were significantly higher than halfway scores (5, 3–6, $p<0.001$) and arrival at hospital scores (4, 3–5, $p<0.001$). The scores covered a wide range of the scale at each measurement, with values ranging from; 1) 4–10, 2) 0–8, and 3) 0–8. **Conclusion** The pilot study showed that 76% were able to use the scale. Scores were distributed on a wide range of the scale at all three measurements, and a significant decrease in scores were registered over time. These results indicate that the use of a verbal rating scale is feasible for assessing subjective intensity of acute dyspnoea in the prehospital setting.

REFERENCE

- Christensen EF, Larsen TM, Jensen FB, Bendtsen MD, Hansen PA, Johnsen SP, *et al.* Diagnosis and mortality in prehospital emergency patients transported to hospital: a population-based and registry-based cohort study. *BMJ Open*. 2016;**6**(7): e011558.

Conflict of interest None declared.

Funding None declared.

17 ACCURACY IN EMERGENCY MEDICAL DISPATCH

¹K Torlén*, ^{1,2}L Kurland, ¹M Castrén, ³K Olanders, ¹K Bohm. ¹Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, Stockholm, Sweden; ²Örebro University, Örebro, Sweden; ³Department of Anesthesiology and ICU, Lunds University hospital, Sweden

10.1136/bmjopen-2017-EMSAbstracts.17

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).

Methods A randomised controlled non blinded simulation study was performed at the EMCC in Stockholm, Sweden, between 2015-10-27 and 2016-03-17. 48 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.

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, $n=349$ (54.0%) were assessed correct with Medical Index and $n=309$ (47.8%) 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 $n=460$ (71.1%) 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.

Conflict of interest K. Bohm and K. Olanders has consult missions at the EMCC organisation SOS Alarm Sverige AB. No other conflicts of interest.

Funding K. Bohm has unrestricted grant from SOS Alarm Sverige AB.

18 'TELL ME WHAT'S HAPPENED': WHEN LINGUISTIC CHOICES AFFECT EFFICIENCY OF AMBULANCE DISPATCH FOR CARDIAC ARREST

¹M Riou*, ²A Whiteside, ¹S Ball, ^{1,2,3,4}T Williams, ⁸KL O'Halloran, ⁹GD Perkins, ^{1,5}J Bray, ⁵P Cameron, ^{3,5,7}K Smith, ^{1,3,4,6}DM Fatovich, ¹M Inoue, ^{1,2}D Brink, ^{1,2,10}P Bailey, ^{1,2,3,5}J Finn. ¹Prehospital, Resuscitation and Emergency Care Research Unit (PRECRU), School of Nursing, Midwifery and Paramedicine, Curtin University, Bentley, Australia; ²St John Ambulance (WA), Belmont, Australia; ³Discipline of Emergency Medicine, The University of Western Australia, Crawley, Australia; ⁴Royal Perth Hospital, Perth, Australia; ⁵Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, Australia; ⁶Centre for Clinical Research in Emergency Medicine, Harry Perkins Institute of Medical Research, Nedlands, Australia; ⁷Ambulance Victoria, Blackburn North, Australia; ⁸School of Education, Curtin University, Bentley, Australia; ⁹Out of Hospital Cardiac Arrest Outcomes, Warwick Clinical Trials Unit, University of Warwick, UK; ¹⁰St John of God Hospital Murdoch, Murdoch, Australia

10.1136/bmjopen-2017-EMSAbstracts.18

Aim Clear and efficient communication between emergency caller and call-taker is crucial to timely ambulance dispatch. Within the Medical Priority Dispatch System,¹ the first opportunity that callers have of describing the situation is after the scripted prompt “okay, tell me exactly what happened”. However, in 60% cases, call-takers introduce a slight linguistic variation (what's happened v. what happened). This study analyses the effect of this change on the way callers describe the emergency.

Methods Using a mixed-methods analysis combining Conversation Analysis and Corpus Linguistics, we analysed 184 calls from paramedic-confirmed out-of-hospital cardiac arrests in Perth (Western Australia) in 2014–2015. We coded each call for its use of tense in the prompt and the format of the response as either a report (focusing on symptoms) or a narrative² (containing irrelevant background details) and we timed the callers' responses.

Results The use of report response was much more frequent when call-takers chose the present perfect (what's happened) rather than the simple past (what happened) (72% v. 43%, $p<0.0001$). We found that the median length of caller response was significantly shorter when it was structured as a report rather than a narrative (9 v. 18 s, $p<0.0001$). Reports unfolded more efficiently over a median of 3 turns (v. 6 for narratives, $p<0.0001$).

Conclusion A change of tense can impact how efficiently callers describe a time-critical emergency. Our results suggest that a better understanding of linguistic and interactional dynamics can improve dispatch performance.

REFERENCES

- Medical Priority Dispatch System (version 12.1.3). Salt Lake City, Utah, USA: Priority Dispatch Corp.
- Labov W, Waletzky J. Narrative analysis: Oral sessions of personal experience. In: Helm J, editor. *Essays Verbal Vis. Arts*. Seattle: University of Washington Press; 2003, p. 74–104.

Conflict of interest A. Whiteside and D. Brink receive full salary support, and P. Bailey, M. Inoue and J. Finn receive partial salary support from St John Ambulance.

Funding Funding for this research was received from an Australian NHMRC (National Health and Medical Research Centre) Partnership Project: #1076949 ‘Improving ambulance dispatch to time-critical emergencies’. J. Finn and J. Bray receive partial salary support from the NHMRC ‘Aus-ROC’ Centre for Research Excellence #1029983. J. Bray receives salary support from an NHMRC/NHF (National Heart Foundation) Early Career Fellowship.