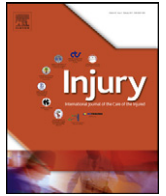




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Evaluation of the survival benefit of Trauma-Centre care in the Italian setting

Stefano Di Bartolomeo^{a,b,*}, Massimiliano Marino^a, Chiara Ventura^a, Rossana De Palma^a

^aRegional Agency for Health and Social Care of Emilia-Romagna, Viale Aldo Moro 21, 40127 Bologna, Italy

^bAzienda Ospedaliero-Universitaria di Udine, Italy

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ABSTRACT

Background: Trauma Centres (TC) are expected to have a lower mortality – after controlling for injury-severity – than non-designated hospitals in order to justify their funding. This benefit has been demonstrated in the USA not long ago, while the evidence from other settings is still limited. We evaluated the mortality benefit of TC care in an Italian setting, where the first Trauma System with designated TCs was instituted six years ago.

Materials and methods: We compared 30-day mortality among 4059 severely injured patients treated in the three TCs and in 12 other hospitals of the region Emilia-Romagna, Italy between 2007 and 2011. We used propensity-score weighting to adjust for differences in potential confounders.

Results: In the overall population there was no difference in the adjusted mortality – OR (95% CI) 1.02 (0.81–1.29). However, an interaction existed between TC care and injury severity. Subgroup analyses showed that the benefit of TC care was significant for the patients with a TMPM-ICD9 severity score > 0.12 – OR (95% CI) 0.70 (0.52–0.97). These patients comprised about one-third of the study population. Further subgroup investigations showed that this effect was concentrated in the patients with less than 45 years.

Conclusions: The risk of death for patients with particularly severe injuries is significantly lower when they are treated in TCs as compared to Non-Trauma Centres, especially if they are younger than 45 years. TC care should be provided to a larger number of patients than currently done.

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