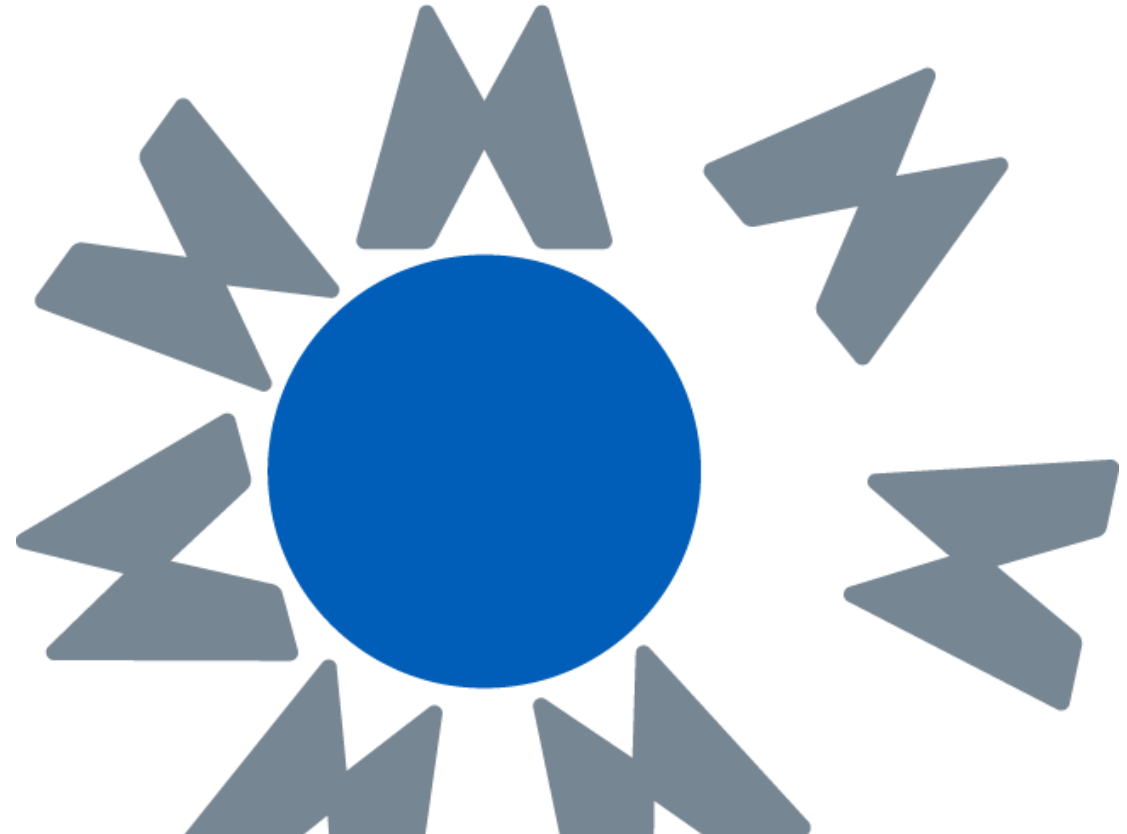


Nurse-led eye care in the Intensive Care Unit

A protocol for practice

Emily Brennan
Manchester Royal Infirmary



Aims

- Outline the importance of effective eye care for critically ill patients on ICU
- Present a quality improvement initiative which has standardised local practices and brought care in line with both the evidence base and national guidelines
- Discuss next steps in evaluating and measuring the effectiveness of the new intervention in addition to ensuring sustainable change in practice

The Eyes in Health

'Blinking and tearing'

Blink reflex

- Protects from trauma
- Helps to distribute the tear film evenly across the ocular surface

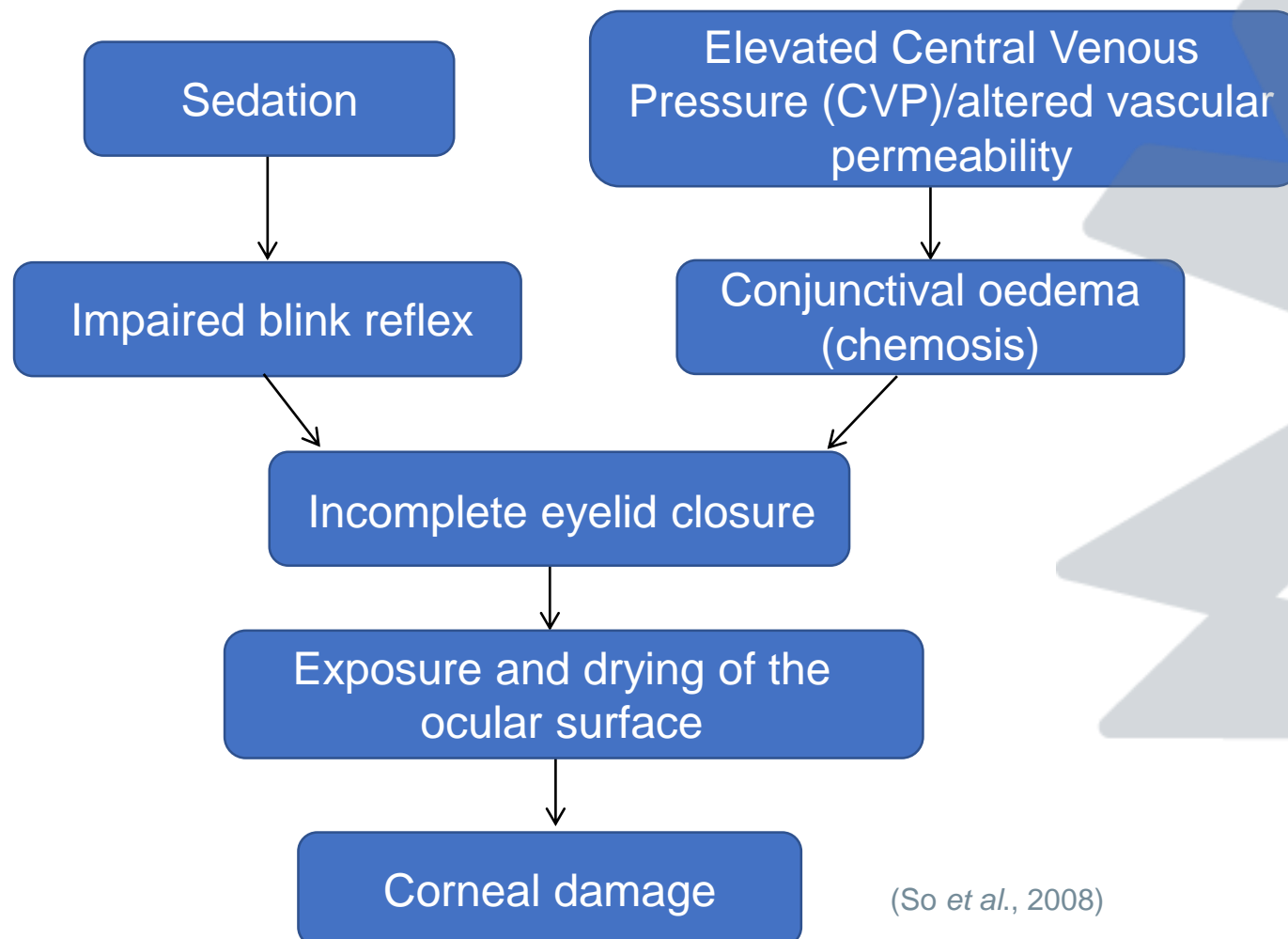
The tear film

- Lubricates the eye
- Antimicrobial
- Provides nutrition to the cornea
- Plays a critical role in the optical properties of the eye

(Beuerman and Lemp, 2017; Koo Lin and Gokoffski, 2017)



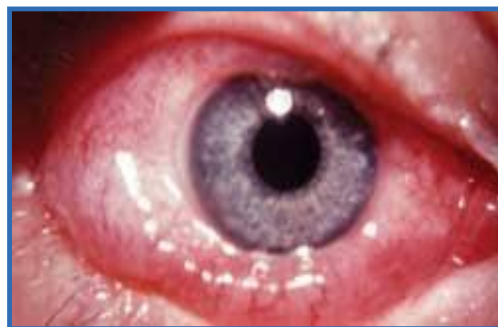
The Eyes in Critical Illness



(So et al., 2008)

Common eye complications in the ICU

Chemosis



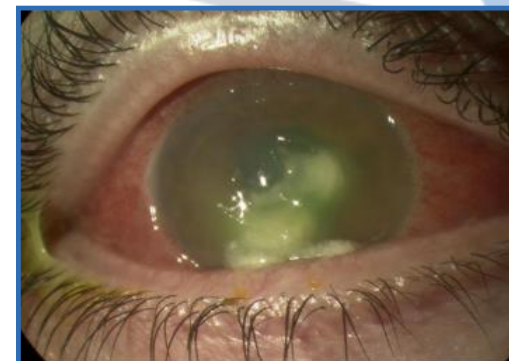
Corneal abrasion/exposure
keratopathy

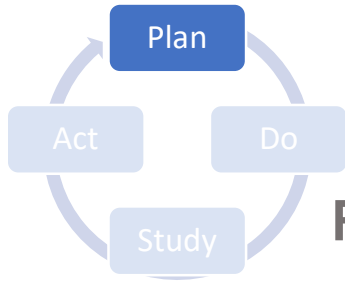


Conjunctivitis



Bacterial keratopathy





Rationale for quality improvement initiative

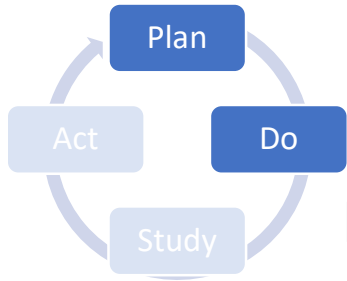
Critical Care Follow Up

40-50% of our survivors reported a deterioration in their eye sight

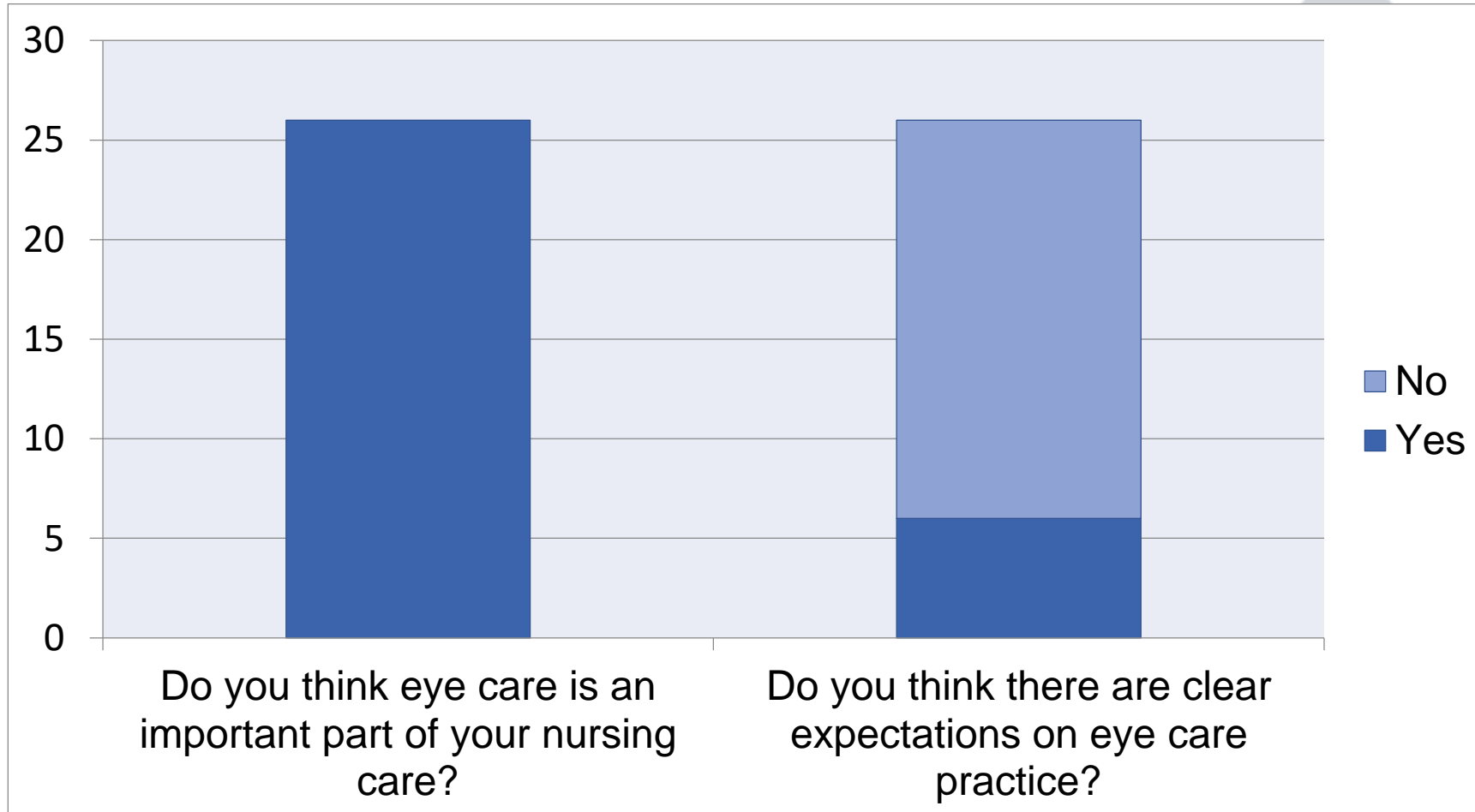


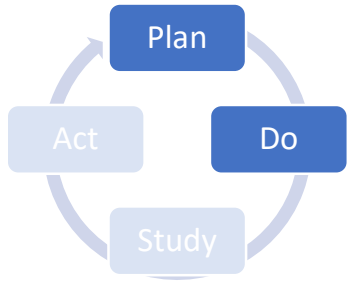
*“Visual impairment in those who survive their stay in the ICU can be **devastating**, largely **irreversible**, often **preventable** and may occur in those who might have otherwise recovered from their primary illness without lasting sequelae”*

(Kam et al., 2013)



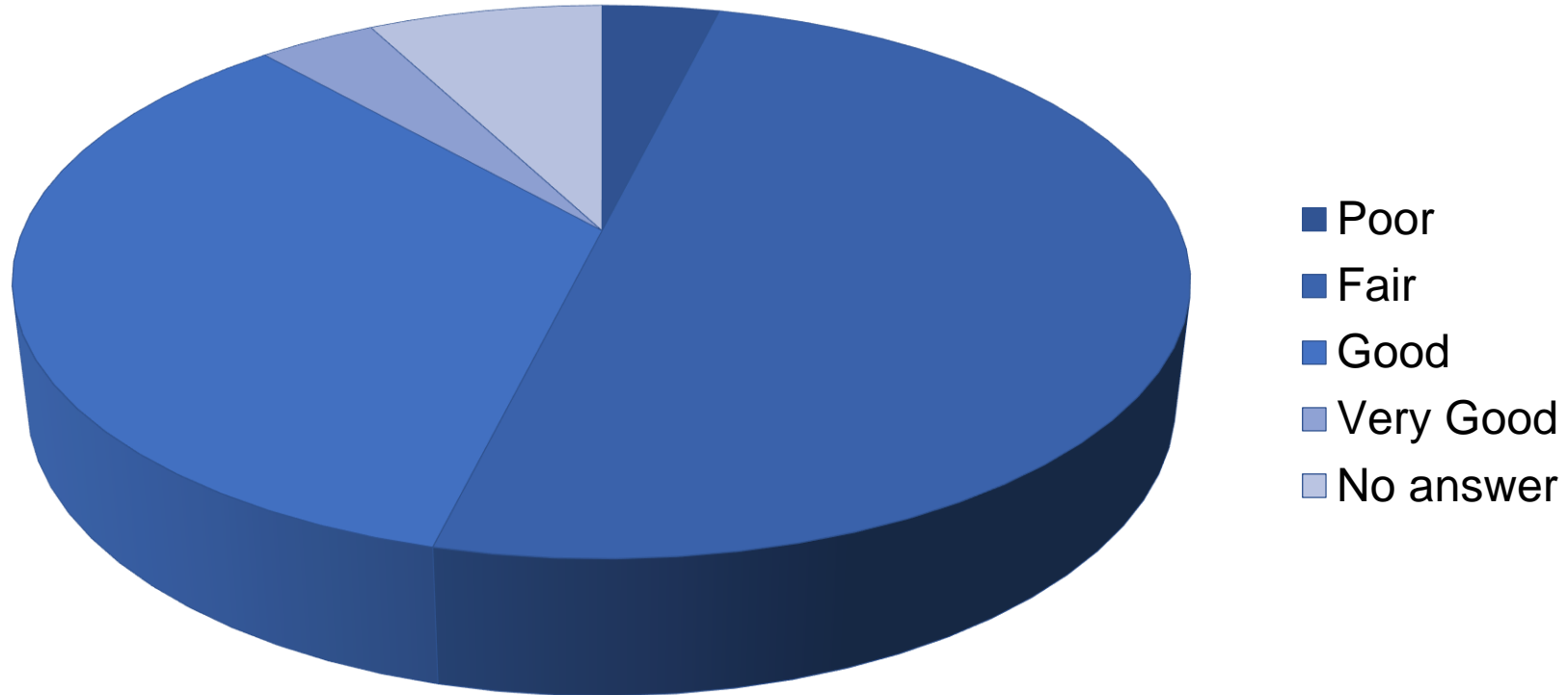
Baseline data

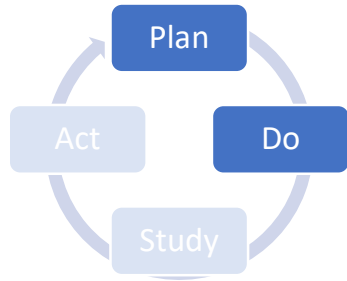




Baseline data

How would you rate your knowledge and understanding of eye care?





Themes

Current practices

- Saline reported as the most widely used method of eye care
- Eye ointment being used but at inconsistent frequencies – anything from 4 hourly to once a day.

Barriers

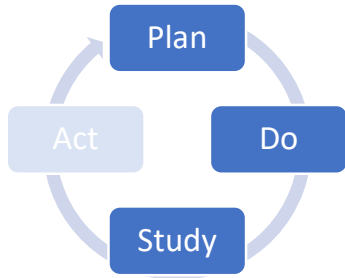
- Lack of education
- Unclear escalation process when there were concerns about a patient's eyes
- Eye care perceived as being low priority when patients are acutely unwell

Staff recommendations

Education and training

Care bundle to standardise practice

Eye care 'prescribed'



Evidence based practice

National guidelines

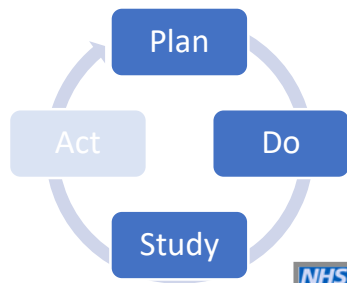
- RCOH Ophthalmic Services Guidance, 2017

Best available evidence

- Alansari *et al.*, 2015
- Gixti *et al.*, 2012
- Kousha *et al.*, 2018
- Zhou *et al.*, 2014

Key messages

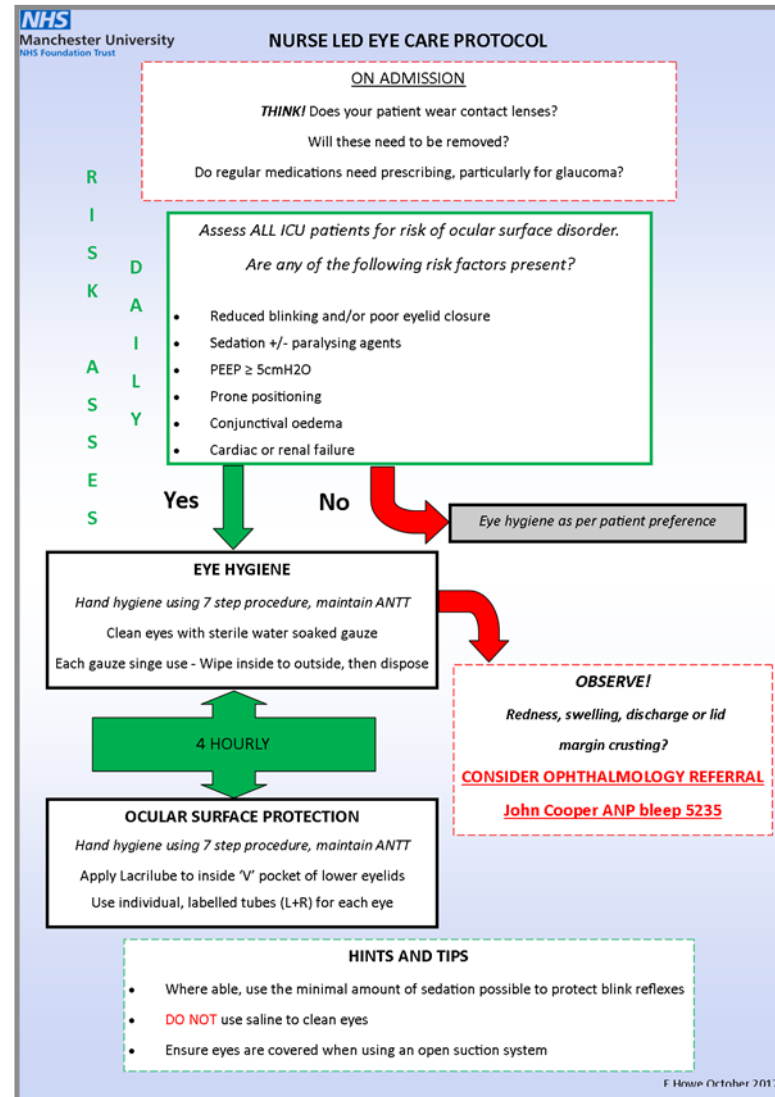
- Correct clinical application of a clear protocol for assessment and intervention can significantly reduce incidences of corneal damage
- Recognition of abnormal pathology and prompt ophthalmology referral essential in protecting the eyes of vulnerable patients and therefore preventing ICU related complications



Nurse led intervention

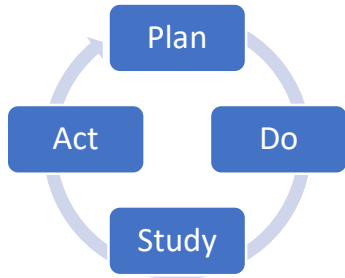


Manchester University
NHS Foundation Trust



Education + protocol = better outcomes!

Statistically significant decreases in ocular surface disorders have been found when intensive care nurses are adequately trained in the provision of systematic, evidence based eye care (Demirel *et al.*, 2014)



Results

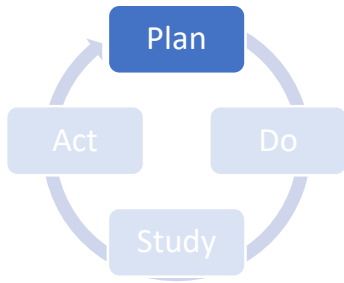


Audit data

- **87%** Overall compliance with daily risk assessment

■ Before protocol

■ After protocol launch and teaching sessions



Evaluation

Audit data

- **58%** Integrated care pathway (ICP) commenced as per risk assessment
- **48.5%** Eye ointment correctly prescribed for those receiving the ICP



Follow up data

Barriers

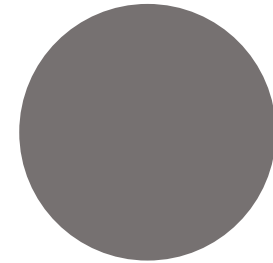
- Time constraints
- Lack of knowledge
- Doctors awareness and understanding
- Bleep referral system outdated and inconvenient

Recommendations

- Further training and education
- Pre-printed ointment prescriptions
- Electronic method of referral to ophthalmology services

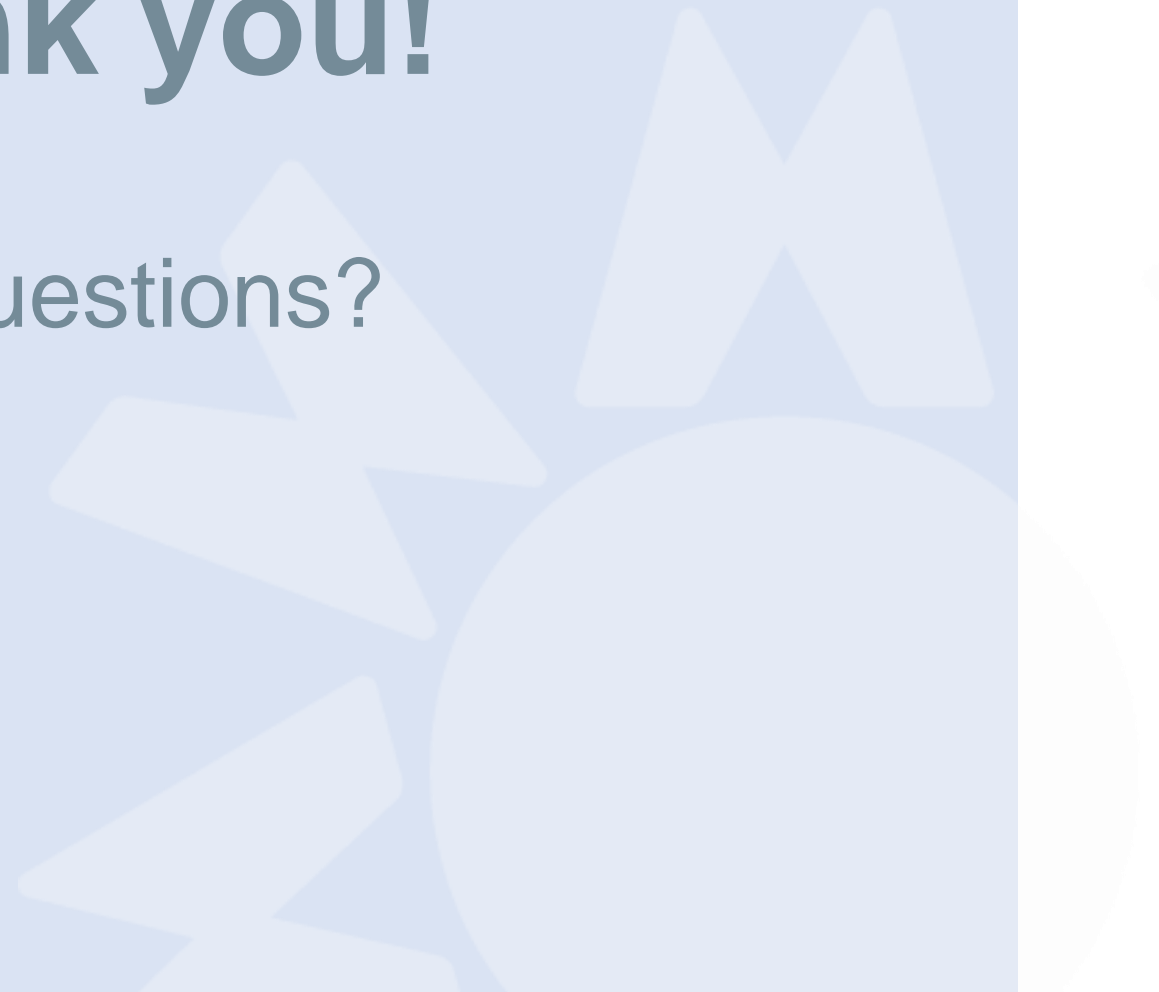
Conclusion

- Local eye care provision was substandard when compared with current guidelines and evidence
- A nurse-led protocol has been implemented largely successfully with evaluation and further quality improvement work ongoing
- Follow up data would need to be re-assessed to fully measure the effectiveness and sustainability of change



Thank you!

Any questions?



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