Optimising the Clinical Implementation of Corneal Infection Disc Testing

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Aims

The aim was to support the implementation of Corneal Infection Disc Testing by:

- Creating an evaluated and optimised training package
- Generating the data required for a business case which can then be widely shared to aid multicentre implementation

Background

- Corneal Infection Disc Testing acts as an alternative to corneal scrapes for patients with microbial keratitis.
- A 12mm impression membrane is used to obtain corneal samples (Figure 1).
- Corneal Infection Disc Testing has been proven to have ***higher microorganism yields*** than corneal scrapes.

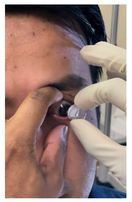


Figure 1 – Corneal Infection Disc Sampling

Methods

- A 4-step multimodal training package was created on how to perform Corneal Infection Disc Testing was created, evaluated and improved (Figure 2).
- The two sampling techniques were compared by prospectively collecting data on the time taken to perform the procedure, patient tolerance and clinician and patient preferences.
- A cost analysis was performed.

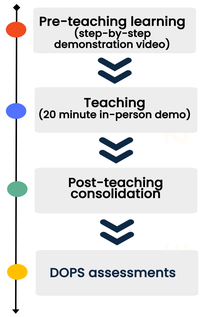
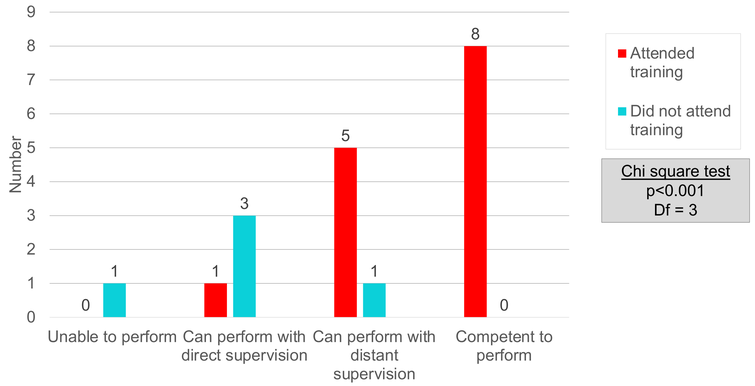


Figure 2 –Training package

Results

Training Package results

- 19 clinicians underwent DOPS assessments of competence, with those who had attended the training reaching a significantly higher level



Comparison of sampling techniques

- Corneal Infection Disc Testing was preferred over corneal scrapes by 98% of clinicians and 100% of patients.
- Time taken for Disc Testing (mean 35 seconds) was significantly less than corneal scrapes (430 seconds, p<0.001).
- Patients reported significantly higher tolerance (p<0.001) for Disc Testing than corneal scrapes.
- The material cost of Disc Testing was £2.48/patient more expensive than corneal scrapes (£35.53 versus £33.05).

Conclusions

- Corneal Infection Disc Testing was faster, better tolerated and preferred by both patients and clinicians compared to corneal scrapes. Previous data showed it achieved a higher microorganism yield.
- These benefits outweigh the minor extra cost of the materials.
- An implementation package was created comprising microbiological evidence, a model business case, clinician training materials and a Standard Operating Procedure (SOP) for Microbiology Laboratories.
- This has been sent to 7 other units and the efficiency of their implementation of the package will be evaluated. The package is widely available to RCOphth members via the online learning platform, INSPIRE.

Teaching Materials

