Massachusetts Department of Public Health

150 YEARS OF ADVANCING **PUBLIC HEALTH**

Massachusetts Trauma Registry, MATRIS: Access, Standard Uniformity, and Data Quality - FFY 2020

AGF Workgroup – Working Traffic Records Coordinating Committee
April 27, 2020

Overview of Data Systems

- The Trauma Registry system collects information about trauma incidents treated at Massachusetts acute care hospitals in accordance with the National Trauma Data Bank (NTDB)

  - Currently collects 96 data points, including patient demographics, trauma circumstance-related elements (i.e. alcohol indicator, safe device use and transport mode), key vital signs and Glasgow coma and injury scores, and abbreviated injury scale scores

- Massachusetts Ambulance Trip Record Information System (MATRIS) aligns with the National EMS Information System (NEMSIS) standard and collects ambulance run information from all ambulance services in the Commonwealth

Project Objectives

Trauma Registry

- Rollout new web-based system to 74 hospitals
- QA/QC reporting available to submitting hospitals

MATRIS

- NEMSIS V3: Complete implementation of all 315 licensed ambulance services
- Submit MATRIS Data to NEMSIS national repository and DPH's Public Health Information Tool (PHIT)
- Review and revise data quality validation (Schematron) rules

Combined

- Linkage of MATRIS and Trauma Registry Data for MVC's

Project Benefits

Benefits:

- Align with National Standards
- Improve ease of submission by trauma and EMS stakeholders:
  - Up-to-date technology in line with vendors' current platforms
  - Efficiency/timeliness of automated data submissions
  - Timely submission feedback and improved data validation
- Improve Access of data to the public
- Improve Standard Uniformity
- Improve Data Quality
- Linkage across the EMS and hospitalization to analyze traffic incidents

Performance Benchmarks

Trauma Registry

- Percentage of trauma hospitals submitting on time(within 3 months)
- Percentage of community hospitals submitting on time

MATRIS

- Number of ambulance services submitting NEMSIS V3 data – increase from 220 to all 315
- Percentage of NEMSIS V3 ambulance trip records collected per month - increase from 45% to 75%

MATRIS -
- UMassSafe completed linkage analysis of MATRIS with crash data 2019
- MassDOT:
  - Provided analysis for Massachusetts Motorcycle Safety Conference 2019
  - Conducted analysis of pedestrian and bicycle crashes
- Energy and Environmental Affairs (EEA): provided analysis of ATV Crashes

Trauma Registry
- Created five public-facing presentations showing traffic and non-traffic related trauma injuries, which were presented at Trauma Systems Committee meetings and are posted online for public use

https://www.mass.gov/orgs/trauma-systems-committee/events/past?_page=1
- Developed report of traumas incidents by incident city or town for local community use in emergency response and resource planning

https://www.mass.gov/lists/state-trauma-registry-data

Timeline

September 2020:

- All services submitting to MATRIS V3
- Trauma Registry- 1st publicly available report

January 2021

- Trauma Registry 2nd and 3rd report
- MATRIS data available in PHIT to public

https://www.mass.gov/guides/population-health-information-tool-phit-data-directory

June 2021

- Trauma Registry 4th and 5th report
- MATRIS data available in NEMSIS national repository

Contacts

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From: Ficks, Ridgely (DPH) <ridgely.ficks@mass.gov>
Sent: Tuesday, April 28, 2020 7:13 PM
To: Traffic Records Group e-list
Subject: RE: FFY 2020 405c AGF Project Presentation Webinars

Thank you for attending the DPH NHTSA funding presentation yesterday. Below is follow up on the questions and requests from the group.

Here are the links from the presentation, which is attached.
https://www.mass.gov/guides/population-health-information-tool-phit-data-directory
https://www.mass.gov/orgs/trauma-systems-committee/events/past?_page=1
https://www.mass.gov/lists/state-trauma-registry-data

For the questions on types of traffic related accidents that can be reported on, with specific questions on bicycles and rail stations both the Trauma Registry and MATRIS collected in the NEMSIS V3 standard use ICD-10 codes for classifying injuries.

Trauma Registry:

There is not a specific ICD-10 code for "dooring" but there is a code for a bicycle collision with a fixed or stationary object.

We can also identify types of bicycle crashes with:

- car, pick-up, or van
- pedestrian or animal
- other bicycle
- two or three wheeled motor vehicle
- heavy transport or bus
- railway train or railway vehicle
- other non-motor vehicle

There are other codes for incidents caused by railway train or railway vehicle beside bicycles as well.

MATRIS:

Data submitted to MATRIS is selected by EMT's from a drop down list of a subset of ICD-10 codes set by each service/vendor and is at a higher level. DPH's suggested list of values that ambulance services primarily use includes the following, all of these are available in the Trauma Registry as well:

Bicyclist- injured in traffic or non-traffic accident
Occupant/Riders of the below injured in traffic or non-traffic accidents:

- Car
- Motorcycle
- Pickup Truck/Van
- Bus
- Industrial vehicle
- Streetcar
- ATV
- Dirt or Motor/cross bike
- Snowmobile
- Pedestrian in accident with

- Bicycle
- Car, pickup truck, van
- Bus, heavy transport vehicle
- Railway train

Car vs animal

This level of detail will not be available in PHIT for MATRIS but can be generated as a data request to DPH for data submitted in the NEMSIS V3 standard.

We can follow up with the PHIT team on the question regarding the ability to report by calendar year vs. fiscal and get back to the group.

Thank you