Working smarter not harder: How to transform eyecare delivery in the United Kingdom (part 2)

BY ROSALIND HARRISON

Are we doing enough to meet the current demands on ophthalmic services? In part two of a two-part series, **Rosalind Harrison** explains how efficiency can be improved by setting up eye services in community hubs.

The problems and challenges of delivering an effective NHS ophthalmology service have been studied and are well understood, and a range of solutions have been proposed. A concise summary can be found in *The Way Forward Executive Summary*, published by the Royal College of Ophthalmologists (see below) [1], but these are also discussed in other reports including the *Getting it Right First Time (GIRFT) Programme National Specialty Report [2]*, and NHS *England's Transforming elective care services ophthalmology* [3].

Common themes

From the research undertaken, the common themes that run through the new models of care encompass mechanisms to:

- **Improve referrals** so that fewer patients reach hospital who do not require to be there – reducing false positive, unnecessary referrals and retaining simple conditions in the community.
- **Maximise use of consultant time and expertise** with the backing of an effective team made up of medical and non-medical eye healthcare professionals (HCPs).
- **Identify optimum flow through hospital clinics, treatment rooms and operating theatres** to increase numbers of patients being treated, reduce numbers of review appointments and improve patient experience using:
  - Trained multidisciplinary teams
  - Integration of entire patient pathways
  - Modern IT systems – virtual clinics and improved communication
  - Risk stratification of clinics to permit HCPs to see low risk patients to protocol.
- **Develop discharge policies** and shared care protocols
- **Enhance the ophthalmology multidisciplinary team and working practices** within the hospital and the community. These are dependent on:
  - Adequate recruitment and retention
  - Appropriate training and upskilling.

The changes outlined cannot be expected to meet the current and future increase in demand without **more funding** but they will help to provide a basis to demonstrate that need.

The development of a multidisciplinary eye healthcare team has emerged as a consistent theme in the report findings. Used well, this team can ensure that **consultant time is optimised**, freeing up more time to perform surgery, deal with the more complex patients and concentrate on decision-making commensurate with their extensive training and experience.

Information gathered in *The Way Forward* also suggests that broadening the team can enhance patient experience and improve overall staff satisfaction and morale when used well. However, it is also clear that **recruiting, training and retaining** this new workforce has its challenges, but is a priority [1].

What needs to be done is understood; how the service can be transformed is the issue. There is now consensus that a hospital-based eye service cannot deliver care to all who need it and at least part of the service must be transferred to the community. The *Report of the Independent Review of Diagnostic Services for NHS England Community* proposed the setting up of community diagnostic hubs (CDHs) for this purpose: "A three-tier model can therefore be envisaged: high street optometrists for case finding and some ongoing low risk virtual and face-to-face care; CDHs for high flow, rapid throughput ongoing monitoring of patients with established conditions; and hospital clinics largely reserved for those who need treatment or very high risk / complex cases. Effective IT connectivity between these tiers will be essential" [4].

NHS England is now being restructured into Integrated Care Systems and has created a National Eye Care Recovery and Transformation (NECRT) Programme whose goals include:

- Embed digitally enabled system transformation including:
  - implementation of electronic eye care referrals (EeRS)
  - implementation of digitally supported services such as video consultations and virtually reported diagnostics only assessments
  - implementing or accessing a digital diagnostic hub that provides a range of services across eyecare pathways and referrals [5].

The extent to which virtual clinics can address the backlog of eye outpatient appointments is unclear. Virtual clinics are being utilised for patients with glaucoma and medical retina conditions, but as the NHS does not disease code outpatient attendances the total number of patients with these conditions and the proportion that would be suitable for virtual clinics is unknown; and patients attending virtual clinics should have face-to-face consultations every second or third visit [6].

In my previous article I described how ophthalmologists in the United States can see many more patients by working with technicians in a pod with around five lanes (examination rooms), thus shortening both the consultation time and the time between consultations. Although there is no national data, a UK

ophthalmologist probably sees about 12 to 14 patients per half day clinic, at an average rate of 15 minutes or more per patient; a US ophthalmologist would see a patient around every 10 minutes or less. If pods were added to community hubs the costs would be relatively small and more than justified by the additional numbers of patients that could be seen. There are around nine million hospital outpatient attendances in England per year, and even if half were seen in community hubs this would generate 1.5 million additional appointments [3].

There are shortages of ophthalmic staff at all levels, but technicians are among the least expensive and require less time in training. There is now a level 4 Healthcare Science apprenticeship for ophthalmic technicians [7,8]. Many hospital Trusts have surplus apprenticeship levy funds to pay for apprenticeship training but there has been some reluctance to use this for ophthalmic staff. This appears to be an ophthalmic-specific institutional scotoma which I find particularly surprising given the expansion of virtual clinics, as poor-quality diagnostic tests will compromise clinical decisions. When US ophthalmologists began to employ ophthalmic technicians in the 1960s they established a certification programme, the Joint Commission for Allied Health Personal in Ophthalmology (JCAHPO). When I observed the JCAHPO training programmes and the clinical practice of US ophthalmic technicians I was struck both by the degree to which ophthalmologists delegated their work to the technicians, and the commitment of technicians to producing high quality test results. It is well established that apprenticeships reduce high staff turnover and thus the costs of recruitment and training, and trained staff increase practice efficiency [9,10].

Setting up an efficient eye service in a community hub

When seeking to improve efficiency it must always be kept in mind that, first and foremost, treatment and care must be delivered to agreed, evidence-based standards. Quality standards describe what should be delivered, and efficiency is about how these can be delivered most effectively. If there is a conflict between quality and efficiency, quality must always take precedence.

1. **Location.** There can be little doubt that, all other aspects of the service being equal, patients would prefer to be seen in a community rather than a hospital clinic, and it would be more convenient and less confusing if they are seen in one location for their virtual and face-to-face appointments. The best location is likely to be in the city or town centre where there are good public transport systems and car parking. There is an abundance of empty retail properties and currently it is a buyers or leaseholder's market, and the increased footfall could benefit communities and businesses [11].
2. **Clinic layout.** This should be the hub-pod-lane plan outlined in Part 1. Each pod should have its own waiting area and toilet facilities and there should be line of sight between the reception, sub-waiting area and the corridor between the examination rooms so that patients can see where they need to go without signs or the need to ask for directions. The layout should follow the patient journey, with diagnostic rooms nearer the entrance and examination rooms furthest away. Diagnostic rooms should be single use with one piece of diagnostic equipment in each, as multiuse diagnostic rooms can generate queues and delays. There should be sufficient diagnostic equipment for patients to have all necessary tests in one visit. Five examination rooms per pod or less should be more than sufficient for UK practice.
3. **Clinic scheduling.** Each consultant ophthalmologist would be allocated a pod and a sufficient number of ophthalmic technicians to undertake the diagnostic tests and patient workups for the scheduled number of patients. Adjacent pods could be allocated to non-medical ophthalmic practitioners working with the consultant, and for virtual clinics. Experienced technicians working in virtual clinics would be able to identify patients with signs of disease progression and they could be reviewed by the consultant during the session. This would reduce the need for additional appointments and would be more efficient and undoubtedly more acceptable to the patients.

   A clinic schedule that maximises efficiency is a continuing, collaborative team effort, and time should be set aside for key members of the team to review and improve the schedule.
4. **Staffing and staff training**. An ophthalmologist would be supported by around six or seven technicians – two or three to do the diagnostic tests and three or four to work in the examination rooms. An ophthalmic practitioner (optometrist, ophthalmic nurse, orthoptist, clinical scientist) would have less technician support and would do more of the patient workup but would still be working in at least two examination rooms as this would minimise the time between consultations.

   In a hospital eye clinic, the consultant and a trainee ophthalmologist or ophthalmic practitioner will have separate lists of patients in separate rooms and unless the consultant's list is reduced, the opportunities for supervision and discussion with the trainee can be limited. The pod / lane model overcomes these difficulties, as a trainee can be allocated an examination room where they can workup patients alongside the technicians, but when the consultant visits the room, the trainee will present not just the clinical findings but also a diagnosis and management plan. In this way the trainee has the benefit of the consultant's supervision whilst high levels of patient throughput are maintained.

   The pod / lane model facilitates the learning experience of technicians as this enhances their understanding of how the ophthalmologist uses diagnostic test results to diagnose and manage the patient's condition. They can also gain a better appreciation of the importance of ensuring that the ophthalmologist is presented with the best possible test result that can be obtained from the patient.
5. **Information management.** Each community hub should have an ophthalmic electronic medical records (EMR) system that at the least meets the minimum Royal College of Ophthalmologists (RCOphth) requirements, including the facility to code all ophthalmic diseases and conditions using ICD-10 [12]. There are guides for ICD-10 coding on the American Academy of Ophthalmology website and coding courses can be provided for designated ophthalmic staff to monitor coding accuracy [13]. EMRs can generate letters that include diagnosis and clinical data. During the consultation the ophthalmologist can dictate the treatment and management plan that the associate / technician can transcribe into the EMR.

   The service must follow evidence-based guidelines, and this should be subject to regular audit. Data from the EMR can be accessed for comprehensive audits of treatment and the outcomes of treatments for the different categories of ophthalmic diseases and can be entered into National Ophthalmology Databases (NODs). It would also be possible to use the data to determine the costs of delivering the service broken down according to disease categories. It would be easier to calculate the costs in an ophthalmic hub than in an eye department in a hospital trust; costs can then be linked to disease codes and procedures to determine realistic levels of funding for the range of conditions that are treated and could replace the current system of new and follow-up outpatient tariffs.
6. **Quality and efficiency.** All assessments, treatment and care provided in the hub must be patient centred, and patient

feedback should be ascertained on a routine basis. All patients should receive timely new and follow-up appointments and as a matter of policy all assessments and clinical decisions should be made wherever possible during one appointment. Assessments and consultations should be scheduled to minimise the time patients, relatives and carers need to spend in the hub. There should be agreed quality and efficiency benchmarks to ensure standards are maintained and areas for improvement are identified and addressed.

The number of patients seen per clinician will be the most important factor determining the efficiency and cost-effectiveness of the service. This should be kept under regular review, with measures implemented to increase patient throughput with the proviso that they do not compromise patient care.

Summary

There is no question that the ophthalmology service needs to expand to meet current and future demands and this will require increases in staff and staff training, equipment, clinic space and information technology. I believe that the model I have proposed is the most cost-efficient whilst ensuring that quality standards are maintained, for the following reasons:

- Creating community-based ophthalmic hubs on the hub / pod / lane model will increase the numbers of patients who can be seen per clinician and will make the greatest contribution to addressing the deficits in ophthalmic care delivery. Even greater efficiencies may be achieved if these combine virtual and face-to-face consultations, as additional appointments to see a clinician can be minimised.
- A proportionally greater increase in the numbers of technicians than more expensive staff will be more cost efficient, with the additional benefit of increasing the efficiency of the working practices of the more expensive team members.
- A hub / pod / lane model will provide opportunities for and facilitate the training of both non-medical clinical staff and support staff at all levels.
- Organising and scheduling clinics such that, wherever possible, all assessments and clinical decisions are made with one clinical visit will reduce the number of clinic attendances and improve the efficiency of the service, and will benefit patients and accompanying relatives and carers.
- Ophthalmic-specific EMRs should be used in all clinical settings. All ophthalmic diseases and conditions should be coded using ICD-10 and SNOMED CT and linked to agreed standard benchmarks for common ophthalmic conditions. This will improve the speed and accuracy of clinical decision-making and facilitate the audit and standardisation of the delivery of clinical care.
- The routine collection of data about the conditions being treated and the procedures undertaken, when linked to costs, can provide commissioners with realistic estimates of the costs of service provision. The data can also be used to improve cost efficiencies.

References

1. The Way Forward Executive Summary. Royal College of Ophthalmologists. 2017: https://www.rcophth.ac.uk/wp-content/uploads/2021/12/RCOphth-The-Way-Forward-Executive-Summary-300117.pdf
2. MacEwen C, Davis A, Chang L. Ophthalmology GIRFT Programme National Specialty Report. 2019: https://gettingitrightfirsttime.co.uk/wp-content/uploads/2019/12/OphthalmologyReportGIRFT19P-FINAL.pdf
3. Transforming elective care services ophthalmology. NHS England. 2019: https://www.england.nhs.uk/wp-content/uploads/2019/01/ophthalmology-elective-care-handbook-v1.1.pdf
4. Richards M. Diagnostics: Recovery and Renewal: Report of the Independent Review of Diagnostic Services for NHS England. 2020: https://www.england.nhs.uk/wp-content/uploads/2020/11/diagnostics-recovery-and-renewal-independent-review-of-diagnostic-services-for-nhs-england-2.pdf
5. Eye Care Planning Implementation Guidance 2021-22 Summary (Annexe). Royal College of Ophthalmologists. 2021: https://www.rcophth.ac.uk/news-views/eye-care-planning-and-implementation-guidance-21/
6. Standards for Virtual Clinics in Glaucoma Care in the NHS Hospital Eye Service. Royal College of Ophthalmologists. 2016: https://www.rcophth.ac.uk/wp-content/uploads/2017/03/Virtual-Glaucoma-Clinics.pdf
7. Apprenticeships. NSHCS. 2021: https://nshcs.hee.nhs.uk/programmes/apprenticeships/
8. Level 4 HCS Associate Apprenticeship. AHPO. 2021: https://www.ahpo.net apprenticeships/level-4-healthcare-science-hcs-associate-apprenticeship/
9. The Cost of Employee or Staff Turnover. Bright HR: https://www.brighthr.com/articles/culture-and-performance/staff-turnover/employee-turnover-costs/
10. Achieving the benefits of apprenticeships: A guide for employers. National Apprenticeship Service. 2018: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800060/Achieving_the_benefits_of_apprenticeships.pdf
11. Hammond G, Hancock A. What will happen to all of Britain's empty shops? *Financial Times* 2021: https://www.ft.com/content/44c442ff-3baf-41ae-b5b0-1916613593ee
12. Somner J, Hingorani M, Sparrow J. Electronic Medical Records – Standards for UK Ophthalmology Services. Royal College of Ophthalmologists: https://www.rcophth.ac.uk/wp-content/uploads/2018/06/Electronic-Medical-Records-Standards-for-UK-Ophthalmology-Services.pdf
13. ICD-10-CM for Ophthalmology. American Academy of Ophthalmology. 2021: https://www.aao.org/practice-management/coding/icd-10-cm

(All links last accessed December 2021)

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