



Improving The Collection And Reporting Of Large Truck Crash Data In CRIS

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Background

- Potential underreporting was identified in a prior study
- Accurate large truck crash statistics are crucial for resource allocation and determining countermeasures for protecting the general public



Project Goal(s)



- Utilize data from CRIS (Texas crash data) to examine the degree to which large truck crashes are underreported in Texas
- Obtain information from LEOs, TxDOT, and DPS, and third party data service providers on potential barriers to reporting large truck crashes
- Develop a training and communications plan and a tip card addressing large truck crash reporting for law enforcement

Project Tasks

Develop a review panel composed of large truck stakeholders to guide the project

Evaluate crash data to identify large truck crashes

Conduct focus groups to identify large truck crash reporting barriers with LEOs, agencies, and third parties

Develop a training and communications plan to help improve large truck crash reporting for LEOs, TxDOT, DPS, and other agencies

Develop a tip card for LEOs to carry to easily identify large truck crashes




Crash Analysis


Methods: Data Collection

- Data utilized
 - 2014-2016
 - Crash records information system (CRIS) data
- CMV project definition
 - Vehicle with a GVWR greater than 10,000 lbs
- Vehicle body styles included
 - Large trucks
 - Truck tractor or trailer, semi-trailer, or pole-trailer
 - Potential large trucks
 - Truck, unknown, other (see narrative), reported invalid, or not reported

Methods: Data Analysis VIN Decoder

- Potential large trucks were run through the NHTSA batch VIN decoder tool
 - Classified as CMV, not CMV, and unknown



NHTSA VIN Decoder Powered by 

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Version: 2.5 last updated on 12/25/2018 [Release Notes](#) [Subscribe/Unsubscribe](#)

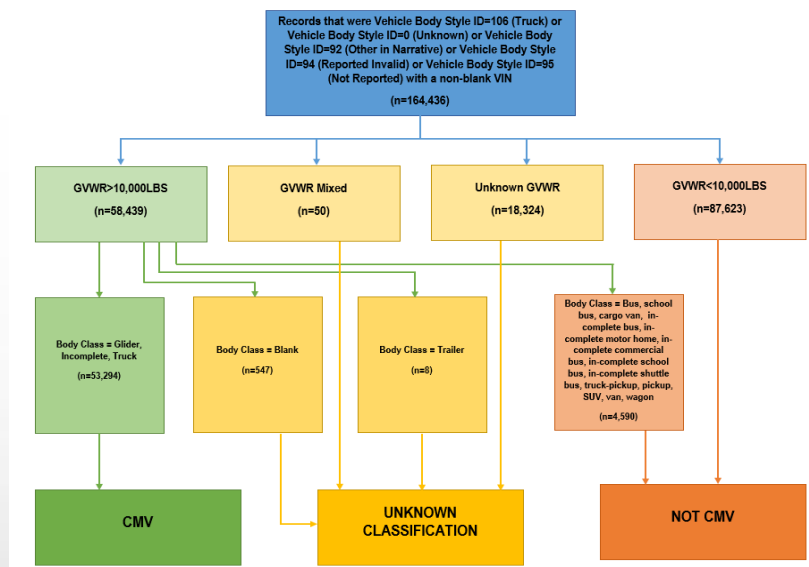
VIN
Partial VINs are also accepted

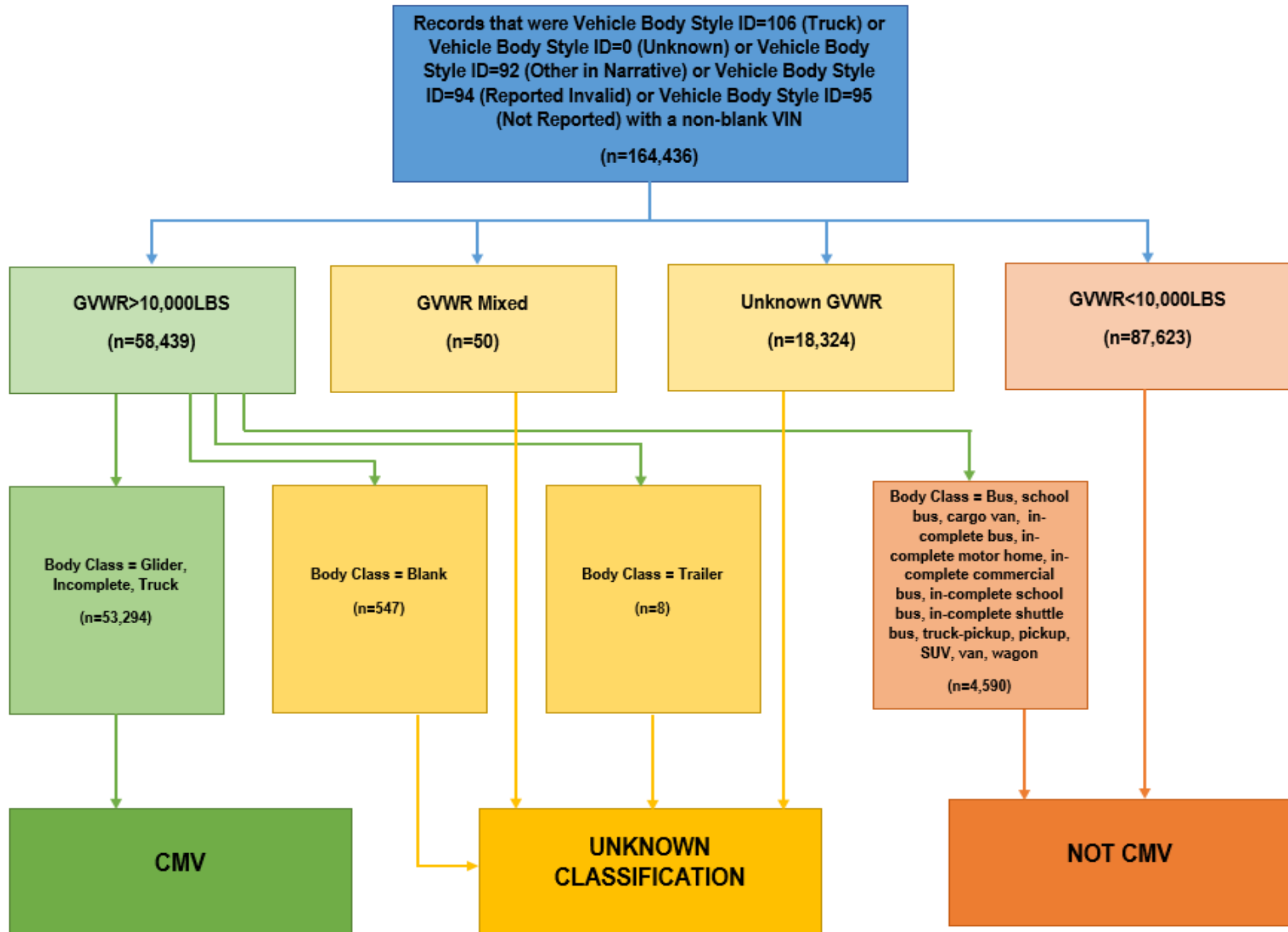
Model Year
If entered the year from VIN will be ignored

[Decode VIN](#) [Canadian Vehicle Specifications](#) [Check Digit Calculator](#)

Crash Analysis Findings: VIN Decoder

- 229,921 crashes identified as potentially involving large trucks
 - 75.7% had a VIN that could be run through the NHTSA batch VIN decoder
 - 24.4% were not run through the decoder: no VIN, not txdot reportable, or were hit-and-runs





Methods: Preparing Data for Modeling

- CMV crashes identified with the VIN tool were combined with known CMVs into one dataset
- Crashes in this final dataset met the following criteria:
 - TxDOT reportable crash
 - Not identified as a hit and run
 - GVWR greater than 10,000 lbs
 - Not vehicle body style trailer
 - No pedestrian or bicyclist involved

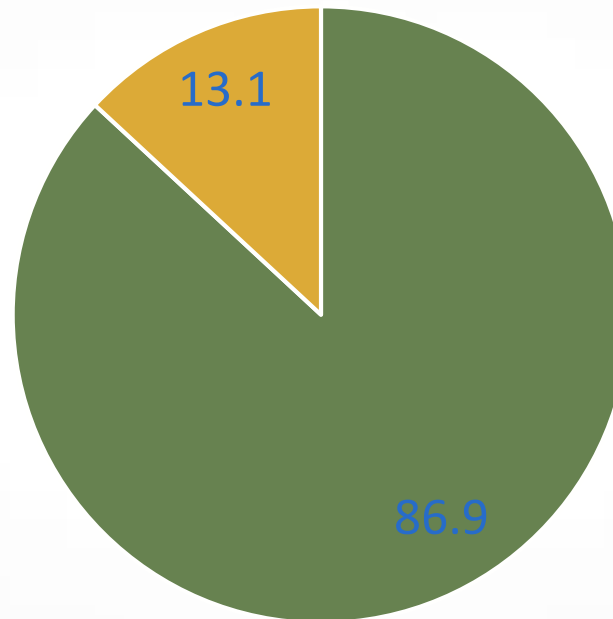
Methods: Modeling

1. Descriptive analysis
2. Logistic models
 1. Single-Vehicle (SV)
 2. Multi-Vehicle (MV)



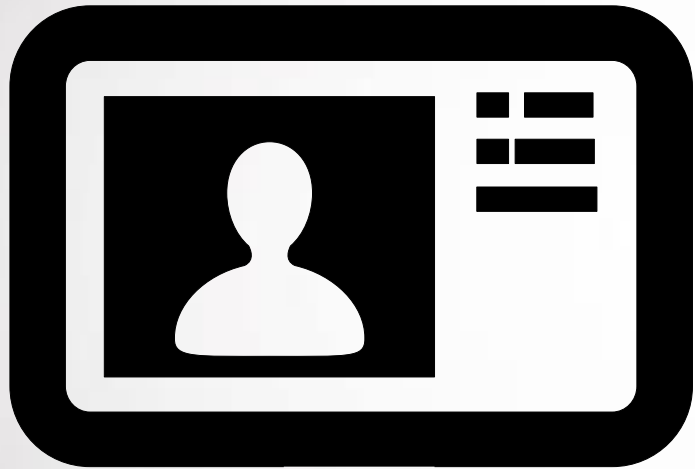
Crash Analysis Findings: Modeling

- 88,998 crashes identified as cmv-related using body style or NHTSA VIN decoder



■ CRIS Flag ■ No CRIS Flag

Crash Analysis Findings: Both Models



Crash Analysis Findings: SV Model



Crash Analysis Findings: MV Model



Crash Analysis Findings: MV Model





Focus Groups

Focus Group Findings

- Training was identified as a significant barrier
 - What is a CMV?
 - Variations between state dot, state, and federal definitions
 - What is the difference between interstate and intrastate commerce?
 - Where do they obtain the information for the cmv section?
 - How to process rental trucks (e.g., Penske)?



Focus Group Findings

- Improvements to crash reporting forms and electronic systems
- Promotion of data linkage where feasible





Project Materials

Tasks Being Finalized

Develop a training and communications plan to help improve large truck crash reporting for LEOs, TxDOT, DPS, and other agencies

Develop a tip card for LEOs to carry to easily identify large truck crashes

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Commercial Motor Vehicle (CMV) Crash Reporting Communications and Training Plan

Communication and Training Plan

- Components
 - Background and purpose
 - Goals and intended outcomes
 - Audience
 - Messages
 - Available tip cards and educational materials
 - Available training opportunities
 - Self-assessment quiz and rubric
 - Performance reporting

Tip Cards

- Identifying CMVs
 - Side 1: flow chart to assist officer with determining if vehicle is a CMV
 - Side 2: table with definitions for the CMV criteria, as well as instructions on where to find the information
- Identifying responsible carrier and DOT numbers
 - Side 1: flow chart to assist officer with identifying the responsible carrier and DOT for CMV crashes in Texas
 - Side 2: DOT and other numbers quick reference

Questions?

