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Evaluation Nurse Led Fast Track Cataract Service

MA Practitioner Development Course (Ophthalmic Practice)

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Part 1

Literature review to support the evaluation of a Nurse Led Cataract Clinic in ophthalmic Outpatients

Background

Age related cataracts constitute the main surgical workload of eye care services and the bulk of ophthalmic waiting lists (NHS Executive 2000). Furthermore, national surveys have provided some evidence of unmet need for cataract surgery in the United Kingdom (Frost 2001). In order to address these issues the government has produced the document termed "Action on Cataracts (NHS Executive 2000)

The purpose of the document was to help managers and health care proffesionals to review and improve the management of cataract services (NHS Executive 2000) The document identifies the need for fewer clinic visits for patients thus allowing more patients to be seen and treated (NHS Executive 2000). Within my department the number of visits required by the patient before cataract

surgery was at least three. This was firstly a consultant appointment, secondly the pre assessment visit to ensure the patient had no undetected medical or social problems that would prevent surgery. The last visit was to perform biometry for the surgeon to determine the size of lens required to provide best vision post surgery.

It was agreed that I should commence a project to review how other ophthalmic units nationally were addressing the need to increase patient activity and provide patient pathways. Copp (2002) identifies this process as benchmarking. Benchmarking originated from nonhealth care industries and is described as a process of comparing oneself to others performing similar activities so as to continuously improve (Lenz *et*

al 1994). It is described consisting of four phases. The first, planning: selecting the subject to benchmark. This was the patient's pathway prior to cataract surgery Phase two, analysis: collecting information regarding practice from other areas. Phase three, integration. After the visits, I identified that the method used in most areas relied on optometrists seeing the patients, making a diagnosis and referring directly to consultants' clinics for surgery (Stevenson and Neal 2000). Phase four, develop action plan.

I presented my findings. It was decided not to use this method. The reason for this was a perception that optometrists locally varied in their accuracy in identifying patients who required and would benefit from cataract surgery.

An alternative to this service adopted by the department was that new patients, referred from the general practitioner with a diagnosis of visual impairment caused by cataracts, were seen in a nurse led fast track cataract clinic before the consultant's appointment. The main purpose of this was to prepare the patient for the possibility of surgery before the consultant visit. To do this information regarding cataract surgery and its potential implications was given. Health screening also performed to identify any undetected medical problems, namely undiagnosed diabetes or uncontrolled hypertension that would prevent surgery. An ocular examination of the anterior segment is performed. Axial length measurements are also made to determine the intra ocular lens size required by the surgeon during surgery

This change meant that the patient had a reduction of two extra visits prior to surgery. This method has now been implemented for the past twelve month and appears to

work well. The next step is to evaluate the service and decide from this possible future developments.

Introduction

The purpose of the literature review is review the current information available on nurse led clinics, from the nursing perspective and that of other team members involved. The reason for taking a multidisciplinary approach was the fact that when the clinic was first established it was apparent that the change in practice had implications for the whole ophthalmic outpatients team. The groups that appeared to most affected were the nurses, in that the nurse led clinic reduced their involvement in the care of patients undergoing cataract surgery. The clerical staff appeared to have their workload increased this due to the change in clinic visits by the patient. No extra funding was provided to support this additional activity.

Prior to commencing the literature review, a literature search was performed using Medline and Cinahl from 1999 to 2002. This identified a scarcity of articles directly relating to "Action on Cataracts". A search of the nursing collection from 2000 to 2002 identified no articles written by nurses involved in nurse led services implemented as a response to the document "Action on Cataracts". A review of the British Journal of Ophthalmology for the same period also provided no articles written to describe nurse led services established in response to the document "Action on Cataracts".

I contacted the Action on Cataracts Impact Team who directed me to the NHS.Modern.UK website. This had good links to other websites that enabled me to obtain information regarding changes in practice nationally. From the search, I identified optometrists to be the group who had produced the most articles on 'Action on Cataracts' to date. Ingram and Culham (2001) believe there are real benefits in optometrists having a greater role in the care of the ophthalmic patient.

The General Optical Councils (1999) rules for the referral of patients to a registered medical practitioner have changed. It is no longer obligatory for optometrists to refer all patients with lens opacities regardless of visual impairment, to a registered medical practitioner (Ingram and Culham 2001). This change in referral pattern supports the recommendations of the document "Action on Cataracts" that optometrists should have a greater clinical role in cataract referral.

The fact that no information was available on nurse led cataract clinics led me to change the literature search to review all articles relating to nurse led care. The articles found relating to nurse led care identified the increase in this service. Two hundred articles were found from 1999 to 2002 that described the implementation of a nurse led service. The reason for the literature review was to identify nurse led clinics from the perspective of all team members. To achieve this, articles were identified that looked at the nurse led service from the perception of the patient or another health professional; these will be discussed in more detail.

Nurse Led Services

The term nurse led care has been a new boost through the publication of the nursing strategy for England, Making a Difference (1999) (Reed 1999). The second chapter 'New nursing in the NHS' makes reference to NHS Direct, the nurse-led helpline, a minor injury nurse led service, a nurse led rapid response team in the community, and a nurse led rheumatology ward (Doh 1999 pages 9, 12 and 13 respectively).

Later chapters refers to nurse led care for cardiovascular patients (p51) and nurse led intermediate care for patients, who no longer require medical intervention, but continuing care and assessment prior to discharge (p68) (Reed 1999).

The perceived benefits of nurse led service are improved continuity of care, especially in outpatient situations, or provision of a service that previously did not exist (Briggs 1997). The articles selected reviewed nurse led care from the perspective of other health care members. From the articles selected primary care was identified as creating the most articles in the medical journals. Cancer care was then found to provide a variety of situations where nurses had developed roles to support the needs of patients. The articles obtained from haematology and urology identifies nurse led care in the ambulatory care situation. The three articles from ophthalmology illustrate differing ophthalmic skills in outpatient's day case surgery and in an accident and emergency department.

Primary Care

The plan to introduce primary care walk in centres was announced by the Prime Minister in April 1999(Rosen and Mountford 2002). Pilot sites were expected to be local and to provide immediate walk in access to a range of minor ailments and treatment services (Rosen and Mountford 2002). Coventry was one the centres that reviewed its service after one year (Pearce 2001). They identified the reason for the centres were not to

replace existing services but to compliment them. Duffin (2001) discussed the outrage of the Wakefield walk in centre, which occurred when it was discovered that the three actors had been hired to test the

skills of the nursing staff. Rosen and Mountford (2002) identified concerns in the standard of training required by nurses to work in walk in centre. They argued that there was no standard assessment or training programme to become a walk in centre nurse.

The issue of training was also identified by Connor (2002) who reviewed nurse practitioners skills in a primary care setting using same guidelines required for a general practitioner trainee. This found the nurses understanding of pathology and pharmacology was far below the standard required by the general practitioner trainee. He suggested that the training needs of the nurse should be reviewed and examined using similar methods to those required to assess the ability of the general practitioner trainee.

Gaskell (2001) favours the development of an in house training programme based on the RCN practitioner training course to support the educational needs of the nurses working in nurse led primary care clinics. The amount of time a nurse in a nurse led clinic was able to spend with the patient was identified as an area the patients commented on. Smith (2001) believed that this was a benefit that the general practitioner was unable to provide. Shun *et al* (2000) also found that patients expressed satisfaction for time the patients were able to spend with the nurse. Nimmo (2002) and Midgely (2000) identify that the ability to spend time with a patient has always increased satisfaction. They believe that this should not be used as evidence the service is succesful. White (2000) believes that before primary nurse led services to succeed doctor's need

to appreciate that nurse training produces different health care professionals from doctors and these differences need to be appreciated if multidisciplinary care is to be advanced. The government have no plans to increase the number of nurse led pilot sites at present (Wise 2001).

Cancer Care

Corner (1997) argued that nurse led clinics could bring a different perspective to the care of cancer patients. She suggested that the main benefits of nurse led cancer services was changing the environment for the care of patients, putting their difficulties and problems higher on the agenda. Loftus and Weston (2001) found the role of cancer nurse led clinics tended to focus on support screening and management. The areas identified that will be discussed in more detail are monitoring of patients during radiotherapy treatment, patients with breast cancer and colorectal cancer.

Radiotherapy

(Campbell *et al* 1999) compared clinics run by nurses compared with a doctor led service. The results showed that the nurse led clinics were more proactive in managing the side effects of radiotherapy. Doctors and radiographers perception of the services identified the benefits monitoring the side effects of radiotherapy.

The other issue identified by the radiographer was that their role in patient care was diminishing. Campbell and Farrell (1998) identify the benefits of team approach using nursing skills and radiographers to provide quality patient care.

Breast Cancer

Garvican *et al* (1998) in a study of a nurse led breast care clinics argued that the technical expertise in fine needle aspiration was better performed by a nurse than other health care professionals. The results of the study were challenged, firstly by Dixon *et al* (1998) on the cost of implementing the service and secondly by Bramley *et al* (1998) on the comparability of the group seen by the nurse. This was in contrast to the group seen by the surgeon who would have a higher incidence of cancer.

Poole (1996) sees the role of breast care nurses to be in collaboration with other health care professionals to provide health promotion and information. Earnshaw and Stevenson (1997) found nurse led follow breast care clinics strength to be its ability to discuss a wide range of topics including hormone replacement management. Another strength is the ability to collaborate with other health care professionals to provide continuity of care.

Colorectal Cancer

Loftus and Weston (2001) suggest that with appropriate training a nurse should be able to provide a quick access clinic for rectal bleeding. Duthrie *et al* (1998) identifies concern at the lack of standardisation of training for nurses to perform sigmiodoscopy. This was in comparison to training required for Specialist Registrars to perform the procedure. Taylor (1998) found when setting up a rectal bleeding clinic the service

needed to be supported other departments by means of additional information regarding the procedures performed.

The purposes of her clinic is to perform sigmiodoscopy and beam the images back to a research doctor for interpretation. Pathmakanthan *et al* (2001) in a national survey of potential benefits and attitudes to nurses performing sigmoidoscopy in the United Kingdom found benefits to include good patient acceptability and improved care.

Haematology

Anticoagulation is the mainstay therapy in the management of a variety of thromboembolic and vascular disease (Brown et al 1998). Connor et al (2002) found nurses were able to at least as safe and effective as the consultant haematologist in managing outpatient anticoagulation therapy. Connor et al (2002) identifies the benefits of service to be its ability to be cost effective as with the nurses involved. The hospital Trust was able to manage more patients. Taylor (1997) found nurse led anticoagulant services to be acceptable to general practitioners. This finding was without substantive evidence to support this (Connor et al 2000). Connor (2000) suggests that although many medical colleagues find nurse led services satisfactory, generally general practitioners may be unwilling to refer a patient to a nurse led clinic. The cost is the same for either visit. Gamineria et al (1997) Marsden (2000) also identified a reluctance of medical staff to take advice from specialist nurses. Connor et al (2002) suggests the benefits of research undertaken to explore the attitudes of other health care professionals to nurses taking on increased responsibility. The nurses undertaking the anticoagulation clinics identified the other limitation of nurse led care. There is a possibility that the patients might feel that they were receiving a

second-class service (Connors *et al* 2002). Wise (2001) identified this as a concern with primary care clinics. Connors *et al* (2002) suggests that this is another area where further research is required.

<u>Urology</u>

Williams *et al* (2000) evaluated a nurse led continence service as a pilot study. The findings identified the service to be effective in reducing urinary symptoms. They also identified high levels of patient satisfaction service. The patient's comments identified the benefits of talking to a nurse with a specific interest in continence care. This was in contrast to practice nurses who they believed to be too busy providing care for other conditions such as diabetes (Shaw *et al* 2000). This finding is not confirmed by Seim *et al* (1996), who found that general practitioners were able to effectively manage the symptoms of urinary incontinence. Training was identified as important to the success of nurse led services in urology (Willims 2000). Gidlow (1998) commented that there is a lack of national accredited training for nurses working in urology nurse led clinics. This has resulted in protocols being implemented locally by the lead consultants and nurses. The impact of this is that the services can only be judged by local and not national standards. Rosen and Mountford (2002) identified the disadvantages of a lack of uniformity of training in nurse led care.

Ophthalmology

Two studies looked at nurse led care from the nurses performing a procedure in contrast to medical staff. The first service to be described was a nurse led chalazion service performed, in ophthalmic outpatients setting. The service identified that the procedure was performed safely and effectively by both nurse and senior house officers (Jackson and Beun 2000). The finding was that a nurse performing the service was more expensive than the senior house officer. The reason for this was the salary scale of the nurse performing the procedure. Davis (1996) identifies the importance of ophthalmic outpatients care to be cost efffective.

The second ophthalmic nurse led service was an evaluation of a nurse giving sub – Tenons local anaesthesia (Waterman*et al* 2002). This identified that a nurse can administer uncomplicated sub-Tenon anaesthesia safely and successfully with similar effect as other health care professionals. There was a high degree of patient acceptance for this mode of local anaesethic administration. Only ten patients took part in the satisfaction survey. There was no indication whether the patients had previously had the procedure.

The third ophthalmic article selected was an evaluation of the safety and effectiveness of telephone triage as a method of prioritisation in an ophthalmic accident and emergency service (Marsden 2000). She found that the decision-making skills of the nurses prioritising the patients had an accuracy score of 100%. The other finding was that the nurse practitioners sometimes had difficulties in obtaining information from general practitioners. This was not found in all cases but supports Connors (2002) findings of reluctance to for general practitioners to refer to nurse led services. The articles selected for review supports Briggs (1998) finding that nurse led services have been established to improve quality of care for patients by providing support and

information. The second finding was that nurse led care had developed to undertake roles previously performed by medical staff (Read 1999).

Framework from Literature to Evaluate the Service

The purpose of the evaluation will be to identify the effectiveness of a nurse led cataract service. The issues from the literature that will be used to provide the framework identified that nurse led care is in an early stage of evolution and at present there is conflicting evidence regarding its financial benefits (Read 1999). The research hypothesis the evaluation will try to answer is

"The Establishment of the nurse led fast track cataract service has improved the quality of care for patients requiring cataract surgery"

Of the articles reviewed six used patient satisfaction of the service provided by the nurse led clinics as a significant indicator to the success of the services Williams (2000), Jackson and Beun (2000), and Waterman (*et al* 2000). This is in spite of the fact that patient satisfaction studies have indicated consistently that patients are generally satisfied with care (Staniszewski and Lailia 1999). This finding is surprising when considering that health care professionals would not claim to provide perfect care all the time (Baker and Whitfield 1992). Such an inconsistency has cast doubt on the validity of the concept measured by patient satisfaction study (Stanizewski and Lailia 1999). For this reason patient satisfaction will not be used as a method of evaluating the service.

The other criteria used is the nurses ability to perform tasks compared to a doctor performing the role Connors (2000) Garvican *et al* (1998) Pathmakman *et al* Connors *et al* (2002). This method of evaluation will not be used for this project. The reason

for this is the fact that the nursing team were already responsible for preparing the patient for cataract surgery. The literature review identified that to effectively evaluate the service the evaluation would require two arms. The first part, a summative evaluation of the patient's case notes, concentrating on the effects and effectiveness of the service (Harris and Hardman 2000).

The second of arm of the evaluation is to review the impact of the Nurse led fast track Cataract Service on the other team members by use of a questionnaire. This to allow them to identify their views on the service (Gerrish 2001).

Summative Evaluation

Summative evaluation focuses on outcomes, matching these against stated objectives of a project (Dehar *et al* 1993). Summative evaluation can also be referred to as outcome evaluation (Overtviet 1999). Overtviet (1999) advocates this method to evaluate whether projects objectives have been reached.

There is a view that summative evaluation tends to neglect the process of the intervention, which may leave the researcher with insufficient knowledge as to why a project has succeeded or failed (Pawson and Tiley 1997). In addition, this method of evaluation may be limited due to community and group diversity and difficulty in controlling variables (Murray 1995).

Cormack (1996) suggests that for an evaluation to be successful the programme under trial needs to be simple and clearly defined. There is a need to establish the programmes effectiveness. The imputs can be specific and measurable. Clinical objectives should not be included, meaning that results can be both useful and timely.

The benefits of combining this method of evaluation with a pluralistic approach give the facility to accumulate evidence from a variety of sources (Billings 2000). It gives the capacity to combine data generated from the patents case notes with information obtained from staff questionnaires.

The benefit of this is the ability to provide a portfolio evidence of the process that took place. The other benefit to describe the changes that took place during and as a consequence of the project (Billings 2000). This method of collective evaluation has proved to be successful in identifying the complexities of change management (Means and Smith 1988). Milburn *et al* (1995) consider that a mixture of methods to collect data may produce conflicting results. Gerrish (2001) suggests that pluralistic evaluation starts from the premise that the criteria for judging the success of an evaluation are situational. Also they can be open to different interpretation by the various stakeholders involved. This opinion is also held by Carr (1993) that complex social situations will require research method that has the ability to be multidimensional.

Hogson (1995) voices concerns nurses undertaking evaluation projects risk becoming the agents of health care economists. Bonner (1999) produces the counter argument that if nurses do not take the lead in evaluating practice other health care groups will lead evaluation of nursing. This leading to the risk of nursing practice becoming less autonomous.

Beattie (1995) believes that pluralistic evaluation is powerful tool for the practitioner to use to provide a basis for evaluation of new developmental projects. Maxwell (1984) provides six key criteria for evaluation:

The first is that the service is relevant and has the ability to match the needs of the client for the purpose of this evaluation. This will be that the nurse led clinic has the ability increase the number of patients listed for surgery at the consultant visit. The service also needs to be accessible to all people requiring cataract surgery. The stakeholders in this case, i.e. other team members are satisfied with the service. No one is excluded from the service due to incorrect referral patterns. The final two requirements are that the service is effective and efficient. This can be judged by this system ability to reduce the number of cancellations for surgery due to undiagnosed medical conditions. For the service to be efficient it needs to reduce the visits pre surgery from four.

Framework for evaluation

It is recommended that a logical framework should be used for the evaluation of National Health Service Schemes (1994).

Five stages are listed below and the discussed in more detail:

- 1 The merits and demerits of different data collection method
- 2 Sample size and sampling methods
- 3 Piloting of the Study
- 4 Security and confidentiality of data
- 5 Data analysis and report writing

Methods of Data Collection

From the literature search the patient's notes were identified as a source of collecting retrospective data on the effectiveness of a nurse led the service (Waterman 2002), (Williams 2000) and Marsden (2000). Documentary data obtained from the patient's

notes is often termed as secondary data because the information has been collected for other purposes (Glaser 1963). Mc Envoy (1999) identifies one difficulty to be the lack of knowledge of the interaction that occurred between the patient and health care professional when the information was collected.

There are ethical issues in using patient's notes it could be argued that the patient's notes are only constructed for the purposes of immediate contact between the patient and the health care professional.

The other limitation of this method is the scope of enquiry is restricted by the nature of information found in the notes (McEnvoy1999). There could also be organisational reasons for limiting records, such as the need the need to justify actions recorded in the notes for medico legal reasons. Clinical staff also have limited time to write up detailed information in the notes (Garfunkel 1984). Taken out of context the meaning of the information could be misunderstood (Cicourel 1964).

An opposing view to this argument would be that they could be to improve the quality of care for future patients. Jay (1997) advocates the identification of good practice as important to raising the profile of nursing.

The government document "Research Governance for Health and Social Care" (2001) outlines the responsibilities of the researcher using data from patient's records. Taking responsibility to ensure that appropriate means of communications are used to be certain that patients are aware that they are part of a research project. When the project has been commenced to ensure all the data obtained is treated as confidential and stored in a securely locked cupboard.

Before commencing the project, a favourable opinion would be sought from the North Birmingham Research Ethics Committee. This is a committee that meets in the hospital to review research applications. A document of six pages is completed. This outlines the project proposal the potential benefits of it and its potential limitations.

The advantages of using the patient's medical notes, as a source of data is that it place no burden on the patient. The only requirement from the patient will be the completion of a consent form that will be returned to the hospital in a stamped addressed envelope to confirm their permission for their records to be used as a source of data. The results will be less biased in that it is a larger representative group (Mc Envoy 1999). It would also allow for a larger number of patients to be included in the sample than other methods of investigation.

It could be argued that this method of evaluation was just an audit of current information found in the notes. Closs and Cheater (1996) define audit as an cyclical process where efforts are made to monitor and improve practice. Once baseline data has been collected, the practitioners are able to compare this against current standards to identify whether targets have been reached. As this is a new service then no current standards are in place to monitor outcomes against. This is described by Smith (1992) *Research is discovering the right thing to do: audit is ensuring that it is done right.* Using Maxwell model (1984) The information required from the patients notes will be

I **relevance** - This will be identified by confirming the patients presenting diagnosis when given an appointment for the nurse led fast track cataract clinic

- 2 Acceptability That patients who had undiagnosed medical problems that would prevent them from having surgery were diagnosed at the nurse led fast track clinic visit
- 3 Efficient that when patients were seen at the consultant visit they could be given a date for surgery
- 4 **Effective -** No patient seen in the nurse led fast has surgery cancelled due to undetected illness. Clinic visits before surgery are reduced

The study will be done over a two-month period when patients return for a routine outpatients appointment. They will be given information about the study, then asked to return a signed consent form in a stamped addressed envelope. On return of the consent form their notes will be included. Overetviet (2002) suggests that of the these patients given the information only 65% will return the completed consent form to allow the evaluation to go ahead. Polit and Hungler (1999) identify problems quantifying the number of required to achieve significant results but suggest that for quantitive research the larger number that can be obtained will provide the best results.

Second Arm Questionnaire

The importance of teamwork is identified as important to delivering the government modernisation programme (1999). Connors *et al* (2002) identifies the lack of information regarding the impact nurse led clinics on the existing team. Ryan and

Hassall (2001) consider that health care provision is complex and that patient care is dependent on imput from all members of the team.

Gerrish (2001) also identifies that obtaining the commitment of the whole team to a project can be problematic because of staff numbers. The other potential area of conflict is the diversity of professional interests in a multidisciplinary team may be hard to accommodate (Gerrish 2001).

This finding is reflected in the literature search by general practitioner attitudes to nurse led care in haematology and primary care Connors *et al* (2002) Loftus and Weston (2000). Read (1999) found that nurse led services failed to reach their full potential because of inadequate management. This was mainly because when the nurse led clinic was established no provision was made for additional clerical or secretarial support. No article in the literature review acknowledged the involvement of clerical and secretarial staff in the establishment of the nurse led clinic. This is a surprising finding, as all aspects of out patient's clinic activity require support from clerical staff to send appointments retrieve notes. The questionnaire will try to establish all members of the perceptions of the service

Design of the Questionnaire

Cormack (1996) suggests that the questionnaire needs to be developed in five stages, which will be discussed in further detail. The first stage needs to decide on the information required to be the focus of the study. The second stage is for researcher to decide on the most appropriate means for eliciting the information required. The third step is to identify the questions that need to be asked and the kind of responses, which might be appropriate. The fourth step is to consider how the questions are worded.

Cormack (1996) identifies this as important to the overall success of the venture in that if questions are asked in an inappropriate form of words the necessary responses will not be forthcoming. The fifth step is to look at the layout of the questionnaire to the sequencing of questions.

The questions asked

 Do you consider the nurse led fast track cataract service to have improved patient care?

This will be marked using the likert scale from one to five to assess the impact the service has had on them.

The introduction of the nurse led clinic has increased my administrative workload?

This to answer Read (1999) finding that nurse led services were often under resourced.

• The patient's perception of the service when they discussed it with them? This to give the patients a voice and provide another dimension to the study

• The way forward for the nurse led fast track clinic should be?

This to reflect Gerrish (2001) comment that valuing and respecting the contribution from different members of the multidisciplinary team was crucial to the teams overall success.

Cormack (1996) believes that questionnaires are able to provide information for this purpose when carrying out an evaluation project. He suggests that the chief problem with this method is the lack of control group for direct before and after comparisons of the questionnaire.

Non-response

Few surveys if any, obtain questionnaires from all the people selected for the sample (Cormack 1996). Some staff may have changed jobs, others may well refuse to take part in the process. Non-response can distort results. Overviet (2002) suggests that to get significant data from the questionnaire the response rate should be 65%. Ways to achieve this they suggest is to keep the questionnaire short ensure it is well designed with clear wording of questions etc., making the questions highly focused and relevant to potential respondents.

Boundaries

Boundaries are described by Overviet (2000) as the situation where the evaluation takes place. The situation would be the ophthalmic outpatients department. This gives the ability of replicating the study in another department in the Birmingham Group.

Reliability

This is the measure that the questionnaire will give the same results when repeated. A method of testing this would be to administer questionnaire to another colleague with experience of an equivalent nurse led clinic.

Sensitivity

This is described as the sensitivity of the tools used for collection of the data to detect a change in condition as a result of the innovation (Overjiet 2002). The summative evaluation of the notes should have the ability to provide quantitive data on numbers of patients clinic with correct diagnosis listed for surgery at consultants visits, on the number of patients cancelled with undiagnosed medical problems and on the number of patients seen in the nurse led clinic that went on to have cataract surgery in a twomonth period.

<u>Bias</u>

It is acknowledged that a researcher collecting information within their own area may be biased towards interpreting findings support the study (Bonner and Tolhurst 2002). To endeavour to prevent this the data collected will be reviewed by an independent supervisor to ensure that the results are accurately recorded. The patient population will also be selected on the basis of clinic visit. This method will prevent the researcher only including notes that reflect the nurse led fast track clinic in a positive light.

Piloting of the Study

The function of a pilot study is run a small-scale trial of the study to provide information for improving the project and to help to assess the feasibility of the project (Polit and Hungler (1997). This study has both summative and qualitive aspects. The pilot of the summative evaluation using the notes would be to use the Excel data sheet designed to collect the summative data for the first two months to identify its ability to collect the data required. The questionnaire would be shown to ophthalmic staff from another ophthalmic unit involved in the establishment of an equivalent nurse led clinic to test its validity.

Security and confidentiality of the study

The Government document "Research Governance for Health and Social Care" (2001) outlines the responsibility of the researcher using data to ensure that appropriate means of communication are used to make certain that patients are aware that they are part of an evaluation project. This will be done when the patients attend for the first visit post cataract surgery when they will be informed of the study. They will then be invited to be part of the study by returning a completed consent form. This will be done by post to allow the patient time to discuss the study with their family and consider their decision to take part.

The colleagues who take part in the study are identified by Sullivan (1996) as the volunteer sample. This is because they have undergone a particular experience namely the establishment of a nurse led cataract clinic. They can choose to take part in the study by completing the questionnaire. Confidentiality will be maintained by using a number system for the questionnaire (Clifford 1997). The questionnaire will also identify staff group. This ensure that no comments would be attributable to any particular person

Data Analysis

The data obtained from the summative evaluation will be collected onto an Excel data sheet. Crighton (2001) suggests that this is a good way to organise data as this method has the ability to produce a graphic display. To collect the data patients will be given a number when entered on the spreadsheet. The five details required from the notes will be scored separately, as listed in the section above 'Data Required from Patient Record Notes''.

The Staff Questionnaire

Two methods will be used. The first is the use of the Likert scale, which uses a fiveitem scale (Breakwell and Millward 1995) that will allow quantitive data to be collected. Grove and Burns (1993) believe a disadvantage of using a Likert scale is the potential for the findings to be difficult to interpret.

Monroe *et al* (1998) used a questionnaire to find the acceptability of callers to the NHS Direct telephone line. He used the positive comments made by the callers about the information given during the call as an indication of satisfaction with the service. The negative statements were used to illuminate dissatisfaction with the service. For the purpose of the evaluation this method will be used.

Report writing

The first aim will be to answer the research question whether the establishment of the nurse led fast track cataract service has improved the quality of care for patients requiring cataract surgery. The concept of quality that the service is trying to achieve is defined by the "International Standards Organisation" (1986) as its ability to satisfy the needs of the service.

The objective outlined by the document action on "Action on Cataracts "is a facility to reduce patients visits before cataract surgery". The other aspect of the evaluation is the perception of the service from other team members. Henderson (2002) believes that each health care professional needs to be aware of their responsibility in providing quality of care to the patient. He suggests a way to provide this is to allow frank and open discussions between team members. This to allow differences to be resolved and then energies redirected towards improving patient care. The intended aim of the evaluation is to provide a forum to discuss the implications this innovation had on other team members.

The second anticipated aim of the study is to evaluate the nurse led service is to ensure that it is achieving the aims identified in Good Hope Hospital Trusts "Specialist Nursing Document" (Barnish 2000). Specifically that the clinic provides a service within ophthalmology, using advanced nursing skills to support the needs of the patient. These skills can be recognized in the framework provided by the document "Shifting the Balance of Power" (2000). This distinguishes the ability of nurses to provide advanced skills using ten separate criteria (Chief Nursing Officer 2000). These criteria are also used by the hospital trust as framework for clinical nurse specialists to provide an annual report on work activity.

The criterion of advanced practice the evaluation is anticipated to acknowledge.

Management of a patient caseload To run clinics To make and receive direct referrals Perform minor outpatient procedures namely biometry slit lamp examination corneal topography To order diagnostic tests To order investigative pathology tests To take the lead in the way the ophthalmic service is run and organised.

The Trusts patients' access team have expressed interest in the project. The viewpoint they are interested in is the ability of the clinic to reduce waiting times in line with government documents "Making a Difference" (1999). West and Scott (2000) believe that nurses need to take a more active role in evaluating projects at local level can use this as a method to influence national policy. They also believe that for the project to be of interest it needs to timely and of interest to policy makers as a method of solving current solutions. The evaluation appears to fit into that category in that it is offering a method to reduce clinic visits and provide a better quality of service to the patients.

The final aim of the report writing stage will be to identify the problems encountered by the researcher during the evaluation project. Duxbury (2002) found when using pluralistic evaluation of staff and patients attitudes to management of patient aggression. The questionnaire proved difficult to evaluate. The reason for this was the opposing data obtained from the staff and patients on the management of aggressive behaviour. Hart (1999) found that pluralistic evaluation had the ability to reveal tensions between the health and social care services. That a negative impact on the quality of life of patients following strokes and their carer. Cormack (1996) suggests that to identify problems that occur during an evaluation can inform and support other colleagues who are considering a similar project.

Plan of Action To Carry Out evaluation

Literature Analysis

Hannington (2000) sees the evaluation of other literature as a method of developing an evaluation strategy. A literature search identified that to rely on information of innovations by nurses would not be sustainable. The other issue was the explosion in nurse led care has resulted in numerous articles to support the practice. This has led the decision only to include nurse led clinics that had literature from a multidisciplinary perspective. The disadvantage of this may be that it limits the information and introduces bias.

Time Management Skills

Tierney (1998) suggests that time management is important to the overall success of the project. To start with the time given to complete the project will be the academic year. Delays to the start of the project may be the time taken for ethical approval to be obtained for the study to commence. The summative evaluation is already available in the patient's notes. As before the notes may be used a completed consent form will need to be returned by the patient. Delays may occur due to the slow response of patients returning consent forms.

The other aspect is the use a questionnaire to collect other member's staff perception of the service might elicit a limited response. Tierney (1998) suggests a way around this might be to contact staff who have worked in the department during the time of the nurse led cataract clinic. To ask invite them to be part of the evaluation.

Financial Budget and Time to Perform the Study

Financial implications need to be considered during the early part of the study.

The costing for the evaluation project can be considered in two categories (Clifford 1997). The first category deals with the time the evaluation will take me away from my current work commitments. My role is to provide a fast track referral system for patients attending with a diagnosis of cataracts. At this assessment to perform health screening and to record measurements required prior to surgery. Prior to this the patients required three visits for all these procedures to be performed. I already see the patients at their postoperative visit. The additional time to inform them of the study will be taken from allocated consultant teaching time.

The second part deals with the time required to collate the data once it has been retrieved. The Trust has agreed to provide a statistical to support the collating of the data after it has been retrieved.

A research fellow who is experienced in the field of qualitative research will review the qualitive data obtained from the questionnaires. Supervision is suggested as an expert endeavour that is underestimated in an evaluation project (1996). The project is part of a master's programme and supervisory support will be provided by the university. Within the department it will be provided by the consultants responsible for the patients care. Additional supervision will be arranged from the Trusts research department to ensure data is accurately recorded from the patient's notes.

Ethical Approval

Access to commence the evaluation project has been obtained from the consultants responsible for the patients care. Permission has also been sought from the operational line manager. Overjiet (2002) sees the involvement of the stakeholders in the

evaluation project as crucial to the overall success of the project. If the evaluation does not raise objections this may be an indication that the evaluation is of no use. A main criticism of the study may be the use of the staff to complete questionnaires on their perceptions on the service. Beech (1997) suggests that it is important to seek opinions of multidisciplinary staff. The chief benefit being that it will provide information on the social and interproffesional pressures between health care groups. Multidisciplinary teamwork is the cornerstone of the Government Health Improvement programme (1999). Little information is available on innovative projects created in response to new health trends from all team members involved (Connors 2002).

Research ethics committees exist to protect the patient's rights of dignity and well being. Secondly to uphold standards of research and protect research workers from unjustified criticism (Royal College of Physicians 2002). Williams (1997) suggests the researcher when applying for ethical approval needs to be well informed about the work of the local research committee. With this advice in mind meetings have been held with the hospital research department who have had experience in the requirements of projects to gain research approval.

This highlighted the need of involving the hospital statistician's advice when formulating the questions to provide robust statistical data. This also identified the need to build into the project the realisation that the research committee may request amendments to the proposal before approval is granted. This may well increase the time of the project.

Computer skills

The study will require knowledge of computer soft wear to analyse the data collected. Problems with using numerical data by nurses have restricted nurses using quantitive data in the past. Tait and Saunders (1999) see the best method to address this is to use a computer-learning package.

Political Awareness of Evaluation

Censorship of research is an increasing problem this is identified as Mason (1997) as a career danger in that the research may be at odds with stakeholders interests, job promotions and future prospects. This is relevant in this evaluation as the fast track nurse led cataracts clinics are responsible for fifteen hours of my current workload. If the evaluation identified that this method was not productive it would have significant implications on my career prospects.

Mason (1997) suggests the researcher needs to foster a belief that the research will support the intellectual development of the nursing profession. Another requirement is to ensure that recognised experts in the field supervise the research.

Conclusion

The nurse led fast track cataract service was established in the ophthalmic unit in response to the government document "Action on Cataracts" (NHS Exective2002). The first disadvantage when evaluating the service was, as yet no nurses have published results of similar innovations. The reason for this may be that nurse led services to support cataract surgery are well established in ophthalmology. Gardner (1999) suggests that ophthalmic nurses have used the new opportunities provided by Scope of Professional Practice (1992) to expand nursing roles. She comments that this has allowed ophthalmic nurses to work in partnership with the medical team to

provide quality patient care. Perhaps this is the reason that the document "Action on Cataracts" (2000) has had little impact on nursing practice.

Other nurse led services appear to be have been established as a response to the Governments Commitment (1999) to improve health care access. Formal evaluation of the projects from all team members' perspectives appears to be limited (Ryan 2001). Secondly the most common criteria for success of the service is identified as patient satisfaction. The problem with this as that this as a concept is fickle. Patient's perception of good nurse led care is different from that of the care given by doctors.

The evaluation aim of the project will be to test Maxwells (1984) tool of evaluation to identify the effectiveness of the nurse led service. The quality aspect identified in the research question that the nurse led service can improve quality will answered in the number of visits by patients in comparison to the previous system. It is hoped that the questionnaire will provide qualitative data regarding the nurse led clinic on the current workload of other team members. Duxbury (2002) identifies problems with this in that within the team differences in perception will occur. Ryan (2001) suggests that the complexity of problems in providing health care and the inability of any single discipline to respond to them comprehensively means that

health care professionals must work in teams to provide integrated services to meet patient's needs. A significant limitation of the study may be that by only using articles that reviewed nurse led care from the team approach may reduce its credibility.

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02

Abstract

The Nurse Led Fast Track Cataract Clinic Evaluation Proposal was presented to colleagues at an audit meeting on March 18th 2003. Comments made by colleagues on aspects of the evaluation are listed below:

Research Question The nurse led fast track cataract clinic is a relevant, acceptable, effective and

efficient service?

The first question that I was asked was that if it was proved that service was not working would it mean that I, as the person who ran the service, was putting my job on the line and was this such a good idea? I responded to this by agreeing that was a real issue and that in the ideal situation I would be conducting the evaluation in another hospital. The purpose of the evaluation was to advance a practice that I had identified in phase one of the MA Practitioner Course. I explained that I had used the nurse led clinic in three of the six modules I had completed last year. Therefore, I had the most information about this topic.

The second question was why I chose to evaluate the service now, when I should have looked at the method used before the whole system was changed. Again I agreed that it was a relevant point in that change seemed to be inflicted on us as an outpatient's team on a regular basis without real evidence of its necessity. I suggested one benefit of

performing the evaluation might be to identify that a change in practice by one practitioner had an impact on other team members. The other benefit was to provide evidence on the shortcomings of the current service and to use as a method of improving future services.

Scientific Background

I presented my research findings from the literature review and this showed that no nurse led article had been written in response to the document "Action on Cataracts" (NHS Executive 2000). This created some surprise amongst the nurses.

The optometrists in the group confirmed Ingram and Culmans (2001) findings that Action on Cataracts (NHS 2000) had created much interest in the optometrist's community. Also that the fact no community project existed locally might change with the appointment of a new lead optometrist. The methods of evaluating nurse led care identified in the literature review were then presented.

These were as listed below:

- Comparison with a doctor performing the role Connors (2000) and
 Pathmakum *et al* (2002)
- Patient satisfaction with the service Williams *et al* (2000), Jackson and Beun (2000) and Watermann *et al* (2000)

Collection of retrospective data from the patients notes Marsden
 (2000) and Waterman *et al* (2002)

I explained the method I proposed to use would be the use of notes to identify the nurse's ability to prepare patients for cataract surgery.

The group were surprised I had not decided to use the patients to comment on the service. The consultants were concerned that I thought the some patients might be too frail to comment on the service. This was because they believed the patients might be insulted with this point of view. I replied that my motive had been to avoid imposing an additional pressure on patients at a potentially stressful time. I then went on to explain that when looking further into the benefits of using information recorded on patients' comments on their perception of the standard of service that they had received. I had found that the results were inconclusive which agreed with the findings of Baker and Whitfield (1992) and Stanisweski *et al* (1999).

For this reason I had elected not to use this method. The second issue was what information I would require from the notes. I Identified the areas I had chosen to look at, which are as listed below:

a) That appropriate patients were referred to a nurse led fast track cataract clinic

- b) The nurse could safely perform an anterior segment examination using the slitlamp
- c) The nurse was able to detect conditions that would prevent cataract surgery being performed and refer correctly
- d) The consultant had sufficient information to list the patient for surgery as a day case or an inpatient
- e) No patients surgery was deferred at the consultants visit due to an undetected medical or ophthalmic condition
- f) The biometry measurements were available at the consultant visit to make calculations on the size of intraocular lens required for surgery
- g) That the patient had a reduction in visits to the department before cataract surgery from four to two
- h) Nurses ability to detect medical or ophthalmic conditions that would prevent surgery

effectiveness of the service. I then went on to explain that I had discussed this with the hospital statistician. He had suggested I could collect this information on to an Excel data sheet to provide visual information on how effective the service was.

The next question asked was why I had not considered comparing myself with a junior doctor performing the role. I responded to this by explaining that traditionally the nurse had always prepared the patient for cataract surgery in the department. Therefore, it was not a skill that could be compared with a junior doctor.

Second Arm of the Study

At this stage I discussed a second finding from literature review was that although the government had a commitment to improve care by the use of teamwork (Making a Difference 1999) no literature had been found that looked of the impact of nurse led care from the whole team perspective. This includes the clerical secretarial and allied health-care professionals to redress the balance. After obtaining ethical approval I planned to invite the other team members to comment anonymously on the service by use of a staff questionnaire. This proposal was meet with some concern by the clerical and secretarial staff who were concerned that it might be used as a method of monitoring their current workload. I explained this was not the case. The questions proposed to ask were circulated for further comments.

The question regarding the patient's comments to them regarding the service created further discussion. The first was that anecdotal evidence was not a good basis for research. This was acknowledged but it was suggested that no other information for the service existed. This might be an opportunity to identify which staff group received the most comments about the service from the patients and use this as a tool to amend the information sent to the patient about the service.

Plan of Investigation

This was noted that in order to gain access to the patient's notes ethical approval would need to be obtained. Once this had been obtained patients who had attended the Nurse Led Fast Track Cataract Clinic and were returning for their consultant visit could be approached and asked if they would be prepared to be part of the study.

The study would be explained to them and consent obtained and confirmed by the patient returning a completed consent form. When this was received I would retrieve the notes from the filing system and collect the data required.

The first question about this was from the nursing staff who were concerned that this might disrupt the clinic with patients waiting to see me in the clinic before being processed to see the consultant. I explained that I did not anticipate this occurring because I planned to discuss this with the patient after the clinic visit. The clerical staff commented that when studies using patient's case notes had happened in the past the medical staff hoarded the notes in boxes, making the notes difficult to trace when required for other purposes. I said that to avoid this I would number the consent forms and have the patient's unit number to allow me to find the notes after they had been returned to file.

The next question was about who would confirm that the data I collected was accurate. This was relevant because the Trust had recently lost all its star ratings due inaccurate recording of data about waiting times for consultant appointments (Good Hope NHS 2002). I confirmed that I had discussed this with the nurse manager who was prepared to confirm my findings when I entered them on to the data sheet.

Staff Questionnaire

I explained that this would be collected in a sealed box in the staff coffee lounge.

The box would be removed after three weeks to give staff who had been on holiday the opportunity to complete the questionnaire on their return.

Data processing

I had already outlined the method used for collecting the quantitive data from the patient's notes. I explained that the qualitative data would be obtained by looking at the questionnaires to identify key ideas or themes (Richie and Spencer 1995). This data would be used to help organise the information into a framework to describe the implications to the team of the introduction of the nurse led fast track cataract service. At this stage one of the clinical assistants identified how difficult qualitative research was to organise into statements. I agreed with this comment and explained that I would have an academic supervisor from the university to support me with this.

Outcome of the Study

I explained that I would ensure all the team had a copy of the study when I finished it.

Conclusion

All the staff members appeared happy for the study to go ahead and indicated their willingness to participate.

Part 3 Practice Focused Project

Abstract

This project reviewed the establishment of a nurse led fast track cataract clinic in an ophthalmic outpatients department.

The tool used to evaluate the service was Maxwell's (1984) model. The principle of the model used, was that in order to show the quality of service was improved by these changes, the service needed to be seen to be:

Relevant, Acceptable, Efficient and Effective.

The method selected for the evaluation was a mixed method known as summative evaluation. The qualitative data about perceptions of the service was collected from the outpatient's team using questionnaires.

Quantitative data was obtained from the patient's hospital notes after, ethical approval for the study had been obtained. Consent was then obtained from the patients by completion of a signed consent form.

The results of the data obtained from the staff questionnaire and the patient's notes identified that the service was relevant effective and efficient. The limitations of the service identified from the team perception, was the additional workload the clinic created for the clerical staff. The fact that no consultant was present at the clinic visit disappointed some patients who attended the clinic.

Recommendations

- Joint appointments with consultant and clinical nurse specialist
- Direct referrals from optometrist to nurse led clinic bypassing the general practitioner (GP).

- Development of satellite centres run by optometrist and clinical nurse specialist to allow district nurses and general practitioners to refer directly
- Selection criteria for referral to the nurse led clinic to allow more complex patients more access to service, criteria could include only eye, poor vision, other ophthalmic pathology, poor referral information,
- When creating new roles in a clinic, consideration should be given to other team members such as Orthoptists and Optometrists.
- Patient information needs careful monitoring to ensure it is understandable and not confusing
- When collecting data for audit purposes thought should be given to the development of consent form that is signed by all new patients. This would mean the patient's notes could be used without further inconvenience to the patient.

Introduction

The location of the project was Good Hope NHS Trust Hospital, Ophthalmic Outpatients. Good Hope Hospital has a day case surgery unit for cataract surgery but no inpatient facilities. This means that when patients are listed for cataract surgery it is important to have information about support at home in the immediate postoperative period, to decide on where the surgery should be performed.

The surgeons who perform the surgery also work at the Birmingham and Midland Eye Centre. This limits the number of clinics that are held at Good Hope Hospital. The implication of this is that the clinics must be able to generate patients who can be listed for cataract surgery.

At Good Hope Hospital, as with most ophthalmic units, age related cataracts constitute the main surgical workload and the bulk of ophthalmic waiting lists.

National surveys have provided evidence of unmet need for cataract surgery in the United Kingdom (Frost *et al* 2001). In order to address this, the government produced the document entitled "Action on Cataracts" (NHS Executive 2000). The purpose of the document was to help managers and health care professionals to review and improve the management of cataract services locally (NHS Executive 2000). Another key aim of the document was to reduce clinic visits for patients undergoing cataract surgery, thus allowing for more patients to be treated. Our response to the document was to review the current pathway for patients undergoing cataract surgery at Good Hope Hospital.

After discussions with the consultants nurses and clerical staff on how we might reduce the number of visits for the patients pre-surgery, it was decided that I should visit other ophthalmic units nationally to review the methods they had adopted to achieve a reduction in clinic visits. The outcome of my visits to the other ophthalmic units identified that the method used by most areas relied on local Optometrists, examining the patients initially and recommending to the patients General Practitioners (GP), that they be referred to the Consultant's clinic for surgery (Stevenson and Neal 2000) (Hughes *et al* 2001). This still meant that the patients required pre-assessment by the nurses before the patient could be offered a date for surgery.

An alternative method was adopted. This was that patients referred by the General Practitioners with a diagnosis of cataracts would be seen in a nurse led fast track cataract clinic. The purpose of the clinic was the following:

- A. To identify patients whose visual impairment due to cataracts was causing significant problems to their lifestyle, enabling prioritisation of clinic appointments.
- B. To prepare patients for the surgery both physically and mentally.
- C. To ensure that medical conditions, such as undiagnosed diabetes and uncontrolled hypertension, which would prevent cataract surgery, (Royal College of Ophthalmology 2000) were correctly identified and the patient referred for treatment prior to surgery.

The reason for adopting this method;

When General Practitioners contacted the department requesting an urgent appointment for a patient with severe visual impairment due to cataracts. An appointment could be arranged for the clinical nurse specialist to see the patient before the Consultant, inform the patient about the implications of cataract surgery, and perform a health screen and biometry. This meant that when the patients saw the Consultant they could be given a date for cataract surgery at the time of the outpatient Consultant appointment.

The nurse led fast track cataract clinic has been in place for eighteen months and it was felt necessary to evaluate the service and then use this as a method to improve the service.

Literature Review

A literature search using Medline and Cinahl from 1999 to 2002, was performed to review the current information on nurse led care established as a response to the document, "Action on Cataracts" (NHS Executive2000). This identified no articles written by nurses who had established nurse led clinics in response to the document. The search was then expanded to include all articles written as a response to nurse led care in ophthalmology and general nursing in that period. This provided two hundred articles written as a response to inniatives in nurse led care.

The method used to select articles for the project was to include articles that reviewed nurse led care from the team perspective. The literature review identified eight areas that had reviewed nurse led care from the team perspective. Primary care identified concerns about nurse led care not being supported by standard assessment and training programmes (Rosen and Mountford 2000). Loftus and Weston (2001) and Poole (1996) found the strength of nurse led care in cancer conditions was its ability to be proactive in treating side effects of radiotherapy and cancer medications. The other strength in cancer treatment was the nurse's ability to collaborate with other health care professionals to provide continuity of care. Connors *et al* (2000) found that nurse led care in haematology was able to provide a service that was at least as safe and cost effective as the service that the Consultant provided.

The areas that have been selected for further investigations in the evaluation have been;

The acceptability of nurse led care to the other health professionals involved.

The educational needs of the nurses involved in nurse led care.

The relevance, effectiveness and efficiency of the service provided by the nurse led clinic.

An analysis of the strengths and weakness of nurse led care

The term 'nurse led care' signifies an expanded role for nurses in primary care (Chappie *et al* 2000). It has been used generically in official documents to identify a new direction for nursing in the new National Health Services (Chappie *et al* 2000). The White Paper "The New NHS: Modern and Dependable"(1997), refers to nurse led clinics and extended role for nurses working in community services (Milburn 1997). The term 'nurse led care' also marks a departure from the terms such as 'specialist nurse' or 'nurse practitioner' used by nurses to indicate specialist areas of practice (Blackie 1998). The perceived benefits of a nurse led service are improved continuity of care, especially in outpatient's situations Briggs (1997). The second benefit is the ability to establish a service for the patient that previously did not exist (Rosen and Mountford 2002). The weakness of the nurse led services identified from the literature review is duplication of roles (Leaman and Terris 2000). Read (1999) found another obstacle is a lack of budgeting for adequate secretarial support when a nurse led service is established. Rosen and Mountford (2002) found that education required for nurses working in nurse led care in the primary sector was not standardised.

Nurse led care from the team perspective

Marsden (2000) identified that ophthalmic nurses have traditionally always enjoyed a good relationship with other members of the ophthalmic multidisciplinary team. Lee and Waterman (2003) confirm that this multidisciplinary support and encouragement continues to exist.

The following articles were selected for inclusion here because the ophthalmic nurses had expanded roles as part of a multidisciplinary team. The first identified that nurses were able to perform chalazion surgery as safely and effectively as the house officer (Jackson and Beun 2000). The second article found that ophthalmic nurses were able to effectively administer subtenons anaesthesia as safely and with similar effect to other care professionals (Waterman *et al* 2002). Marsden (2000) found that nurses were able to effectively prioritise patients using the telephone in an ophthalmic accident and emergency situation.

Her other finding was that some, though not all, General Practitioners were reluctant to refer a patient directly for nurse led care (Marsden 2000). Connor *et al* (2002) also identified reluctance from the General Practitioners to refer patients directly to nurse led anticoagulation clinics.

Savage and Smith (2000) identify that the relationship between doctors and nurses has always been a complex one. Norton and Kamm (2002) also identify a shift of power from doctors to nurses. That has come about as a result of the government commitment to make nurses the centre of the NHS modernisation programme (Milburn 2000).

The response to this change in power from doctors has been mixed Shum *et al* (2000) identifies the benefits of nurse led care in the primary care setting. Connors *et al* (2002) found care of patients was not compromised by the use of nurse led anticoagulation clinics. Davies (2000) suggests that a reason doctors have difficulties in adjusting to the changes in health care is that medical training produced doctors who were independent and autonomous, thus making the concept of shared care and multidisciplinary team work, a new concept.

Leman and Terris (2000) believe that nurses undertaking expanded roles are actually duplicating tasks performed by doctors and neglecting more traditional nursing roles. Little current information is available on nurses who are not working in nurse led clinics. Norton and Kamm (2002) suggest that encouraging nurses to perform new roles may impoverish more traditional ward and outpatient areas. Leaving these staffed only by the more unadventurous, or those unwilling to undergo further training. They regarded this as a potential means of creating divisions between nurses, with those who are left behind on the ward resenting the nurses who go away to attend study days. Allen (2001) found some nurses cynical regarding the opportunities for role expansion, regarding them as collusion between the government and nursing bodies in order to support the government commitment to the reduction of junior doctor's working hours.

The alternative argument to this could be that nurse led services are a method of making nursing more attractive by increasing opportunities and career pathways. There appeared to be no information available from clerical and secretarial staff about their opinions of nurse led care.

Team Satisfaction in the service

The significance of teamwork is identified as important to delivering the government modernisation programme (Making a Difference 1999.Connors *et al* 2002), identifies the lack of information regarding the impact of nurse led clinics on the existing team. Ryan and Hassell (2001) consider that health care provision is complex and that the patient is dependent on input from all team members. The most common methods used to collect qualitative data on health care are interview focus groups. Focus groups have been tried in the department and were found to be an unsuccessful method of obtaining information. The reason for this was that the more vocal members of the team dominated the meetings (Kitzinger 1995). The questionnaire gives these people an opportunity to express personal views anonymously.

Educational Needs

The second area identified from the literature review was the educational needs and abilities of the nurse giving the nurse led care. Rosen and Montford (2002) found that no standard training or assessment programme was available to support the nurses employed in walk-in centres. O'Connor (2002) found when reviewing practice nurses using the same criteria guidelines required for a general practitioner trainee, that the nurses understanding of pathology and pharmacology was far below the standard required by the trainee general practitioner. This supported the opinion of Duthrie *et al* (1998) in that doctors who undertake sigmoidoscopy were required to complete an accredited programme. Nurses undertaking the same procedure did not have an equivalent training.

Gidlow (1998) found the problem with urology nurse led care was the fact that lack of a nationally accredited training scheme for nurses working in urology clinics has resulted in protocols being implemented locally by lead nurses and Consultants. Another reason for the use of protocols developed on a local basis is that for the nurse to be protected under hospital Trust's vicarious liability cover, she would need to prove she had worked within recognised policies laid down by the hospital (Pennels 1998).

Kamm and Norton (2002) identify difficulties in preparing nurses to undertake new roles, as a lack of nurse led education to support the roles. This is in contrast to America where all nurses working in specialist roles will normally be educated to Masters level. (Scott 1998)

Disaro et *al* (1993) suggests that if nurses are undertaking a role previously performed by a doctor, the skill required to perform the role should be the same.

Before I began my role as the nurse seeing the patients in the nurse led cataract clinic I was taught medical history and trained to make a diagnosis of ophthalmic conditions using the slit lamp. An independent Ophthalmologist confirmed the accuracy of my observations, while using the slit lamp. My attendance at the Masters Practitioner Development course at Manchester Metropolitan University supported this. Wandsworth *etal* (2002) believes that such a course can provide the practitioner with the necessary skills to work more autonomously and expand roles using the best available evidence.

As part of the evaluation, the information I recorded in the patients' notes was reviewed to identify my current skills, and where additional education was required.

Evaluation of Services

The gold standard research method in service evaluation is the randomised control trial (Bonnell 1999). Hodgson (1995) expressed concern about nurses undertaking evaluation projects was that they risked becoming the agents of health care economists. Bonnell (1999) produces the counter argument that if nurses do not take the lead in evaluating practice, other health care groups will lead evaluation of nursing. This leads to the risk of nursing practice becoming less autonomous.

The difficulty in using this method of evaluation for the Nurse Led Fast track

Cataract clinic was that no equivalent service was in place to compare it with. The other methods used to evaluate nurse led care have been patient satisfaction in the service, Williams (2000) Jackson and Beun (2000) and Waterman *et al* (2002). This method of evaluation was rejected because patients' satisfaction studies have consistently shown patients are satisfied with the care they receive (Stanizeweski and Laila 1999). This fact is surprising in that no health care professional would claim to provide perfect care all of the time (Baker and Whitfield 1995).

The other method of evaluating nurse led care is comparing the nurse providing nurse led care with a doctor Connors *et al* 2002 and Pathmakum (2002). This method was not selected because nurses at Good Hope Hospital have always been involved in preparing patients for cataract surgery. The role was therefore not comparable with those undertaken by the doctor.

Billings (2000) believes that advantages can be derived from combining summative evaluation with another approach to provide a portfolio of evidence. Means and Smith (1988) found this method successful in providing information on the complexities in change management. Gerrish (2001) identified that when using a pluralistic model for evaluation the researcher will start from the premise that the success of the innovation

will be situational and outcomes viewed differently in the perspectives of the other team members involved. Duxbury (2002) found this to be the case when evaluating methods to manage patient aggression, from the perception of the staff and the patients involved. She suggests this had positive results in identifying methods of controlling patient aggression that were acceptable to both staff and patients.

Methods of Evaluation

The two methods of evaluation decided, were the use of patients case notes to identify the efficacy of the safety effectiveness of the service and secondly the use of a questionnaire to review the impact of the Nurse Led Cataract Service on other team members - a questionnaire was selected for this purpose.

The aims of the study are therefore identified as:

- 1 To consider the effectiveness and safety of the service
- 2 Assess the impact of the service on the team

Strategy and plan for review and analysis

- Methods of data collection
- Sample size and sampling methods
- Data analysis and report writing

Methods of data collection

From the literature search, patient's notes were identified as a source of collecting data on the effectiveness of nurse led care (Waterman 2002) (Williams 2000) and (Marsden 2000). There are ethical issues in using patient's notes as it could be argued that the patient's notes are only constructed for the interactions between the patient and health care professional. To use the patient's notes, ethical approval was obtained from the ethics committee in line with Research Governance Guidelines (DOH 2002).

I then used Maxwell Model (1984) as a tool for the evaluation of the information obtained from the patient's notes and the staff questionnaire this is detailed below;

To demonstrate Relevance

- Whether Patients were appropriately screened at the nurse led visit and had a reduction in clinic visits from the traditional three/four to two.
- Whether concurrent conditions that would have delayed surgery were correctly identified and appropriately referred.
- Whether appropriate patients were fast tracked.
- Whether the system helped to implement the document "Action on Cataracts" (NHS Executive 2000) by preparing more patients for surgery.
- Whether time was freed up in consultant clinics to allow more patients to be seen.
- Whether an offer of early surgery could be made to patients with severe visual impairment.

To demonstrate Acceptability

• Whether the service was acceptable to all grades of staff

To demonstrate Efficiency

- Whether the patient's visits have been reduced from three/four to two
- Whether the staff believed that it provided a more efficient service for the patients.

To demonstrate Effectiveness

• Whether any patients seen in the nurse led fast track cataract clinic had surgery cancelled, due to ophthalmic or medical conditions that had not been detected by the Clinical Nurse Specialist.

Summary of Information and its source required for evaluation of Nurse Led Fast

Track Cataract Clinic

<u>Relevance</u>

Patients' case notes Appropriate patients referred to Nurse Led Fast Track Cataract Clinic Patients correctly screened for ophthalmic and medical conditions that would prevent surgery were correctly detected and appropriately referred Reduction in number of clinic visits from four to three/two

Acceptability

Staff Questionnaire

Staff workload

Ways in which service can be improved

Efficient

Information from patient's case notes and staff questionnaire Patients could be given date for surgery at the consultants visit No condition that would prevent surgery was missed at the nurse led

Effective

Information from patient's notes

Patient cancellation due to pre existing condition

Method of Quantitive Data Collection

The study was done over a two-month period. When patients attended for a routine outpatient appointment, they were given information about the study and advised that if they wished to participate. They should return a signed consent form, in a stamped addressed envelope. On return of the consent form their notes were included in the study.

Population and Sample Size for Quantitive data collection

If all the patients who attend for the outpatient visit had agreed to take part in the study then one hundred and thirty sets of notes would be available for review. Øvretviet (2002) suggests that only 64% would return the consent form. The total number of patients who completed the consent forms was eighty this was 62% of all the patients eligible.

Qualitative data Questionnaire

Cormack (1996) suggests that the questionnaire needs to be developed in five stages. The first stage is that the information required be the focus of the study. The second stage to decide on the most appropriate means of obtaining the information required. The third step is to identify questions that need to be asked and the kind of responses, which might be appropriate. The forth step, to consider how the questions should be worded. The fifth step is to look at the layout of the questionnaire and the sequencing of the questions.

The questions asked were;

1 What is your opinion of the Nurse Led Fast Track Cataract Service?

2 In your opinion what effect has the Nurse Led Fast Track Cataract Service had on the patients' experience much improved? Improved – no difference –worse much worse

Can you explain why you consider the service has had this effect?

Has the service had an impact on your current workload?
 Yes/No

If yes could you give an example of what the effect has been?

4 There have been no written complaints about the service. Do you remember any positive or negative comments about the service from patients?

If yes can you record these below?

Positive

Negative

5 Are there any ways in which the service can be improved?

If you answered yes can you explain how?

Population and Sample size

Twenty-five members of staff were involved in the service and they were all invited to complete the questionnaire:

The group included clerical staff, secretaries, nursing staff, orthoptists, technical staff, clinical assistants, registrars and consultants. Each group was asked to identify their job title on the questionnaire.

<u>Bias</u>

It is acknowledged that a researcher collecting information within their own area may be biased, interpreting findings to support the study (Bonner and Tolhurst 2002). In an endeavour to prevent this, patient population was selected on the basis of an outpatient clinic visit in an eight-week period. The researcher was not able to affect this in an endeavour to remove the possibility of bias in interpretation of data.

The data details were given to the Hospital Clinical Governance department to confirm the accuracy of the data and confirm my findings on the twelve criteria selected for evaluation.

Analysis of Quantitative Data

The data obtained from the evaluation of the patients' notes was collected onto an excel data sheet. Crighton (2001) suggests the benefits of using this method as a good way to organise data, as this method has the ability to produce a graphic display. To collect the data patients were given a number when entered on the spreadsheet. The twelve details of information required from the sheet were scored separately. These are summarised below:

Appropriate Referral	Ophthalmic Condition recognised by nurse	Ophthalmic Condition Not recognised nurse	Medical Condition recognised by nurse	Medical Condition not recognised by nurse	Listed surgery	for
Number of visits	Social Situation	High Priority	Low Priority	Sex	Age	

Analysis of Qualitative Data

Clifford (1997) identifies the benefits of using a questionnaire for this method of data analysis, is that the number of words generated by the respondents will be limited, and therefore relatively easy to analyse on a word-by-word basis. Pope *et al* (2000) views qualitative data analysis as a labour intensive activity, that requires skill to complete. With this information in mind, support at this stage was obtained from the academic supervisor to ensure the analysis did not become anecdotal and descriptive (Pope *et al* 2000)

Results of Staff Questionnaire

The information regarding the staff questionnaire was given to all the staff, working in Ophthalmic Outpatients at Good Hope Hospital. This was done at the clinical audit meeting, where a presentation regarding the project was given and subsequently then supported by a letter given to each member of staff.

Ophthalmic staff members were invited to complete the questionnaire and return it to the box provided in the coffee lounge by July 6th 2003. Twenty-seven questionnaires were sent out and nineteen were returned, this a response 68% of questionnaires returned

The responses to the questionnaire are discussed in further detail below:

Table of Staff Involved in Questionnaire

The ophthalmic staff who completed the questionnaire;

3 Consultants, 3 Doctors, 3 Nurses, 2 Clinic Clerks, 2 Secretaries, 4 Orthoptists and 3 Opticians

. This in relation to the total staff in the department is reflected as

75% of Consultant staff 75% of Doctors 50% Nursing staff 100% of Clerical staff 50% of Secretarial staff 100% of Orthoptic staff 100% of Optometrists

The reasons for the lack of nursing and secretarial staff completing the questionnaire appeared due to holidays and sickness within these groups

1 What is your opinion of the Nurse Led Fast Track Cataract Service?

All the consultants identified the service as a marvellous system that provide superb care

The doctors felt that it was an excellent service that nurses should become involved with and the service should be expanded, to include LVA clinics, glaucoma (stable) clinics and post-op cataract clinics. They felt that reduced medical staff in the future meant it was important to enhance the role of nurses now, by giving them more opportunities to achieve more and improve their confidence.

All the nurses felt that it was a good idea, but could be improved, if patients were to be seen on the same day, by the Consultant. They felt that it had speeded up the cataract service for both the patients and staff involved.

All the secretaries stated that the service would be greatly enhanced if the patients were seen on the same day by the Consultant to reduce outpatient visits. They felt that the service slowed down the cataract service further because it generated too many additional clinic appointments.

The clinic clerks expressed no opinion about the service.

Of the opticians, one identified the service, as fine and the other made no comment. Out of the four Orthoptists, two made no comment. One said the idea was great but in reality, unless all services had a fast track allowance built-in to all clinics, it was another way of jumping the queue. The second, that the service offered the patient an earlier consultation than previously could be offered.

Phase 2



2 In your Opinion what effect has the Nurse Led Fast Cataract Service had on the patients' experience? And can you explain why.

The ophthalmic staff were asked to tick the relevant box; much improved, improved, worse, and much worse.

The Consultants believed that the service in their opinion was improved and much improved the patients' experience. This was because a better quality of care was provided; the patients had better and fuller explanations regarding cataract surgery and were able to give more informed consent. The clinic was able to sort out problems before the consultant clinic visit. The number of visits the patients required before cataract surgery was reduced and the efficiency of the cataract clinic was increased. All the doctors said the cataract service was improved because it provided the patients with an extra member of staff who was skilled at counselling.

Of the nurses who responded, two believed that the service was improved because the patients had an opportunity to discuss their eye condition on a one-to-one basis. The third believed the service given to patients to be worse, because the fast track clinic generated additional appointments. The nurses also believed that if the interval was

too long between the fast track appointment and the consultant appointment the patient became disappointed.

The secretaries also found that the fast track clinic created additional appointments. One commented that she thought the idea was to make the service as fast as possible for the patient. The other that the term fast track would lead the patient to expect to be seen by the Consultant on the same day.

As regards the clinic clerks, one felt the service improved the care for patients because problems could be picked up at an earlier stage.

The opticians felt unable to comment on the service, as they had not been employed in the department before the service had been implented.

The Orthoptists; Two felt unable to comment about the service, as they had no direct contact with patients who had been through the system. Of the other two, one said that patients she saw in the post-operative period were unaware they had been through a different system and the other, said that patients were generally very happy with the thorough examination of their problems and appeared very happy with their visit.

3 Has the service had an impact on your current workload? If yes could you give an example of what this effect has been?

Phase 2



All the Consultants found it reduced their workload in the cataract clinic and allowed for improved quality and throughput and that it speeded up waiting time for surgery because difficult biometries were available for review at the consultant visit and something could be done about confirmation of the biometry measurements before the operation date.

All the doctors found they could see an increased number of complicated cases because the low risk cases were correctly identified at the fast track cataract clinic.

Of the nurses, three identified the workload reduced in the consultant led clinic. One suggested it increased the number of patients requiring additional pre-operative assessment.

The secretaries found no increase in workload except if blood tests were requested in the fast track clinic, as these would need to be made available for the consultant visit. One believed that the clinic had increased the workload of the clinic clerks.

The clinic clerks identified that their clerical workload had increased with the introduction of the nurse led service.
One Optometrist found no increase in workload, the other felt, that patients referred for low vision assessment were more appropriately referred and therefore easier to manage.

Of the Orthoptic staff; three found no changes to workload, one found that it increased the waiting time for other services such as low vision assessment and that this impacted on other clinics.

4. There have been no written complaints about the service. Do you remember any positive or negative comments about the service from patients? If yes can you record these below?



The Consultants identified no negative comments about the service; one commented that many patients had commented on how kind the nurse had been who was involved with the service. The other comment was how helpful the information had been for the patients to make a decision about surgery.

The doctors commented the patients were very positive about the service and had appreciated the time the nurse had been able to spend with them.

The negative comment about the service was that those patients with non-cataract problems did not have the advantage of a similar service.

The nurses had not received any positive comments about the service. The negative comments were that the patients were unsure whom they were seeing. That as no definite diagnosis was made at the fast-track clinic visit, this could make the patients very disappointed. because they had presumed that a date for surgery would be given at the fast track visit.

The secretaries identified the patients found the nurse conducting the clinics to be helpful and that they appreciated a point of contact for queries before and after surgery.

The other negative comments were that some patients believed they should have one visit for assessment and have surgery performed at the next visit. Some general practitioners also questioned the secretaries as to why a fast track clinic visit did not include a Consultant visit.

The clinic clerks found one positive thing about the clinic was that when patients came to the fast track clinic and the clinical nurse specialist was concerned about their vision. They were able to give the patient an urgent appointment to see consultant. The negative comments were about the patients not seeing the consultant on the same day.

The Opticians had no comment to make about the service.

The Orthoptists had no positive or negative comments to make about the service.

5 Are there any ways in which the service can be improved?

Phase 2



The Consultants believed the service could be improved by the nurses not duplicating investigations that had already been performed at the fast track clinic visit, when the patients attended for the Consultant's appointment. They also felt no consultants name should be quoted at the fast track visit, in case the patient was not seen by named Consultant at the clinic visit. All patients should receive clear information about the fast track clinic service and that identified the need for future medical input. The final comment from the Consultants was that it was a superb initiative that they fully supported

The doctors felt that the service was excellent, but that it should also include a post operative clinic which could advise patients on drop use and select patients for second eye surgery.

The nurses felt the service would be improved if the patients were able to see the Consultant on the same day as the fast track visit.

The secretary's felt that all should be done at the same visit. One secretary suggested a way to do this would be to hold one clinic per month where the Clinical Nurse Specialist worked together with the Consultant and just saw the cataract patients.

The clinic clerks felt the service would be improved if the name was changed to Nurse Led Clinic and the patients did not have to wait too long for a clinic appointment. Optometrists; one had no comment about the service, the other suggested that the service might benefit if patients had a low vision assessment at the clinic visit if appropriate.

Orthoptists; two had no further comments about the service, one other suggested that there needed to be better planning and better resources across the services that may be utilised, other than nursing services.

Her colleague also identified this comment; and the need for different professions, e.g. Nurses Orthoptists Optometrist to diversify has now been recognised nationally. However it should be recognised that if other professions are to take on a medical role, then additional support will be needed. In the example of the Nurse Led Fast Track Cataract Service was extra clerical support funded /provided for clinics.

Quantitive Analysis of the Patients Notes

This was started on 30 June 2003 and would be completed on Monday 15 September 2003. The reason this is over ten calendar weeks and not eight, as in the research protocol, is that the researcher had two weeks holiday in this period and was not available to select the patients eligible for the study during that period. For patients to be eligible for the study they needed to have attended a Nurse Led Fast Track Cataract Clinic before their Consultant's appointment. They then agreed to take part by returning a completed consent form. The data from the notes were given to the hospital clinical governance team together with the patient's unit number to ensure the accuracy of the findings.

A total of eighty consent forms were returned. The sample consisted of forty-two females and thirty-eight males. The median age was seventy-five years with a mean of 73.5 years.

Evaluation

The data obtained from the patients notes and the qualitative data obtained from the questionnaire will be intergrated here in to the format described on page fourteen using Maxwell's model (1984) to demonstrate the effectiveness of the change to the service.

1. Relevance

Is the service relevant and were appropriate patients referred to Nurse Led Fast Track Cataract Clinic?

	Frequency	Percent	Cum. Percent
Yes	77	96.3%	96.3%
No	3	3.7%	100.0%
Total	80	100.0%	100.0%

The optometrist via the general practitioner had inappropriately referred three patients. One patient had severe infective blepharitis, the other very narrowed anterior angles in the anterior chamber. This patient required urgent Yttrium- aluminium garnet drainage (YAG) laser to treat this. The third had had a retinal vein occlusion, which was the reason for her reduced vision

Ophthalmic condition recognised by CNS?

	Frequency	Percent	Cum. Percent
Yes	77	96.3%	96.3%
No	3	3.7%	100.0%
	80	100.0%	100.0%

The anterior segment examination was accurate in all patients who agreed to take part in the study. The consultant who reviewed the patients at the consultant visit confirmed this. Three patients ophthalmic conditions were not recognised due to the inability of the clinical nurse specialist dilate patients pupil's .Two patients were found, when their pupils were dilated to have cupped optic discs. These patients both were commenced on glaucoma therapy prior to cataract surgery. The third patient had a central retinal vein occlusion, identified when her pupil was dilated.

Medical Condition recognised by CNS?

	Frequency	Percent	Cum. Percent
Yes	80	100%	100%
No	0	0	100%
Total	80	100%	100%

Potential medical conditions such as undiagnosed diabetes and untreated MRSA

infections were recognised by the Clinical Nurse Specialist at the fast track clinic

visit.

Listed For surgery

	Frequency	Percent	Cum. Percent
Yes	76	95%	95%
No	4	5%	100%
Total	80		

The patients who were not listed for surgery at the consultant visit were undecided about surgery and happy with their current vision. One patient had had a central retinal vein occlusion. The other patient had narrowed anterior angles that required YAG laser.

Number of visits Pre surgery

Two visits

	Frequency	Percent	Cum. Percent
Yes	64	77.5%	77.5%
No	18	22.5%	100%
Total	80	100%	100%

77.5% of the patients had two visits a reduction from three to four visits.

Three visits

	Frequency	Percent	Cum Percent
	14	20%	20%
Total	80	100%	100%

The reasons for three visits

- Two patients had raised intraocular pressure that required medication. They returned for an additional monitoring visit prior to surgery.
- Three patients decided they would prefer to have cataract surgery under general anaesthetic. The additional visit was required for review by the senior house officer.
- One required an ECG for review by the senior house officer prior to cataract surgery.
- One was identified as having a raised blood sugar at the fast track visit. This patient needed review by the senior house officer, to ensure the diabetic control had improved prior to cataract surgery.
- One was undecided about surgery and attended for an additional visit to discuss surgery before listing.

- Two had conjunctivitis that required treatment before the biometry could be performed.
- Two wore soft contact lens that required removal two weeks prior to biometry.
- Two had unexplained differences in axial lengths when biometry was performed that required confirming with an additional visit prior to surgery.

Four visits

	Frequency	Percent	Cum Percent
	1	1.3%	1.3%
Total	80	100%	100%

This patient had very varying biometry measurements this meant that additional visits were required to ensure the best scans were available prior to surgery.

Five Visits

	Frequency	Percent	Cum. Percent
	1	1.3%	1.3%
Total	80	100%	100%

This patient was identified as MRSA positive and needed treatment to clear the infection prior to cataract surgery. The reason for the additional visits was that the communication between the department and the general practitioner was not effective. The patient returned twice without the results of swabs to confirm he was clear of infection and able to have cataract surgery.

Social situation

Only one patient in the group requested to stay in hospital overnight. This was because they were anxious about returning home alone after cataract surgery

Priority for Surgery

Frequency Percent Cum.

			Percent
Poor vision	10	8%	8%
Total	80	100%	100%

Ten patients were identified as having poor visual acuity which was affecting their life style. All these patients had their appointments with the Consultant prioritised, to allow them to have early dates for surgery.

Results from Staff Questionnaire and Patients Notes

The purpose of the using the Maxwell's model (1984), was to decide whether the service was relevant acceptable effective and efficient.

Is the Service Relevant?

In order that the fast track cataract clinic is relevant, patients who would benefit from cataract surgery need to be correctly referred by local Optometrists to General Practitioners, who would in turn refer them to Ophthalmic Consultants for cataract surgery. The information from the notes identified that 98% of the patients had been correctly referred for review of cataracts that required surgery. The second criteria for relevance is, to identify whether the Clinical Nurse Specialist has the educational skills to correctly screen patients for other ophthalmic problems that would prevent or

delay cataract surgery. The nurse was able to correctly identify anterior segment abnormalities in all the patients included in the study.

Three of the patients were found to have additional ocular pathology when examined with dilated pupils. This meant that 3.7% of the patients had not be correctly screened by the clinical nurse specialist, because of an inability of the nurse to perform fundal examination on dilated pupils at the fast track clinic visit The data was able to find the clinic relevant as 79% of the patients could be offered a date for surgery at the Consultants visit. The others could be offered an effective pathway that would enable them to have safe cataract surgery. Another measure of the relevance s of the clinic was whether it had the ability to identify patients whose visual impairment was having a significant impact on their lifestyle. This was then used as criteria for prioritising the Consultant appointment. The clinic identified this as a factor in ten of the patients who attended for a fast track appointment. All of these patients had accelerated clinic appointments arranged with the Consultant.

Is the service Efficient?

Whether it has increased or decreased the efficiency of the service provided:

The medical staff defined the service as efficient because the patients were adequately clerked and significant problems had been accurately detected and dealt with before the medical staff saw the patients. This supports the findings of Rushforth *et al* (2000) who found that nurses were able to take histories of patient's conditions with a high degree of accuracy. Marsden (2000) also identified that nurses were able to accurately triage patients when they contacted an ophthalmic accident department and refer them appropriately.

The staff, who defined the service as less efficient for the patients, identified that this was because no Consultant was present to see patients at the fast track clinic visit. Wilson *et al* (2002) also found this to be a limitation in nurse led services in general practice. The reason being when the patient saw the general practitioner he was able receive a complete package of care that included medication and further referral. Some of the general practitioners who took part in her study also believed patients would consider the doctor to be the more appropriate person to make the diagnosis, particularly when they believed the condition they had to be serious. Some general practitioners suggested that a consultation with the doctor carried more authority than seeing the nurse. The other comment made by the general practitioners was that the more elderly the patient the more uncomfortable they would be in seeing the nurse. This was because they used to the nurse acting on instructions from the doctor, rather than acting independently (Wilson *et al* 2002). This was supported by staff completing the questionnaire: They commented on the patient's disappointment that no definite diagnosis could be obtained at the nurse led fast track cataract visit.

The other reason the service was considered less efficient was a perception that the fast track clinic meant that the patients attended more appointments and investigations prior to surgery than before.

Horrocks *et al* (2002) found that nurses working in primary care who provided the first point of contact for patients also carried out more investigations. This was in contrast to doctors seeing a similar patient population. Preston Wright (2002) suggests that ordering additional investigations should not be regarded as a negative indication of the service provided. He believes that it is an indicator of the health care professional undertaking a more problem-solving role. Therefore reducing potential

for cancellation of surgery, because an underlying health problem has not been recognised.

The final two criteria of efficiency were whether the patients could be given a date for surgery at the consultants visit. That no condition that would prevent surgery was missed at the nurse led visit. 100% of the patients were able to be offered a date for surgery at the consultant visit. The clinical nurse specialist did not recognise 3 patients 3.7% who had ophthalmic conditions that needed treatment prior to surgery.

Is the service acceptable?

The service appeared to be unanimously acceptable to all grades of medical staff. The reasons for this were that the patients had more information about the surgery and could give informed consent. Patients who had other health problems were detected before they attended for the Consultant visit. For example patients whose biometry measurements at the fast track clinic were identified as unusual and requiring further investigation.

The questionnaire found both the medical and nursing staff found the nurse led clinic acceptable because of had reduced workload in the consultant's clinic.

The secretaries found no change to their workload. The clinic clerks were the only ones who reported an increase in workload. This was due to the fact that additional clerical time was required to prepare patients notes for the fast track clinic visit. The Orthoptist who completed the study believed that the whole outpatient team should be involved in role expansion.

Ways in which the service can be improved

The Orthoptists as a professional group are defined as "Allied Health Professionals" (2000). The benefits of Orthoptists working within a team to provide care for patients undergoing cataract surgery was found by Fisher (2002) to be an efficient method of improving services using existing resources within the ophthalmic outpatient's team. The reason for this was that the Orthoptists were skilled in their own roles. They could also be trained in other roles such as biometry. This meant that when additional biometries were required before surgery, they could be performed, thus preventing the surgery being cancelled.

Is the service effective?

The clinic was found to be efficient from the patients case notes in that no patient had surgery cancelled due to a previously undiagnosed health problem. The Consultant was able to give the patient a date for surgery when they attended for the consultant visit.

Sixty-four patients could be offered surgery at the Consultant visit. This meant that the patients only required two visits prior to cataract surgery. Of the rest of the patients fourteen required three visits, one required four visits, and one five visits. Eight of the return visits were regarding problems with recording of biometry measurements. Biometry is an essential step prior to cataract surgery.

The purpose of the biometry is to enable the selection of the correct intraocular lens implant to meet the refractive needs of an individual patient (Royal College of Ophthalmologists Guidelines for Biometry 2001). Two of the patients in the group had a difference in axial lengths between the two eyes that was not explained by previous surgery or refractive error. Hoffer (1999) suggests that in this situation the biometry should be repeated to ensure the accuracy of the results.

Two of the patients wore soft contact lens. Byrne (1995) recommends, in order to ensure that the corneal readings are accurate at the biometry measurement, the contact lens needs to be removed for two weeks prior to the biometry being performed. The reason for this is that the corneal diameter measurement is used to calculate the intraocular lens measurement. Hoffer (1999) found that more accurate corneal diameters could be obtained if the soft contact lens has been removed for at least this period.

An inaccurate lens prescription can result in a poor visual outcome for the patient. To improve the vision additional surgery may then be required.

Two patients had developed conjunctivitis prior to their clinic appointment. Conjunctivitis is a common condition of the eye. There is diffuse conjunctival injection and discharge that is often profuse enough to close the lashes together (Shah *et al* 1999). The implication of this prior to biometry measurement is that it is not safe to perform measurements on already infected eyes. Biometry is performed by direct contact with the cornea, which can increase the risk of corneal abrasion that may introduce secondary infection (Byrne 1995).

The treatment for conjunctivitis if it's considered to be a bacterial infection is a course of topical antibiotics with instructions on cleaning the eyelids. Also it is important not to share towels and face flannels with others, to limit the risk of cross infection (Shah *et al* 1999). After the treatment, these patients had biometry performed when the Ophthalmologist examined their eyes and found them to be clear of infection.

Three of the patients, all of whom were in the fifty two to fifty-five year age group, decided that they would prefer a general anaesethic when they had their cataracts

removed. This was instead of having a local anaesethic, which the other patients had decided as a method of anaesthesia prior to surgery.

The surgery under general anaesthestic was then performed at the Birmingham and Midland Eye Centre. The protocol for patients under going surgery under general anaesethic at the Eye Centre requires that a physical assessment is performed by the senior house officer to ensure the patient is fit for surgery (BMEC 2001).

Further investigations, such as bloods taken for urea and electrolytes and chest X-ray are carried out, as indicated by the patient's general condition.

One patient at the fast track visit was identified as requiring an ECG if listed for surgery at the Birmingham and Midland Eye Centre. This was because he had a history a myocardial infarction in the previous six months and the local hospital guidelines require this (BMEC 2001).

Two patients were found to have cupped optic discs when reviewed with dilated pupils. Cupped discs that are seen in the absence of statistically raised intraocular pressure are indicative of normal low-tension glaucoma (Shah *et al* 1999). The treatment for this condition is to maintain the introcular pressure at a level that causes no further damage to the optic nerve (Kanski 1999). Both patients were therefore commenced on eye drops, namely Timoptol.

One patient was found to have undiagnosed diabetes at the nurse led clinic visit and he was referred back to his General Practitioner for treatment prior to listing for surgery. Thereafter he reviewed by the senior house officer in the pre-assessment clinic to ensure his blood sugar control had improved (Royal College of Ophthalmology 2001).

The last patient requiring three visits needed an additional visit to further discuss the surgery and its implications, with the surgeon prior to listing

Four Visits

This patient had inconsistent readings of biometry when it was performed on three different occasions by three different biometrists. He was informed of the problems with gaining accurate measurements of the intraocular lens prior to surgery. He was also told that the implication of this was that it might adversely affect his outcome post cataract surgery (Royal College of Ophthalmologists Guidelines 2001).

Five Visits

This patient when he attended for the fast track cataract clinic visit reported that he had previously had an Methacillin Resistant Staphylococcus Aureous (MRSA) infection in his foot that had resulted in a below knee amputation.

MRSA is the most challenging bacterial infection that currently affects patients in hospitals and communities (DOH 2002). The emergence of widespread organism resistance to antibiotics is partially a result of the global use of antibiotics in the health care sector (DOH 2002). Some of the diseases that it can cause are Osteomyelitis Endocarditis, Pneumonia and Bactreamia (Greenwood 2000). The fact this patient had suffered from this infection in the past put him in an at risk group who are treated as potential carriers of the organism (Duckworth *et al* 1998). The hospital policy (Good Hope Hospital Trust 2003) is to take swabs from nose, groin and axilla regions. When the laboratory confirmed the results as positive to MRSA the patient was refereed back to the General Practitioner for treatment until the clear wound swabs were obtained. The reasons for his additional visits were a result of communication difficulties with the general practice and clinic regarding the status of his swabs. The patient went on to have cataract surgery at a later date.

Discussion

Milburn *et al* (1995) identified a difficulty when using a pluralistic method of evaluation in that the people involved in the process will utilise their professional judgement of the evaluation being researched. This was identified in the questionnaire by how homogenous the response was from each of the health care groups involved in completing the questionnaire.

The medical team identified the service as a success because they felt that it allowed them to provide the patients with a better quality service. It could be argued that they perceived this because the model used to improve patient throughput relied heavily on the medical model of care. They were able to recognise and relate to this and use this as a measure to identify the success of the evaluation. The second reason for the success of the service from the medical staff perception was the fact that potential problems such as undiagnosed diabetes and unusual biometry had been identified. They perceived that the patient was better able to give informed consent.

The consultant and doctors support for the services was in contrast to the clerical, secretarial and nursing team, who felt that the nurse led clinic was not as successful as it might have been.

The most consistent theme from the nursing, clerical and secretarial staff was the fact that because no consultant was present at the fast track visit the patient was disappointed. The first reason was that the patients had presumed from the appointment letter sent that a fast track clinic visit would mean one visit before surgery. The second was that they had expected a definite diagnosis about their ophthalmic condition at the clinic visit.

When I saw the patient at the fast track appointment, I explained that although I was able to examine the anterior segment of their eye, I was not able to confirm that the blurring of vision was not being caused by a retinal condition, such as macular degeneration and this would only be confirmed when the pupils were dilated at the consultant visit.

The other limitation identified by the secretarial and nursing staff to the service was the fact that the nurse involved in the clinic appeared to be creating additional clinic appointments for the patients to attend before surgery. The advantage of using a pluralistic evaluation method was the ability to use quantitative data to look at this in greater detail. The age range of patients requiring additional appointments was younger than the mean age of seventy-five years; three patients requiring a third visit had decided upon general anaesthetic. All three patients were under the age of sixty.

The other reasons patients attended for additional appointments were all evidence based and in line with current guidelines to ensure good practice prior to cataract surgery (Royal College of Ophthalmologists Guidelines Biometry 2001) & (Royal College of Ophthalmologists Guidelines Cataract Surgery 2000) increasing the chance of a good visual outcome.

The perception by other team members of a nurse led service increasing workload illustrates an observation made by Soothill *et al* (1995) that to the casual observer nursing is not a skilled job. He suggests that the skill of nursing is its ability to define what needs to be done for the patient at that time. A member of the clerical staff was able to identify that patients who attended the nurse led clinic and were found to have problems that required early intervention were given an accelerated consultant appointment

The other issue that was identified from the questionnaire was that the Orthoptists believed that they should also have a greater involvement in the development of the service.

Summary of Evaluation

The evaluation was able to confirm with the tool selected namely Maxwell Model (1984) that improved quality of care was improved by the introduction of nurse led service. It was also able to identify the need to look at alternative referral methods to the hospital clinic. It suggested ways to reduce clinic visits by pre selecting patients for appointments with the clinical nurse specialist.

When the staff were asked for opinions on the service it revealed that changing one clinic could increase the workload of the clerical staff. That this should be considered as a funding issue when clinics are established.

The other information from staff identified the need for a multidisciplinary approach when introducing new services.

Data collection found problems with consenting of patients to gain access to their notes .The information sent out to inform patients about the nurse led service was identified by the health care professionals as confusing and in some cases creating disappointments for the patients attending the clinic.

Developments for Future Practice Identified from the Evaluation

The following topics were identified for future development from the questionnaires and patients notes:

- Direct referral of patients from Optometrists to nurse led clinics
- Consultant and clinical nurse specialist to work together in the cataract clinic to see the patient on the same day

- Consideration given to the of selection patients for the fast track nurse led cataract clinic using selected criteria
- Providing training for other health care professionals to support the fast track clinical nurse specialist to perform fundal examination.
- Patient information regarding the purpose of the clinic needed to be more easily understandable. Development of a consent form for all new patients to get permission to use notes for audit purposes

• Increased training for the clinical nurse specialist to perform fundal examination Patients when sent for assessment for cataract surgery require health screening before the procedure can be carried One solution would be for the optometrist to after diagnosing cataracts to refer directly to a nurse led clinic. Alternatively for the clinical nurse specialist and Optometrist could work together in the community to prepare patients for cataract surgery before referral to the hospital consultant.

This model supports the NHS plan (2000), which identifies a commitment to improve links between primary and secondary care that can impact on patients waiting time for surgery. It also supports the government document National Service Framework for Older People (2001). This document has a commitment to ensure older people receive better and quicker care. It is recognised that poor vision can contribute to increased incidence of falls in the elderly (Grey *et al* 1999).

The preferred method suggested by the team would be that the Clinical Nurse Specialist and the Consultant saw the patient on the same day.

This model of care delivery would support the model recommendations of the Modernisation Pathway (2003). The patient would be seen by the optometrist and after a diagnosis had been made would discus the implications of surgery.

If the patient wished to proceed, the optometrist would then make outpatients appointment for the patient to see the consultant. Using "The NHS General Ophthalmic Service – Direct Referral to Hospital Cataract Services". A copy of this referral would also be sent to the patient's general practitioner to alert the practice to the fact that the hospital would require information regarding the patient's health status and current medication for the consultant's visit.

A possible disadvantage of adopting this method is that it would reduce the patient's contact with the health care professional. Cox and Wilson (2003) Miles *et al* (2003) both found that patients did appreciate the additional contact time they had when nurse led clinics were established

The additional contact time did have benefits for the patients who after hearing about anaesthetic options decided to opt for general anaesthesia. The service to date has received no written or verbal complaints regarding the quality of the service from the patients. Quite the reverse, in fact the patients who have written to the department have praised the fact they had been given a quality and individual service.

The consultants who performed the surgery also believed that the patient benefited from additional contact time with a nurse led service. One reason was that they had some one they could contact directly if they required further information regarding the surgery.

The additional visits for patients were found to be for undiagnosed health/ophthalmic problems anaesthetic related or due to difficulties with biometry measurements suggested criteria for nurse led clinic prior to consultant visit

- Poor vision or no vision in one eye.
- Inadequate health information on referral letter or known systemic health problems

 High hypermetropia or myopia both these conditions care make biometry less accurate and require repeated measurements (Royal College of Ophthalmology Guidelines for Biometry 2000).

Consideration should given to taken training other health care professionals namely the Optometrists and Orthoptists to perform expanded roles within the cataract clinic Staff who completed the questionnaire believed it was the letter sent to the patients that misled them about the service. For example it was clear from comments made by patients to staff that they had expected the consultant would be present at the clinic visit. The fact that all the patients were required to complete consent form before their case notes could be used for the study created additional inconvenience for them. A future development will to create a patient forum to review documentation and discuss the creation of a consent form that can be completed by all new patients. One training need for the Clinical Nurse Specialist identified by the evaluation was an inability to perform fundal examination. Training sessions have been organised to address this. Another potential development would be for the clinical nurse specialist to dilate patient's pupils at the fast track clinic visit

Limitations of the Evaluation

One limitation of the evaluation was the fact that no equivalent service was available to compare with to identify a "gold standard" of service (Øveretviet 2002). Another potential limitation was the sample selected to provide information about the fast track cataract service described as a purposive population (Naido and Wills 1994). Morse (1991) believes that the advantage of this sample is they will have knowledge of the evaluation by their involvement. The disadvantage described by Milburn *et al* (1995) is that health care professionals involved in this method of evaluation will only concentrate on the area that will affect them most in the evaluation under review, rather than the whole system. The advantage of asking all of them was that when the information was put together, it had the ability to provide a composite picture of the whole service

The fact that before patient's notes could be used in the study they needed to have completed consent form .may have affected the data collection Moore and Savage (2002) believe that many patients having to sign a form will worry about the implications of this. When I discussed the need with the patient to read the information about the study and then complete the form if they agreed to be included in the study, they were surprised that it was necessary for me to obtain permission to look at information I collected myself.

The condition that they had to take home the consent form and return it in the stamped addressed envelope provided may have also unintentionally excluded those who were housebound and unable to return this information. The other possibility is that they forgot to return the consent form because the episode of care was over. The second possibility was fact that asking them to return the consent was not convenient for them at that time.

It is hard to predict whether this biased the study. I had no permission to review the notes of the patients who excluded themselves from the study by not returning the consent form.

A possible solution to this might be to inform all new patients that details from their notes would be used anonymously for audit purposes at any time during their treatment in the department. If they were not happy for this to happen then they could sign a disclaimer to prevent this.

A final potential limitation of the evaluation was that I was working as a member of the department team when carrying out the evaluation. Bonner and Tolhurst (2002) describe this position as the researcher being an "insider" in the research process. The advantages of this was that I was in a position to gather data because I was familiar with the routines of the department.

The limitation of this familiarity can be the researcher becomes so enmeshed in the unit environment, that they can begin to lose their research perspective. When reading the comments made by the staff on the limitations of the service I found it was sometimes difficult not to attempt to challenge negative perceptions.

In an endeavour to prevent this, I had to ensure that, information collected from patient's notes, be reviewed by the Trust's clinical governance department, to confirm its accuracy. I also had support from my academic supervisor.

Another disadvantage occurred when the staff completed the questionnaires they identified personality traits about myself that they might not have done had I not been familiar to them.

Difficulties Identified during the Evaluation

One difficulty was obtaining ethical approval for the study. A reason for this was the fact that I, as a researcher, had very limited knowledge of applying for ethical approval. This meant that the study was rejected firstly because the ethics committee felt that the patient and staff information was not presented in a format that was easily understandable to the staff and patients.

The second issue was that the questions asked in the questionnaire might not be robust enough to obtain the information I required.

It seemed that the Ethics Committee was trying to direct the focus of the research rather than concentrating on the ethical issues. This was in contrast to the Trust who viewed it as a project that would provide additional information on team working practices within the trust

The other difficulty was that when the questionnaire was given out to the staff half the nursing and secretarial staff, were away and unable to complete the questionnaire apparently due to sickness or annual leave. The outcome of this was the nursing staff had a limited input into the study and very useful data could well have been lost. Rose *et al* (1999). The other issue when reading the responses of the nurses involved in the study was that their opinions were similar and did not indicate any support for nurse led practice

This was in contrast to the Orthoptist and medical and staff who supported the role expansion.

Lessons learnt from the Evaluation

The establishment of the Nurse Led Fast Track Cataract Clinic was in response to the government document Action on Cataracts (NHS Executive 2000), which was a commitment to improve the patient's pathway prior to cataract surgery. The clinic proved successful in doing this because it was effectively able to reduce 76% of the patient's visits prior to cataract surgery to two visits. The reasons for additional visits were supported by evidence-based practice. The information obtained from the reasons for additional visits could then be used as a method to improve the service.

Asking the staff to comment on the service, provided useful information on how the team perceived nurse led care and its implications. It was able to illustrate that

although the views from team members were sometimes contradictory, their comments could be used as a method to provide a better service for the patients.

Conclusion

The evaluation of the nurse led clinic was able to provide further information on nurse led services. Using Maxwell's Model (1984) the service was found to be relevant. This was because patients were correctly screened for undiagnosed medical and ophthalmic conditions that would prevent surgery. It was able to reduce patients' visits prior to cataract surgery. Patients who attended the clinic with poor visual acuity were able to have appointments prioritised and be offered earlier dates for surgery. . The service was found to be efficient because the patients could be given a date for cataract surgery. It was found to be effective because the patients had a reduction in clinic visits.

The most significant limitation of the service was lack of medical involvement at the fast track clinic visit, left the patients frustrated because the visit was unable to provide them with a diagnosis.

The questionnaire illustrated that within a health care team, quality of care has different interpretations. The consultants and doctors who completed the study believed the quality of the service to be the ability it had to provide the patient with information about cataract surgery. The other members of the team found the service not to be effective because they perceived that quality of a service was defined by providing the patient with all the information with minimal patient contact. Both these views have merits and illustrate the complexity of health care provided within the National Health Service.

The other issues identified by the study are the fact that current documentation sent out to the patients about the clinics appeared confusing for the patients to understand. In an attempt to address this, help will be sought from a newly established patient focus group. They will be provided with draft copies of patient's letters to identify areas that require clarification.

The final issue was a lack of evidence of multidisciplinary working within the department when developing models for cataract care. This will be discussed in greater depth with the Orthoptists involved, to suggest methods to improve this. New research from this study would be a feasibility study into the establishment of the service at the same time as the Consultant clinic.

Developmental role of the Clinical Nurse Specialist

The study established the fact that a Clinical Nurse Specialist is able to correctly prioritise patients prior to cataract surgery. That to do this role without support from Consultant to complete the examination may not be the most acceptable method for the other team members and the patients. However, the study did suggest new possibilities of using resources in a more effective manner.

- The first would be to establish a joint appointment for the consultant and the clinical nurse specialist
- The patients seen in the sample been refereed by the optometrist. This meant that not all patients with poor vision would be referred. A method to address this may be the use of health centres to provide satellite assessment centres run by the optometrist and clinical nurse specialist. This method would allow general practitioner and district nurses to refer patients directly to a service when concerns about their vision were identified.
- Direct referrals from optometrist to nurse led clinics bypassing the general practitioners. The study indicates that health checks to screen a patient to ensure

fitness for cataract surgery are not normally performed before referral to the hospital consultants

- Development of consent form for all new patients to get permission to use the notes for audit and research purposes. Then the notes can be used without any further inconvenience to the patient
- Patient forum to read all current information sent out by the department to ensure it is readable and understandable

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Phase 2