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<https://idph.iowa.gov/Environmental-Health-Services/Occupational-Health-and-Safety-Surveillance>



Principal Investigator July 2019-May 2020: Stuart C. Schmitz, M.S., P.E.
Stu Schmitz died after a brief illness on May 17, 2020. His life and work with the Iowa Department of Public Health were highlighted in an article published in the Des Moines Register.

Key Accomplishments

- The Beyond ABLES campaign to increase awareness of adult lead poisoning issues in Iowa reports that there has been a drop of adults with elevated blood lead levels (EBLs) of 5 mcg/dL or higher from 40% of adults tested in 2012 to 30% in 2019 for all of Iowa. The drop was more significant in two of three targeted areas of the state that have the most adults at risk from industrial work exposure - Phase One area: 85% in 2012 to 73% in 2019; Phase Three area: 79% in 2012 to 64% in 2019
- Iowa OSHA acted on a referral made by the IDPH ABLES program regarding adult elevated blood lead levels and possible take-home lead exposure of family members. The site inspection resulted in a number of citations, improved safety for workers and increased blood lead monitoring of employees. The number of employees tested increased from 74 workers in 2018 that identified 50 EBLs to 210 workers in 2019 with 125 EBLs.

Core (Fundamental) Surveillance Program

The mission of the Iowa Occupational Health & Safety Surveillance Program (OHSSP) is protecting and improving the health and safety of Iowans in the workplace. The program explores options to improve surveillance and data translation capacity, and provides analysis, dissemination, outreach and evaluation functions to support each project. Funding for the program is provided through cooperative agreement grant number 6 U60OH008460-14-01 with the National Institute for Occupational Safety and Health (NIOSH) Office of Extramural Programs for the project period of 7/1/2015 through 6/30/2021.

General Program Highlights

- OHSSP provided fatal occupational injury surveillance findings to the Iowa Division of Labor to improve identification of worker deaths, especially deaths of self-employed workers. These findings ultimately become part of the Iowa Census of Fatal Occupational Injury (CFOI) report to the U.S. Department of Labor Bureau of Labor Statistics.
- OHSSP participated in the multi-agency response of a cluster of acutely ill workers and members of the public at an Iowa convenience store in the fall of 2019. The store was closed and reopened repeatedly due to air quality issues that caused symptoms. Medical record reviews, employee interviews and an environmental assessment of the store identified infrastructure problems and equipment deficiencies that were fixed by the corporate office to resolve the issue.
- Hard-copy paper records collected by the Iowa FACE (Fatality Assessment & Control Evaluation) Program from 1995 to 2015 were scanned into searchable files for future reference, analysis and reporting.

Occupational Health Indicators (OHI)

OHSSP uses Iowa data gathered annually for the calculation of nationally established occupational health indicators (OHI). OHI data is tracked to review state-level trends and comparison (when appropriate) to U.S. indicators and data from surrounding states. Findings are reported through program outreach activities and

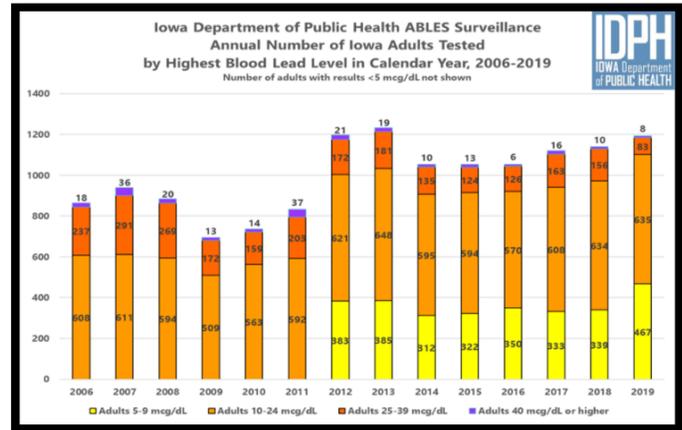
outputs to highlight gaps or opportunities for improvement in worker safety. The submission of Iowa's OHI using 2017 data has been delayed (for all funded states) due to the coronavirus pandemic.

Project Outputs and Outcomes Highlights:

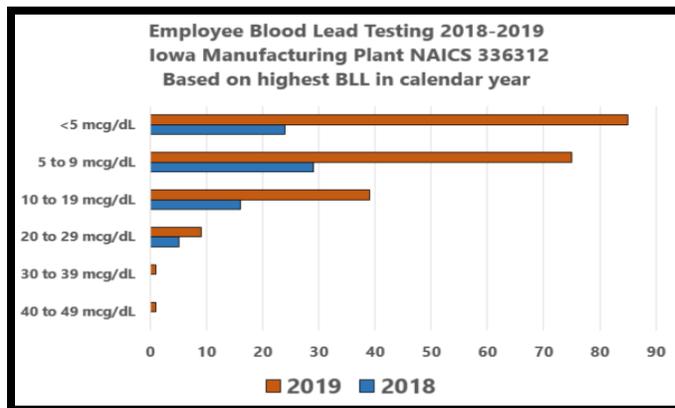
- The Program Manager submitted annual recommendations in February 2020 for updates to the national OHI guidance document as the state-level lead contact for indicators one and four.
- Iowa OHI data was used in multiple trainings, including grand rounds for veterinary, medical and pharmacy students and in certification training for elevated blood lead inspectors and case managers.
- Data findings were used to update the Healthy Iowans report.

Iowa Adult Blood Lead Epidemiology and Surveillance (ABLES)

OHSSP ABLES surveillance involved the review of incoming adult BLL data. Elevated reports were given additional follow-up to determine if the report was for a known case or a newly reported exposure; follow-back was done to gather missing or incomplete data and determine whether the exposure was work-related or from another exposure source. Work-related cases were coded by industry. Educational materials were provided to medical providers and new cases. Referrals were made by OHSSP to the Iowa OSHA enforcement program when appropriate.



Project Outputs and Outcomes Highlights:



- The Program prepared summary data and provided subject matter expertise to the Iowa OSHA program regarding an Iowa manufacturing plant where a number of employees were identified as having young children with elevated blood lead levels. The OSHA investigation was the outcome of a referral made by OHSSP. Employee testing at the plant increased in 2019 due to the OSHA investigation. Monitoring of test results continues in 2020.

- Iowa ABLES worked with the NIOSH ABLES and CDC National Center for Environmental Health (NCEH) throughout the year on options for integrating child and adult lead surveillance databases. A site visit was held at IDPH on August 14, 2019 to facilitate communication and understanding of data reporting, management and use.

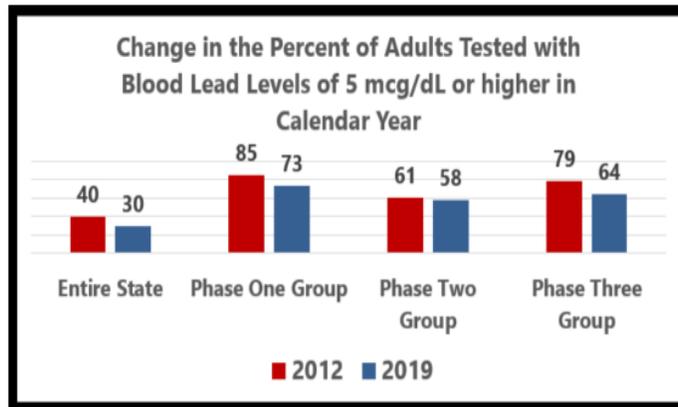
Beyond ABLES

The Beyond ABLES campaign is an ongoing strategy. The goal of the campaign is to provide community-level targeted education, outreach and awareness activities to the workers and medical providers in Iowa counties with the highest number of adults with elevated blood lead levels, while building capacity at the local public health level - there are no funded local adult lead programs in the state. Key messaging focuses

on take-home lead risks, medical impacts from long-term chronic lead exposure, and risks to young adults entering the workforce who may be starting families.

Project Outputs and Outcomes Highlights:

- A review of adult blood lead test results over the course of the campaign shows a distinct drop in the percentage of adults with elevated blood lead tests in the three targeted areas of the state and for the state as a whole.



Agricultural Safety Outreach

Iowa OHSSP collaborated throughout the year with partners to network our agricultural safety outreach projects. Iowa OHSSP represented the Iowa Department of Public Health on the board of Iowa’s Center for Agricultural Safety and Health (I-CASH at <https://icash.public-health.uiowa.edu/>), a multi-organizational group working to improve farm safety with many resources available online.

Project Outputs and Outcomes Highlights:

- OHSSP exhibited and presented *Oh, the Places We Can Go* at the 2019 Midwest Rural Agricultural Safety and Health (MRASH) Conference November 2019
- IDPH OHSSP was coordinating the 2020 Farm Progress Show Health & Safety Tent area by recruiting partnering agencies and programs to provide demonstrations, PPE samples, and safety and health resource materials for the three-day event scheduled for September 1-3. However, due to the coronavirus public health disaster emergency, the in-person show was canceled.

Communication, Dissemination of Information and Activities Completed

- Provided adult lead exposures in Iowa training as part of the state’s Elevated Blood Lead Investigator Training – October 2019
- Provided Grand Rounds education for medical, veterinarian, pharmacy, public health students – 3 sessions in current fiscal year, approximately 14 participants
- EpiUpdates electronic newsletter article (distributed to over 1,300 medical providers, local public health and other contacts) regarding take-home lead concerns was published August 2019



- Display and Presentation at the Preventing Childhood Injury Conference: *Baby Shoes to Work Boots – Lead Exposure in Iowa* – September 2019
- Display on adult and take-home lead concerns at the National Environmental Health Association Region IV Fall Conference in Omaha, NE - October 2019
- Display regarding lead concerns in special populations in Iowa at the 2019 Refugee Summit in Ankeny IA – October 2019
- Webinar presentation *Not Gone But Often*

Forgotten-Why Lead Exposures Continue in Iowa (child and adult lead issues in Iowa) for medical providers through the Blank Children’s Hospital Center for Advocacy & Outreach – October 2019

- Display regarding adult lead exposures in Iowa, take-home lead concerns, opioids and mental health in the work place for the John Deere Ottumwa employee safety day – October 2019

- Display regarding adult lead exposures in Iowa, take-home lead concerns, opioids and mental health issues at the Iowa Governor's Safety Conference – November 2019
- Development of a PowerPoint regarding distracted driving risks titled *Confessions of a Serial Multitasker* for use at a Collins Aerospace employee training event in Cedar Rapids, IA– December 2019
- Presentation to a University of Iowa rural health class on the intersections of mental & behavioral health and environmental & occupational public health – February 2020



Collaboration Activities Accomplished (not previously mentioned):

- Iowa State University Extension Services Pesticide Applicator Training reported that they surveyed 800 applicators and 65% reported being injured while using ATVs for pesticide application. ISU Extension developed a video about the overturn risks when using ATVs during pesticide application using data and scenarios provided by OHSSP and received good comments from private applicators.
- Collaborative response with multiple state and regional agencies to concerns of worker exposure to acetaldehyde at area hog abattoir sites when gases used to euthanize animals were contaminated – September 2019
- IDPH Childhood Lead Poisoning Prevention Program collaboration and subject matter expert, including participation in the MCEH ColIN (Maternal and Child Environmental Health Collaborative Improvement and Innovation Network) projects in Iowa
- Surveillance of blood lead levels reported for those 6 to 15 years of age not covered by funded childhood or adult lead surveillance
- Consultation provided to a NIOSH contractor regarding NIOSH adult lead data visualization in the Worker Health Charts.
- NIOSH Surveillance Coordinating Group monthly call co-liaison on behalf of the Council of State and Territorial Epidemiologists (CSTE) Occupational Health (OH) subcommittee
- Participation in the national OHI Workgroup and CSTE OH subcommittee
- University of Iowa Ag Safety & Health Grad Program External Advisory Group
- University of Iowa DOT study; Cost of Unbelted Drivers, Technical Advisory Group
- Two internship opportunities provided:
 - College undergraduate, 30 hours, data visualization of OHI, Feb-May 2020
 - College senior, 80 hours, ABLES and worker health disparities, Feb-May 2020

Activities canceled due to coronavirus pandemic April – June 2020:

- Display regarding child and adult lead poisoning at the 2020 Iowa Governor's Conference on Public Health, Des Moines – April 2020
- Display and presentation "Got Lead? Work Safe!" (adult blood lead exposures in Iowa) at the Iowa-Illinois Safety Council Professional Development Conference & Expo, Dubuque – April 2020
- Presentation "Multi-Agency Response to a Cluster of Acute Illness at a Convenience Store" at the 2020 CSTE Annual Conference, Seattle WA – June 28-July1, 2020