

Higher paediatric readiness in emergency departments and trauma centres with a paediatrician on-site

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Background: Critically ill and injured children are frequently admitted to mixed adult/paediatric emergency departments and trauma centres. Children constitute a smaller proportion of patients in these facilities, thus leading to the risk of poor quality of paediatric emergency care being provided. Studies show that day-to-day readiness for the emergency care of children affect paediatric patient safety and is associated with a reduced risk of mortality among critically ill children. This study aimed to assess the level of paediatric readiness in Danish emergency departments and trauma centres. We hypothesised that trauma centres had a higher paediatric readiness than emergency departments.

Methods: From November 2020 to January 2021, a nationwide survey was conducted in all 18 Danish emergency departments and four trauma centres. The questionnaire was a Danish translation of the 2013 American assessment of paediatric readiness provided by the National Pediatric Readiness Project. Facility chief physicians were approached by phone and for those willing to participate, the questionnaire was e-mailed for completion by designated healthcare professionals working in the emergency department or trauma centre. Primary outcome was paediatric readiness, which was assessed using the weighted paediatric readiness score based on a scale from 0-100. A score of 100 points indicated full compliance with the 2009 American Guidelines for Care of Children in the Emergency Department. The weighted paediatric readiness score was presented as median with interquartile range (IQR). Our hypothesis was tested using the Mann-Whitney U

test, and a P-value of less than 0.05 was considered statistically significant.

Results: A total of 13 emergency departments and three trauma centres replied resulting in a response rate of 73%. There was no significant difference in weighted paediatric readiness scores between emergency departments, median (IQR) 70.0 (56.1-78.2) and trauma centres 75.6 (70.9-78.4); (P = 0.42). Facilities with a paediatrician on-site 24/7 (n=12) had higher paediatric readiness scores 75.5 (67.7-78.8) than four facilities without an on-site paediatrician 53.8 (44.9-63.1); (P = 0.02).

Conclusion: Trauma centres did not have a higher paediatric readiness than emergency departments. However, we found a higher paediatric readiness in facilities with a paediatrician on-site.