Eyecare Scotland

NHS SCOTLAND

National Ophthalmology Workstream: Hospital Eye Services

Progress, Priorities & Practical Actions for A Safe, Sustainable Service across Scotland

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Scottish Government
Riaghaltas na h-Alba
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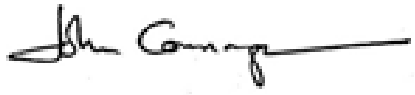
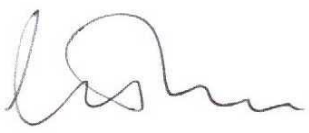
Foreword:

Patients with ophthalmic conditions are often vulnerable and must be supported by a responsive health service. Their care should primarily be safe and timely. This document sets out how we plan and manage the delivery of services to achieve this by making the best use of existing resources and developing these effectively. This involves:

- Improving datasets and collection of data to understand demand and optimise available capacity; identifying shortfalls so that we are in a position to treat all patients safely and in a timely manner;
- Offering appropriate treatments within a suitable timeframe to ensure patient satisfaction and safety by preventing the risk of poor outcomes from treatment and/or vision loss by providing care where and when it is needed;
- Optimising current capacity – how we use the hospital eye service efficiently to manage patients with eye disease and those at risk of vision loss;
- Managing the system in a patient focussed fashion –
    - by ensuring that only those who require secondary care are referred to hospital;
    - by improving hospital appointments and flow by using new methods of working, technology and the entire workforce to capacity;
    - by focusing use of our return capacity more effectively to provide management of Long Term Conditions – by collecting data on review patients to 1) ensure care takes place within clinically safe time limits and 2) promote properly managed service re-design;
    - By discharging appropriate low risk patients via pre-determined pathways – identifying who and how we follow up and ensuring clear and adequate information to patients about their condition and how to access care should they need it.
- Maximising the workforce -
    - using the skill sets available so that staff work to maximise their competences;
    - enhancing education, training and continuing professional development so that each individual is able to develop and work for the benefit of patients;
    - ensuring that suitable patients are seen by the correct professional and, where indicated, this should be closer to home.

This report sets out significant progress that has already been achieved across hospital eye services in Scotland. It also explores future opportunities for further gain and innovation. Above all it sets out opportunities and tools for clinicians to be the architects of future change in the delivery of ophthalmic care in a modern health service. This exemplar work has already delivered benefits and there is much more to achieve.





John Connaghan
NHSScotland Chief Operating Officer

Professor Carrie MacEwen
President of the Royal College of Ophthalmologists

High Level Summary Messages from the National Ophthalmology Workstream

1. **Health Intelligence**
   Ensure collection of robust and adequate data to develop and support services.

Action – Improve data capture and use of health intelligence as a basis for ongoing and informed decision making about how best to deliver our services. To capture data on diagnosis, outcomes and waiting times for new and return patients for transparency, local use and submission to a central data warehouse to highlight and evidence opportunities for further change.

2. **Capacity and Demand**
   Identify mechanisms to determine that service capacity is adequate to meet clinical need.

Action – Ensure equality of access for new and review patients. Engage with the Getting Ahead Programme for local and national planning of demand, capacity and flows and modelling of future changes and capacity gaps to be confident that NHSScotland has enough well-utilised capacity in the right place to continue to provide a safe, efficient and patient centred service.

3. **Booking Management**
   Develop an administratively robust mechanism to make clinic appointments.

Action – Provide a responsive system to deliver patient appointments which are timely and clinically safe. To uniformly introduce electronic patient record and e-booking within the clinically indicated time for review.

4. **Workforce & Competencies**
   Embed a culture of recruiting and retaining high quality staff and optimising training, skills and professional development.

Action – Identify ways to attract medical staff. Systematically review options for extended roles and competency based workforce deployment to achieve patient care and efficiency benefits. To train and up-skill non-medical eye heath care professionals (HCPs) and to work at the top of their competencies e.g. minor ops, intra-vitreal injections, triage, assimilating clinical findings, undertaking clinics for lower risk patients.

5. **Eyecare Integration Network**
   Strengthen the functionality of the Eyecare Integration Network to support ease of use and to enable electronic two-way dialogue between community and acute care practitioners as the norm.

Action – Upgrade the Eyecare Integration Network to allow electronic uploading and sharing of images, dialogue regarding quality and appropriateness of referrals and advice-only feedback and treatment planning.

6. **Primary /Secondary Care and community Interface**
   Increase collaborative working across primary/secondary care and community settings. To promote professional dialogue and joint education to support more patients being seen in the community, closer to home.

Action – Develop local policies and protocols to work together to share care or discharge patients who are at low risk of vision loss, progressive disease or systemic complications.

7. Patient Experience

Use evidence to ensure that all patients receive the optimum care for their specific needs.

Action – Support the realisation of the National Clinical Strategy and Realistic Medicine to support every patient through their care by providing standardised care that is individualised for their specific needs.

8. Managing and Reducing Variation

Review the evidence to highlight opportunities and to reduce geographical variation in services, systems and processes.

Action – Identify causes for variation in practice, productivity, procurement and outcomes, recognising differences in local requirements.

9. Long Term Conditions Management

Draw up pathways and systems to ensure that patients are seen, reviewed, monitored, treated and discharged as efficiently as possible.

Action – Develop mechanisms to use the workforce wisely to care for patients with chronic conditions with pathways and flows that improve both the patient journey and safety.

10. Technology to assist efficient care

Maximise IT developments for clinical benefit.

Action – Ensure development of appropriate IT capabilities to implement virtual clinics - undertaken by non-medical staff – especially for long term conditions such as age-related macular degeneration and glaucoma for the benefit of patients.

11. Cataract / High Volume Surgical Pathways

Identify ways to optimise surgical flows for efficiency.

Action – Focus on improving systems and processes by identifying barriers to increase the volume of cataract treatments undertaken within existing ophthalmology theatres to keep patients at their local hospitals for their treatment.

12. Sustainability of service provision

Take a long term view to plan and deliver health care.

Action: Secure adequate resources to deliver sustainable service provision – equipment, personnel and accommodation. Deliver and embed approaches and services which are inclusive, robust and fit for the future.

13. Community Eyecare Review

Identify ways for all involved in eyecare to work together with particular emphasis on primary/secondary care.

Action: Maintain ongoing communication to highlight and agree a mutually beneficial way forward to implement a solution focussed programme for the benefit of all patients requiring eyecare services.

14. National Eyecare Workstream

Recognise the need for a seamless ophthalmic patient journey backed up by funding and management support.

Action: Work collaboratively with all stakeholders to harness and embed ‘what good looks like’ within all areas of ophthalmic care, across HES and the primary/secondary care and community interface.

1. Context, Issues and Vision

Ophthalmology is a high volume specialty dealing with patients with acute and chronic eye diseases and systemic diseases that may be sight or life threatening. The Hospital Eye Service (HES) is currently facing a series of challenges; not least high levels of demand for new and return appointments and pressures arising from the growth of the ageing population and the development of successful new treatments. Recruitment and retention of all groups of the ophthalmology clinical workforce are proving difficult in order to keep up with this demand – and the forecast is for increasing need.

This is also a service where significant opportunities have been identified by the professions involved to use capacity and capabilities differently: opportunities for new models of care, opportunities for harnessing technology and opportunities for expanding staff roles and competences.

Furthermore, clinical advancement, new drugs, treatments and surgical developments have had a significant effect on this specialty; of note are the abilities to increasingly treat wet age-related macular degeneration and the growing number of people with glaucoma. The impact of demographic change with an ageing population and increasing patient expectations has resulted in greater actual and perceived need. Clinicians in the Hospital Eye Service have absorbed a significant increase in clinical activity already, with little additional investment, based on imaginative service developments and better use of technology. However, without more support it has become impossible to progress further and the ophthalmology community has requested assistance to support and expand novel ways to continue to provide safe, sustainable care for their patients.

Community Optometry services have become an integral part of primary care provision available to patients with eye conditions. There is a growing recognition that closer working between hospital and community eyecare services is desirable and inevitable. In addition to the work of this National Ophthalmology Workstream (NOW), a Review of Community Eyecare Services is underway. It is the intention that outputs and recommendations will dovetail, within the context of the clinical strategy, such that maximum gains may be realised.

Significant changes in both clinical practice and the underlying systems and processes through which we manage patient services have already occurred. Further changes are needed in order to overcome the high demand for secondary care and there is a strong commitment and energy to do this.

National Ophthalmology Workstream

Established in 2014, at the request of the ophthalmology community in Scotland and supported by the Scottish Government, the programme built on earlier diagnostic work that focussed on shortfalls in capacity. This resulted in local **'Tests of Change'** initiatives (see section 3), supported by the National Ophthalmology Workstream to develop and promote novel working practices as a basis for sharing and future development. The Workstream's focus is on learning and working together to reduce regional variation to influence the main drivers which support the national vision for a safe and sustainable service and to develop local approaches.

Since the start of the implementation phase in Summer 2014 detailed dialogue and peer review site visits have been carried out to all ophthalmology departments and Health Boards to explore exemplars and identify local barriers to change. The aim is to share best practices throughout NHSScotland and to reduce variation in practice. In addition there have been ongoing discussions with professional groups, including Eyecare Scotland, the Scottish Eyecare Group and Optometry Scotland, to identify a national perspective.

Such close collaboration with clinical and managerial colleagues enabled the development of **'What Good Looks Like'** (section 4.2). These have been articulated graphically across 6 keystone considerations. This has driven the promotion of best practices by streamlining pathways and processes across these areas, namely:

- Using data as intelligence for capacity planning;
- Booking processes to ensure that new and review patients are seen at the clinically appropriate time;
- A workforce that enables non-medical Health Care Professionals (HCPs) to be upskilled using a needs and competency based model;
- Long term condition care using available intelligence and developing data sets for capacity planning;
- Higher volume elective surgery with better flow of patients through the system;
- Working across the primary/secondary care interface with high street optometrists to monitor and treat specific cohorts of stable patients.

Successful implementation of 'What Good Looks Like', depends on high level leadership and ownership, ensuring pace and profile in every Board, for maximum benefit. Health Board Chief Executives and Executive Leads play a key role in ensuring these opportunities are developed and firmly established in every organisation.

A **National Symposium,** held in Stirling, November 2015, enabled clinical and managerial staff working in HES and primary care to share and encourage further implementation of innovative ways of working. This was succeeded by a process of **Peer Review Visits** to each ophthalmology unit – this has proved a critical part of this process. Detailed and ongoing dialogue regarding challenges and solutions at all levels has been key for understanding and initiating change. This continues, with all those professionals who manage and deliver services playing a pivotal part. Common themes and recurring issues have been identified and, in particular, an enthusiasm to develop different ways of working has been continually identified and highlighted throughout.

Scoping work enabled each Board to identify specific areas on which they wish to concentrate, what benefits may be realised and how these can be prioritised. Much is dependent upon understanding the capacity available in Hospital Eye Service and how it could be developed to effect.

The workstream (NOW) aims to consolidate and strengthen existing successful processes, to share new systems that have already been shown to work, and to systematically address any remaining, identified obstacles to progress.

As a result of this step by step approach the NOW has:

- Worked with HES to ensure clinically informed background work;
- Supported HES to develop 'tests of change';
- Shared outcomes of these at a national symposium;
- Undertaken series of departmental peer review visits which involved clinical and managerial stakeholders at all levels.

An Action framework was developed to include, local, regional and national solutions to highlight pressure areas and co-ordinate possible solutions – this framework is articulated graphically and can be found at appendix one, its focus encapsulates:

- Local action plans within each Health Board;
- Regional solutions: by considering hub and spoke models for service delivery while being cognisant of consultant job plans and on call rotas to enable the delivery of complex treatments/surgeries;
- National solutions: highlighting pressure areas and co-ordinating possible solutions by supporting 'tests' of change' and implementing solutions to promote and embed, for example, training for optometrists, sub-specialty data capture and IT support.

Fundamental and key aims of this programme are to balance capacity with demand on a sustainable basis by:

- The use of **robust data and information** for capacity planning and management – using analysis and health intelligence as a basis for informed decision making - (a major finding of this workstream has been to recognise that current available information is inadequate for optimum effect and work has been commissioned to proactively develop and implement a solution-based approach for the HES);
    - Measuring activity, using updated datasets, and to make future planning realistic, streamlining supporting activities – this will inform booking processes and clinic templates;

- A clear national framework to promote a systematic approach, while recognising local needs through ophthalmology development plans and Health Boards' stated delivery priorities to **reduce unwarranted variation** and deliver **standards of delivery** that can be shared for transparency and overall benefit;
    - Sharing **'What Good Looks Like'** across Scotland and embedding as common practice for the benefit of all patients, recognising in some circumstances the need for local variation;

- Practical support and partnership working to **share and use models** that are already being successfully employed to drive rapid improvement;
    - Reviewing the range of expanded roles performed by non-medical Health Care Professionals (HCPs) in order to further enhance and extend these roles and responsibilities across the service– backed up by appropriate training and professional development;
    - Up-skilling the workforce to ensure that patients can be reviewed by the most appropriate professional relative to their condition;
    - Using technology – to enable different methods of delivering care by a multi-professional team;

    - Identifying novel pathways to deliver patient care and management both within secondary care and across the primary secondary care interface;

- Analysing the range of tasks and competencies in order to realign and **enhance roles and responsibilities** across the service – thus optimising the use of the multi-disciplinary team and developing ways to work more effectively both within the hospital sector and across the primary secondary interface recognising the need for **training and professional development**;

- Exploring the role of technology in the delivery of ophthalmic care.
    - Developing output measures in order to highlight where adaptation and adoption may be desirable – and to recognise where new developments are not performing against set metrics.

2. Key Data - Hospital Eye Services (HES)

Ophthalmology Dashboard – Monthly Management Information:

A national ophthalmology dashboard has been built and will continue to be developed to 'pull together' all available data sets relating to eyecare services nationally and will be accessible to those treating patients and managing HES across NHSScotland from early 2017. Outputs from ongoing work will be added to the dashboard in due course. In view of limited national data capture around specific return procedures undertaken by HES, a monthly management information (MMI) return was commenced in March 2016. Recently this MMI has been iterated to capture the number of procedures undertaken in cataract-only theatre sessions as well as mixed sessions where the number of cataract procedures undertaken is naturally fewer.

Making a difference: New and return patients

The MMI, to date, is also capturing new and return patient data and consequently the return to new ratio which is higher in ophthalmology than many other specialties due to many patients with long-term conditions requiring life-long review. As work develops towards sub-specialty rich data, the National Ophthalmology Workstream has yet to accurately measure the number of patients attending each of the ophthalmology's sub-specialties, especially those dealing with chronic sight threatening conditions. In tandem with this, information regarding the ophthalmology workforce – consultants and those staff with advanced training working at the higher end of their competences - are also captured. This information is vital to ascertain the number of staff working in each area per head of population and for benchmarking and continuing to drive and spread best practices.

The number of intra-vitreal treatment (IVT) injections across Scotland and in each health board is also captured and alongside this there is a genuine appetite from consultant ophthalmologists to provide an evidence base and collect and collate outcomes from these interventions.

Table one below highlights high level information across HES from existing national data sets.

In 2015/16 129,986 New Outpatients attendances (ISD(1) & SMR00).
In 2015/16 307,966 Return Outpatient attendances (ISD(1) & SMR00).
In 2015/16 conversion rate from new outpatient on list to seen was 84.7%. (Waiting times warehouse).
In 2015-16 7.9% DNA (ISD(1) & SMR00).
At August 2016 the new: return ratio was 1:0.4 for Scotland (Excluding Highland and Shetland). (Ophthalmology Benchmarking Data).
In 2014/15 42,848 ophthalmology IP/DC patients seen (TTG Figures), 36,605 cataracts procedures were performed (SMR01 data). 85.4% of ophthalmology IP/DC patients treated were cataracts.

2015-2016 conversion rate from New Outpatients seen to addition to IP/DC list was 34.6% (Waiting times warehouse).
18 weeks RTT performance % for all-ophthalmology 82.7% 17.3% at Sep-16 (>18 – 1,785, total list size – 10,293) (Waiting times warehouse).
Proportion of all Ophthalmology outpatients who wait >12 weeks is 21.9% at Sep-16 (>12 – 6,2015 and total list size – 28,361) Waiting times warehouse.
Proportion of all Ophthalmology IP/DC seen who wait >12 weeks. 11.6% at Sep-16 (>12 – 1,183, total seen – 10,225) Waiting times warehouse.

Table one – Information from National Ophthalmology Data sets

Reviewing and up-dating these data collected for ophthalmic services are essential in order to provide a robust basis on which to identify the demand for the available capacity and manage this intelligently – the development and use of such data are fundamental to the success of future ophthalmology services.

3. The Workstream Aims – meeting demand with adequate capacity

The workstream aims to ensure the delivery of timely, safe, effective and sustainable patient centred treatment to ophthalmology patients across Scotland while ensuring that no patient is disadvantaged at the expense of others. Whilst it is recognised that there is no one size fits all approach, it is important to support rapid improvement.

Stakeholder Engagement
Early and considerable emphasis has been placed on building stakeholder engagement and empowerment. The eyecare community is increasingly proactive and solution focused and working together to deliver increased capacity is essential. This has enabled strong communication and interaction amongst consultant ophthalmologists, managers, information leads and the non-medical clinical HCP team and across a very wide range of stakeholder groups including, for example, Eyecare Scotland, The Scottish Eyecare Group, Optometry Scotland, The Cross Party Group for Visual Impairment and The Scottish Council on Visual Impairment (SCOVI).

Ongoing links into other national policy areas include the Scottish Vision Care Strategy, Optometry policy including the General Ophthalmic Services (GOS) contract, Certification of Vision Impairment (CVI) and the Sensory Impairment Strategy. Regular meetings with the Scottish Government policy lead for optometry and the primary care division has ensured that where possible common solutions have been identified to avoid duplication of effort.

4. Delivering the Aims

A systematic approach has been employed to deliver of the aims of this work -

- Initially a scoping exercise to identify possible opportunities for the development of new models of care in individual departments was performed;
- These were supported and evaluated through a Test of Change process;
- Next each was considered for national roll out, based on 6 keystone considerations;
- National strategy symposium and workshop to discuss methods to embed best practice;
- Latterly peer review visits to every ophthalmic department in Scotland.

The fundamental priorities for Workstream have been addressed throughout:

- Using data to inform booking processes;
- Promoting novel pathways to deliver care – in primary and secondary care;
- Recognising workforce deficiencies and identifying how these can be met by
    - attractive recruitment measures to meet the shortage of consultant ophthalmologists and
    - reviewing the roles of and upskilling the HCP workforce;
- Exploring the role of technology.

4.1 Tests of Change

Since 2014, a focus has been placed on offering support to each Board in testing initiatives that have been shown to work in some settings and to understand whether they may translate to local eye services by adapting existing knowledge. To support this improvement, each Board was asked to measure the success of each test and gauge the outputs/benefits of their improvements to evidence their impact that may therefore be replicated elsewhere. These measurements may, for example, reflect an increase in activity by streamlining pathways and/or processes, or by releasing capacity. Common areas of focus are in line with the aims of the NOW and include all elements of the workstream:

- Using data to inform, support and improve booking practices to ensure that patients are booked safely and that reflects capacity within the service;
- Promoting novel pathways to deliver care;
- Reviewing roles of and upskilling the HCP workforce –training HCPs to undertake procedures previously performed by medical staff, releasing doctors to perform high level decision making tasks or procedures only they can do;
- Working across the primary secondary care interface - strengthening working relationships to develop and manage non-medical professionals' skills to manage low risk patients safely in the community;
- Exploring the role of technology – using tele-consultations and the development of virtual clinics.

There have been numerous '**Tests of Change'** sponsored by The National Ophthalmology Workstream over the past two years. Table Two below highlights one test from each Health Board . Please note, this list is far from exhaustive.

NHS Health Board	**Examples of Test of change**
Ayrshire and Arran	Scoping and developing a technical solution to allow two way electronic communication and sharing of images with community optometrists for a shared care initiative.
Borders	Education - up-skilling workforce.
Dumfries and Galloway	Information to sub-specialty level for capacity planning.
Fife	Integration of the management of acute anterior uveitis between primary care optometrists and the hospital eye service.
Forth Valley	Advice only session for community optometrists.
Golden Jubilee National Hospital	Information video for patients undergoing cataract surgery to standardise information. Video conferencing to assess patients travelling to GJNH for cataract surgery.
Grampian	'App' to host optometry guidelines for community optometrists.
Greater Glasgow and Clyde	Proof of concept with *Open Eyes,* dovetailing with existing systems to develop an Electronic Patient Record.
Highland	Realignment of systems and processes to streamline the cataract pathway.
Lanarkshire	Planned review list (PRL) for medical retina.
Lothian	Glaucoma stratification regarding complexity of a patient's condition and subsequent follow-up location.
Tayside	Innovative development of virtual macular clinics to change expectation and flows.

Table Two – Examples of 'Tests of Change.'

Some Tests of Change are being led nationally e.g. from a training and continuing professional development perspective, sponsoring the development of ophthalmology educational modules for nurses with 20 places per academic year, delivered at and accredited by Caledonian University. The first cohort of students graduated from the course in January 2017.

4.2 What Good Looks Like

Focus has been placed on adapting, adopting and embedding these **'Tests of Change**' to make permanent change as part of the day-to-day operation of the system. The clinical and managerial community working across Hospital Eye

Services have been key partners in confirming **'What Good Looks Like**' articulated as the **Six Keystone Considerations that reflect the NOW elements**, illustrated in Figure one.

- Utilising intelligence to inform capacity planning
- Booking Processes
- Workforce
- Primary / Secondary care interface
- Out-patient activity – management of long-term ophthalmic conditions – Age-related macular degeneration, diabetic retinopathy and glaucoma
- Management and flows of high volume surgical work - cataracts

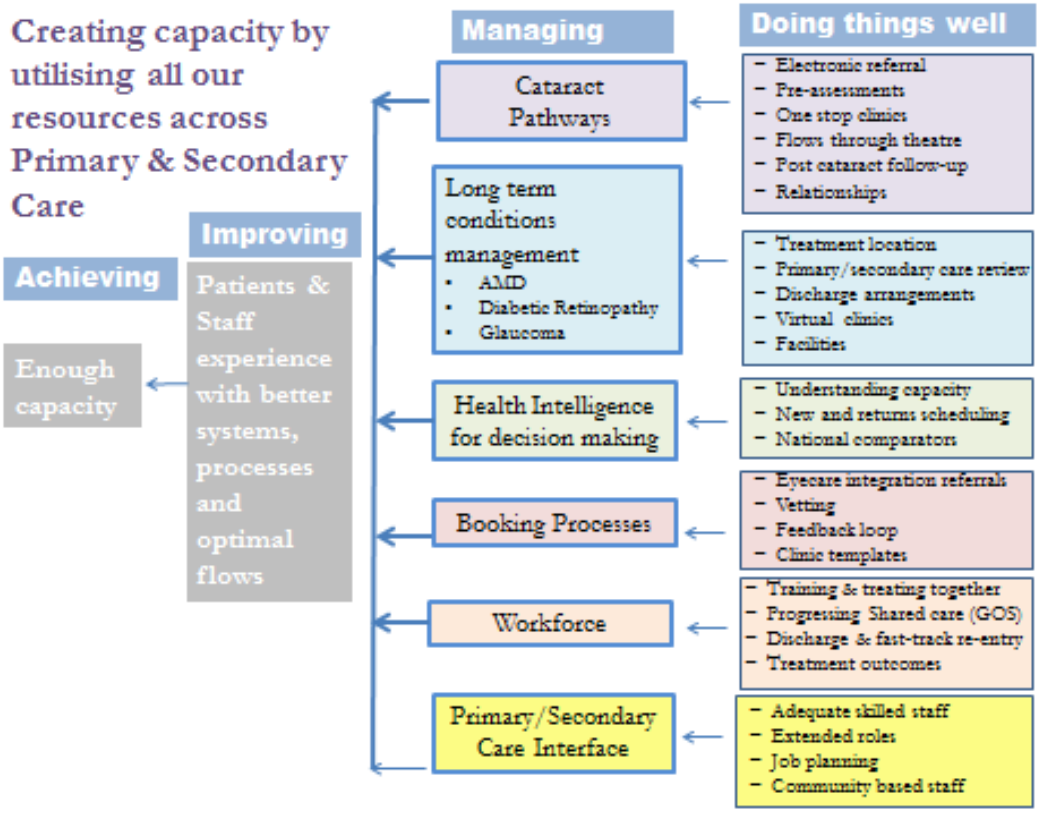


Figure one – Overarching workplan 'What Good Looks Like'

Using these **keystone considerations**, each Board assessed remaining gaps and opportunities, reviewing their priorities and options for standardised implementation across Scotland.

Some aspects of the **keystone considerations** are being sponsored and fast tracked nationally. Others depend on improvement methodology for their development. Significant cross-fertilisation continues with Boards communicating with each other and sharing ideas and driving common themes. Increasingly, organisations are working together to implement the changes created.

4.3 Embedding Best Practice – National symposium

The national ophthalmology event held in November 2015 showcased the positive improvements to ophthalmology services, gave delegates the chance to network and collaborate with their clinical and managerial colleagues and offered an important further catalyst for change. Benefits and value of the **Tests of Change** were considered and discussed around the 6 **Keystone Considerations.** Further useful

work at the symposium included a debate about the design of optimal pathways to galvanise each Board's proposals to improve capacity and flows within their Eye Services.

These procedures and processes, once routinely harnessed, will make a cumulative positive impact to service delivery and enable each patient to be seen in the right place, by the right person. Continuing national emphasis is being placed on concentrating efforts across the Eye Care community to achieve maximum impact.

Such developments align well with the *Monitor* report (October 2015) which aims 'to help NHS providers make improvements in the productivity of elective care / in the two largest elective specialties – orthopaedics and ophthalmology.' The report recommends that 'focussing on five of nine good practices reviewed will realise most of the potential productivity gain.' For Ophthalmology, these five practices are:

- Stratifying patients by risk and creating low complexity pathways for lower-risk patients;
- Extending clinical roles to enable lower-grade staff to undertake routine tasks in theatre or out-patients usually performed by consultants;
- Increasing throughput in theatres by explicitly measuring, communicating and managing the number of patients per theatre session;
- Implementing enhanced and rapid recovery practices to reduce length of stay;
- Providing virtual follow-up for uncomplicated patients.

The *Monitor* report concluded that no service model or organisation appears to excel in all five aforementioned practices. Therefore by harnessing and embedding these practices across Health Boards, there remains scope to work differently in these specialties.

4.4 Peer Review Visits

Throughout May and June 2016, formal 'set piece' peer review visits were undertaken to all mainland Health Boards across NHSScotland, in order to focus on the key local issues which contributed to gaps, opportunities and variation.

These were led by Professor Carrie MacEwen and supported by clinicians and managers from other Health Board areas. The visits were viewed as positive and constructive and focussed on the Keystone Considerations that form the overarching workplan of the National Ophthalmology Workstream. Current initiatives, local limitations and recommendations for action and support were identified.

A department specific report was formulated based on each Board visit – highlighting the strengths of the department and identifying areas where support would benefit the service.

Each Health Board area was tasked with reinvigorating their **local ophthalmology action plan to progress throughout 2016/17 –** as highlighted, local Tests of Change have been used to implement Health Boards' action plans and have been, in part, supported by the National Ophthalmology Workstream for the past two years These local plans went further and set out Health Boards' further delivery intentions and their priorities for specific areas within the specialty which require detailed analysis locally in order to treat patients most appropriately. Practical support and partnership working are being used to drive rapid improvement, with emphasis on clear actions and timelines relating to implementation.

5. What Good Really Looks Like

5.1 Clinical Condition Pathways

At all sites in Scotland there is evidence of good practice and overall there are many areas where Scottish services excel. Adoption, adaption and consolidation of these proven approaches should therefore form the basis of each Board's way forward and detailed local action plan. It is also acknowledged that in Scotland we already have the elements of a blueprint and an evidence base of what works and what gains are realistically achievable – with accepted local variation. A number of high impact developments have been identified as being significant e.g. nurse injectors delivering intra-vitreal anti VEGF treatment for Age Related Macular Degeneration. The Peer Review process too, has created significant momentum, for change and improvement.

The vision for NHS Scotland is to achieve a Target Operating Model for Eye Services across primary and secondary care. The intention is to design and deliver a world class service, in state of the art facilities which is person centred, safe and effective. Measurable outputs are essential to this approach so that we can continuously challenge our decisions, our systems and processes so that all services work to the top of their scope with comparable efficacy and outputs. This may also mean that not all services will be provided in all places so that we can streamline provision and location so that every patient is seen in the right place, at the right time, by the right professional. The six keystone considerations revolve around managing the whole system and recognising that high volume surgical conditions and Long Term Conditions need to be dealt with differently and effectively.

5.1.1 High volume surgical condition - Cataracts – issues and achievable benefits still to be realised

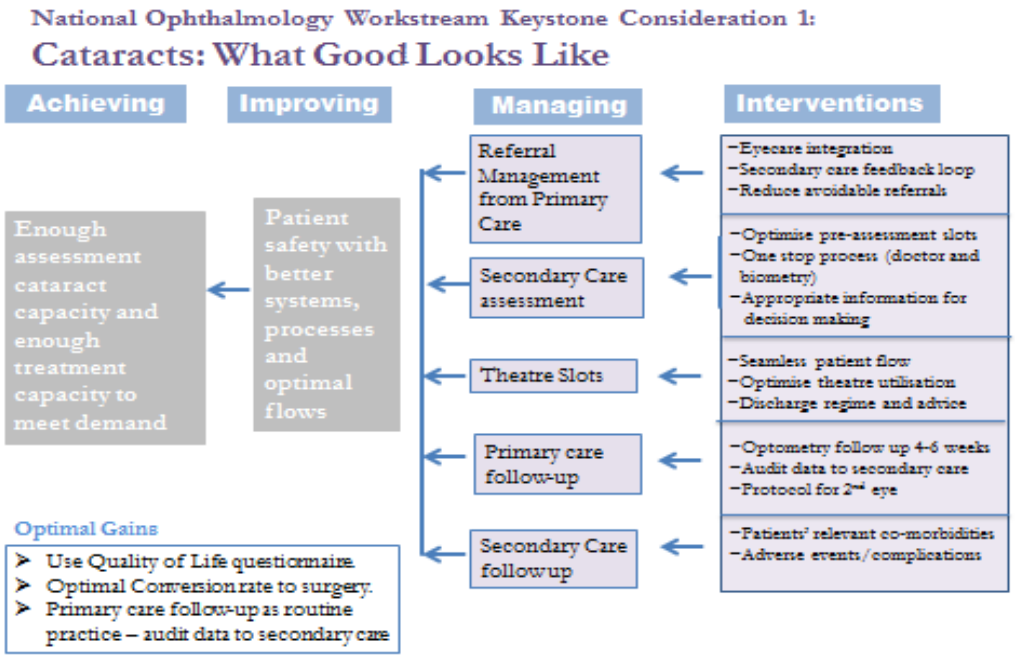


Figure two – Keystone consideration 1: cataracts

Referral Management: The overall objective is to create sufficient assessment and surgical capacity to meet demand. The ophthalmology peer review visits revealed that there is variation across Boards with regard to the numbers of patient referred for cataract surgery and those actually progressing to surgical intervention. This 'conversion rate' from referral from primary care to cataract surgery ranges from 50-90%. This, in part, may be a consequence of Boards being at different stages with the roll out of electronic referrals which allows standard proforma to be completed and sent to secondary care. Presently with non-electronic referrals there is variation in the information received via optometry practices. Ongoing training of optometrists, development of clear pathways and communication between primary and secondary care is in hand to ensure that patients are referred for surgery at the right time with all the necessary information. False positive referrals – those patients who either do not need or wish for surgery – are a poor use of both the patients and hospital time.

Recommendation: Adequate training of primary care practitioners – optometry and general practice – to ensure that those referred for cataract surgery are suitable candidates for surgery. Monitoring of conversion rate to surgery is essential in order to capture appropriate referral patterns.

As a consequence of the variation of conversion rates to cataract surgery, the Director of Optometry at NHS Education Scotland, is developing an e-learning package, supported by webinars and it is anticipated this will rolled out in the middle of 2017.

Secondary Care Assessment: There are different pre-assessment models across the country. In NHS Ayrshire and Arran 75% of patients undergo a rigorous assessment by optometrists and are pre-assessed by nursing staff via telephone - biometry and consent are undertaken on the day of surgery. This is a model that has been in use for many years and is wholly dependent on training of specific optometrists for the role which is on-going and relies on local relationships. It is acknowledged though, that surgeons meeting patients on the day of surgery runs the risk of an increased cancellation rate.

The workforce involved in pre-operative assessment is also variable across the country. In NHS Highland, nurses and hospital optometrists pre-assess patients and consent is taken by the optometrist at the pre-assessment visit. However, in NHS Dumfries and Galloway one nurse undertakes all aspects of the pre-assessment appointment resulting in fewer patients being reviewed within each session; while in NHS Tayside and at the Golden Jubilee consultants review each patient at the pre-assessment clinic prior to being listed for a surgical procedure. Overall the average number of patients pre-assessed in one dedicated cataract session ranges from 3-14 patients. Some HES do not have cataract only pre-assessment slots and assess all ophthalmology patients referred for ophthalmic surgeries in mixed pre-assessment clinics.

Recommendation: Pre-assessment slots should be optimised in a dedicated one stop process to prevent unnecessary hospital visits. The clinics should be streamlined to optimise numbers assessed with adequate space and staff.

Cataract Theatre Throughput: The national monthly management information for the HES has identified significant variation in the number of cataracts undertaken in

a 3.5 hours' theatre session. The majority of cataract surgery is not undertaken on dedicated cataract theatre lists, but on mixed case lists (i.e. with other ophthalmic surgical procedures). On those lists that are 'cataract only' the overall numbers vary from three to seven per session. It was recommended in *Action on Cataracts,* 2001 that one cataract should be undertaken every 30 minutes – including turn-around time and this was re-iterated in the *Monitor Report.* Some Health Boards use a scoring system which outlines the number of cataracts that can be added to a theatre session depending on the degree of surgical difficulty (DSD). This scoring system developed by Dr Patrick Kearns and colleagues in NHS Fife, now adopted at the GJNH, can be found at appendix two.

Recommendation: Cataract theatre lists should aim to undertake one case every half hour.

Turn-around Time

The turn-around time is the critical rate limiting step in cataract surgery theatre utilisation. Departments indicated that generally the limitation in numbers performed was due to lack of support staff (adequate porters, health care assistants, scrub nurses etc.) or because of the geography of the building – leading to delays caused by slow lifts or long distances to travel. The National Ophthalmology Workstream is working with Health Boards to mitigate rate limiting steps and reduce turn-around time.

Making a difference

The MMI has been revised to reflect the fewer number of cataract only sessions undertaken – many cataract surgeries are undertaken as part of a mixed theatre list and consequently the first seven months of data which focussed on the number of cataract surgeries undertaken in a 3.5 hours' theatre session appeared fewer as a consequence of being diluted within mixed theatre lists. The Golden Jubilee National Hospital is exploring ways to reduce their turn-around time through double scrub theatre lists. Currently this sits at 8 minutes – measured form speculum to skin and accounted by:

- 1 minute for writing up the case
- 2 minutes surgeon de-gowning, scrubbing and re-gowning
- 2 minutes prepping patient
- 2 minutes draping
- 1 minute final pre-op check (surgical pause)

If the hospital can delegate prepping and draping to other members of the multi-disciplinary team, there is scope to reduce this time from 8 to 4 minutes. The GJNH is also working towards supporting the training junior surgeons.

There is anecdotal evidence to suggest that some Boards are having difficulty in 'pulling' information from existing theatre systems and require to manually count the number of procedures undertaken for specific sub-specialties. Systems and processes should be able to capture and measure procedures undertaken in an allocated timeframe to ascertain the time taken to undertake cataract procedures in mixed theatre sessions and to benchmark variations across Health Boards and consequently ensure best practices are shared between colleagues.

Recommendation: Explore processes and ensure that turn-around time is as short as possible.

Potential to increase cataract throughput: In November 2016, across NHSScotland, 666 ophthalmology theatre sessions were undertaken. 278 of these sessions were cataract only sessions and 1689 cataracts were performed. Although this equates to an average of 6 cataracts per session, there is still widespread variation ranging from 4-9 cataracts undertaken in a 210 minute theatre session.

Recommendations:

- **Each Health Board should review causes for reduced cataract numbers per list to improve throughput.**
- **Consideration should be given to cataract only lists – alternating with other surgical lists alternate weeks.**

Primary care follow-up post-cataract: Across NHSScotland patients are followed up in a variety of different ways. Some clinicians discharge all patients directly to community optometry following both first and second eye surgery, others restrict discharge to those undergoing second eye surgery only and some review all post-operative cataracts in the HES (usually by in house optometrists, nurses or orthoptists). Patients with other ocular pathology or complicated surgery are not suitable for post-operative review in the community and clear, shared communication channels need to be active for all discharged patients.

NHS Highland has discharged all cataracts directly into the community for more than 10 years – recognised communication channels to the hospital for the patient and the optometrist are in place.

Alongside this, it would seem that the General Ophthalmic Contract has been interpreted differently across Health Board areas with some community optometrists requesting remuneration unless the patient has been discharged by the hospital – therefore first eye cataract cases are all seen in the HES. The peer review visits revealed around 60-70% of patients have cataract surgery on both eyes.

Recommendation: Suitable patients, who have no other ocular morbidity – including complicated surgery - should be considered for discharge to community optometrists for post-operative review and refraction, ensuring that audit forms are returned to secondary care. First and second eyes should be considered and booking processes for those patients that have been deemed clinically appropriate to progress to second eye cataract surgery should be in place.

5.1.2 Out-patient clinics - Long Term Conditions - issues and achievable benefits still to be realised.

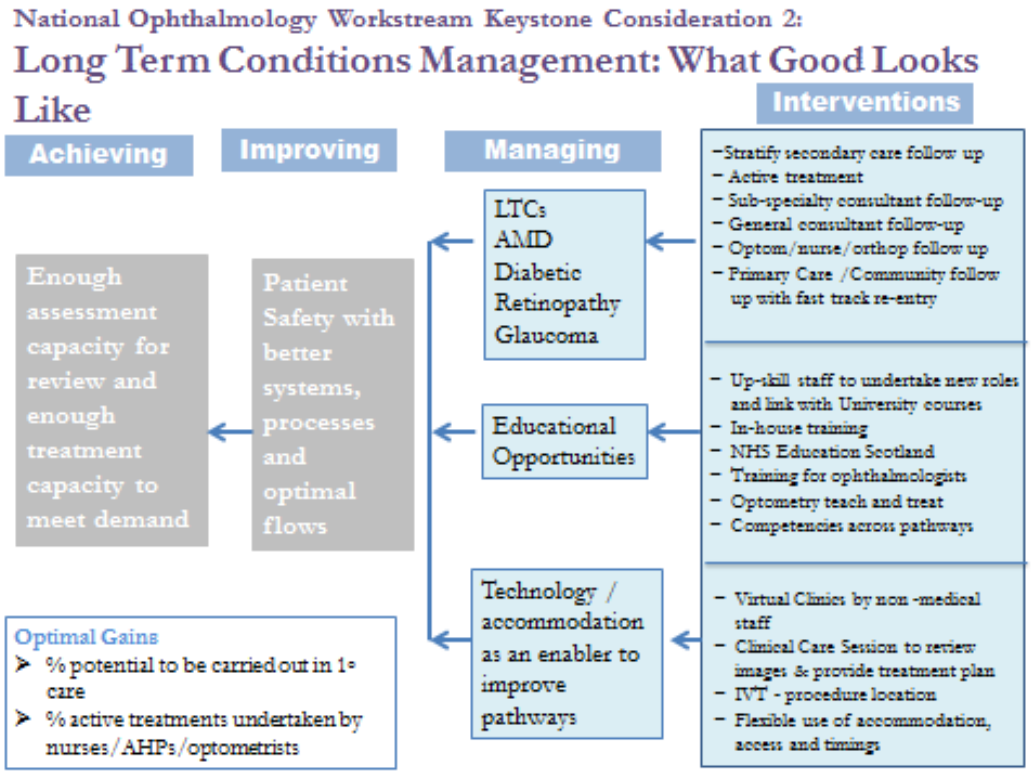


Figure three: Keystone consideration 2: Long Term conditions management

It is recognised that long term ophthalmology conditions require lifelong monitoring and often intervention to prevent deterioration of sight threatening conditions.

Intra-vitreal anti VEGF injections: Pharmacological agents (anti-VEGFs) to treat, previously untreatable, medical retinal conditions such as age-related macular degeneration, diabetic maculopathy and retinal vascular disease are now commonplace. These conditions also require regular diagnostic tests to monitor the effectiveness of the treatment. Previously, injections were administered by medical staff, however, following changes in governance, it has been possible for non-medical Health Care Practitioners - usually nurses - to deliver these treatments following a period of training.

Treatment Regimes: The number of injections that patients receive will depend on their response to treatment, although all patients will routinely receive three loading doses of the drug via intra-vitreal injections. The number of injections any one patient requires can be as few as three but it is clinically appropriate for some patients to require and receive life-long treatment. The number of IVT injections undertaken across the country is extrapolated from different sources: some Boards record this data on hospital systems and in others this information is captured by pharmacy – number of drug vials used.

The MMI highlights that the number of injections carried out in a standard session varies from 12-18 procedures. This, in part, can be explained by newly trained non-medical HCPs who are starting to undertake these procedures. Nurse specialists who have been up-skilled for the past few years are delivering the same number of injections as their medical colleagues with excellent patient satisfaction. As this

workforce continues to undertake these procedures, parity in the number of injections undertaken in each session will expect to be similar across Health Boards.

One of the limiting factors with administration of IVT injections has been highlighted as appropriate accommodation. A clean room is necessary to ensure, as far as possible, a sterile environment in which to undertake the procedure. Otherwise, some NHS Boards have resorted to utilising theatre capacity to ensure patient safety. This will have a compounding effect on the number of surgical procedures undertaken, and is a clear rate limiting factor.

Recommendation: Ensure appropriate accommodation is available to prevent theatre capacity being utilised for procedures that require clean room status. Injections should be carried out in a clean room rather than in theatre

Recommendation: to optimise use of clinical time, anti VEGF injections should be routinely performed by non-medical HCPs – usually, but not exclusively nurses.

Stratified risk of patients: Once firm diagnosis has been determined, patients with chronic ophthalmic conditions should be stratified into low risk, medium risk or high risk in order to determine the optimum mechanism of follow up – which may be face to face with a consultant or an HCP or in a virtual format.

Virtual consultations using technology: Virtual clinics are being used more frequently for long term conditions such as AMD and glaucoma to enable patients to attend for clinical assessment and imaging – which, in the virtual clinic situation - can be undertaken by non-medical HCPs. Images and clinical information are then reviewed by an ophthalmologist remotely, enabling the clinician to review many more patients than they could have done by assessing each patient in person. Only those patients in which there is a change in their clinical condition or who require a decision regarding further treatment require to be reviewed directly by the ophthalmologist.

Recommendation: HCPs should be trained to perform clinical assessment and imaging on low risk patients to help facilitate virtual clinics, where feasible, using appropriate IT and connectivity.

Injection protocols

Not only do patients require to attend for injections, they also require diagnostic tests (OCTs) to assess the effectiveness of the treatment as well as out-patient review by ophthalmologists and/or virtual assessment. In order to utilise all available slots per session, some Boards have chosen to implement a combination of booked with 'see and treat' – one stop appointments. For example, NHS Forth Valley appoints those patients requiring a loading injection (required as initial treatment) at the beginning of a session. This prevents the lag time at the start of a see and treat clinic, especially if the first patients reviewed do not require an IVT injection.

Recommendation: To ensure maximum utilisation of injection slots, consider a mixture of booked and 'see and treat – one stop' slots. This will reduce the number of hospital attendances by patients allowing diagnostic tests, treatments and review to be undertaken in as few appointments as possible to manage the patient's condition as clinically indicated.

Remote and Rural: In remote and rural areas it can be challenging for patients to attend regional centres for review, appropriate patients could be reviewed by a high street optometrist in conjunction with secondary care through the use of technology. This is currently being explored by NHS Ayrshire and Arran who are undertaking a scoping exercise supported by the National Ophthalmology Workstream.

5.2 Enablers – mechanisms to deliver the changes

5.2.1 Health Intelligence - issues and achievable benefits still to be realised

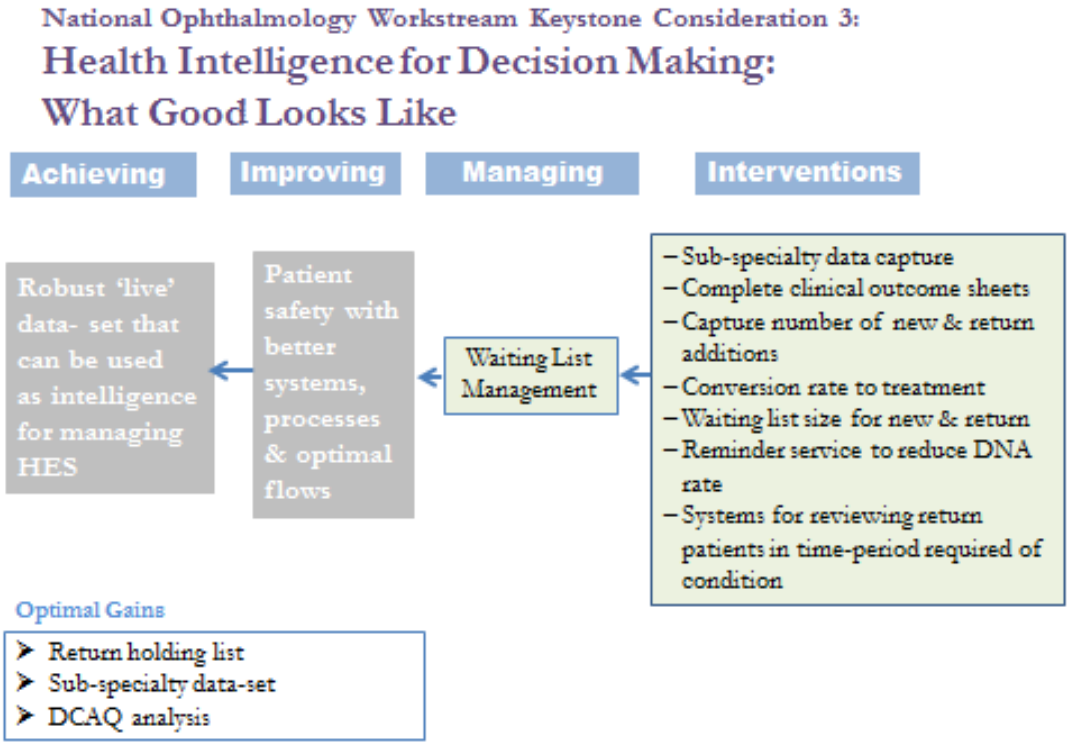


Figure four – keystone consideration Health Intelligence

Information for decision making: Presently, there are limited data to inform capacity planning and what limited data are available are only at general ophthalmology level and not at sub-specialty level or, more specifically at diagnostic level. Such data are essential in order to plan services and manage change in a positive way.

The national ophthalmology workstream is collaborating with Information Services Scotland (ISD) to deliver a solution to improve the dataset and to enable information on review patients - capable of capturing and monitoring the clinically indicated time of review - to be locally implemented and a national return collected. The recognition of the lack of capacity to manage review out-patients has been acknowledged nationally and to proactively manage the capacity required for service delivery, these data are essential. Presently, there is good evidence that patients are being reviewed in a timeframe significantly beyond that requested by the ophthalmologist due to insufficient capacity within existing Hospital Eye Services, and this was confirmed at Board level during the peer review process. This is exacerbated by the general separation of booking new patient appointments from return patient appointments. This indicates that there is an unmet need, but that need has not yet been quantified. The effectiveness of some treatments is

dependent of being reviewed timeously, such that late (expensive) treatments could be wasted treatments, and therefore wasted resource, because the window of treatment opportunity has been missed.

Recommendation: data capture of review patient appointments and any delays to patients being seen in a clinically safe time is required.

From 2008 the number of new outpatients reviewed at Hospital Eye Services increased by 8.8% (ISD). The total attendance at Hospital Eye Services (new and return patients) has increased from 406,609 attendances in 2008 to 438,358 in 2015. This 8% increase in overall attendances reflects the demographics of this patient cohort, along with the fact that individual patients require multiple attendances with a combination of diagnostic tests and, for example numerous intra-vitreal injections to treat conditions such as age-related macular degeneration.

Sub-specialty Tagging: As already highlighted, there is inadequate output of sub-specialty data for drill down. A few Boards are implementing this process although, to date, implementation is variable. As part of a test of change sponsored by the National Ophthalmology Workstream, NHS Lanarkshire has implemented a planned review list (PRL) for their medical retina service which allows the service to appoint patients in the time critical period required of their condition; it also enables the service to quickly identify if extra capacity is necessary at specific times due to a fluctuation in demand/activity is required. NHS Dumfries and Galloway operates a 'hopper' system and has implemented sub-specialty planning across all ophthalmology sub-specialties; this originated via a retrospective data set and currently the Board can prospectively capture which patients require review in a particular timeframe. There is a threshold before and following the clinically indicated date of review that allows a degree of flexibility for booking staff – this period is relative to the length of the review date e.g. if the patients required to be reviewed in one month, there may be a week's flexibility either side of that date. For return appointments, for example, which require a 6 months' appointment this may extend to one month either side. This model ensures patient focussed care can be planned and in tandem with this, will forecast any increase in activity and allow Hospital Eye Services to plan accordingly. Ensuring that all interventions below are actioned will enable each HES to undertake Demand, Capacity, Activity Analysis which will enable patient focussed treatment.

Recommendation: Sub-specialty data capture is essential to make current and future plans – and to manage change intelligently.

5.2.2 Booking Processes / Management - issues and achievable benefits still to be realised.

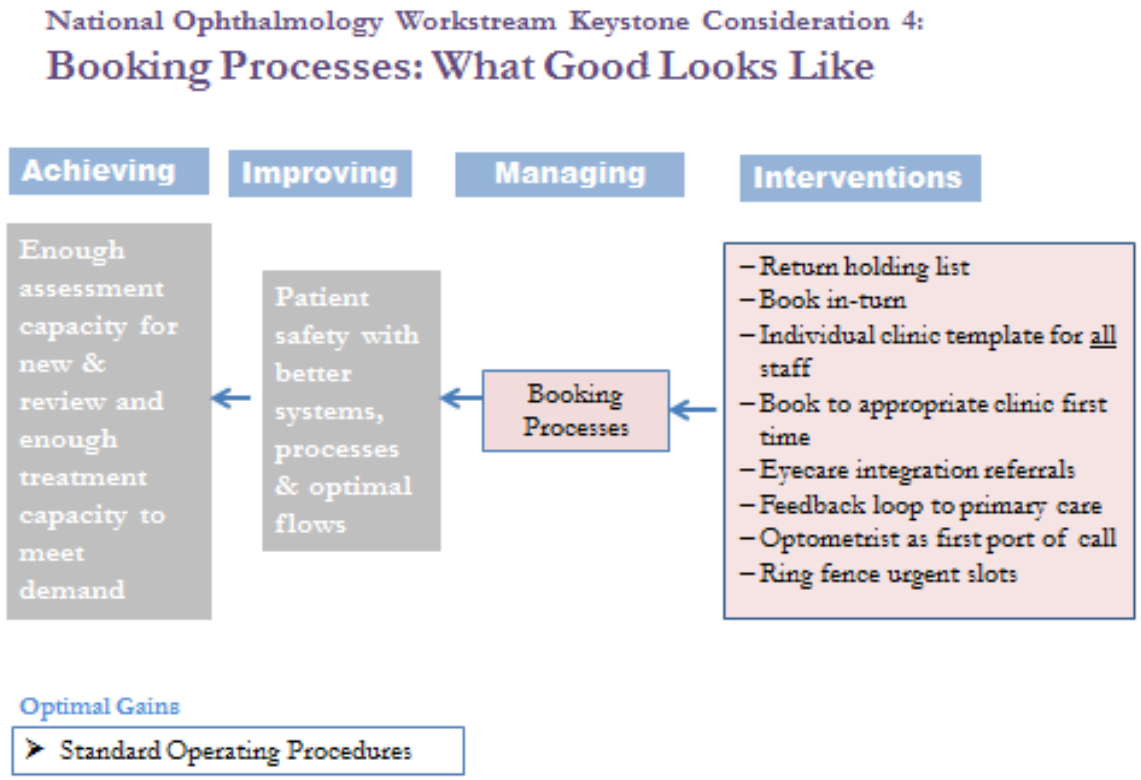


Figure 5: Keystone consideration: Booking Processes

'The way that appointments are booked can have a profound effect on the efficiency of hospital processes and ultimately the delivery of safe and reliable services for patients.' *(Effective Patient booking for NHSScotland).*

Patients should be booked in the clinically indicated timeframe to manage their condition and allow best outcomes of treatments. Staff working in booking areas, irrespective whether it is in a booking hub, or managed by an ophthalmology team, should be aware of the importance of ensuring that diagnostic tests and treatments should be closely aligned to prevent unnecessary duplication of attendances and improve the patient experience and ultimately the clinical outcome.

- Prior to making a referral, the referrer should use a booking fact sheet to discuss the process and purpose of referral with the patient;
- Staff within an NHS Board should work to standard operating procedures/protocols to ensure equity in appointing patients;
- A process should be established to promote booking in turn and to monitor booking processes;
- A standard vetting approach across all hospital sites to include agreement of sub-specialties/capacity categories;
- Continue to support the reduction of DNA/CNA and cancelled clinics with less than 6 weeks' notice;
- Implement a Patient Reminder System to support utilisation of available capacity;
- Ongoing waiting list validation to ensure maximum clinic utilisation;

- Utilise clinic outcome data to support future service planning and review regularly to identify opportunities for improvements to pathways such as required to account for the variation in demand.

Along with this, Hospital Eye Services are, in the main, still using paper systems rather than electronic patient records (EPR) which can be challenging especially when viewing images to assess a patient's disease process. In some areas images are stored as pdfs making the process of assessing images slow and consequently the patient pathway is protracted. A few Boards are introducing 'paper- lite' systems while a few others are using stand-alone modules for a single condition. Information and technology departments wish to ensure, that if specific systems are procured, there should connectivity with existing hospital systems to ensure all information relating to a patient's health/co-morbidities are housed in one area. A test of change is underway in Greater Glasgow and Clyde Health Board using a bespoke version of *Open Eyes* with existing systems and processes (SCI Gateway, Trakcare and Clinical Portal) to ascertain if there is a gap with these existing systems and consequently if *Open Eyes* can bridge the gap and produce an Electronic Record that enables 3-D images to be viewed.

Recommendation: An electronic patient record system that meets the needs of ophthalmology should be introduced in order to permit electronic capture of clinical data, audit and follow up data. Where appropriate this will promote care across primary and secondary care through data sharing.

5.2.3 Workforce - issues and achievable benefits still to be realised

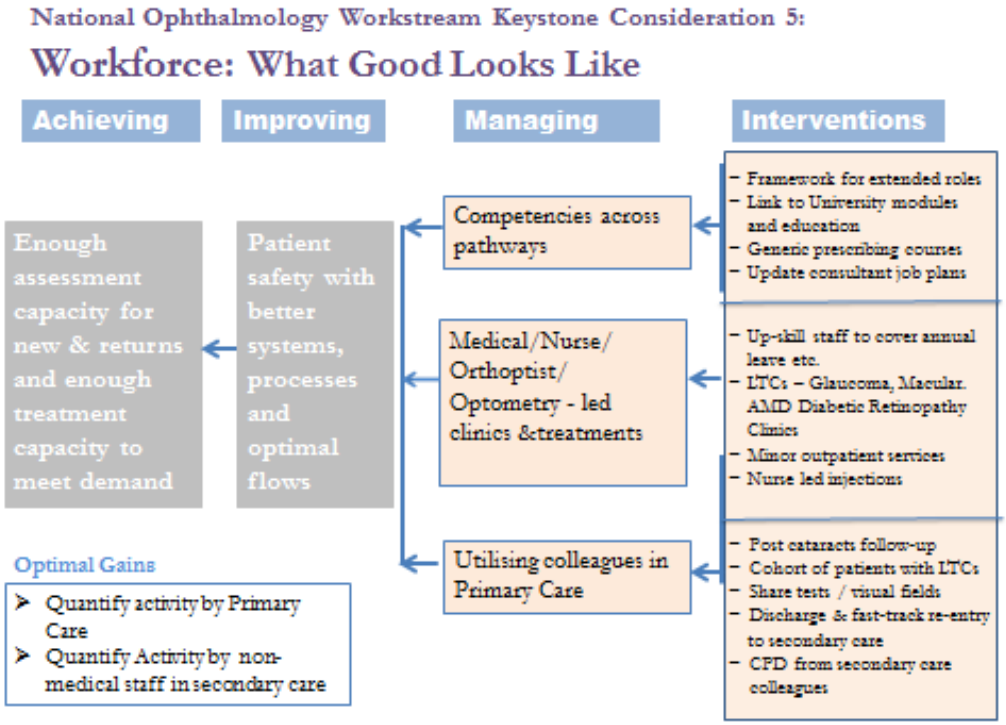


Figure six – Keystone consideration 5: Workforce

There are many good examples of staff roles being expanded and HCPs such as ophthalmic nurses, optometrists and orthoptists undergoing training to undertake further duties in conjunction with and on behalf of medical staff; freeing up

ophthalmologists to make complex clinical decisions and to undertake treatments and surgical procedures. Increasingly, non-medical HCPs within the hospital service are being up-skilled to undertake IVT injections, perform minor surgical interventions, carry out pre-operative cataract assessments, review low risk or stable patients and carry out new and return out-patient clinics across a number of ophthalmology sub-specialties including glaucoma.

Although already staff are employed to undertake these duties and work at the top end of their competencies, there is often no backfill when they are on annual leave and consequently waiting lists accumulate and/or senior medical staff undertake these duties, or undertake extra clinics to ensure patients are reviewed in their clinically indicated timeframe. In order to overcome this issue, Greater Glasgow Clyde are in the process of up-skilling a number of nurse practitioners who will be able to undertake IVT injections on a sessional basis when necessary. Not only does this ensure succession planning, but also promotes continuing professional development. Junior doctors also work alongside non-medical staff as an adjunct to teaching and training by consultant colleagues to ensure that they achieve the competencies required, prior to undertaking many of these procedures autonomously.

Recommendation: In order to deliver treatment(s) in the clinically indicated timeframe, ensure that there are sufficient members of the multi-disciplinary team who are up-skilled in order to provide cross-cover/back fill sessional work when required.

There is a shortage of consultant ophthalmologists in Scotland with a majority (73%) of departments reporting a vacancy and recognising the need for further recruitment in the next 2 years. This is impacting on all aspects of delivery of care including surgery, management of ophthalmic medical conditions and the leadership required to effect change. Imaginative options are essential to attract and retain an adequate highly trained ophthalmic consultant workforce in Scotland. Such options include – consultant appointments across different Boards to accommodate remote and rural issues and consideration of sharing out-of-hours care. Developing multi-disciplinary ophthalmic teams who work together to provide a sustainable service is essential for the current and predicted future demands.

Recommendation: Mechanisms to improve recruitment and retention of consultant ophthalmologists to be explored at national and regional level.

5.2.4 Primary Secondary Care Interface - issues and achievable benefits still to be realised

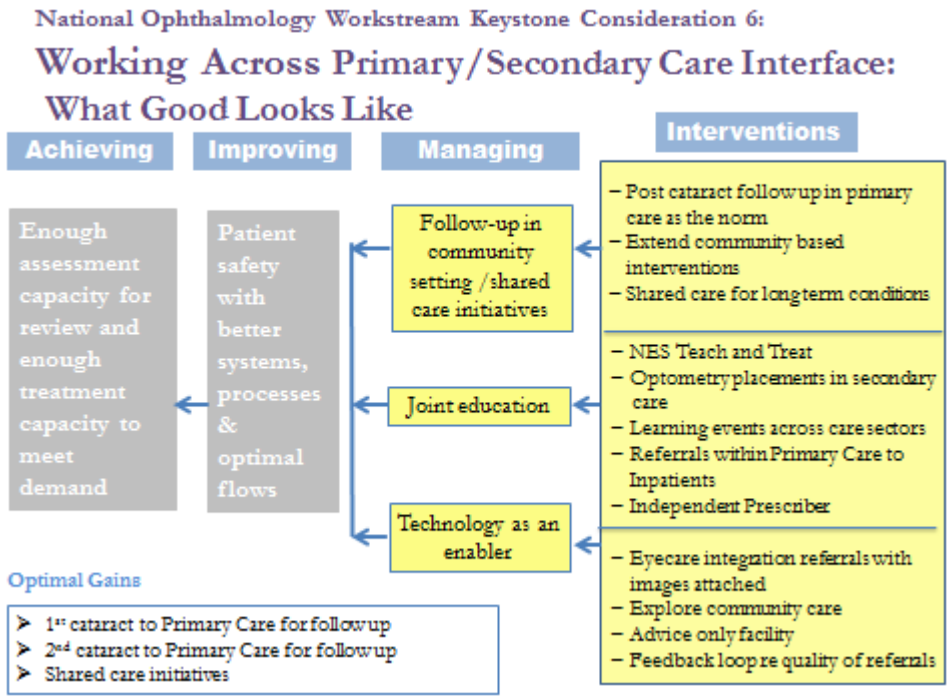


Figure seven – Keystone consideration 6: Primary Secondary Care Interface

There remain a number of ways that the capacity in primary care optometry can be better used to assist delivery of care currently carried out in the HES as highlighted in section 5.1.1.

Increasingly in Scotland, the public recognise that high street optometry is the first port of call for ophthalmic primary care and are sign posted to their optometrist for the assessment of minor eye conditions. Whilst there are a number of independent prescribing optometrists across the country, some Boards work collaboratively with their GP colleagues regarding co-prescribing and therefore enabling prescribed treatments to be commenced in the community and/or to prevent patients attending for follow up appointments in secondary care, for conditions such as diagnosed ocular hypertension. NHS Tayside have discharged patients to the community for this patient group in line with the SIGN guidelines for glaucoma – with clear guidance about when patients should be re-referred.

The Community Eyecare Review has highlighted that "General Ophthalmic Services (GOS): is to be seen as the core service which all optometrists provide, with the need to ensure that all have the required competencies and undertake mandatory and ongoing Continual Professional Development." This, in tandem with a view to registering patients with a named optometrist akin to being registered with a dental or medical practitioner, is being considered to promote continuity of care and patient safety. This is coupled with a need for training to accredited standards that meet NICE guidance for Glaucoma – and cataract and medical retina over the next two years as new NICE guidelines for these conditions are developed.

Recommendation: Continuing training for community optometrists remains a high priority. Identifying mechanisms to provide clinical training within the HES should be considered.

6. Eyecare Integration Network

The Eyecare Integration Programme was initiated some years ago with the objective of sending electronic referrals from the high street optometrist to Hospital Eye Services via pathways in the following conditions: cataract, glaucoma, paediatric, medical retina and general ophthalmology. It was intended that this system would supersede the paper system that had been utilised until this point. To this end the programme has been largely successful with varying degrees of implementation across primary / secondary care, and with work ongoing to ensure all high street practices have the IT infrastructure to send their referrals electronically. This has ensured referrals are received instantaneously in a similar way as other electronic referrals from general practice. Consequently, patients can be triaged quickly, and if an appointment is deemed to be clinically indicated, the patient will be seen as required.

However, given technological advances in other settings, the Eyecare Integration network is unable to handle some fairly basic functions required of it, in terms of the ability to readily upload and share images, to offer electronic feedback on the quality and appropriateness of individual referrals and to serve as a conduit for advice only dialogue, treatment planning or discharge information. Early solutions-oriented dialogue suggests that a mixture of technical and change-management actions could lead to a significantly more agile network and subsequent use.

For example, unlike GP referrals where a feedback loop allows the secondary care clinician to respond to their colleagues in primary care, with advice regarding appropriate treatment / interventions, the system adopted by the Eyecare Integration Programme, simply acknowledges receipt of referral when sent by the optometrist. Limitations in technology mean that in the few places where the advice only function is utilised, it is transmitted to the GP system and not to the optometrist who has made the referral. This has been a source of frustration for many secondary care practitioners who are unable to utilise a function which could in practice avoid unnecessary referrals and could serve as a conduit for advice only dialogue, treatment planning or discharge information. These technological issues extend to IT systems' inability to readily upload and share images that have been undertaken in primary care and consequently, duplication of tests are undertaken in secondary care.

One of the Test of Change projects was to explore a dedicated clinical care session being available to provide local optometrists with advice via SCI Gateway and in doing so assess the benefits of the feedback loop, for example, if this enables patients to be appropriately treated in the community without having to attend secondary care unnecessarily. Further information and outputs will be disseminated to HES as this project progresses and embeds locally.

Recommendation: Proactively address, in the medium term, a parallel way forward, linking efforts across the Community Eyecare Review and the National Ophthalmology Workstream to harness and progress a solution based outcome to these technical challenges.

7. Capacity and Demand

It is essential that Hospital Eye Services understand the total capacity available to them and the activity that is, and could be, achieved within this envelope and outcomes of use. Most relevantly we also need to understand the demand for return slots, and how this can be managed differently, what remains to be done in acute care, and how we can adjust the balance between new and return provision by managing these together. In addition we need to understand, how we can maximise the use of available capacity, whether there is a remaining gap between capacity and demand, and if so how we might address this. Furthermore, a number of services have a remaining one-off backlog of long waiting patients who require assessment following their treatment, who, once seen, will leave the system.

Where a gap remains, plans and actions to address this sustainably are critical. This may involve a mixture of solutions, such as increasing emphasis on community based capacity e.g. Grampian's Eye Network, increasing emphasis on new ways of working which release existing capacity for alternative use e.g. higher volume lists where possible for non-complex cataract procedures, and using the concept of realistic medicine to ascertain the clinical outcomes and direct benefit to patients of certain procedures. Other opportunities that exist to address a remaining capacity imbalance may include further benefits realisation, service reconfiguration, attracting and retaining a suitable workforce and regional solutions, or mid to longer term national investment.

Demand/Capacity Planning and Management

The objective of the 'Getting Ahead' demand/capacity programme is to enable NHSScotland to plan and manage services such that there is a dynamic balance between patients requiring treatment and the capacity available to treat them. To be in balance, capacity must match demand over time; to be dynamic, the number of patients waiting must fluctuate to take account of variation in elective demand and supply, and the requirements for non-elective treatment. On this basis, at appropriate sub-speciality level, there should be sufficient capacity available to meet non-elective demand and admit elective patients within acceptable waiting times.

Further emphasis will be placed on capacity planning and management for ophthalmology in line with the national approach, through which the work will proceed in three stages:

- Available capacity will be detailed based on job plans, clinic templates and theatre schedules, available staff, equipment and space. The optimal utilisation of capacity will be assessed taking account of improvement methodologies and best practice. The optional configuration of capacity will be assessed, taking account of workforce projections and the distribution of facilities.
- Each Board's specialty action plan will explicitly state the difference between projected additions to a treatment queue and planned removals from the queue (i.e. the gap between demand and activity), at appropriate sub-specialty level. The work will cover new outpatients, review outpatients, inpatients, day cases and tests undertaken frequently in HES. Working within the national context, Boards will state available options to close any gap such that activity meets demand and elective waiting lists fluctuate to manage variation in demand and supply; allowing for spikes in non-elective activity. The impact of boarding,

delayed discharges, beds and theatre availability will be assessed. Where there appears to be insufficient options to meet appropriate demand then explicit decisions will be made based on clinical need, patient focused care and population health (for example changing the configuration of services or not providing interventions where there is insufficient evidence of benefit).

- A whole systems model will be developed that places the specialty concerned within the context of wider hospital services and draws on the expertise developed in both the elective and non-elective improvement programmes, particularly relating to the 'flow' work.

8. Community EyeCare Review and its Recommendations

Given the context and the challenges faced by patients accessing eyecare services and by service providers in the community and hospital services alike, and within the context of the National Clinical Strategy, there are remaining opportunities for smoothing the way in which care is provided. As part of this thinking, a Review of Community Eyecare Services has been undertaken, with a view to streamlining pathways and provision across primary secondary care.

The Project Initiation Document for the Community EyeCare Review states that, 'Since the introduction of free GOS eye examinations, community optometrists have been providing more care in the community, reducing the use of secondary care and the need for patients to travel to hospital.' '…a Review of Community Eyecare Services [has been commissioned] to consider the eyecare services that will meet the future needs of the population.' 'The Review will consider and evaluate community eyecare services across Scotland. This process will involve reviewing the current delivery landscape and recommend actions and consider improvements to the service that can provide first-class eyecare services that meet the individual needs of patients.'

The Report of this review work will be available imminently. The conclusions and recommendations will be aligned with the conclusions and recommendations of this National Ophthalmology Workstream report in order that common themes may be highlighted and progressed at pace across the care settings, with increased joint working wherever possible nationally, regionally and locally. This will augment the existing impetus that exists around achieving and embedding change at all levels in all sectors of eyecare services across NHSScotland.

It is anticipated that the way forward will be driven by a NEW (National Eyecare Workstream) programme to be developed and launched in the first half of 2017 – the detail of this programme is currently under discussion. Figure 8 flags potential core elements of the NEW programme.

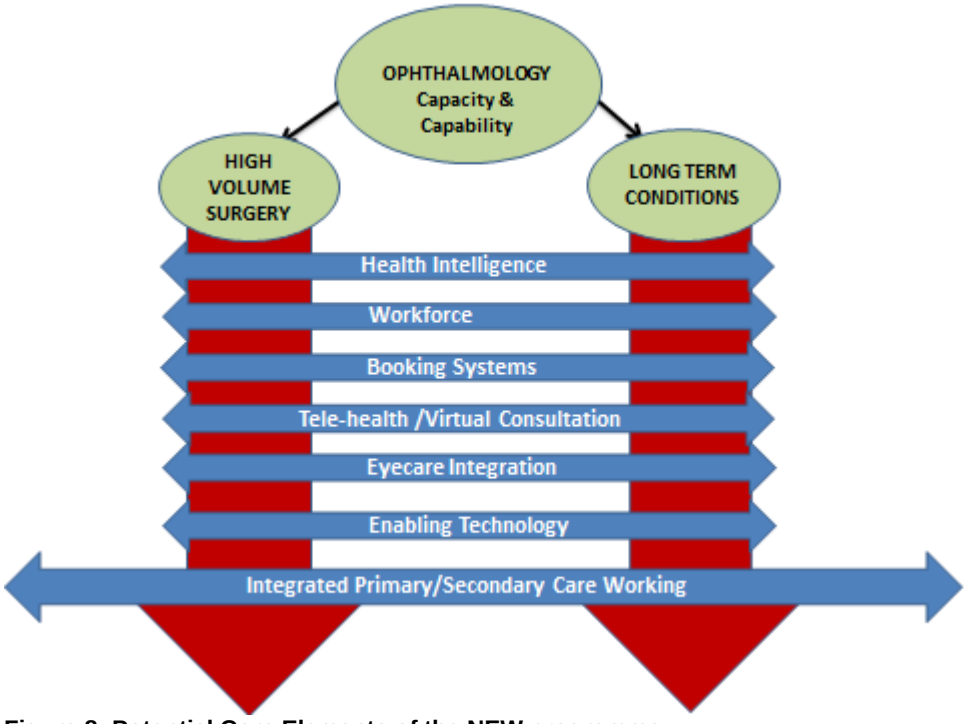


Figure 8: Potential Core Elements of the NEW programme

9. Conclusions

There is ongoing work to iterate and improve the ophthalmology dashboard and data sets in order to proactively manage waiting times for new and return patients and ascertain to sub-specialty level the number and types of conditions that are being reviewed by the service. We continue to develop and share new ways of working by:

- Optimising available resources;
- Training and up-skilling the workforce – including continuing professional development;
- Sharing protocols and pathways;
- Maximising equipment and space to improve pathways and flows.

To date, we have insufficient data to accurately use capacity planning methodologies to manage our Hospital Eye Services. However, multiple workstrands are being implemented, in collaboration with key stakeholders, which will have a positive and cumulative effect in providing a robust data set to understand the metrics and ensure that we proactively review patients in the clinically indicated timeframe, in particular, those patients suffering from sight threatening conditions.

In tandem with this there is an appetite by clinicians and managers to improve services and develop new models of care across Hospital Eye Services in order to:

- Reduce inappropriate referrals;
- Improve hospital flows;
- Increase the discharge rate for those patients who do not require review in secondary care.

The National Ophthalmology Workstream is continuing to work with Boards to support the implementation of their action plans, measure outputs from new ways of working and thereby promote gains and push boundaries for the benefits of patients and staff across Eyecare Services in Scotland.

Recommendations: The whole body of this report is made up of recommendations for achievable benefits. Each Board's action plan will drive ongoing change. This Report is intended to be a dynamic document that will also inform further solutions and benefits at all levels. With the publication of the Community EyeCare Review's recommendations, it is anticipated that closer integrated working will be opportune and that a NEW (National Eyecare Workstream) will emerge for launch and impact during 2017 onwards.

Appendix one: Action Framework

What is the problem? New treatments/drugs for previously untreatable conditions - (e.g. Wet Age Related Macular Degeneration); Ageing population & changing expectations; Propensity to long-term-conditions; ↓ Increasing demand for return outpatient appointments in particular as a consequence; Inadequate capacity to meet that demand; ↓ Limitations of physical capacity; Bottlenecks within secondary care patient flows; Inadequate workforce - Consultant ophthalmologist vacancies within NHSScotland.	**What are the existing initiatives/developments?** Eye Care Integration programme Ophthalmology Short Life Working Group (to November 2013) See Hear Initiative SIGN Guidelines for Glaucoma Scottish Vision Strategy Cross-Party Working Group on Visual Impairment; NES Training Strategy (Learnpro) ↓ Alternative drug/injection treatment, potentially requiring less return visits Upskilling of AHPs/Nurses - trained to deliver IVT injections; Enhancing optometrist skill set in community
What do we know about the problem? Inadequate output of overarching data to inform capacity planning; Inadequate output of sub-specialty data to drill down; Results in artificial variation: ↓ clinic templates not set up optimally (number of new: reviews; timeslots); Booking approaches to return outpatient appointments not consistent; Frequent disparity between requested and actual date of return appointments; ↓ Resource constraints Physical accommodation /equipment Manpower numbers and skill mix (at all levels)	**What are the recommendations?** Capture real-time information to sub specialty level to inform strategic and operational decisions Effective booking processes and training which acknowledge sub specialty variation and are responsive to safe patient care Flexible use of accommodation (flexibility of access & timings); Update consultant job plans to reflect demands on each service – improve attractiveness of consultant posts Up-skill AHPs / nurses (e.g. IVT injections) and consistency of post grading Strengthen work across primary/ secondary care interface (appropriateness of care settings). Improve primary care optometrists training Reduce number of patients returning to secondary care for monitoring by consultant clinicians (e.g. OHT). Use modern technology to help improve patient pathways. Ophthalmic technicians to release ‘trained’ time for skilled activities.

Philosophy: ***Deliver timely safe and effective patient centred treatment to ophthalmology patients across Scotland*** **What are the aims? National Framework for Change** Balance capacity with demand sustainably Streamline pathway(s) that are most appropriate to the individual Appropriately-upskill workforce, working in right settings	**What is the plan?** Working with a range of key stakeholders across the primary/secondary care interface to deliver a balance of capacity with demand sustainably by smoothing pathways & variation, and systems & processes, using the right care professionals in the right setting, by: • **Creating the conditions and profile nationally** • **Articulating what 'good looks like'** • **Clarifying the framework / focus / workstrands – i.e. 'what' needs to be improved** • **Empowering and working with stakeholders – i.e. 'who'** • **Helping with the 'how' and avoiding reinventing the wheel** • **Supporting co-production - sharing and networking** **Output: Consolidation and sustainability**

	Primary Driver	Secondary Driver	Measurement of Success/Outcomes (to be developed)
Smoothing the Journey – Promoting a Seamless Process to support the balance of capacity and demand	*Referrals into secondary care:* efficient referral management / pathways	Managing Demand into secondary care: • Adhering to 5 referral protocols from primary care • Training optometrists in assessment and referral criteria • Consensus on referral thresholds • Consistent information/work-up within primary care to promote timely assessment/intervention in secondary care • Advice-only protocol and feedback on quality of referrals	Reduction in avoidable referrals; Maintain high conversion rates to treatment/intervention;
	Secondary Care Flows and Processes: efficient and effective capacity utilisation	High-level queue management / capacity management: • Optimise use of available capacity; • Reduce and optimise the number of sub-specialty queues; • Appointment scheduling and queue shape (treat-in-turn) • Smoothing variation (in capacity and demand) • Optimal queue size and balance (remove backlog once-only) • Balance capacity with demand sustainably • Plan and manage systems, flows and throughput (trajectories)	Seamless journey – reduction in waiting times through having a system in balance
		Operational clinic management / Standardising booking processes: • Advanced training for admin staff re specialty-specific clinic booking requirements; standard operating policy, list validation • Ensure triage to appropriate clinic first time (general or sub-specialty level); pooling • Review clinic structure (including trauma; daily rapid access clinics; one stop clinics; specialty clinics; virtual clinics; 7-day working, cross Board working); • Review clinic templates to support demand patterns; treat in turn; cancellations/DNAs/CNAs; appointment reminder system	Standardised processes for hub or departmental booking. Tailoring capacity to ensure adequacy and timing of appointment slots (consultant recruitment; job plans; sub specialisation).

		Patient communication: • Supplying information to patients in a format suitable for people with visual impairment • Learnpro module for staff working with patients with sensory impairment	Ensuring that provision is met (communication; transport; access) to support visually impaired patients attendance. Contribution to NHS Education Scotland Learnpro suite
	<u>Follow-up /surveillance flows:</u> Streamlined systems and alternative models for follow-up	Managing return slots successfully: • Review balance of new and return slots in clinic templates; • Weekend clinics / virtual clinics undertaken by HCPs/Nurses • Use return holding list to manage timeframes for returns	Make full and effective use of clinic capacity to smooth journeys. Reduce bottlenecks/long waiting times
		Introduce alternative models for surveillance to reduce follow-up slots needed within secondary care by: • Influence and minimise expectation of multiple return appointments, but recognise the need in certain long term conditions • Timely virtual review / telephone call in low risk/minor conditions. • Community optometry follow-up e.g. post-op cataract; – manage appropriate patients in primary care by optometrists • Use clinical outcome data to identify other pathway opportunities	Patients should not routinely attend OP clinics for post-cataract follow-up within secondary care

	Primary Driver	Secondary Driver	Measurement of Success

Developing the Workforce
 	
- how to use manpower considerations to match capacity with changing patterns of demand
	Extended roles for nurses/ HCPs
	Secondary care
		Up-skill nurses/ HCPs to perform intra-vitreal injections for diabetic retinopathy and wet macular degeneration:
		
		• Clarity/consistency regarding job descriptions
		• Appropriate training / skills' mix for service delivery
		• Establishment and consistent use of local evidence-based protocols
		
		Train HCPs through recognised programmes to assess and, in some instances, treat patients with chronic ophthalmic diseases Working as part of the multi-disciplinary team in face to face, community or virtual clinics
			• Free consultant capacity to undertake duties at higher end of competencies.
			
			• % of injections performed by:
			  • Medical staff
			  • Nurses
			  • Other HCPs
			  •
			
			Numbers of patients seen with glaucoma, diabetic retinopathy, AMD within secondary care

	Extending the remit of optometrists / orthoptists Primary Care	Extending the remit of optometrists / orthoptists • Availability/utilisation of optometry bank and therefore enhanced levels of experience through 'in-reach' work in acute care setting • Up-take of MSc course in optometry e.g. glaucoma patients (Queen Margaret University) and consequently up-skill optometrists in performing level 2 functions in primary care/ community setting	Extend optometrist role in delivering shared care Extend multi-disciplinary team input in order to free consultant capacity to undertake duties at higher end of competencies.
	Strengthening tertiary / local service networks Specialised care	Delivery of specialised procedures: • Robust regional planning, service configuration and pathways; • Ensure complementary skills mix and competencies in low volume/highly specialised procedures. • Focus delivery of high volume procedures in local DGHs.	Delivery of high volume procedures in acute setting and specialist procedures in tertiary setting. Maintaining competencies – centre of excellence

Appendix Two

1. Complexity Grading, Suitability for Pooled Lists and Scheduling of Cataract Lists

At the GJNH at the time of listing the assessing Surgeon writes a surgical plan which specifies;

- Whether patient is being listed for one eye only, first eye then second eye or second eye (we are currently not offering Immediate Sequential Bilateral Surgery)
- Which eye and what IOL (style and Power)
- What LA (this is indicative only and the surgeon on the day will make a final decision)
- Identified Hazards (Medical, Ocular, Pharmacological)
- What special measures may be required (again, indicative only) - temporal incision, vision blue, endothelial protection, hooks etc.
- **DSD (Degree of Surgical Difficulty) Grade, 1-4**
- **Whether this case is suitable for a pooled list or not**

2. COMPLEXITY GRADING (aka DSD-degree of surgical difficulty)

The purpose of the complexity Grading/ DSD, which indicates how technically challenging a case is likely to be, is to enable booking staff to populate lists appropriately, making sure there are enough suitable cases for training where there are juniors and avoid overloading lists with too many complex cases.

To do so they use the following list reduction calculator;

No. Of Grade 3 cases on the list	**Reduce the list by**	**Total on the list**
0	0	7
1	0	7
2	1	6
3	2	5
4 or more	*See below	5

Individual surgeons might elect to have more cases on a list if he/she is comfortable with that, for example;

- When a junior normally allocated to this list is on leave
- If there are no Grade 3s, some surgeons may be comfortable with 8 cases on a “Consultant only list”.
- *Some surgeons will be comfortable a list of “5 X 3”, that is a list of 5 grade 3 cases. Booking office will avoid giving more than 3 DSD 3s to surgeons who are not happy to do this.

Complexity Grading / DSD	**Description…**	**For example…**
1	A very straightforward case, suitable for a novice phaco surgeon	
2	A straightforward case which should cause an experienced surgeon no difficulties	Perhaps one or two of the following; more difficult access, deep-set eye, sub-optimal dilation, on Tamsulosin, significant COPD, difficulty lying flat, anxious or jumpy patient, a dense or mature cataract, high Myopia or Hypermetropia, extreme age (>85), endothelial gutattae etc.
3	A more challenging case for an experienced surgeon, likely to take longer and carrying a higher risk of complication	Perhaps 3 or more of the above, and certainly any of the following; PXF, poor dilation requiring Iris hooks, very difficult access, severe positional / mobility issues
4	A very challenging case with a very high risk of major complication	Lots of the above and certainly any of the following; Phacodonesis, “black cataract”, nanophthalmic eye NB Not suitable for surgery at GJNH

3. “Suitable for a pooled list?”

The purpose of asking the assessor to state Yes or NO to this question is to ensure that surgeons are not confronted with contentious or controversial surgical plans when they meet a patient for the first time on the day of surgery. The surgeon will not have time nor would it be fair on the patient for a re-evaluation of the surgical plan to take place on the day of surgery.

So, any possibility of reasonable disagreement amongst surgeons regarding the following would constitute a contraindication to pooling;

- Whether surgery is indicated at all at this time (for example a patient with early cataract, minimal functional difficulties & still legal to drive. Or again, an only eye situation where the patient is not severely visually impaired)
- which eye should be done (for example, where one eye is amblyopic)
- whether one or both eyes should be done
- What the target post op refraction should be (for example, a hyermetropic or myopic patient with uniocular cataract; do we aim for a balance or emetropia, accepting aneisometropia? Or a myope who currently reads without glasses; do we leave him / her myopic?)
- Whether a toric IOL is indicated
- The list is not exhaustive

NB Complexity/DSD Grading is **NOT** a factor in determining if a patient can be pooled. So long as the listing is uncontroversial, a DSD3 case can nearly always be pooled. One could argue that listing a DSD4 is always controversial

4. Scheduling for theatre

Booking office staff will always try schedule a patient on an operating list of the Consultant who did the listing, unless that Consultant has no dates within the TTG. In that event, those patients who have been designated “ok for pooled list” can be scheduled for another consultant’s list. For those who have been deemed not suitable for pooling, notes are passed for review to either PPK or LW (permanent GJNH Consultants) who may either then take the patient over themselves or re-designate the patient as suitable for a pooled list if the original decision appears questionable.

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