Prevalence of treatable diabetic retinopathy in those aged over 80 within the diabetic eye screening programme. Should we be routinely screening this cohort?

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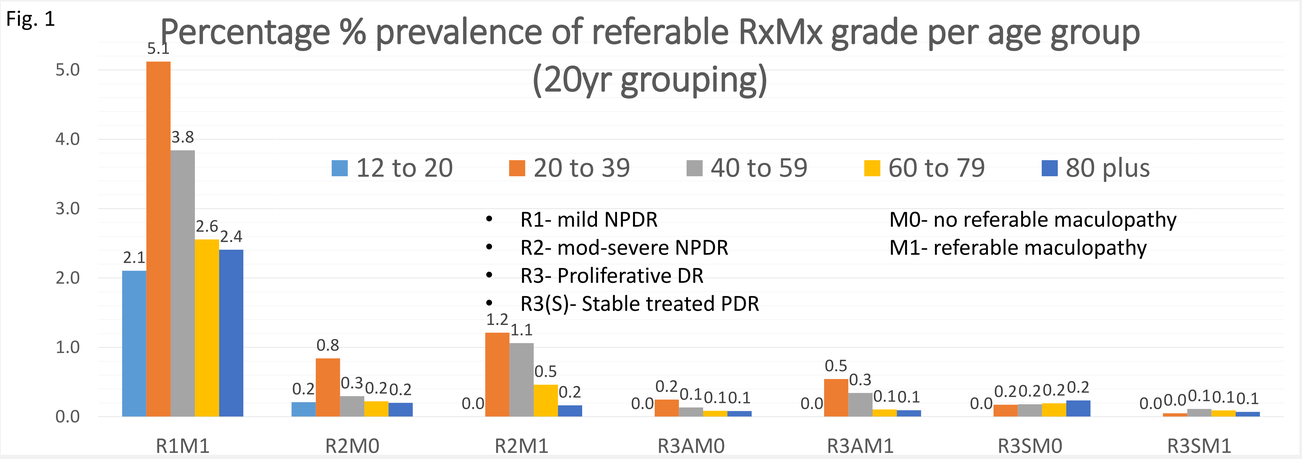
Guy's and St Thomas' NHS Foundation Trust

Purpose: This study evaluates the prevalence of treatable diabetic retinopathy and maculopathy in the over 80s population undergoing screening in the National Diabetic Eye Screening Programme to assess whether the current screening model in the UK is appropriate.

Introduction: Currently the Diabetic Eye Screening Programme (DESP) is the only UK National screening programme with no upper age limit. Although we know that retinopathy rates increase with duration of diabetes, retinopathy rates are highest in the working age population and then appear to stabilise (1). Previous studies have shown a low prevalence of sight-threatening diabetic retinopathy in the elderly (2,3). In the Oulu population study from Finland, it was concluded that the prevalence of sight-threatening retinopathy particularly Proliferative retinopathy in those above 70 was low (2). In Taiwan, although incidence of sight-threatening DR was higher in older men compared to women, the overall prevalence in >80s was also low (3). This cohort often have co-morbidities, so it is important to assess the value of screening. We evaluated the prevalence of referable diabetic retinopathy and maculopathy in the eye screening population over 80s in addition to the numbers who actually received treatment to assess whether the current screening model in the UK is appropriate given limited resources and the increasing ageing population.

Methods: In total, the number of patients with type 1&2 diabetes who had their eyes screened in the South East London – Diabetic Eye Screening Programme between 1st July 2017 and 30th June 2018 was 67,476. Of these **8,183** (12%) were aged 80 or over. This was a retrospective audit of all those with referable retinopathy in this cohort of patients. Data were collated from the Optomise v 4.7 screening software on gender, ethnicity, duration of diabetes, type of screening clinic, worse retinal grade and referral to hospital. Further information on any treatment given under the Hospital Eye Service was determined from individual hospital electronic patient records.

Fig. 1



Results: 7231 patients were seen in routine digital screening and 952 (12%) patients were seen in Slit-lamp biomicroscopy clinics due to cataract reducing the quality of the images. 289 out of a total of 8183 (3.5%) over 80 yr olds were graded with referable pathology and referred to Hospital Eye Services (HES). A total of 9/8183 (0.1% of cohort) patients required active treatment for their sight-threatening changes. Those requiring treatment were predominantly female (61.9%) and from Black, Asian and Minority Ethnic backgrounds (62.5%). 68 patients continue to be monitored in the HES and may progress to receive treatment in the future.

Fig. 3

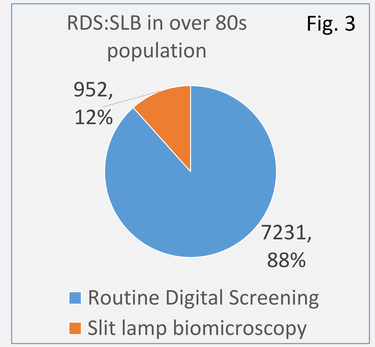
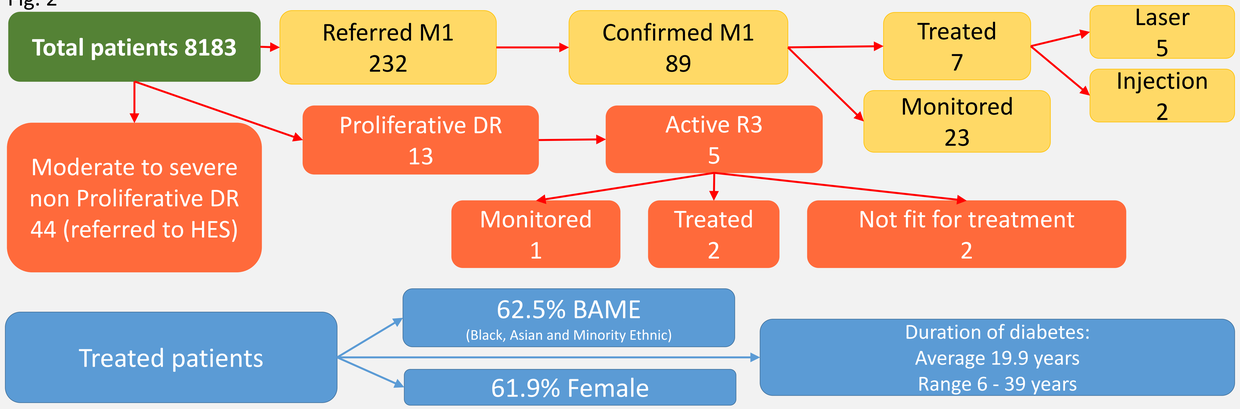


Fig. 2



Discussion. There are increasing numbers of patients with diabetes over 80 that require screening in the UK, but these results demonstrate that by age 80, those still under the diabetic eye screening programme, have a low prevalence of sight threatening disease. A small number of patients have previously received treatment for maculopathy or proliferative retinopathy (R3S) and remain stable . A very low number, develop referable pathology requiring referral and even fewer require treatment. Although 12% patients were seen in the SLB pathway with cataract, other pathways exist for cataract care outside of DESP. Co-morbidities are also higher especially with reduced mobility, and higher levels of cognitive impairment, making attendance and treatment often not possible. This study supports a review of current guidance, changing to an opt-in service for eye screening in the over 80s for those who have not yet developed sight-threatening retinopathy to allow resources to screen patients at greater risk.

References:

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