

Improving care and increasing efficiency—challenges in the care of chronic eye diseases

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EDITORIAL

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In March 2010, the government announced its Quality, Innovation, Productivity and Prevention (QIPP) initiative for England, which aimed to make £20 billion of efficiency savings in the NHS by 2015.¹ The scheme calls for reduction in hospital-based care through an increase in care closer to home, efficiency through new technology and innovation through medical research.²

As with most industrialised nations, the UK population is living longer; in 2010, there were 19 million individuals over the age of 60 years and this number is predicted to increase to 28 million by 2035.³ While evidence suggests that most people are enjoying more healthy older age now than ever before, older people are still at a greater risk of developing disease and remain disproportionate users of healthcare services.⁴ Within ophthalmology, there is an increase in prevalence of age-related macular degeneration (AMD), diabetic retinopathy (DR) and glaucoma, all of which are potentially blinding conditions that frequently require lifelong monitoring, and often treatment, to prevent irreversible visual loss.^{5–8}

Use of hospital outpatient services for ophthalmology ranked second only to orthopaedics and trauma (6.3 *vs* 7.1 million outpatient appointments in 2011–12, respectively). Hospital eye care accounts for 8.6% of all outpatient activity in NHS England. For example, at Moorfields Eye Hospital NHS Foundation Trust, glaucoma and medical retina follow-up appointments constituted 146 707 attendances over the 2011–12 period, accounting for 45% of all follow-up attendances across the Trust. With the 2014–15 National Tariff Payment System recommending prices for ophthalmology out-patient services at ~£100

for new patients and ~£85 for follow-up consultant-led attendances,⁹ these attendances represent a major and ever-increasing cost burden. Total costs will only increase when we consider the implementation of the 2009 NICE guidelines, which prompted a considerable increase in the number of glaucoma-suspect referrals,^{10,11} the advent of new treatments (such as anti-VEGF injections) for AMD,¹² and, more recently, DR,¹³ which requires regular administration and patient monitoring by ophthalmologists.

The increasing prevalence of chronic eye diseases, increasingly widespread use of diagnostic technology by optometrists, and the chronicity of these conditions have been taken into consideration by some hospital eye departments to predict capacity problems in meeting the demand for ophthalmology out-patient services.^{14–16} To illustrate this, we have developed a model based on appointment interval outcome data obtained from patients attending the Glaucoma Service at Moorfields Eye Hospital between 1 April and 30 June 2013. The model starts from 0 patients and assumes a stable stream of 10 new referrals per week for one consultant's clinic. The case mix includes complex, unstable or surgical cases, and stable patients. The data obtained suggest that ~30% of new referrals to the clinic and 8% of those on 12-month interval are discharged, with a much smaller discharge rate for those under the service for shorter follow-up periods. Figure 1 illustrates the predicted weekly demand for appointments in this new consultant's service over a 15-year period.

Secondary care providers are under increasing pressure to keep new to follow-up ratios at or less than 1:2.5, with penalties being imposed if targets are not met.¹⁷ However, ophthalmology departments often have very

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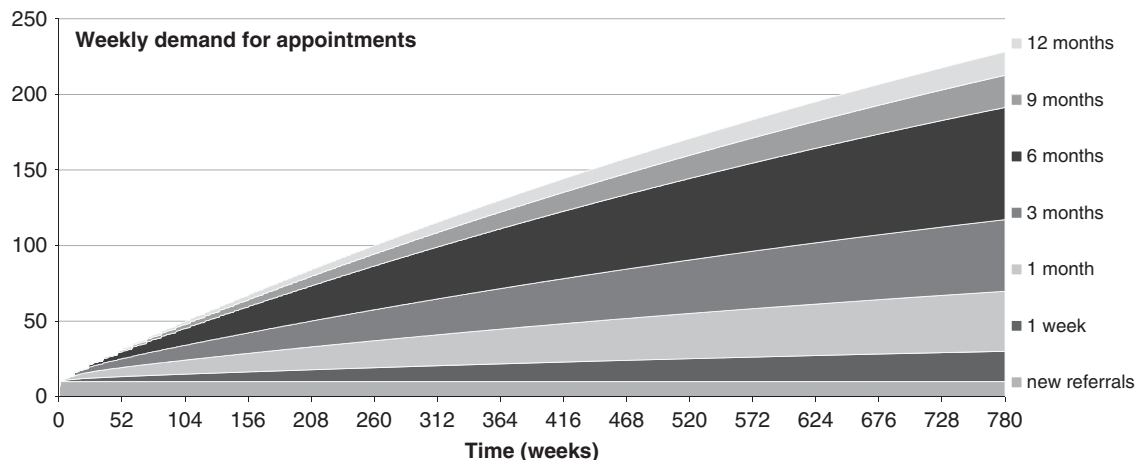


Figure 1 Projected weekly demand (number of patients) for an outpatient glaucoma clinic based on retrospective data obtained from Moorfields Eye Hospital glaucoma service over a 3-month period. The interval for follow-up appointment in the new clinic ranges from a single week to 12 months, and there are 10 new referrals to the clinic every week.

different new to follow-up ratios¹⁸ as patients with chronic eye disease cannot be discharged to a primary care setting. Guidelines that outline the recommended intervals for patient monitoring have been developed to ensure that patients are monitored at intervals appropriate to their risk of disease progression and visual loss.^{19,20} Bringing patients back too frequently increases the demand for appointments and may result in overbooked clinics, which in turn may lead to inappropriate appointment rescheduling. Delays in appointments have implications for patient safety.^{21,22}

There are a number of approaches to meeting the increasing demand for services. One is to increase clinic capacity,²³ which, although may in the short term lead to a reduction of waiting times, is not a viable long-term solution (as Figure 1 demonstrates). Another is to implement community eye care schemes, whereby 'stable' patients may be discharged from secondary care to be followed up within the community, usually by suitably trained optometrists. While there has been a drive towards this model of care,²⁴ anecdotal evidence suggests that the success of such schemes is very much dependent on a high level of secondary care input and overall supervision.²⁵ Furthermore, there is a concern that moving care from secondary to primary settings may be at the expense of care quality and that costs for such services are often greater than expected.^{26,27} While there are a number of successful community models of primary care ophthalmology that improve the quality of new referrals into secondary care,^{28–32} there is a scarcity of evidence concerning the viability of community monitoring services for people with stable eye diseases. Furthermore, there is evidence to suggest that non-attendances to non-ophthalmologist-led community

services are greater than those in NHS secondary care settings.³³

Even with such community schemes, there will always be a number of patients who are not suitable for, or who do not want, community monitoring. These patients need to be managed efficiently within the acute NHS setting.

In the care of chronic ophthalmic disease, the patient journey time per outpatient appointment can be lengthy³⁴ and depends on the number of pre-consultation monitoring tests and the availability of tests/staff on the day. Recommended guidelines for frequency of testing are often not followed due to time constraints within busy outpatient settings,³⁵ which may be detrimental to the patient. While regular patient monitoring is necessary, there is no doubt that a more efficient approach to patient care is required if the hospital eye service is to cope with increasing demand.

Efficiency may sometimes be misinterpreted as a 100% utilisation of resources.^{23,36} This approach can lead to an increase in 'time wastage', whereby time is wasted triaging, prioritizing, and managing patients rather than being used to diagnose and treat patient conditions. A more efficient use of resources would be to reorganize patient flow through the system. Patient flow describes the flow of patients between staff, departments, and organizations through the care pathway. Poor patient flow increases the likelihood of harm to patients and increases healthcare costs when 'unnecessary' processes waste precious resources.³⁷

The issue of optimizing patient flow through ophthalmology clinics is not new and is being addressed by NHS and independent sector providers. As an example, The Royal Hallamshire Hospital in Sheffield

has for over 20 years run a virtual Glaucoma Monitoring Unit for stable glaucoma patients, staffed by technicians. The service removes the face-to-face ophthalmologist consultation and data are reviewed remotely by a consultant ophthalmologist (S Longstaff, personal communication, 15 January 2014). The average patient journey time is 40 min, with a review/GP and patient information turnaround of 2 weeks. A similar model for glaucoma care is run by an independent sector provider,^{38,39} although this model utilizes specialist trained optometrists for the face-to-face consultation, with consultant ophthalmologist review of data to ratify clinical decisions. Both services make use of the electronic patient record (EPR) to deliver their service. Whilst the 'virtual' approach has been used to facilitate specialist ophthalmological consultation in remote areas,^{40,41} these examples support the possibility of removing some face-to-face doctor consultations as a more efficient way to manage some patients *within* the NHS.⁴²

The NHS Operating Framework 2012–13 encourages clinical commissioning groups to adopt innovation within their local reconfiguration plans, and cites removal of the face-to-face consultation as an efficient method to deliver care.⁴³ The use of this type of model remains contentious, may have unintended consequences, and needs to be assessed alongside, and relative to, other interventions to improve quality and efficiency.^{44,45}

Within the NHS, implementation of redesigned services may be inhibited by a lack of clinical engagement due to disagreement about their purpose, resistance to standardisation, and their perceived relevance to only some clinical groups.⁴⁶ There may be difficulties with aligning different managerial and clinical groups in the context of clinical service redesign,^{47,48} as well as changing inter-professional relationships.⁴⁹ A further barrier to the success of any new NHS care pathway is a lack of evidence on effectiveness, cost-effectiveness, viability, sustainability, safety, and acceptability to patients and clinicians. The approach to such evaluations should combine the question 'what works, at what cost?' with a study of the development, implementation, and sustainability of these models, including the views of the multiple stakeholders likely to be affected by the implementation.^{50,51} Ongoing evaluation of services, which may include non-participant observation or ethnographic methods,⁵² coupled with analysis of outcomes, costs, and modelling should be used to identify aspects of the organisational context that influence the implementation of change and to support the iterative development of services that builds on such evidence.

In the current climate of increasing demand and limited clinic capacity, radical change in provision is needed, but without good-quality evidence, NHS ophthalmology providers will remain divided in their approach to the care of chronic eye disease. Ophthalmology services are in critical need of robust evaluation to determine which clinical pathways best suit the increasing demand for services. Without evaluation, we run the risk of taking distinctly disparate approaches to care, with little idea of what is best for the patient.

Conflict of interest

The authors declare no conflict of interest.

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