A COMPARISON OF EMERGENCY TRIAGE SCALES IN THE ASSESSMENT OF PATIENTS PRESENTING WITH POISONING

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Objectives: To compare the triage scoring systems utilized by the three Western Sydney hospitals in patients presenting with poisoning.
Methods: Thirty triage nurses, ten from each of three hospitals, were given 8 clinical scenarios and asked to give a triage category. Twenty nurses were from two hospitals where routine triage involved the use of the Australasian Triage Scale (ATS), and 10 nurses from the third hospital that routinely used the Manchester Triage Scale (MTS) as part of their normal work practise. The 8 scenarios were grouped into 3 groups: (i) obvious triage category (n=2), (ii) commonly encountereda (n=3) and (iii) rarely-encountered (n=3). As an agreed standard, the investigators had an a expected triage category assigned to each scenario, which was not revealed to the participants. Median triage category, inter-quartile range (IQR) and relative frequencies of triage categories assigned for each scenario were calculated for each hospital, by ATS and MTS. The variance of the median triage category for each scenario was compared between each of the three hospitals. The two hospitals using the ATS were assessed for agreement of triage category prior to comparison with the hospital using the MTS.
Results: In testing for heterogeneity between hospitals (Kruskal-Wallis nonparametric analysis of variance) it was found that the hospitals were not all similar. There was agreement in the median triage categories given across all scenarios in the two hospitals that used the ATS (Mann-Whitney test p-value 0.123 to 0.739). There was a difference in median triage category assignment between ATS and MTS. Compared to the ATS, the MTS under-triaged (lower acuity) at least one scenario in each of the scenario groups obvious triage category ($p=0.001$), commonly encountered ($p<0.001$) and rarely encountered ($p=0.01$) groups. The MTS had a higher frequency of lower acuity triage categories across all 8 scenarios when compared to the ATS. In all 3 rarely encountered scenarios the ATS assigned a triage category closest to that expected by the investigators.
Conclusions: There was agreement of triage categories assigned for poisoned patients in two hospitals that used the ATS. The MTS under-triaged obvious, common and rarely encountered poisoning scenario groups when compared to the ATS. Rarely encountered poisoning scenarios may present an area of under-triaging by Manchester Triage Scale.