



Truck Manufacturers Pioneering Development
of Accident Data Programs

SAE Truck and Bus Meeting
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Oral Presentation
Farrel L. Krall
Author and Presenter

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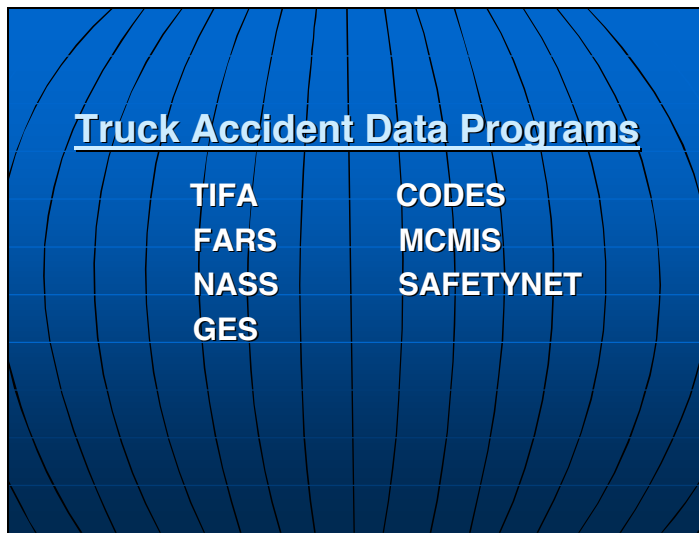


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This presentation provides an overview of the historical development of truck accident programs implemented under the sponsorship of U.S. truck manufacturers. Most of the program efforts included herein have been funded by truck manufacturers through the former Motor Vehicle Manufacturers Association (MVMA).

The U.S. is indeed fortunate to have a number of quality truck accident data programs, most of which are currently funded by the U.S. Department of Transportation. MVMA became proactively involved in sponsoring the development of data collection and analysis programs in the mid to late 1960's, at which time truck accident data were virtually non-existent. MVMA continued to sponsor such programs until the MVMA organization was dissolved in December 1992. A listing of MVMA sponsored accident studies is provided later in this presentation.

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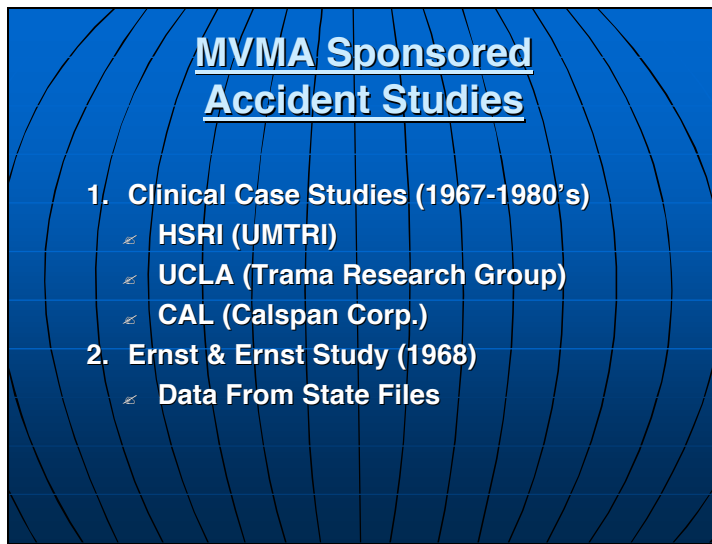
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This is a list of current truck data programs. TIFA (Trucks Involved in Fatal Accidents) was launched by the University of Michigan Transportation Research Institute in 1980 under the sponsorship of MVMA and its member truck manufacturers. More details on the TIFA Program are discussed later in my remarks.

Before leaving this slide, I should mention that FARS, which is DOT's **Fatal Accident Reporting System**, is the building block for the TIFA Program. The other programs listed here are the **National Accident Sampling System**, the **General Estimates System**, the **Crash Outcome Data Evaluation System**, the **Motor Carrier Management Information System** and **Safety Net**.

Truck accident data are included in varying degrees in each of the seven programs.

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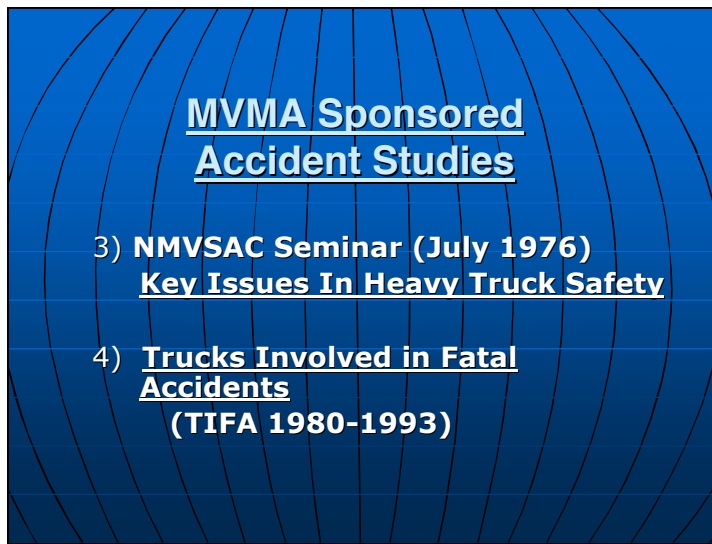
I have selected four (3 & 4 on next slide) of MVMA's early programs as a way of describing and illustrating the evolutionary process that was pursued by MVMA (known as AMA until 1972) on behalf its member truck manufacturers.

The first truck studies to be sponsored by MVMA were Clinical Case Studies sometimes referred to as Multi-Disciplinarian Accident Investigations (MDAI). The approach here was to collect a voluminous amount of detailed crash information on a rather limited number of truck crashes.

Although clinical studies were useful in identifying certain injury causal factors, the need for mass data became apparent as a way of statistically relating the in-depth clinical findings to the total universe of accidents.

That need prompted initiation of the Ernst & Ernst Study as a means of gleaning mass statistical data from state accident files. Although Ernst & Ernst did a first class job of collecting, analyzing and reporting state data, it soon became apparent that the type and quality of accident data desired by truck manufacturers were not available at the state level, in that the state data were grossly lacking in describing truck configuration and pertinent crash information.

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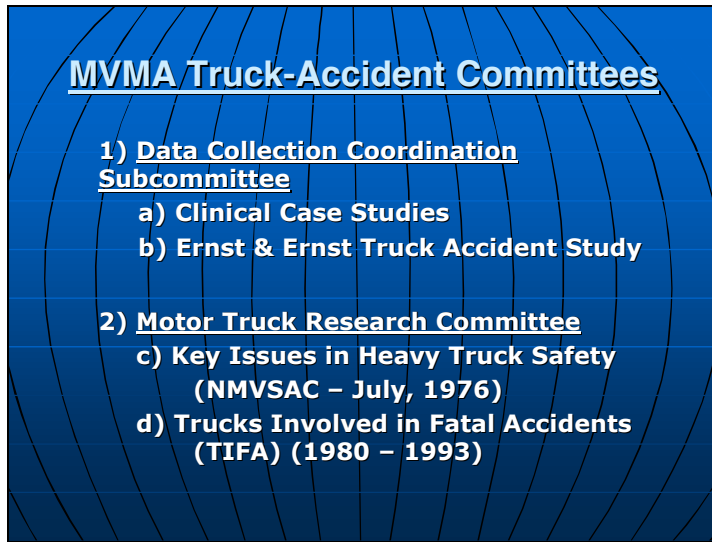
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In 1976, MVMA engaged two independent research organizations—Calspan Corporation and Southwest Research Institute—to evaluate and comment constructively on a number of tractor/trailer safety allegations put forth by a member of the National Motor Vehicle Safety Advisory Council.

Both of the independent contractors concluded from their individual analysis of selective data bases that existing data were inadequate to address the various safety allegations set forth by the Advisory Council Member. In fact, some of the findings of the two independent contractors were found to be in contradiction with each other.

In a follow-on effort to develop meaningful accident information, MVMA convened a series of meetings with UMTRI staff and other organizations to explore various strategic alternatives. This effort lead to the planning and implementation of the UMTRI TIFA Program in 1980 under the initial sponsorship of MVMA.

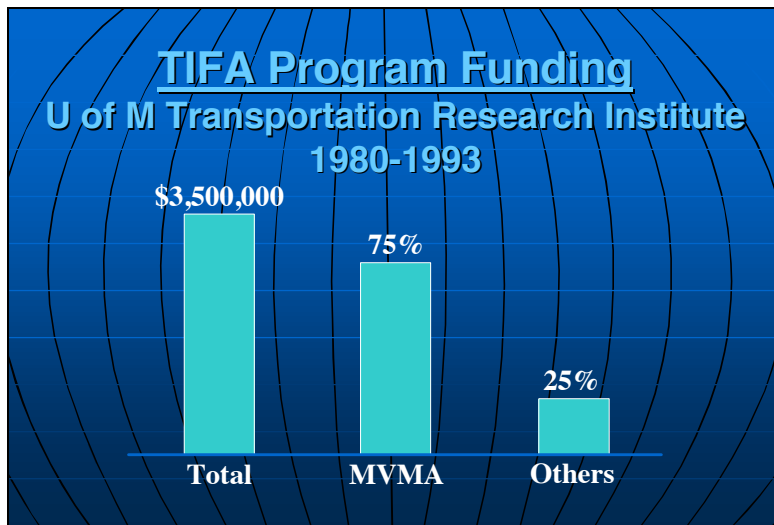
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The two MVMA Committees shown above were responsible for coordinating the development and monitoring of MVMA sponsored accident data programs. I had the good fortune of joining the Data Collection Coordination Subcommittee when it was formed in 1966, and also served as chairman of the Motor Truck Research Committee (MTRC) during the development phase of the TIFA Program with UMTRI. The MTRC continued to provide technical oversight of all MVMA truck accident studies prior to MVMA being dissolved in December 1992.

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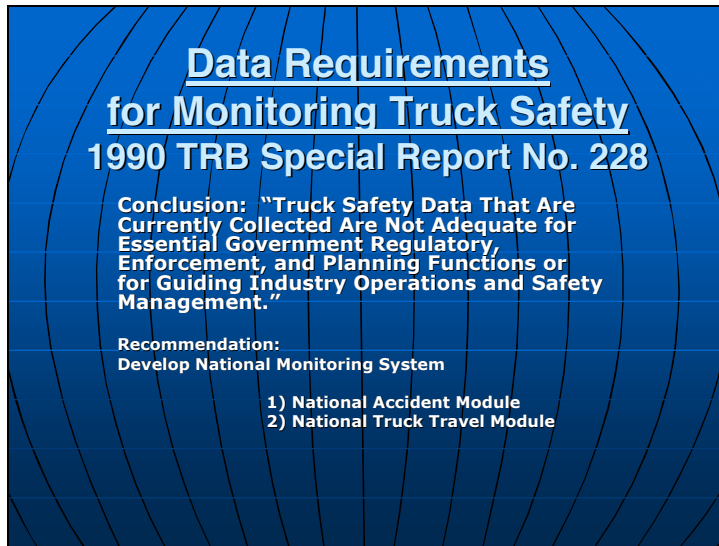
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MVMA, on behalf of its truck members, continued to fund the TIFA Program until mid-year 1993, at which time the MVMA organization was dissolved. Since that time, truck manufacturers' support of TIFA has been provided on an individual basis. During the time in which MVMA supported TIFA, it provided over 75% of the total program funding of three and one-half million dollars.

It goes without saying that TIFA is a highly recognized program and continues to be responsive to the needs of truck manufacturers and the trucking community in general. MVMA's Gary Rossow was a key participant in brainstorming, planning and implementation of the TIFA Program. Gary, who was truck program manager for MVMA and secretary to the Motor Truck Research Committee, deserves much credit for coordinating the launching of the TIFA Program.

The MVMA Motor Truck Research Committee closely monitored and provided technical oversight of the TIFA Program during the 13-years the program was funded by MVMA.

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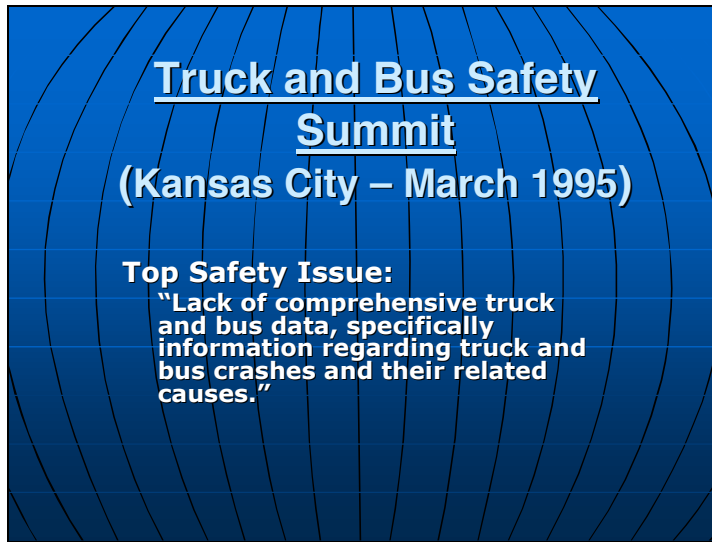


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Truck manufacturers have continued to be involved in the overall development of government and industry sponsored truck accident data programs. As an example, representatives of two of the independent truck manufacturers (Navistar and Volvo Truck Corporation) served on the TRB Committee that developed this special comprehensive report published by TRB in 1990.

The TRB study concluded that accident data currently being collected are inadequate; and therefore recommended development of a National Monitoring System (NMS) for collection of both truck accident and travel-exposure data.

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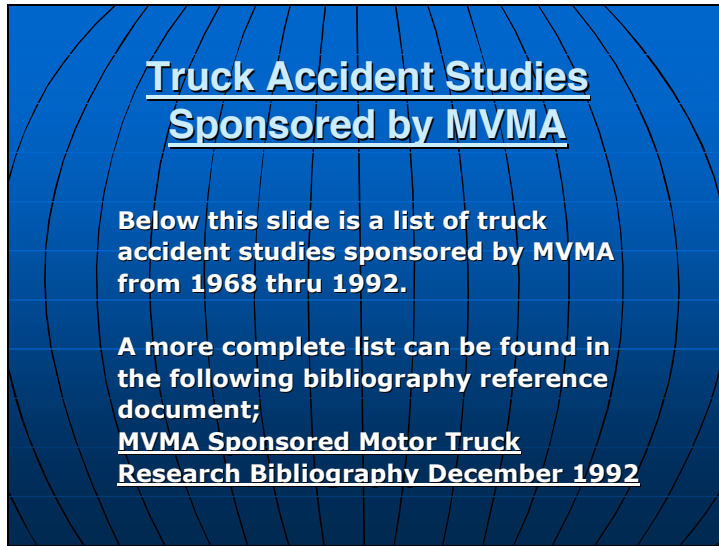


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In March, 1995 the U.S. DOT convened a three-day summit conference on truck safety for the purpose of identifying a list of the nation's top safety issues and priorities. Need for improved accident data, with special emphasis on crash causation, was identified as the No. 2 priority out of a total list of 17 issues. All U.S. Truck Manufacturers participated in this three-day summit conference.

It is evident from the earlier list of current programs mentioned that the U.S. DOT is making a concerted effort to greatly improve its data collection and analysis programs.

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MVMA SPONSORED TRUCK ACCIDENT STUDIES

- 1) Truck Accident Study, Report of Procedures and Findings; Ernst and Ernst August 1968
- 2) Trucks in Rural Injury Producing and Property Damage Utah Accidents;
Cornell Aeronautical Laboratory December 1969
- 3) Characteristics of Large-Truck Accidents as Represented in Texas Accident Data;
UM-HSRI October 1975
- 4) Truck/Bus Accident Study; University of California, Institute of Safety and
Systems Management December 1975
- 5) Analysis of Tractor-Trailer and Large Truck Accident Data; SWRI June 1976
- 6) Analysis of Truck, Tractor/Trailer Accident Data; Calspan June 1976
- 7) Car-Truck Fatal Accidents in Michigan and Texas; UM-HSRI October 1977
- 8) Analysis of Heavy Truck Accident Data; Calspan April 1978
- 9) Analysis of Heavy Truck Underride Accident Data; Calspan September 1978
- 10) Effects of Truck Conspicuity on Collisions; UM-HSRI August 1979
 - a) Car/Tractor-Trailer Underride Accidents; Analysis of 1977 FARS Data
 - b) Retro-reflectorization and Nighttime Truck Conspicuity; A Literature Review
 - c) Truck Conspicuity Eye Mark Study
- 11) Analysis of Truck Accident and Exposure Information, Phase I; UM-HSRI November 1979

- 12) Comparison of Michigan Fatal and Non-Fatal Car-Into-Truck Accidents; UM-HSRI
November 1979
- 13) Accidents and the Nighttime Conspicuity of Trucks; UM-HSRI December 1979
- 14) A Comparative Analysis of Truck and Non-Truck Accidents in the State of Michigan;
Wayne State University January 1980
- 15) Combination Vehicles: Five-Year Accident Experience; UM-HSRI July 1980
- 16) The Effect of Cab Style on the Accident Experience of Heavy Trucks;
UM-HSRI February 1981
- 17) A Comparison of Accident Characteristics and Rates for Combination Vehicles with One or
Two Trailers; UM-HSRI August 1981
- 18) Occupant Survivability in Heavy-Truck Crashes; UM-HSRI November 1981
- 19) Truck-Truck Fatal Accidents; UMTRI February 1985
- 20) Road Class and Large Truck Involvements in Fatal Accidents; UMTRI January 1986
- 21) The UMTRI Large-Truck Survey Program; UMTRI July-August 1986
- 22) Road Class and Large Truck Involvements in Fatal Accidents; UMTRI May 1987
- 23) Presentations on the Large Truck Survey Program-Proceedings of the National Truck
Safety Symposium; UMTRI June 1987
- 24) Rear-End Collisions and Conspicuity; UMTRI June 1987
- 25) Heavy Truck Fuel System Integrity, Summary of First Nine Months of Operation; Texas
Transportation Institute October 1987
- 26) Analysis of Accident Rates of Heavy-Duty Vehicles; UMTRI April 1988
- 27) National Truck Trip Information Survey, UMTRI Truck Study; UMTRI March 1988
- 28) Heavy Truck Fuel System Integrity Study, Summary Report;
Texas Transportation Institute November 1988
- 29) Feasibility Study: Accident Rates of Existing Longer Combination Vehicles; UMTRI July 1989
- 30) Evaluation of Personal Injury Occurrences in, on, or around Medium and Heavy Trucks;
Gallagher & Ross October 1991
- 31) TIFA Annual Reports from 1980 thru 1992; UMTRI 1980 - 1992

SUMMARY

It is indeed gratifying to see the progress that has been and continues to be made in collecting and analyzing truck accident experience in the United States. Truck manufacturers can certainly be proud of their pioneering role in this significant effort. The USDOT is also to be commended for assuming its current leadership role in building upon the early successful efforts of the truck manufacturing industry as described in this presentation.

AUTHOR'S COMMENT:

As a member of the MVMA Motor Truck Research Committee from 1966 through 1992, the current author is extremely grateful to have had the opportunity to be actively involved in the evolutionary process described herein. I am indebted to Navistar International Corporation (formerly International Harvester Company) for its overwhelming encouragement, motivation, and professional support of my involvement in this extremely important opportunity to advance the cause of truck safety.