The Working Group
on DWI System Improvements
dwiwg.tirf.ca

Data Collection, Management & Use

The education resources of the Working Group on DWI System Improvements are produced by the **Traffic Injury Research Foundation** with funding from **Anheuser-Busch**. The Working Group on DWI System Improvements is a prestigious coalition of senior leaders of organisations representing frontline professionals in all segments of the criminal DWI system (law enforcement, prosecution, judiciary, supervision, and treatment).

What actions are necessary to collect high-quality data to support research initiatives and decision-making?

Good quality data are essential to understanding the magnitude, characteristics, and trends of the impaired driving problem. It is needed to both guide and drive the research process and help set priorities.

- The acceptance and use of uniform definitions of key research concepts and/or measures, and common key identifiers can improve data collection and comparisons across state data sets to strengthen research initiatives.
- The sharing of information across jurisdictions and among agencies is key to improving current data collection to support research initiatives. The establishment of partnerships between practitioners and researchers and among agencies, can promote stronger research initiatives and produce more informative results.
- In conjunction with the identification of gaps in existing data, there is a need to focus on the development of sound data collection strategies. Gaps in available data impede decision-making and the development of impaired driving policies, sanctions, and interventions.

What qualities make data useful and actionable?

- Data should be accurate, relevant, complete, readily accessible, and available in a timely manner.

Why are good quality data important?

- Good data provide researchers and policymakers with the information they need to determine the scope of the impaired driving problem and how best to deal with it. With good data, it is possible to accurately determine the magnitude and characteristics of, or trends in the impaired driving problem. These data enhance the ability of legislators, policymakers and administrators to establish priorities regarding which programs and policies are most needed, and to allocate resources accordingly.
- Good data permit the identification and understanding of where and why weaknesses in the DWI system are occurring and what strategies will be most effective in addressing these problems.
- Good data can form the basis for thoughtful, achievable and effective legislation to guide implementation efforts, close loopholes, and ensure offenders are subject to appropriate policies and programs.
- Measuring system outcomes with data is critical to inform research and ultimately help practitioners match appropriate interventions to different levels of risk posed by offenders.
- Practitioners who have access to good data tend to have better outcomes and conviction rates, which speaks to the power of possessing complete information about the impaired driving offender population.

What are the consequences of poor-quality data?

The consequences of poor quality data are profound and affect decision-making throughout the system. Poor quality data can result in:

- Faulty conclusions based on incomplete data, or data not recognized as being incomplete;
- Legislation fails to address impaired driving priorities and/or does not adequately support the priorities with appropriate resources;
- The development of ineffective programs and policies and the ineffective delivery of impaired driving programs and penalties;
- The implementation of poorly targeted educational initiatives for practitioners;
- Public misunderstanding of the issue or ways it can be addressed; and,
- Wasted resources or the misallocation of resources.

What are some of the barriers impeding the collection of quality data?

- **Stand-alone data systems and/or legacy database systems.** Many agencies are tasked with providing or collecting impaired driving data operate unique, stand-alone and outdated information technology systems that are distinct to their respective agency. This renders the automated sharing of data unfeasible or, if corrected, expensive to implement. These agencies waste precious resources by duplicating data collection efforts, or by relying upon inefficient means to access needed information because of system incompatibilities.
- **Policies hindering information-sharing.** Privacy policies and laws can make it difficult to access and collect data from disparate agencies to determine an individual's risk of recidivism from criminal history and/or therapeutic needs from social histories. Determining the effectiveness of strategies, programs and policies is thwarted by policies that impede cross-agency information sharing.
- **Lack of uniform data definitions and inconsistent data collection protocols.** Key data terms and research variables are not uniformly defined or collected across agencies and jurisdictions. The

reliance on disparate data collection procedures creates definition discrepancies. It also prevents matching of distinct data sources researchers can use to investigate the impaired driving problem and decision-makers can use to set priorities and develop good policy.

How can impaired driving data be improved?

- **Convene a state task force to examine existing data collection practices and make recommendations for improvement.** Determine which agencies currently collect data, what data are collected, how they are collected, the way key terms are defined, the data systems employed for storage and processing, and any gaps in the system. The task force can also be the first step towards achieving a longer-term goal of harmonization and reciprocity across jurisdictions.
- **Implement collection practices that create an accurate data source.** Uniformity is critical in data collection. Leadership is needed to bring consistency to data collection and to reduce discrepancies which impede the accurate interpretation and comparisons of data sources.
- **Support and fund technology initiatives to improve data systems.** Allocate adequate funds to support system upgrades and ensure proper implementation that will enable agencies to reach their goals. The automation of data collection systems can make it easier for practitioners at all levels to collect, input, and analyze information resulting in greater efficiencies in decision-making and in practice.
- **Develop uniform definitions for key pieces of data to be used across jurisdictions and facilitate meaningful comparisons.** The use of uniform definitions provides greater and a more accurate understanding of the magnitude and characteristics of the impaired driving problem. It enables the identification of priorities for program and policy change. The acceptance and use of uniform definitions can streamline data collection and facilitate comparisons across data sets to determine priorities and to strengthen research findings.
- **Improve information-sharing practices across agencies and data systems.** Agencies require appropriate policies and protocols specifically enabling them to share relevant data as appropriate without violating privacy laws. Political leadership is needed to ensure new data systems that are purchased and installed are compatible and can integrate with data systems in other state agencies, and, in the longer-term, nationally.
- **Engage populations and communities over-represented in impaired driving crashes as partners in data collection and information-sharing.** It is essential good data are collected to reflect the magnitude and characteristics of the impaired driving problem in high-risk populations. These data are critical to the identification of priorities and effective ways to address these populations. The ability to share information with these communities also permits researchers to better understand the nature of the problem, why it is occurring, and most importantly, to identify appropriate strategies to be embraced by these communities.

What are the key pieces of data each jurisdiction should collect?

There are several key pieces of data policymakers should rely upon to provide a complete understanding of the impaired driving problem and solutions to address it. These pieces of data are referred to as indicators (variables used to measure change) and can be organised into four main categories:

Social cost indicators (direct and indirect). Facilitate comparisons of the impact of road injuries with outcomes in other policy areas such as:

- medical costs,
- loss of productivity,
- loss of life/quality of life,
- investments in education campaigns, and
- cost-benefit analysis of various sanctions.

Outcome indicators. These indicators are used to measure the final outcomes of impaired driving crashes, injuries, and deaths. When combined with exposure data (the quantity and quality of driving), outcome indicators can facilitate comparisons across jurisdictions and reveal the prevalence of impaired driving crashes across the nation. Some examples of outcome indicators are:

- number of alcohol-related crashes, fatalities, and injuries (together with an explicit definition of each), along with information on the driver(s), vehicle and conditions; and,
- blood alcohol concentration (BAC) levels from all alcohol-related crashes; information about the driver testing rate; information about test refusals.

Safety performance indicators. These indicators are closely linked to outcome indicators. These indicators have a causal relationship with crashes as it is the behavior leading to the outcome. These indicators may include:

- number and percent of drinking drivers based on observation (roadside surveys) broken down by BAC categories, together with information about the driver, passengers, trip origin, and destination;
- number and percent of drinking drivers based on self-report data gathered through public opinion polls; frequency of the behavior together with estimates about being over the legal limit;
- number of sobriety checkpoints conducted annually with the number of drivers stopped, the number tested, and the number positive for alcohol (and at what BAC if available); and,
- pre-stop driving behaviors are most common in drunk driving arrests.

Process and implementation indicators. These indicators provide insight into how well road safety management is functioning and what interventions, policies, and programs are being implemented. It is important to note any gaps or missing data can influence the value of the indicator. Also, these indicators do not allow for the measuring of the impact on impaired driving – outcome evaluations are needed to determine whether impaired driving interventions are having the desired impact. Some process and implementation indicators include:

- number of administrative license suspensions for drinking and driving, standardized, ideally by population, mileage, and licensed driver;
- number of arrests for drinking and driving, standardized, ideally by population, mileage, and licensed driver;
- number of plea reductions (e.g., pleas to lesser charges including the specific lesser charge) and the types of reduced charges offered;
- number of impaired driving convictions (categorized according to plea agreement, guilty plea, conviction at trial) and acquittals at trial;

- type of sentences imposed categorized by penalty type (e.g., fines, screening, probation supervision, ignition interlocks, alcohol testing/random testing, vehicle impoundment, treatment intervention, jail, license suspension, alcohol education, victim impact panel); and,
- number of successfully completed sentences– be aware of the outcomes of sentences imposed to determine what penalties are most effective with which types of offenders.

What educational materials does The Working Group on DWI System Improvements provide?

The efforts of the Working Group on DWI System Improvements have served to identify critical system needs, to make needed educational materials available, to articulate the complex issues associated with program and policy implementation embedded within broader systems, and to give voice to the concerns of practitioners in the DWI system and identify achievable solutions. The Working Group provides educational primers, policy documents, and guides for DWI system professionals to help strengthen the efficiency and effectiveness of the DWI system.

Key topics discussed on this site include:

- Impaired drivers;
- Impaired driving programs and policies;
- Strategies to improve the DWI System;
- DWI Dashboard; and,
- other special topics.

Each of these topics contains a series of fact sheets structured in a question and answer format which are available for free download and sharing (with attribution). These resources are designed to support the training efforts for agencies that work within the DWI system.

To view more fact sheets, or to get more information about alcohol, its effects on driving skills, and impaired driving, visit **dwiwg.tirf.ca**.

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Traffic Injury Research Foundation

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries. TIRF is a national, independent, charitable road safety research institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in a wide range of subject areas related to identifying the causes of road crashes and developing programs and policies to address them effectively.

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