Crash Data Accepted with Warning Project Part II
April 27, 2020

massDOT
Massachusetts Department of Transportation
Registry of Motor Vehicles

2019 Traffic Records Assessment

Improve the data quality control program for the Crash data system that reflects best practices identified in the Traffic Records Program Assessment Advisory

Question 60

Formally documented processes for returning rejected reports to the originating officer and tracking resubmission of the report in place

Does Not Meet Advisory Ideal

Question 48

Formally documented processes for returning rejected crash reports to originating officer and tracking resubmission of the report

Partially Meets Advisory Ideal

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Background – AWW Part I

Analysis Performed

Statewide Data Quality Analysis

Identify crash report fields most often left incomplete or have invalid data

Collaboration to Modify AWW Criteria

- Enhance AWW criteria to remove false positives
- Add new fields that can be validated by coded options

Statewide AWW Problem Identification

- Ranking of Depts. by AWW Rate by Size
- Dept. Overview Data Quality AWW Snapshots
- Officer Specific Data Quality AWW Identification
- RMS AWW Submission Quality Comparative Analysis

Background – AWW Part I

Outreach & Technical Assistance

- Outreach & Technical Assistance to Law Enforcement Agencies
- Outreach and Technical Assistance to RMS Vendors
- Presentations at Police Training Academies & Police Chief's Associations

LEL Prioritization

Ranking of LEAs by AWW Problem Fields & Dept Size

Large Departments Ranked by Percent Invalid/Incomplete AWW Fields

Large Police Departments	Count	% Invalid/ Incomplete
Cambridge	831	17.8%
Lawrence	986	15.1%
Lynn	1143	15.1%
Malden	534	14.2%
Haverhill	991	13.7%
Newton	854	13.0%
Waltham	781	12.6%
Quincy	1083	12.3%
Methuen	719	8.7%
Framingham	903	6.5%

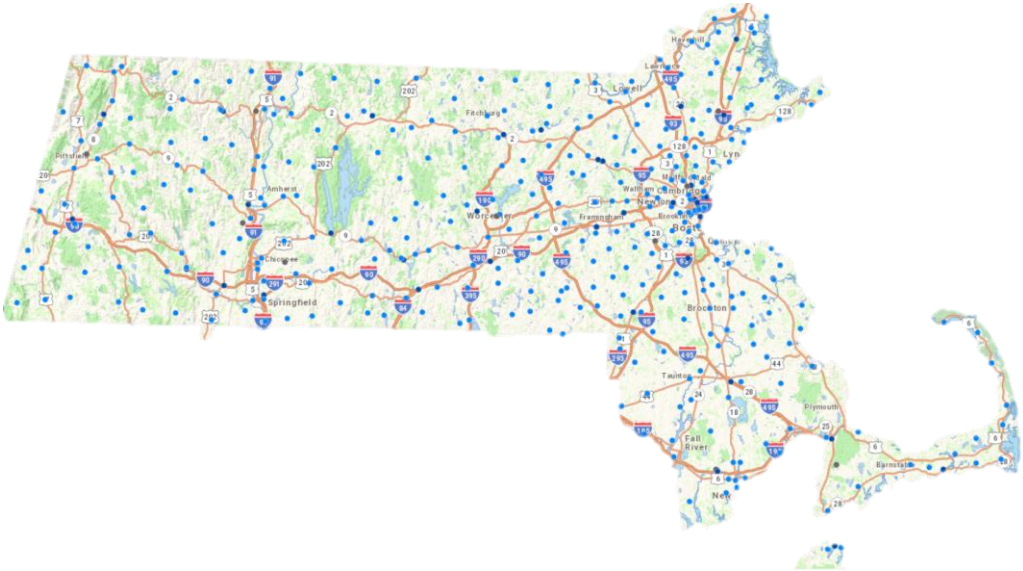
RMV Vendor Data Quality Analysis

Percent Invalid/Incomplete by AWW Field and RMS

Category	Field Name	IMC	RAMS	QED	Pamet	Nexgen	Micro-systems
Crash	Road Contrb Circumstances	0.6%	2.0%	12.2%	3.3%	0.0%	0.1%
	Crash Diagram	0.4%	0.0%	0.0%	0.0%	0.0%	1.1%
Vehicle	Damaged Area Code	9.8%	2.0%	0.4%	4.0%	1.6%	3.3%
	Towed from Scene?	1.5%	0.2%	0.4%	0.2%	5.4%	2.9%
	Responding to Emergency?	5.2%	1.4%	99.5%	0.2%	0.5%	21.0%
	Vehicle Travel Direction	5.8%	1.7%	6.7%	7.6%	5.3%	10.8%
Occupant	Safety System	0.6%	13.7%	3.9%	8.0%	1.7%	2.4%
	Airbag Status	0.3%	4.6%	4.2%	9.8%	1.7%	1.2%
	Transported by Code	0.6%	4.1%	3.4%	9.3%	5.6%	10.1%
Driver	License Class	0.8%	8.6%	27.8%	10.8%	2.1%	3.7%
	Driver Contributing Code	0.4%	6.5%	25.9%	9.5%	2.6%	7.3%
	Driver Distracted By	2.8%	26.5%	39.4%	16.7%	1.5%	10.7%

Law Enforcement Outreach

Collaboration & training with 89 local LEA's and 8 MSP Troops



Part I Accomplishments

- LEL met with LEA's focusing on the top 20 in each Category of Small, Medium and Large, provided and reviewed the AWW ranking reports and detailed reports for their agency and reviewed process on correcting and resubmitting those reports with Warnings

- Provided AWW reports by Officer for the Top 25 LEAs as requested by LEA or LEL

- Reduced total warnings in crash reports received from LEA's by 50% during the project period

- Identified:
  - RMS Vendor Software issues
  - RMV IT issues identified and updated Crash Data Rule
  - Training needed for the LEA's

AWW Part II - Project Details

- UMassSafe: Baseline Problem Identification
- RMV: Determine current state of AWW resubmission & establish a tracking system
- UMassSafe: Automatic Queries for Data Quality Reports
- RMV: Determine current RMS validations and changes needed
- UMassSafe: LEA & RMS Data Quality Reports
- RMV: Outreach & Technical Assistance to LEAs
- UMassSafe: Quantitative analysis of implementation tasks

What's New in Part II

Assistant to LEL

- Assist in LEA submissions
- Implementation of RMS vendors warnings fields
- Formalize and document resubmission process
- Continuously update contact information

Performance Measure

Benchmark: This project with improve the accuracy and completeness of the RMV Crash Data System by showing a reduction in the number of warnings from the pre and post analyses provided by UMass and an increase in report resubmissions

Performance Measure:

- ✓ LEL will meet with at total 30 LEA's focused on the top 10 LEA's in each category of small, medium, and large who have not shown any improvement utilizing the Pre/post analysis and provide them with the written procedures on how to correct and resubmit those reports with warnings.
- ✓ Increase the correction and resubmission of those crash reports with warnings by 3 percent by end of project

Questions

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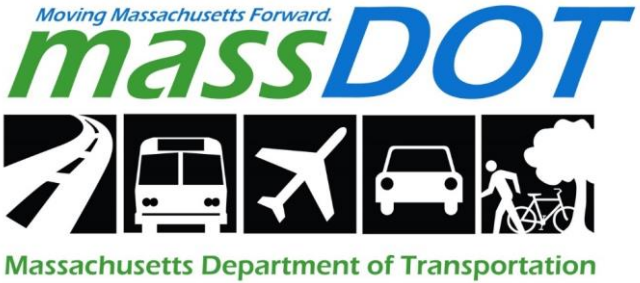


AUTOMATED CRASH REPORT

PILOT PROJECT

April 27, 2020

Automated Accident Report Pilot Introduction

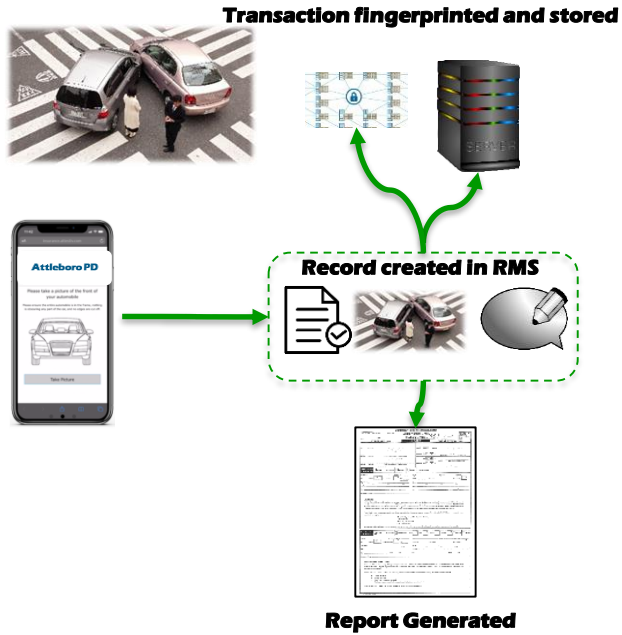
- ✓ To Improve Data Quality on the RMV Crash Report Form (CR65)
- ✓ Allows the gathering of crash data ***at the scene*** and transfer crash data into their RMS
- ✓ Able to ***require*** specific field entries enhancing quality and completeness of the crash report
- ✓ Complete integration into ***any*** Records Management System

Assessment recommendation

#48: **Are the quality assurance and quality control processes for managing errors and incomplete data documented?**	• The RMV partially meets this ideal. The pilot project proposed will provide information to enable the RMV to fully meet this ideal for incomplete data documentation.
#50: Do all law enforcement agencies collect crash data electronically?"	• This is an opportunity to create and pilot an electronic capture system that may be adapted by other RMS vendors and police departments across the Commonwealth, if the pilot proves successful.
#64: from the Commonwealth's *2019 Traffic Records Assessment* asks: "Are there completeness performance measures tailored to the needs of data managers and data users?"	• This pilot should serve to create a standard that can be adopted by all RMS vendors who submit crash reports from law enforcement agencies to CJIS. The fact that incomplete crash reports are being uploaded to CDS now indicates the need for an application such as what is proposed here.

Complete Crash Report from Mobile Device (iPhone, Ipad, Android…)

- **Scan License & IDs**
- **Auto Populate Registration**
- **Voice to text**
  - Narrative
  - Notes
- **Captures photos**
- **Captures detail**
  - Time / date
  - Location
  - Pre-populated fields
  - Weather



Benefits

Rapidly fill crash report

At the scene

Eliminate text inputs

No need to go back into police cruiser

Clear the scene faster

Improve safety

Without leaving behind important details

More accurate reporting

Scene data ingested and maintained in cloud

Prevents errors and omissions

All data can be reviewed on RMS system later

Complete reports

All fields must be completed

No need to backfill reports

No dependence on notes or memory

Product Mobile Device Screen Shots

Tasks

RMV

- Determine current state of Attleboro PD reporting
- Law Enforcement Liaison will monitor Attleboro PD electronic crash report submissions
- Crash Data Supervisor will oversee quality of the reports submitted from Attleboro PD and compare them to quality reports submitted prior Pilot implementation

Attleboro PD

- Provide training to staff on use
- Submit timely crash reports

NEXGEN

- Integrate Attestiv application into the NEXGEN software
- Incorporate into Attleboro PD's RMS software
- Implement training
- Roll-out to officers
- Provide product support

Benchmark – Performance Measure

Benchmark:

Pilot an Automated Crash Report application at Attleboro Police Department through which all crash reports will be uploaded to Nexgen, through CJIS, then RMV CDS to improve the completeness and uniformity performance measures. These benchmarks will be possible to achieve because this method of reporting and submission will not allow any incomplete documentation to advance from the department through the RMS vendor.

Performance Measure:

The number of incomplete crash reports received by the RMV from the Attleboro Police department with incomplete information will be reduced to zero.

Questions

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