Aim Medical dispatching is a highly complex procedure and has an impact upon patient outcome. It includes handling emergency calls, prioritisation of resources and the provision of guidance and instructions to callers. Whilst emergency medical dispatchers play a key role in the process, their perception of the process is rarely reported. We explored emergency medical dispatchers’ perception of their role in emergency call handling and their perception of barriers.

Methods An explorative qualitative interview study was designed. Modified grounded theory was used for the data analysis.

Results A total of 5 paramedics and 6 registered nurses were interviewed. A model of the emergency call handling process was drawn based on the data. The analysis of barriers resulted in themes relating to the callers and the medical dispatchers, from whom four and three respective themes were identified. For callers, the motive for calling, the situation, the perception and presentation of the problem was influencing factors. For the dispatchers, the expertise, teamwork and organisation influenced the process.

Conclusion The results indicate factors influencing the medical dispatch process, as perceived by medical dispatchers. Callers lack knowledge about best utilisation of the emergency number and the medical dispatching process, which can be improved by public awareness campaigns and incorporation of knowledge in first aid courses. For medical dispatchers the most potent modifiable factors were based upon the continuous professional development of the medical dispatchers and the system that supports them.

Conflict of interest None declared.

Funding EMS, Copenhagen receives centre support from the Finnish Society of Anaesthesiologists

References

Conflict of interest None declared.

Funding Helsinki University Central Hospital, The Finnish Society of Anaesthesiologists

Abstracts

EMERGENCY MEDICAL DISPATCHERS’ PERCEPTION OF BARRIERS IN HANDLING EMERGENCY CALLS. A QUALITATIVE STUDY

Aim Since 2014, HEMS (Helicopter Emergency Medical System) has been an integrated part of the emergency medical system, providing fast and high-competence helicopter transport of patients to highly specialised care. Different heliport solutions at the receiving hospitals may have an impact on the time delay from landing to arrival at the catheterization laboratory in patients with ST Elevation Myocardial Infarction (STEMI) has been an integrated part of the emergency medical system, providing fast and high-competence helicopter transport of patients to highly specialised care. Different heliport solutions at the receiving hospitals may have an impact on the time delay from landing to arrival at the catheterization laboratory in patients with ST Elevation Myocardial Infarction (STEMI) has been an integrated part of the emergency medical system, providing fast and high-competence helicopter transport of patients to highly specialised care. Different heliport solutions at the receiving hospitals may have an impact on the time delay from landing to arrival at the catheterization laboratory in patients with ST Elevation Myocardial Infarction (STEMI) has been an integrated part of the emergency medical system, providing fast and high-competence helicopter transport of patients to highly specialised care. Different heliport solutions at the receiving hospitals may have an impact on the time delay from landing to arrival at the catheterization laboratory in patients with ST Elevation Myocardial Infarction (STEMI). We prospectively recorded the time from the landing at the heliport to arrival at the catheterization laboratory from October 1st 2014 to December 31st 2016 in all STEMI patients transported by HEMS Denmark. LTT was compared between two centres with heliports at the hospital, and two centres with heliport located outside the hospital, necessitating ground transportation in ambulance.

Results 1163 patients were included in the study. 310 were excluded due to missing data. The two hospitals with hospital based heliports showed shorter LTT compared to the two...
Comprehensive Efficacy and Integrated Safety

40 Results

A total of 479 patients were enrolled; 363 received comitant medications.

Conclusion

Hospital based heliports ensure shorter time delay from landing to pPCI in patients with STEMI. We strongly recommend that heliports are located close to the treating facility. Transfer from landing site to hospital by ground ambulance seems unfeasible in time critical patients.

Conflict of interest

None declared.

Funding

None declared.

New Methods for Diagnosis of Thoracic Trauma in Prehospital Care

41 Aim

Trauma to the thorax is common and can be life-threatening. Ultrasound is a promising technology; however, its accuracy is operator dependent. Methods not requiring operator image interpretation would be beneficial. The aim of this study is to evaluate electrical bioimpedance (EBI) and microwave technology (MWT). Both technologies are non-operator dependent, non-invasive, harmless, cost efficient, rapid and portable.

Methods

Two complementary lines of research are pursued. A clinical study aiming to differentiate EBI measurements of thoracic trauma patients (n=20) and healthy controls (n=20), using diagnostic mathematical algorithms, has been completed. Clinical trials are complemented by experiments on realistic porcine models of pneumothorax (PTX) and hemothorax (HTX). 1,2,2 These experiments enable analysis of EBI and MWT with well-defined injuries. A pilot study on two pigs with unilateral PTX from small (50 mL) to large (2000 mL) sizes, and large HTX, was performed. Diagnostic performance is evaluated using cross-validation to derive the area under the ROC curve (AUC), and confusion matrices.

Results

The clinical study achieved AUC=0.87. The pilot porcine study showed that EBI parameters evolved as expected with increasing PTX/HTX; EBI theory predicts presence of air should increase resistivity and fluid decrease it. The MWT study showed that EBI parameters evolved as expected with increasing PTX/HTX; EBI theory predicts presence of air should increase resistivity and fluid decrease it.

Conclusion

EBI and MWT are promising technologies for prehospital diagnosis of thoracic injuries.

REFERENCES


Conflict of interest

None declared.

Funding

The authors acknowledge funding received from the Swedish research centre MedTech West and Folksam insurance company.