).

The ongoing Liverpool Diabetic Eye Study (LDES) was set up to research and develop an eye-screening programme. Results from the LDES have demonstrated the high sensitivity and efficacy of a mobile community-based diabetic eye-screening system (Harding et al, 1995).

In this system, a mobile eye-screening unit visits general practices in Liverpool. At each screening session, three-field 35mm transparencies of each eye are taken and sent for review at a central grading office. If necessary, patients are invited to a hospital-based assessment clinic for further evaluation and possible referral and treatment.

Focus groups are increasingly being used in healthcare delivery systems to explore patient-centred issues and to help improve services for consumers (Alspach, 1997; Clarke, 1999; Hume, 1999). The LDES decided to adopt this approach for assessing patient needs and evaluating patient satisfaction with the community-based mobile eye-screening programme.

Patient satisfaction with diabetes programmes has been assessed by various methods. The diabetes treatment satisfaction questionnaire is possibly the best known in the UK (Bradley, 1994). However, these studies have generally used other outcome measures such as quantitative methods, perception of treatment and emotional behaviour measurement.

Research using focus groups for people with diabetes has been limited. The few studies that have been carried out have assessed patient education (Lowry, 1997), self-awareness (Hernandez et al, 1997), perception of diabetes severity (Dunning and Martin, 1997) and experience of self-management (Ellison and Rayman 1998). Although these studies did not directly examine satisfaction with diabetes services, they have shown that focus groups concerning diabetes care can provide useful information.

Study aim

A focus group study was undertaken to assess patient needs, experiences and satisfaction with the mobile eye-screening service.

Methods

A focus group was developed as a tool to meet the study aim. Traditionally, focus groups have been used in consumer product research (Krueger, 1994). In health care, they are claimed to provide illuminating information on specific client groups (Alspach, 1997). They have been used in various chronic illnesses as a means of examining patient experiences (Van Harten et al, 1998; Clarke, 1999; Hume, 1999).

The scope of focus groups is limited as no generalisable data can be produced (Krueger, 1994). For the current study, it

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was decided nevertheless that a group from the screening programme could provide some usable information. The method employed was based on Krueger's (1994) treatise on focus groups using open-ended questions in a discursive atmosphere.

Sample

Prospective participants were selected from people on patient register database who had attended the community-based mobile eye-screening unit at their own practice in the previous year. Each was sent an invitation letter explaining the nature of and reasons for the focus group and containing a reply/consent section, and a stamped addressed envelope.

Demographic and diabetes management data were collected during each screening session, and subsequently entered onto the study database. These are outlined in Table 1.

Ethics

The LDES had been granted ethics committee approval. For the focus group study, committee approval was obtained for qualitative approaches to examine patient experiences. Confidentiality and anonymity were preserved. NHS treatment rights were not affected by participation in the group.

Focus group conduct

The group meetings were conducted by a nurse who had experience as a focus group facilitator and who was not directly involved in the screening service.

The meetings were held in a comfortable, private room within the outpatient department of the major hospital in the area. Discussions focused on:

- Eye-screening sessions
- Patients' understanding of the rationale underlying attending for eye screening
- Satisfaction with the mobile eye-screening service
- Suggestions for improvement.

Shorthand notes were taken and later transcribed into full text for analysis. Tape recordings were not used because they tend to limit freedom of discussion in a group situation. This phenomenon has been identified in previous related studies, including that of Dunning and Martin (1997).

This article describes the results of the first meeting of the focus group.

Group discussion

In the early stage, the facilitator took the lead and kept the discussion flowing by using appropriate prompts. The discussion eventually became self-sustaining and facilitator input was not needed.

All the group members participated in the discussion. There was a good focus on the central issue of perceptions of the community-based eye-screening service, particularly the advantages of a local GP-based service as opposed to a hospital-based service.

Data analysis

A comparative method of data analysis was employed to identify codes and, from that, common occurring themes (Wooffitt, 1993). The principal researcher performed the analysis. Verification was provided by

Table 1. Demographic and diabetes management characteristics of the focus group members.

Five females, two males
Aged 38–76 years
All Caucasian
All with type 2 diabetes, controlled by: ● Diet (3 people) ● Insulin, previously by tablet (2 people) ● Tablet (2 people)

PAGE POINTS

1 Focus groups are a useful way of gaining user perspectives.

2 A representative sample was chosen from the screening database.

3 Approval was obtained from the ethics committee.

4 The focus group session was, in essence, a 'guided' discussion of relevant topics.

5 Identification of themes was included in the data analysis.

A focus group meeting in session.

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1 One major theme identified from the study was the local nature of the service.

2 The other major theme was the rationale underlying the screening service.

3 Patients expressed a desire for more knowledge.

4 A strategy needs to be developed for the provision of education.

comparing results with those of the facilitator, who performed an independent analysis.

Results

The main results of the focus group meeting are presented here as themes and discussion points derived from the notes (as described by Miles and Huberman, 1994).

Themes

Through the coding procedures, two main themes were identified from the transcriptions:

- A locally based eye-screening service
- Rationale underlying screening for eye disease.

Community-based service

When the discussion centred on the community eye-screening programme, the group expressed their satisfaction with a GP-based service. They generally felt that it was much better to have a local, mobile service than a central, i.e. hospital-based, service. The reasons given all centred on feeling at ease with their surroundings (the patients attended the practice often).

The other related issue was a process-oriented one of transport. All the participants were very pleased that they could reach their screening session by walking or travelling by bus. This was more convenient than attending the hospital.

An example of the type of statement relevant to this theme included:

'I really like it that I can go to the doctors for my eye check…I feel a lot more comfortable at my own doctors…I don't really like going to the hospital.'

However, as discussed by some participants, a mobile unit does have some disadvantages. These included: accessibility problems for some people, e.g. those who are wheelchair-bound; lack of access to other services, e.g. a diabetes specialist nurse (DSN) for treatment advice; and sometimes a lack of privacy during the assessment.

The mobile unit used in the Liverpool Diabetic Eye Study, as viewed from the inside and outside (during a screening session).

Why is screening needed?

Most of the group discussions focused on the rationale for eye screening. There was considerable debate as to whether enough information had been given to people about the mobile eye-screening service and the processes employed within it.

Further in-depth discussion centred on why a new systematic approach to detection of eye disease was needed in place of previous modalities, which included ad hoc attendance at general practices or optometrists. Concern was also expressed as to whether adequate screening was being performed before the new screening service commenced:

'What I want to know is what was happening to my eyes before the photos were taken? I mean I've been a diabetic for 17 years and only had my eyes checked last year…That's the first time anyone's looked at them.'

Some participants felt that they had not received enough information about diabetic eye disease and the consequences of not having regular eye checks. They also wanted to know more about what would happen if something were to be detected. Although

this information is made available at the screening sessions, some people clearly felt that further information was needed:

'What happens if they do find something? Will I have to go into hospital or what? I'd like to know just in case it happens…'

The participants generally expressed a desire for more knowledge about issues of diabetic eye disease and the management of diabetes in general. They suggested that the mobile unit could be an excellent way of providing health education services to people with diabetes and even help with diabetes treatment and management problems. This point could be related to the nature of the sample, as all were receiving community-based diabetes care.

Discussion

The results demonstrate that although the participants were generally very happy with the community-based service, they did perceive a lack of essential knowledge in key areas. They felt they needed more information on:

- Processes of service provision
- Rationales for the service
- Diabetic eye disease in general.

Numerous activities have been developed to promote the screening service: information/open days; various written and tape-recorded information sources; talks at local help and support groups; and media coverage. It is clear that as consumers of health care, patients are requesting much more in-depth information about the services they are receiving.

The focus group revealed potential areas for nursing practice to address. Information giving and patient education have been identified as requirements for diabetes nursing practice (McDermott, 1995; Coates and Ryan, 1996; Watkinson, 1997; Lowry, 1997). However, perhaps consideration needs to be given to novel modes of delivery, e.g. mobile community-based educational systems. Alternatively, DSNs could liaise with and teach practice nurses, who have greater contact with patients in primary care.

Conclusion

The focus group used in the diabetic eye-screening study has provided some interesting and useful information on how eye-screening services in Liverpool could be improved to meet patients' perceived needs. Patients reported general satisfaction in terms of having access to a community-based eye-screening service.

It is tentatively suggested that further, larger exploration and study is required on methods of mobile community-based education for people with diabetes. ■

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PAGE POINTS

1 Nurses need to address methods of patient education and information giving.

2 Focus groups can yield interesting and useful information.

3 Mobile community-based education for people with diabetes requires exploration.