TraumaNetzwerk DGU*: Optimizing patient flow and management

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ARTICLE INFO

Keywords:
Quality of trauma care
Trauma network
Whitebook
Trauma centres

ABSTRACT

Purpose: Caring for severely injured trauma patients is challenging for all medical professionals involved both in the preclinical and in the clinical course of treatment. While the overall quality of care in Germany is high there still are significant regional differences remaining. Reasons are geographical and infrastructural differences as well as variations in personnel and equipment of the hospitals.

Methods: To improve state-wide trauma care the German Trauma Society (DGU) initiated the TraumaNetzwerk DGU® (TNW) project. The TNW is based on five major components: (a) Whitebook for the treatment of severely injured patients; (b) evidence-based guidelines for the medical care of severe injury; (c) local auditing of participating hospitals; (d) contract of interhospital cooperation; (d) TraumaRegister DGU® documentation.

Results: By the end of 2013, 644 German Trauma Centres (TC) had successfully passed the audit. To that date 44 regional TNWs with a mean of 13.5 TCs had been established and certified. The TNWs cover approximately 90% of the country’s surface. Of those hospitals, 2.3 were acknowledged as Supraregional TC, 5.4 as Regional TC and 6.7 as Lokal TC. Moreover, cross border TNW in cooperation with hospitals in The Netherlands, Luxembourg, Switzerland and Austria have been established.

Preparing for the audit 66% of the hospitals implemented organizational changes (e.g. TraumaRegister DGU® documentation and interdisciplinary guidelines), while 80% introduced personnel and 21% structural (e.g. X-ray in the ER) changes.

Conclusions: The TraumaNetzwerk DGU® project combines the control of common defined standards of care for all participating hospitals (top down) and the possibility of integrating regional cooperation by forming a regional TNW (bottom up). Based on the joint approach of healthcare professionals, it is possible to structure and influence the care of severely injured patients within a nationwide trauma system.

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Trauma care in Germany

Every year 7–8 million accidents occur in the Federal Republic of Germany [1]. Current assessments expect 33,000–38,000 severely injured patients (ISS ≥ 16) per year [2,3]. Moreover, a similar number of patients suffer from less severe trauma (ISS < 16) but still require treatment in the Emergency Room (ER) due to the preceding injury mechanism or a temporary impairment of the vital signs. Thanks to the well-organized rescue system and the commitment of all participating medical disciplines the reputation of trauma care in Germany is excellent. Nonetheless, controversies discussing individual cases as well as a number of scientific studies indicate that the quality of trauma care is comparatively heterogeneous in our country [3–8].

According to the data of the Federal Bureau of Statistics the rate of mortal traffic injuries varies widely between the federal states of Germany. Mortality after traffic accident in states such as Mecklenburg-West Pomerania for example amounts to 2.7%, more than double the rate of North Rhine-Westphalia (1.1%). In city – states like Berlin, it is only 0.5% [26]. Data from TraumaRegister DGU® demonstrate significant differences between the participating hospitals [6,7] as well. There are two main reasons leading to the cited quality variations. Firstly, there are geographic and infrastructural differences between the federal states and secondly, treatment concepts, organization and equipment in the participating hospitals differ.

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http://dx.doi.org/10.1016/j.injury.2014.08.024
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