

3rd International Conference on Translational Medicine

November 03-05, 2014 Las Vegas, USA

The Emergency Department Prediction of Disposition (EPOD) study

Milan Vaghasiya
Westmead Hospital, Australia

Background: Emergency departments (ED) continue to evolve models of care and streaming as interventions to tackle the effects of access block and ED overcrowding. Tertiary ED may be able to design patient flow based on the predicted dispositions in the department. Segregating discharge-stream patients may help develop patient-flows within the department, which is less affected by hospital bed availability. We aim to determine if triage nurses and ED doctors can predict disposition outcomes early in the patient journey and thus lead to successful streaming of patients in the ED.

Methods: During this study, triage nurses and ED doctors anonymously predicted disposition outcomes for patients presenting to triage after their brief assessments. Patient disposition at the 24-h post ED presentation was considered as the actual outcome and compared with predicted outcomes.

Results: Triage nurses were able to predict actual discharges of 445 patients out of 490 patients with a positive predictive value (PPV) of 90.8% (95% CI 87.8-93.2%). ED registrars were able to predict actual discharges of 85 patients out of 93 patients with PPV of 91.4% (95%CI 83.3-95.9%). ED consultants were able to predict actual discharges of 111 patients out of 118 patients with PPV 94.1% (95% CI 87.7-97.4%). PPVs for admission among ED consultants, ED registrars and Triage nurses were 59.7%, 54.4% and 48.5% respectively.

Conclusion: Triage nurses, ED consultants and ED registrars are able to predict a patient's discharge disposition at triage with high levels of confidence. Triage nurses, ED consultants, and ED registrars can predict patients who are likely to be admitted with equal ability. This data may be used to develop specific admission and discharge streams based on early decision-making in EDs by triage nurses, ED registrars or ED consultants.

Biography

Milan Vaghasiya has completed his Masters in Public Health and Master in Health Management from University of New South Wales (UNSW) in Sydney, Australia. He is actively involved in research activities in Emergency Medicine Research Unit (EMRU) at the Emergency Department, Westmead Hospital in Sydney, Australia. Westmead Hospital is a tertiary 850-bed adult hospital with a level 1 trauma service and 41 treatment spaces in ED, which treats over 60,000 adult patients annually. His research interests are emergency medical services, models of care, organization efficiency and ED planning.

milan_au@yahoo.com.au