Collect and Analyze Injury and Violence Data

UNDERSTANDING INJURY AND VIOLENCE DATA

To understand and monitor changes to health issues, state injury and violence prevention (IVP) programs must obtain accurate and consistent data. However, the wide range of circumstances under which injuries and violence occur means that there are many different types of injuries, risk factors, and degrees of severity on which to collect data. No single data source can provide all the information needed to accurately describe the burden of injuries and violence. As a result, programs must utilize data from a variety of sources, including vital records (death certificates), hospital discharge data systems, hospital emergency departments, crime reports, and many other sources in order to capture the full scope of an issue.

The Safe States Alliance publication, Consensus Recommendations for Injury Surveillance in State Health Departments1 (ISW5), advises state IVP programs to identify their priorities by using 11 core data sets to analyze recommended injuries and injury risk factors. Such data enable state and local IVP programs to track incidences of injuries and violence, identify underlying causes, identify groups at highest risk, recommend prevention priorities, and measure the effectiveness of policies and programs.

ACCESS TO AND USE OF CORE DATA SETS

In 2015, state IVP programs’ access to and use of core data sets varied among the 41 reporting states (Figure 9).

- As in previous survey years, most states reported having access to and using data from the Behavioral Risk Factor Surveillance System (BRFSS) (100%), vital records (98%), the Youth Risk Behavioral Surveillance System (YRBSS) (95%), hospital discharge data (HDD) (88%), and Web-based Injury Statistics Query and Reporting System (WISQARS) (88%).
- Most states who had access to data, used it. However, access to data sources varied by type. National Occupant Protection Use Survey (NOPUS) (78%), Uniform Crime Reporting System (UCR) (61%), and Medical Examiner (ME) (46%) were the least likely to be available for use by the reporting states.

In 2015, state IVP programs used the core data sets to identify topics or populations at risk (Figure 10).

- Sixty-four to 81 percent of states that reported having access to the top five data sources (vital records, BRFSS, YRBSS, HDD, and WISQARS) used the information to identify specific population groups that were affected by various injury or violence issues.

- HDD was the most common data set used to:
  - identify topic-specific injury and violence issues affecting the state (92%)
  - identify differences in injury or violence prevalence by specific population groups (81%)
  - identify geographic regions disproportionately affected by injury or violence issues (78%)

- YRBSS was the most common data set used to identify differences in risk and/or protective factors among populations (69%).

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Figure 9.
Access to and Use of Core Data Sets, 2015 (N=41)

Figure 10.
Proportion of States Using the Top Five Accessible Data Sets to Identify IVP Topics or Populations, 2015
In addition to the 11 core data sets listed in the ISW5 report, states used multiple other data sets to inform the work of the state IVP program and partner efforts (i.e., motor vehicle traffic records, Pregnancy Risk Assessment Monitoring System, prescription drug monitoring, etc.). Across all data sets, states used information from specific data sets to:

- **Communicate key findings to partners and the public:** HDD (78%), ED (77%), and vital records (76%)
- **Respond to data requests:** HDD (78%), ED (77%), and vital records (76%)
- **Inform policy or program evaluations:** HDD (70%), vital records (66%), motor vehicle traffic records (64%), and medical examiners (64%)
- **Make programmatic decisions:** HDD (78%), ED (77%), and vital records (76%)
- **Create scientific reports or presentations:** ED (71%), HDD (70%), and vital records (68%)

In order to share key data findings with state and local partners, state IVP programs produced a variety of reports and print materials in 2015.

- Ninety-one percent (91%) of states indicated that they produced some type of report using injury and violence surveillance data.
- States most commonly produced fact sheets about injury in general or specific injury problems for the public and/or policy makers (80%).
- Others presented orally or via posters at conferences and workshops (72%), produced technical reports (37%), publications in print media (37%), and publications in peer-reviewed journals (37%).

### USE OF DATA SOURCES TO ADDRESS SPECIFIC INJURY AND VIOLENCE TOPIC AREAS

In 2015, vital records, HDD, ED data, and WISQARS were the most common data sets used to address specific injury and violence topic areas. Vital records were used as a data source for all of the top five priority areas (Table 2).

<table>
<thead>
<tr>
<th>Injury and Violence Topic Areas</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Injuries (N=30)</td>
<td>Vital Records (87%), Hospital Discharge Data (80%), Emergency Department (67%)</td>
</tr>
<tr>
<td>Unintentional Poisoning/Prescription Drug Overdose (PDO) (N=30)</td>
<td>Vital Records (93%), Hospital Discharge Data (77%), Emergency Department (73%)</td>
</tr>
<tr>
<td>Sexual Violence (N=25)</td>
<td>Behavioral Risk Factor Surveillance System (64%), National Intimate Partner &amp; Sexual Violence Survey (56%), Vital Records (36%), Youth Risk Behavioral Surveillance System (36%)</td>
</tr>
<tr>
<td>Child Passenger Safety (N=24)</td>
<td>Motor Vehicle Traffic Records (71%), Vital Records (63%), Emergency Department (46%)</td>
</tr>
<tr>
<td>Suicide (N=22)</td>
<td>Vital Records (95%), Hospital Discharge Data (86%), Emergency Department (68%)</td>
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</tbody>
</table>
Since 2009, state IVP programs access to data professionals (e.g., epidemiologist, statistician, etc.) has decreased. Twenty-one percent of states report no access to data professionals in 2015, compared to only four percent in 2009 (Figure 11). States with Core VIPP funding had an average of 2.5 FTEs of data professionals within the state IVP program compared to 0.86 FTEs among non-Core VIPP funded state IVP programs.

Many states, however, had access to data professionals through multiple mechanisms such as the within the state health department, or through consultants or ICRCs.

- Thirty-three percent of states reported having access to a data professional within the state IVP program – a substantial decrease from 2013 (76%).
- Four percent reported access by consultant, seven percent by an external partner, and seven percent by an Academic Research Center.

**Figure 11.**
State IVP Program Access to an Epidemiologist, Statistician, or Other Data Professional, 2015, 2013, 2011, and 2009 by FTE
Data in Action

USING DATA TO EXPAND PERSPECTIVES ON CHILDHOOD ADVERSITY AND WELL-BEING IN CALIFORNIA

When the CDC/Kaiser Permanente Adverse Childhood Experiences (ACEs) study was first published in 1998, it changed our understanding of the prevalence of child abuse and neglect and the consequences for adult health. The results showed that two-thirds of an insured, employed population in Southern California had experienced at least one ACE, and one in five had experienced three or more — greatly increasing their risk for adult health conditions such as alcoholism, depression, suicide attempts, and risk for sexual violence, among many others.

The findings were eye-opening, but raised a whole new set of questions. How could ACEs be prevented or mitigated in children before they damaged the health and well-being of adults? How could these findings move outside the clinical, one-on-one realm of doctor and patient to more community-wide, environmental prevention strategies?

In California, a CDC Essentials for Childhood grant was part of the response. The grant aligned well with a Collective Impact approach that brought early care and education partners together with a common agenda of preventing child maltreatment, conducting mutually reinforcing activities, and sharing data and outcomes. In late 2014, their efforts accelerated when the Center for Youth Wellness released a report — A Hidden Crisis: Findings on Adverse Childhood Experiences in California — that included county-specific ACEs data from a statewide survey conducted by the California Department of Public Health (CDPH). CDPH and its partners considered how these data could be made more accessible and useful to the many partners interested in improving child health and well-being at the county level.

With support from the Lucile Packard Foundation for Children’s Health, partners including the CDPH’s Safe and Active Communities Branch, ACEs Connection, and First 5 California collaborated to make county-specific

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ACEs data and Essentials for Childhood indicators more accessible through a data platform and dashboard.

The project is unfolding in several phases. In the first phase, currently underway, three separate county-level measures of childhood adversity will be combined on www.kidsdata.org (a statewide child health data website supported by the Packard Foundation). In addition to Behavioral Risk Factor Surveillance System (BRFSS) data on ACEs, these measures will include the Child and Adolescent Health Measurement Initiative (CAMI) National Survey of Children’s Health, which asked parents of children aged 12 and under about their exposure to ACEs to measure exposure in real time, instead of waiting until these children are adults. Another measure is the Maternal and Infant Health Assessment (California’s equivalent of PRAMS), which poses a series of questions about childhood adversity to post-partum women aged 18-34.

The second phase involves individuals selecting a short list of existing www.kidsdata.org indicators that are relevant to their Essentials common agenda and developing county-specific data dashboards to display these indicators. Future plans include identifying data gaps that could be filled with existing data and incorporating them into the www.kidsdata.org dashboards. For example, the child poverty measure does not currently take into account the effects of California’s social safety net programs (e.g., California Work Opportunity and Responsibility to Kids; temporary cash aid; the earned income tax credit; or the California Supplemental Nutrition Assistance Program). Similarly, several surveys (e.g., California Healthy Kids and the National Child Health Survey) collect responses related to childhood resiliency, but these are not available in a way that would be useful and accessible to local advocates and planners. Ultimately, the group hopes to stimulate broader discussions about childhood trauma and toxic stress — conversations that move beyond parent-child interactions to address the powerful role of communities, policies, and social norms in preventing child maltreatment. As data are transformed into more accessible and useful information, increased support can be generated from the public, legislators, and policy makers for policies that prevent ACEs more effectively, on a societal and community level.