

Report to the Standing Committee on Public Accounts

Recommendation #3

Report 4, Oversight of Passenger Vehicle Safety

July 2018

Transport Canada

Motor Vehicle Safety Directorate

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1. Overview / context

Introduction

On November 29, 2016, the Auditor General of Canada's (OAG's) fall 2016 Reports were tabled in the House of Commons. The Report 4 on Oversight of Passenger Vehicle Safety focused on Transport Canada's (TC's) process of making amendments to regulations for emerging technologies and issues, as well as the Department's oversight and analysis of public complaints, investigations, and manufacturer recalls. The Department accepted all of the recommendations contained in the OAG report and committed to undertaking specific actions to address these recommendations.

In addition, the OAG report on passenger vehicle safety was also considered by the House Standing Committee on Public Accounts (PACP) on March 6 and April 3, 2017, where the committee heard witnesses from TC and the OAG. Based on this review, the PACP tabled a report on May 15, 2017, which was closely aligned with the 2016 OAG report and included seven recommendations for TC's Motor Vehicle Safety program (MVS). The government response was tabled on September 27, 2017.

One particular recommendation from the 27th Report of the PACP requested that:

- [By July 31, 2018, TC will provide the PACP with a report detailing how it has implemented its action plan to improve the quality of collision and injury data.](#)

To address this recommendation, this report presents an action plan and the associated work to date with respect to collision and injury data.

Office of the Auditor General Audit

During 2015-16, the OAG conducted an audit of MVS, which included a review of the collision and injury data holdings within the Department's Evaluation and Data Systems Division. While the focus of the audit was more on Transport Canada's regulatory framework and its oversight of vehicle safety defects and recalls, the OAG noted that Transport Canada did not have complete collision and injury data to inform its decisions. More specifically, two recommendations were made as follows (under sub-section 4.44 of the report):

[In developing new or modifying existing safety standards, Transport Canada should:](#)

- [assess whether its collision and injury data can adequately support evidence-based decisions based on its quality, reliability and relevance; and](#)
- [take appropriate measures, including working with provinces, territories and other stakeholders, to improve the quality and scope of data needed to inform decisions.](#)

Motor Vehicle Safety and its Collision Data Program

Road safety is a shared responsibility among all levels of government, owners, and operators. While Transport Canada is responsible for the standards for new and imported vehicles, tires, and child restraints, the provinces and territories are responsible for driver licensing, vehicle registration, operation of highways, and the administration of justice.

Established over four decades ago, MVS is focused on protecting the public against loss of life or damage to health, property and the environment from the use of vehicles and equipment. The Department, in

cooperation with the provinces and territories (P/Ts) and the Canadian Council of Motor Transport Administrators (CCMTA), has compiled the national motor vehicle collision data since the early 1970s. This data is regularly used by jurisdictions (including TC), international partners, stakeholders, academia, road safety professionals, and the public to report on road safety activities. The National Collision Database (NCDB) and its data dictionary were created in 1994 and subsequently revised in 2006 to increase the uniformity and relevance of the data.

2. Transport Canada's Response to Recommendations

In response to the OAG recommendations under sub-section 4.44, the Department committed to assess the quality (e.g., reliability and validity) of its collision and injury data. TC also committed to work with the P/Ts and other stakeholders to develop an action plan to improve data quality.

Process and Activities in Response to Recommendations

To address recommendations under sub-section 4.44, TC created an internal working group in fall 2016 to plan and undertake activities associated with the recommendations. The working group identified two primary activities:

1. conduct an internal environmental scan of MVS collision and injury data needs; and
2. assess the existing collision and injury data holdings (i.e. the National Collision Database).

Additional work was identified as part of the overall response to the OAG and PACP recommendations which resulted in the following three main deliverables:

1. conduct an environmental scan of collision and injury data (completed July 2017);
2. conduct an assessment of Collision and Injury Data (completed October 2017); and
3. propose an Action Plan to Improve Data Quality (completed April 2018).

An initial internal needs assessment was conducted using a combination of a targeted questionnaire and staff consultation sessions. The sessions, led by a facilitator, were aimed at obtaining as much input as possible on the use, importance, perceived quality, and data gaps associated with the motor vehicle collision, injury and related data. In addition to the internal needs assessment, TC undertook work in relation to the NCDB's data quality. Specifically, that the data assessment examined the timeliness, completeness, accuracy and relevance of the NCDB and related data holdings.

In April 2018, TC shared its Action Plan with the CCMTA and the provinces/territories to engage and discuss already identified items as well as soliciting other possible action items for consideration. This engagement exercise is expected to transpire over several weeks, culminating with a final set of action items to be implemented starting in July 2018. It is anticipated that the CCMTA secretariat(s) (Board, Road Safety Research and Policies Committee and National Collision Data Task Force) will be the main conduits through which this work is undertaken (refer to Section 3 for the Action Plan).

Key Findings from Environmental Scan

Currently, the data requirements within MVS are both broad-based and significant. The general consensus from the consultations is that data are not received in a timely manner, information is incomplete, and the information collected does not address all of the Directorate's needs. Specifically, collision data are needed

quicker and more frequently. There also needs to be more detailed information, including vehicle-based information and injury location.

It is also worth noting that the level of completeness of collision data is inconsistent between jurisdictions. For example, two-thirds of the jurisdictions have yet to adopt the newer version of the data dictionary in their collision forms (NCDB2). Additionally, 26 percent of the data missing concerning casualty collisions.

Further, a recent assessment of data accuracy compared a number of data elements included the NCDB with collision investigation data found in CIRD database of investigated crashes. For the majority of data elements, the NCDB matched the CIRD data approximately 90% or better. However, there were a number of data elements (e.g., restraint use, ejection status, collision configuration and impact location) that showed significant differences between the two databases.

Summary Assessment

Despite the shortcomings noted above, the collision data collected is more than adequate for the needs associated a majority of MVS' regulatory and some limited research activities. The data also allows for analysis and a number of reporting activities, including TC corporate, the CCMTA, Parliamentary and international reporting requirements. Additionally, the data is suitable for external dissemination at an aggregated level, including an annual publication of summary statistics, an online query application and a subset of raw data that feeds into the Government of Canada Open Data initiative. Finally, the data has been used (where available) to support Regulatory Impact Assessment Statements and cost-benefit analyses associated with regulatory proposals.

3. Action Plan and Implementation Update

Action Plan Items

The proposed action items below will help guide and support jurisdictions to achieve improvements in their collision data collection and reporting systems.

TC has proposed the following action items to address data quality and timeliness issues (See Table format of Action Plan in Annex A).

Short-term activities:

- 1. Raise Awareness of Importance of Collision Data (Start Date: July 2018 - End Date: N/A)**
 - TC to add agenda item to Council of Ministers and Deputy Ministers meetings.
 - FPT to hold a data workshop through CCMTA in fall 2018.
 - FPT to identify champions on CCMTA Board.
 - FPT to increase data discussions at CCMTA RSRP committee.
 - TC to open a direct dialogue with the Canadian Association of Chiefs of Police.

- 2. Regular FPT Data Quality-Focused Meetings (Start Date: July 2018 - End Date: March 2019)**
 - FPT to have quarterly National Collision Data Task Force meetings.
 - FPT to schedule national workshops as needed.
 - P/Ts to review internal collection and processing.

Medium-term activities:

3. Develop Formal Data Quality Program (Start Date: July 2018 - End Date: March 2020)

- TC to produce regular custom data quality reports.
- TC to create assessment and measurement framework.
- FPT to draft guides and manuals for data quality.
- TC to examine possibility of on-site visits to provide assistance.

4. Opportunities to Link Injury Data (Start Date: July 2018 - End Date: March 2020)

- TC to undertake a pilot study with a P/T.
- TC to reach out to P/T coroners, Health Canada, and Statistics Canada for data holdings.
- FPT to work with hospital/trauma centres.

Long-term activities:

5. Address Data Gaps (Start Date: April 2019 - End Date: March 2024)

- TC to explore additional data sources.
- FPT to hold upcoming workshop on data/emerging issues.
- TC to coordinate data linkage activities.

6. Expand Data Dissemination (Start Date: April 2021 - End Date: March 2024)

- FPT to add more National Collision Database content to online products.
- FPT to identify additional mechanisms for diffusion of data.
- FPT to consider more frequent dissemination.

7. Alternative Data Collection Models (Start Date: April 2021 - End Date: March 2024)

- TC to investigate sampling for non-fatal collisions.
- TC to consider Canadian Fatality Reporting System similar to United States system.
- FPT to discuss other collection models and sources.

8. Electronic Data Collection (Start Date: July 2018 - End Date: N/A)

- P/Ts to increase use of electronic data collection.
- P/Ts to work with local law enforcement.

9. Adoption of Data Dictionaries (Start Date: July 2018 - End Date: N/A)

- P/Ts to adopt NCDB2 and future versions of national data dictionary.
- P/Ts to incorporate future data requirements and emerging data needs.
- P/Ts to collect location/GIS collision data.

Progress to Date

As noted above, in order to better support and inform the work currently undertaken in the MVS, the quality in terms of timeliness, completeness, and scope needs to improve.

As noted in Section 2, the Department addressed the OAG and PACP recommendations by completing an environmental scan, assessment report, and proposed action plan. This work commenced in late 2016 and continued through to early 2018.

More specifically, TC undertook the following data quality improvement activities:

- **Custom jurisdictional NCDB data quality reports**
 - Prepared detailed reports highlighting data issues (e.g., missing data, errors) for each jurisdiction.
 - Created additional reports focusing on unique issues by jurisdiction.
- **Data imputation for NCDB data elements**
 - A total of 22 NCDB data elements were included in the imputation exercise.
 - The amount of unknowns were reduced by 10 percent.
- **Improvement of vehicle-type information**
 - Examined vehicle-type records of 14 years' worth of data.
 - Over that period, 20 percent of vehicle-type data were corrected/improved.
- **Environmental scan of trauma/hospital data holdings**
 - Reviewed trauma and hospital data holdings across Canada.
 - Identified pilot data linkage opportunity.
- **Data quality discussions with P/Ts (NCD Task Force)**
 - Chaired several meetings with increasing focus on data quality.
 - Conducted ad-hoc surveys to identify key road safety issues and status of data collection.
- **Possible new data sources to address data gaps**
 - Initiated research into what other sources or data holdings are available.
 - Drafted a report identifying opportunities to build upon.
- **Potential funding sources for data improvement**
 - Undertook initial scan of possible opportunities for road safety data collection.
 - Identified some federal government programs for further examination.

Next Steps

The Department will continue to work on these activities and will work with the provinces and territories and other stakeholders as required to implement the additional action items being proposed.

The implementation of the action plan will take place over several years.

Annex A – Action Items to Improve Data Quality

Item	Planned Actions	Lead Agency	Timeframe (S,M, L)	Start Date	End date
1. Raise Awareness of the Importance of Collision Data	<ul style="list-style-type: none"> • TC to add agenda item to Council of Ministers and Deputy Ministers meetings. • FPT to hold a data workshop through CCMTA in Fall 2018. • FPT to identify champions on CCMTA Board. • FPT to increase discussions at CCMTA RSRP committee. • TC to open a direct dialogue with the Chiefs of Police. 	TC	Short	Jul-18	n/a
2. Regular FPT Data Quality-focused Meetings	<ul style="list-style-type: none"> • FPT to have quarterly National Collision Data Task Force meetings. • FPT to schedule national workshops as needed. • P/Ts to review internal collection and processing. 	TC	Short	Jul-18	Mar-19
3. Develop Formal Data Quality Program	<ul style="list-style-type: none"> • TC to produce regular custom data quality reports. • TC to create assessment and measurement framework. • FPT to draft guides and manuals. • TC to examine possibility of on-site visits to provide assistance. 	TC	Medium	Jul-18	Mar-20
4. Opportunities to Link Injury Data	<ul style="list-style-type: none"> • TC to undertake a pilot study with a P/T. • TC to reach out to P/T coroners and Health Canada and StatCan for data holdings. • FPT to work with hospital/trauma centres. 	TC	Medium	Jul-18	Mar-20
5. Address Data Gaps	<ul style="list-style-type: none"> • TC to explore additional data sources. • FPT to host upcoming workshop on data/emerging issues. • TC to coordinate data linkage activities. 	TC	Long	Apr-19	Mar-24

Item	Planned Actions	Lead Agency	Timeframe (S,M, L)	Start Date	End date
6. Expand Data Dissemination	<ul style="list-style-type: none"> • FPT to add more National Collision Database content to on-line products. • FPT to identify additional mechanisms for diffusion of data. • FPT to consider more frequent dissemination. 	TC	Long	Apr-21	Mar-24
7. Alternative Data Collection Models	<ul style="list-style-type: none"> • TC to investigate sampling for non-fatal collisions. • TC to consider Canadian Fatality Reporting System similar to United States system. • FPT to discuss other collection models and sources. 	TC	Long	Apr-21	Mar-24
8. Electronic Data Collection	<ul style="list-style-type: none"> • P/Ts to increase use of electronic data collection. • P/Ts to work with local law enforcement. 	P/T	Long	Jul-18	n/a
9. Adoption of Data Dictionaries	<ul style="list-style-type: none"> • P/Ts to adopt NCDB2 and future versions of national data dictionary. • P/Ts to incorporate future data requirements and emerging data needs. • P/Ts to collect location/GIS collision data. 	P/T	Long	Jul-18	n/a