

# **SAFETY DATA COLLECTION TOOLS**

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This issue brief summarizes the data collection tools presented and discussed at the 2008 ITE Technical Conference in Miami, FL in the Planning / Data and Analysis Tools track. A number of data collection tools are available at the federal level, and others are being developed and implemented by state agencies. This brief focuses on the federal level tools.

Several speakers at the 2008 ITE Technical Conference identified the basic need to collect and maintain good quality data, in a timely and consistent way. Many of the recently and soon to be released data analysis tools also require good quality data, including the Interactive Highway Safety Design Module, SafetyAnalyst, and the Highway Safety Manual.

In addition, getting safety to compete for resources on the same level as other priorities such as costs, right-of-way, and operations requires relying on or developing tools to make safety a more tangible quantity.

There is a need to make safety data more universally accessible and useful; good quality data are required to facilitate the decision-making process. Inconsistencies in how safety data is collected and disseminated among federal and state agencies to local jurisdictions remain widespread. Under SAFETEA-LU Section 408, states may receive funding to improve their traffic records systems in terms of timeliness, accuracy, uniformity, completeness, and integration. Many states are using Section 408 funds to improve their safety data.

Two important guidelines for standardizing the collection of safety data are the Minimum Model Uniform Crash Criteria (MMUCC), and the Minimum Model Inventory for Roadway Elements (MMIRE). More information on these two guidelines can be found on-line at [www.mmucc.us](http://www.mmucc.us) and [www.tfhr.gov/safety/pubs/07046/index.htm](http://www.tfhr.gov/safety/pubs/07046/index.htm), respectively.

As noted on the MMUCC website: "MMUCC represents a voluntary and collaborative effort to generate uniform crash data that are accurate, reliable and credible for data-driven highway safety decisions within a state, between states and at the national level." The MMUCC provides a comprehensive list of 111 data elements, including crash, vehicle, person, and roadway elements.

The FHWA report on the development of MMIRE (FHWA-HRT-07-046) states "The concept of MMIRE includes a listing of roadway inventory and traffic elements critical to safety management and the proposed coding for each of these critical elements." In essence, MMIRE will provide a comprehensive list of

road inventory and traffic elements, similar to the data elements provided in MMUCC. The MMIRE is proposed to include 180 data elements.

The Crash Outcome Data Evaluation System (CODES) provides guidelines to link crash data collected at the scene with datasets from emergency medical services (EMS), hospitals, citations, roadway inventory, and insurance data. More information on CODES is available at <http://www-nrd.nhtsa.dot.gov/departments/nrd-30/nrsa/codes.html>.

Linking crash data with EMS, hospital and other data creates a more robust dataset that more effectively captures crash events. As noted on the CODES website “Probabilistic linkage of the crash, hospital and either EMS or emergency department data so that persons involved and injured in a motor vehicle crash can be tracked from the scene through the health care system. Linkage also makes it possible to evaluate the medical and financial outcome for specific event, vehicle and person characteristics.”

Many agencies are embracing technology to provide access to data through the internet and/or on web-based systems. Some agencies are able to use GIS-mapping, while others are using web-based mapping.

In summary, the Planning / Data and Analysis Tools track at the 2008 ITE Technical Conference in Miami, FL emphasized the need to collect and maintain crash data and to link crash data with roadway elements, traffic volumes, hospital/EMS data, insurance claims and other datasets.