

Specialist high-street eye clinics for managing patients with retinal disorders can enhance care standards

BY ROD MCNEIL

The author examines the successful introduction of community-based retinal clinic services by Manchester University NHS Foundation Trust.



Dr Sajjad Mahmood, Consultant Ophthalmologist, MREH, shares experience of establishing community-based medical retina clinic services.

Sight loss from age-related macular degeneration (AMD), cataract, diabetic retinopathy, glaucoma and under-corrected refractive error affected an estimated 1.93 (1.58 to 2.31) million people in the UK in 2013, a burden projected to double to approximately four million people by 2050 with demographic ageing [1]. The share of sight loss from AMD, a leading cause of visual impairment and severe vision loss, is projected to rise from 23.1% in 2013 to 29.7% by 2050, while diabetic macular oedema (DMO) is a major cause of vision loss among adults of working age [1-3]. The UK National Eye Health Survey will provide updated, robust nationally-representative data on the prevalence and causes of sight impairment in 2020.

If detected and treated promptly, some sight loss from AMD, diabetic retinopathy

and other retinal diseases may be averted [4]. Mitchell et al. note that treatment with intravitreal anti-vascular endothelial growth factor (anti-VEGF) therapy for neovascular AMD (nAMD) has markedly decreased the prevalence of visual impairment in populations worldwide [2].

Service redesign offers opportunities to maximise efficiencies and resources to better meet current and future demand for additional capacity in medical retina services and the hospital eye service (HES) generally [5]. Community-based high street clinic services for the management of people diagnosed with retinal disease and receiving active treatment within the NHS have been successfully introduced by Manchester University NHS Foundation Trust in North and South Manchester. In an interview with the author, Dr Sajjad Mahmood, Consultant Ophthalmologist, Manchester Royal Eye Hospital (MREH), shares his experience on the approach taken to enhancing medical retina service delivery beyond the hospital setting in the Greater Manchester area.

In Manchester, close to 3000 patients each month require review and assessment for treatment of sight-threatening retinal disease. Growing demand for eye care services was negatively impacting the ability to offer timely review and follow-up appointments and, with the service covering an area encompassing a 30-mile radius, accessibility to hospital-based appointments was a major barrier for many patients. The two new high street-based services, located in Cheetham Hill shopping centre in North Manchester and Wythenshawe Civic Centre in South Manchester, are designed to improve overall patient experience by providing eye care in convenient, easy to access locations with ample free parking available.

Implementation of the community-based



The clinic at Cheetham Hill shopping centre in North Manchester.

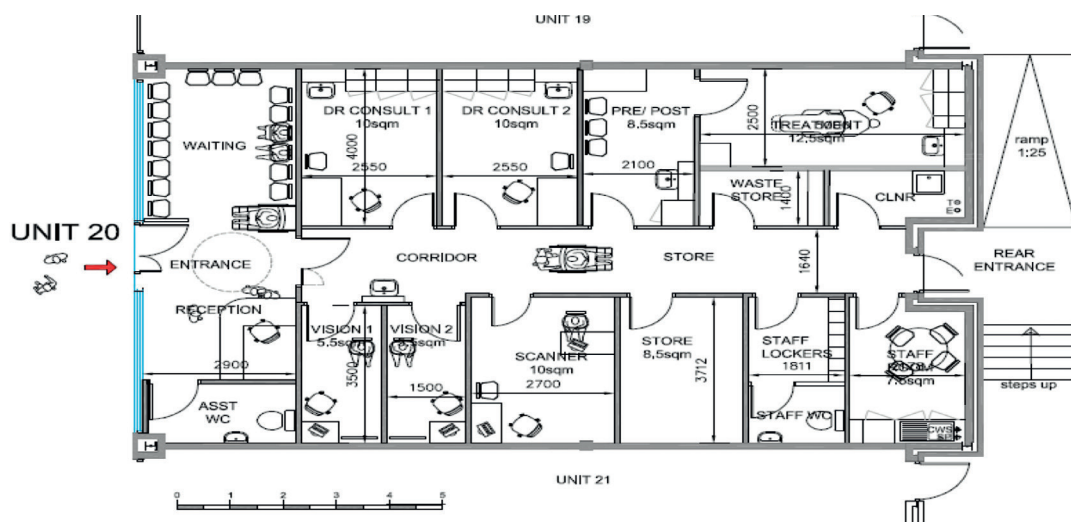


Figure 1: Manchester Royal Eye Hospital medical retina service, typical floor plan of a community-based specialist eye clinic.

specialist eye service was developed as part of a joint working partnership between Manchester University NHS Foundation Trust and Bayer, an initiative designed to enhance the delivery of ophthalmology services and help better serve people with retinal conditions in Greater Manchester.

The initiative supports the strategic aims of commissioners for provision of more care in the community. Manchester Health and Care Commissioning has developed a robust strategy to improve the health and well-being of people in Manchester. Commissioning strategy aims include providing services fairly, to reduce local variation in outcomes, ensuring services are safe, equitable and of a high standard with less variation, and transforming the health and care system, shifting care from hospital to the community [6].

Crucially, these additional clinic services have expanded the number of available appointments, which helps to minimise appointment and / or treatment delays. The priority always is to ensure a high standard of care, at every stage of the treatment pathway, for patients accessing hospital eye services, explained Dr Mahmood. He added that, while rapid access diagnostic and initial treatment appointments were meeting recognised care standards, there was a need to ensure that patients continued to receive the best level of care with timely follow-up appointments. The two new specialist eye service locations provide a comprehensive one-stop assessment and treatment service, with a target average full appointment attendance time of under one hour.

Background rationale: developing a network of specialist eye units in appropriate high-street locations

Originally all medical retina services were concentrated in one central hospital site at MREH. That expanded from one treatment

room to a second treatment room with associated infrastructure to accommodate rapidly growing patient demand.

As demand for intravitreal injection therapy continued to increase, explained Dr Mahmood, there was difficulty maintaining sufficient capacity through a single central site. MREH then considered the option of extending beyond the hospital centre by developing peripheral specialist eye units in appropriate high-street locations. This was first taken forward by introducing a modular mobile macular treatment unit, located on the grounds of Trafford General Hospital.

It was decided, however, that a network of centres throughout the city was required, covering the west, north and south; this would help expand service capacity further. Keeping the patient very much in focus, a decision was made to take the delivery of care out of the hospital environment by establishing clinics in a high-street setting. This would help make the treatment process a normal part of a patient's everyday life, rather than it becoming an arduous task requiring frequent hospital clinic visits, with all the other attendant tasks of travelling, finding parking, walking around a large central hospital site, lengthy waiting time in clinic and often long appointment duration.

The background thinking was that smaller units with a dedicated focus on medical retina treatment in a high-street setting would allow patients to then get on with their daily life and maintain good clinic attendance adherence (Figure 1).

Medical retina services are now provided at four different treatment sites around the city of Manchester. Each clinic service offers a comprehensive 'one-stop' service for patients with nAMD, DMO, retinal vascular occlusions and other conditions requiring regular intravitreal injection therapy. The consultant-led medical retina team is supported by a multidisciplinary

team of specialist nurses, optometrists and ophthalmic photographers as part of an integrated patient-centred service.

Each new community clinic provides six to nine sessions per week and aims for a throughput of between 15 and 20 patients each session. There are two injection rooms at the MREH central site and one injection room in each peripheral site, providing five treatment rooms across the Trust. Intravitreal injections are administered by trained ophthalmic nurses in dedicated clean rooms.

The community eye centres have been named specialist eye clinics to provide flexibility for developing additional ophthalmology service models beyond treatment of common retinal disorders, while distinguishing this service from that of a general walk-in eye unit. Currently, the peripheral centres treat patients previously diagnosed with a macular disorder at the central hospital eye centre. The route into the high-street community-based eye clinic is via the Emergency Macula Clinic (EMAC) service or from the existing patient population receiving ongoing anti-VEGF treatment within the HES. Fluorescein angiography is still only performed at the central site. If diagnosis is confirmed on OCT examination alone, treatment is commenced and patients are offered the option of ongoing treatment at one of the peripheral community clinic centres.

Turnaround in service performance

Maintaining scheduled intended follow-up appointments without unwanted deferral is necessary to secure maximum treatment benefit, said Dr Mahmood. Discussing capacity constraints, he said that when patients require a follow-up review appointment at a certain time following a treatment visit, they need to have retreatment provided on time to retain

and maintain the benefit of treatment. Otherwise the potential outcome benefit of the treatment regimen being followed is lost.

"We were finding slippage in delivery of on-time review appointments. We monitor the number of patients reviewed within seven days of their intended review appointment date as part of an ongoing assessment of service quality standards. Before we set up the north and south community service centres, we were achieving this target at best for around 70% of all patients. Since we set up these community-based clinic units, there is sufficient capacity to ensure more patients are seen on time. In auditing performance, we are now achieving in the order of 95% of all patients being seen within seven days of their intended review appointment date."

Dr Mahmood said that this turnaround in provision of intended review appointments has been the main improvement in achieving compliance in terms of adequate capacity. He highlighted additional benefits too. "In these smaller high-street specialist eye units, we have ensured that the patient pathway is streamlined and focused, such that patients are in and out within one hour, from arrival to pathway completion – that includes vision assessment, optical coherence tomography (OCT) imaging, consultation (with a consultant or optometrist) and treatment. In the main site, this process can take two hours or more to complete. Assessment and treatment at each visit allows us to follow a uniform process to secure timely treatment and the best possible outcomes."

Patient experience highly positive

Patient satisfaction with the care provided in these local community clinics is high. Dr Mahmood commented: "We find that once patients have gone out to these peripheral community centres, they do not want to come back. Some may nonetheless need to come back to the hospital for additional diagnostics or may be referred to a low vision clinic. But most are very resistant to coming back. The 'Friends and Family Test' is an objective measure administered by nursing staff to gauge patient experience and satisfaction. Consistently over 95% of patients say they are likely or extremely likely to recommend the community eye clinic service to friends and family."

The care pathway involves antiangiogenic therapy using licensed, National Institute for Health & Care Excellence (NICE) – approved intravitreal anti-VEGF treatments, following the recommended posology for the therapeutic indications of the medicine. "It is all about ensuring capacity and having the necessary treatment protocols in

"We find that once patients have gone out to these peripheral community centres, they do not want to come back."

place so that patients are treated according to the current best evidence, and they may be transitioned between treatment regimens, depending on the stage of their disease," observed Dr Mahmood.

"And we have also historically run 'virtual clinic' monitoring of stable patients, within the central site but also now within the peripheral units," explained Dr Mahmood. "The principle with regard to determining 'stable' is patients reach a point where we feel they are able to be monitored without active treatment, that can either be for patients who have had an exceptional response early on in the course of treatment and beyond, or those patients who had continued treatment and then were extended over time, reaching intervals of 12 weeks between injections, and have had two to three consecutive visits at those extended intervals and were judged to be stable. If a patient's macular disease progresses to a point of treatment futility, then that patient would be discharged. But if there is potential for patients to benefit from treatment, should their disease recur, then we would continue to monitor for up to two years following their last injection."

Next steps: convenient local care provision from point of first appointment

The two community-based specialist eye centres were established within six months following project go-ahead and funding approval. A multidisciplinary project team and steering group oversaw implementation, with regular weekly project meetings.

Community-based mobile eye services are an alternative way of providing flexible and convenient access to treatment. Mobile macular eye units have the benefit of rapid bespoke deployment. Dr Mahmood said such mobile solutions are good short-term measures but, in his local experience, are relatively less robust, more vulnerable to breakdown and less resilient in terms of change in seasonal environment compared with larger fixed-build clinics. He said there are limits to what can be achieved utilising a mobile trailer service versus a fuller-sized specialist eye clinic based in an accessible

high-street space.

NICE recommends urgent referral within one working day for people with suspected active nAMD to a retinal unit/macula service, whether or not they report any visual impairment [7]. For eyes with confirmed active nAMD for which antiangiogenic treatment is recommended, treatment should be offered within 14 days of referral to the macula service. The NICE guideline committee acknowledged that a shorter delay than the two-week target would maximise the chances of preserving vision. The Way Forward initiative from the Royal College of Ophthalmologists recommends that the decision that rapid treatment or no treatment is required should be made and delivered with the most efficient use of time and personnel. Referral management for people with suspected sight-threatening retinal disease may be improved through direct referral and triage of new patients using clinical assessment and imaging performed by trained optometrists or other non-medical healthcare professionals.

Challenges in timely follow-up remain highly prevalent among patients with chronic eye diseases nationally [8]. The Manchester model, offering greater clinic accessibility through community services, with improved transportation services and benefits such as free parking, as well as improved clinic efficiency, is likely to help improve compliance with recommended appointment intervals [8]. A study evaluating the frequency of patients suffering harm due to delay in ophthalmic care in the UK over a 12-month period to February 2016 found that delayed follow-up or review was the cause in the majority of cases, indicating a lack of capacity within the HES [9]. A one-stop assessment / treatment model for the provision of a medical retina service has several advantages, for example, in reducing the number of hospital appointments for patients, and is considered an important factor in the provision of care by patients undergoing active treatment for nAMD in the NHS [10].

In Manchester, next steps in community-based medical retina service development include broadening of scope to make the provision of care increasingly local from the point of first appointment. For example, by establishing a community-based EMAC service for new referrals. This would extend current HES provision beyond the central MREH site, providing same-day triage for people referred by optometrists with suspected or confirmed macular disease, allowing prompt early access to treatment when indicated.

TAKE HOME MESSAGE

- Redesign of medical retina services, including additional clinics in appropriate community locations, offers opportunities to maximise efficiencies and resources to better meet current and future demand.
- Maintaining scheduled intended follow-up appointments without unwanted deferral is necessary to secure maximum treatment benefit especially for patients on active treatment for macular disease.
- Each clinic service offers a comprehensive 'one-stop' service for patients with nAMD, DMO, retinal vascular occlusions and other conditions requiring regular and continued intravitreal injection therapy.
- 95% of all patients receive their clinic appointment within seven days of intended review date and visits are completed within 60 minutes.
- The community specialist eye clinics have scope to expand capacity according to local need and incorporate other chronic eye disease patients.
- The clinics will expand their remit to provide local rapid access service for new patients from their first appointment.

References

1. Pezzullo L, Streatfeild J, Simkiss P, Shickle D. The economic impact of sight loss and blindness in the UK adult population. *BMC Health Serv Res* 2018;**18**(1):63.
2. Mitchell P, Liew G, Gopinath B, Wong TY. Age-related macular degeneration. *Lancet* 2018;**392**(10153):1147-59.
3. Schmidt-Erfurth U, Garcia-Arumi J, Bandello F, et al. Guidelines for the management of diabetic macular edema by the European Society of Retina Specialists (EURETINA). *Ophthalmologica* 2017;**237**(4):185-222.
4. RNIB. Eye health and sight loss stats and facts. Last updated: April 2018. www.rnib.org.uk
5. Buchan JC, Amoaku W, Barnes B, et al. How to defuse a demographic time bomb: the way forward? *Eye (Lond)* 2017;**31**(11):1519-22.
6. NHS Manchester Clinical Commissioning Group. Manchester Health and Care Commissioning, Working together for a healthier Manchester: our commissioning strategy aims. www.mhcc.nhs.uk/wp-content/uploads/2017/07/A4-Strategy-Aims-v3.pdf
7. National Institute for Health and Care Excellence. Age-related macular degeneration: diagnosis and management. NICE Guideline NG82 January 2018. www.nice.org.uk/guidance/ng82
8. Thompson AC, Thompson MO, Young DL, et al. Barriers to follow-up and strategies to improve adherence to appointments for care of chronic eye diseases. *Invest Ophthalmol Vis Sci* 2015;**56**(8):4324-31.
9. Foot B, MacEwen C. Surveillance of sight loss due to delay in ophthalmic treatment or review: frequency, cause and outcome. *Eye (Lond)* 2017;**31**(5):771-5.
10. Baxter JM, Fotheringham AJ, Foss AJ. Determining patient preferences in the management of neovascular age-related macular degeneration: a conjoint analysis. *Eye (Lond)* 2016;**30**(5):698-704.

(All links last accessed October 2018)

AUTHOR



Rod McNeil,

Independent Journalist and Consultant.

E: rod.mcneil@icloud.com

Images provided Courtesy of Dr Sajjad Mahmood, MREH.