

Accuracy in emergency medical dispatch

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Background/Aim:

To compare the accuracy in priority level between two Swedish dispatching protocols – Medical Index, the criteria based protocol currently in use, and the newly developed Rapid Emergency Triage and Treatment System – Alarm (RETTS-A).

Method:

A randomized controlled non blinded simulation study was performed at the EMCC in Stockholm, Sweden, between 2015-10-27 and 2016-03-17. 50 call takers recruited from all EMCCs in Sweden handled 26 emergency medical calls each, simulated by experienced standard patients. Manuscripts for the scenarios were based on real life emergency medical calls, representing the six most common chief complaints. A crossover-model with 13+13 calls was used. Priority level and medical condition for each scenario was predetermined by expert consensus.

Results:

1293 unique calls were performed, 646 calls with Medical Index and 647 calls with RETTS-A. According to the predetermined priority level for each case, n=349 (55.0%) were assessed correct with Medical Index and n=309 (48.0%) with RETTS-A (p=0.02). Over triage was 38% in Medical Index and 28% in RETTS-A. Corresponding proportion of under triage was 6% and 23% respectively. According to the predetermined medical condition for each case, n=492 (76.2%) were assessed correct with Medical Index and n=457 (70.6%) with RETTS-A (p=0.03).

Conclusion

The new dispatch protocol RETTS-A, had a lower accuracy for priority level than the protocol in current use, Medical Index, and a higher level of under triage. This is the first large study evaluating Medical Index. Despite Medical Index being the superior tool it has a low overall accuracy.