Background

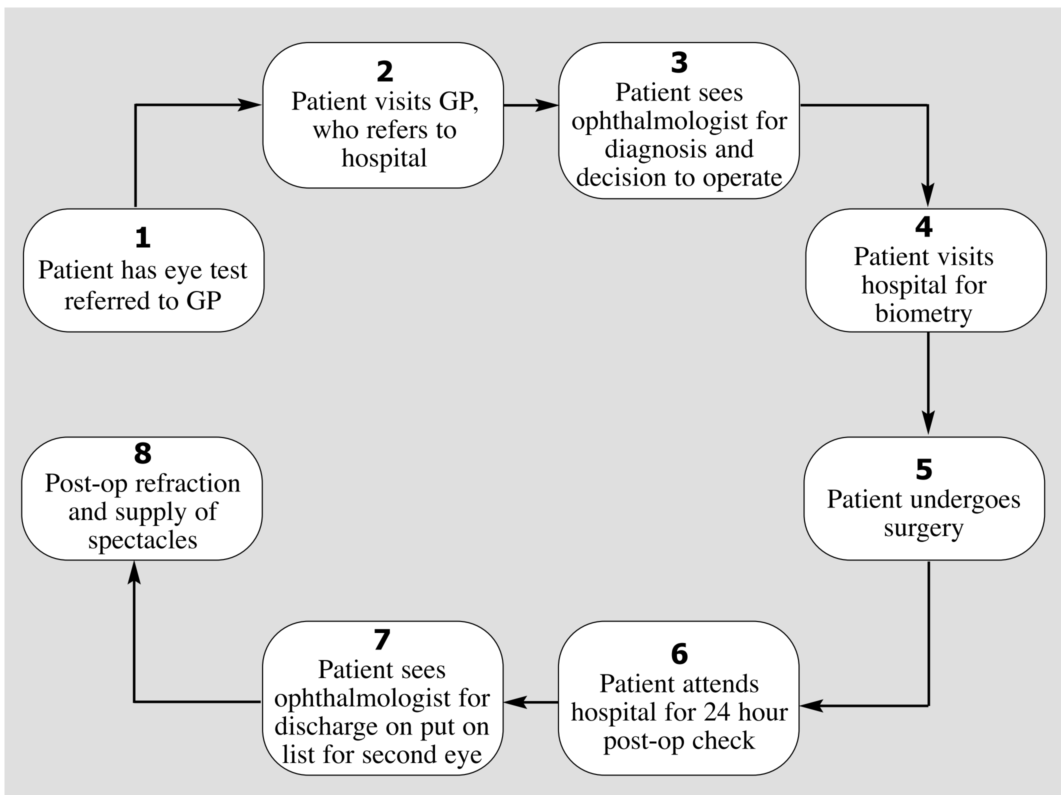
It is estimated that outpatient appointments in the Hospital Eye Service associated with cataract account for up to 30% of all appointments. The Department of Health, through its "Action on Cataracts- Good Practice Guidance" [1] has identified this as a priority for change. In the introduction it states:
Significantly improving access to treatment for people who need cataract surgery will bring about a real improvement in the lives of millions of mainly elderly people.

There is thought to be a backlog of 2.4 million people who would benefit from surgery, but operating facilities are working at only 62% of capacity, assuming five operations per session.[2] Some surgeons achieve a higher throughput than this, seven being common, which would indicate an under-utilisation of resources of 50%. On cataract only lists, with no teaching, and two scrub nurses it is possible to increase volume even further.

The Government has indicated that it wishes to see the number of cataract operations increase to 3200 per 100000 people over 65, which will require a 50% increase over the next few years, and there is also a commitment to reducing waiting times simultaneously.

These targets can be achieved only by substantially altering the patient pathway, to free up the time of surgeons from "mundane" outpatient consultations to undertake more surgery.

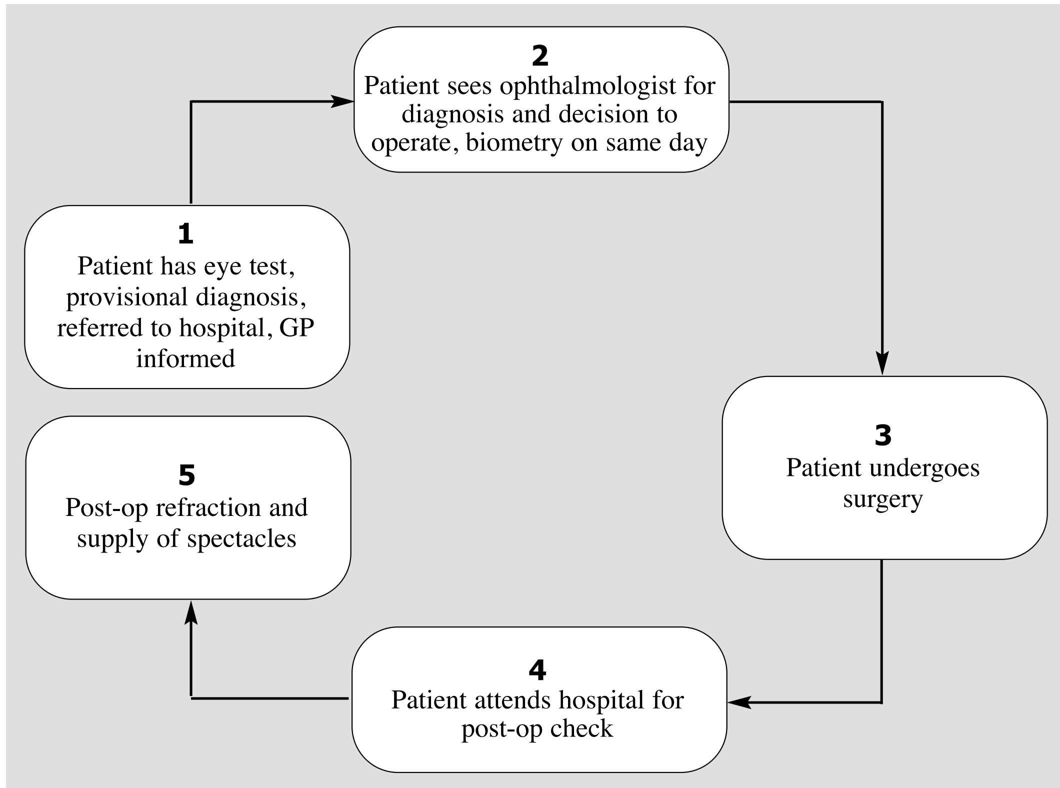
Currently the typical patient pathway through the system is:



1. Action on Cataracts Good Practice Guidance, NHS Executive, February 2000
2. The deficit in cataract surgery in England and Wales and the escalating problem of visual impairment: epidemiological modelling of the dynamics of cataract, Minassian DC, Reidy A, Farrow S, Vafidis G, Minassian A, *Br.J.Ophthalmol.*, 84, 1, p.4-8, January 2000.

Cataract background

The pathway suggested in Action For Cataracts is:



There are many other ways of streamlining this pathway, and each area needs to arrive at a method which best suits local conditions. Some areas have introduced "nurse led" schemes, but this requires the availability of trained ophthalmic nurses. "Optometry led" schemes similarly require the availability of community optometrists who wish, and have the capacity, to participate in these arrangements. As the government is committed to moving the focus of care from the secondary sector to the primary sector, optometrists are well placed to be the profession of choice to deliver the resources to assist in the delivery of this improvement in patient care.

Again "Action on Cataracts":
3.4.2 Referral guidelines
Many older people simply expect their eyesight to get worse as they get older. Some GPs and optometrists may not be aware of the latest practice in cataract treatment, and may still be advising patients to wait for the cataract to 'ripen' before referring them to hospital. Modern surgical techniques mean that this is no longer necessary: cataracts can be removed successfully at an earlier stage than was the case even a few years ago. Referral guidelines and standard referral information should be agreed locally between the hospital ophthalmology service, GPs and optometrists:

- *to ensure that patients are referred promptly to a hospital ophthalmologist if their eye condition requires this*
- *to assist the referrer in making this decision, by helping them to identify patients who would not benefit from hospital referral (or would not benefit until a later time).*

This will avoid unnecessary hospital referrals. Referrals should be based on:
- *reduced visual acuity,*
- *PLUS impairment of lifestyle,*
- *PLUS willingness to have surgery, if appropriate.*

Cataract background

Referrals should NOT be based simply on the presence of a cataract;
One aspect of "optometrist led" schemes which sometimes cause concern is that of consent. This can be designed into any system.

3.4.13 Consent for surgery
The patient needs to give consent to surgery, in case there is a subsequent complaint or legal action. It is important that there is a record that:
the benefits and risks of cataract surgery have been explained to the patient; and
the patient wants to have surgery.

The patient should have all necessary information well before the day of surgery, in order to make an informed decision to go ahead. The fact that the patient arrives for surgery is a confirmation that he/she wants to go ahead. If the surgeon has not met the patient previously, then he/she should take the opportunity to answer any final questions and reassure the patient.

The patient should sign the consent form before the day of surgery (at the pre-op assessment stage), or at an early stage on the day of surgery if this is the patient's first opportunity to do so. But this should only be the administrative task of completing the form: it would be quite inappropriate for the possible risks and benefits of surgery to be explained for the first time immediately before surgery.

The patient should sign it (though is under no obligation to do so) and the person who has explained the procedure and its risks and benefits should also sign it. Usually this will be the consultant who is carrying out the surgery. If the responsible consultant has delegated this task, then the person who has given the information and obtained the patient's consent should sign it. This might be a junior doctor, or another professional, such as a nurse, orthoptist or optometrist.

***GMC guidelines make it clear that this person does not have to be the person who will carry out the surgery, nor does it have to be someone who is capable of undertaking the procedure**.*

The person must, however, be someone:

- *who is familiar with cataracts and cataract surgery*
- *who has been trained to communicate effectively and to take patients' consent; and*
- *whose professional practice is audited.*

If he/she has delegated this task, the surgeon remains responsible for ensuring that the patient has been given appropriate information, and that informed consent to surgery has been obtained and documented.

This advice has been agreed with risk management consultants who advise the Clinical Negligence Scheme for Trusts.

[1] Action on Cataracts Good Practice Guidance, NHS Executive, February 2000
[2] The deficit in cataract surgery in England and Wales and the escalating problem of visual impairment: epidemiological modelling of the dynamics of cataract, Minassian DC, Reidy A, Farrow S, Vafidis G, Minassian A, *Br.J.Ophthalmol.*, 84, 1, p.4-8, January 2000.

Overview of possible schemes

1. Direct referral

a. At a basic level, the first change which can be made is to introduce direct referral from optometrist to hospital. The usual route, optometrist to GP to hospital has few, if any, advantages. It is rare for GPs to countermand the referral, and this needs to be looked at in terms of the "value added" to the referral if the patient sees the GP. In most areas both the GPs and the ophthalmologists are prepared to accept a system which allows optometrists to refer patients who need, and want, surgery to the hospital, with a copy letter going to the GP. The latter can then add any relevant medical information to this, and forward this on to the hospital. In this way the GP also keeps control of the financial aspects of the procedure. Protocols for referral should be defined locally, and agreed between the ophthalmologists, the optometrists and the GPs. This can be arranged through triangular meetings of the LOC, LMC and ophthalmologists, and may need to be further defined by the PCGs in the area, who may have preferences as to the hospital or consultant to be used. (There is a move to "department" rather than "consultant" referrals, but this will need to be agreed.)

The principle of direct referrals by optometrists is supported by the College of Optometrists, the Royal College of General Practitioners, the Royal College of Ophthalmologists, and the British Medical Association.

Quoting from Action on Cataracts:[1]
The lessons learned by one service which has piloted direct optometrist referrals (for all eye problems, not just for cataract) were that:

- *It was essential to offer community optometrists some initial training, in order to give them more confidence in deciding whether to refer the patient. To do this, they put on evening training sessions for local optometrists. Instead of giving the traditional lecture with slides, they invited some patients to come along. The optometrists assessed the patients' eye health and discussed their findings with ophthalmologists*

- *The referral paperwork needs to be simple, and the training for optometrists should emphasise the importance of completing all the administrative details such as the patient's address and GP. A standard referral form would help*

- *Optometrists may initially err on the side of caution. The hospital needs to be prepared for an initial increase in referrals, although this should fall away as optometrists are given feedback on the quality of their referrals.*

b. A refinement of this system can be used when optometrists are referring in to a "nurse led" scheme. In this type of situation specialist ophthalmic nurses see patients for the pre- and post-surgery examinations, working under the direct supervision of the ophthalmologist.

An example of direct referral forms for cataract, and for posterior capsular opacification (see below) is given. The first of these, used by The Norfolk and Norwich University Hospital is merely a purpose designed replacement for the GOS18, and local optometrists are not expected to undertake any additional clinical or administrative procedures. The second used by optometrists referring via GPs to Mid-Cheshire Hospitals does involve providing some additional information, and therefore a fee was agreed. If referral, direct or via the GP entails pre-assessment clinical procedures then an appropriate fee should be negotiated.

[1] Action on Cataracts Good Practice Guidance, NHS Executive, February 2000

2. Pre-surgery examinations

Accredited optometrists can undertake the pre-surgery examinations, and there are two distinct possibilities:

a. The optometrist works to a local protocol, and refers appropriate patients to the surgeon, who will then already be almost certain that surgery is required and desired. This short appointment with the consultant is therefore to confirm this, take informed consent, and undertake biometry in one visit. Patients may already have been allocated to a fast track appointment by the optometrist, if suitable, or to a slower track if appropriate (for example if there is co-morbidity). This scheme my include direct referral, or via the GP. (Always a "two-stop" system)

b. The optometrist works to a local protocol, and refers appropriate patients directly onto the surgical list. The surgeon will see the patient in advance of surgery to confirm that there are no unforeseen problems, biometry will be undertaken, informed consent obtained and surgery undertaken all in one visit. Patients unsuitable for fast-track would be seen in a more conventional system. There will have been contact with the patient, for example by telephone before this appointment. ("One-stop" or "two-stop" depending on the findings at the optometrist's examination.)

3. Post-operative examinations

Many consultants now agree that two check-ups after surgery are not necessary, especially when extra-capsular extraction by phako-emulsification on a day case basis is undertaken. Although there may complications following surgery in up to 23% of cases, [2] major problems are rare, and those that do occur tend to be within the surgery timescale itself, or immediately afterwards. The 24 hour check up is considered therefore to be superfluous by many surgeons. [3] The two hospital visits can be replaced with one examination by an accredited optometrist 7-14 days after surgery, plus ample information to the patient about the action to take in the event of some sequelae. Subject to a satisfactory outcome, the patient can be discharged back to the original optometrist for refraction.

Pre-& post-surgery examinations

In a full "optometry led" scheme, both the pre-surgery examination, and the post-surgery examination will be undertaken by optometrists. These therefore may combine the elements of 2 and 3 a or b above. Of course it is also possible to have pre- or post-surgery examinations without direct referral.

4. Posterior capsule opacification

This is another area where a referral via a GP does not add any value, and direct referral should be introduced. It would be entirely appropriate for the patient to be listed for the laser clinic without any examination by the ophthalmologist.

1. Action on Cataracts Good Practice Guidance, NHS Executive, February 2000
2. National cataract surgery survey 1997-8: a report of the results of the clinical outcomes. Desai P, Minassian DC, Reidy A, *Br.J.Ophthalmol.*, 83, 12 pp1336-1340, December 1999.
3. Phako-emulsification cataract surgery: is routine review necessary on the first post-operative day?, Tan JHY, Newman DK, Klunker C, Watts SE, Burton RL, *Eye* 14, 1 pp53-55, February 2000.

The development of a cataract co-management scheme

Overview

Every scheme has evolved in a unique manner to meet a local need, but the development of the Ayrshire system can be considered as a model. Both this scheme and Peterborough were created as part of a modernisation agenda, with cataracts being just one part of the process. Thus it should be noted that these schemes were not developed because of pressure from clinicians, but by an administrative team devoted to modernisation of the patient pathway processes. It is possible that this assisted in the developments, as there were no pre-conceived views on how the clinicians, patients and other staff should interact. However it is likely that many of the co-management projects for cataract in the future will be devoted entirely to improving the patient pathway for that condition alone, although this does not preclude the use of the same techniques for managing other ophthalmic conditions.

In Ayrshire a "Designed Healthcare" team was established with funding of £1.05M with an overall brief to redesign the patient pathway, with a target outcome of improving this experience for the patient. The aim was not to save money, indeed the cataract scheme may actually cost more, as more surgery is undertaken. The projects were to be multi-disciplinary, multi-agency and patient focused.

The cataract project group analysed the routine pathway, and audited each stage. All staff were encouraged to comment.

The first step excluded the visit to the GP from the patient pathway. It was felt that it was not necessary for the patient to visit the GP, when little was added by this appointment, although the GP would continue to have input to the referral process. The consensus was also that little was gained by the patient attending the clinic one day post operatively, as few complications were identified at this stage, which would not also be apparent in a telephone interview with the patient. It was also agreed that the second post-operative examination could be undertaken by trained community optometrists, working to a protocol.

The selection of those who would benefit from surgery could also be undertaken by optometrists, again working to a protocol, and at this stage patients could be divided into two groups, those without other complicating problems, (ophthalmic, medical and social), and those with. The latter would continue to be best served by a routine ophthalmic outpatient appointment, but in clinics with nurses undertaking more of the procedures, followed by the appropriate form of surgery, which might be under local anaesthetic or general, and may be day case or as an inpatient. The uncomplicated patients could have the outpatient examination and surgery condensed into one visit, with a telephone interview two weeks before this appointment.

A pre-requisite to this would be a cataract co-ordinator, with a dedicated telephone line, and appointments booked by the optometrist at the time of the cataract consultation. There would also be a need to redesign the theatre scheduling system and the nurses' rotas, to maximise the gain, but the opportunity was also taken to review the whole process, which included a change to the specifications of the instrument and sterile packs and an enlarged IOL bank.

Patients who had uncomplicated surgery would be telephoned a day after this procedure, by one of the cataract nurses, which would pick up the urgent problems, such as reduced vision and pain. Any of the non-urgent sequelae would be found at the optometrist visit.

However the Ayrshire and Peterborough approaches should not be seen as the only models. They appear to be the most efficient in utilisation of available resources, and move the focus of care out of the secondary into the primary sector (which is in line with Government

policy), but they will not always suit local circumstances. Direct referral may be all that can be achieved when there is no will to change processes significantly, and indeed this may be the most suitable methodology if the local optometry population is not stable.

Ayrshire adopted a "big-bang" approach, with changes to all stages of the pathway, including theatre systems at the same time, whereas Peterborough adopted a more cautious approach. The latter required a pilot scheme involving a limited number of optometrists undertaking a pre-surgery examination, followed by an expansion to a larger group of optometrists and then to all. The post-surgery examinations would be part of a later phase.

The "one-stop" system will not suit all surgeons, and so a modified "two-stop" may be adopted.

Funding will always be an issue, and direct referral alone may have no cost implications beyond the GOS, but whenever optometrists are expected to undertake procedures (clinical or administrative) which are outside the GOS contract then a fee which represents the additional time and /or clinical content should be negotiated.

The team approach

In any modernisation agenda it is vital to ensure that all interested parties are consulted, and feel that they are part of the process. It is helpful if the modernisation team is from within the organisational structure, so that there is not a perception of change being imposed from without. This may necessitate additional training in "change management". A list should be produced which includes all of those who are party to the present arrangements, and those who will be affected by any change. This will form the main group who will oversee the process of change, but a smaller process change management team would need to be formed to design the new pathways. It is vital at this stage that careful consideration is given to those who are invited to participate. For example in one scheme it was the medical secretaries who felt most threatened by the changes- they had been used to having control over the surgical lists of their own consultant, but under the new system this would be handled on a group basis by the cataract co-ordinator. Thus it is not just the ophthalmologists, nurses, optometrists and GPs who should be consulted, but patients and other staff members as well.

Once the scheme has been established there will need to be feedback both ways with this large group, and the smaller management team will need to review the procedures on a regular basis.

The cataract co-ordinator

This role is pivotal for the whole scheme. In any scheme it will be the co-ordinator who controls the flow of the patient and associated paperwork through the system. In some schemes it is the co-ordinator who prioritises the bookings (acting as a filter to ration supply and demand).

The co-ordinator will receive the phone calls from the optometrist to book the patient into the system, so a direct phone line is vital. A dedicated fax line, and e-mail address can also assist, especially in receiving reports before and after surgery, both from GPs and optometrists.

Most units now operate a department referral system, rather than a consultant system. This is a fundamental change, which has to be agreed with the ophthalmologists and GPs. It means that in most cases, a referral for cataract surgery will not be made to an individual consultant, but to the unit. The co-ordinator will then allocate the patient to the most appropriate surgeon, for clinical or administrative reasons.

In some cases it was also felt that moving booking away from the various secretaries to one person allowed for more equitable treatment of the patients, and less opportunity for personal manipulation of the system by ophthalmologists.

The co-ordinator will also ensure that the paperwork is complete and available, that schedules for the nurses and surgeons are produced, and that follow up is carried out.

The general medical practitioner

Most GPs are very happy to move to a direct referral system. They agree that a patient visiting them, occupying an appointment slot, only to have it confirmed that the optometrist's suggestion of a referral for cataract surgery will be fulfilled, is not cost effective.

Information from the GP may be valuable to the appropriate treatment of the patient. The surgeon will need to know the current status of the health of the patient, particularly conditions such as hypertension and diabetes. In one system the patient is instructed to visit the practice nurse to have BP and blood sugar levels checked, and this becomes part of the referral paperwork. The GP can also add useful further information about the ability of the patient to lie still for twenty minutes, and indeed social factors which may impinge of the surgical treatment.

Thus it is important that the GP is kept within the "loop" and involved in the referral process. This is usually by a copy of the referral form from the optometrist to hospital being sent to the GP, who can add relevant information, or even countermand the referral altogether. It must also be noted that the GP will (through the PCG or PCT) be responsible for the funding of the operation.

More controversial is the ability of GPs to refer to hospital themselves if they consider that a patient has cataract. It may be possible for GPs to be part of a fast-track system, but usually this is not considered appropriate, particularly when optometrists are required to undertake most of the preliminary clinical work. GPs may be unhappy with a system of referral to a limited number of accredited optometrists, but this is fundamental to many schemes. One area has imposed a ban (agreed with the LMC) on GPs referring to the HES for cataract. Another adopts a more conciliatory approach- GPs are permitted to refer, but it is pointed out to them that the patient will receive a much slower service as this has to go through the "old-fashioned" outpatient system.

GPs need to be informed of the proposed changes in advance, and this should be reinforced regularly. They must also be aware that patients will hear about the system and expect this standard of care to be delivered by all. Posters about the arrangements may be posted in GP's and optometrist's practices. GPs may also see this new system as a threat to their status, and their role as the gatekeeper.

Most GPs will be happy to accept that the patient is being seen by an expert based in their own community, in ideal clinical surroundings, with a procedure which saves their time (as well as that of the patient), and assists in the better integration of general medical practice with other professionals.

The nurses

The role of the nurses must be designed into the process from the start. In most systems this role will be actively enhanced. The King's Lynn system actually relies on nurses to undertake all of the clinical procedures normally undertaken by optometrists and ophthalmologists, but few hospitals would consider that they have sufficient nurses with appropriate skills to work this way, or that it is an cost-effective use of nursing staff. In addition it does not move the care of the patient into the community.

In the Ayrshire scheme the nurse is involved throughout the pathway. Once a patient has been allocated a surgical slot on the “one-stop” system, a nurse will telephone the patient in advance of the surgery date. This is to double check some of the information provided by the optometrist and/or GP, to remind the patient of the procedures which will be followed on the day of surgery, and to ensure that appropriate transport and overnight care are available. The nurse will have the power to order further clinical tests on the patient, or appointments with other clinicians, both in the hospital and the GP practice, if this is appropriate for a patient.

At all stages the nurse will liaise with the co-ordinator.

When the patient attends on the day of surgery the nurse will prepare the patient. This will involve dilation, biometry and a degree of clinical examination, to ensure that all is well for surgery. The nurse may also reinforce the patient’s knowledge of the procedures, instruct the patient on the handling of drops, and perhaps discuss the advantages and disadvantages of surgery.

At this stage, for the first time, the patient will see the surgeon who will examine the patient, recheck the notes, ensure that surgery is indicated (clinically and socially), explain the possible adverse sequelae and consent the patient.

Nurses will complete the preparations for surgery and deliver the patient to the surgeon. The nurses who assist in the operation may be specialist ophthalmic nurses or theatre nurses. As the final part of the surgical process the nurse will check the patient in recovery, complete the instructions on the post-surgery procedures, and discharge from the unit.

It is widely considered that a check up in the clinic at one day post-surgery is not necessary. Most of the major complications will occur during surgery, or before the patient leaves the hospital.

Other important problems will produce extremely poor vision, pain or a severe red eye. These can be identified during a phone call from the nurse to the patient on the day following surgery. If all is well, the role of the nurse in the care of this patient is ended. Wherever possible the same nurse will take the patient though each stage, from initial telephone contact, through the day case unit, and to the post-operative telephone consultation.

The ophthalmologist

In some units up to 30% of ophthalmology outpatient appointments are associated with cataract. Under a fast track, “one-stop” system, these appointments are redundant. This will allow the consultant either to undertake more surgery, or reduce the waiting time for outpatient appointments for other conditions.

The surgeon will still retain control of the process throughout. It is possible for the ophthalmologist to review the referral paperwork, from optometrist, GP and nurse in advance of the day of surgery. (This could be e-mailed to the surgeon by the co-ordinator). At all stages the ophthalmologist can call the patient in for a “normal” outpatient appointment.

On the day of surgery the ophthalmologist will examine the patient and take clinical responsibility. It may also be convenient for the surgeon to take consent, but this is not strictly necessary as the patient should be well informed before this stage, and so consent can be obtained at the most appropriate point in the pathway, by the most appropriate clinician.

In the Peterborough scheme the patient is also evaluated for second eye surgery (if necessary) at this stage, with a full examination and biometry of the second eye, and surgery scheduled for four weeks later.

Many surgeons already delegate the post-surgical examinations to more junior staff, so the movement of this procedure to the community optometrist does not represent a major shift. The main advantages to the surgeon are the ability to spend more time on the procedures which require the skill of the consultant (surgery and diagnosis), and less time on the more mundane examination of the uncomplicated cataract patient.

The re-evaluation of the theatre systems need not be restricted to the introduction of a fast track system, but will produce worthwhile benefits to the surgeon, and the care of the patient. Even the use of a retinoscope while the patient is still on the operating table can improve the patient outcome, by showing when an inappropriate implant has been used, or where the implant is optically unsound.

A major advantage to all, especially the surgeon, is the reduction in waiting lists which could be produced by the introduction of the fast track schemes.

Some surgeons may not be comfortable with a “one-stop” approach, and prefer a “two-stop” system for all patients. This may still produce worthwhile savings in time. It is considered that an out-patient appointment following a comprehensive optometrist examination need only take half the time of the more traditional approach. Further time is also saved by undertaking biometry and any other clinical tests at the same visit.

Concern may be expressed that not only is the system producing two tracks, it also produces a rapid first class system for some patients and a slower second class system for others who may have greater need. This can be designed out of the process, so that all patients can receive surgery based on clinical need. If some outpatient appointments are saved (and it is estimated that 80% of cataract patients are suitable for “one-stop”) before surgery, and even more saved after surgery (95% of patients are uncomplicated), then “two-stop” patients can be fitted into a schedule which allows them to have both the outpatient appointment and surgery in the same timescale as the “one-stop” patient.

To achieve optimal throughput surgeons will also need to decide on the mix of surgical lists-cataract only lists are an essential feature, but it may be necessary to separate “simple” “one-stop” patients from the more complex “two-stop”, and consideration need to be given to “business lists” separate from “teaching lists”.

The optometrist

By involvement both at the start and end of the clinical care of the surgical patient, the optometrist gains considerably in the management of the patient. This not only enhances the clinical role of the optometrist, but reinforces the perception of the patient that the optometrist is the community based eyecare specialist.

The optometrist should be part of the planning process, with input at every stage in the implementation of a new system, and in the ongoing management of the scheme. Adequate feedback to all concerned is part of this process. Central to the operation of any cataract scheme is the protocol which is to be used for deciding which patients require surgery. Almost all of the schemes have invented their own questionnaires, some based on the VF-14 model, but with time it is likely that a more common approach will be adopted. There is also frequent usage of an acuity scoring system.

Cataract development

The preliminary examination of the patient will allow the optometrist to use a full range of clinical skills, to produce a comprehensive review of the ocular status of the patient, and their suitability for surgery. In a "one-stop" system this will also identify those who need to be seen by the ophthalmologist prior to surgery. It is usual for the optometrist to spend more time on the social evaluation of the patient's need for surgery, and in counselling.

After surgery the optometrist also examines the patient according to an agreed protocol, referring back to the HES those with defined problems. The associated refraction and report back to the hospital completes the clinical pathway. In some schemes the optometrist will decide on the need for second eye surgery and refer into the system as appropriate.

The fee for the optometrist's consultations can be generated either by a "work sheet" which is processed monthly (cf. GOS vouchers), or automatically by an additional copy of the reports being sent to the hospital administrative department.

The advantages of using optometrists are:
- graduate professional
- primary healthcare specialist
- trained to examine the eye to detect abnormal ocular conditions, general health problems & defects of eyesight
- economic & effective
- give advice on all eyecare-related matters
- under-utilised healthcare resource
- have the necessary communication skills
- committed to CET/ clinical audit/ clinical governance
- available in every community
- well equipped practices
- established recall systems
- flexible appointment times

The advantages to the optometrists are:
- involvement in multi-disciplinary co-management
- working to agreed protocols
- enhanced professional image
- improved inter-professional communications
- more open debate on adequate remuneration for clinical skills
- training opportunities
- opens the way to future co-management schemes

The advantages to the patient are:
- improved access to the cataract service
- more of the process in convenient and familiar surroundings
- reduction in uncertainty and anxiety
- appointment for surgery issued at the same time as the diagnosis is made (improvement in convenience)
- more participation in the process
- awareness of the implications of surgery from the time of diagnosis
- convenience and flexibility
- continuity of care

Advantages to the whole process:
- there is a more seamless system
- there is more utilisation of the appropriate skills at every stage, allowing more job satisfaction
- implementation of improved communications as part of the design process
- greater involvement in multi-disciplinary teamwork

Paperwork

The introduction of any changed system allows a complete review of the paperwork which is part of the process. In a fast-track system adequate feedback at all stages is essential, but even in a modified traditional system the opportunity should be taken to ensure that all involved are kept aware of what is happening at every stage. This includes the patient!

The referral from optometrist to hospital should be copied to the GP. Information about cataracts and surgery can be given to the patient at the same time. In a “one-stop” system this will need to be comprehensive.

In every system the decision on whether or not surgery is to be undertaken should be conveyed to the optometrist, GP and patient.

When surgery has been performed, the optometrist and GP should be informed, with instructions to the patient on what needs to happen next.

The optometrist should inform the hospital of the refractive outcome after the post-operative visit, and should be able to identify when patients do not attend.

The theatre schedule

In the Ayrshire scheme a large effort has gone into streamlining and enhancing the procedures at the Day Case surgery unit.

Much of the preliminary examination is undertaken by the nurses, with three working in individual consulting rooms on the pre-surgery check of the patient. This reduces the examination time for the surgeon. The pre-operative procedures are also optimised so that patients are ready for surgery at regular intervals. Patients are delivered into surgery with as much of the preparation done as possible. They are prepared on surgical trolleys so that they do not have to get on to a table in theatre. Patients go through the process in batches of three.

The theatre is laid out so that patients having surgery on the left eye are placed at 180° to those having surgery on the right eye. This means that the microscope and foot pedals do not have to be moved to cater for the different position of the eye.

Once surgery is over the patient is moved into a recovery suite, for examination and instruction, again under the care of a nurse. If all is well the patient can sit in a lounge until ready to go home.

In this manner it is not just the pathway that has been streamlined but the whole procedure, allowing 14 operations per day, from one surgeon. Rotas for nursing and other staff have to be organised to ensure that this high volume can be delivered to the satisfaction of the whole team and patient.

Training

Training should be an integral part of any scheme, even if the necessary clinical skills of the optometrists do not extend beyond those normally expected in community practice. It is essential that all optometrists are well acquainted with procedures as well as protocols, and they are aware of the activities of all of the other participants.

It is likely that time spent in the outpatient department, and seeing some cataract surgery, as well as evening seminars on cataract type differentiation will be required.

Accreditation

It is likely that in a system which relies on a more advanced usage of the skills of optometrists some form of accreditation will be necessary, with individual optometrists (not practices) being accredited once the training programme has been completed. Provision needs to be made to train and accredit optometrists moving into the area.

Audit

Audit is an essential ongoing feature of the cataract schemes. Initial audits will discover any procedural problems which can be discussed with the management team. Later audits will identify clinical problems, and fine tuning issues. Participants must be aware that they may be identified as not measuring up to the levels of performance required which will suggest changes to the accreditation or training, or in severe cases removal from the list of participating optometrists.

Both Peterborough and Ayrshire have been audited.

In the first six month audit in Ayrshire the following was reported:

- there had been 169 referrals to the “one-stop” system
- 9 (5%) were moved to the “two-stop” pathway on review
- 160 were thus listed for the “one-stop” pathway
- there were no DNAs and no defaults
- 154 were offered surgery on the same day
  - two had insufficient cataract
  - two had previously undiagnosed hyperglycaemia but had surgery at a later date
  - one had intermittent entropion
  - one had a possible iris melanoma (but this was a cyst)
- there were no opt-outs on the day
- of the 154 who had surgery, 139 required only the single optometrist follow-up appointment

511 patients have now been through this scheme (September 2000) with similar results.

In the Peterborough audit the time taken to complete the visual assessment and documentation varied from 12 to 40 minutes, with the patient attending the practice for from 40 to 70 minutes. The optometrist could be dealing with other patients whilst waiting for the pupils to dilate.

It was found to be helpful for the patient to be given the health check questionnaire in advance of the cataract assessment appointment. Seeing a patient outside of the hours worked by the co-ordinator introduces delays.

This scheme has now undertaken 210 fast-track procedures, with very few failures. In general these have been associated with unexpected health problems of the patients, for example previously undiagnosed hypertension or hyperglycaemia. It is considered that these would have occurred in a “normal” system. There has been a 20% increase in activity.

Patient surveys have shown a higher satisfaction rate amongst those attending on the fast track service than those on the traditional pathway.

Benefits were seen to be:

- high attendance rate
- low inappropriate referral rate

- reduction in attendance by patient
- transfer of resources from outpatient to surgery
- reduction in administration
- aligns with the National Booked Admissions Programme
- the co-ordinator is the one point of contact for patient, optometrist, GP and hospital staff
- allows 100% utilisation of theatre resources as lists can be moved from one surgeon to another to cover for consultant leave

Outcomes:
- reduction in the number of patient visits
- reduction in waiting times
- reduction in bureaucracy
- increased capacity
- improved data on outcomes

Problems perceived:
- two services running in parallel
- the backlog may need to be cleared at the same time as patients are being seen on a fast-track
- teaching lists have to be separated from routine lists

Funding

None of the participants should expect any of the other participants to undertake additional tasks, unless these are adequately funded. The source of funding for optometrists needs to be identified at an early stage in the planning process, and should be part of the agenda. The actual fees to be paid should be discussed once the work patterns are agreed. Many GPs, ophthalmologists and administrators are ignorant of the funding of optometric activities, and erroneously anticipate that additional activities can be funded from the GOS contract.

In a direct referral system, where the optometrist undertakes nothing which would not be considered part of the routine referral of a patient with cataract, then no additional fee may be appropriate. (See King's Lynn system). However if the referral system requires the optometrist to undertake any additional clinical procedures (such as dilating every patient, or grading the cataract), or additional administrative procedures (such as scoring the patient's need for surgery) then these should be paid as an additional fee.

It must be noted that some schemes will evolve, perhaps from a simple direct referral system, through an enhanced preliminary examination in a "two-stop" system, to a "one-stop" system and finally to a complete package as in the Ayr scheme. Therefore it is essential to fix the fees at levels which reflect the work being undertaken at each stage, allowing the progress from one level to another to progress more smoothly.