

Department of Health

**Biospatial – Motor Vehicle Crash Dashboard
Version 2.0**



Biospatial – MVC Dashboard

Motor Vehicle Dashboard

The MCV Dashboard has many of the same widgets familiar on other dashboards. However, handling of the datasets is unique.

The MCV Dashboard carries two main data sets: EMS dataset and Traffic Records from law enforcement. The MVC Dashboard can view each dataset individually, or “link” the two datasets providing a powerful filter/search experience.

Caution (1): Law enforcement records are updated periodically, and sometimes lag by months. Use caution when selecting the date range.

Caution (2): While the algorithm is highly successful, there are limitations for a perfect 1:1 match for every incident.

Biospatial – Introduction

Motor Vehicle Dashboard

The guide will review the following widgets that are unique to the MCV Dashboard.

Filter/Search Toolbar (Left):

The filter and search toolbar will change based on the data set chosen (EMS, Traffic records, or Linked).

Widgets

- Injury Severity widget (Static)
- Motor Vehicle Crash by Time widget
- Records by Day Hour widget (Demand Chart)
- Age and Gender widget
- Motor Vehicle Crash Details widget
- MCV Data Explorer widget
- Map widget
- Records Table widget

Biospatial – MVC Dashboard

Filter/Search Toolbar (Left)

Data Type(s):

Emergency Medical Services: This is the most common dataset used throughout Biospatial. This dataset contains all the agency's EMS event records. EMS data contains pt. injury, mechanism and other medical information.

Traffic Records: Law enforcement generated traffic records (make, model, speed, road conditions, and weather, ect.)

Linked Traffic and EMS Records: Associated or "linked" EMS and traffic record pairs. For each traffic record, there may be one or more persons involved. Each person in that incident may have interacted with EMS at the scene. If there is a corresponding EMS record for that interaction, it is possible to link the EMS record for that person (or "patient") to the traffic record. When this data type is selected, all widgets on this dashboard will show data for only linked EMS and MVC record pairs.

Imagine: You can pull a crash report for: Any make pickup truck, in rainy weather, speeding 20 MPH over posted, while texting, where there was fatal chest injuries.

Biospatial – MVC Dashboard

Filter/Search Toolbar (continued)

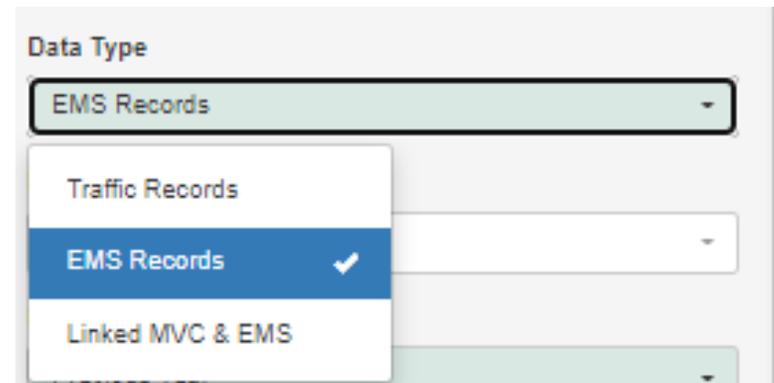
The first selection is the data type. When you select EMS Records, toolbar returns specific filters for this data type. When you select Traffic Records, the toolbar return filters for this type, and the same occurs for Linked traffic & EMS records, the toolbar return all the filters.

Start with EMS Records, select date range (use “previous Year) and click “Apply”

Do the same for the other data sets to familiarize yourself with the choices. Spend extra time on traffic records to view all available choices.

Definitions are located top left Circled ?

Or The Blue *i*, left toolbar.



Biospatial – MVC Dashboard

Injury Severity by Data Type Widget

MVC Events: Total crash events, based on user selected timeframe.

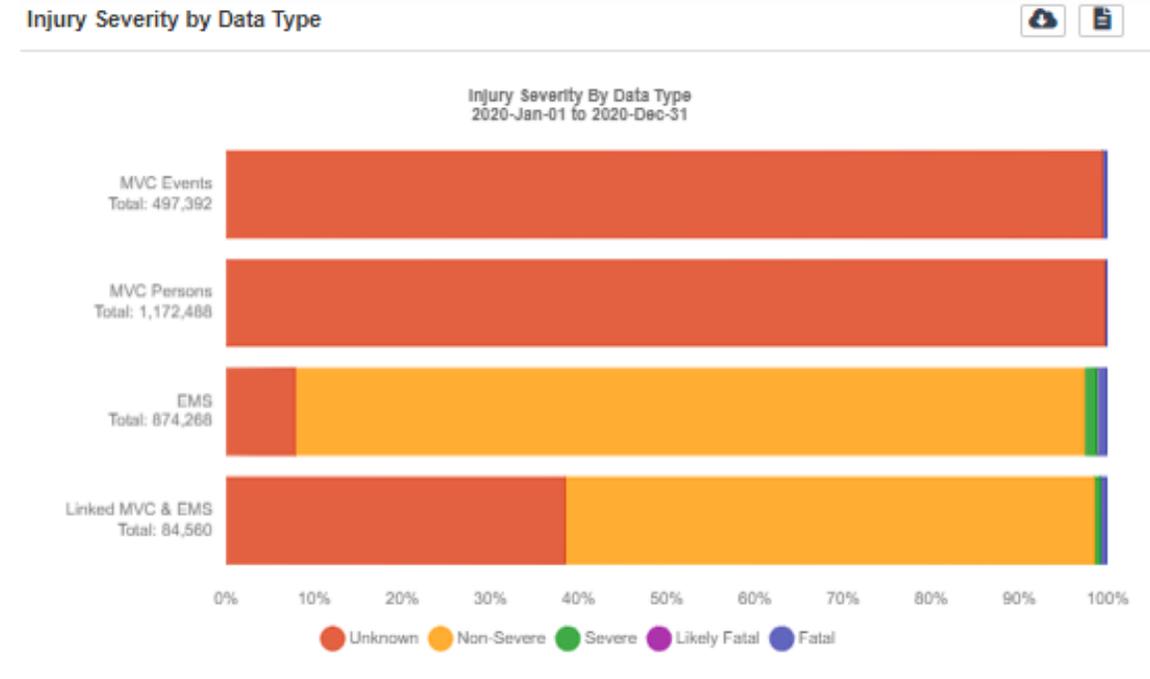
MVC Persons: Persons involved in the MVC events.

EMS Events: Total number of EMS events generated

Linked MVC & EMS: Total number of linked records.

High unknown counts are common since Law does not collect the same severity as EMS (Fatal only). Unknown means the person did not meet a severity criteria.

Note: It is common to have various counts.
(i.e., Four persons in a vehicle)



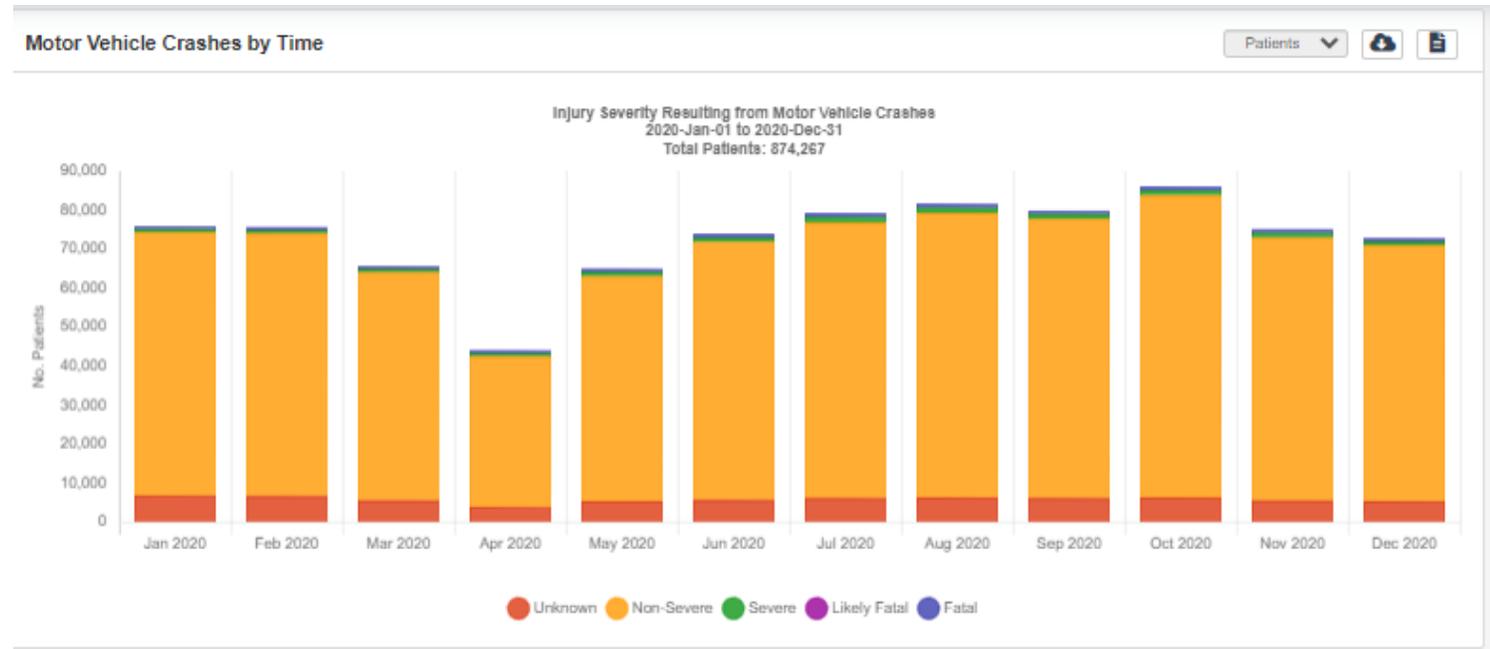
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Motor Vehicle Crashes by Time Widget

This widget is a graphical vertical chart that includes severity type, displayed over time. Time is user selected in the “Date Binning” feature on filter/search toolbar.

In this example: # Persons by Month stacked and grouped by severity.

Note: This graph and many other dimensions can be made in the MVC Data Explorer.



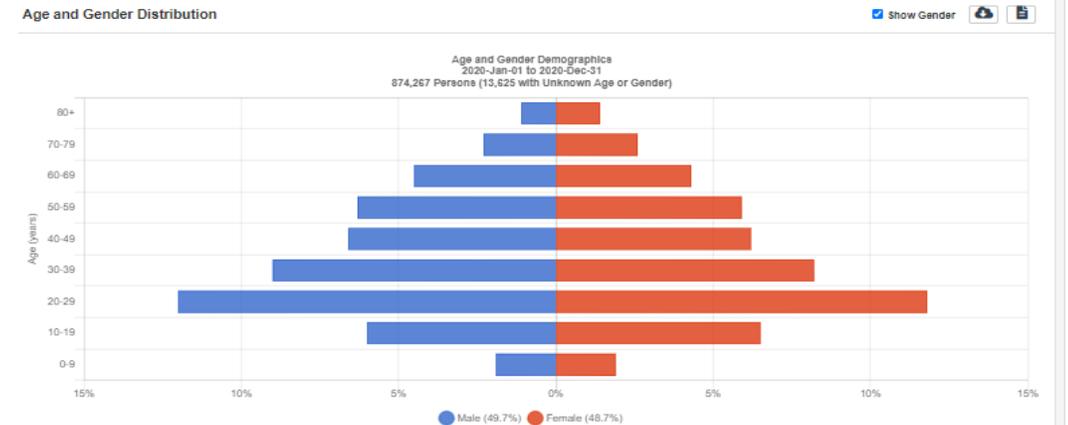
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Records by Day and Hour Widget Age and Gender Widget

These widgets are addressed in the Advanced Search Widget Guide.

Records by Day and Hour Widget: This is a demand chart of user select filter/search from left tool bar. This is a good view of the MVC incident stress time/day.

Age and Gender Widget: Default is distribution by age and gender, deselect the “Show Gender” for age distribution only.



Biospatial – MVC Dashboard

Map Widget

The Map widget can be found on many of the Biospatial dashboards. The map displays the data selected in the filter/search toolbar (Left).

Note: When using the map, you can zoom until the incident dot appears. Depending on the Data Type selected on the filter/search toolbar (EMS or Traffic Records), by clicking on the dot will present with the EMS Event records or the traffic record.

Mapping programs use “Layers”, first you start with a base map and layer extras on top. To view these choices, click on the map fold button, top right of Map Widget.



Base Map Type: Dark, Light, Topographical, Satellite, Street base maps are available.

Base Map View: (Two most common views)

Absolute Count: Based on zoom level, clusters appear with incident count and geographic area the covers. This changes with each zoom level.

Gradient Heat Map: Provide heat map of incidents.

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Map Widget (Continued)

Additional Map Layers: Users can select as map layers desired. Use the pull-down list to view all the choices.

Tip: Adding too many layers when zoomed out may provide too much data for adequate view. Zoom closer when multiple layers are selected. Click on any object the layer provides for identification.

Advanced tip: If the agency has Arc GIS URL or KML/KMZ file of response zones, or any other agency specific GIS file may be added to the layer. Click the + for “Add/Edit Custom Layer”.

Binning/Play back View:

At the bottom of the Map Widget a vertical chart appears based on the Binning selected from the filter/search toolbar (Left). Select one of the vertical bars to view data in that bin period. Example: Set Bin to weeks, by selecting the vertical bar, the incidents for that week will be in view.

Advanced tip: Select the Play feature and the map will playback the incidents as they occurred by bin period. Zoom tightly to enjoy.

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Load Records

Records Table

The records table will load event and source records for the data type selected in the filter/search toolbar. Once loaded, the records will be display with columns of data. Column selections are based on the Data Type selected (EMS, MVC, or Linked). With these two combinations the choices are too great to list in this guide. Column selection can be made by clicking the “Book” Column Visibility icon. The columns to be viewed are user selected. Data from the records table may be exported to a CSV file.

Data Type (Selection from left toolbar)

EMS Records: Present as “Source” or “event”, both contain ePCR data. Event records are presented in a logical flow, like an ePCR chart. The event record may contain HIE hospital records “Relevant Hospital Records”. (See HIE Guide for complete details).

MCV Traffic Records: Presents the law uniform report.

Linked Records: This view offers all the column selections.

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Records Table Example below is “Linked Records Table”

Linked Records Table

Data filtered based on Access Levels: Event = Full. Operational = Full.

2020-Jan-01 to 2020-Dec-31
84,548 Total Records
1 – 500

Show 25 entries

Search:

Event Date (UTC)	Incident State	Computed Injury Severity	MVC Reported Injury Severity	Vehicle Year, Make, and Model	VIN Number
2020-01-01 05:12:00	FL	Non-Severe	Suspected Serious Injury	2011_HONDA_Accord	1HGCP3F84BA003283
2020-01-01 05:13:00	FL	Unknown	Suspected Minor Injury	2005_PONTIAC_G6	1G2ZG528854131023
2020-01-01 05:13:00	FL	Unknown	No Injury	2007_NISSAN_Frontier	1N6AD07U57C480889
2020-01-01 05:13:00	FL	Non-Severe	Possible Injury	1997_TOYOTA_Camry	4T1BF22K7VU013132
2020-01-01 05:13:00	FL	Non-Severe	Suspected Serious Injury	2014_HYUNDAI_Genesis Coupe	KMHHT6KD7EU113923
2020-01-01 05:15:00	FL	Unknown	Suspected Minor Injury	2005_GMC_Envoy	1GKDT13S352105808
2020-01-01 05:25:00	FL	Unknown	Suspected Minor Injury	2017_VOLKSWAGEN_Tiguan	WVGAV7AX8HK048584
2020-01-01 05:39:00	FL	Unknown	No Injury	2016_GMC_Sierra	1GTN1LEC4GZ801174
2020-01-01 05:39:00	FL	Unknown	No Injury	2015_HYUNDAI_Accent	KMHCT4AE9FU935097
2020-01-01 05:39:00	FL	Unknown	No Injury	2016_GMC_Sierra	1GTN1LEC4GZ801174
2020-01-01 05:39:00	FL	Unknown	No Injury	2015_HYUNDAI_Accent	KMHCT4AE9FU935097
2020-01-01 05:39:00	FL	Unknown	No Injury	2015_HYUNDAI_Accent	KMHCT4AE9FU935097
2020-01-01 05:41:00	FL	Non-Severe	Possible Injury	2005_FORD_Taurus	1FAPP53235A240537
2020-01-01 05:48:00	FL	Unknown	Suspected Minor Injury	2003_HONDA_Civic	JHMES98663S006795
2020-01-01 05:48:00	FL	Fatal	Fatal (within 30 days)	2003_HONDA_Civic	JHMES98663S006795
2020-01-01 05:48:00	FL	Unknown	Possible Injury	2004_FORD_Explorer	1FMZU72K14UB05952