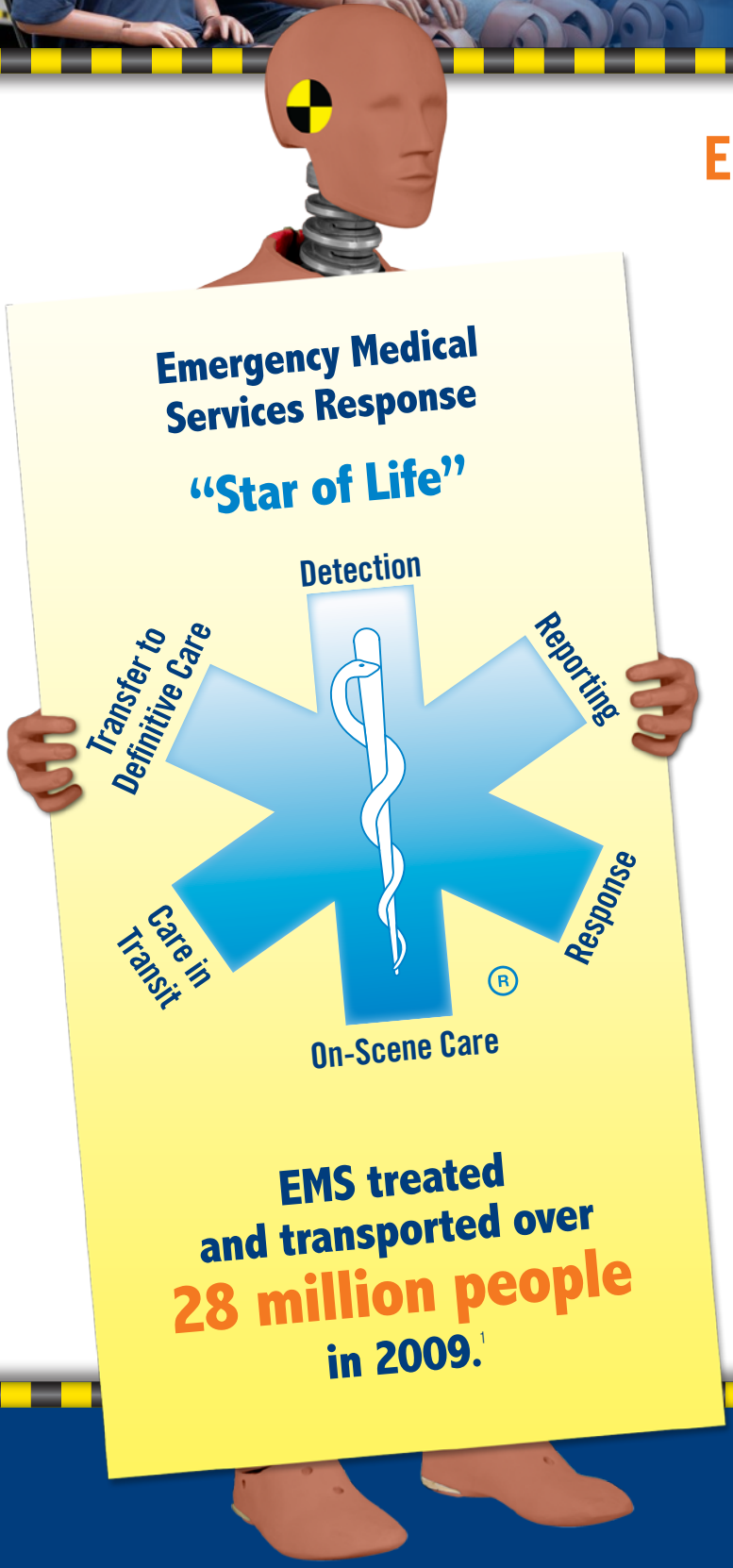
MAY 2014

SAFETY IN NUMBERS



EMS Data IS Important

On any given day, thousands of America's 212 million licensed drivers call 911 for emergency help.

A realistic scenario: A young mother just crashed her car along a busy highway. She has a head injury, her husband has been knocked unconscious, and their 3-year-old daughter wails from her car seat in the back seat. The mother calls 911, and when the ambulance arrives from one of the Nation's 21,283 Emergency Medical Services (EMS) agencies, EMS providers recognize the potentially life-threatening injuries of the husband and radio for a helicopter to transport him to a Level 1 trauma center. That one call to 911 may save a life.

Nearly everywhere in America, dialing 911 brings the help you need, where you need it, thanks to the Nation's Emergency Medical Services system. You may have seen the universal symbol for EMS, called the Star of Life, on ambulances and the uniforms of EMS providers. The six arms of the Star of Life describe what happens from the 911 call to arrival at the hospital.

EMS providers assess each patient, provide immediate emergency medical care, and follow protocols to take each person to the hospital that can meet their needs. Some may need the specialized services of a trauma center, and others may need the community hospital. EMS professionals (over 826,000 in 2011) follow detailed protocols using real-time EMS data and evidence-based technology to achieve the best outcome for injured motorists. Even before the ambulance arrives at the hospital, doctors and nurses often use EMS data to plan treatment.

After each person's injuries have been treated, EMS data is used again—to make continuous improvements in emergency medical care. Perhaps one of the most important uses of EMS data is to prevent injuries from happening in the first place, by analyzing how, where, and when certain injuries occur and developing countermeasures to prevent the crash.

For more information, visit:

www.NHTSA.gov and www.EMS.gov

U.S. Department of Transportation
National Highway Traffic Safety Administration

NHTSA
www.nhtsa.gov

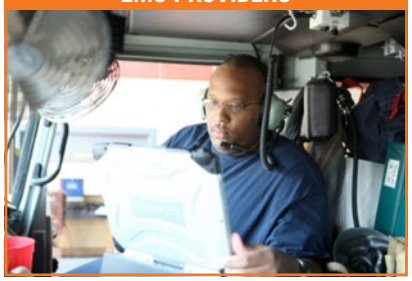
How EMS Data Saves Lives

EMS data helps the injured in real-time. Data tells EMS providers what care patients need and where to take them.

EMS also uses data from traffic crashes and other incidents to improve emergency medical care—and the EMS system.

The first step in using EMS data is the EMS Electronic Patient Record. EMS providers document the details of the injury as completely as possible.

EMS PROVIDERS



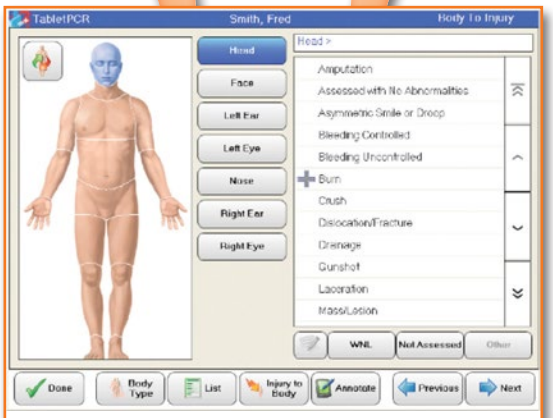
"What could EMS providers do better?"

- Local EMS systems collect uniform data and review it to improve the care they provide.
- Knowing where EMS services are more frequently needed, and what injuries and illnesses are most common can help EMS professionals focus training and education to master skills that will best meet the needs of the public.

EMS SYSTEM

"How can the EMS system improve its response?"

- In 2011, EMS responded to 16,053 rural crashes involving fatalities and 13,578 urban crashes involving fatalities.[2]
- By knowing where crashes occur, local and State EMS systems can use this data to plan efficient responses and how to coordinate with hospitals and other parts of the EMS system.



Example of Electronic Patient Care Record

PATIENT NEEDS

"What does the patient need now?"

- For every patient encounter, EMS providers record what they find, what they do, and how the patient responds.
- By collecting and recording detailed information, EMS providers are able to decide how to care for the patient and which medical facility is best suited to provide the appropriate care.

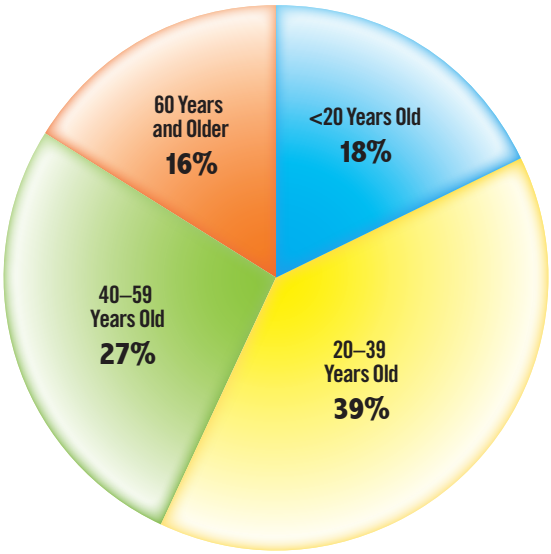
HIGHWAY SAFETY

"How can EMS reduce deaths and injuries on the highways?"

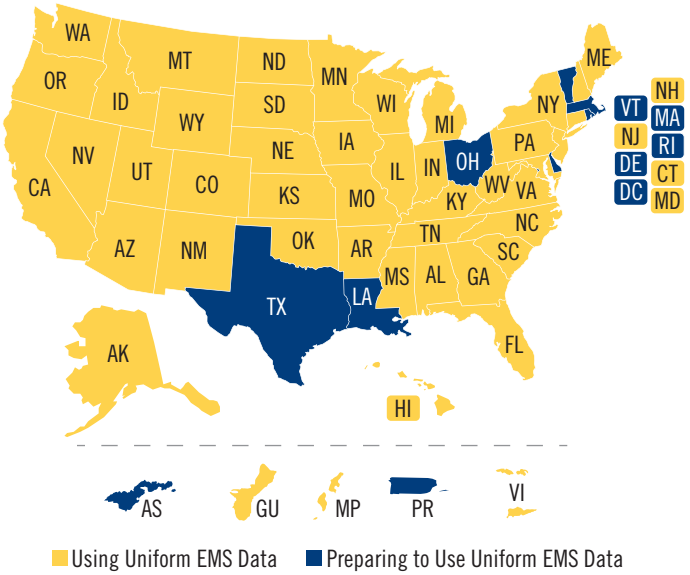
- In 2011, EMS arrived within 10 minutes of being notified to the scene of 53 percent of rural crashes involving fatalities and 83 percent of urban crashes involving fatalities.[3]
- By analyzing data, EMS systems can conduct research and identify specific ways to reduce crash-related deaths and injuries.

THE FACTS

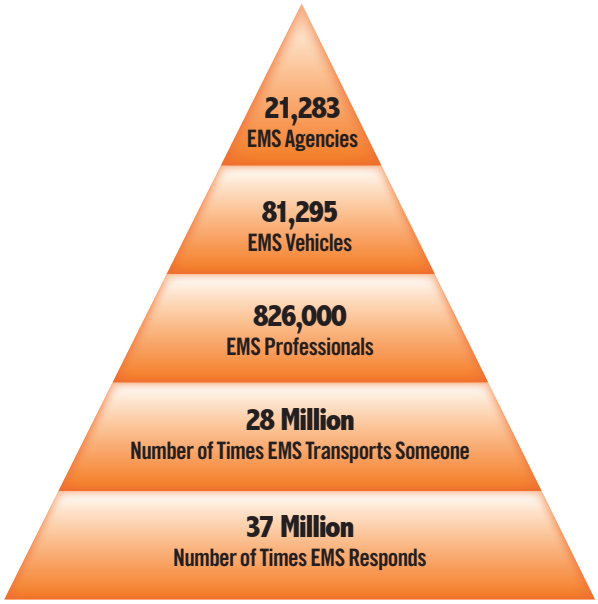
Age of People in Motor Vehicle Crashes Treated and Transported by EMS in 2012[4]



Most States Have Adopted Uniform EMS Data Collection[6]

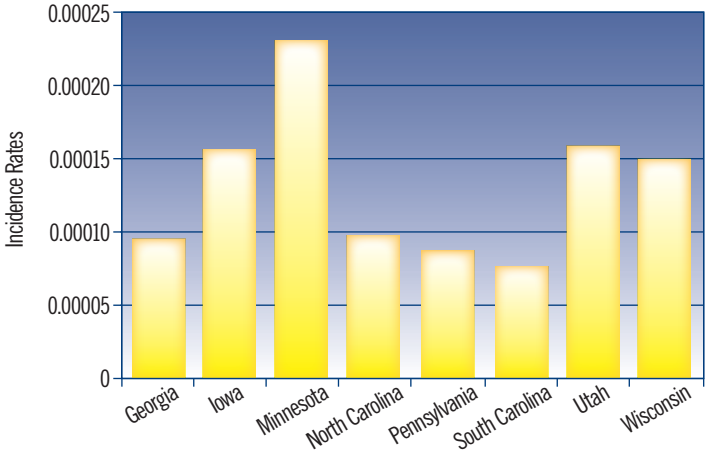


The National EMS System by the Numbers[5]



Incidence Rates for 911 Responses With EMS Primary Role of Transport for Bicycle Crashes, 2012[7] (Number of Injuries per 1,000 Population)

State data can be used to plan how to treat or prevent specific injuries in specific States and enables comparison with other States.



WHAT YOU CAN DO

The Public Can:

- Call 911 for emergency medical care, and help EMS providers make the right decisions by answering their questions accurately and fully.
- Learn CPR.
- Contact the State EMS office (www.nasemso.org/About/StateEMSAgencies/StateEMSAgencyListing.asp) to become an emergency medical responder, technician, or paramedic.
- Visit www.ems.gov for more information on EMS and how to celebrate EMS Week (May 18-24).

State Highway Safety Offices Can:

- Use EMS data to geocode crashes to determine high-risk locations.
- Use EMS data to identify the most frequently occurring crash-related injuries to develop countermeasures to prevent specific types of traffic crashes. Every injury prevented saves money on medical care.
- Use State EMS data to target injury prevention efforts. Focus on pedestrians, bicyclists, and motorcycle riders who are high-risk populations for injuries.
- Visit "The Highway Safety & EMS Connection" (http://safety.fhwa.dot.gov/hsip/shsp/ems/connection/) for ideas on how to work with State EMS offices.

EMS Agencies Can:

- Use EMS data to assess EMS demand, response, and outcomes. This information helps allocate resources to the time and place of highest demand.
- Examine EMS data to determine what kinds of medical problems and injuries occur most often – and identify the skills that are most important for EMS providers to master and maintain.
- Use EMS data to identify and quantify the important role EMS plays in reducing death and disability by providing emergency medical care and transport.
- Use EMS data to inform others about the effectiveness, quality, and impact of pre-hospital care.
- Visit "The Highway Safety & EMS Connection" (http://safety.fhwa.dot.gov/hsip/shsp/ems/connection/) for ideas on how to work with DOTs and State Highway Safety Offices.

EMS Providers Can:

- Record complete, accurate, patient care reports on every EMS transport.
- Work with doctors, nurses, and others in the local/State EMS system to use EMS data to improve emergency care.
- Visit http://nemsis.org for more information on uniform EMS data.

References:

[1] Mears, G., Armstrong, B., Fernandez, A. R., Mann, N. C., McGinnis, K., Mears, C. R., Sanddal, N. D., Sanddal, T. L., & Shofer, F. S. (2012). 2011 National EMS Assessment. (Report No. DOT HS 811 723). Washington, DC: National Highway Traffic Safety Administration. Available at www.nhtsa.gov/staticfiles/nti/ems/pdf/811723.pdf.

[2] NHTSA. (2012). *2011 traffic safety facts: A Compilation of motor vehicle crash data from the Fatality Analysis Reporting System and the General Estimates System.* (Report No. DOT HS 811 754). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/811754AR.pdf.

[3] Ibid.

[4] National EMS Information System, Technical Assistance Center. https://www.nemsis.org/. Accessed March 31. 2014.

[5] Mears et al.

[6] National EMS Information System.

[7] Ibid.

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For more information, visit:

www.NHTSA.gov and www.EMS.gov

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