**Introduction**

Diabetic retinopathy (DR) is a major complication of diabetes affecting the eye and one of the most serious causes of blindness among people of working age in the UK. If left untreated, it can progress to more advanced stages of permanent visual impairment and blindness [1].

![Normal vision vs. vision with diabetic retinopathy](http://www.stlukeseye.com/conditions/DiabeticRetinopathy.html)

**Motivation**

The increasing number of people diagnosed with diabetes entails an increasing number of people who are eligible for DR screening. Only in 2013, an increase of more than 163,000 people with diabetes was recorded compared to 2012 [2]. Only in 2013, an increase of more than 163,000 people with diabetes was recorded compared to 2012 [2].


**Screening pathway**

1. Screening appointment (Retinal photographs are taken)
2. Assessment of the retinal photographs (Tertiary Quality Assurance system)
   - Level 1
   - Level 2
   - Level 3
   - Level 4
   - Final Outcome

**Integration ????

**Aim**

We aim to investigate whether the integration of automated grading software will maintain the accuracy of the grading process at a lower expenditure.

**Methods**

From our local screening programme managed by Health Intelligence, we work towards the calculation of the parameters that describe the current economic framework. The accurate identification of all implicated parameters in the current economic framework is very important it serves as the base case for comparison with alternative strategies in the realm of cost-effectiveness.

**Discussion**

Healthcare decisions are not easy decisions. Careful and evidence-based scrutiny is required towards the adoption of a new approach. A cost-effectiveness analysis is essential because it shows the potential of mistaken decisions and the monetary implications. In the future work, several scenarios of interchange between automated and manual grading will be investigated and respective effectiveness and cost will be quantified.

**References**