

**PP064 FROM PRACTICE TO EVIDENCE: A PILOT STUDY ON IMPACT OF SECONDARY TRIAGE TO IMPROVE EMERGENCY DEPARTMENT EFFICACY IN MALAYSIA**

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## **INTRODUCTION**

Most emergency department in district hospitals in Malaysia practice single tier triage system. We study whether adding a secondary triage, i.e. a 2-tier triage system can improve the department efficacy.

## **METHODOLOGY**

The study was a single-centred pre-post interventional study carried out in a district hospital emergency department. During pre-interventional phase, patients were triaged by usual practise using single tier system. For post-interventional phase, a secondary triage was added. A physician was also added to the secondary triage from 3pm to 10pm during weekdays and 8am to 10pm during weekends or public holiday. The secondary triage performed comprehensive triage, ordered investigations and discharged

simple cases. All patient's data who came during pre and post-intervention phases were collected for analysis. The primary outcomes were department length of stay (LOS), call not around (CNA) rate and green zone waiting time (WT).

## **RESULTS**

There were 5007 patients (pre-intervention period) and 4970 patients (post-intervention period) recruited for data analysis. Intervention had reduced the overall LOS from 106min to 85min (mean,  $p < 0.001$ ). Subgroup analysis showed reduced LOS for green cases from 72min to 45min (mean,  $p < 0.001$ ), but no significant improvement for red and yellow cases. Green zone waiting time (WT) was reduced from 58min to 36min (mean,  $p < 0.001$ ). The CNA rate was also reduced from 4.1% to 2.0% ( $p < 0.001$ ).

## **DISCUSSION**

Secondary triage system with addition of physician during peak hours has been proven to improve department LOS, CNA and green zone waiting time. With the positive impact shown, we suggest the triage model can be generalised to other facilities with similar setting.