OUTCOMES OF GLAUCOMA FILTERING SCHEMES 2021-22

Authors: H Mohamud[1], V Bhargava[2], R Bagdai[3], V Balaji[3], W Craven[3], L Gibson[3], O Jones[2], D Patel[3], A Bhan[1,2,3]

1. Imperial College Hospitals NHS Trust 2. Royal Cornwall Hospitals NHS Trust 3. Primary Eyecare Services

PURPOSE

Until there is evidence to support the introduction of a national screening programme for glaucoma, it is likely that optometrists will continue to play an essential role in glaucoma detection. Glaucoma referral filtering schemes have been in operation in the UK for over 15 years and have been advocated by the NICE glaucoma guidelines which advise repeat measure evaluations. The aim is to provide a safe and efficient service for patients to be reviewed promptly following initial referral as glaucoma suspects and to reduce false positive referrals which provide unnecessary burden to the hospital eye service (HES), which is struggling with capacity nationally. In this study, we reviewed the outcomes of such schemes across 50 care commissioning groups (CCGs) from 2021 to 2022 supervised by Primary Eye Care Services.

RESULTS

In a one year period from April 2021 to April 2022, 5,200 patients were seen in the referral filtering services across these 50 CCGs. The majority of patients were seen under the Type 1 pathway (4051) with 153 in type 3 and 996 in type 4 respectively. Overall, only 11% (572) patients were referred to the hospital eye service after the first assessment, with 21% (1122) of patients in total being referred after a second assessment. Of these 2% were referred urgently. 3503 patients (67%) were deflected in all three active pathways and did not require referral to the HES.

DISCUSSION

It is clear that referral filtering schemes continue to provide a consistent reduction of false positive referrals to the HES and have expanded to cover large proportions of the UK. The services benefit the whole healthcare system as it shortens wait times for other patients and provides potential cost benefits to the NHS in addition. This work did not look at false negatives which have previously been reported and range between 3 and 20%, with the lower figures possibly due to reviews being undertaken by specialist optometrists.

METHOD

There were 4 in total but three active pathways currently in use to filter referrals across the CCGs reviewed (see table below listing the eligibility and referral requirements for each of these pathways). The Type 2 pathway was not used in any of the CCGs. Goldmann tonometry is used to assess intraocular pressure and Humphrey visual fields are undertaken.

TABLE 1: GLAUCOMA REPEAT READINGS PATHWAY TYPES

TYPE 1	**A patient is eligible for this service if they have any of the below findings at the sight test, but no other signs of glaucoma noted (e.g. no concerning optic nerve features):** - **High IOP** - **And/or abnormal visual field defect (where no urgent pathology ocular or general health is the suspected cause)**
TYPE 2	A patient is eligible for this service if they have the below findings at the sight test**:** - **Abnormal visual field defect (where no urgent pathology ocular or general health is the suspected cause)** **AND normal IOP with no other signs of glaucoma noted (e.g. no concerning optic nerve features)**
TYPE 3	A patient is eligible for this service if they have the below findings at the sight test: - **High IOP and** - **Normal Visual Field Findings** - **No other signs (or concerns) of glaucoma** The patient may have a single repeat of IOP within this CCG pathway.
TYPE 4	A patient is eligible for this service if they have the below findings at the sight test: - **High IOP and** - **Normal Visual Field Findings** - **No other signs (or concerns) of glaucoma**

REFERENCES

- NICE. 2009.Glaucoma: diagnosis and management, Clinical guideline [CG85] https:// www. nice. org. uk/ guidance/ CG85
- NICE. 2017.Glaucoma: diagnosis and management, NICE guideline [NG81] https:// www. nice. org. uk/ guidance/ ng81
- Sheldrick JH, Ng C, Austin DJ, et al. An analysis of referral routes and diagnostic accuracy in cases of suspected glaucoma. Ophthalmic Epidemiol 1994;1:31–9
- Bell RW, O'Brien C. Accuracy of referral to a glaucoma clinic. Ophthalmic Physiol Opt 1997;17:7–11
- Bowling B, Chen SD, Salmon JF. Outcomes of referrals by community optometrists to a hospital glaucoma service. Br J Ophthalmol 2005;89:1102–4
- Ratnarajan G, Newsom W, Vernon SA, et al. The effectiveness of schemes that refine referrals between primary and secondary care—the UK experience with glaucoma referrals: the Health Innovation & Education Cluster (HIEC) Glaucoma Pathways
- Gunn PJG, Marks JR, Konstantakopoulou E, et al. Br J Ophthalmol2019;103:1066–1071