

# Ophthalmic exposure for emergency medicine doctors

BY EDWARD SAXTON

Emergency medicine is a challenging specialty which requires managing a range of acute issues. In this article, I explore the experiences of emergency doctors towards ophthalmic cases presenting in the emergency department, identifying what initiatives have helped trainees.

**E**mergency medicine (EM) doctors must treat both routine and obscure presenting complaints with patients expecting to be triaged onto a specialty or be discharged safely. Common presentations such as chest pain and breathing difficulties are heavily taught during pre-clinical and clinical education and so all EM doctors are well accustomed to assessing and stabilising a patient. Eye injuries constitute 6% of all injury presentations to emergency departments in the state of Victoria, Australia [1].

Ophthalmic teaching is a part of the medical school curriculum however it is usually taught over one week. Certain students may only receive didactic education and not obtain any clinical experience prior to starting as a junior doctor [2]. Therefore, it is unsurprising that in one study only 50% of EM trainees felt confident in assessing eye cases [3]. Furthermore, another study revealed that the diagnostic accuracy rate of ophthalmic conditions was as low as 39% [4]. Ophthalmology is heavily dependent on examination skills which require a considerable amount of practice to become competent.

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These statistics prove that the lack of ophthalmic experience gives little confidence to clinicians when assessing eyes. The consequences of missed or delayed diagnosis due to a lack of training can then be very costly to the patient, resulting in potentially irreversible vision loss.

## A teaching session for EM doctors

An ophthalmic focussed teaching session was held by emergency medicine doctors at Eastern Health, Melbourne in December 2023. In this session, they were educated about common ophthalmic presentations like conjunctivitis, corneal foreign body, and blepharitis. They were also taught about serious sight-threatening conditions like giant cell arteritis, retinal detachment, and penetrating eye injury. They were taught how to measure the visual observations, how to use the slit-lamp, and certain ophthalmic examination skills, like everting an eyelid.

A survey was taken before and after the teaching session. The questions explored their confidence in working up an ophthalmic case. A total of 12 EM doctors were in attendance for the teaching session, the great majority of which expressed low confidence regarding the management of ophthalmic presentations. The slit-lamp is a complicated piece of equipment which can take many attempts to master and is an essential tool in diagnosing conditions. Prior to the session, 57% of participants had never used a slit-lamp to examine the anterior segment of the eye.

By the end, all doctors felt like they had gained more confidence in the assessment of ophthalmic presentations however more time would be appreciated as comprehensive teaching could not be complete with one session alone. Verbal feedback from the session was positive

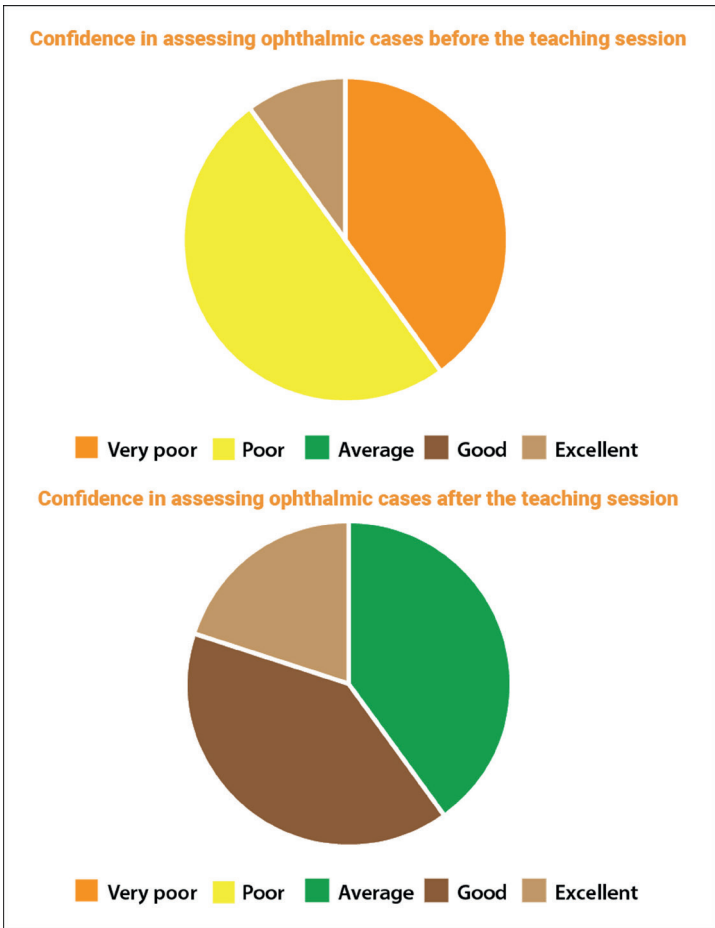
– participants were very happy with the new skills picked up. No other feedback methods were provided except for the survey.

## Discussion

The survey revealed that many doctors do not feel comfortable performing a basic eye exam due to a lack of teaching and exposure to eye cases. Most emergency departments have access to the basic ophthalmic equipment however the interpretation of its findings is user dependent. Certain conditions like acute retrobulbar haemorrhage, acute angle closure glaucoma, and giant cell arteritis need swift diagnosis and prompt treatment to prevent complete vision loss.

Since there are a significant number of eye injuries presenting to the emergency department, adequate teaching should be in place to give confidence to EM doctors as patients may suffer if there is a lack of senior support, or if ophthalmic services are not immediately available. During the teaching session, some EM doctors admitted that they choose to avoid eye cases due to their unfamiliarity around the assessment. A negative feedback loop is created where a lack of training causes an avoidance, which in turn diminishes exposure and confidence at being able to safely care for a patient independently. This gap in knowledge and clinical skills is of paramount importance to improve to produce emergency clinicians who are adept at initially managing any eye case which may present itself to casualty. Otherwise, undue pressure can be placed upon senior EM clinicians or ophthalmic services when simple cases could easily be managed independently by a trainee.

Emergency medicine doctors feel inadequately prepared by their medical school and residency to deal with ophthalmic emergencies. Ophthalmic



Results from the survey taken from EM doctors before and after the teaching session.

training should therefore be increased in the curriculum to create confidence. On average, EM doctors will have had 5–10 hours of formal training during their undergraduate years which is simply not enough time to gain competency in new skills. This may resonate internationally, too, as a study revealed that British senior house officers had little to no confidence in the emergency department for handling ophthalmic cases [5].

In metropolitan Melbourne, Australia, EM trainees are given the opportunity to gain clinical exposure to ophthalmology. Emergency medicine trainees rotate through a specialist ophthalmic and otorhinolaryngologic (ENT) hospital where they spend three months working in the emergency department. They are exposed to a range of ophthalmic and ENT conditions and given direct access to registrars for opinions on management as well as direct teaching opportunities. This allows the EM trainees to obtain first-hand experience working with specialists. At the end of the placements, the trainees have increased confidence at dealing with most anterior-segment eye examinations and recognising when

to appropriately refer to specialists for further assessment.

Emergency medicine trainees in Victoria, Australia, also get the opportunity to rotate through other specialties, like paediatrics, obstetrics and gynaecology. Common eye presentations such as corneal foreign body, corneal abrasion, and conjunctivitis are easily managed by these trainees. This helps to maintain active and moving patient pathways, saving them from a trip to a tertiary centre for treatment.

Ophthalmology exposure as a medical student in Australia is similar to the UK, with one week of tutorials at medical school followed by one week of clinical experience. However, as a junior doctor there are more opportunities to get ophthalmology exposure in Australia as more rotations are offered, compared to very few within UK, though it is still not as well covered as general medicine.

The difficulties with rotations lie in the logistics of trainee’s being able to rotate through these specialties. In Australia, one must fill their competencies which is not confined to one specific region, therefore training can take place all throughout Australia, whereas in the

UK training is more specific to the region with less mobility. More teaching from medical schools could focus on common ophthalmic complaints and how to look for them, incorporating the ability to use the slit-lamp to assess the anterior segment since most newly qualified doctors have never used one.

I’m not aware of other countries that have a similar training scheme however it would be interesting to see and compare the level of emergency training people may receive for ophthalmology around the rest of the world.

**Conclusion**

Our results show that attention should be focussed on teaching ophthalmology for training doctors due to little exposure during medical school to develop well-rounded doctors, confident in assessing all cases in the emergency department. Eye presentations are common, and a basic understanding and assessment should be performed.

**References**

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**Declaration of competing interests:** None declared.