Life of a Record After MCSAP

March 1, 2021

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Learning Objectives

• Understand how uploaded records affect the SSDQ measures
• Understand the resources for improving data after it has been uploaded
• Understand the Data Quality Specialists role
Agenda

• Who is your Data Quality Specialist (DQS)
• What happens after records are uploaded
• Available resources for improving the quality of the data
• SSDQ success stories
• Wrap up and ask questions
Data Quality Website Demo
Data Quality Resources

• Your Data quality Specialist
  • What do we do?
• Driver Information Resource
• Learning Center
Role of the Data Quality Specialist

- Monitor **inspection and crash rejected records**
  - These are **records rejected by MCMIS**
  - They need to be **corrected and re-uploaded**
- This information is also in your SAFETYNET’s **Activity Log**
- A lot of rejections can be **prevented by running the SAFETYNET DQ Tool**

<table>
<thead>
<tr>
<th>STATE</th>
<th>FILE TYPE</th>
<th>REPORT NUMBER</th>
<th>REPORT DATE</th>
<th>REPORT TIME</th>
<th>MULTI SEQUENCE NUMBER</th>
<th>ERROR MESSAGE(S)</th>
<th>BATCH ID(s)</th>
<th>SOURCE OFFICE</th>
<th>LAST SOURCE DATE</th>
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<tr>
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<td>XX0020067729</td>
<td>5/5/2020</td>
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<td>9/6/2020</td>
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Role of the Data Quality Specialist

• Monitor **inspection and crash deleted records**
  
  • These are **records deleted in SAFETYNET and subsequently in MCMIS**

• We look for high counts

• These counts are found in the **MCMIS Upload Edit Results report**

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<th>File Type</th>
<th>Validation Date</th>
<th>Confirmation Sent Date</th>
<th>Sent Count</th>
<th>Insert Count</th>
<th>Modify Count</th>
<th>Delete Count</th>
<th>Inactivate Count</th>
<th>Reject Count</th>
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<td>412</td>
<td>14</td>
<td>168</td>
<td></td>
<td>81</td>
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</table>
Role of the Data Quality Specialist

- Monitor the **SSDQs and Leading Indicators**
  - Current status
  - Downward trends
Role of the Data Quality Specialist

- Ad Hoc Reports
Data Quality Resources Demo
Success Stories

• Examples for:
  • Crash Timeliness Measure
  • Crash Completeness Measure
  • Fatal Crash Completeness Measure

• Will show how to use the SSDQ Measures to:
  • Find reporting issues
  • Monitor ongoing issues
### Timeliness Measures

#### Crash Timeliness
- % of fatal and non-fatal crash records **uploaded** to MCMIS within 90 days of the **crash event** over a 12-month period

#### Inspection Timeliness
- % of inspection records **uploaded** to MCMIS within 21 days of the **inspection event** over a 12-month period
What are the most common causes of **Timeliness** issues?

- Personnel turnover
- Records arriving late from Agencies
- IT issues
- Crash form changes
Maryland Crash Timeliness Measures

MEASURES: Crash Timeliness

Maryland Overall State Rating: Measures

Current Measure: 76%
Leading Indicator: 99%
Good (100-90): 76% of your State’s evaluated crash records were reported within 20 days of the crash. These crashes were first uploaded between 08/01/2013 and 09/30/2014. Your rating is Good because your percentage is between 65%–90%. Learn how this rating is calculated.

Poor (44-4): Note: Insufficient Data: State has <15 records reported in current timeframe AND percentage reported within 90 days is < 65%

What to do next:
- Make sure you understand this measure and your State’s rating.
- You can use the dashboard below to view the measure, leading indicator, and dig deeper into the data behind each measure. Select a data point on any of the tables below to learn more about that month’s data.
- Hover over the Dashboard Help icon for additional information.

Supplemental Reports:
- Prior Methodology Results
- Records to Research
- Evaluation by Uploaded Month
- Frequency of Record Uploads to NCHDS

Crash Timeliness: Measure and Leading Indicator

Please click on a month on one of the graphs to the left to activate the single-snapshot drilldown view.
Maryland Crash Timeliness Measures

- **Dashboard View**
  - **November 22, 2020**
  - **Measure: Crash Timeliness**
    - 76% records uploaded on time out of 3,091 total records evaluated.
    - Records were uploaded on time between September 1, 2019 and August 31, 2019.

- **Leading Indicator: Crash Timeliness**
  - 98% records uploaded on time out of 543 total records evaluated.
  - Records were uploaded on time between September 1, 2020 and November 27, 2020.

- **Underlying Data**
  - Explore the data behind the measure and leading indicator.

- **Data Quality—Education, Learning & Training**
Record Completeness Measures

Crash Record Completeness

• % of fatal and non-fatal crash records uploaded to MCMIS over a 12-month period, which contain complete driver and vehicle information

Inspection Record Completeness

• % of inspection records uploaded to MCMIS over a 12-month period, which contain complete driver and vehicle information
Record Completeness Measures

SSDQ Measures
Click each measure to learn how you can improve your State’s data quality.

**CRASH MEASURES**

- **Crash Timeliness**
  - Current Rating: 89%
- **Crash VIN Accuracy**
  - Current Rating: 96%
- **Crash Accuracy**
  - Current Rating: 97%
- **Crash Record Completeness**
  - Current Rating: 97%
- **Fatal Crash Completeness**
  - Current Rating: 0%
- **Crash Consistency Indicator**
  - Current Rating: 131%

**INSPECTION MEASURES**

- **Inspection Timeliness**
  - Current Rating: 99%
- **Inspection VIN Accuracy**
  - Current Rating: 99%
- **Inspection Accuracy**
  - Current Rating: 98%
- **Inspection Record Completeness**
  - Current Rating: 100%

**Data Source:** FARS records and MCMIS crash and inspection records.
Record Completeness Measures

Data Source: NCMIS fatal and non-fatal crash records for 12 months representing interstate, intrastate, and non-motor carriers, and includes large trucks and buses.
# Record Completeness Measures

**SSDQ Measures**

Click each measure to learn how you can improve your State’s data quality.

## CRASH MEASURES

<table>
<thead>
<tr>
<th>Metric</th>
<th>Current Rating</th>
<th>Leading Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crash Timeliness</td>
<td>88%</td>
<td>100%</td>
</tr>
<tr>
<td>Crash VIN Accuracy</td>
<td>95%</td>
<td>100%</td>
</tr>
<tr>
<td>Crash Accuracy</td>
<td>97%</td>
<td>100%</td>
</tr>
<tr>
<td>Crash Record Completeness</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>Fatal Crash Completeness</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Crash Consistency Indicator</td>
<td>121%</td>
<td>121%</td>
</tr>
</tbody>
</table>

## INSPECTION MEASURES

<table>
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<th>Metric</th>
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<td>95%</td>
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<tr>
<td>Inspection Record Completeness</td>
<td>100%</td>
<td>100%</td>
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</tbody>
</table>

**Data Source:** FARS records and MCMIS crash and inspection records.
Record Completeness Measures
Fatal Crash Completeness

• Evaluates a **full calendar year** of fatal crash records to determine your State’s rating

• A record is evaluated if the **date of the crash event** (not the date of upload to FMCSA) falls within that calendar year

• **Diffsers from the SSDQ measures**, which evaluates a rolling 12-month period

• Measure **compares the number** of large truck fatals in **MCMIS** to the number of large truck fatals in **FARS**
Fatal Crash Completeness - Enhancement

• Allow States to **identify non-commercial vehicles that qualify in FARS** due to weight

• By **adding a specific comment to the record in the FARS-MCMIS Matching Tool**, this record will be bypassed in the FARS count for the FCC measure

• Comment to exclude record:
  - **FARS Exclusion - medium/heavy duty truck that qualifies as personal use**
**MEASURES: Fatal Crash Completeness**

Colorado: Overall State Rating = Measures

**Current Measure**

107%

Your rating is GOOD

107% of your State’s evaluated fatal crash records were reported to MCMIS as compared to the number of fatal crash records in FARS. These crashes occurred in calendar year 2018. Your rating is good because the number of MCMIS records as a percentage of FARS records is greater than or equal to 90%. Learn how this rating is calculated.

**NOTE: INSUFFICIENT DATA:** State has < 10 FARS records AND MCMIS as a % of FARS is < 89%

**What to do next**

Make sure that you understand this measure and your State’s rating.

- You can use the dashboard below to view the measure and dig deeper into the data behind each measure. Select a data point on any of the tables below to learn more about that month’s data.
- Hover over the Dashboard Help icon for additional information.

**Supplemental Reports**

- Prior Methodology Results
- Use the FARS/MCMIS Matching Tool.
- Talk with your State’s FARS Analyst to ensure that you have all the records you should in MCMIS. If needed, reach out to your DQ Specialist for help to connect with your FARS Analyst.
FARS/MCMIS Matching Tool

• Use the FARS-MCMIS Matching Tool to improve your Fatal Crash Completeness Measure

• Colorado – Background
  • Created a New Crash Repository
  • Resulted in certain records not being identified as reportable
  • 2017 FARS release resulted in the FCC measure dropping from 95% to 57%
FARS/MCMIS Matching Tool

• Use the **FARS-MCMIS Matching Tool** to improve your Fatal Crash Completeness Measure

• Colorado – Improvement Actions
  
  • Used the FARS-MCMIS Matching Tool to identify fatal records not in MCMIS
  
  • Researched why these records had been bypassed
  
  • Updated the extract logic to include these records
FARS/MCMIS Matching Tool

- Use the **FARS-MCMIS Matching Tool** to improve your Fatal Crash Completeness Measure

- Colorado – Improvement Results
  - Improved the FCC measure from 57% to 93%
  - New extract logic also identified reportable non-fatal crashes which had been bypassed
  - Crash Consistency Indicator increased from 85% to 114%
  - With the 2018 FARS release the state’s Fatal Crash Completeness measure is 107%
Have Questions? Let Us know!

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Additional Resources:
Data Quality Website
http://ai.fmcsa.dot.gov/DataQuality

DataQs Website
http://dataqs.fmcsa.dot.gov/

Thank You!