

What is SIREN?

The Statewide Incident Reporting Network

Description

The State of Vermont licenses and regulates all Vermont Emergency Medical Service (EMS) agencies. As part of this central regulation, all electronic pre-hospital patient care reports (ePCRs) are maintained in a single statewide database and managed by the EMS Data Manager at the Vermont Department of Health (Health Department). All Vermont licensed ambulance agencies are mandated to submit ePCRs within one business day after responding to an incident. First Response agencies are not required to submit incident reports to SIREN. As of 2015, 14 First Response agencies were submitting data to the state and 10 more of these agencies began to submit data in 2016.

The Statewide Incident Reporting Network (SIREN) is Vermont's pre-hospital electronic documentation database hosted by ImageTrend, Inc. There are currently over 360,000 records stored in SIREN, dating as far back as 2009. By mid-2014, 100% of Vermont based ambulances were reporting NEMSIS Version 2.2 compliant EMS data to the State. In late 2016, Vermont transitioned to NEMSIS Version 3.4 compliant data. In addition to NEMSIS suggested data fields, Vermont collects additional/modified data elements that are of interest to the state.

The central SIREN database of ePCRs is used for several purposes within the Health Department, including agency-level and statewide EMS quality assurance and quality improvement projects, injury prevention initiatives, and the assessment of populations in Vermont that may be more vulnerable than others. This pre-hospital emergency care data, spanning multiple years, provides information about past emergency health incidents that can be utilized to inform evidence-based strategies for the future. SIREN is a useful and informative supplemental data source to the Vermont Uniform Hospital Discharge Dataset.

Data Limitations

SIREN data is entered by Vermont licensed EMS providers from across the state. Since there are many providers submitting data, it should be recognized that individual, agency, or even regional tendencies and/or subjectivities in data reporting may exist. For this reason, an outcome of interest (medication administration, cause of injury, etc.) may be over- or under-reported.

If a patient received pre-hospital care involving more than one data-submitting EMS agency, that patient may be counted multiple times (once for each EMS agency encounter). Analysts at the Health Department take this into consideration when utilizing the data and attempt to remove duplicate encounters, however some may remain.

SIREN only captures incidents that result in EMS activation. Therefore, incidents in which EMS was not activated for a variety of reasons (fear, less severe injury, financial, etc.) are not included in data briefs and other reports that utilize SIREN data. For this reason, these reports may underestimate the total burden of certain types of injury, medication administration, etc.

For more information regarding SIREN data, please contact Lauren Prinzing, MPH at:
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