EVALUATION OF EFFICACY OF ARTIFICIAL INTELLIGENCE IN THE TRIAGING OF PATIENTS IN THE EYE CASUALTY AND IT'S COMPARISON WITH CLINICIANS AT DIFFERENT GRADES

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INTRODUCTION

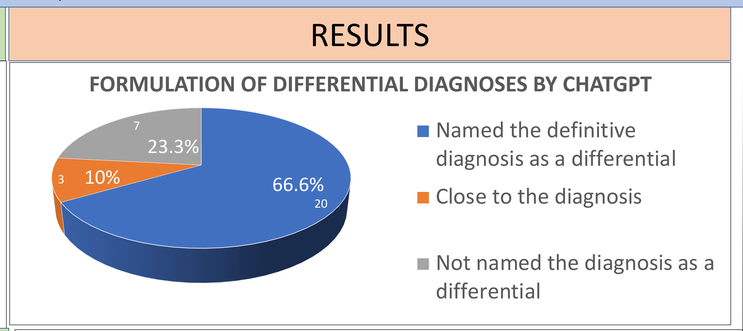
- Eye Casualties are noted to have long queues
- Waiting times are sometimes more than 4 hours
- Staff Shortages make pre-triaging of patients difficult
- Inadequate triaging is done in the community

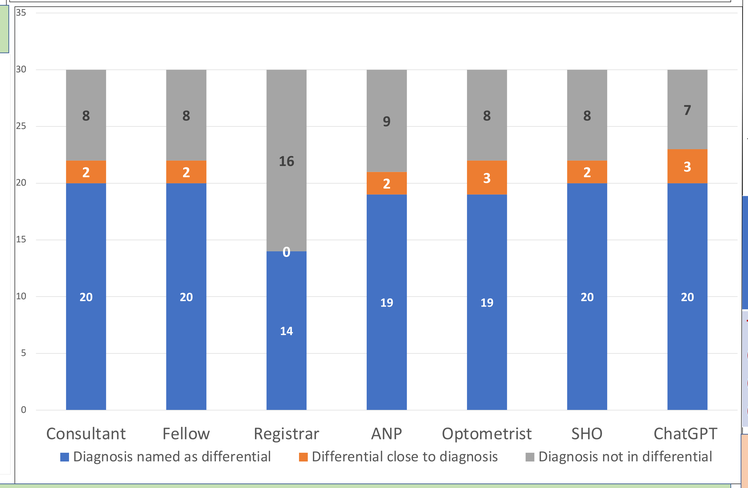
This study was done to evaluate the potential use of artificial intelligence in triaging of patients presenting to the eye Casualty

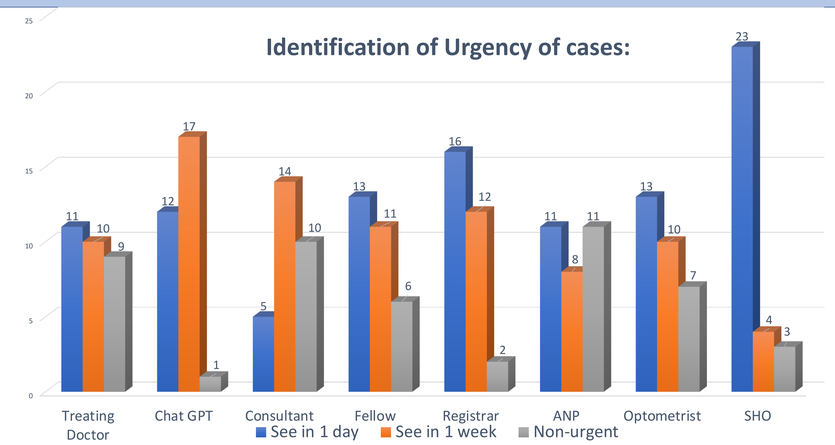
MATERIALS AND METHODS

- 30 random and anonymized patients were chosen from those visiting the eye casualty
- The patients were asked questions based on a standard questionnaire and the responses noted
- The questionnaire and the responses were provided to clinicians of different grades for triaging and formulation of differential diagnoses
- The same questionnaire and the responses were provided artificial intelligence software Chat-GPT for triaging and differential diagnoses.
- These were compared to the correct triaging and definitive diagnoses determined by the treating clinician (in consultation with the Eye Casualty Consultant)

RESULTS







IDENTIFICATION OF CASES REQUIRING URGENT SAME DAY CCONSULTATION BY CLINICIANS AND CHATGPT

	Consultant (5)	Fellow (13)	Registrar (16)	Optometrist (13)	ANP (11)	SHO (23)	Chat GPT (12)
Treating Clinician + Casualty Consultant (11)	36.3 % (4 cases)	81.8% (9 cases)	81.8% (9 cases)	72.7 % (8 cases)	72.72% (8 cases)	90.90% (10 cases)	63.6% (7 cases)

DISCUSSION POINTS

- Formulation of differential diagnoses by Artificial intelligence is comparable to experienced clinicians
- Reasonably good identification of urgent cases that need to be seen in the Eye Casualty
- Poor identification of non-urgent cases by Chat-GPT. This was comparable to doctors with very little ophthalmology training (SHO)
- High potential for use in community health set-ups for ophthalmology referral triaging and can be very helpful to reduce waiting times and cope with staff shortages in the emergency setting

CONCLUSIONS

- Performance of artificial intelligence in the eye casualty is comparable to experienced clinicians.
- Artificial Intelligence can be used for identification of urgent cases that need to be seen in the eye casualty and for formulation of differential diagnosis during triaging.
- There is scope for improvement with better trained AI platforms.

Reference: a. https://chat.openai.com