General Practitioner Trainees Demonstrate Enhanced Knowledge and Understanding Related to Ophthalmological Primary Care following a Student-directed Ophthalmology Tutorial.

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Introduction

- Patients presenting to primary care with an ophthalmological complaint comprise up to 5% of a general practitioners (GP) workload.
- This amounts to approximately 1-2 patients per day. In spite of this, many GP trainees in the UK do not complete a formal ophthalmology rotation during the course of their training (87.5% of GP trainees surveyed).
- As a result, some patients with ocular complaints may have a:

1. Delayed diagnosis
2. Missed treatment opportunities
3. Increased ocular morbidity
4. Unnecessary referral to the eye emergency department

- Significantly, 33% of those surveyed did not feel confident with diagnosing and 47% did not feel confident with managing ocular complaints. 100% felt they could benefit from additional focussed teaching.
- This study investigated the benefit attained by a group of GP trainees who undertook a 90 minute focused ophthalmology teaching session.

Hypothesis and Aims

- A short ophthalmologist-led tutorial could benefit GP trainee knowledge and reinforce confidence in managing patients presenting with eye complaints

- Specific aims:
  - To survey participants to identify knowledge gaps and ensure high yield content
  - To audit eye casualty referral letters to identify common pitfalls
  - To establish a baseline knowledge of participants through assessment.
  - To evaluate the impact of the teaching intervention on their knowledge
  - To identify positive and negative aspects of the teaching sessions to improve future teaching.

Materials and Methods

Design of the teaching curriculum

- GP Trainees completed a qualitative and quantitative survey that identified knowledge deficiencies and student selected learning outcomes i.e. what elements of ophthalmology they would like to discuss.
- EED Referral letters for one week were audited and Common pitfalls were identified
- A tutorial was designed to follow stepwise management of clinical cases including clinical photographs and videos
- The final tutorial broadly discussed topics centred around ocular examination, differential diagnosis, management, and hospital ophthalmological services.
- Additional requested topics included: Neuro-ophthalmology examination, Referral of squints and legal requirements for driving.

Results

Assessing the pre-teaching knowledge

- A pre-teaching evaluation comprised a quantitative ‘pre-quiz’.
- The tutorial was followed by a quantitative ‘post-quiz’ with a qualitative feedback element included.
- The ‘pre-quiz’ average score was 55.7 +/- 27% (n=35). Importantly, Students who had previously completed an ophthalmology rotation were not found to score significantly higher than those who had not.

- The best answered questions referred to management of chronic conditions such as glaucoma and macular degeneration. Participants were found to have a good knowledge or ocular medications, and management of minor ocular infections.





Assessing the pre-teaching knowledge






- Lowest scoring areas of knowledge included the management of ocular emergencies, relevant neuroanatomy, and ophthalmology related services such as orthoptists.

Results

Assessing the tutorial

- The ‘post-quiz’ average score was 85% +/- 9.1% (n=18).
- The greatest increases in the ‘post-quiz’ correct answer response where found to be related to clinical examination.
- Similarly, there were significant increases in correct answer responses for questions related to ‘red flag’ clinical signs and legal requirements for driving.





Discussion and Conclusions

- GP trainees were surveyed on ophthalmology knowledge and learning points were identified.
- A succinct 90-minute tutorial was designed that encompassed diverse aspects of ophthalmological care.
- All participants were found to increase there understanding

This study demonstrates that a student-directed teaching intervention can significantly increase the ophthalmological knowledge base of general practitioner trainees. Furthermore, small group teaching with student selected learning outcomes was found to positively promote participant engagement and encourage open discussion.

Acknowledgments

A special thank you to all my colleagues who engaged so enthusiastically with this project

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