Could new referrals from Diabetic Eye Screening Wales be reduced by 40%?

An analysis of patients seen in a virtual diabetic retinopathy clinic.

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BACKGROUND:

- **Diabetic retinopathy (DR) has a disproportionate requirement of resources**, including the availability of ophthalmologists who are trained in laser and surgery.
- There is a **need for a sustainable clinic model** which will meet the growing demands placed on hospital eye services.
- Currently, all eligible patients have annual diabetic screening which involves dilated retinal photography and grading with a subsequent outcome.
- As per the screening service, all maculopathy is referred to hospital eye services for further assessment. However, **a subgroup do not require any treatment** and therefore do not need a face to face (F2F) medical retina review.
- Therefore we **implemented a virtual DR clinic to improve the current model of care and assess lower risk patients.**

METHOD

- A virtual clinic pathway was implemented as per Image 1.
- Patients were given a grading and outcome for both retinopathy and maculopathy.
- Maculopathy grading was as below:
  - **'M1 negative' and 'M1 photo' i.e. exudates but no oedema, were discharged back to the screening service.**
  - **'M1 borderline' i.e. some IRF, no obvious thickening, normal ILM contour, VA >6/12, was reviewed in virtual clinic again in 4-6 months**
  - **'M1 significant' i.e. IRF with thickening, abnormal ILM contour, foveal involvement was given an urgent face-to-face review.**

RESULTS

- Between 11/11/19 and 10/05/21, **766 patients were booked** in the virtual DR clinic. The virtual service was suspended during the peak of the COVID-19 pandemic from 04/03/20 and restarted with limited capacity on 21/08/20.

- **226 new patients** were seen.
- **126 (56%) were R1M1.**
- **95 new R1M1 patients did not require a F2F review**
  - **That is 76% of all new R1M1 patients, equivalent to 42% of all new referrals**

CONCLUSION

- **Virtual DR clinics are an efficient model of care** as more patients are reviewed per session than in a F2F clinic.
- **76% of all new R1M1 patients, equivalent to 42% of all new referrals, were either discharged or were monitored in the virtual service.**
- This freed up F2F medical retina appointments for patients most likely to require treatment.

FUTURE DIRECTION:

- We propose methods to review this cohort of 42% of patients outside of the HES setting.
  - **Option 1: the addition of 'OCT refinement' of R1M1 referrals** within the diabetic screening service as currently implemented in some units in England.
  - **Option 2: an optometric DR review scheme** within the community for low-risk patients as is being piloted in south wales.

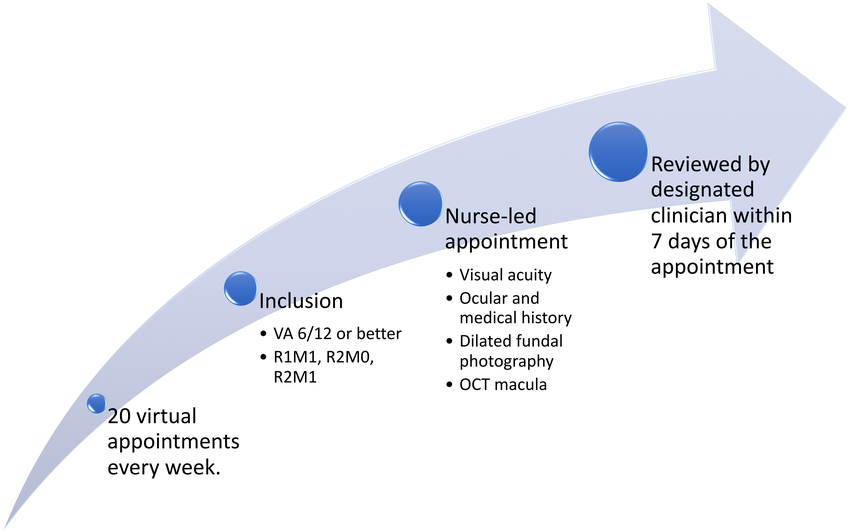


IMAGE 1: A chart demonstrating the virtual clinic pathway.

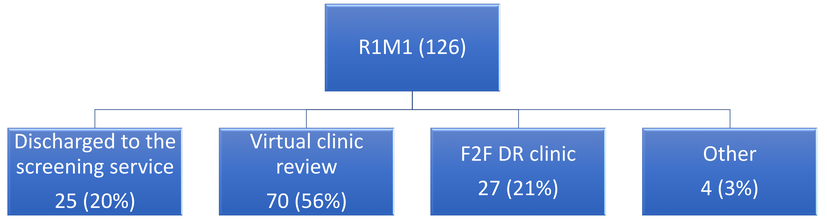


IMAGE 2: A tree-diagram demonstrating the number of new R1M1 patients reviewed in the virtual clinic and their subsequent outcomes.