Crash Outcome Data Evaluation System (CODES)
Summary and Transition

For: DOT TRCC

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Overview: CODES as developed by NHTSA provided assistance to States in linking crash data to medical data and analyzing the data. The program was transitioned to state control in 2013.

What we’ll cover

• What is CODES? (2)
• Data sets in CODES (1)
• How NHTSA administered CODES (2)
• CODES Data Products (2)
• CODES Transition (2)
• Other Recent Developments (1)
What is CODES?

- The Crash Outcome Data Evaluation System or CODES was initiated by NHTSA in the 90’s to assist States in linking crash data to medical data: Hospital and ED and/or EMS.

- Over the years CODES sought to overcome the problem of lacking identifiers or missing data in the linkage process.

- A specialized linkage application was developed and supported under a cooperative agreement with NHTSA.

- Some states added other data sets to the mix.
CODES Data Sets

Minimum Required Data Sets in CODES

- Police Crash Reports
- Ambulance & EMS Logs
- ED Data
- Hospital Records

At least one required

Required
But can expand to...

- Driver Citations
- Police Crash Reports
- Ambulance & EMS Logs
- MVA Licensing
- ED Data
- MC Training
- Hospital Records
- Vital Statistics
- Statewide Trauma Registry
- Autopsy Records
- Toxicology
How NHTSA Administered CODES

• Awardees had cooperative agreements with NHTSA.
• States had to apply, qualify and be accepted; and perform well to be retained.
• Funding was partial – most grantees secured added funding
• NHTSA also provided CODES software, training and technical assistance.
• Two grantees were also Resource Centers that helped to support the program and provide training and technical assistance to grantees.
How NHTSA Administered CODES

- Close to 30 states had CODES throughout the years.
- The active grantees in 2012-2013 were:

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<tr>
<th>Region 1</th>
<th>Region 3</th>
<th>Region 4</th>
<th>Region 7</th>
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<tr>
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<td>S. Carolina</td>
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In recent years NHTSA also had two interagency agreements on CODES
- CDC – to explore data linkage programs and uses of linked data
- NTSB – to obtain data for a truck study
CODES Data Products

Grantees were also trained in analysis of linked data.

Variables that became available for analysis related crash circumstances to outcomes such as

• hospital admission
• level of care
• injury severity / MAIS / ISS *
• injury region and category (CDC Barell Matrix)
• charges
• length of stay
• payer
• societal costs projections

*Using AIS as translated from ICD-9 CM using existing software. No software in place for change to ICD-10 CM in 2014.
CODES Data Products

Grantees presented on a highlighted data application annually.

Recent examples:
- NY – Back seat belts
- KY – Neck injuries
- MN – Lane departure crashes
- SC – Adding CODES data to annual safety book

Recent successful legislation support examples:
- MN – primary belt law passed
- MO – helmet law repeal defeated
- GA – pick-up belt exemption ended
- NE – teen alcohol possession law strengthened
- KY – booster seat bill passed ages 4-7

NHTSA white paper documenting state applications
CODES Data Products

Grantees produced state fact sheets and reports.

NHTSA
www.nhtsa.gov

National Center for Statistics & Analysis
CODES Data Products

Grantees contributed data for special studies.
CODES Transition

Strategic Plan and Transition

• 2009 CODES internal strategic plan outlined steps to help grantees become more independent.
• Eventual CODES transition to State control was anticipated in the strategic plan.
• Plan was shared with grantees.

In early 2012, NHTSA established final transition plan and communicated it to CODES grantees.
The last cooperative agreements ended in 2013.
CODES Transition

State Plans

- A number of state programs are continuing to conduct CODES independently.
  - Sometimes using funding through SHSO / TRCC grants.
- Some are still seeking funding or stopped for now but would like to resume in the future.
- Continuing programs still call themselves CODES and still use the methodology.
CODES Transition

Final CODES reports currently in review

CODES: An Overview of Methodologies and Multi-State Traffic Safety Applications
University of Utah

Assessment of Characteristics of State Crash Outcome Data Evaluation Systems (CODES) and Other State Data Linkage Systems
NHTSA/CDC/University of Maryland

Partially funded by CDC.
Other Recent Developments

Transportation Research Board
National Cooperative Highway Research Program

Two projects looking at serious injury measurement and related linkage topics.

NCHRP project 20-24,
*MVMEASURING PERFORMANCE AMONG STATE DOTS: SHARING GOOD PRACTICES -- SERIOUS CRASH INJURY*

Cambridge Systematics, Inc.

Released September 2013.

University of Michigan Transportation Research Institute

A conclusion of the project, at this point, is that linking police crash reports to medical data is the best way to obtain a serious injury measure (Flannagan, TRB proceedings, 2013).

report expected 2014.
CODES Summary and Transition

Thank You

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