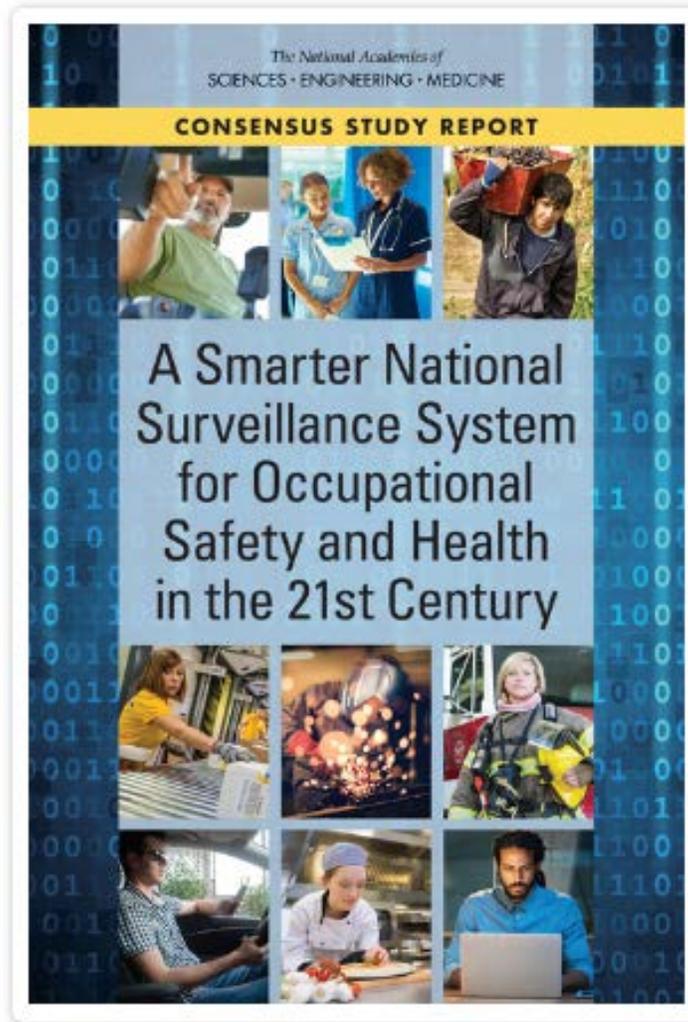


National Academies of Sciences, Engineering and Medicine (NAS) Report

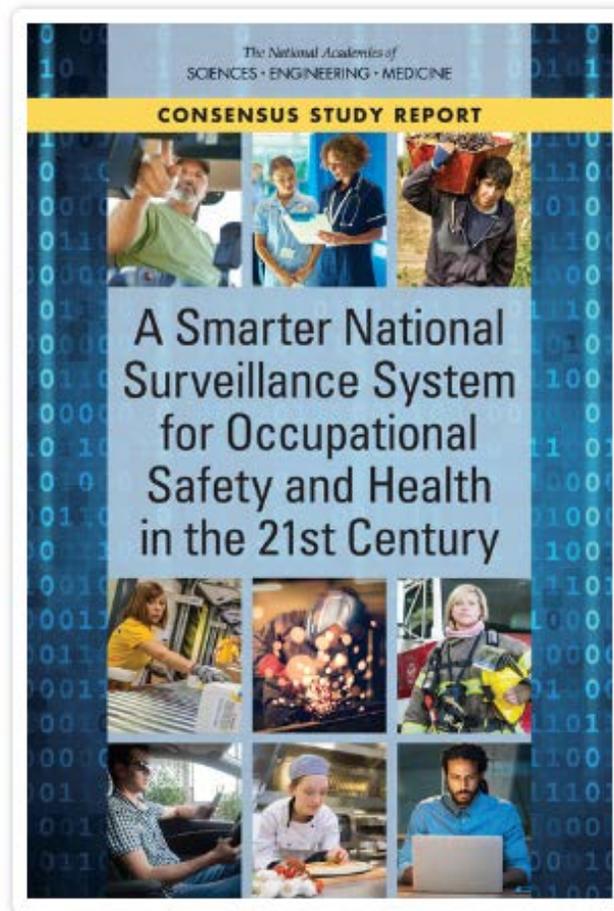


**Board of Scientific
Counselors Meeting**

Sept 27, 2018

Margaret Kitt and Terri Schnorr

National Academies of Sciences, Engineering and Medicine (NAS) Report



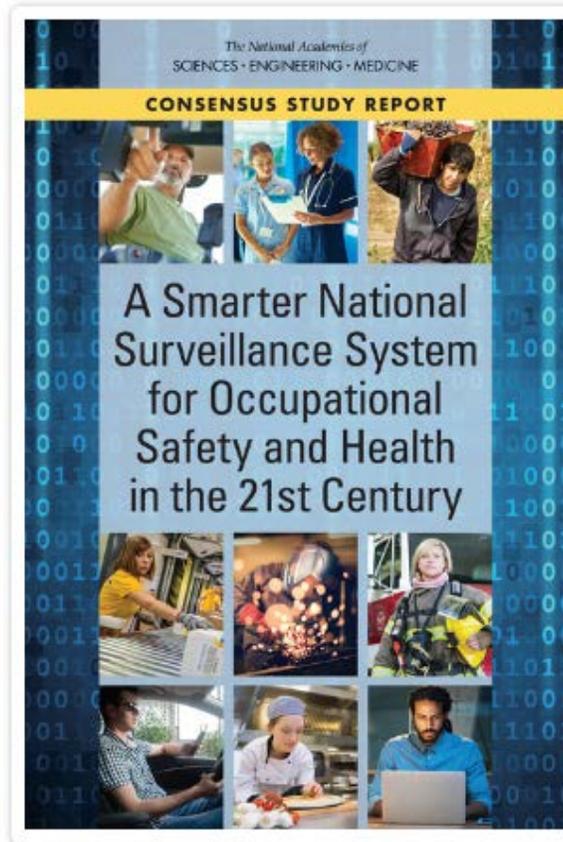
- NAS convened a 12 study member panel - academia, state labor and health departments, labor, and employers
- April 2018: 17 recommendations to NIOSH, BLS and OSHA (sponsoring agencies)

A Smarter National Surveillance System for Occupational Safety and Health in the 21st Century

Report Recommendations

- A.** BLS and OSHA should collaborate to enhance injury and illness recording and the Survey of Occupational Injuries and Illnesses (SOII) to achieve more complete, accurate, and robust information on the extent, distribution, and characteristics of work-related injuries and illnesses, and affected workers, for use at the worksite and at national and state levels.
- B.** NIOSH, working with the state occupational safety and health surveillance programs and across divisions within the agency, should develop a methodology and coordinated system for surveillance of both fatal and nonfatal occupational disease using multiple data sources.
- C.** NIOSH should lead a collaborative effort with BLS, OSHA, the states, and other relevant federal agencies to establish and strengthen state-based OSH surveillance programs
- D.** BLS should place priority on implementing their plan for a household survey of occupational injuries and illnesses (HSOII).
- E.** OSHA, in conjunction with BLS, NIOSH, state agencies, and other stakeholders, should develop plans to maximize the effectiveness and utility of OSHA's new electronic reporting initiative for surveillance.
- F.** NIOSH, with assistance from OSHA, should explore and promote the expanded use of workers' compensation data for occupational injury and illness surveillance and the development of surveillance for consequences of injury and illness outcomes, including return to work and disability.
- G.** HHS should designate industry and occupation as core demographic variables collected in federal health surveys, as well as in other relevant public health surveillance systems, and foster collaboration between NIOSH and other CDC centers in maximizing the surveillance benefits of including industry and occupation in these surveys and surveillance systems.
- H.** NIOSH, in consultation with OSHA, should place priority on developing a comprehensive approach for exposure surveillance.
- I.** NIOSH should coordinate with OSHA, BLS, and other relevant agencies to measure and report, on a regular basis, the economic and health burdens of occupational injury and disease at the national level.
- J.** NIOSH should build and maintain a robust internal capacity in biomedical informatics applied to OSH surveillance.
- K.** NIOSH should work with the National Library of Medicine to incorporate core OSH surveillance terminologies, including those for industry and occupation, into the Unified Medical Language System (UMLS).
- L.** NIOSH should lead efforts to establish data standards and software tools for coding and using occupational data in electronic health records.
- M.** NIOSH and BLS, working with other relevant agencies, academic centers, and other stakeholders, should coordinate and consolidate, where possible, efforts to develop and evaluate state-of-the-art computational and analytical tools for processing free text data found in OSH surveillance records of all types.
- N.** To identify emerging and serious OSH injuries, illnesses, and exposures in a timely fashion, NIOSH (in coordination with OSHA, BLS, and the states) should develop and implement a plan for routine, coordinated, rapid analysis of case-level OSH data collected by different surveillance systems, followed by the timely sharing of the findings.
- O.** To promote and facilitate the use of surveillance information for prevention, and to present more comprehensive information on the extent, distribution, and characteristics of OSH injuries, illnesses, and exposures, NIOSH (in coordination with and input from OSHA, BLS, and the states) should establish a coordinated strategy and mechanism for timely dissemination of surveillance information.
- P.** NIOSH, OSHA, and BLS should work together to encourage education and training of the surveillance workforce in disciplines necessary for developing and using surveillance systems, including epidemiology, biomedical informatics, and biostatistics.
- Q. Recommendation Q (meta-recommendation): The Secretary of HHS, with the support of the Secretary of Labor, should direct NIOSH to form and lead a coordinating entity in partnership with OSHA, BLS, and other relevant agencies.** The coordinating entity should:
- develop and regularly update a national occupational safety and health surveillance strategic plan that is based on well-articulated objectives;
 - coordinate the design and evaluation of an evolving national system of systems for OSH surveillance and for the dissemination of surveillance information provided by these systems;
 - publish a report on progress toward the strategic plan's implementation at least every 5 years, documenting advances toward achieving a 21st Century Smarter Occupational Safety and Health (OSH) Surveillance System; and
 - engage partners, including other federal health statistics agencies, state agencies with OSH responsibilities, and stakeholders.

NAS Recommendations: Meta-recommendation

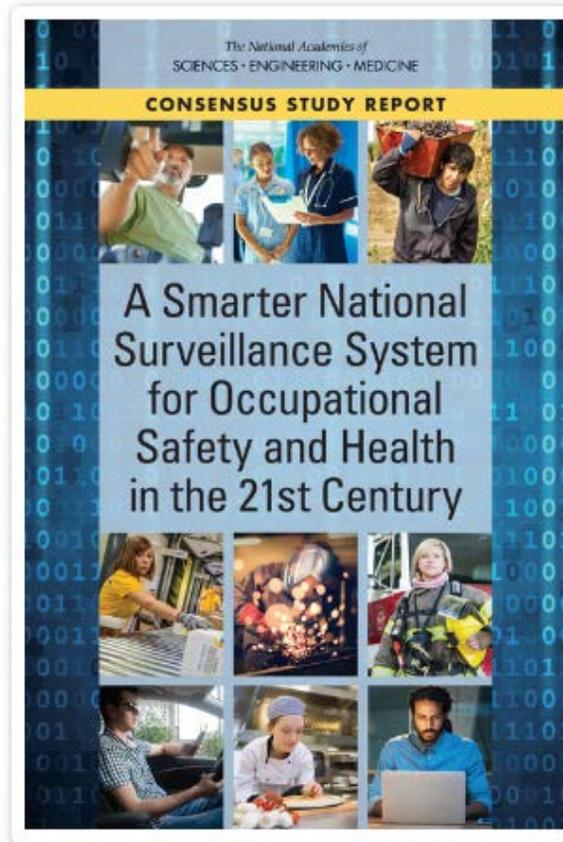


The Secretary of Health and Human Services, with the support of the Secretary of Labor, should direct NIOSH to form and lead a coordinating entity in partnership with OSHA, BLS, and other relevant agencies

The coordinating entity should:

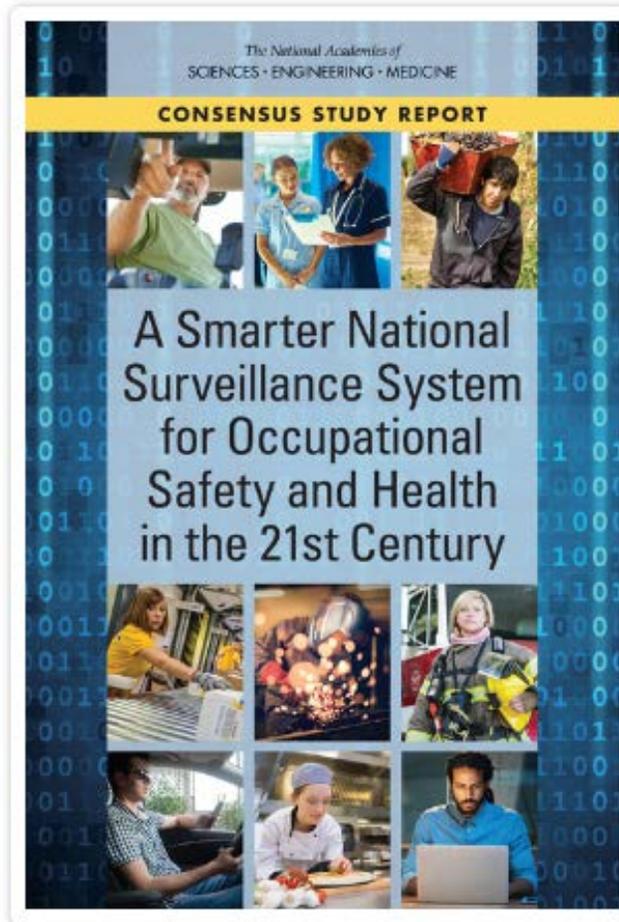
- Develop and regularly update a national occupational safety and health surveillance strategic plan that is based on well-articulated objectives;
- Coordinate the design and evaluation of an evolving national system of systems for OSH surveillance and for the dissemination of surveillance information provided by these systems;
- Publish a report on progress toward the strategic plan's implementation at least every 5 years, documenting advances toward achieving a 21st Century Smarter Occupational Safety and Health (OSH) Surveillance System; and
- Engage partners, including other federal health statistics agencies, state agencies with OSH responsibilities, and stakeholders.

NAS Recommendations: Four categories of recommendations



- Prioritize and coordinate OSH surveillance
- Improve data collection
- Expand biomedical informatics use and capabilities
- Strengthen data analysis and information dissemination for prevention

NIOSH Actions to Date



- Grouped recommendations within the four categories (recognizing some overlap)
- Established four corresponding workgroups

Prioritize and Coordinate OSH surveillance

Workgroup Lead-Jennifer Lincoln

Recommendations:

- **B** - NIOSH, working with the state occupational safety and health surveillance programs and across divisions within the agency, should develop a methodology and coordinated system for surveillance of both fatal and nonfatal occupational disease using multiple data sources.
- **C** - NIOSH should lead a collaborative effort with BLS, OSHA, the states, and other relevant federal agencies to establish and strengthen state-based OSH surveillance programs.
- **G** - HHS should designate industry and occupation as core demographic variables collected in federal health surveys, as well as in other relevant public health surveillance systems, and foster collaboration between NIOSH and other CDC centers in maximizing the surveillance benefits of including industry and occupation in these surveys and surveillance systems.
- **J** - NIOSH should build and maintain a robust internal capacity in biomedical informatics applied to OSH surveillance.
- **P** - NIOSH, OSHA, and BLS should work together to encourage education and training of the surveillance workforce in disciplines necessary for developing and using surveillance systems, including epidemiology, biomedical informatics, and biostatistics.

Improve Data Collection

Workgroup Lead-Lauralynn Taylor-McKernan

Recommendations:

- **F** - NIOSH, with assistance from OSHA, should explore and promote the expanded use of workers' compensation data for occupational injury and illness surveillance and the development of surveillance for consequences of injury and illness outcomes, including return to work and disability
- **H** - NIOSH, in consultation with OSHA, should place priority on developing a comprehensive approach for exposure surveillance.

Expand Biomedical Informatics Use and Capabilities

Workgroup Lead-Marie Sweeney

Recommendations:

- **G** - HHS should designate industry and occupation as core demographic variables collected in federal health surveys, as well as in other relevant public health surveillance systems, and foster collaboration between NIOSH and other CDC centers in maximizing the surveillance benefits of including industry and occupation in these surveys and surveillance systems.
- **J** - NIOSH should build and maintain a robust internal capacity in biomedical informatics applied to OSH surveillance.
- **K** - NIOSH should work with the National Library of Medicine to incorporate core OSH surveillance terminologies, including those for industry and occupation, into the Unified Medical Language System (UMLS).
- **L** - NIOSH should lead efforts to establish data standards and software tools for coding and using occupational data in electronic health records.
- **M** - NIOSH and BLS, working with other relevant agencies, academic centers, and other stakeholders, should coordinate and consolidate, where possible, efforts to develop and evaluate state-of-the-art computational and analytical tools for processing free text data found in OSH surveillance records of all types.

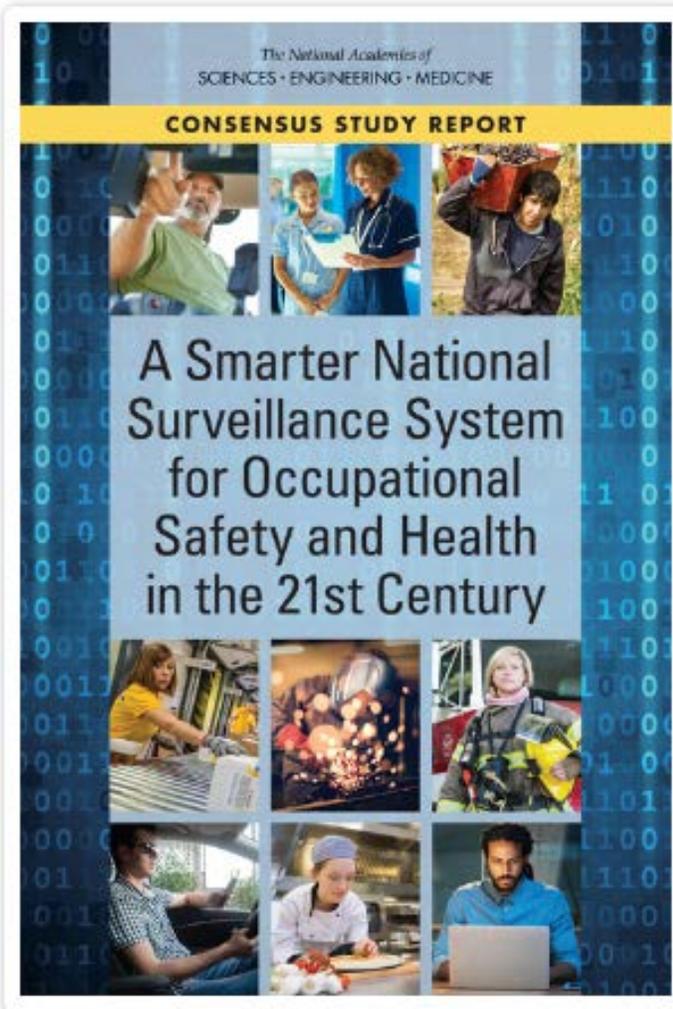
Strengthen Data Analysis and Information Dissemination for Prevention

Workgroup Lead-John Myers

Recommendations:

- **I** - NIOSH should coordinate with OSHA, BLS, and other relevant agencies to measure and report, on a regular basis, the economic and health burdens of occupational injury and disease at the national level.
- **N** - To identify emerging and serious OSH injuries, illnesses, and exposures in a timely fashion, NIOSH (in coordination with OSHA, BLS, and the states) should develop and implement a plan for routine, coordinated, rapid analysis of case-level OSH data collected by different surveillance systems, followed by the timely sharing of the findings.
- **O** - To promote and facilitate the use of surveillance information for prevention, and to present more comprehensive information on the extent, distribution, and characteristics of OSH injuries, illnesses, and exposures, NIOSH (in coordination with and input from OSHA, BLS, and the states) should establish a coordinated strategy and mechanism for timely dissemination of surveillance information.

Next Steps



- Draft Implementation Plan (In-process)
- Discuss with OSHA and BLS
- Present plan to Dr Howard
- Discuss plan with BSC in 2019 and periodically review progress

<https://www.nap.edu/catalog/24835/a-smarter-national-surveillance-system-for-occupational-safety-and-health-in-the-21st-century>