

Variation in activation of trauma teams in Dutch emergency departments

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Introduction: Trauma teams can be activated by emergency department (ED) staff to assess and treat a seriously injured patient optimally. Some EDs have one trauma team available whereas other EDs have two or more different trauma teams. The decision to activate a specific trauma team is mostly based on information provided by the emergency medical service (EMS) and is called in-hospital trauma triage. A system with a tiered response may contribute to the efficiency of the in-hospital trauma triage process by better resource allocation, improved cost containment and patient outcomes.

Objective: The aim of this study is to investigate and compare current practice of in-hospital trauma triage and activation of trauma teams in Dutch EDs.

Methods: A cross-sectional survey was conducted between May 30, and July 26, 2011 among managers of all 102 EDs in the Netherlands, using a semi-structured online questionnaire. The questionnaire contained items about type of in-hospital trauma triage system, composition of trauma teams at the ED and the criteria used to activate these teams.

Results: Seventy-seven (76%) questionnaires were included in the analyses. Most EDs use a one-team trauma triage system (64%). The overall number of trauma team members varies from 3 to 16 professionals. 96% Of the EDs receive a pre-notification from EMS, mostly by telephone (92%). 40% Of the pre-notifications is communicated directly, 31% via an Emergency Medical Dispatcher (EMD), 20% by both EMS and EMD and 9% in another way. The ED nurse usually receives the pre-notification (96%), whereas the decision to activate a team is made by different professionals at the ED. Information mostly available in pre-notification is: blood pressure (84%), pulse rate, age and gender (all 81%). The following criteria are mostly used for trauma team activation: Glasgow Coma Score (85%), Airway, Breathing, Circulation (84%) and Revised Trauma Score (83%). Only 56% of the EDs were satisfied with the current situation on in-hospital trauma triage and found their system useful.

Discussion: We identified a large variation in trauma team activation across Dutch EDs regarding: 1. the in-hospital trauma triage system (number of teams) and composition and size of trauma teams; 2. how and by whom information about the incoming patient is communicated between EMS and the ED and by whom the decision for trauma team activation is made; 3. the criteria to activate the different trauma teams. Future research needs to address the criteria that could be used to efficiently and safely activate a specific trauma team and in what way decision makers in Dutch EDs can be supported in the in-hospital trauma triage process.

Topic: Trauma

Key-words: Trauma teams; In-hospital trauma triage; Trauma team activation