

Council of State and Territorial Epidemiologists  
Occupational Health Surveillance Subcommittee Meeting  
**Counting Work-related Injuries and Illnesses: Taking Steps to Close the Gaps**

**Meeting Summary and Recommendations**

On April 17 - 18, 2013, the Council of State and Territorial Epidemiologists (CSTE) in collaboration with the Bureau of Labor Statistics (BLS), the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA) convened a working meeting in Washington D.C. to address the current state of occupational injury and illness surveillance in the United States. State and federal surveillance experts, academic and government researchers and key stakeholders reviewed new knowledge and advances made since a similar meeting held in 2009, and updated recommendations to address gaps in surveillance of work-related injuries and illnesses at the national and state levels. (See Appendix A for the meeting agenda and list of participants.)

The 2009 CSTE meeting had been held in response to calls by Congress, the Institute of Medicine, and National Occupational Research Agenda (NORA) sectors for improving surveillance of nonfatal work-related injuries and both fatal and nonfatal work-related illnesses in the United States (US House of Representatives, 2008; IOM, 2009; NIOSH, 2009). The 2009 meeting resulted in a number of specific recommendations to key government agencies (Appendix B). Since that time, many activities have been undertaken by BLS, OSHA, NIOSH and the state health and labor agencies to address those recommendations. Key accomplishments are highlighted in Table 1. (See Page 6 for a more extensive description of actions taken to address those recommendations).

This document provides the updated set of recommendations from the 2013 meeting for building a comprehensive nationwide surveillance system for occupational injuries and illnesses that draws on a number of complementary data sources. The agencies identified to move the recommendations forward are listed after each recommendation. Recommendations that are unchanged from 2009 have (2009) in parentheses after the recommendation.

## 2013 Recommendations

### I. USE HEALTH DATA TO FILL THE GAPS IN EMPLOYER REPORTING

- **Establish a multi-source surveillance system for work-related traumatic injuries resulting in inpatient hospitalizations in several states.** More detailed information is needed about the most serious injuries in order to more effectively allocate prevention resources. A multisource system will provide a more comprehensive picture of these serious injuries and supplement the information from employer-based data. A multisource system should be piloted in several states to assess feasibility of collecting both case and population-based data and the comparability of data across states (NIOSH/States/BLS/OSHA).
- **Expand state based surveillance, increasing the number of states and the conditions, worker populations and hazards under surveillance.** States are uniquely positioned to take advantage of multiple data sources currently available and use data to take action to prevent injuries, illnesses and deaths among workers at the state and local levels (NIOSH/States/BLS).
- **Routinely collect occupational information in national health surveys.** This information will be useful not only for tracking work-related health outcomes but also for developing integrated approaches to prevention that address both occupational and life style risk factors for chronic conditions. Among other actions,
  - **Include an occupational health supplement in the National Health Interview Survey (NHIS) Supplement every five years. This should be included in agencies' strategic plans to assure continuation in future years (NCHS/NIOSH).**
  - **Routinely collect information about occupation and industry in the core module of the Behavioral Risk Factor Surveillance System (CDC/states).**
  - **Assess the feasibility of a nationwide worker survey, drawing on precedents in other countries (2009).**
- **Develop guidance and tools to enhance collection and efficient, accurate coding of occupational health information in surveys and other data sources.**
  - **Continue to refine and update electronic tools for assigning standardized industry and occupation codes to narrative text that can be used across a variety of data sources.** This auto-coding is critical to promote inclusion of industry and occupation in all national health surveys and electronic health records (NIOSH/BLS).
  - **Develop new electronic tools for assigning Occupational Injury and Illness Codes to narrative text that can be used across a variety of data sources. (BLS)**
  - **Develop a white paper that includes analyses of the similarities and differences between SOC/NAICS and Bureau of Census Codes for industry and occupation (NIOSH).**
  - **Develop and test standard survey questions to collect key occupational information (such as industry, occupation, exposure and work-relatedness) and make this menu of questions readily available for use in surveillance and research (NIOSH).**
- **Incorporate standards for industry and occupation into the Uniform Bill (UB), maintained by the National Uniform Billing Committee (NUBC).**

- **Continue to promote the inclusion of occupational information in electronic health records (EHRs).** EHRs are destined to become a cornerstone of American medicine and a vital source of information for public health surveillance. Next steps should include but not be limited to: 1) demonstration projects demonstrating the feasibility and usefulness of collecting industry and occupation information; and 2) development of clinical quality measures that promote the collection and use of I/O in EHRs. The feasibility of including the designation of work-relatedness of health conditions in the EHRs should also be explored (NIOSH/States).
- **Create a working group to expand state-federal agency and health care practitioner collaboration to facilitate rapid information exchange and investigation of emerging occupational health and safety issues (OSHA/NIOSH/States).**

## II. INFORM THE NATION

- **Produce a periodic (every 3-5 years) authoritative, comprehensive report on the magnitude of work-related injuries and illnesses in the U.S.** This report should compile information from the full complement of data sources and include a variety of metrics including costs. This report should be included in agency strategic plans (NIOSH/BLS/OSHA). As part of this effort, NIOSH should update and document the methodology for estimating the extent of fatal and non-fatal occupational diseases.
- **Include occupational health data in broader public health reports and planning documents such as health needs assessments required for public health department accreditation.** Integrating occupational health information within more general public health information is critical to increase awareness of the impact of work on health and promote more comprehensive public health interventions that address the complex interplay between work-related and non-work related factors (NIOSH/States).
- **Sponsor an Institute of Medicine (IOM) review of the status of occupational injury and illness surveillance in the U.S., updating the 1987 NRC Report.** The charge would include a review of what is known about the current burden of occupational injury and illness in the U.S, an assessment of ongoing surveillance efforts and development of recommendations to address gaps (NIOSH/OSHA/BLS).
- **Develop a comprehensive communication strategy with increased focus on “communicating” findings and ways in which the data on work-related injuries and illnesses can be used by specific audiences.** This strategy should include targeted reports that integrate and synthesize information for high-level decision makers (policy makers, Congress, the President) as well as other audiences. To maximize their impact such reports should be joint publications done by BLS, NIOSH, and CSTE. (NIOSH, BLS, OSHA, CSTE).
- **Provide direct and timely access to available surveillance data in user-friendly formats.** Easy access by stakeholders to essential knowledge can promote use of the data by a wide range of data users (2009) (NIOSH/BLS/OSHA/States).

### III. IMPROVE COLLECTION AND USE OF EMPLOYER REPORTED OCCUPATIONAL INJURY AND ILLNESSES DATA BY OSHA AND BLS

#### A. Continue to expand and modernize collection of occupational injury and illness data (OSHA)

- **Require employers to report all work-related amputations and work-related injuries or illnesses requiring an inpatient hospitalization within 8 hours of the incident.** Given the anticipated number of cases, OSHA should develop a strategy for using the data for targeting enforcement activities, drawing on the experience in state plan states that currently require such reporting. (Proposed rulemaking is in progress).
- **Require employers to report occupational injury and illness data pursuant to OSHA record-keeping requirements in an electronic web-based format on a timely basis.** A modernized web-based reporting system would enable more efficient and timely collection of data and would improve the accuracy and availability of the relevant records and statistics. The system should include mechanisms for rapid feedback to employers to improve both quality of reported data and use of the data by employers and workers (Under active consideration).
- **Document illnesses and injuries among all workers on multi-employer sites, including contract workers who are increasingly used in a wide range of industries. Specifically,**
  - **Include a column on the OSHA log on employment relationship, enabling identification of reportable injuries and illnesses among temporary and other contingent workers who are under supervision of the site employer.**
  - **Require general contractors to maintain a site-wide log of injuries and illnesses among all workers on construction sites, including those under supervision of subcontractors (2009)**
  - **Investigate approaches to maintaining site-wide OSHA logs in other industries.**
- **Mandate employer recording of race and ethnicity on OSHA logs.**
- **Collect additional data on establishment health and safety programs/practices and firm characteristics (2009).**
- **Mandate OSHA recordkeeping in all industries and explore changes in criteria for recording cases to reduce uncertainty about recordability and perverse incentives that lead to under-reporting.** This should include evaluating the elimination of the recordkeeping exemptions associated with first aid.

#### B. Collect and report additional data in the SOII (BLS)

- **Fully implement collection of case and demographic data for OSHA recordable cases with days of job transfer and restriction only (DJTR) cases.** This will collect more extensive description of injury and illnesses patterns and improve understanding of the shifts from days away from work cases to those with days of job transfer or restriction (Pilot in progress).
- **Provide a more extensive description of the limitations of the SOII in the annual release of data.** These limitations should be discussed in *all* data reports and linked to more extensive documentation of undercount research findings.
- **Rename the SOII to “Employer Survey of Occupational Injuries and Illnesses.”** This would aid in communicating both the source and nature of the data.

- **Routinely use available information in the case and demographic file and provide a report on injuries that result in hospitalization** (An initial report is in progress).
- **Share micro data with state agencies conducting surveillance of work-related injuries and illnesses with appropriate protection of confidential data.**
- **Either increase state SOII sample size or aggregate state data across years to provide more robust, useful surveillance data at the state level (2009).**

### **C. Develop improved guidance to employers and employees about record-keeping (OSHA and BLS)**

- **Provide employers with record-keeping and reporting tools that include editing functions to provide immediate feedback about errors in order to improve data quality**
- **Provide timely electronic feedback to employers submitting injury and illness records to facilitate their use of the data.** This could include, for example link to information on SOII rates or most common OSHA citations by industry sector.
- **Provide additional training and feedback for employers about what conditions to report (i.e. record-keeping requirements).**
- **Provide a very clear definition of what is recordable, particularly of musculoskeletal disorders, and what is a new versus old case (2009).**
- **Identify and promote benchmarks other than injury rates for companies to use in evaluating their health and safety performance.** These may include for example, number of near miss or hazard reports filed, number of hazard investigations carried out, time between hazard reports and investigations (2009).

### **D. Continue and expand research to assess the magnitude and scope of occupational injuries and diseases in the US (BLS/OSHA/States)**

We need to know more about factors influencing the undercount in order to better allocate prevention resources and target enforcement. Future research should address the variability in employer awareness of workers' injuries and illnesses and the additional variability in employer reporting by industry, by worker and establishment characteristics, by injury severity, by geographic region, and over time. We also need research that collects information directly from workers about factors that influence employer record-keeping.

Successful implementation of these recommendations will provide the public health workforce and the community with essential knowledge that is currently unavailable but critical to the reduction of preventable work-related injuries and illnesses. The 150,000,000 workers in the US deserve nothing less. To implement these recommendations requires immediate and long term enhancement of capacity and infrastructure at both the federal and state levels. The groundwork must be laid now and a plan developed to provide adequate funding and expertise to achieve these goals within the next five years. Some steps can be undertaken now without additional resources such as a better description of the limitations of the employer based survey and improved collaboration and coordination between federal agencies and the states to better disseminate data being generated. Ongoing collaboration among the groups involved in this meeting is needed to assure a coordinated approach to implementing these recommendations.

Table 1. Counting Occupational Injuries and Illnesses: Taking Steps to Close the Gaps: Highlights of Agency Accomplishments, 2009-2013

	<b>Highlights of Agency Accomplishments (2009-2013)</b>
<b>Bureau of Labor Statistics</b>	<ul style="list-style-type: none"> <li>• Undercount research studies:</li> <li>• Matching WC cases to SOII days-away-from-work cases</li> <li>• Multi-source surveillance</li> <li>• Employer interviews on OSHA recordkeeping, WC reporting and SOII reporting</li> <li>• Articles (in the Monthly Labor Review) and FAQs addressing SOII completeness and research</li> <li>• Expansion of SOII to public sector</li> <li>• Producing rates for case circumstance and worker characteristics by occupation</li> <li>• Pilot collection of case and demographic data on job transfer and restriction transfer cases</li> <li>• Proposed report on hospitalization cases using available case and demographic data</li> <li>• Exploration of auto-coding to improve efficiency and quality of data coding</li> </ul>
<b>Occupational Safety and Health Administration</b>	<ul style="list-style-type: none"> <li>• Proposed change in Fatality/Catastrophe reporting to include injury incidents involving amputations or one or more in-patient hospitalizations</li> <li>• Proposed change from SIC codes to NAICS to update list of industries partially exempt from routine OSHA log requirements</li> <li>• Development of a proposal that employers submit occupational injury and illness data electronically on a timely basis</li> <li>• Guidance on Employer Safety incentive and Disincentive Policies and Practices that discourage injury and illness reporting</li> <li>• National Emphasis Program on record-keeping and analysis of findings</li> </ul>
<b>National Institute for Occupational Safety and Health</b>	<ul style="list-style-type: none"> <li>• Included an occupational health supplement in the 2010 and 2015 NHIS and have plans to repeat in 2015 and periodically, thereafter</li> <li>• Collecting industry and occupation (I/O) (2013-2016) in the Behavioral Risk Factor Surveillance Survey as an optional module with goal of incorporating I/O in the BRFSS core module as key demographic data.</li> <li>• Conducted the Childhood Agricultural Injury Survey (CAIS), Occupational Injury Survey of Production Agriculture (OISPA) and will conduct a new round of injury and musculoskeletal pain modules in the National Agricultural Workers Survey (NAWS )in 2014-2015</li> <li>• Expanded support for state-based occupational health surveillance programs from 15 to 23 states</li> <li>• Multi-pronged initiative to promote inclusion of occupational</li> </ul>

	<p>information in Electronic Health Records</p> <ul style="list-style-type: none"> <li>• Development of the National Industry and Occupation Coding System (NIOCCS): software tool for automatic coding of occupation and industry</li> <li>• Conducted two workshops on use of workers' compensation data for surveillance and established a new NIOSH <i>Center for Workers' Compensation Studies</i></li> <li>• Evaluating NEISS-Work data collection through surveys of workers to assess barriers they experience in reporting work-related injuries and illnesses to hospitals and employers</li> <li>• Collecting through NEISS-Work reported injuries among EMS workers treated in EDs to understand injury circumstances and worker characteristics</li> <li>• Assessing utility of trauma registry data for reporting severe occupational injuries among EMS workers.</li> <li>• Established State-based Clearinghouse located on the NIOSH website to provide access to state-generated occupational health and exposure reports. <a href="http://wwwn.cdc.gov/niosh-survapps/statedoc">http://wwwn.cdc.gov/niosh-survapps/statedoc</a></li> <li>• Established NIOSH Worker Data and Statistics Gateway to provide quick access to a broad range of CDC/NIOSH surveillance resources connected to research initiatives across the Institute. The Gateway incorporates the Worker Health eChartbook, a web-resource of descriptive epidemiologic reference on occupational morbidity and mortality. <a href="http://www.cdc.gov/niosh/data/">http://www.cdc.gov/niosh/data/</a> and <a href="http://wwwn.cdc.gov/niosh-survapps/Gateway/Home.aspx">data by industry sector. http://wwwn.cdc.gov/niosh-survapps/Gateway/Home.aspx</a></li> <li>• Published reports on health status of eight sectors based on 1997-2007 NHIS general health questions</li> <li>• Released enhanced and updated Occupational Injury and Illness Classification System resource web site in collaboration with BLS, which provides graphical interfaces to the BLS-redesigned OIICS Code Trees and prior versions, along with downloadable software applications. <a href="http://wwwn.cdc.gov/wisards/oiics/">http://wwwn.cdc.gov/wisards/oiics/</a></li> </ul>
<b>State Agencies</b>	<p>NIOSH funds 23 state health agencies and in several instances, labor departments, to compile Occupational Health Indicators and use health data sources to track specific conditions. (See below). Additionally, 41 states have been funded to track elevated blood leads. (NIOSH has informed the states that funding for ABLES will end August 31, 2013). See the CSTE publication: <i>Putting Data to Work for Worker Safety and Health: Successes in the States</i> for examples of recent success stories from state programs <a href="http://www.cste2.org/webpdfs/ohsuccessstories.pdf">http://www.cste2.org/webpdfs/ohsuccessstories.pdf</a>.</p> <p style="text-align: center;"><u>Condition/population under targeted surveillance (# states)</u></p> <ul style="list-style-type: none"> <li>• Acute Chemical Exposures (3)</li> <li>• Acute Pesticide Toxicity (6)</li> </ul>

	<ul style="list-style-type: none"> <li>• Amputations (5)</li> <li>• Arsenic Blood/Urine Levels (7)</li> <li>• Burns (4)</li> <li>• Cadmium Blood/Urine Levels (5)</li> <li>• Carbon Monoxide Poisoning (7)</li> <li>• Carpal Tunnel Syndrome (1)</li> <li>• Cholinesterase Blood Levels (3)</li> <li>• Crush Injuries (1)</li> <li>• Injuries (Fatal) (9)</li> <li>• Injuries (Non-fatal) (3)</li> <li>• Injuries (Teenagers) (3)</li> <li>• Lead (41)</li> <li>• Logging Injuries (1)</li> <li>• Mercury Blood/Urine Levels (8)</li> <li>• Second hand cigarette smoke exposure (1)</li> <li>• Silicosis (2)</li> <li>• Skull Fractures (1)</li> <li>• Temporary Agency Workers (2)</li> <li>• Tick-borne disease (1)</li> <li>• Trucking Industry including Waste Management (1)</li> <li>• Tuberculosis (1)</li> <li>• Uranium miners (Occupational diseases of former workers) (1)</li> <li>• Workplace Violence/Assaults (1)</li> <li>• Work-related asthma (6)</li> </ul>																												
<p><b>Inclusion of Industry/ Occupation in BRFSS (22)</b></p>	<p>The Behavioral Risk Factor Surveillance System (BRFSS) is an annual state-based random digit-dialed telephone survey of the non institutionalized US civilian adult (≥ 18 years of age) population. The survey is designed to collect information on both health conditions in the population as well as the risk factors that may influence them. In 2013, 22 states have added questions on occupation/industry so prevalence of health conditions/risk factors will be available by occupation/industry.</p> <table border="0"> <tr> <td>California</td> <td>Florida</td> <td>Georgia</td> <td>Illinois</td> </tr> <tr> <td>Louisiana</td> <td>Maryland</td> <td>Massachusetts</td> <td>Michigan</td> </tr> <tr> <td>Minnesota</td> <td>Mississippi</td> <td>Montana</td> <td>Nebraska</td> </tr> <tr> <td>New Hampshire</td> <td>New Jersey</td> <td>New Mexico</td> <td>New York</td> </tr> <tr> <td>North Dakota</td> <td>Oregon</td> <td>Utah</td> <td>Washington</td> </tr> <tr> <td>Wisconsin</td> <td>Wyoming</td> <td></td> <td></td> </tr> </table>	California	Florida	Georgia	Illinois	Louisiana	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Montana	Nebraska	New Hampshire	New Jersey	New Mexico	New York	North Dakota	Oregon	Utah	Washington	Wisconsin	Wyoming						
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<p><b>Occupational Health Indicators (28)</b></p>	<p>There are 20 Occupational Health Indicators (OHIs) compiled by 28 states. See the website of the Council of State and Territorial Epidemiologists (CSTE) for a description and the data for each indicator. Several additional OHIs are also under development. (<a href="http://www.cste.org/?OHIndicators">http://www.cste.org/?OHIndicators</a>).</p> <table border="0"> <tr> <td>California</td> <td>Colorado</td> <td>Connecticut</td> <td>Florida</td> </tr> <tr> <td>Georgia</td> <td>Illinois</td> <td>Iowa</td> <td>Kentucky</td> </tr> <tr> <td>Louisiana</td> <td>Maryland</td> <td>Massachusetts</td> <td>Michigan</td> </tr> <tr> <td>Minnesota</td> <td>Missouri</td> <td>Montana</td> <td>Nebraska</td> </tr> <tr> <td>New Hampshire</td> <td>New Jersey</td> <td>New Mexico</td> <td>New York</td> </tr> <tr> <td>North Carolina</td> <td>North Dakota</td> <td>Oregon</td> <td>South Dakota</td> </tr> <tr> <td>Texas</td> <td>Washington</td> <td>Wisconsin</td> <td>Wyoming</td> </tr> </table>	California	Colorado	Connecticut	Florida	Georgia	Illinois	Iowa	Kentucky	Louisiana	Maryland	Massachusetts	Michigan	Minnesota	Missouri	Montana	Nebraska	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Oregon	South Dakota	Texas	Washington	Wisconsin	Wyoming
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## References

U.S. House of Representative s. Hidden Tragedy: Underreporting of Workplace Injuries and Illnesses. A Majority Staff Report by the Committee on Education and Labor, U.S. House of Representatives. The Honorable George Miller, Chairman. June 2008. Accessed June 2013. <http://www.gpo.gov>.

IOM (Institute of Medicine) and National Research Council. 2009. Traumatic Injury research at NIOSH. Committee to Review the NIOSH Traumatic Injury Research Program. Report No. 6, Reviews of Research Programs of the National Institute for Occupational Safety and Health. Washington, DC: The National Academies Press.

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## **Glossary**

BLS – Bureau of Labor Statistics  
BRFSS – Behavioral Risk Factor Surveillance System  
CAIS – Childhood Agricultural Injury Survey  
CDC – Centers for Disease Control and Prevention  
CSTE – Council of State and Territorial Epidemiologists  
DJTR – Days of Job Transfer and Restriction  
EHRs – Electronic Health Records  
I/O – Industry and Occupation  
IOM – Institute of Medicine  
NAICS – North American Industry Classification System  
NAWS – National Agricultural Workers Survey  
NCHS – National Center for Health Statistics  
NEISS – National Electronic Injury Surveillance System  
NHIS – National Health Interview Survey  
NIOCCS – National Industry and Occupation Coding System  
NIOSH – National Institute for Occupational Safety and Health  
NORA – National Occupational Research Agenda  
NRC – National Research Council  
NUBC – National Uniform Billing Committee  
OIICS – Occupational Injury and Illness Classification System  
OISPA – Occupational Injury Survey of Production Agriculture  
OSHA – Occupational Safety and Health Administration  
SIC – Standard Industrial Classification  
SOC – Standard Occupational Classification  
SOII – Survey of Occupational Injuries and Illnesses  
UB – Uniform Bill  
WC – Worker’s Compensation

## Appendix A – 2013 Meeting Agenda and Participant List

Council of State and Territorial Epidemiologists  
Occupational Health Surveillance Subcommittee Meeting

### Counting Work-related Injuries and Illnesses: Taking Steps to Close the Gaps II

April 17-18, 2013  
Washington, D.C.

Bureau of Labor Statistics Conference and Training Center  
Postal Square Building: 2 Massachusetts Ave. NE, Washington DC, 20212

#### Purpose of meeting

- Update participants regarding steps taken and proposed to improve the BLS and OSHA data collection systems for non-fatal occupational injuries and illnesses;
- Review progress and challenges faced by NIOSH and states in implementing 2009 CSTE *Closing the Gaps* meeting recommendations to use the public health infrastructure to address surveillance gaps; and
- Identify new opportunities for surveillance and develop an updated list of specific shorter and longer range recommendations to improve surveillance of nonfatal work-related injuries and illnesses.

#### Agenda

Day 1 – April 17<sup>th</sup> Moderator: Tish Davis

- 8:30 – 9:00**      **Introductions and overview of meeting**
- 9:00 – 9:45**      **Goals of Surveillance: how well are we doing? - Exercise and group discussion**
- 9:45 – 10:00**    **Break**
- 10:00 – 11:15**   **Steps to improve BLS and OSHA data collection - Panel and group discussion**
- Moderator: David Bonauto**
- **BLS:** Intramural and extramural research/improvements      Beth Rogers
  - **OSHA:** Update on proposed record-keeping changes,      Dave Schmidt  
         National Emphasis Program on record-keeping, etc
- 11:15 – 12:15**   **Progress in meeting 2009 CSTE recommendations – Presentation and discussion**

- **NIOSH:** National surveys, EHRs, State programs, Marie H. Sweeney  
information dissemination, etc.
- Progress by other stakeholders (Participant Discussion)

**12:15 – 1:15 Lunch on Your Own**

**1:15 – 2:30 Using the public health infrastructure to fill the gaps - Breakout groups**

**1. Improving collection and use of BLS/OSHA data**

*Moderator: Les Boden*

The focus of this group will be to provide suggestions to OSHA on improving employer recordkeeping and reporting practices and alternative ways to collect the data as well as suggestions to BLS for improving collection of SOII data and characterizing potential systematic biases in the SOII.

**2. Surveying workers: Use of national/state surveys**

*Moderator: Theresa Schnorr*

The focus of this group will be to provide suggestions on using existing population-based surveys and conducting stand-alone surveys of individuals/workers. The group will discuss regarding standardized questions, sample size considerations, frequency of administration, and use of automated coding tools, as well as uses of the data.

**3. Reporting the magnitude in light of the undercount**

*Moderator: Larry Jackson*

The focus of this group will be to provide suggestions on how to present annual data on work-related injuries and illnesses that better reflects the magnitude of the problems, given what is known about the undercount in the annual employer survey.

**4. Exploring development of a multisource system for serious injuries**

*Moderator: Terry Bunn*

The focus of this group will be to explore options for and provide suggestions on how to develop a cost effective multisource system for serious work-related injuries.

**2:30 – 3:00 Break**

**3:00 – 4:00 Breakout groups continue**

**4:10 – 5:00 Plenary Presentation**

David Michaels, Assistant Secretary of Labor for Occupational Safety and Health

Council of State and Territorial Epidemiologists  
Occupational Health Surveillance Subcommittee Meeting

**Counting Work-related Injuries and Illnesses: Taking Steps to Close the Gaps II**

*Day 2 – April 18<sup>th</sup> Moderator: Ken Rosenman*

- 8:30 – 9:30 Plenary Presentation: The Fissured Workplace**  
David Weil, Boston Univ. School of Management and Harvard Univ.  
Kennedy School of Government
- 9:30 – 10:30 Reports from Breakout groups WITH group discussion**
- 10:30 – 10:45 Break**
- 10:45 – 12:30 Reports from Breakout groups (continued)**
- 12:30 – 1:15 Box lunch**
- 1:15 – 3:00 Putting it all together and next steps** TBD
- 3:00 Adjourn**

**Counting Work-related Injuries and Illnesses: Taking Steps to Close the Gaps II**  
**April 17-18, 2013**

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**Appendix B – 2009 Meeting Recommendations and Summary**



**COUNTING WORK-RELATED INJURIES  
AND ILLNESSES:  
TAKING STEPS TO CLOSE THE GAP**

April 21-22, 2009  
Arlington, VA

Meeting Summary