

The North Carolina Trauma Registry

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Unintentional injuries are the leading cause of death in North Carolina and throughout the United States for ages 1 to 44, with medical expenditures of \$117 billion each year.^{1,2} Optimal care of seriously injured patients requires an organized and coordinated approach by emergency medical services (EMS), hospitals, and other health systems. The Office of Emergency Medical Services (OEMS) is the lead agency for coordinating trauma care in North Carolina and began designating individual trauma centers in the 1980s.³ The Trauma System Act of 1993 enabled development of an inclusive statewide trauma system with every acute care hospital required to affiliate with 1 of the 7 newly created Regional Advisory Committees (RACs). Each RAC is led by a regional Level I or Level II trauma center^a and is expected to develop regional treatment protocols, transfer guidelines, and programs for education, training, and performance improvement.⁴ Unfortunately, the legislation which created the trauma system and RACs was an unfunded mandate, so efforts to build and support it to date have been voluntary and the establishment of an integrated, inclusive trauma care system has been incomplete.

The North Carolina Trauma Registry (NCTR) was created in 1987 as a cooperative effort between the state's trauma centers and OEMS to facilitate the collection of consistent data on all injured patients admitted to the trauma centers. Each of the 11 trauma centers in North Carolina (6 Level I, 3 Level II, and 2 Level III) are required to collect and submit data using NTRACS (National Trauma Registry of the American College of Surgeons) trauma registry software sponsored by the American College of Surgeons. Over 250 data points are

collected on each trauma patient, with standard data definitions provided in a data dictionary which is regularly revised and updated. Since 1994 the registry has collected data on more than 200 000 patients treated at North Carolina's trauma centers.⁴

Data from the registry has been a resource for many scientific publications over the past 20 years, including those focusing on the evaluation of care and outcomes of specific injuries, causes of injury, impact of injury prevention equipment such as seat belts and motorcycle helmets, and in other benchmarking and

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outcomes studies. The NCTR Research Review Committee and Publications Committee oversee access to registry data and assure that resulting publications are accurate and maintain confidentiality of the patients and hospitals. However, since state law only mandates data submission by designated trauma

a Level I and II trauma centers provide comprehensive care for trauma patients, and serve as regional resource centers. Level III centers provide initial stabilization of injured patients, with transfer to Level I or II centers for those patients with more complex or critical injuries.

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centers, the registry does not currently provide a population-based profile of injured patients cared for in more than 100 acute care hospitals throughout the state.

The impact of the NCTR on health policy decisions has thus been somewhat limited. Several databases currently contain information on injured patients throughout the state, including the NCTR, PreMIS (the EMS prehospital database), and NC DETECT (the North Carolina Division of Public Health database which is updated daily with information from all emergency department visits to hospitals in North Carolina). These various databases must be linked to provide a comprehensive

profile of injury in North Carolina, and efforts are currently underway to do so. If successful, this will create a registry, maintained and administered by OEMS, with accurate and accessible data to support ongoing evaluation of the evolving trauma system with benchmarking for performance improvement and outcomes research, injury prevention, and public health planning. The goal of the coordinated data system is inclusion of all state EMS agencies, acute care hospitals, and other providers in an organized, multidisciplinary, data-driven structure to provide optimal quality care for all injured patients throughout North Carolina. **NCMJ**

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