

State of New Hampshire



American College of Surgeons Pre Review Questionnaire Answers

Table on Content

Introduction 2

Section 1: Assessment 5

 Injury Epidemiology 5

Section 2: Policy Development 23

 Statutory Authority and Administrative Rules 23

 System Leadership 27

 Coalition Building and Community Support..... 29

 Lead Agency and Human Resources within the Lead Agency 31

 Trauma System Plan..... 32

 System Integration..... 33

 Financing 34

Section 3: Assurance..... 35

 Prevention and Outreach..... 35

 Emergency Medical Services..... 37

 Definitive Care Facilities..... 42

 System Coordination and Patient Flow..... 49

 Rehabilitation 51

 Disaster Preparedness 52

 System-wide Evaluation and Quality Assurance..... 55

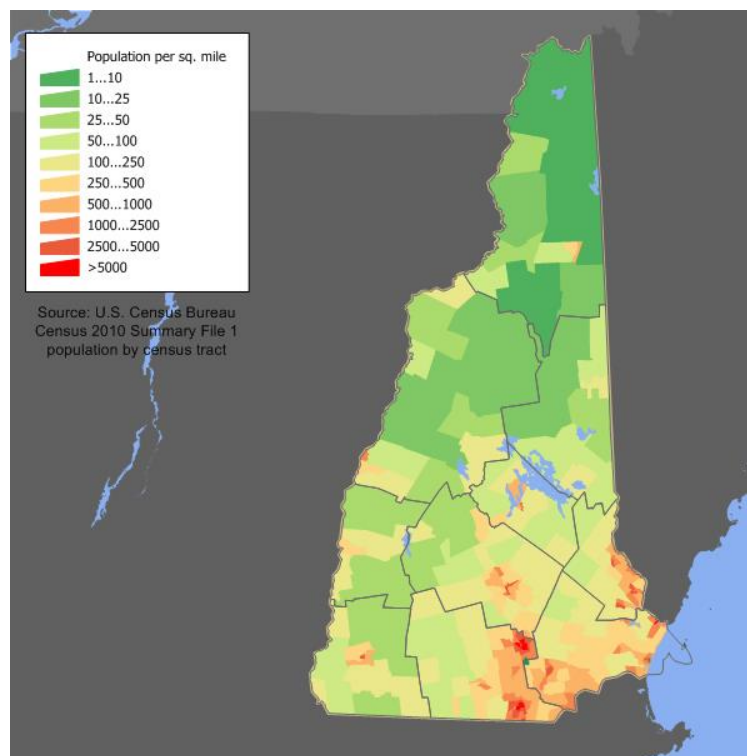
 Trauma Management Information Systems 57

 Research..... 59

Introduction

Background Information

New Hampshire is a small state both by land mass and population. The state ranks 44th in land area, 46th in total area of the 50 states, and 41st in population. Total population is approximately 1.3 million residents. Forty-nine percent of New Hampshire's residents reside in rural areas and 51% in urban areas. Seventy-seven percent of New Hampshire towns are considered non-urban or rural, with urban and near urban areas located in the southeast and south central regions. The rural areas are located in the western, central and northern sections. Rural areas of New Hampshire are comprised of small towns separated by large tracts of undeveloped forests, preserved land grants, privately owned logging properties, and state parks.



The state's road system is well developed in the most populated, southern area of the state and less so in the rural areas. Travel time by ground from the most northern town to the southern border is 3.5 hours (189 miles). Travel from the southwestern border to the seacoast is just over 2 hours (122 miles). Travel time from the northwestern border to the northeastern border is just over 2 hours (84 miles). All means of travel are difficult during the winter months due to weather and road conditions. Winters are cold and snowy throughout the state and are especially severe in the northern and mountainous areas. Average annual snowfall ranges from 60" to over 100" across the state.

Though the state has no general sales tax and no personal income tax, it does tax income from dividends and interest at a 5 percent rate. The legislature exercises fiscal restraint. New Hampshire's lack of a broad-based tax system has resulted in the state's local communities

having some of the nation's highest property taxes. EMS services are supported largely by local taxes and fees for services.

NH's median household income is about \$11,000 more than the national median and the poverty rate is 6% lower than the national rate. Ninety-four percent of the residents are white, 3% are Hispanic, 2.5 percent are Asian (many of whom are refugees), and 1.5% are African-American. Overall, nine percent of NH residents have no health care insurance.

The population of NH is aging. The state has a lower percentage of children under age 18 than the country as a whole (20% versus 23%) with an estimated number of 266,689 children in 2015. Despite an increase of over 13 percent in New Hampshire's adult population since 2000, the population of children has declined by over 12 percent. Two-thirds of our children live in the southern-most third of the state. Approximately 9 percent of our child population is non-white, and 5 percent are Hispanic or Latino. Ninety-one percent of NH's children are considered to be in excellent or good health, and 97% of them are insured.

While New Hampshire ranks as one of the healthiest and wealthiest states in the country, there are differences among its many communities. Disparities exist with higher injury rates in the rural areas of the north and west than in the more urban and suburban southern areas. Higher injury rates, however, are associated with lower socioeconomic indicators in the most urban areas, especially in Manchester and Nashua,

The incidence of crime in NH is low. According to the FBI's Uniform Crime Reporting Program, NH's violent crime rate in 2013 was 187.9 per 100,000. This is the 3rd lowest rate in the country. Only Hawaii had a lower murder rate than the Granite State's 1.3 per 100,000. These rates are reflected in low numbers of gunshot wounds and stabbings treated in NH hospitals.

NH Trauma System Overview

The NH Trauma System began in 1995 with the passage of RSA 153-A-7. (See [Appendix 1 RSA 153](#)). The lead agency is the Department of Safety, Division of Fire Standards and Training & Emergency Medical Services (FST&EMS). The Commissioner of Safety has been empowered by RSA 153-A-7 to educate the public, establish a data collection system, and provide for training of providers about the trauma system. The Commissioner is specifically empowered to:

- Adopt rules, with the approval of the Emergency Medical and Trauma Services Coordinating Board and the Trauma Medical Review Committee (TMRC), in accordance with RSA 153-A:20, and
 - Oversee the establishment of the Trauma Medical Review Committee.

As for rulemaking authority specifically for the trauma system, the Commissioner has been empowered by RSA 153-A:20 to develop rules relative to:

- Patient triage and transfer and
- Categories of hospital classification that provide adult and pediatric trauma services.

- The day-to-day operation of the trauma system is administered by the staff of the Department of Safety, Division of Fire Standards and Training & Emergency Medical Services. Their responsibilities include: Implementing the recommendations of the Trauma Medical Review Committee.
- Providing staff to support the Trauma Medical Review Committee in its responsibilities.

- Monitoring performance of trauma system service providers in accordance with standards, criteria, and provider obligations recommended by the Trauma Medical Review Committee
- Implementing system-wide data collection and system quality management and evaluation.
- Facilitating implementation of injury prevention and public education programs.

The NH Trauma System is a voluntary, inclusive trauma system. NH's 26 acute care hospitals may choose to actively participate in the trauma system by seeking trauma hospital assignment. All acute care hospitals with emergency departments are recognized to have a role in trauma care, whether or not they actively participate in the NH Trauma System through trauma hospital assignment. Non-participating hospitals in the NH Trauma System benefit from statewide performance improvement activities, improvements in care delivered by EMS providers, educational opportunities, and consulting services offered through the Trauma System Section of the NH Division of FST&EMS.

Thirteen of the 26 acute care hospitals are critical access hospitals. Dartmouth Hitchcock Medical Center located on the Vermont border is ACS verified as a Level I adult and a Level II pediatric trauma center. Concord Hospital (Level II) is the only other ACS verified trauma hospital. The other 9 hospitals participating in the NH Trauma System have been verified by the NH Trauma Medical Review Committee using NH criteria. (See [Appendix 2 Designation Maps](#)).

Section 1: Assessment

Injury Epidemiology

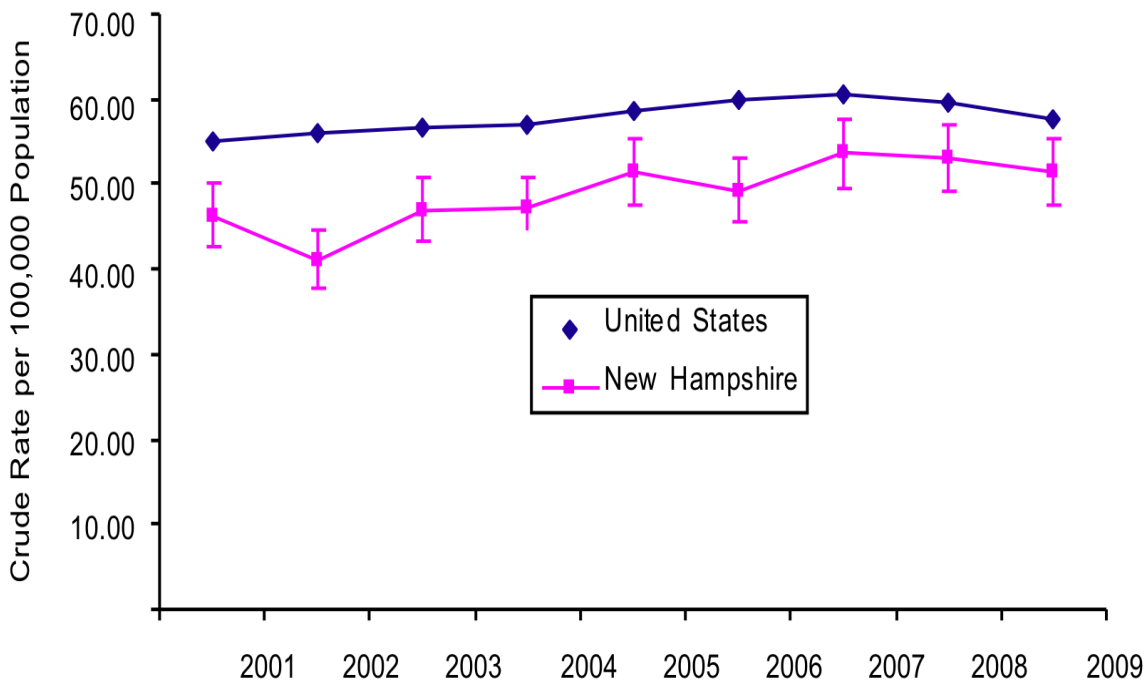
Question 1: Describe the epidemiology of injury in your region and unique features of:

“Injuries in the State of New Hampshire 2001-2009”, published in October 2012, is the primary document used to describe the epidemiology of injury in the State (See full report in [Appendix 3 NH Injuries 2001-2009](#)). The data from this document does not include any information from the New Hampshire State Trauma Registry which was only recently released to the hospitals.

a. Overall Population Injury Statistics Overview

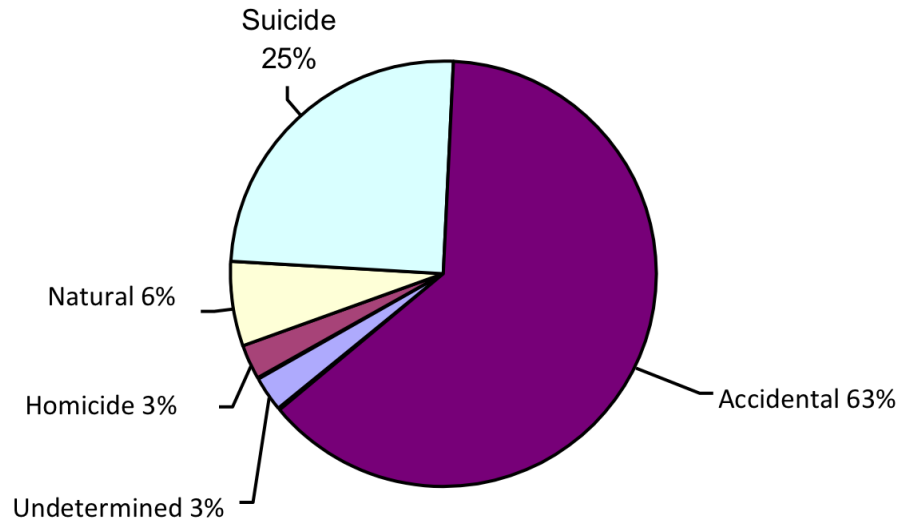
From 2001 to 2009, injuries were the leading cause of death for people in New Hampshire 1 to 44 years of age and the third leading cause of death overall. (In the past year, deaths due to opioid overdose have exceeded MVA deaths; this recent trend is not reflected in the following data and charts.) The 2007 rate of NH fatal injuries was 50.1 per 100,000 population, and in 2009, the rate was 43.1 per 100,000 population. These rates are significantly lower than the US rate during the same time period. New Hampshire’s rates are also below the Healthy People 2020 Target of 53.3.

Figure 1: United States versus New Hampshire Age-Adjusted Injury Mortality Rates by Year



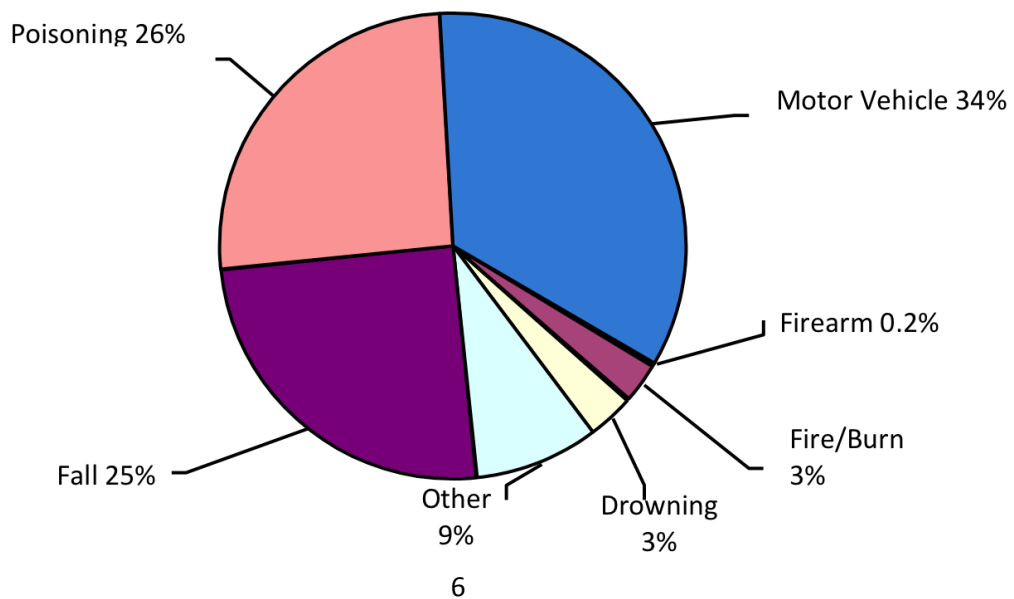
Unintentional, accidental injuries are the most common manner of death, followed by suicide.

Figure 2: Fatal Injury by Intent, 2001-2009, NH Residents



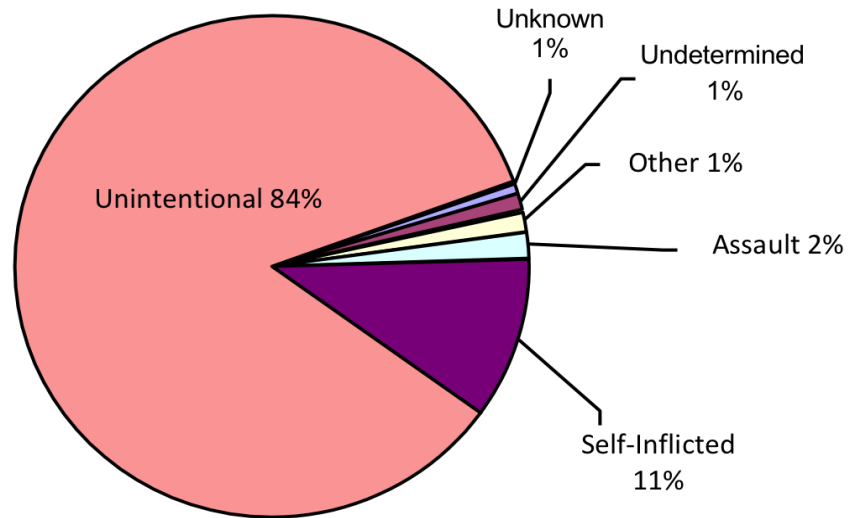
From 2001 to 2009, motor vehicle deaths were the most common, followed by poisoning. Most recent data from 2014 and 2015 indicates that these two causes have switched places due to opioid overdoses.

Figure 3: Fatal Injury by Unintentional Cause, 2001-2009, NH Residents



The non-fatal rate of inpatient discharges was 512.8 per 100,000 population for all injuries in 2007 and 496.4 per 100,000 population in 2009. Both are below the Healthy People 2020 target.

Figure 4: Inpatient Discharges by Injury Intent, NH Residents, 2001-2009

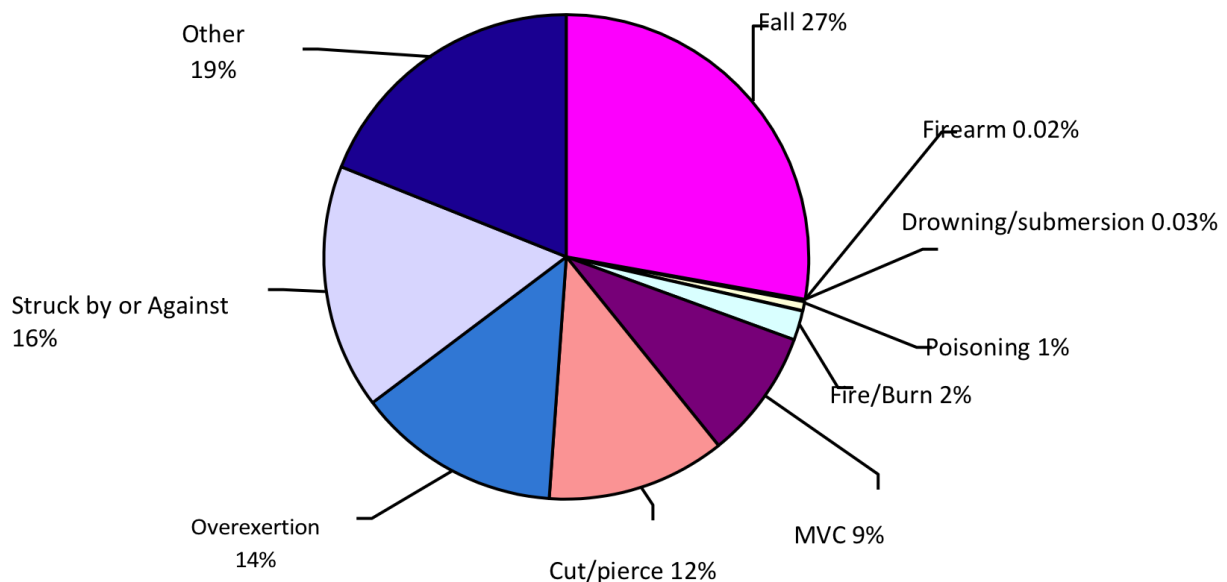


Non-fatal injury ED discharges were 12,466 per 100,000 population in 2007 and 12,311 per 100,000 population in 2009. Injury ED discharge rates are nearly double the target rate for Healthy People 2020.

Rates and Trends for All Traumatic Deaths and Injuries

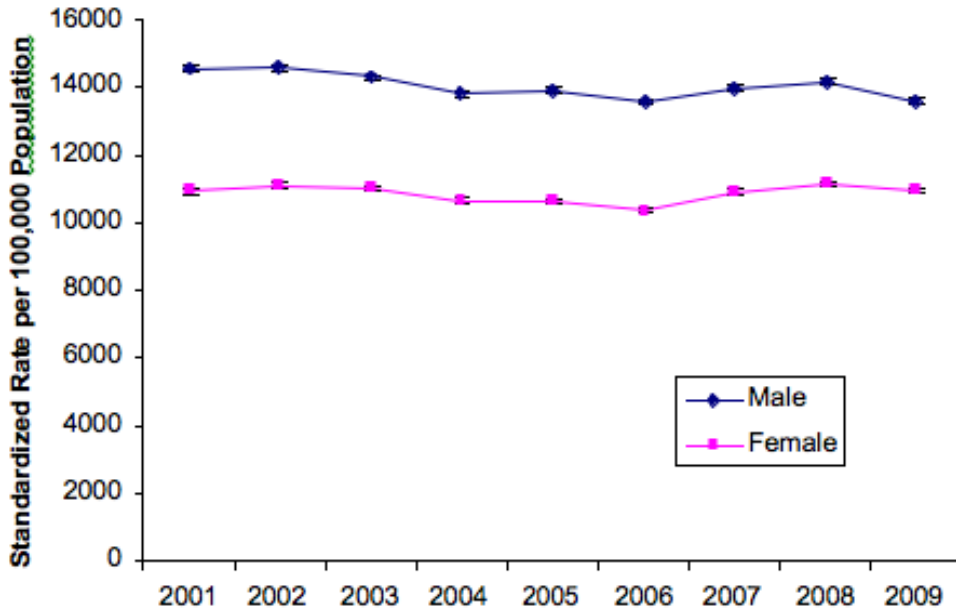
In New Hampshire, the non-fatal rate of inpatient discharges was 512.8 per 100,000 population for all injuries in 2007 and 496.4 per 100,000 population in 2009. These rates are well below the Healthy People 2020 target.

Figure 5: Emergency Department Discharges Unintentional Injury by Cause, NH Residents, 2001-2009



Males are more likely to be treated at the hospital for non-fatal injuries than females. There was a significant decrease in the rate of male visits to the ED between 2001 and 2009 and no change in rates for females. There are no statistically significant differences in inpatient discharge rates from year to year or between genders between 2001 and 2009

Figure 6: ED Discharges, Non-Fatal Injury by Gender. NH Residents, 2001-2009



Focusing only on inpatient discharges of patients, age 24 and under, yields a picture of the decline among teens and young adults.

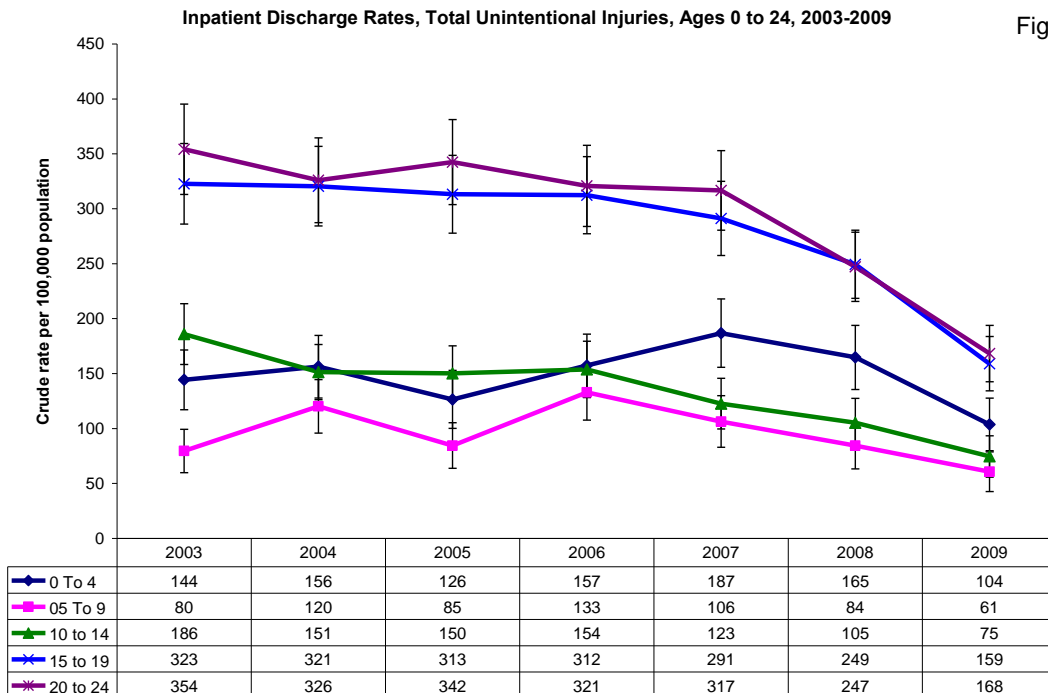
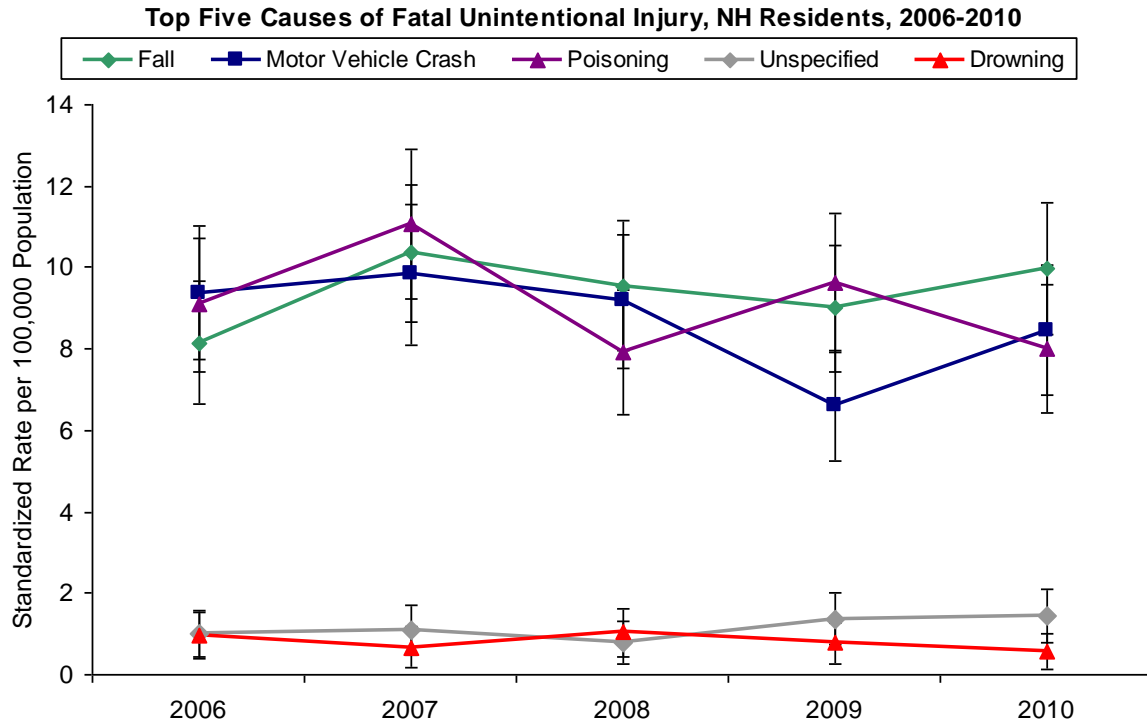


Figure 7:

Rates and Trends for Specific Trauma Deaths and Injuries

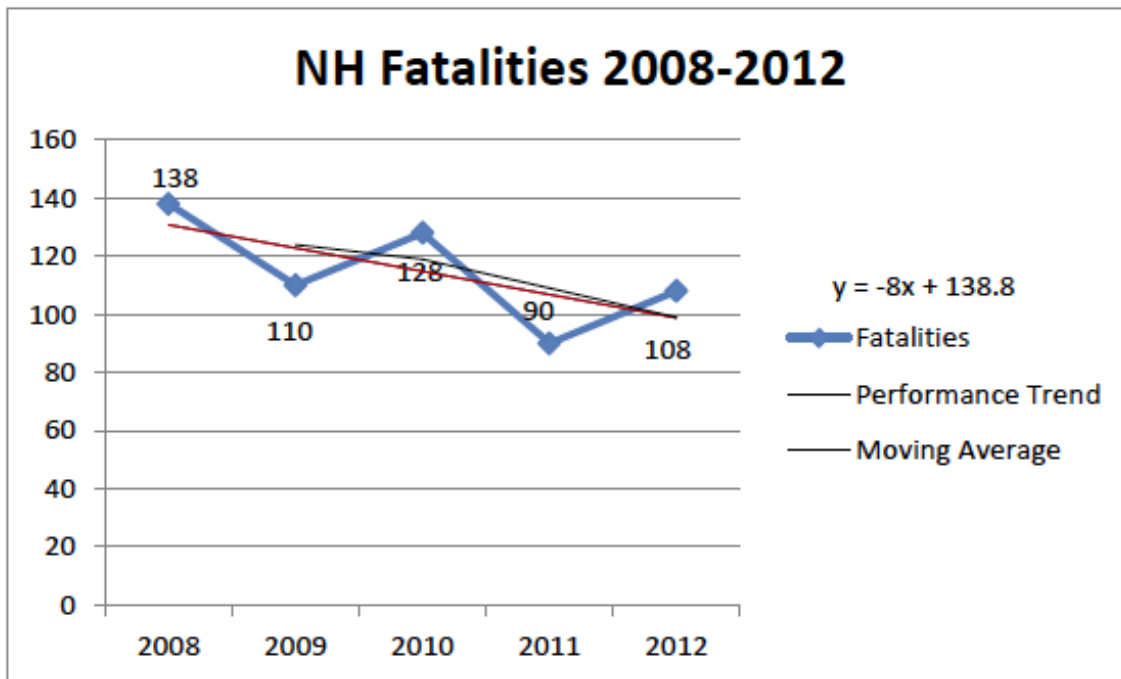
In New Hampshire, small numbers make it difficult to distinguish between random fluctuation and meaningful change when monitoring injury rates and identifying trends over time. According to the National Center for Health Statistics, considerable caution must be observed in interpreting the data when the number of events is small (perhaps less than 100) and the probability of such an event is small. Counts below 20 events do not generate statistically significant differences. Due to these difficulties, only the top three causes of injuries will be discussed in detail.



Motor Vehicle Crashes

The New Hampshire motor vehicle fatality rate in 2007 was 11.6 per 100,000 population, and 8.3 per 100,000 population in 2009. The confidence intervals between 2007 and 2009 are close, so no statistically significant change can be established. The state rate is well below the national target rate of 12.4 per 100,000 population.

Updated information from the NH Highway Safety Department indicates that a modest, declining trend may continue. As of December 1, 2015, there have been 98 deaths for the calendar year.

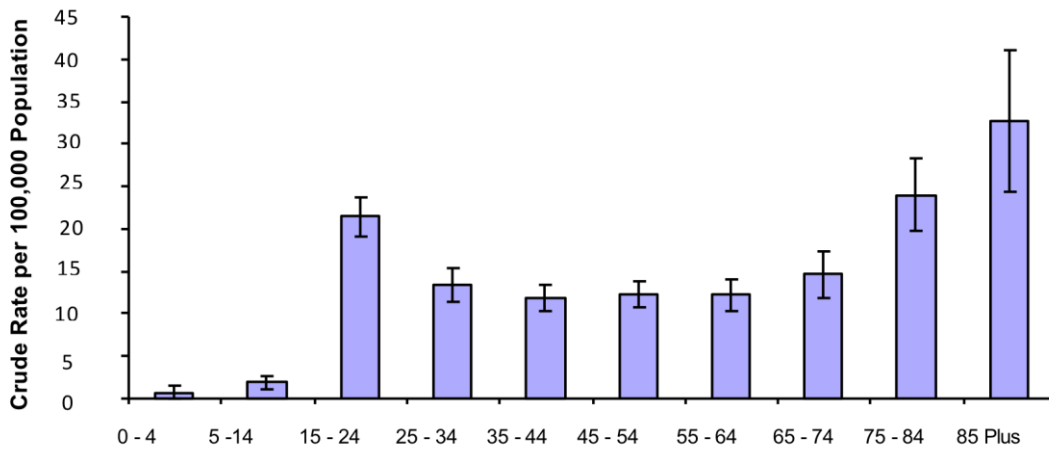


Source: FARS March 2014

Between 2001 and 2009, motor vehicle fatality rates decreased for males, who remained at a higher rate than females until 2009 where there was no statistically significant difference.

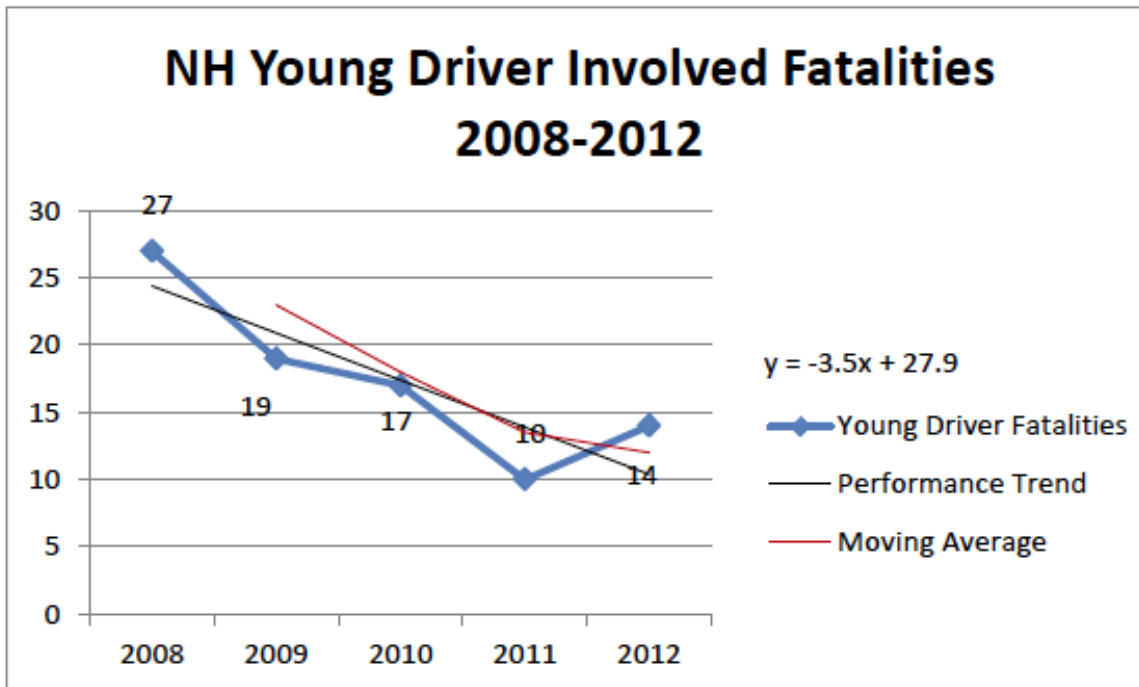
The age groups most likely to perish in an automobile crash are ages 15 to 24 years and 75 years and older.

Figure 6: Fatal Motor Vehicle Crash Injuries, by Age Group, NH Residents, 2001- 2009



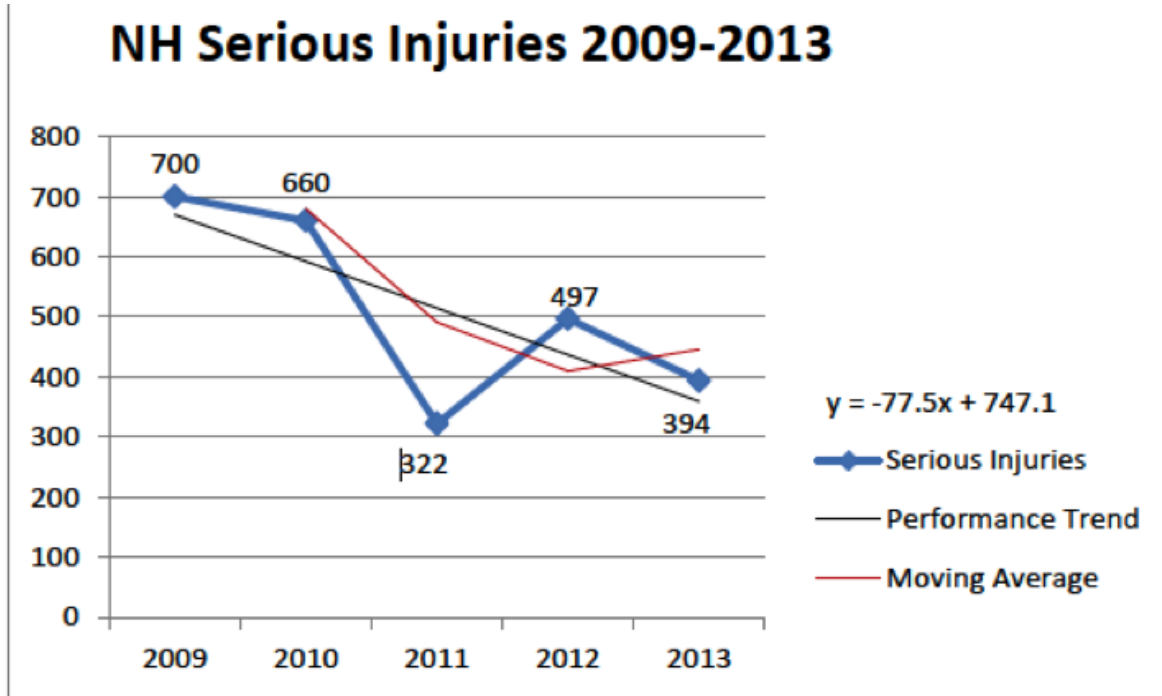
Source: New Hampshire Bureau of Vital Records, Death Certificate Data

A declining trend has been detected in the number of fatalities among young drivers.



Source: FARS May 2014

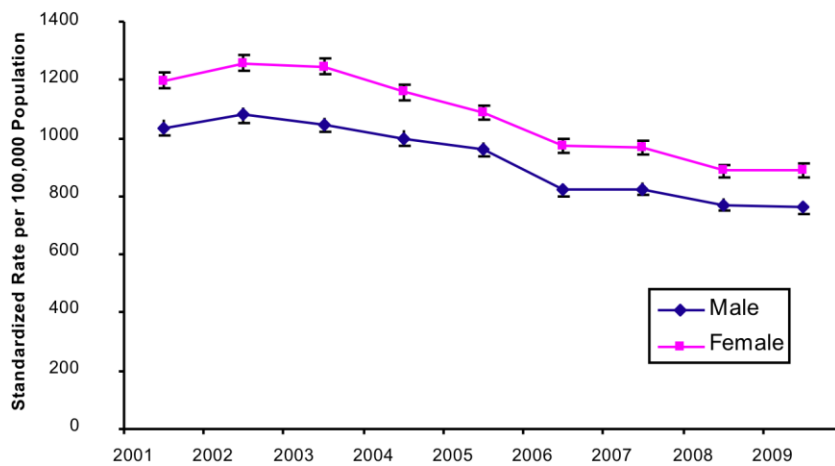
Along with decreasing fatalities, the number of serious injuries due to MVC is decreasing as shown in the following chart.



Source: NH Department of Transportation 2014

The 2007 rate of ED discharges for MVC was 895.9 per 100,000 population, and in 2009, it was 824.6 per 100,000 population. This is a statistically significant decrease between years 2007 and 2009.

Figure 7: Emergency Department Discharge Rates for Motor Vehicle Crash Injuries, NH Residents, by Gender, 2001-2009

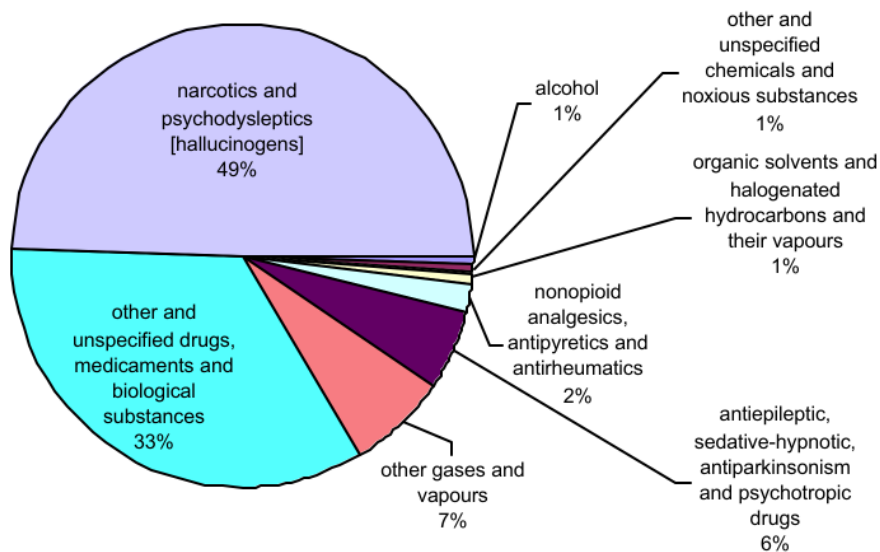


Poisoning

In 2007, the NH fatality rate for poisoning was 14.8 per 100,000 population. This decreased to 12.9 per 100,000 population in 2009. Since the confidence interval for the 2009 data overlaps the rate for 2007 as well as the national target rate of 13.1, there are no statistically significant differences in these rates. New Hampshire rates during this period meet the Healthy People 2020 target.

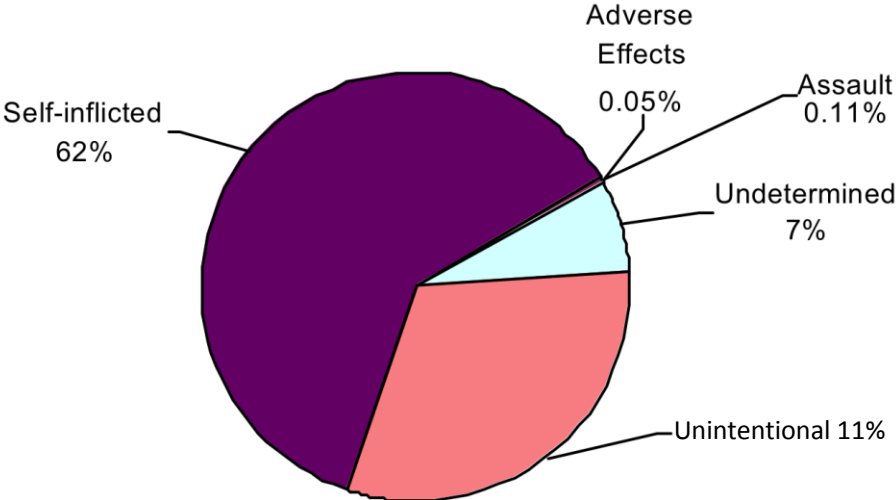
Sixty-seven percent of the poisoning deaths (2001-2007) were unintentional, and in 2007, the most common substance was narcotics (opioids) and hallucinogens. The majority of the poisoning deaths occurred in the age range of 15 to 64 years.

Substances That Caused Fatal Poisonings, 2007



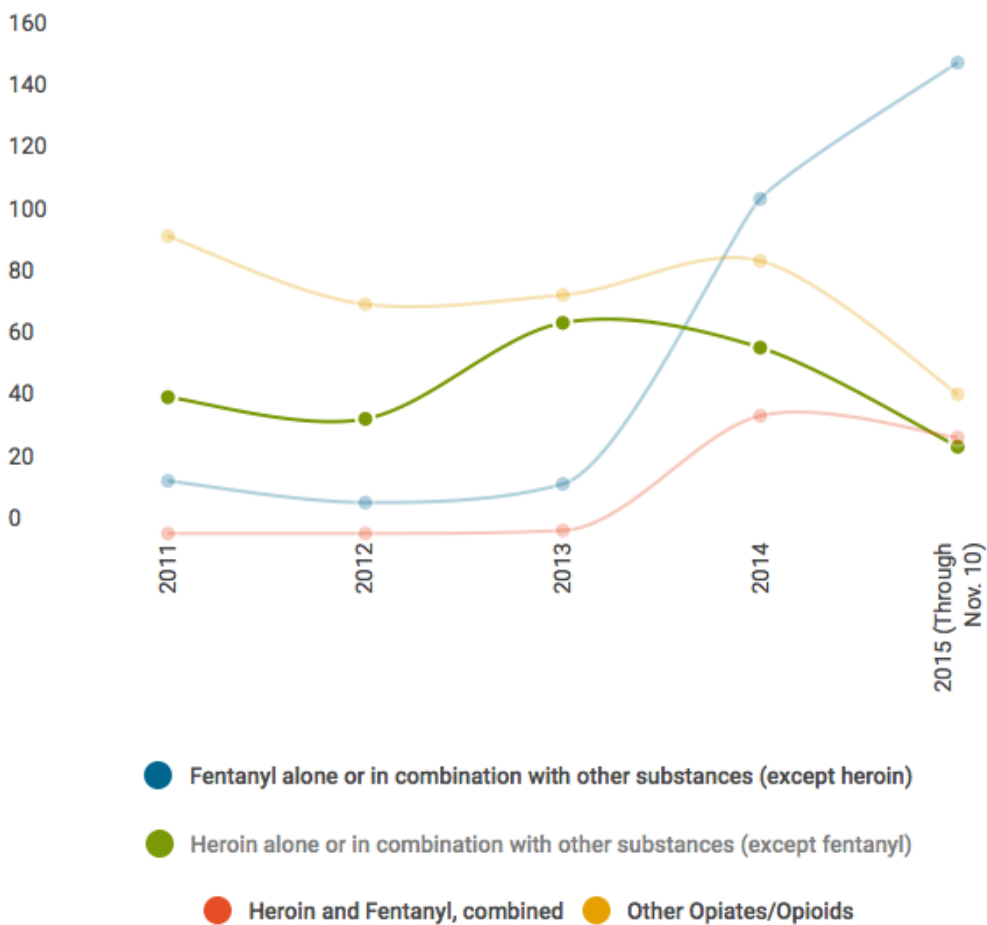
New Hampshire's data for non-fatal poisoning comes from hospital discharges. In 2007, the ED discharge rate for poisonings was 195.0 per 100,000 population. In 2009, the ED discharge rate for poisoning was also 195.0. The inpatient discharge rate in 2007 was 88.4 per 100,000 population, and in 2009, it was 91.2 per 100,000 population. There were no significant differences in overall ED or inpatient discharges.

: Inpatient Discharges for Poisoning, NH Residents, by Intent, 2001-2009, n=9,416



After 2009, a significant increase in deaths and hospitalizations due to opioid overdoses occurred. Although the hospital discharge database (inpatient and ED) is not available for the time period after 2009, it is obvious that there is a significant problem that is growing each year. The increase in opioid deaths is so significant that the governor and the legislature have become involved in developing a statewide plan to address the problem. A task force was created and is collecting data regarding opioid deaths. As of December 1, 2015, there have been 295 confirmed opioid deaths with another 80 suspected opioid deaths. The projected number of drug related deaths for 2015 is expected to hit 357. The urban areas, including our largest cities of Manchester and Nashua, are experiencing the most deaths. EMS and law enforcement are working together to make naloxone more available to first responders.

Deaths from Opiates and Opioids in New Hampshire

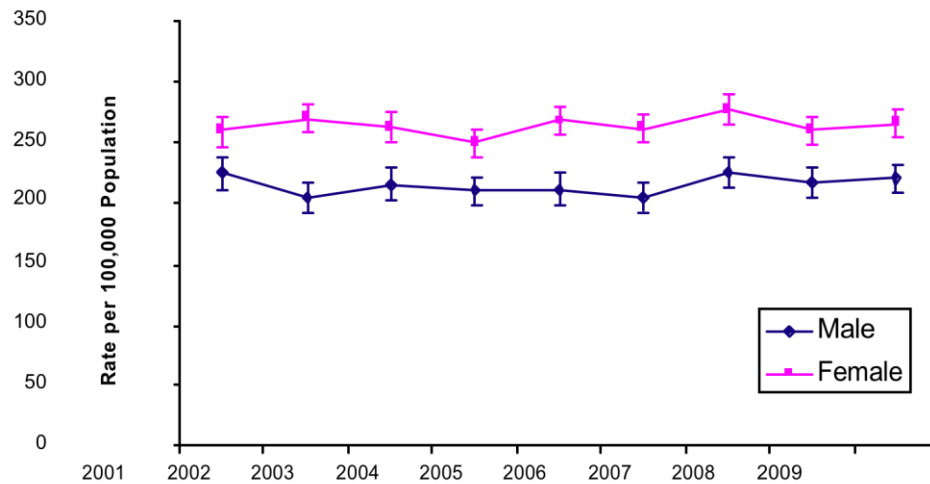


Falls

The fatality rate for fall-related injuries in 2007 was 10.5 per 100,000 population. In 2009 the fatality rate for falls was 8.3 per 100,000 population. While the New Hampshire rate is higher than the national target of 7.0, NH's confidence interval overlaps this rate, so in terms of statistics, it is not significantly different. NH residents age 65 and older have a significantly higher fatality rate due to falls than other age groups.

Inpatient discharge rates have remained constant; in 2007, the rate was 259.0 per 100,000 population, and in 2009, it was 249.6 per 100,000 population. As expected, female inpatient discharge rates are higher than males. NH's goal is to prevent an increase in the rate of hospital discharges even though NH's population is rapidly aging.

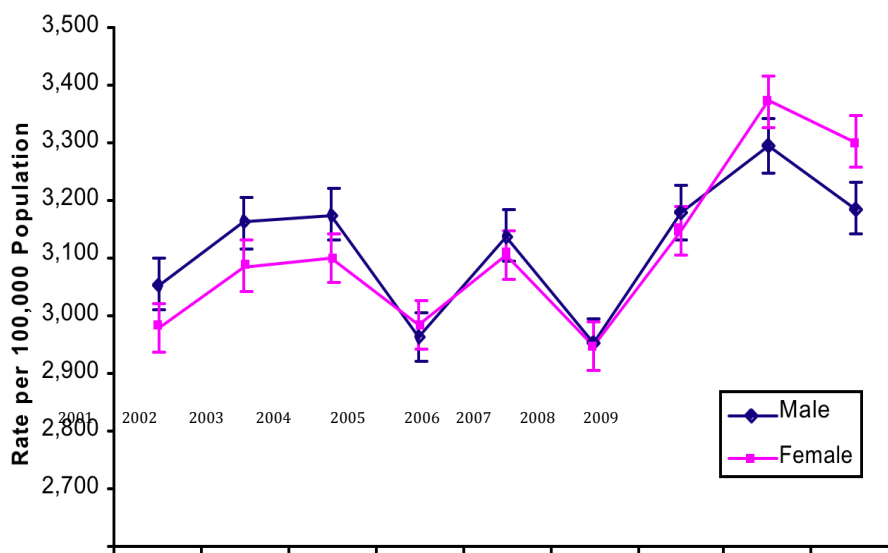
Inpatient Discharge Rate, Fall Injuries, NH Residents, by Gender, 2001-2009



Source: NH-DPHS Inpatient Hospital Discharge Data

The ED discharge rate for falls was 3,181.3 per 100,000 population in 2007 and 3,261.7 per 100,000 population in 2009. ED discharges due to falls have significantly increased between 2001 and 2009. The age groups most likely to be seen in the ED due to a fall injury are 0-14 years and 75 years and older. Ages 65 and older are the most likely to need inpatient care after a fall-related injury.

Emergency Department Discharge Rate, Fall Injuries, NH Residents, by Gender, 2001-2009



Total ED discharge rate for hip fractures in 2007 was 73.4 per 100,000 population, and in 2009, it was 68.7 per 100,000 population. Emergency department discharges for hip fracture in older adults significantly increased in 2005 and remained constant through 2009.

In 2007, the inpatient rate for hip fracture was 353.5 per 100,000 population, and in 2009, the rate was 313.3 per 100,000 population. Inpatient discharges have decreased between years 2002 and 2009 (Figure 22). This may be a sign that there has been a reduction in the severity of hip injuries due to falls as a result of fall risk prevention efforts.

Other Types of Injuries

Firearms:

On average, there are 82 firearm related fatalities per year. This rate has remained constant for the past 8 years. The most common intent is suicide (89%) followed by homicide (9%).

The 2007 rate of inpatient discharges for firearm-related injuries was 2.5, and the 2009 rate was 2.9 per 100,000 population; these are below the national target of 18.6 per 100,000 population. The 2007 rate of ED discharges for firearm-related injuries was 7.0 and 9.0 in 2009. These are below the national target of 18.6 per 100,000 population.

Fire:

On average, there are fewer than 11 deaths per year due to fires. The NH 2009 fatality rate due to fire was 0.76 per 100,000 population. This is below the Healthy People 2020 target of 0.86 per 100,000 population. The overall US rate is 1.10 per 100,000.

Drowning:

On average, there are 14 drowning cases per year. The NH 2009 fatality rate due to drowning was 1.1 per 100,000 population. The Healthy People 2020 target is 1.1 per 100,000 population. The overall US rate is 1.10 per 100,000.

The 2007 rate of inpatient discharges for drowning was 0.3 and the 2009 rate was 0.4 per 100,000 population. These are below the national target of 18.6 per 100,000 population. The 2007 rate of ED discharges for drowning was 1.8 and 1.7 in 2009.

Question 2: Describe the databases that are used to formulate the injury epidemiology profile (for example, population-based and clinical).

Vital Statistics:

Death certificate data are collected by the Department of Vital Records in New Hampshire and provided to the Health Statistics and Data Management Section through a Memorandum of Understanding (MOU).

Hospital Discharge Data:

New Hampshire's Office of Medicaid and Billing maintains electronic databases of hospital discharge records for nonfederal, acute care hospitals located within New Hampshire borders. Like many states, New Hampshire uses the standard uniform billing form (UB-92) as the basis for their hospital discharge database. The UB-92 includes the following data elements: patient's age, sex, zip code, admission date, length of stay, total charges, principal diagnosis, and up to eight additional diagnoses.

Fatality Analysis Reporting System (FARS)

FARS, coordinated by the National Highway Traffic Safety Administration (NHTSA), contains data on all fatal traffic crashes that occur in the 50 states, the District of Columbia, and Puerto Rico. For inclusion in FARS, a crash must involve a motor vehicle traveling on a public roadway and result in the death of a person (either a vehicle occupant or a non-motorist) within 30 days of the crash. The FARS file contains a description of each fatal crash reported. More than 100 coded data elements characterize each crash, the vehicles, and the people involved.

Behavioral Risk Factor Surveillance System (BRFSS):

CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

manages the BRFSS. This is a broad, ongoing state-based, random-digit-dialed telephone survey of the non-institutionalized U.S. population over age 17. BRFSS monitors risk behaviors associated with the leading causes of disease, injury, and death.

Because BRFSS is telephone-based, population subgroups less likely to have telephones may be underrepresented; for example, those people in a low socioeconomic status. In addition, self-reported data may be biased. The data collected for risk-reduction factors, such as self-reported use or testing of smoke alarms may not uniformly represent safe and effective use.

Additionally, not all BRFSS questions are asked every year. Questions asked during the year for which a current Injury Indicator Report is being prepared will be reviewed and appropriate questions included in the report. Results will be reported as a percentage of respondents.

Youth Risk Behavior Survey (YRBS)

YRBS, a component of the Youth Risk Behavior Surveillance System, is managed by NCCDPHP at CDC. The YRBS monitors risk behaviors associated with the leading causes of injury and death among teenagers. State and local departments of education and health conduct the survey biennially in many locations throughout the country. The school-based survey is administered to 9th through 12th graders, and the data are analyzed by CDC. YRBS data apply only to youth who attend school. The extent of underreporting or over-reporting of

behaviors cannot be determined, although the survey questions demonstrate good test–retest reliability.

NH Electronic EMS Patient Care Record (TEMSIS):

All licensed EMS services are required to use the NEMSIS compliant data collection system. This data base is maintained by the NH EMS Bureau.

NH Hospital Trauma Registry

The recently launched trauma registry is provided free to all New Hampshire hospitals. Hospitals that have a trauma designation are required to use the trauma registry, and the nonparticipating hospitals use the registry voluntarily. The registry is maintained by the NH EMS Bureau.

Web-based Injury Statistics Query and Reporting System (WISQARS):

Customized reports of state and national injury-related data;
Maintained by the CDC.

Wide-Ranging Online Data for Epidemiologic Research (WONDER):

Online database for use by public health professionals and the public that gives access to a wide variety of public health information, i.e. mortality data;
Maintained by the CDC.

National Poison Data System (NPDS):

Maintained by the American Association of Poison Control Centers, NPDS contains information from the human poison exposure case phone calls taken by all 57 poison centers in the United States. One poison center exists in Northern New England and serves Vermont, New Hampshire, and Maine.

Question 3: Have system epidemiology profile results (for example, from trend or surveillance data) were identified and acted on.

Our benchmarks are limited to Health People 2020 Comparison:

Motor Vehicle Crash

The New Hampshire motor vehicle fatality rate in 2007 was 11.6 per 100,000 population, and 8.3 per 100,000 population in 2009. The confidence intervals between 2007 and 2009 are close, so no statistically significant change can be established. The state rate is well below the national target rate of 12.4 per 100,000 population.

Poisoning

In 2007, the NH fatality rate for poisoning was 14.8 per 100,000 population. This decreased to 12.9 per 100,000 population in 2009. Since the confidence interval for the 2009 data overlaps the rate for 2007 as well as the national target rate of 13.1, there are no statistically significant differences in these rates. New Hampshire rates during this period meet the Healthy People 2020 target.

Falls

The fatality rate for fall-related injuries in 2007 was 10.5 per 100,000 population. In 2009 the fatality rate for falls was 8.3 per 100,000 population. While the New Hampshire rate is higher than the national target of 7.0, NH's confidence interval overlaps this rate, so in terms of

statistics, it is not significantly different. NH residents age 65 and older have a significantly higher fatality rate due to falls than other age groups.

Other Types of Injuries

The 2007 rate of inpatient discharges for firearm-related injuries was 2.5, and the 2009 rate was 2.9 per 100,000 population; these are below the national target of 18.6 per 100,000 population. The 2007 rate of ED discharges for firearm-related injuries was 7.0 and 9.0 in 2009. These are below the national target of 18.6 per 100,000 population.

Fire

On average, there are fewer than 11 deaths per year due to fires. The NH 2009 fatality rate due to fire was 0.76 per 100,000 population. This is below the Healthy People 2020 target of 0.86 per 100,000 population. The overall US rate is 1.10 per 100,000.

Drowning

On average, there are 14 drowning cases per year. The NH 2009 fatality rate due to drowning was 1.1 per 100,000 population. The Healthy People 2020 target is 1.1 per 100,000 population. The overall US rate is 1.10 per 100,000.

Question 4: Describe how emerging injury control patterns (for example, from trend or surveillance data) were identified and acted on.

The Injury Prevention Program is located within the Division of Public Health Services, Bureau of Population Health and Community Services, Maternal and Child Health Section, and is responsible for surveillance, identification of trends, and development of the NH Injury Prevention Plan which is updated regularly.

In New Hampshire, injury prevention efforts are accomplished in collaboration with a variety of public and private sector partners who collaborate through the New Hampshire Injury Prevention Advisory Council (IPAC). The IPAC meets regularly to design evidence based programs integrating injury prevention and control activities into existing health care and other community based services, such as the trauma system and hospitals. A few of the partners include the NH Trauma Coordinator, Dartmouth Hitchcock Medical Center, Injury Prevention Center at Dartmouth, Northern New England Poison Center, Injury Prevention Surveillance Program, Brain Injury Association of NH, NH Highway Safety Agency, Medical Examiner's Office, Drug Prevention Section, Division of Public Health, Bureau of Behavioral Health, and Rehabilitative Medicine.

To maximize the effectiveness of its resources, the Injury Prevention Program focuses its efforts on those high incidence and high impact injuries which are most amenable to effective public health interventions. For the past 10 years, the top three causes of death and injuries have been falls, MVC, and poisonings.

Numerous goals, objectives, and activities have been outlined in the current injury prevention plan. Some of the highlights include:

- Increasing the number of health care professionals serving older adults trained in falls risk reduction,
- Implementing a sustainable prescription drug-monitoring program (PDMP),
- Advocating for strong enforcement of current child passenger safety laws, and
- Strengthening restraint laws regarding children as well as those of all ages.

More details regarding NH injury prevention activities are presented in the “New Hampshire State Injury Prevention Plan 2014 – 2018” ([See Appendix 4 NH Injury Prevention Plan 2014-2018](#)).

Question 5: Describe how ongoing and routine injury surveillance is completed and how results are shared with constituent groups.

New Hampshire review of injury data occurs approximately every 5 years or more. New Hampshire has not been able to conduct ongoing, routine surveillance for several reasons:

- There are no full time, dedicated injury surveillance staff members in the Dept of Health and Human Services.
- Hospital discharge data (inpatient and ED) are released when 4 or more years old.
- Access to TEMSIS data (EMS patient care records) is limited due to staffing constraints.

Injury surveillance results are shared with the various constituent groups who are members of the New Hampshire Injury Prevention Advisory Council (IPAC). IPAC members are responsible for sharing this information with their broader membership.

Indicators as a Tool for System Assessment

1. Has a multidisciplinary stakeholder group participated in the scoring and consensus process associated with the Benchmark, Indicators and Scoring (BIS) tool? If not, are there plans to do so?

No, we have not participated in the scoring and consensus process associated with the BIS tool. Though we do not have plans to participate at this time, we are interested in doing so. It would be instrumental in identifying our weaknesses and gaps.

2. If the process has been completed, how were the findings used?

N/A

3. Is there a date (year/month) set for a reassessment using the BIS to mark progress toward agreed-on goals or benchmarks?

We have not gone through this evaluation.

Section 2: Policy Development

Statutory Authority and Administrative Rules

Question 1: Describe how the current statutes and regulations allow the state or region to:

[See Appendix 1 RSA 153](#)

Currently the New Hampshire Trauma System has two regulations that primarily govern our trauma system; RSA 153-A and RSA 21-P:12-b. However, there are some laws and rules that will also apply in more of a secondary role. There are no administrative rules that apply to the system.

RSA 153-A is the primary law that provides some regulation to the Trauma System. It established and governs the scope of the State Trauma Medical Review Committee. It also establishes the State Emergency Medical and Trauma Services Board, which oversees and establishes trauma policies, procedures and protocols of the statewide trauma system.

RSA 21-P:12-b establishes the Bureau of Emergency Medical Services under the Division of Fire Standards and Training. It also establishes the scope of the Bureau, including overseeing the planning of operational resources, providing public information, collecting and analyzing data, and giving general administrative support to the New Hampshire Emergency Medical and Trauma System.

a. develop, plan, and implement the trauma system,

See [Appendix 1 RSA 153 and](#), specifically: 153-A:1 II, RSA 153-A:8 V and [Appendix 5 RSA 21-P](#), specifically: RSA 21-P:12-b II (b) Bureau of Emergency Medical Services:

RSA 153-A:1 II supports the establishment of a “coordinated statewide trauma and injury prevention system.” This allows for the structure to develop, plan and implement the trauma system, along with RSA 153-A:4 IV, which establishes the Emergency Medical and Trauma Services Coordinating Board, empowered to “approve statewide trauma policies, procedures, and protocols,” RSA 153-A:8 V establishes the Trauma Medical Review Committee to develop a statewide plan, review system operations, delivery of EMS care, make recommendations on EMS protocol and make recommendations to the Emergency Medical and Trauma Services Coordinating Board. RSA 21-P:12(b) II empowers the Department of Safety, Division of Fire Standards and Training & EMS, Bureau of Emergency Medical Services, to “plan and provide operational resources as available for the coordination of...adult and pediatric trauma services....”

b. monitor and enforce rules,

RSA 153-A:8 V(b) states that the Trauma Medical Review Committee will “review statewide trauma system operations, including monitoring adherence to established guidelines and standards...” giving said committee the ability to monitor the trauma system.

c. designate the lead agency,

See [Appendix 1 RSA 153-A](#) and [Appendix 5 RSA 21-P12b](#)

RSA 153-A and RSA 21-P both establish the lead agency as the Department of Safety, Division of Fire Standards and Training & EMS, Bureau of Emergency Medical Services, as the lead agency for the trauma system.

d. collect and protect confidential data, and

See [Appendix 1 RSA 153-A](#) and [Appendix 5 RSA 21-P12b](#)

RSA 21-P:12(b)(g) provides for the establishment of a data collection system and analysis of collected data.

RSA 153-A:9 provides for the confidentiality of all records during activities of the Trauma Medical Review Committee.

e. protect confidentiality of the quality improvement process.

See [Appendix 1 RSA 153](#), specifically: RSA 151:13A:

RSA 153-A:9 provides for the confidentiality of all records during activities of the Trauma Medical Review Committee.

RSA 151:13-a provides for the confidentiality of hospital records.

Question 2: Describe the process by which trauma system policies and procedures are developed or updated to manage the system, including:

a. the adoption of standards of care,

Pertaining to EMS provider, the standard of care is adopted through prehospital protocols - See [Appendix 7 NH 2015 Patient Care Protocols](#)).

The NH EMS Medical Control Board has a protocol committee which reviews the prehospital protocols on a two-year cycle. Updates and changes are evidence based, using the best available data. After revisions are made, the protocols are presented to the NH EMS Medical Control Board where they receive their final approval. A protocol rollout is then developed to review all changes, and all EMS providers must complete this in order to obtain or renew their licensure.

b. designation or verification of trauma centers,

See [Appendix 8 NH Trauma Plan](#), specifically page 7 next to last paragraph.

“The NH Trauma System is voluntary in terms of hospitals choosing to actively participate in the trauma system by seeking trauma hospital assignment. Though this process is mandatory in some states, it is not in New Hampshire. A NH hospital seeking assignment at a particular level agrees to meet the standards set by the TMRC, undergo an assessment of its ability to meet the

standards, and adhere to those standards.”

The TMRC has adopted the policy of having all level I and level II trauma designation verified by the American College of Surgeons (ACS) and we depend on their processes for updating level I & II criteria. Our level III and level IV designation/verification policies and procedures are developed and revised by our Hospital Designation Subcommittee. Using the ACS’s “Resources for Optimal Care of the Injured Patient”, the subcommittee reviews each criterion and determines levels of deficiencies and how they fit into NH’s trauma system.

See [Appendix 9 NH Verification Criteria Checklist Level II-IV](#)

See [Appendix 10 Verification Application and PRQ](#)

c. direct patient flow on the basis of designation,

See [Appendix 11 Trauma Triage and Transport Decision](#)

The patient flow on the basis of designation is determined using the Center for Disease Control and Prevention’s (CDC) “Guidelines for Field Triage of Injured Patients”, which is reviewed by the TMRC. The TMRC then makes recommendation for protocol change to the protocol committee. The protocols are then revised and approved by the EMS Medical Control Board.

d. data collection, and

See [Appendix 5 RSA 21](#), specifically RSA 21P:12-b-II(g) and Appendix __ EMS: SafC5900

RSA 21-P:12(b)(g) provides for the establishment of a data collection system and analysis of collected data. There are currently no administrative rules or policies/procedures that govern the provision of data collection for the trauma system. Saf-C 5902.09 provides for a requirement for EMS data to be collected.

e. system evaluation.

Currently, there is only a provision for EMS quality assurance in Saf-C 5923. There is no formal policy, procedure or administrative rules surrounding the evaluation of the trauma system. RSA allows for it, but a mechanism and procedure have yet to be developed. Two examples of system evaluation to improve EMS protocol are:

- The use of short spine boards, which ultimately resulted in the removal of this device from the system of care.
- The evaluation of the air medical asset utilization which ultimately concluded that there was room for improvement in the protocol in both adding some conditions not currently in the protocol and in clarifying some issues regarding traumatic brain injury criteria. The members further concluded that the new AMT protocol has not resulted in unreasonable overuse of AMT scene response.

A system of designating hospitals was formed from the trauma plan; it has been used to evaluate hospitals individually but is not consistent enough throughout the state to provide for a complete system evaluation.

Question 3: Within the context of statutes and regulations, describe how injury prevention, EMS, public health, the needs of special populations, and emergency management are integrated or coordinated within the trauma system.

In the current statutes and regulations, there are no specific lines drawn between the different components of a trauma system, with the exception of prehospital care and trauma. The only place that ties these components together is the New Hampshire State Trauma Plan, which focuses on injury prevention, EMS, acute care, and rehabilitation. Until this year, only EMS and acute care hospitals have been involved in state level activities of the trauma system. We have recently recruited representatives from the rehabilitation and injury prevention groups to join our Trauma Medical Review Committee as non-voting representatives, establishing a link between the four components of a trauma system.

System Leadership

Question 1: How does the lead agency bring constituency groups together to review and monitor the trauma system throughout each phase of care?

We currently do not review or monitor the phases of care in our trauma system. We have recently established a trauma registry and provided education; hospitals are planning on using the registry as the ICD10 is rolled out. There will be a time lag as hospitals learn how to use the registry and data is entered. The registry can be tied into our EMS PCR (TEMSIS) and dispatch, which will enable us to monitor two of the phases of care. In the future, as we gather more data, we will establish surveillance of the system with our constituency groups. These groups would include:

- EMS – Bureau of EMS
- Hospitals – Hospital Association
- Injury Prevention – Injury Prevention Advisory Council
- Public Health – Injury Surveillance Program
- Emergency Management –
 - US ASPR (Assistant Secretary for Preparedness and Response) Grant goes to Preparedness at DHHS, then they contract with NHHA to improve medical surge capacity and resources
 - Department of Safety, Homeland Security and Emergency Management –
- Children – EMS for Children
- Elderly – Public Health Injury Surveillance Program
- Citizens with chronic health conditions (special needs) – Public Health Injury Surveillance Program

Question 2: Describe the composition, responsibilities, and activities of the multidisciplinary trauma system advisory committee(s) and the working relationship(s) with the trauma lead agency and the EMS lead agency, if they are different.

a. Identify pediatric representatives on the multidisciplinary trauma system advisory committee and any pediatric advisory groups that provide input into trauma system development.

Pediatric representatives on the TMRC are Janet Houston with EMS –C, and two pediatric surgeons, Dr. Elizabeth Soukup and Dr. Reto Baertschiger.

b. Describe the process of involving experts in, and advocates for, special populations and how they help drive regional trauma system policy.

At this time we do not have a process to involve experts for populations other than pediatrics.

c. Describe how the multidisciplinary advisory committee is involved in trauma system performance evaluation (for example, review of system performance reports).

In 2006, the TMRC established a subcommittee to review over/under triage of our aeromedical transports. As a result, they changed the trauma triage guidelines. Since that review, we have not evaluated any performance measures of our trauma system.

Question 3: Provide examples of how the lead agency and trauma system leadership (for example, trauma centers, trauma medical director, nurse coordinator, trauma administrator, and other stakeholders) inform and educate policy makers, elected officials, community groups, and others about the trauma system, its strengths, and its improvement opportunities.

Policy maker:

Dr. Murphy, trauma surgeon and chairman of the TMRC, went to the Commissioner of the NH Department of Safety and convinced him of the need for the ACS's Trauma System Assessment.

Community Groups:

Dr. Murphy's hospital had the Commissioner of the NH Department of Safety speak at their annual trauma conference on the need for an ACS trauma system assessment.

It is our hope that the ACS review will act as a spring board for educating policy makers, elected officials, and community groups about the trauma system and improvement opportunities.

Question 4: Describe the process to build or expand effective trauma leadership within the trauma system (for example, succession planning, leadership courses, workshops), including the lead agency and trauma centers.

Under our present chairman, Dr. Murphy, we have expanded our membership to include a broader representation of trauma surgeons from throughout the state. Additionally, Dr. Murphy has expanded our non-voting participants, including hospital EMS coordinators, injury prevention representatives, rehabilitation representatives, and nurse trauma coordinators, and has placed them in leadership roles on subcommittees.

Question 5: Describe the process by which lead agency staff would identify changes in system performance.

At this time, we are unable to identify changes in our system due to lack of data. With the implementation of the trauma registry, we will be able to monitor system performance.

Question 6: Describe how the multidisciplinary advisory committee is involved in trauma system performance evaluation.

At this time, we are unable to conduct system wide performance evaluations; however the TMRC does evaluate hospital trauma performance for those hospitals seeking a designation level within the trauma system. This evaluation is based on case review during their trauma center assessment.

Coalition Building and Community Support

Question 1: What is the status of the trauma system's coalition (for example, What is the status of recruiting members and building a coalition? Is the coalition strong and active coalition? Does the coalition need new energy? Who is not currently involved but should be a part of your coalition?)

A coalition does not exist outside the TMRC and its regular attendees (who are non-voting members). We do need a coalition that is active. The coalition could use new energy and more active involvement from injury prevention, mental health providers, law enforcement, special population (e.g. individuals with special needs or chronic illnesses), rehabilitation, dispatchers, emergency management, etc.

a. What is the role of the coalition members (constituents and stakeholders) in promoting trauma system development?

The role of our coalition members would be to educate policy makers, elected officials and community members regarding the importance of the trauma system and the need for all hospital to participate. Additionally, we need to educate the policy makers, elected officials, and community members on the need to provide support for the trauma system.

b. What is the method and frequency for communicating with coalition members?

Communication with the coalition members is provided as follows:

- Email – as needed
- Trauma conference - annual
- Trauma registry data group – TBD
- TMRC meetings – bi monthly
- Newsletter – bi monthly

Question 2: Describe how the trauma system leadership mobilizes community partners to improve the trauma system through effective communication and collaboration.

a. How has the community been approached to identify injury control concerns?

The TMRC has not approached the community to identify injury control concerns.

b. What key problems have the community identified?

- Requirements for level III or level IV are too stringent.
- EMS providers are unaware of their hospital's trauma designation or if they participate in the trauma system.
- Many hospital do not recognize the need or advantage of participation in the trauma system
- Hospitals are lacking fulltime trauma coordinators and are being pulled in multiple directions. For example, the emergency preparedness coordinators frequently act as the trauma coordinators, stroke coordinators, STEMI coordinators, and EMS coordinators as well as being responsible for direct patient care. These positions have multiple roles and responsibilities with limited time available for the trauma system.

c. How do stakeholders bring system challenges or deficiencies to the attention of the lead agency?

If a challenge or deficiency needs to be brought to our attention, it is done either by direct contact with the Bureau of EMS or attendance at the TMRC meetings.

Lead Agency and Human Resources within the Lead Agency

Question 1: Describe the number, position titles, and percentage of full-time equivalency of all personnel within the lead agency or contract personnel who have roles or responsibilities to the trauma program.

Position	Name	FTE
Bureau Chief	Nick Mercuri	0.03
Deputy Bureau Chief	Jon Bouffard	0.1
Clinical System Coordinator	Vicki Blanchard	.4
Quality Management Coordinator	Chip Cooper	0.03

Question 2 Identify other personnel resources that support the trauma program activities of the lead agency (for example, epidemiology support from other units within the health department, public health interns)

The Injury Surveillance Program at the Division of Public Health Services provides support to the trauma program.

Question 3: Describe the adequacy of personnel resources available to the lead agency to sustain trauma program assessment, policy development, and assurance activities.

We do not have adequate resources to sustain trauma program assessment, policy development and assurance activities.

- a. Identify impediments or barriers that hinder system development.
- Limited funding,
 - A need for additional personnel to support the clinical systems coordinator, and
 - The trauma registry to analyze and generate reports.

Trauma System Plan

Question 1: Describe the process for the development or revision of the trauma system plan.

a. Include the role of advisory and stakeholder groups in the process.

The steps to the development or revision of the trauma system plan are:

- The trauma plan was written by the trauma coordinator and brought to the advisory board and stakeholder.
- It was then reviewed by the stakeholders.
- Stakeholders made recommendations to the TMRC.
- The TMRC considered and then made a recommendation to Emergency Medical and Trauma Services Coordinating Board.
- The Emergency Medical and Trauma Services Coordinating Board further considered, then sent its recommendation to the Commissioner for final approval.

Question 2: Is there ongoing assessment of trauma resources and asset allocation within the system?

We do not currently have an ongoing assessment of our trauma resources or asset allocation.

Question 3: Describe the process used to determine trauma system standards and trauma system policies.

a. How are they reviewed and evaluated?

NH depends on the ACS to perform the Levels I and II evaluations. Our Level III's are patterned after the ACS Level III's. The TMRC's Hospital Designation Subcommittee will be re-evaluating the criteria this year using the ACS's 2014 "Resources for Optimal Care of the Injured Patient".

The Level IV criteria were developed by the TMRC and like the Level III, the TMRC's Hospital Designation Subcommittee will be reviewing the ACS's 2014 "Resources for Optimal Care of the Injured Patient" for criteria which fit within the NH Trauma System.

(See [Appendix 9 NH Verification Criteria Checklist Level III-IV](#))

b. What standards and policies exist for special populations, including rural and frontier regions?

Pediatric level I & II are done by the ACS and levels III & IV are done by the state using our criteria which is closely related to ACS.

There are no specific standards or policies pertaining to rural or frontier regions.

c. How are specialized needs addressed, including burns, spinal cord injury, traumatic brain injury, and reimplantation?

Our criteria require written agreements between the transferring and specialized hospital for the care of traumatic brain injury. There are criteria for written transfer guidelines for the pediatric patients and burn patients. We do not have specific agreements for spinal cord injury, traumatic brain injury, or reimplantation.

System Integration

Question 1: What is the trauma system's collaboration and integration with EMS, public health, and emergency management and programs such as:

a. prevention programs,

Injury prevention participates on the TMRC as a non-voting member. We collaborate with them as needed. Currently we are working with them and other agencies on a seat belt law.

b. mental health,

Mental health is currently not integrated into the trauma system; we recognize we should collaborate with them in future.

c. social services,

Social services are currently not integrated into the trauma system; we recognize that we should collaborate with them in future.

d. law enforcement,

Law enforcement is currently not integrated into the trauma system; however we do collaborate with them in other committees or programs, such as the Fatality Review Committees established by the Attorney General's office.

e. child protective services, and

Child protective services are currently not integrated into the trauma system; however we do collaborate with them on the Child Fatality Review Committee.

f. public safety (for example, fire, lifeguard, mountain rescue, and ski patrol)?

Lifeguards, mountain rescue, and ski patrol are currently not integrated into the trauma system; we recognize we should collaborate with them in future.

Financing

Question 1: How does the lead agency track and analyze internal trauma system finances?

There is no funding for the state trauma system in the State budget, however any grants funds that we used to fund the trauma system are tracked through the State's Business Office and Finance System.

a. How does the advisory committee participate in the financial review process?

They do not participate in the financial review process.

b. How frequently are trauma system financial reports published?

The financial reports are not published.

c. Which financial data are reported (lead agency data, health facility data, or both)?

No financial data is reported.

2. What is the lead agency's budget for the trauma system?

The While the trauma budget is primarily based on grant funding, we estimate that approximately 0.48 full time employee hours are spent per year. As of 2018, the state will be providing \$50,000 per year from the State budget for support and maintenance of the trauma registry.

3. What is the source of funding available to support the development, operations, and management of the trauma system (for example, general funds, dedicated funds)?

- Our salaries are paid from dedicated funds.
- Highway Safety 405/408 Traffic Records Coordinating Committee (TRCC) grant funds paid for the trauma registry and Crash Outcome Data Evaluation System (CODES).
- Federal Rural Health Flex funds for trauma team activation training to critical access hospitals and supported the state's annual trauma conference.

4. What financial incentives and disincentives exist to encourage trauma center participation in the trauma system?

There are no financial incentives to encourage trauma center participation.

5. Specifically include arrangements for uncompensated and undercompensated care.

There are no arrangements for compensation.

Section 3: Assurance

Prevention and Outreach

Question 1: List organizations dedicated to injury prevention within the region and the issues they address (for example, MADD, SADD, SafeKids Worldwide, Injury Free Coalition for Kids, American Trauma Society, university-based injury control programs).

- Safe Kids Worldwide/local – Infant safety, home safety, child maltreatment, poisoning, Suicide, pool safety
- Child Safety Network-child maltreatment, falls, home safety, Sudden unexpected infant death, pool safety, co2
- New Hampshire Coalition for Domestic Violence- Domestic Violence, Rape prevention
- Chief Medical Examiner-NVDRS National Violent Death Reporting System, all deaths due to injury
- NH DHHS, Occupational Health Surveillance Program- injuries in the workplace, co2
- Center for Program Design and Evaluation, Geisel School of Medicine-data collection and review teams
- NH Department of Safety, Division of Motor Vehicles- teen driving
- NH Department of Education, Office of School Health- school safety, concussions, Rape prevention
- NH DHHS, Acquired Brain Disorders Services-concussions, brain injuries
- NH DHHS, Alcohol, Tobacco, and Other Drugs Prevention Section-poisoning, home safety, CO₂
- Injury Prevention Center at Dartmouth-falls, child maltreatment, elder falls, teen driving, poisoning, concussion, suicide
- DHHS, Bureau of Behavioral Health- suicide, falls, concussions
- NH Highway Safety Agency- crashes, teen driving,
- NH Coalition Against Domestic and Sexual Violence
- Safety and Health Council of Northern New England-falls, home safety, poisoning
- NH Children's Trust- child maltreatment, suicide, rape prevention, home safety, falls
- NH Department of Transportation- crashes, teen driving, concussions
- Brain Injury Association- falls, concussions, traumatic brain injuries
- Boys and Girls Club-home safety, poisoning, rape prevention and education
- YMCA & YWCA- poisoning, concussions, suicide
- NAMI New Hampshire- Suicide, poisoning, concussions

The 13 New Hampshire's Public Health Networks are also lead agents working towards injury Prevention. Addresses and contact information for all Public Health Networks are attached. The public Health Networks address poisoning, home safety, child maltreatment, home visiting, falls, rape prevention, etc. (see Appendix12 NH Public Health Networks Contact List)

Question 2: Describe how the trauma lead agency has funded and coordinated system-wide injury prevention or outreach activities.

We have not funded or coordinated any system-wide injury prevention or outreach activities.

a. Which injuries (including pediatric injuries) have been identified and prioritized for intervention strategies?

Child passenger safety and teen driving have been identified for intervention strategies by the NH Highway Safety Agencies, which is a part of the NH Department of Safety.

b. Identify any dedicated lead agency or other agency staff member (full- or part-time) responsible for injury prevention outreach and coordination for the trauma system.

In NH the lead injury prevention agency is the Injury Surveillance Program in the NH Division of Public Health Services. The trauma system needs to coordinate more closely with them.

c. What is the source of funding?

The Injury Surveillance Coordinator is funded by several funding sources, the Maternal and Child Health Block Grant (HRSA), a small amount of general funds, SUID/SDY funds (CDC), and Health Statistics dollars, which is cost allocated over all of the Division of Public Health's programs.

The Injury Program Manager is funded by the Maternal and Child Health Block Grant (HRSA) and a small amount of general funds.

The intervention money (which goes to the Injury Prevention Center at Dartmouth and the Brain Injury Association) is from Preventive Health and Human Services Block Grant funds (CDC) and the MCH Block Grant (HRSA). We also get some additional funding for sexual violence prevention through the CDC, and we have a contract with general funds for the poison center.

Question 3: Explain the evaluation process for injury prevention projects that are conducted by the lead agency, trauma facilities, or other community-based organizations.

Trauma facilities and other community-based organizations have conducted numerous injury prevention projects but have not been able to provide evaluation information on outcomes. Most of the evaluation process is centered on input and process criteria.

a. Identify any gaps in injury prevention efforts for population groups in the state.

Falls in the elderly population has been identified as gap.

Emergency Medical Services

Question 1: Provide information on the last assessment of EMS, including assessor and date.

The last assessment of EMS was done in 1990 by NHTSA. (see [Appendix 27 NH Statewide EMS Assessment Initial 1990](#))

a. Describe the EMS system, including the number and competencies (that is, ALS or BLS) of ground transporting agencies, non-transporting agencies, and aeromedical resources.

The provision of emergency medical services in New Hampshire is based on municipal decision. Each of the 234 municipalities chooses their ambulance provider based on their individual needs or their particular governmental structure.

There are currently 169 transporting agencies and 139 non-transporting agencies. Of the 169 transporting units, 154 are at the ALS (Advanced EMT or above) level and 1 of these is an aeromedical service. Please refer to the chart below for the competencies and resources available to our citizens and visitors.

We are unable to calculate how many of the non-transporting units by competency as this is not tracked by our office.

NH Lic Ext	NREMT	New Hampshire EMS License Level Description	Count
AP	N/A	Apprentice level (aged 14 - 17)	16
LE	N/A	Law Enforcement "Narcan only" Provider**	65
NF	FR*	National Registered First Responder	7
R	EMR	National Registered Emergency Medical Responder	183
NH	N/A	NH "Grandfathered" EMTs (Non-Nationally Registered)	42
NR	EMT-Basic*	National Registered EMT-Basic	87
E	EMT	National Registered EMT	2459
I	EMT-I*	National registered EMT-Intermediates	490
A	AEMT	National Registered Advanced EMT	841
P	EMT-Paramedic*	National Registered EMT-Paramedics	85
M	NRP	National Registered Paramedic	924
Total:			5199

*Retiring NREMT Levels where providers have not yet transitioned to the new level

** 0 in process as of 11/18/15

Rollup Group	Provider Level Rollups Description	Count
First Responders	Includes Apprentices, Law Enforcement, NRRFRs and NREMRs	271
EMTs	Includes NH EMTs, NREMT-Basics and NREMTs	2588
AEMT/EMT-Is	Includes NRAEMTs and NREMT-Is	1331
Paramedics	Includes NREMT-Paramedics and NRPs	1009
Total:		5199

Updated As of 11/18/2015

b. How are these resources allocated throughout the region to service the population?

In New Hampshire it is the municipal authority to address and secure the provision of emergency medical services to their communities. The Bureau of EMS assists in any way possible; however, there is not currently a system wide EMS delivery plan.

c. Describe the availability of enhanced 911 and wireless E-911 access in your region.

100% of New Hampshire has access to E911 and wireless E911.

d. Identify any specialty pediatric transporting agencies and aeromedical resources.

DHMC has 2 helicopters; one in Lebanon and one in Manchester, available 24/7 dependent on weather for all patient demographics. DHMC also has a ground adult/pediatric unit available from Lebanon from 10:00 am – 10:00 pm. They have another ground unit in Lebanon staffed with an EMT driver and ready 24/7 for neonate transport with hospital staffed RNs and RTs.

e. Describe the availability of pediatric equipment on all ground transporting units.

NH EMS Bureau regulations mandates all the pediatric equipment specified in the required BLS and ALS sections of the 2014 Joint Policy Statement "Equipment of Ground Ambulances". (See [Appendix 26 Equipment of Ground Ambulance](#))

Question 2: Describe the procedures for online and off-line medical direction, including procedures for the pediatric population.

Off-line medical direction: Evidence based adult and pediatric protocols are developed by the state protocol committee and approved by the Emergency Medical Services Medical Control Board.

On-line medical direction: Every service is required by administrative rule to have a written Hospital Resource Hospital Agreement in order to be licensed. The Resource Hospital must provide online medical direction.

a. Describe how EMS and trauma medical direction and oversight are coordinated and integrated.

NH has statewide EMS protocols. Every provider must pass a written protocol exam every 2 years in order to be licensed. Each medical resource hospital must provide quality management to those EMS agencies they serve as specified through a written agreement.

Question 3: Describe the prehospital workforce competencies in trauma:

a. Initial training and certification/licensure requirements ([See Appendix 13 National EMS Education Standards](#), specifically pages 35, 37,38,40,41 & 43)

NH follows the National EMS Education Standard which breaks trauma down into the following categories:

- Trauma Overview
- Bleeding
- Chest Trauma
- Abdominal and Genitourinary
- Orthopedic
- Soft Tissue
- Head, Facial, Neck and Spine
- Nervous System
- Special Consideration
 - Pregnant
 - Pediatric
 - Geriatric
 - Cognitively Impaired
- Environmental Emergencies
- Multi-system

b. Continuing education and recertification/ re-licensure requirements

NH follows the standard National Registry of EMTs re-certification process of a traditional refresher program and continuing education hours, OR providers may now choose the National Continued Competency Program (NCCP), which NH is piloting for the National Registry of EMTs.

Emergency Medical Responders traditional refreshers trauma categories are (see [Appendix 14 EMR Recert Brochure](#))

- Management of Shock
- Bleeding/Wounds/Shock
- Environmental Emergencies
- Soft-tissue Injuries
- Musculoskeletal Injuries
- Injuries to the Head and Spine
- Burns
- Trauma Emergencies and Care in Pediatric Patients

Emergency Medical Responders NCCP categories are (see [Appendix 15 NCCP Training Officers Guide page 16](#)):

- CNS Injuries
- Tourniquets

Emergency Medical Technician traditional trauma categories are (see [Appendix 16 EMT Recert Brochure](#)):

- Assessment of Trauma Patients
- Management of Shock
- Bleeding/Wounds/Shock
- Environmental Emergencies
- Soft-tissue Injuries
- Musculoskeletal Injuries
- Injuries to the Head and Spine
- Burns
- Trauma Emergencies and Care in Pediatric Patients

Emergency Medical Technician NCCP trauma categories are (see [Appendix 17 EMT NCCP Recert Brochure](#)):

- CNS Injuries
- Tourniquets
- Triage
- Spinal Motion Restriction
- Trauma Team Activation

Advanced EMTs traditional refresher program trauma categories are (see [Appendix 18 AEMT Recert Brochure](#)):

- Perform a primary survey
- Assess a patient who had a head injury
- Assess and provide care to a patient who has a suspected spinal injury
- Provide care to a patient who has chest injury
- Provide care to a patient who has an open abdominal injury
- Provide care to a patient who has shock/hypoperfusion
- Assess and provide care to an infant or child who has shock/hypoperfusion
- Assess and provide care to an infant or child who has trauma
- Provide care to a patient who has a painful, swollen, deformed extremity.
- Assess and provide care to a patient who had a burn injury

Advanced EMTs NCCP trauma categories are (see [Appendix 19 AEMT NCCP Recert Brochure](#)):

- CNS injuries
- Tourniquets
- Triage
- Spinal Motion Restriction
- Trauma Team Activation

Paramedic traditional refresher program trauma categories are (see [Appendix 20 Paramedic Recert Brochure](#)):

- Perform a primary survey
- Assess a patient who had a head injury
- Assess and provide care to a patient who has a suspected spinal injury
- Provide care to a patient who has chest injury
- Provide care to a patient who has an open abdominal injury
- Provide care to a patient who has shock/hypoperfusion

- Assess and provide care to an infant or child who has shock/hypoperfusion
- Assess and provide care to an infant or child who has trauma
- Provide care to a patient who has a painful, swollen, deformed extremity.
- Assess and provide care to a patient who had a burn injury
- Assess and provide care to an infant or child who has suspected non-accidental trauma or neglect

Paramedic NCCP trauma categories are (see [Appendix 21 Paramedic NCCP Recert Brochure](#)):

- CNS Injuries
- Triage
- Fluid Resuscitation
- Spinal Motion Restriction
- Trauma Team Activation

c. Pediatric trauma training requirements for recertification

As with adult trauma NH EMS providers may choose either the National Registry of EMTs traditional refresher or the NCCP recertification process.

Emergency Medical Responders pediatric trauma categories are (see [Appendix 14 EMR Recert Brochure](#)):

- Trauma emergencies and care in pediatric patients

Emergency Medical Technician pediatric trauma categories are (see [Appendix 16 EMT Recert Brochure](#)):

- Trauma emergencies and care in pediatric patients

Advanced EMTs pediatric trauma categories are (see [Appendix 18 AEMT Recert Brochure](#)):

- Assess and provide care to an infant or child who has shock/hypoperfusion
- Assess and provide care to an infant or child who has trauma

Paramedic pediatric trauma categories are (see [Appendix 20 Paramedic Recert Brochure](#)):

- Assess and provide care to an infant or child who has shock/hypoperfusion
- Assess and provide care to an infant or child who has trauma
- Assess and provide care to an infant or child who has suspected non-accidental trauma or neglect

Definitive Care Facilities

Question 1: Describe the extent to which all acute care facilities participate in the trauma system.

(See [Appendix 2 Designation Maps](#))

NH has 26 acute care facilities and currently 11 are actively participating in the trauma system. Those 11 tend to be the larger hospitals. The trauma centers are broken down as follows:

1 adult level I trauma center:

- DHMC, Lebanon

3 adult level II trauma centers:

- Concord Hospital, Concord
- Elliot Hospital, Manchester
- Portsmouth Hospital

6 adult level III trauma centers:

- Catholic Medical Center, Manchester
- Cheshire Medical Center, Keene
- Parkland Medical Center, Derry
- Southern NH Medical Center, Nashua
- St Joseph Hospital, Nashua
- Wentworth Douglas Hospital

1 adult level IV trauma center:

- Cottage Hospital, Woodsville

0 pediatric level I trauma centers

1 pediatric level II trauma center:

- DHMC, Lebanon

5 pediatric level III trauma centers:

- Concord Hospital, Concord
- Elliot Hospital, Manchester
- Southern NH Medical Center, Nashua
- St. Joseph Hospital, Nashua
- Wentworth Douglas Hospital, Dover

5 pediatric level IV trauma centers:

- Catholic Medical Center, Manchester
- Cheshire Medical Center, Keene
- Cottage Hospital, Woodville
- Parkland Medical Center, Derry
- Portsmouth Regional Hospital, Portsmouth

a. Describe the availability and roles of specialty centers within the system (pediatric, burn, traumatic brain injury, spinal cord injury)

Pediatric:

1 pediatric level two trauma center in Lebanon at DHMC, they recently dropped to level two because of dispersion of pediatric patients to level 3 facilities in the more centrally located and populated areas.

5 pediatric level three trauma centers

- Concord Hospital, Concord
- Elliot Hospital, Manchester
- Southern NH Medical Center, Nashua
- St. Joseph Hospital, Nashua
- Wentworth Douglas Hospital, Dover

5 pediatric level four trauma centers

- Catholic Medical Center, Manchester
- Cheshire Medical Center, Keene
- Cottage Hospital, Woodville
- Parkland Medical Center, Derry
- Portsmouth Regional Hospital, Portsmouth

Burn: There are no specialty burns hospitals in NH, burns that meet burn transfer criteria are transferred out of state.

Currently New Hampshire does not designate specialty facilities nor are they tracked within our system.

Question 2: Describe the roles of the non-designated acute care facilities in the trauma system.

NH is an all-inclusive trauma system; however, those that have not yet been designated are urged to attend the TMRC to become more familiar with the Trauma Plan and their role in the Trauma Plan.

a. Address their representation on the regional trauma committee.

We do not have regional trauma committees.

b. Do they submit registry and/or financial data?

They are urged to use the new Trauma Registry, and educational programs were offered on its use; 24 hospitals participated in this education.

c. What is their degree of engagement in the system-wide performance improvement process?

If they have submitted data to the trauma registry, they will be included in the system-wide improvement process when implemented.

Question 3: Describe the process for verification and designation. Briefly outline the extent of authority granted to the lead agency to receive applications and to verify, designate, and de-designate regional trauma centers.

Currently we have no statutory authority to verify or designate facilities. Our Trauma Plan, dated 2010, outlines the process and criteria for verification and designation. We do not currently address de-designation.

However, the TMRC suggested the following changes in October of 2014 in regards to hospital designations; however, the Trauma Plan has not yet been updated to reflect said changes:

- Hospitals seeking Level I or II Trauma Center status must be verified by the American College of Surgeons (ACS) beginning January, 2015.
- Hospitals that have current State Level I & II designations will continue to carry their designation until the 5 year expiration.
- Hospitals seeking Level III and Level IV Adult / Pediatric status will now be on a 3 year cycle once designated.

Below is a description of the current verification/designation process.

REQUEST FOR PARTICIPATION

1. Step One: Request for Participation

Each acute care hospital not actively participating in the NH Trauma System will be periodically requested to identify their level of desired participation. This communication will include the following:

- A document explaining the trauma system and the participation process
- A copy of the hospital standards for each level of participation
- A statement for the requested level of participation
- A self-survey assessment tool

2. Step Two: Facility Assessment

Each hospital requesting trauma system participation will be site-visited and assessed by one of the Trauma Medical Review Committee's Site Visitation Teams within one year of submission of the completed participation package.

The Site Visitation teams, to include at least one physician, trauma nurse and the NH Division of Fire Standards and Training & EMS Trauma Coordinator, will perform the following activities:

- Visit the hospital and verify its capability to provide trauma services at the level requested by the hospital.
- Compile the results of the on-site assessment
- Provide consultative assistance and information to the hospital and its medical staff
- Hospitals seeking assignment as a trauma hospital must select a level of assignment for both adult trauma care and pediatric trauma care. The hospital can choose different levels for adult and pediatric assignment, but a hospital must meet at a minimum Level IV pediatric trauma standards.

Hospitals may voluntarily choose to pursue verification by the American College of Surgeons (ACS) Committee on Trauma. Hospitals successfully acquiring ACS verification may request assignment in the NH Trauma System at that level. The Trauma Medical Review Committee may waive the requirement for a site visit as part of the application process for hospitals meeting ACS criteria.

3. Step Three: Determination of Level of Participation

Following the site visit at the hospital, the Trauma Medical Review Committee will review all documents submitted by the hospital and the site visitation team's reports, findings, and recommendations and review any additional information or testimony provided by the hospital or its medical staff. The TMRC will consider the application and approve or advise the hospital of deficiencies identified. If deficiencies are resolved within one year, the TMRC may elect to hold a focused review instead of a full site visit, and pending a favorable report, the initial application may be reconsidered.

If approved, the TMRC will recommend to the Commissioner a level of participation for a period of up to three years. The Commissioner or his designee will issue a document to the hospital with notification to pre-hospital medical control physicians and pre-hospital providers identifying the hospital's level of assignment.

If the hospital subsequently wishes to change its assignment and participation status, the hospital can reapply at any time during its term.

4. Step Four: Appeal Process

Any hospital that does not agree with and challenges the Committee's recommended level of classification and participation can, at its own expense, have its facility evaluated by the American College of Surgeon's (ACS) Committee on Trauma's representatives.

The hospital can submit the findings and recommendations of the ACS Committee on Trauma's site visit to the Trauma Medical Review Committee. The Trauma Medical Review Committee will consider the ACS findings in the Committee's recommendation to the Commissioner.

Pre-Hospital Impact

Pre-hospital providers and their medical control physicians will be directed by the NH Division of Fire Standards and Training and EMS to preferentially transport major and severely injured trauma patients, in accordance with statewide protocol, to the hospitals with capability to provide the appropriate level of trauma service.

Revocation of Assignment

Any hospital that is found to be out of compliance with the requirements of this plan will be notified of the deficiency. Failure to take corrective steps within six months to address the deficiency will risk the loss of assignment. Hospitals that lose their assignment for failure to correct deficiencies will be required to re-apply if active participation in the NH Trauma System is desired at a later date. Notice of the loss of assignment will be communicated in writing to the hospital, prehospital medical control physicians, and prehospital providers.

Renewal of Assignment

Prior to the expiration of the Trauma Hospital Assignment, the assigned hospital will communicate with the NH Department of Safety, Division of Fire Standards and Training & Emergency Medical Services as to its intentions of continuing as an assigned trauma hospital. If a hospital wishes to upgrade to a higher level, a full evaluation and site review will be required. For those hospitals seeking renewal at the same level, the Trauma Medical Review Committee may, at their discretion, require a full evaluation and site visit or a modified application and evaluation process.

Question 4: Describe your standards for trauma center verification (including pediatric standards) and the extent to which they are aligned with national standards.

For our Level 1 and 2 centers, we depend on the criteria set by the ACS for Level 1 and 2 adult and pediatric facilities. For adult and pediatric Level 3 and 4, our criteria are similar to the ACS criteria, but vary to take into consideration some of the challenges our facilities face with geographic and resource limitations.

<u>LEVEL</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>
General Surgery	E	E	E	
Anesthesia	E	E	E	D
Emergency MD	E	E	E	D
Orthopedics	E	E	E	
Neurosurgery	E	E		

a. Describe any waivers or program flexibility granted for centers not meeting verification requirements.

The TMRC has decided to waive the requirement for a state site visit for those hospitals that have been verified by the American College of Surgeons Committee on Trauma for adult and pediatric level one and level two.

Adult and pediatric level III and IV hospitals that do not meet verification requirements may be given provisional approval pending additional information or proof of meeting requirements.

b. Describe the process and frequency of use for de-designation of trauma centers.

The NH Trauma System has not de-designated any trauma centers; however hospitals have been informed that their designation has expired and will not be reassigned until they meet the renewal requirements.

Question 5: Outline how the geographic distribution and number of designated acute care facilities is aligned with patient care needs.

It is an inclusive trauma system, and we encourage all hospitals to participate and obtain a trauma designation.

a. Describe the process by which additional trauma centers are brought into the system.

The TMRC's Education Subcommittee is establishing a mentoring program which involves trauma coordinators from designated hospitals reaching out to non-designated hospitals to guide them into the trauma system.

b. Describe the system response to the voluntary withdrawal of designation by acute care facilities.

The Clinical System Coordinator reaches out to the hospital to discuss the reasons and challenges which led to the decision to withdraw. The result of this interview is brought back to the TMRC and discussed; efforts are then made to work with these hospitals to resolve their challenges.

c. Describe the mechanism for tracking and monitoring patient volume and flow between centers and how this influences the overall configuration of designated facilities.

We have just begun to put data into our trauma registry and have not yet started to track patient volume and flow.

Question 6: Describe your system for assessing the adequacy of the workforce resources available within participating centers.

The review team is assigned roles before the review starts. Each reviewer is responsible for assessing workforce resources for each piece of the trauma program for that facility. Nurses will assess nursing resources and MDs the medical resources. We are looking at staffing patterns, call schedules, availability of ancillary staff, and support staff. We have standards for on-call staff and standards for arrival of staff to trauma team activations. We look at nurse patient ratios in trauma areas and numbers of procedures done with what workforce resources and are these reasonable expectations. We look at numbers of medical providers in each area and for each discipline.

a. Address nursing and subspecialty needs (trauma or general surgery, intensivists, neurosurgeons, orthopaedic surgeons, anesthesiologists, pediatric surgeons, and others, as required).

We do not specify specific numbers of subspecialties; rather, what works for that hospital, proven through chart reviews at the time of the site visit.

(See [Appendix 9 NH Verification Criteria Checklist Levels III- IV](#))

b. What human resource deficiencies have been identified and what corrective actions have been taken?

At our most recent review, we identified that the trauma coordinator's position was not allotted enough FTEs and the trauma registry registrar was a volunteer. The TMRC made a recommendations for additional hours for the trauma coordinator and a hospital employee to be the trauma registry registrar. The hospital did increase the trauma coordinator's hours but has not employed a trauma registrar.

Another hospital identified the need for additional FTE support for registry and Performance Improvement. This same hospital has hired two additional trauma/critical care surgeons as well as two additional advanced practitioners to accommodate an increasing number of trauma patients.

Question 7: Describe the educational standards and credentialing for emergency physicians and nursing staff, general surgeons, specialty surgeons, and critical care nurses caring for trauma patients in designated facilities.

Nursing requires holding current TNCC/ATCN certification and ENPC or PALS or showing evidence of trauma education annually.

Paramedics within a hospital are required to be current in ITLS/PHTLS and PALS certifications or show evidence of trauma education annually.

Trauma continuing education must also be provided for physicians and allied healthcare professions and out of hospital providers.

See [Appendix 9 NH Verification Criteria Checklist Level III-IV](#)

See [Appendix 10 Verification Application and PRQ](#)

a. What regional educational multidisciplinary conferences are provided to care providers? Who is responsible for organizing these events?

NH has the following multidisciplinary conferences offered to care providers:

- Concord Hospital, DHMC, TMRC each offer an annual trauma conference
- Pediatric EMS Conference - Elliot Hospital
- Sunapee EMS Conference – New London Hospital and DHART
- North Country EMS Conference – Littleton Hospital
- Preparedness Conference – Department of Health and Human Services

ATLS:

- Concord
- DHMC
- Portsmouth
- WDH

TNCC:

- Concord
- DHMC
- We now have an RTTDC instructor in the state and have plans to offer additional courses from the state.

PNCC:

- DHMC

Pediatric Simulation Classes for hospital ED staff and EMS personnel

- DHMC

Local continuing education for EMS

Landing Zone Training – DHART

Pre-Hospital Trauma Life Support (PHTLS)

All designated hospitals must provide trauma education to their staff and local EMS and community members.

System Coordination and Patient Flow

Question 1: Describe the source of prehospital trauma triage protocols, and specify whether they are consistent with national guidelines.

Yes, CDC's "Guidelines for Field Triage of Injured Patients" which has been incorporated into our statewide protocols. ([see Appendix 11 Trauma Triage and Transport Decision](#))

a. Describe how children and patients with severe traumatic brain injury and spinal cord injury are triaged from the field to appropriate facilities.

Frequently, patients are transferred to the closest appropriate hospital for stabilization before then being transferred to a definitive higher level of care; this occurs due to many factors, including distances, weather, road conditions, EMS staffing, and level of training or availability of air transport.

The NH Patient Care Protocol empowers the EMS provider to request air medical transport from the scene and/or bypass local hospital to transport patients to the appropriate trauma center. (See [Appendix 22 AMT](#))

Question 2: Within the system, what criteria are used to guide the decision to transfer patients to an appropriate resource facility and are these criteria uniform across all centers?

Each hospital develops its own transport policies and guidelines. The lead agency does not have system-wide criteria. During site visits, appropriate transfer decisions are evaluated through case reviews.

Question 3: Specify whether there are interfacility transfer agreements to address the needs of each of the following:

a. Transfer to an appropriate resource facility

Many hospitals have general transfer agreements with other hospitals as evidenced by the Pediatric Readiness Assessment 2013. ([see Appendix 23 Pediatric Readiness Assessment](#)) These general transfer agreements are generally with MGH and DHMC.

b. Traumatic brain injury

Yes, it is required for levels III and IVs. Our level I and IIs are now being reviewed and designated by the ACS.

c. Spinal cord injury

There are no required spinal cord injury transfer agreements in order to be designated.

d. Reimplantation

There are no required reimplantation transfer agreements in order to be designated.

e. Burns

Yes, it is required for levels III and IVs. Our level I and IIs are now being reviewed and designated by the ACS.

f. Children

Many hospitals have general transfer agreements with other hospitals as evidenced by the Pediatric Readiness Assessment 2013, (see [Appendix 23 Pediatric Readiness Assessment](#)) but specific transfer agreements for children are not required for designation.

g. Repatriation

There are no required repatriation transfer agreements in order to be designated.

Question 4: Describe the system-wide policies addressing the mode of transport and the type and qualifications of transport personnel used for interfacility transfers.

System wide policies addressing the mode of transport and the type and qualifications of transport personnel used for interfacility transfer are determined by the lead agency and are published in the state wide EMS protocols. Any deviations from these protocols are reviewed by the lead agencies. (See [Appendix 24 IFT](#) and [Appendix 25 PIFT Administrative Packet](#))

Question 5: Specify whether there is a central communications system to coordinate interfacility transfers. Describe how this system has access to information regarding resource availability within the region.

There is not one central communication system to coordinate interfacility transfers; however DHART does provide both ground and air transport services with a central answer point and will coordinate with other air medical transport services, including Boston Med Flight, UMass Life Flight, and Life Flight of Maine.

Rehabilitation

Question 1: Provide data about the number of rehabilitation beds and specialty rehabilitation services (spinal cord injury, traumatic brain injury, and pediatric) available within the trauma system’s geographic region. On average, how long do patients need to wait for these rehabilitation beds?

Does the average wait vary by type of rehabilitation needed?

According to the most recent analysis by the Office of Health Services Planning and Review, New Hampshire Division of Public Health Services, Department of Health and Human Services for certificate of need (CON) purposes, it was determined that NH has an abundance of inpatient rehabilitation beds available. The report states that there are currently 322 licensed inpatient rehabilitation beds and there is a statewide need for only 160, leaving a surplus of 162 beds. When looked at by geographical region the area listed as the “Northern” NH has a shortfall of 9 beds and the “seacoast” region has a shortfall of 1 bed. All other regions (Central, Southern, and Western) have a significant surplus of beds.

List of inpatient rehabilitation centers and CARF certification status

Facility Name	Location	CARF Certified	CARF Certification
Health South	Concord, NH	No	n/a*
Farnum Rehabilitation Center	Keene, NH (at Cheshire Medical center)	No	n/a*
Northeast Rehabilitation Hospital	Salem, NH	Yes	TBI, Stroke, IP Rehab (Adults, & Children)
	Portsmouth, NH	Yes	TBI, Stroke, IP Rehab (Adults, & Children)
	Nashua, NH (at Southern NH Medical Center)	Yes	TBI, Stroke, IP Rehab (Adults, & Children)
	Manchester, NH (at The Elliot Hospital)	Yes	TBI, Stroke, IP Rehab (Adults, & Children)
St. Joseph Hospital	Nashua, NH	Yes	IP Rehab (Adults), Stroke
Catholic Medical Center	Manchester, NH	No	n/a*
Crotched Mountain	Greenfield, NH	No	n/a*

*Each facility that does not have specific CARF accreditation does carry an accreditation from another quality assurance organization, such as Joint Commission Accreditation or DNV GL.

2015 New Hampshire Inpatient Rehabilitation Bed Need by Region

Rehab Region	2015 Population Estimate Per NH Office of Energy & Planning	Rehab Bed Need (12 per 100,000 pop)	Current Licensed Beds	Unmet Bed Need
Central	255,172	30.62	50	(19)
Northern	76,636	9.20	0	9
Seacoast	280,340	33.64	33	1
Southern	519,229	62.31	153	(91)
Western	199,459	23.94	86	(62)
Total	1,330,836	159.70	322	(162)

New Hampshire Inpatient Rehabilitation Current Beds

Hospital	Rehab Region	# of Beds
Catholic Medical Center	Southern	27
Cheshire Medical Center	Western	24
Crotched Mountain Center	Western	62
HealthSouth Rehab Hospital	Central	50
Northeast Rehab Hospital	Southern	82
Northeast Rehab Hosp @ SNHMC West	Southern	20
Northeast Rehab Hospital	Seacoast	33
St. Joseph Hospital	Southern	24
Total		322

Question 2: Describe how existing trauma system policies and procedures appropriately address treatment guidelines for rehabilitation in acute and rehabilitation facilities.

We do not have trauma system policies or procedures that address treatment guidelines for rehabilitation.

Question 3: Identify the minimum requirements and qualifications that rehabilitation centers have established for the physician leaders (for example, medical director of spinal cord injury program, medical director of traumatic brain injury program, and medical director of rehabilitation program).

We do not have this information; we would have to survey each rehabilitation facility.

Question 4: Describe how rehabilitation specialists are integrated into trauma system planning and advisory groups.

We recently invited Matthew Petrin of the NH Association of Rehabilitation Administrators to join the TMRC.

Disaster Preparedness

Question 1 When was the last assessment of trauma system preparedness resources conducted, and what were the significant findings of the assessment as they relate to emergency preparedness?

No large scale assessment has been done to assess the entire trauma system. Each hospital conducts annual disaster drills or tabletop exercises which may or may not include another hospital. These drills are not coordinated with the trauma system lead agency. Gaps identified through hospital drill are not communicated to the lead agency.

Hospitals are required by regulation to exercise twice a year. They include operational capabilities in their exercises, in accordance with their Hazard Vulnerability Analysis (HVA).

NH Hospital Association assists hospitals in fulfilling their mandatory exercise requirements of the CRI, SNS, and ASPR HPP grants.

Question 2: What actions were taken to remediate or mitigate the gaps identified through tabletop or simulated responses in disaster drills among the acute care facilities participating in the system?

We have not conducted an assessment of the trauma system disaster preparedness resources and hospitals, and the NH Hospital Association does not share gaps identified during their disaster exercises.

Question 3: What is the trauma system plan to accommodate a need for a surge in personnel, equipment, and supplies?

The trauma system has no actual plan for surge. However, the NH Hospital Preparedness Program, under contract with the State of New Hampshire Department of Health and Human Services, has used grant funds from the U.S. Department of Health & Human Services, Assistant Secretary for Preparedness and Response (ASPR), to improve medical surge capacity and resources. All NH Hospitals participate in the ASPR HPP. This requires them to achieve community medical surge capacity as well as facility level surge capacity. This includes the development of Alternate Care Sites for low acuity patients in order to decompress hospitals.

Hospitals continually strive to quantify, improve and increase their internal surge capacity. They strive for a 30% increase in overall bed capacity. The challenge now is to shift to the Immediate Available Beds concept as dictated by the HPP guidance. NHHA has introduced the concept and determined that it is not much different from techniques used to decompress a hospital in a surge event. The only difference is that it is coalition-wide, not just hospital. We feel this is already in place.

Ventilator surge capacity

The State of New Hampshire purchased a cache of transport ventilators. The intent of the purchase was to begin to increase critical care capacity to support our state's medical infrastructure. Some hospitals enlisted to participate in this Homeland Security funded project, thus contributing to the increased surge capacity of ventilators in the State.

Every hospital participates in a memorandum of understanding (MOU) that allows for hospital-to-hospital assistance on a state-wide basis in the event of an emergency. The MOU addresses

personnel, equipment, and service support when requested. As part of this collaboration, hospitals agree that in the event of a declared or undeclared event affecting hospital services as a result of natural, man-made, or technological causes or a mass casualty incident impacting the operational capabilities of any other hospital, the affected hospital may request assistance from the other hospitals.

First Receiver decontamination surge capacity

Hospital decontamination programs are based upon the OSHA Hospital First Receivers Guidelines, January 2005 and the New Hampshire Decontamination Guidelines, June 2003. All acute-care hospitals can now decontaminate a limited number of patients that either self-refer or need secondary decontamination to supplement primary (gross) decontamination at the site of the emergency. Each hospital has 12 ILC Dover PAPRs and associated accessories and PPE for this purpose. An initial train-the-trainer took place in 2005; now, hospitals take care of their own training. We also hired a contractor who provides decon/PPE classes regionally to alleviate some of the training burden on hospitals.

Question 4: How is the trauma system integrated into the state's incident command system and the communications center?

The trauma system is not integrated into the state's incident command system; however, the lead agency, NH Bureau of EMS, sends a staff member to the incident command center when activated.

All hospitals use a web-based system called, "Knowledge Center". This system integrates and coordinates State and hospital response and allows the State to see and coordinate distribution of resources and assets. However, the trauma system's resources and information have not been fully integrated into this web-based system.

5. What strategies and mechanisms are in place to ensure adequate inter-hospital communication during a mass casualty incident?

All hospitals use a web-based system, Knowledge Center (KC), that provides tools, forms, documentation of hospital incident response, and will track resources, including HaVBED compliant bed tracking, patient tracking, equipment, PPE and more. This system also integrates and coordinates State and hospital response and allows the State to see and coordinate distribution of resources and assets.

All hospitals have internal and external emergency communications systems, including dedicated phones, fax machines, HAM radio, satellite phone, high speed internet access, email system, 800MHz radios, fiber optic connectivity, microwave radio, weather alert receivers, and two-way radios, cell phones, WAN, LAN and VOIP for internal communication.

System-wide Evaluation and Quality Assurance

Question 1. What is the membership of the committee charged with ongoing monitoring and :evaluating of the trauma system?

(See [Appendix RSA 1](#), specifically 153-A:4 IV, 153-A:8)

RSA 153-A:8 V(b) states that the Trauma Medical Review Committee will “review statewide trauma system operations, including monitoring adherence to established guidelines and standards...” giving said committee the ability to monitor the trauma system.

a. To whom does it report its findings?

Findings are reported to the Bureau of EMS, Coordinating Board and the Commissioner of the Department of Safety.

b. How does it decide what parameters to monitor?

We currently do not monitor parameters.

c. What action is it empowered to take to improve trauma care?

The TMRC is not empowered to take action.

Question 2: Describe the trauma system performance improvement efforts as they pertain to the system for the following groups of providers in the context of system integration:

a. Dispatch centers

We have statewide 911 with one answering point which is able to process location information for cellular phones. This dispatch center is housed in the Bureau of Emergency Communications, which is a part of the Department of Safety.

b. Prehospital provider agencies

The Bureau of EMS reviewed the use of air medical transport over/under triage in 2006; this review resulted in revision of the air medical transport protocol.

c. Trauma centers

We have not done any performance improvement efforts with the trauma centers.

d. Other acute care and specialty facilities

We have not done any performance improvement efforts with other acute care or specialty facilities.

e. Rehabilitation centers

We have not done any performance improvement efforts with rehabilitation centers.

Question 3: List the process and patient outcome measures that are tracked at the trauma system level, including measures for special populations.

At this time we do not track any process or patient outcome measures.

Question 4: As part of your system-wide performance improvement, specify whether each of the following is assessed on a regular basis:

a. Time from arrival to a center and ultimate discharge to a facility capable of providing definitive care. If yes, specify the mean time to transfer.

Each hospital sets their own mean time to transfer. The TMRC does not assess on a regular basis; however, with the new trauma registry, we will be able to monitor this.

b. Proportion of patients with injury more severe than a predefined injury severity threshold (for example, ISS >15, or other criteria) who receive definitive care at a facility other than a Level I or II trauma center (undertriage)

The TMRC does not assess on a regular basis; however, with the new trauma registry, we will be able to monitor this.

c. Proportion of patients with injury less severe than a predefined injury severity threshold (for example, ISS <9) who are transferred from any facility to a Level I or II trauma center (overtriage).

The TMRC does not assess on a regular basis; however, with the new trauma registry, we will be able to monitor this.

Question 5: Describe how your system addresses problems related to significant overtriage or undertriage, both primary and secondary.

Aside from the air medical transport assessment in 2006, we have not assessed problems related to significant over/under triage; however, each hospital seeking designation must show over/under triage for their reporting year.

Trauma Management Information Systems

Question 1: Which agency has oversight of the trauma management information system? New Hampshire Bureau of EMS

a. Describe the role and responsibilities of this agency in collecting and maintaining the data.

It has yet to be defined, as the trauma registry has just been implemented.

b. How are the completeness, timeliness, and quality of the data monitored?

It has yet to be defined, as the trauma registry has just been implemented.

Question 2: Specify which of the following data sources are linked to the information system. Describe the method of linkage (for example, probabilistic or deterministic).

a. Motor-vehicle crash or incident data:

We have done CODES previously, and DHHS is in the process of restarting this program.

b. Law enforcement records:

We have no linkage to law enforcement records.

c. EMS or other transporting agency records:

Yes, our EMS PCRs are deterministically linked to our direct entry trauma registry, any hospital owned registries require their registrar to manually find and enter the EMS data.

d. Emergency department records:

There is no linkage; the information is transcribed by hand.

e. Hospital records (hospital trauma registries):

There is no linkage; the information is transcribed by hand.

f. Hospital administrative discharge data:

There is no linkage; the information is transcribed by hand.

g. Rehabilitation data

We have no linkage to rehabilitation data.

h. Coroner and medical examiner records:

DHHS, at one point, linked a couple of cases through their surveillance people during a heat wave; however we do not have anything automated.

i. Financial or payer data:

We have no linkage to financial or payer data.

j. Dispatch:

There is no direct linkage from the E911 PSAP (public safety answer point) to the dispatch centers software, however there are several services and dispatch centers that can push the dispatch data into the EMS records.

Question 3: What are the regional trauma registry inclusion criteria?

We have used the National Trauma Data Base inclusion criteria in our trauma registry.

Question 4: Which stakeholders had a role in selecting the data elements for inclusion into the regional registry?

A trauma registry user's group was established and was instrumental in selecting the data elements for inclusion into the state trauma registry. Stakeholders included the Center for Injury Prevention, EMS for Children, NH Hospital Association, and our designated hospitals.

a. From what source(s) were the data field definitions derived?

National Trauma Data Base

b. What pediatric data elements are captured?

Pediatric data elements as defined in the National Trauma Data Base.

Question 5: What local or system-wide reports are routinely generated and at what frequency?

We do not routinely generate local or system-wide reports.

Question 6: Are data contributed to the National Trauma Data Bank (NTDB) or other outside agencies? If so, please specify which agencies.

All designated hospitals contribute to the National Trauma Data Bank.

Research

Question 1: Describe the current procedures and processes investigators must follow to request access to the trauma system registry.

The Bureau of EMS currently has no procedures or processes for obtaining data from the trauma system registry due to the fact that the system is new to the State of NH.. If the Bureau, in the scope of an investigation, needed to access the system, it would mirror the way it accesses the TEMSIS system. Investigators needing to access TEMSIS must sign in using a personalized assigned user name and password in order to gain specialized access. Also, when each record is accessed a documented reason needs to be attached to the record along with identifying who accessed the record and the time and date of access.

Question 2: What are the mechanisms used to ensure patient confidentiality when regional trauma registry data are used by investigators?

By using a password protected, personalized user name with specialized access, only the investigator could access the record, and that access would need to be rationalized with each and every case, thus helping to secure the privacy of the data contained within the registry. Though there has been no previous need for access to the information contained within the trauma registry, there is a chance in the future that to do a complete a full investigation, allowing for the discovery of all the facts, the trauma registry may need to be accessed.

Question 3: Provide examples of where research was conducted for the purpose of providing evidence that the processes of care and outcome of injured patients in the system's region are within acceptable standards.

We have not conducted any research on process care and outcome of injured patients.

Question 4: How has research been used to modify policy or practice within the system?

We have not modified any policies or practices based research.

Question 5: What resources (for example, personnel and fiscal) are available to the lead agency to assist in conducting system research?

The Quality Management Section of the Bureau of EMS is available to assist in conducting research. This consists of one full time employee and two part-time employees.