



HEALTHY HOMES AND LEAD POISONING PREVENTION PROGRAM'S (HHLPPP) DATA SYSTEMS

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State Web Site:	http://chfs.ky.gov/dph/mch/poisoning.htm
National Web Site:	http://www.cdc.gov/nceh/lead/

Sources of Information for the Database

Kentucky is currently working with the Centers for Disease Control and Prevention (CDC) Healthy Homes and Lead Poisoning Prevention Branch in attaining the Healthy Homes Lead Poisoning Surveillance System (HHLPSS). HHLPSS will enable the Kentucky Healthy Homes and Lead Poisoning Prevention Program (HHLPPP), to store and access all the data from one system. At present, the lead Case Management, Environmental Risk Assessment and the blood lead lab data are housed in 3 different systems. The Case management database houses client/case information, as well as blood lead levels. The Environmental Risk Assessment database houses data from certified risk assessment reports, including lead hazards found, for those children identified as having lead poisoning. The blood lead lab data system holds all of the lab data. The new system, HHLPSS, will enable Kentucky to enter housing data collected through environmental housing investigations which will include lead and other identified housing-related health hazards.

Patients are tested starting at age 6 months if they are found to have a potential lead hazard risk. At-risk patients are defined per KRS 211.900 to mean all children seventy-two (72) months of age and younger and pregnant women who reside in dwellings or dwelling units which were constructed and painted prior to 1978, or reside in geographic area defined by the cabinet as high risk (Targeted Zip Codes), or possess one (1) or more risk factors identified in a lead poisoning verbal risk assessment. Blood lead tests are administered at local health departments, private physicians' offices and hospitals throughout the state as part of the primary preventive screening efforts for lead poisoning. Secondary preventive efforts for elevated blood lead levels $\geq 5\mu\text{g}/\text{dL}$ including case management interventions work to decrease blood lead levels to $< 5\mu\text{g}/\text{dL}$.

Blood lead samples are analyzed either by contracted laboratories or an in-house portable lead laboratory. All laboratories in Kentucky, including those using the in-house portable machine, which receive and analyze blood lead levels are required to report all blood lead results $> 2.3\mu\text{g}/\text{dL}$ to the Cabinet as mandated by KRS 211.902. The blood lead results should be reported electronically to the Cabinet for Health and Family Services (CHFS) within 7 days. Results should also be reported directly to the provider who sent the sample for analysis. Approximately 98% of all blood lead levels received by HHLPPP are electronic. The current surveillance system, as well as the new system (HHLPSS), are considered part of KY HHLPPP and are funded through the Maternal and Child Health (MCH) Division. Ongoing technical support is provided and funded through MCH.

Description of the Data Collected

The Case Management system collects data including, but not limited to, the following: patient name, full address, date of birth, phone number, guardian's name, relation and occupation (if applicable), date of initial and confirmatory blood lead draw, blood lead test results, blood lead test type (venous or capillary), date received by HHLPPP, provider and insurance information, assigned case manager and health department, and other demographic and case specific information.

The Risk Assessment/Environmental system collects housing specific data (i.e. full address, year built, ownership type, and type of dwelling) on homes or structures that have been assessed by certified risk assessors. The Risk Assessment Database also stores all the environmental measurements taken during the risk assessment. Some of these measurements include samples from paint, floors, dust, windows, soil, water, etc. This housing data is used to report to CDC.

The blood lead lab data system collects data including, but not limited to, the following: patient name, full address, date of birth, phone number, blood lead test results, blood lead test type (venous or capillary), sample date taken, provider and insurance information, testing lab, and other demographic information.

Strengths of the Data

Data is received in a timely manner and that allows for accurate reporting. With current electronic data submission nearing 100% there is very little manual data entry from outside labs. However, states outside of Kentucky who voluntarily report Kentucky residence blood lead levels continue to be identified resulting in an influx of lead reports that need to be manually entered. The current system is population-based rather than relying on a sampling strategy.

Specific Uses of Information

- Ensure elevated blood lead level follow-up care is performed in a timely manner.
- An elevated blood lead case review history to help identify and assure child is prevented access to potential lead hazards.
- Ensure continual decrease in the blood lead level
- Submit quarterly reports to the CDC on child and adult blood lead levels
- Complete annual reports and performance evaluations
- Fulfill data requests
- Estimating the population of lead poisoned children in the state of Kentucky
- Estimating a populations' risk of lead poisoning based on their specific demographic and address information

The CDC utilizes the data to assemble a national surveillance database.

Data Limitations

Incompleteness of data:

a.) Data submitted lacks information necessary for analysis. Names, addresses and date of birth for example are absolutely necessary for entry into the system. Patient records with incorrect data are entered as is and can cause duplication within the system.

b.) There is a lack of testing and reporting despite federal and state mandates. As a result, the reported screening numbers are subject to non-coverage bias.

No analysis capabilities:

Data must be extracted out of all 3 data systems and placed into a capable program such as Access or SAS in order to perform any type of query. This causes the data analyzed to be a picture of the data on the specific download date and not on a real time basis.

System Evaluation

The data collected are based on CDC and NIOSH guidelines. The data are subject to computerized edit checks when entered.

Data Set Availability

The fully identified data sets are not available to the public. A data request can be submitted to the HHLPPP data contact if specific data needs are identified. All data requests that are Health Insurance Portability and Accountability Act (HIPAA) compliant will be met. Data are generally given in aggregate form by county level. Tables and reports are available on the HHLPPP website.

Data Release Policy

All data requests that are HIPAA compliant will be met. The datasets in their entirety are not available to the public. Data are generally given in aggregate form by county level. However, if the total number of lead poisoned children is less than 5 for a county the exact count is not presented to help protect the identity of the client.

Data Publications

HHLPPP currently reports both adult and child blood lead data to the National Institute for Occupational Safety and Health (NIOSH) (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5326a2.htm>) and the Centers for Disease Control and Prevention (CDC), respectively in the form of quarterly and bi-annual data submissions. The CDC website provides statistical information for the state of Kentucky based on the reports received from the KY HHLPPP <http://www2.cdc.gov/nceh/lead/census90/house11/house11.htm>. Additional reports and data are available on Kentucky HHLPPP's website <http://chfs.ky.gov/dph/mch/poisoning.htm>.

Suggested Data Citation

Kentucky Department for Public Health, *Healthy Homes and Lead Poisoning Prevention Program Data*, Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, [data year].

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