

Blood Lead Surveillance System (BLSS)

OMB Control No. 0920-0931 (Expiration Date: 05/31/2021)

Request for Extension

National Center for Environmental Health
National Institute for Occupational Safety and Health

Supporting Statement Part B – Collections of Information Employing
Statistical Methods

Program Official: Monica Leonard, CDR
Branch Chief (Acting), Lead Poisoning Prevention and Environmental
Health Tracking Branch (LPPEHTB)
Division of Environmental Health Science and Practice (DEHSP)
National Center for Environmental Health (NCEH)
Centers for Disease Control and Prevention (CDC)
4770 Buford Hwy N.E., S106-5
Phone: (404) 498-1826
Fax: (770) 488-3635
Email: zgf7@cdc.gov

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Part B.

Collections of Information Employing Statistical Methods

B.1. Respondent Universe and Sampling Methods

This is a three-year extension information collection request (ICR) of the “Blood Lead Surveillance System” (OMB Control Number: 0920-0931; expiration date May 31, 2021).

This collection includes two distinct data collection systems that provide a coordinated, comprehensive, and systematic public health approach to the surveillance and monitoring of blood lead levels (BLLs) for children and occupationally exposed adults in the U.S. Target populations whose BLLs are reported to the Childhood Blood Lead Surveillance (CBLS) and the Adult Blood Lead Epidemiology and Surveillance (ABLES) do not overlap in age.

Although the collection does not involve statistical sampling methods to obtain blood lead surveillance data, we will use Part B to describe the respondent methods, which remain unchanged and are used to report blood lead data to the CDC from the target population in the jurisdictions from which they arise.

The National Center for Environmental Health (NCEH) supports state and local health departments to collect and report individual-level, laboratory-reported blood lead surveillance data for children less than 16 years of age to the Childhood Blood Lead Surveillance (CBLS) system.

CBLS respondents are cooperative agreement recipients in state and local health departments, or their bona fide agents, that submit NCEH childhood (n=53) blood lead surveillance data as part of the funding requirements to develop and implement a childhood lead poisoning prevention program (CLPPP). In most state and local lead poisoning prevention programs, blood lead testing and laboratory reporting of all blood lead levels are required by law (NCSL, 2010).¹ NCEH also anticipates additional funding for up to 7 new awards for FY21, therefore, the program is requesting PRA clearance for up to 60 awardees.

The National Institute for Occupational Safety and Health (NIOSH) works with state labor and health departments to collect and report laboratory-based blood lead surveillance data from adults, age 16 years and older, most of whom are occupationally exposed, to the Adult Blood Lead Epidemiology and Surveillance (ABLES) program. The ABLES Program collects adult blood lead levels (BLLs) from state public health and labor departments, or their bona fide agents.

¹ As described in Section A.10, these target populations are not considered respondents with imposed burden under 5 CFR §1320.3(b)(2) and (b)(3), because the reporting, recordkeeping, or disclosure activities needed to comply within jurisdictions are usual and customary, or are required by law even in the absence of the federal requirement.

States voluntarily participate by sharing all BLL data received from testing laboratories with NIOSH ABLES. No sampling is conducted, and response rates do not apply.

Over the next three years, up to 40 participating states will submit adult BLL data to NIOSH annually. Over the past three years, 32 states reported BLL data to NIOSH. During the upcoming period, NIOSH aims to collaborate with up to 8 additional states. For states to participate in the ABLES program, they must have mandatory state regulations that require public and private laboratories to report adult BLLs to state health departments or designees.

B.2. Procedures for the Collection of Information

An overview of the protection of privacy and confidentiality of information provided by respondents to CBLS and ABLES is found in Section A.10.

State health departments receive blood lead data from health care providers, laboratories, hospitals, or other facilities that analyze blood samples for lead as required by jurisdictional laws. NCEH funds CBLS activities at the state and local level and also provides technical support but does not provide funding for system development. To promote standardization, NCEH provides Healthy Homes and Lead Poisoning Software System (HHLPSS) software at no cost to programs. HHLPSS is primarily a program management tool for state and local health departments to manage their blood lead surveillance and follow-up data. HHLPSS, or the equivalent systems, and the data therein are owned by state and local health departments. Their systems are customized for jurisdictional-specific program needs and are subject to state or local legal codes and IT security requirements.

For this PRA clearance, CBLS recipients are required to submit quarterly data to CDC with a one-quarter lag (e.g. data collected during the first quarter is due by the end of the second quarter). All required data are extracted from the respondent's secure server and transmitted to CDC via the CDC's Secure Access Management System's (SAMS) Secure Data eXchange's (SDX) integrated Managed File Transfer (MFT) Platform.

Data submitted in text files to NCEH are processed and maintained in the CBLS database. NCEH uses its processing software, CBLS Central, to perform data checks on recipient text files for required formatting. Text files are parsed into separate linkable data tables (e.g., Address, Child, Lab Results, and Investigation) (**Attachment 5a**). Processing reports are generated and sent to recipients, to indicate how many records were properly parsed and loaded into the CBLS database and how many records were not loaded with an explanation of the rejection. Corrections from recipients are returned in the next quarterly report. Therefore, NCEH has a 1 to 2 quarter lag with on-time data delivery. CBLS Annual Reports are based on the calendar year and are sent to recipients at the end of the second quarter of the fiscal year. NCEH estimates that one respondent will submit aggregate CBLS data (**Attachment 5b**). See **SSA-Section A.3** for

details on the procedures utilized by respondents for data delivery into the NCEH Childhood Blood Lead Surveillance (CBLS) System and discussion of the current version of CBLS and the 'Next Generation CBLS' will be a web-based system which is undergoing development and testing.

ABLES Data Delivery and Processing Report Dissemination – States submit an electronic data file to NIOSH on an annual basis. If data were collected less frequently, it would impact ABLES' ability to monitor occupational lead exposure, particularly new exposures, in a timely manner. States may submit data in either of two different data collection formats: 1) individual data records for each case, or 2) aggregated data in which only the final counts are provided. The formats for these electronic data files are attached (**Attachments 6a, 6a1, & 6b**). The data file includes: 1) The data in the prescribed format, and 2) a brief narrative report describing any notable lead surveillance activities during the year. NIOSH consolidates data from reporting state ABLES Programs, conducts data quality control, analyzes the data, and disseminates the findings among stakeholders.

NCEH and NIOSH are working to integrate the CBLS and ABLES information technology systems in the future and are adding fields to the HHLPPS system for ABLES.

B.3. Methods to Maximize Response Rates and Deal with Nonresponse

NCEH anticipates a 100 percent response rate because CBLS data are required to be submitted as part of the requirements of the cooperative agreements with state and local health department recipients. If the recipient does not submit its quarterly CBLS data, then the assigned project officer will contact the program to help them overcome any barriers to data submission. Additionally, NCEH develops reports to provide feedback to each recipient about the quality of their data. NCEH project officers, epidemiologists, and IT specialists use these reports to highlight weaknesses in the data and recommend ways to improve program activities and to ensure consistency with stated objectives.

States submit data to the ABLES Program on a voluntary basis. To encourage submission, NIOSH ABLES develops effective working relationships with states by providing technical assistance and guidance in adult blood lead surveillance, prevention, and intervention. Additionally, NIOSH ABLES works closely with state partners to produce educational materials, Morbidity and Mortality Weekly Reports (MMWR), and journal articles. The ABLES Program also publishes aggregated blood lead level data through the ABLES website and NIOSH's Worker Health Charts.

B.4. Test of Procedures or Methods to be Undertaken

No tests of procedures or methods were conducted for CBLS or ABLES. The CBLS methods have been used at CDC since 1994 (Pertowski, 1994). The ABLES methods have been used at CDC since 1987 (NIOSH, 2012). See summary of program accomplishments for CBLS in **Attachment 4a** and for ABLES in **Attachment 4b**.

B.5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The following tables show CDC personnel responsible for 1) CBLS and 2) ABLES, respectively, who: A) designed the data collection and B) will collect and analyze the data.

Table B.5.1A. Personnel Responsible for CBLS Methods and Design	
Mary Jean Brown, ScD, RN (2003-2016) Chief, HHLPPP, NCEH, CDC Email: mjb5@cdc.gov Tel: 770-488-7492	Adrienne Ettinger ScD, MPH, MS (2017 to 2020) Chief, LPPEHTB, NCEH, CDC Email: abe7@cdc.gov Tel: 770-488-7492
Monica Leonard, CDR (2020-Present) Acting Branch Chief, LPPEHTB, NCEH, CDC Email: zgf7@cdc.gov Tel: 404-498-1826	Joseph Courtney, PhD (2020-Present) Senior Epidemiologist/Team Lead for Surveillance and Epidemiology, LPPEHTB, NCEH, CDC Email: hzc2@cdc.gov Tel: 404-498-3282
Qaiyim Harris, BS IT Specialist, LPPEHTB, NCEH, CDC Email: gah3@cdc.gov Tel: 770-488-7115	Benjamin Bina IT Program Manager, LPPEHTB, NCEH, CDC Email: yhp5@cdc.gov Tel: 770-488-7115
Table B.5.1B. Personnel Responsible for Collection and Analysis of CBLS Data	
Stella Chuke, MBBS, MPH Epidemiologist, LPPEHTB, NCEH, CDC Email: slc7@cdc.gov Tel: 770-488-3475	Kathryn Egan, PhD, MPH, MS Epidemiologist, LPPEHTB, NCEH, CDC Email: nky9@cdc.gov Tel: 404-718-5778
Joseph Courtney, PhD Senior Epidemiologist/Team Lead for Surveillance and Epidemiology, LPPEHTB, NCEH, CDC Email: hzc2@cdc.gov Tel: 404-498-3282	
Table B.5.2A. Personnel Responsible for ABLES Method and Design	
Rebecca Tsai, PhD, MPH Project Officer, NIOSH, CDC Email: vht5@cdc.gov Tel: 513-841-4398	Marie Sweeney, PhD, MPH Branch Chief, NIOSH/DSHEFS/SB/CDC Email: mhs2@cdc.gov Tel: 513-541-4102
Table B.5.2B. Personnel Responsible for Collection and Analysis of ABLES Data	
David Wall, BS, MA	Rebecca Tsai, PhD, MPH

Information Technology Specialist, NIOSH, CDC Email: dkw0@cdc.gov Tel: 513-841-4331	Project Officer, NIOSH, CDC Email: vht5@cdc.gov Tel: 513-841-4398
Scott Henn, MS Industrial Hygienist, NIOSH, CDC Email: ajn4@cdc.gov Tel: 513-841-4173	John Lu, MS Statistician, NIOSH, CDC Email: czl5@cdc.gov Tel: 513-841-4565

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Pertowski C. Lead Poisoning. From Data to Action: CDC’s Public Health Surveillance for Women, Infants, and Children. Atlanta, GA: U.S. Department of Health and Human Services. 1994.

National Conference of State Legislatures (NCSL). State Lead Poisoning Prevention Statutes. Denver: 2010 March. Compiled by Farquhar D. Available at: <http://www.ncsl.org/documents/enviro/stlaws10.pdf>

National Institute for Occupational Safety and Health (NIOSH). Data into action. NIOSH blood lead surveillance program contributes to a decline in national prevalence rates. U.S. Department of Health and Human Services, July 2012. Available at: <https://www.cdc.gov/niosh/docs/2012-164/pdfs/2012-164.pdf>