Waiting time for Laser treatment among proliferative diabetic retinopathy referrals in a Hospital-based diabetic retinopathy service – A quality improvement project

Mr Nadir Ali FRCOphth, Dr Stacey Law BMBS, Mr Ashish Patwardhan FRCOphth

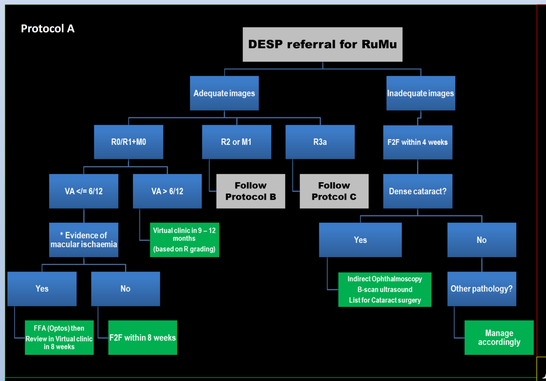
Department of Ophthalmology, Royal Cornwall Hospital NHS Trust

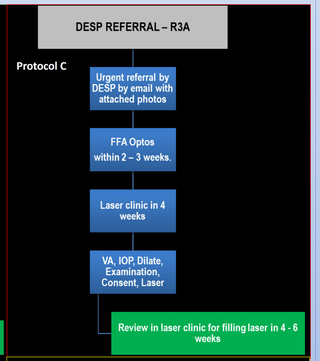
NHS Royal Cornwall Hospitals NHS Trust

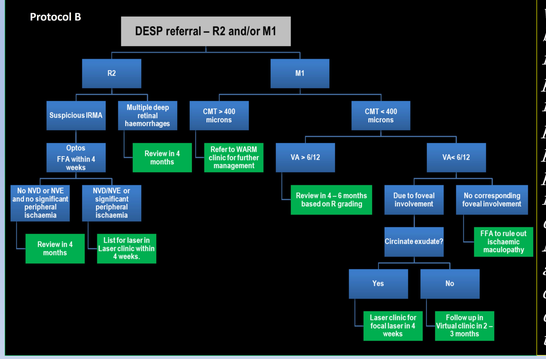
INTRODUCTION

The hospital-based diabetic retinopathy service at Royal Cornwall Hospital has undergone a major overhaul following a previous audit in 2020. This audit was prompted by multiple DATIX reports of delayed laser treatment incidents for patients with advanced proliferative diabetic retinopathy (PDR), resulting in moderate to severe harm.

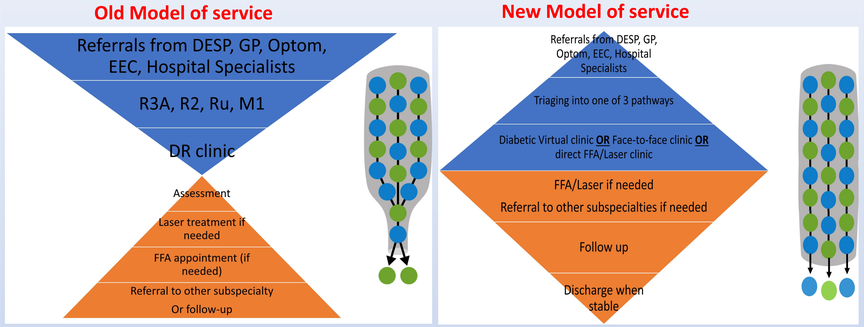
New management pathways were devised and implemented based on the initial audit recommendations. These pathways aimed to streamline referrals by segregating patients into an urgent pathway, where those with proliferative diabetic retinopathy are expedited to a dedicated laser clinic. Meanwhile, non-urgent patients are triaged to either a virtual clinic or a face-to-face clinic, depending on the gradability of their fundus photos.







New management pathways were devised and implemented based on the initial audit recommendations. These pathways aimed to streamline referrals by segregating patients into an urgent pathway, where those with proliferative diabetic retinopathy are expedited to a dedicated laser clinic. Meanwhile, non-urgent patients are triaged to either a virtual clinic or a face-to-face clinic, depending on the gradability of their fundus photos.



METHODS

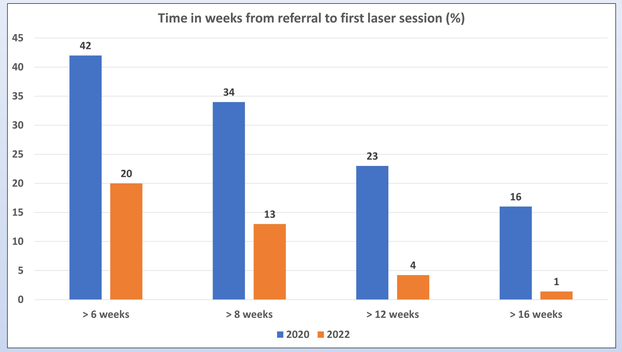
The project commenced with an initial audit focusing on newly referred patients with PDR who experienced delayed pan-retinal photocoagulation (PRP) treatment between January 1, 2019, and December 31, 2019. Subsequently, a change in practice was implemented, which introduced a new three-tier clinic system. This system prioritizes urgent cases, fast-tracking them to receive treatment in a dedicated laser clinic, while non-urgent patients are allocated to either a virtual or face-to-face clinic based on the gradability of their fundus photographs.

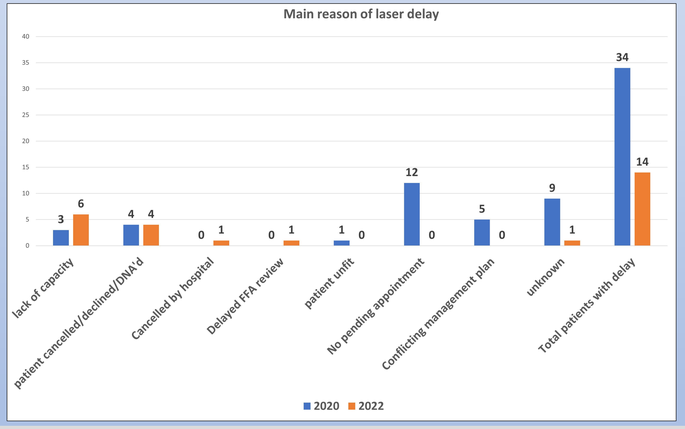
Key metrics, including the duration from referral to the first PRP session, the interval between the first and second laser treatments, and any reasons for delays, were identified. A delay of more than 6 weeks was classified as a 'delayed first laser session'. The service underwent re-audit after a two-year period to assess the outcomes of these changes.

RESULTS

In 2022, 620 laser procedures were done for 428 patients. Of those, 71 patients were new referrals from DESP. In contrast, 255 laser procedures were done for 188 patients in the year 2019. Of those 79 patients were new patients referred from DESP.

The number of delayed patients has fallen by 50% at 6 weeks and by 75% at 12 weeks. The issue of delayed appointments almost completely resolved at 16 weeks.





CONCLUSIONS

Given the constraints of limited NHS resources and the substantial demand on this service, implementing a three-tier service delivery model (comprising virtual, face-to-face, and laser clinics) appears to be the optimal approach for maximizing the capacity of the hospital-based diabetic retinopathy service. This model allows for efficient allocation of available manpower and infrastructure to address the diverse needs of patients while ensuring timely and effective management of diabetic retinopathy cases.