

Prehospital Triage of Emergency Patients by EMS

A comparison of CTAS scores by EMS and triage nurses

The Canadian Triage Acuity Scale (CTAS) is recognized across Canada as the standard for triage of patients



Evidence suggests medical professionals other than triage nurses can be taught to accurately use CTAS



CTAS classifies patients into 5 categories based on the urgency of their presentation



A Prospective, Observational Study

PURPOSE

To assess the accuracy of prehospital EMS assigned CTAS scores compared to triage nurse assigned CTAS scores

STUDY POPULATION



Focused on patients in Winnipeg Regional Health Authority and the Winnipeg Fire and Paramedic Service

Patient records between July 2014-December 2014 accessed



14,378 patients > 17yo with CTAS scores from both nurses and EMS staff included

ANALYSIS

EMS assigned CTAS scores (CTASa) was compared to:

CTASi:
initial nurse triage scores w/ computerized clinical support

CTASf:
final nurse triage scores w/ override of computerized support

Assessment of the inter-rater reliability measured using weighted kappa:
Excellent - Good ($kw > 0.6$)
Moderate ($0.6 < kw < 0.4$)
Fair - Poor ($0.4 < kw$)

RESULTS



Moderate agreement between CTASa and CTASi ($kw=0.437$, $p<0.001$, 95% CI)



CTASa and CTASi were within one grade point in 84.3% of cases



Moderate agreement between CTASa and CTASf ($kw=0.452$, $p<0.001$, 95% CI)



CTASa and CTASf were within one grade point in 86.5% of cases

CONCLUSION

This system wide implementation study demonstrates moderate inter-rater reliability between CTAS scores assigned by trained EMS and triage nurses.

References:

Leeies M., ffrench C., Strome T., Weldon E., Bullard M., Grierson R. Prehospital application of The Canadian Triage Acuity Scale by emergency medical services. CJEM 2016, Vol. 19 p.26-31



This infographic was created by Xuan Xiao for the CanadiEM website and CJEM with editing from Simon Huang, Calvin Yeh, Alvin Chin, Heather Murray, Brent Thoma, Will Sanderson, Lynsey Martin & Rohit Mohindra

