

**STATE OF IOWA
STRATEGIC PLAN FOR THE ELIMINATION OF
CHILDHOOD LEAD POISONING IN IOWA**

JULY 2004

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CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) MANDATE

CDC's 2003 program announcement for childhood lead poisoning prevention programs requires each program to write a statewide or jurisdiction-wide strategic plan to eliminate childhood lead poisoning as a major public health problem by 2010. This must be completed by June 30, 2004. CDC's guidance for developing the plan is listed below.

CDC Guidance for Developing a Jurisdiction-Wide Strategic Plan for the Elimination of Childhood Lead Poisoning

Introduction: The development of a strategic plan to eliminate childhood lead poisoning as a public health problem is an important tool in helping communities focus efforts and resources towards a common goal. It is also instrumental in gauging progress and helping leaders to determine when and if they should adjust activities and refocus resources to ensure success of the overall goal of elimination.

1. The applicant must establish an advisory workgroup or committee (or expand the scope of its current advisory group) to develop and implement a jurisdiction-wide childhood lead poisoning elimination plan. The group should also serve to monitor the progress of the elimination plan, and to leverage resources and enhance cooperative efforts towards this goal.
 - a. This committee/workgroup should include representation from the various stakeholders who will be involved in solving the jurisdiction's lead poisoning problem. They should include, but not be limited to:
 - Public Health Departments.
 - State Medicaid agency.
 - Housing programs.
 - Real estate and landlord organizations.
 - Other programs focused on children who are also likely to be at high risk for lead poisoning (e.g., Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Immunizations, Asthma Control, Head Start and Healthy Start).
 - Grassroots advocacy groups focused on most at-risk populations.
 - Educators.
 - Community-based organizations focused on children's health.
 - Managed care organizations.
 - Nursing and/or case management representatives.
 - b. Member representatives must have sufficient authority to commit staff and resources to the elimination work plan.
 - c. The committee should consider developing subcommittees specifically to develop goals, objectives, and activities for each program component.
2. At a minimum, the elimination plan should contain:
 - a. A Mission Statement.

- b. A Statement of Purpose.
- c. Background on the jurisdiction's childhood lead poisoning problem.
- d. A detailed assessment of the lead poisoning problem that is specific to the jurisdiction. This assessment should be based upon all available data sources (e.g., blood lead surveillance, housing, Medicaid, tax assessor, census, etc.) that may assist the committee in determining the approximate number of children under six who have elevated blood lead levels. This estimate will be used to help measure the change in the number of children at risk as the applicant moves towards elimination.
- e. A Strategic Work Plan
 - Develop five-year (long-term) goals that address, at a minimum, the key areas of Surveillance, targeting high-risk populations (to include Medicaid-eligible children), and Primary Prevention.
 - Support each five-year goal with 12-month (annual) objectives. The objectives should be detailed sufficiently to demonstrate that they are specific, measurable, achievable, realistic, and time-phased.
 - Include a plan to annually evaluate progress towards elimination. This plan should specify who will conduct the evaluation, what data sources and other information will be used to assess progress and how the information will be used, a timeline for conducting and presenting annual evaluations to the workgroup and CDC, and how the evaluation results will be used to improve progress towards elimination.
 - Programs will establish a substantial target for the annual reduction in percent of Medicaid children with elevated blood lead levels using the above data and estimates. This target should be included in the Elimination Work Plan.

Iowa's Response to the CDC Mandate

The Iowa Department of Public Health (IDPH) Childhood Lead Poisoning Prevention Program responded to this mandate by asking volunteers to serve on a committee. Most of the committee members were selected in February 2003. Additional committee members were added in January 2004. IDPH gathered background information and communicated with committee members via e-mail and telephone from April 2003 to January 2004. The first meeting was held over the Iowa Communications Network (ICN) on February 23, 2004. The committee members are listed on the next two pages.

STRATEGIC PLANNING COMMITTEE FOR THE ELIMINATION OF CHILDHOOD LEAD POISONING IN IOWA

Programs for Children

Susan Pohl, IDPH WIC program
 Lucia Dhooge, IDPH Title V Child Health Program
 Kay Rankin, MD, Drake Head Start
 Paula Halbur, Child Care Resource & Referral of Southwest Iowa
 Shanell Wagler, Iowa Community Empowerment
 Cheryl Jones, Early Access (Iowa Department of Education)
 Mary Schertz, Early Childhood Special Education (Iowa Department of Education)

Medicaid and Insurance

Sally Nadolsky, Iowa Department of Human Services Medicaid Program
 Anna Ruggle, *hawk-i* (State Child Health Insurance Program)

Local Childhood Lead Poisoning Prevention Programs (CLPPPs)

Mike Prideaux, Black Hawk County CLPPP
 Mary Rose Corrigan, City of Dubuque CLPPP
 Ann Olson, Linn County CLPPP
 Deb Bomgaars, Northwest Iowa CLPPP
 Tina VanDenBerg, City of Ottumwa CLPPP
 Rick Fleshin, Eastern Iowa CLPPP
 Sarah Wanless, Winneshiek County Public Health
 Tammy Loussaert, Scott County Health Department

Local Government and Community-Based Organizations and Environmental Firms

Anton Till, Housing Director, Area XV Regional Planning Commission, Ottumwa
 Karen Knapp, City of Cedar Rapids
 Sergio Hernandez, The Home Connection, Des Moines
 Steve Harfst, Interfaith Housing, Davenport
 Aaron Wolfe, City of Marshalltown Housing Office
 Vicki Stricker, Section 8 Housing Inspector, Mason City Rental Assistance
 Barb Carlson, Northwest Iowa Regional Housing Authority, Spencer
 Dan Stroda, Ottumwa Housing Authority
 Dave Keidel, City of Waterloo Community Development
 Liz Kemp, MSA Professional, Dubuque
 Mary Ann Humpal, Northeast Iowa Community Action Agency

State Housing Agencies

Terry Vestal, Iowa Department of Economic Development
 Scott Johnson, Iowa Finance Authority

Property Owner Interests

Paul McLaughlin, Iowa Association of Realtors
Doug Slechta, Landlord, Sioux City
Dan Lubell, Landlord, Bettendorf
Ron Gruenhagen, Landlord, Walcott
Tony Jacobson, Property Manager, Fort Dodge
Airlin De Vos, Landlord, Sheldon
Daryl Waugh, Landlord, Clinton
David Jacobsen, Landlord, Avoca
Roger Wahl, Landlord, Council Bluffs

State Lead Programs

Brian McPartland, Bureau of Lead Poisoning Prevention
Bruce Hokel, IDPH Adult Blood Lead Epidemiology and Surveillance Program
Kane Young, IDPH Lead Professional Certification and Pre-renovation Notification Programs
Mindy Rohlfs, IDPH Operation LEAP Program
Dave Ortega, IDPH Childhood Surveillance Program
Matt Lozier, IDPH Childhood Lead Poisoning Prevention

MISSION STATEMENT: The mission of this committee is to eliminate childhood lead poisoning as a major public health problem in Iowa by reducing the number of children identified with blood lead levels greater than or equal to 10 micrograms per deciliter from the current estimated 12,041 to 0.

PURPOSE: The purpose of this committee is to develop and implement a plan to eliminate childhood lead poisoning as a major public health problem in Iowa. The committee will monitor progress towards the goals and objectives in the plan, work to identify resources, and seek cooperation from other groups to achieve the goals. Finally, the committee will review the goals and objectives regularly and make revisions based on current data and activities.

BACKGROUND ON CHILDHOOD LEAD POISONING

Lead poisoning is a disease that occurs when children have too much lead in their bodies. Children are identified as lead-poisoned through a blood test. A child is considered to be lead-poisoned at a blood lead level of 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$). CDC chose this level because it is the level at which health effects can start to become significant. In addition, at this level, CDC recommends that action be taken to keep the blood lead level from increasing.

Health Effects of Lead Poisoning

Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of 6 years. At very high blood lead levels, children can have severe brain damage or even die. At blood lead levels as low as 10 $\mu\text{g}/\text{dL}$, children's intelligence, hearing, and growth are affected. This damage can be stopped if a child's lead exposure is reduced. However, the damage cannot be reversed. A number of studies have estimated that a child's IQ will drop by one to three points for every increase of 10 $\mu\text{g}/\text{dL}$ in the child's blood lead level. In 2002, researchers estimated that the average decrease in lifetime earnings of a child with a blood lead level of 10 $\mu\text{g}/\text{dL}$ would be at least \$40,000 and that the average decrease for a child with a blood lead level of 20 $\mu\text{g}/\text{dL}$ would be at least \$80,000.

(Environmental Pollutants and Disease in American Children: Estimates of Morbidity, Mortality, and Costs for Lead Poisoning, Asthma, Cancer, and Developmental Disabilities. PJ Landrigan, DB Schechter, JM Lipton, MC Fahs, and J Schwartz. Environmental Health Perspectives, Volume 110, Number 7: 721-728.)

Causes of Lead Poisoning

In Iowa, most cases of lead poisoning are caused by lead-based paint. Lead-based paint in a home becomes a lead hazard as it deteriorates and lead-based paint chips end up on the floors and in window wells throughout the home as well as in the soil around the exterior of a home. The paint chips also crumble and become part of the dust on the floors and window troughs. Most of Iowa's older homes contain lead-based paint. Young children who live in older homes become lead-poisoned when they put paint chips or exterior soil in their mouths or when they get house dust and soil on their hands and put their hands in their mouths.

THE CHILDHOOD LEAD POISONING PROBLEM IN IOWA

A number of studies show that the number of lead-poisoned children is highest in areas with a large amount of older housing, a high rate of children in poverty, and a large minority population. In areas where the rate of children living in poverty or the minority population are high, older housing is usually in poorer condition and contains more lead-based paint hazards than such housing in areas where the child poverty rate or the minority population are lower. This section describes the prevalence of these conditions in Iowa. Because Iowa's health services, including childhood lead poisoning prevention, are provided at the county level, these data are analyzed at the county level.

Housing Data

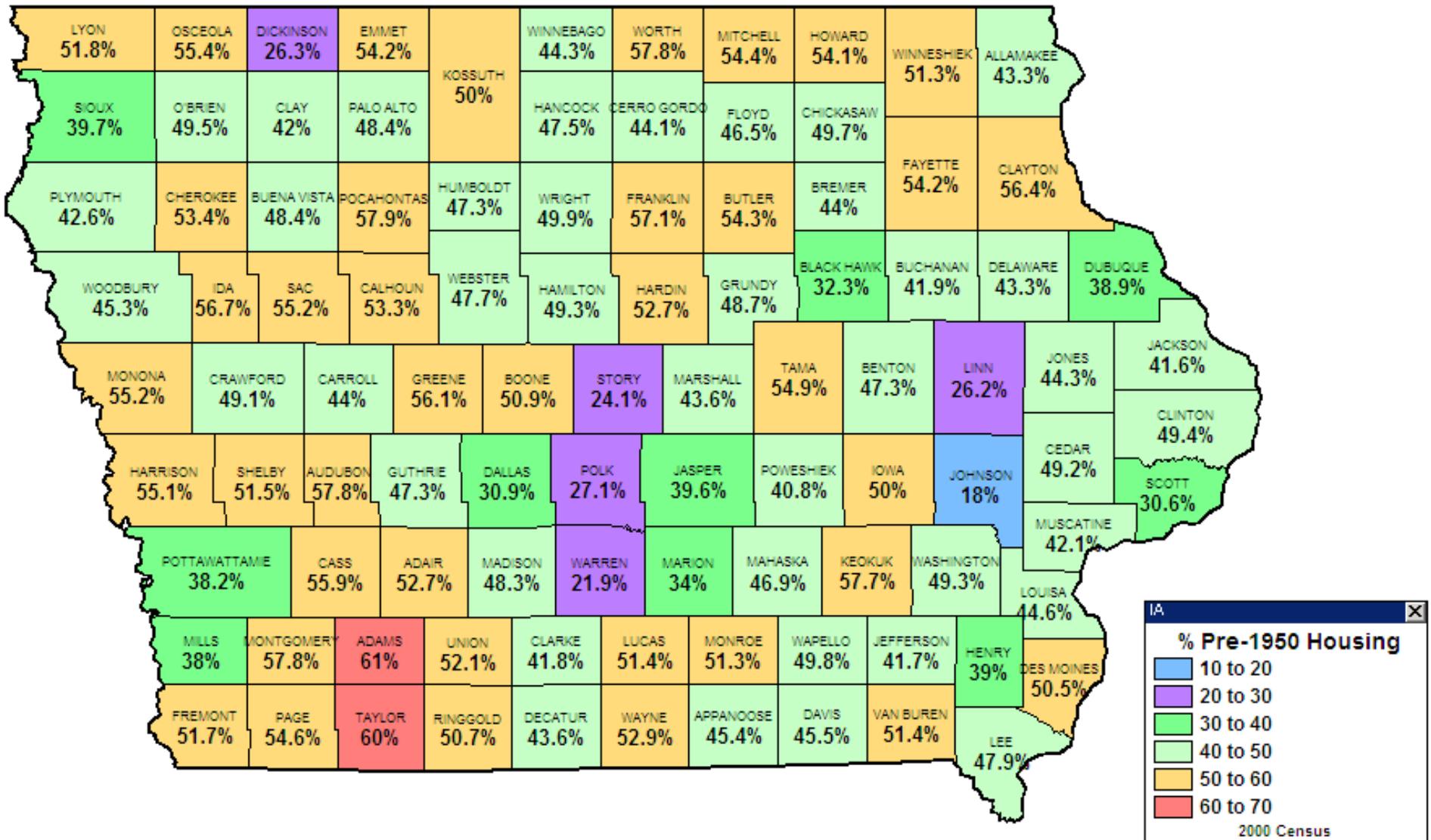
Although lead-based paint was not banned until 1978, and most federal regulations apply to housing built before 1978, most cases of lead poisoning in Iowa are associated with homes built before 1960. Some homes that were built between 1950 and 1960 contain lead-based paint hazards, but CDC guidance recommends using pre-1950 housing to identify the housing that is at the great risk of having lead-based paint hazards. Therefore, while IDPH advises people to be concerned about lead-based paint hazards in pre-1960 housing, pre-1950 housing is used for statistical analyses.

Housing data from the 2000 census show that 39.3 percent of the housing in Iowa (483,849 units) was built before 1950. This is substantially greater than the national average of 22.3 percent. Iowa ranks fifth among the states in the percentage of housing built before 1950 and third among the states in the percentage of housing built before 1940. Two of Iowa's faster-growing counties are the only ones with less than the national average of 22.3 percent of pre-1950 housing. Table 1 shows the percentage of housing built before 1940, the percentage of housing built before 1950, and the percentage of pre-1950 housing that is rental. It is notable that, in Iowa, only 26.1 percent of the pre-1950- housing is rental. By contrast, in the District of Columbia, New York, Massachusetts, and Rhode Island, nearly 50 percent of the pre-1950 housing is rental.

Table 1 – Characteristics of Iowa Housing Compared to Other States

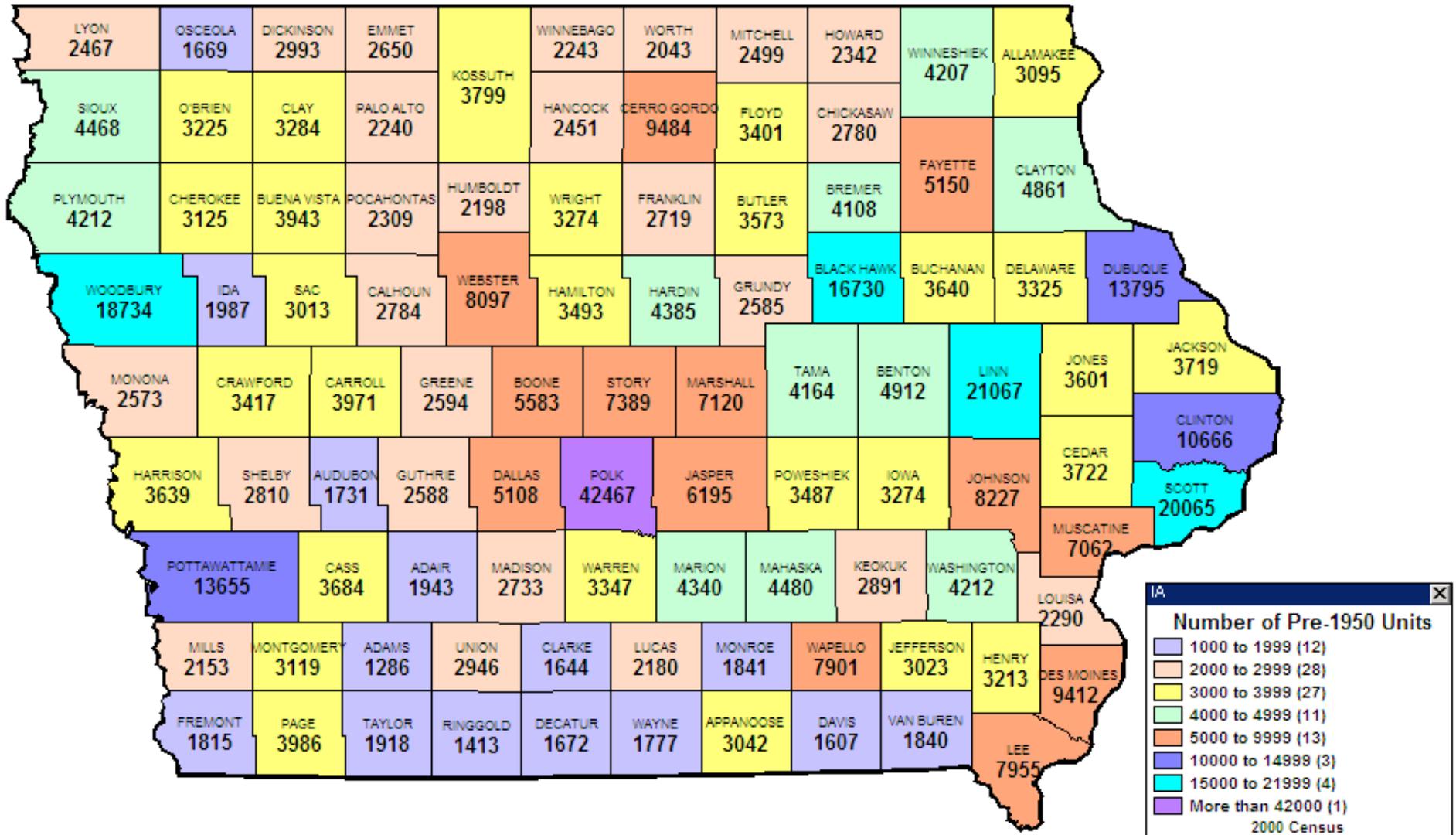
State	% Pre-1940 housing units	% Pre-1950 housing units	% Of pre-1950 housing that is rental
Illinois	22.6	31.8	37.5
Nebraska	25.3	32.3	30.0
Vermont	30	34.5	39.2
Maine	29.1	35.8	35.8
Rhode Island	29.4	39.2	46.3
Iowa	31.6	39.3	26.1
Pennsylvania	30.3	40.3	31.3
Massachusetts	34.5	42.8	43.6
New York	31.2	43.1	52.1
District of Columbia	34.6	51.4	46.7
National Average	15	22.3	37.3

This map shows the percentage of housing that was built before 1950 for each county.



% Pre-1950 Housing -- State Average = 39.3%

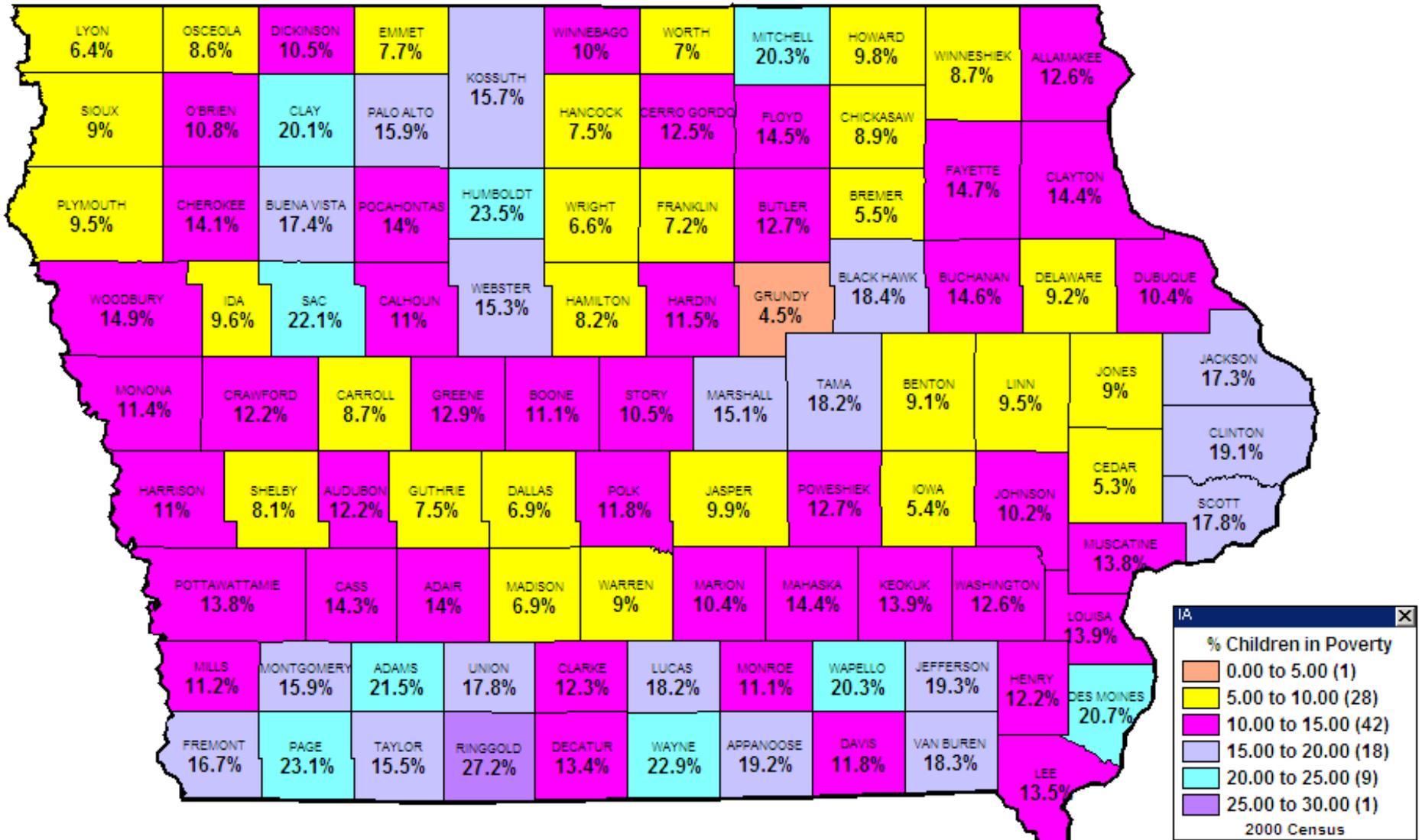
This map shows the number of pre-1950 housing units in each county.



Number of Pre-1950 Housing Units by County -- State Total = 483,489 Units

Poverty Data

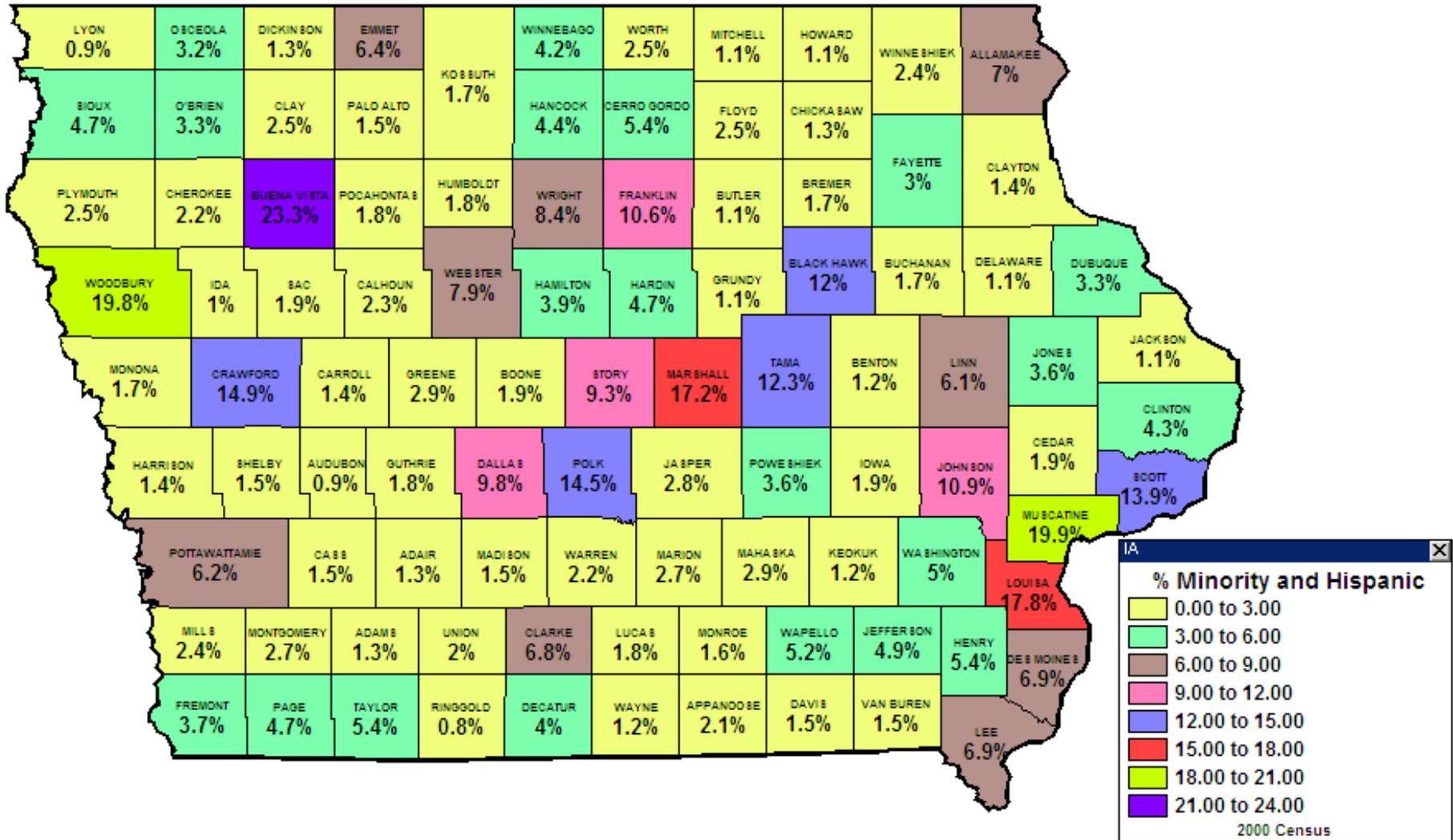
According to 2000 census data, Iowa's rate of poverty in children under the age of 6 years is 12.9 percent. The poverty rate by county ranges from 4.5 to 27.2 percent.



% Children in Poverty -- State Average = 12.9%

Minority and Hispanic Population

According to the 2000 census, Iowa's combined minority and Hispanic population is 7.8 percent, or three times greater than the 2.6 percent shown by 1990 census data. By county, the combined minority and Hispanic population ranges from 0.7 to 23.3 percent.



Combined % Minority and Hispanic Population -- State Average = 7.8%

Prevalence of Childhood Lead Poisoning in Iowa

Since 1992, the IDPH has recommended that all children under the age of six years be tested for lead poisoning. In addition, state and federal laws require that all children covered by Medicaid be tested for lead poisoning. Iowa law requires the results of all blood lead testing to be reported to IDPH. Therefore, IDPH knows how many children have been tested for lead poisoning and how many have been identified with lead poisoning.

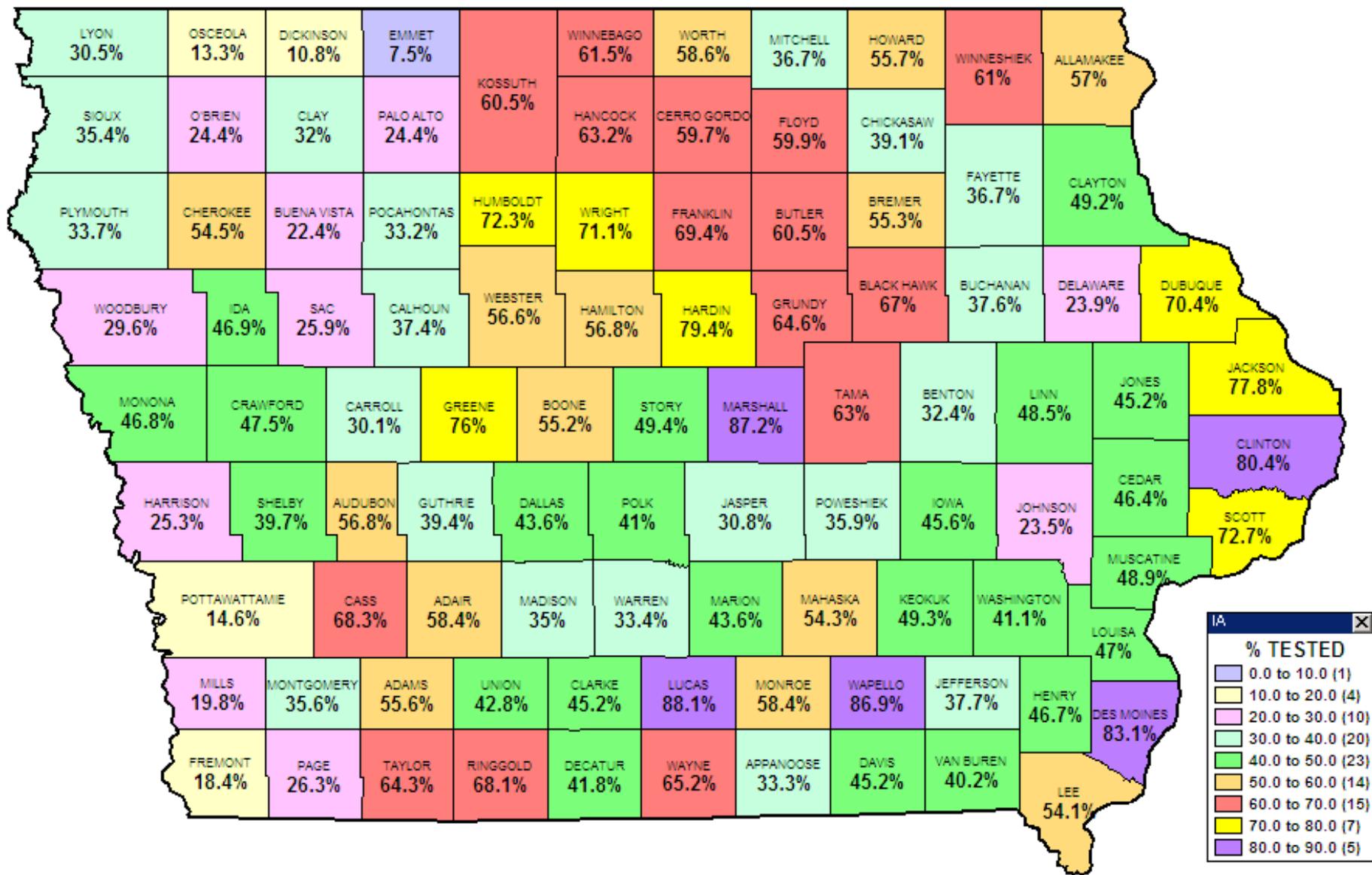
IDPH reports the rate of blood lead testing among children and the prevalence of lead poisoning by birth cohort. A birth cohort is a group of children born during a given time period. IDPH uses this method because it is the only method that allows both the percentage of children who have been tested and the percentage that has been identified as lead-poisoned to be reported. It is important to consider both of these rates in assessing the childhood lead poisoning problem in Iowa. For example, if the data show that no lead-poisoned children have been identified in a particular county, but also show that few children have been tested, then it is not possible to say that childhood lead poisoning is not a problem in the county. On the other hand, if most of the children in a county have been tested for lead poisoning and no children have been identified as lead-poisoned, then it may be accurate to say that childhood lead poisoning is not a problem in the county.

Among the group of Iowa children born from January 1, 1995 through December 31, 1997, 48.3 percent had at least one blood lead test before the age of 6 years. Statewide, the prevalence of elevated blood lead levels among this group of children was 9.4 percent. This is more than four times the national average of 2.2 percent.

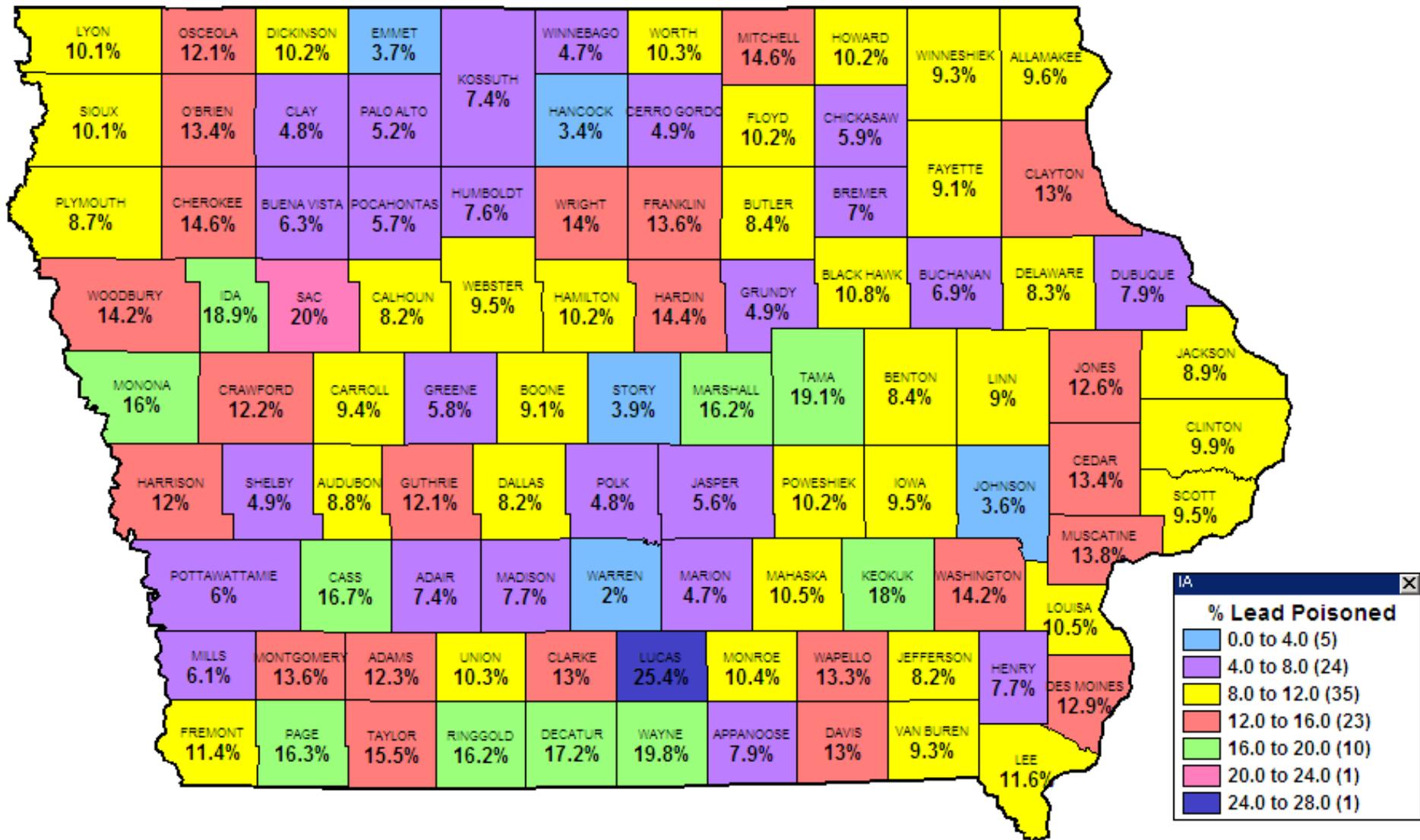
CDC requires IDPH to calculate the rate of testing and the prevalence of poisoning in children covered by the Medicaid program (Medicaid children) and in children who are not covered by the Medicaid program (non-Medicaid children). For the purpose of this calculation, a Medicaid child is a child who has ever been covered by Medicaid, and a non-Medicaid child is a child who has never been covered by Medicaid.

The testing rate among Medicaid children born from January 1, 1995 through December 31, 1997, was 46 percent, compared to 51.5 percent for non-Medicaid children. The prevalence of lead poisoning among Medicaid children born from January 1, 1995 through December 31, 1997, was 13.4 percent, compared to 5 percent for non-Medicaid children.

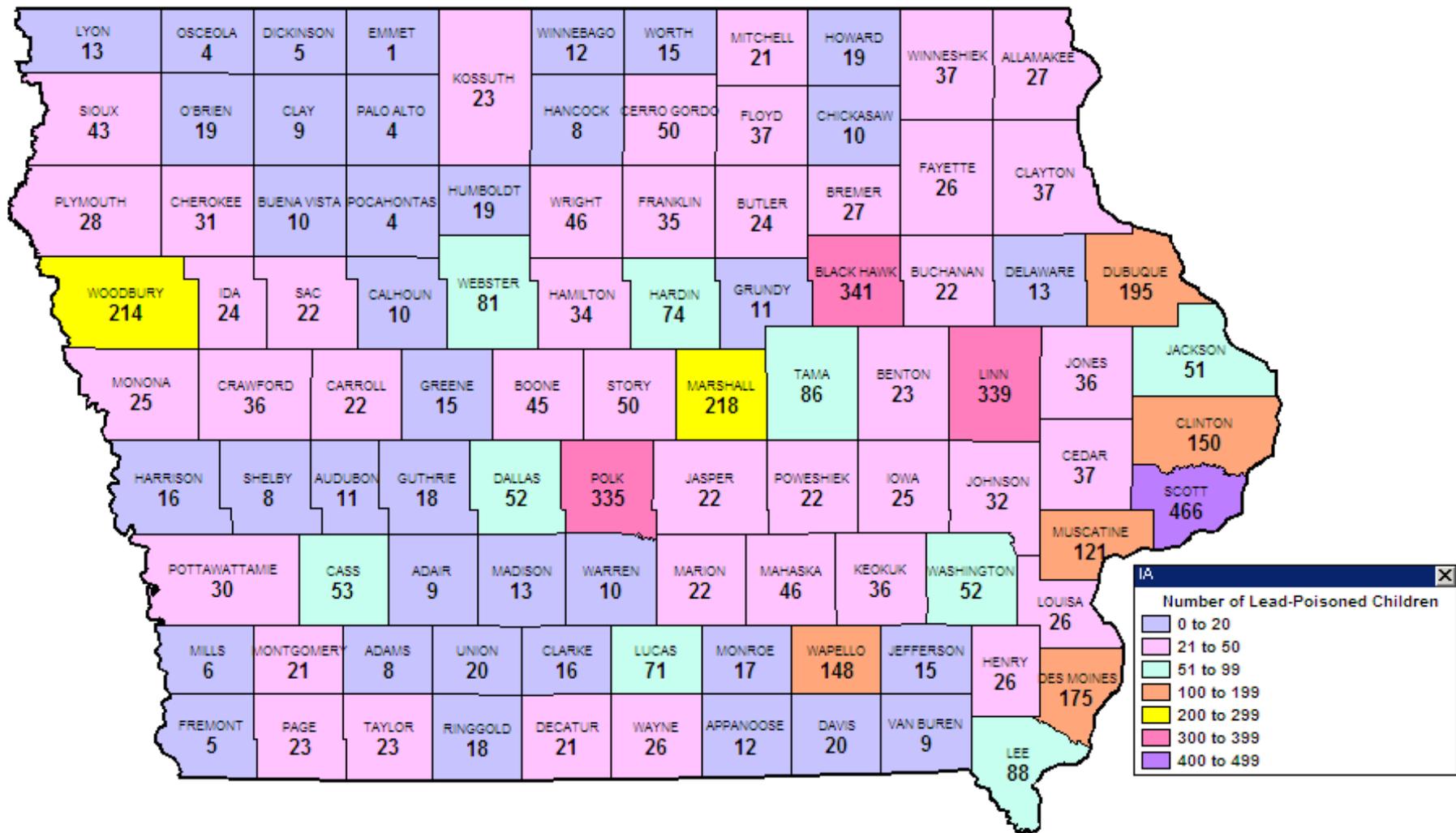
The map on page 12 shows the percentage of children in each county who were treated for lead poisoning. The map on page 13 shows the percentage of children in each county who were tested and identified as lead-poisoned. The map on page 14 shows the number of children in each county who were identified as lead-poisoned.



% Children Born in 1995-1997 and Tested for Lead Poisoning -- State Average = 48.3%



% Children Born in 1995-1997 Tested and Identified as Lead Poisoned -- State Average = 9.4%

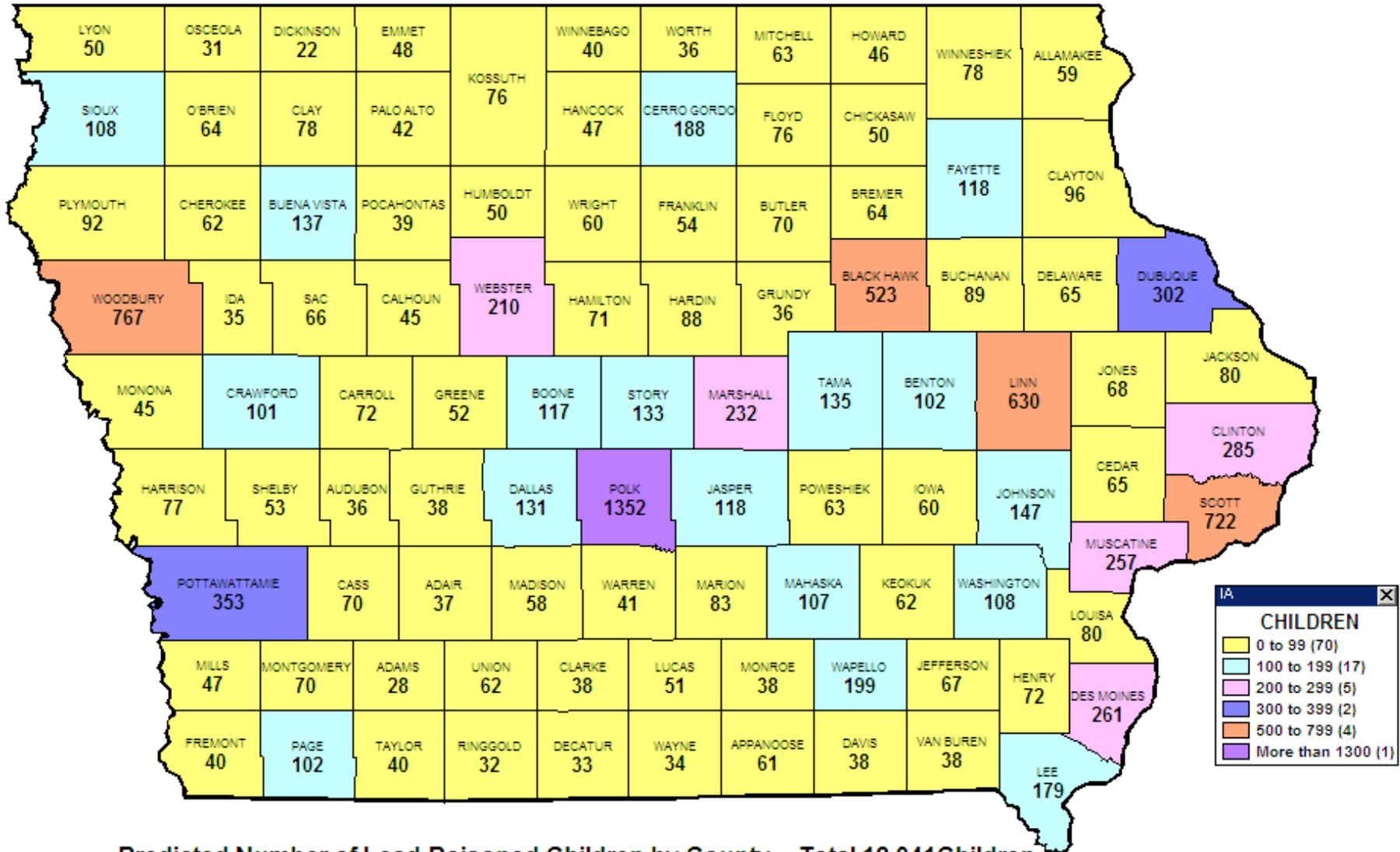


Number of Children Born in 1995-1997 Tested and Identified as Lead-Poisoned -- State Total = 5,011

Estimating the Number of Lead-Poisoned Children in Iowa

One of the required components of this strategic plan is to estimate the number of lead-poisoned children in Iowa. This estimate is to be used to help measure the change in the number of lead-poisoned children as the state of Iowa moves toward the elimination of childhood lead poisoning. IDPH has done this by performing an analysis of variance relating the percentage of children identified with confirmed elevated blood lead levels by county to the following factors: percentage of pre-1950 housing, percentage of children under the age of 6 years in poverty, and the combined percentage of minority and Hispanic population. The p-value for the percentage of pre-1950 housing was highly significant (less than 0.0001). The p-value for the percentage of children under the age of 6 years living in poverty was significant (0.02). The p-value for the percentage of combined minority and Hispanic population was nearly significant (0.06). IDPH chose to leave this variable in the model because it was important in explaining the higher levels of prevalence in the counties that had higher percentages of combined minority and Hispanic population. IDPH then used the results of the analysis of variance to calculate a predicted prevalence for each county and for the state of Iowa. The predicted prevalence was multiplied times the number of children under the age of 6 years in each county according to the 2000 census to determine the estimated number of lead-poisoned children in each county and in the state of Iowa.

IDPH estimates that there are 12,041 lead-poisoned children in the state of Iowa. The map on page 16 shows the estimated number of lead-poisoned children in each county. IDPH is also required to estimate the number of Medicaid and non-Medicaid children that are lead-poisoned. Based on current prevalence trends, IDPH estimates that 9,031 of these are Medicaid children and 3,010 of these children are non-Medicaid children.



Predicted Number of Lead-Poisoned Children by County -- Total 12,041 Children

Public Use Microdata Sample (PUMS) Data

Additional data are available from the 5 percent 2000 Census Public Use Microdata Sample (PUMS) file for Iowa. This file contains the data for each household that filled out the longer census form that was completed by 5 percent of the population. The 5 percent sample data can be aggregated for a state and for state subdivisions called Public Use Microdata Areas (PUMAs). Each PUMA has at least 100,000 persons. In Iowa, the PUMAs are based on counties. Polk County is the only Iowa county that contained more than one PUMA. The data in this file can be analyzed based on the number of children under the age of 6 years who live in pre-1950 housing or based on the number of pre-1950 houses where at least one child under the age of 6 years lives. The data can be further analyzed by housing tenure (owner-occupied versus rental) and by whether the child lives in poverty.

Data Based on the Number of Housing Units

There are 60,537 pre-1950 houses with at least one child under the age of 6 years; 40,788 are owner-occupied houses, and 19,749 are rental houses. There are 9,005 pre-1950 houses with at least one child under the age of 6 years living in poverty; 3,931 are owner-occupied houses and 5,074 are rental houses.

Data Based on the Number of Children

There are 83,330 children under the age of 6 years living in pre-1950 houses; 57,359 of the children live in owner-occupied houses, and 25,971 of the children live in rental houses. There are 12,830 children under the age of 6 years living in poverty in pre-1950 houses; 5,839 of these children live in owner-occupied houses, and 6,991 live in rental houses.

Data at the PUMA Level

IDPH calculated the following for each PUMA from the 5 percent PUMS file for Iowa:

- Number of pre-1950 owner-occupied and rental houses with at least one child under the age of 6 years.
- Number of pre-1950 owner-occupied and rental houses with at least one child under the age of 6 years living in poverty.
- Number of children under the age of 6 years living in pre-1950 owner-occupied and rental houses.
- Number of children under the age of 6 years living in poverty who live in pre-1950 owner-occupied and rental houses.

These data are shown in Table 2 on page 18 for each PUMA in Iowa.

Table 2
State of Iowa
5 Percent PUMS Data for Children Under the Age of 6 Years, Poverty Status, Pre-1950 Housing, and Housing Tenure

PUMA	Number of Pre-1950 Houses with Children Under Age 6 Years			Number of Pre-1950 Houses with Children Under Age 6 Years Living in Poverty			Number of Children Under Age 6 Years Living in Pre-1950 Housing			Number of Children Under Age 6 Years Living in Poverty in Pre-1950 Housing			Predicted Lead-Poisoned Children
	Total	Owner-Occupied	Rental	Total	Owner-Occupied	Rental	Total	Owner-Occupied	Rental	Total	Owner-Occupied	Rental	
100	3225	2308	917	321	117	204	4367	3119	1248	530	200	330	580
200	2785	1978	807	439	234	205	4589	3623	966	668	366	302	580
300	4658	3434	1224	438	162	276	5738	4517	1221	546	245	301	706
400	2117	1312	805	265	42	223	2865	1710	1155	322	39	283	523
500	4700	2873	1827	752	229	523	6336	4070	2266	1055	376	679	797
600	5263	3599	1664	532	318	214	7018	4716	2302	662	385	277	856
700*	626	351	275	26*	0*	26*	738	458	280	13*	0*	13*	147
800	2697	1861	836	525	165	360	3517	2599	918	670	267	403	630
900	2683	1835	848	445	303	142	3518	2382	1136	594	348	246	475
1000	3406	2177	1229	345	177	168	4653	3041	1612	462	241	221	599
1100	3055	2125	930	444	238	206	4245	2893	1352	607	365	242	767
1200	4689	3196	1493	810	366	444	6443	4302	2141	1240	641	599	812
1300	4481	2898	1583	892	469	423	6404	4166	2238	1469	822	647	965
14-1500	5494	3805	1689	1058	565	493	7360	5266	2094	1480	799	681	1352
1600	2255	1692	563	285	91	194	3176	2244	932	399	89	310	381
1700	2349	1646	703	254	85	169	3134	2342	792	288	135	153	300
1800	3740	2533	1207	591	233	358	5030	3388	1642	933	355	578	849
1900	2314	1165	1149	583	137	446	4199	2523	1676	892	166	726	722
Totals	60537	40788	19749	9005	3931	5074	83330	57359	25971	12830	5839	6991	12041

*Only one household met the selection criteria in PUMA 700. Different weights are assigned to the house and to the child, resulting in data for this PUMA that show a larger number of houses than children.

Statistical Analysis

IDPH performed an analysis of variance relating the estimated number of lead-poisoned children for each PUMA to each of the variables in Table 2 on page 18. These results are shown in Table 3 and Table 4 below.

Table 3
Data Based on the Number of Housing Units

	Number of Pre-1950 Houses with Children Under Age 6 Years			Number of Pre-1950 Houses with Children Under Age 6 Years Living in Poverty		
	Total	Owner-Occupied	Rental	Total	Owner-Occupied	Rental
p-value	<0.0001	0.231	0.025	<0.0001	0.0002	0.0051
Adjusted R ²	0.70			0.83		

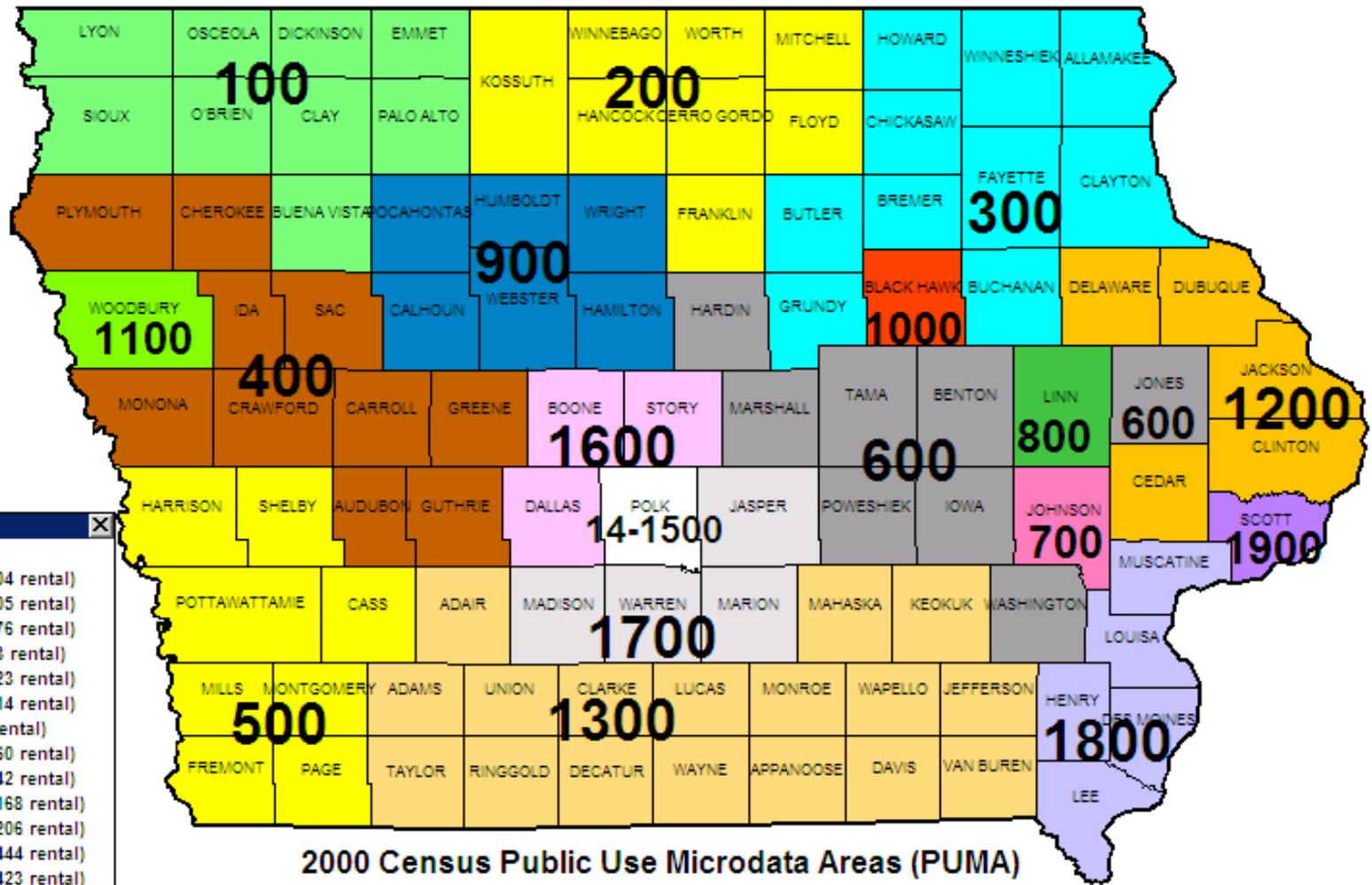
The p-values for the number of pre-1950 homes with children under the age of 6 years and the number of pre-1950 homes with children under the age of 6 years living in poverty were both highly significant (less than 0.0001). The Adjusted R² represents the proportion of the variation in the estimated number of lead-poisoned children that can be attributed to the model rather than to random error. The Adjusted R² was higher for the number of pre-1950 houses with children under the age of 6 years living in poverty than for the number of pre-1950 houses with children under the age of 6 years (0.83 versus 0.70). The p-values for the number of owner-occupied and rental pre-1950 houses with children under the age of 6 years living in poverty were much more significant than the p-values for the number of owner-occupied and rental pre-1950 houses with children under the age of 6 years.

Table 4
Data Based on the Number of Children

	Number of Children Under Age 6 Years Living in Pre-1950 Housing			Number of Children Under Age 6 Years Living in Poverty in Pre-1950 Housing		
	Total	Owner-Occupied	Rental	Total	Owner-Occupied	Rental
p-value	<0.0001	0.02	0.05	<0.0001	0.0017	0.0261
Adjusted R ²	0.76			0.76		

The p-values for the number of children under the age of 6 years living in pre-1950 housing and the number of children under the age of 6 years living in poverty in pre-1950 housing were both highly significant (less than 0.0001). The Adjusted R² was the same for each model. The p-values for the number of children under the age of 6 years living in poverty in owner-occupied and rental pre-1950 housing were more significant than the p-values for the number of children under the age of 6 years living in poverty in owner-occupied and rental pre-1950 housing.

These analyses suggest that the most significant variables in predicting the estimated number of lead-poisoned children by PUMA are the number of owner-occupied and rental pre-1950 houses with children under the age of 6 years living in poverty. These data are shaded in Table 2 on page 18 and shown on the map on page 20. Since there are 3,931 owner-occupied pre-1950 houses with at least one child under the age of 6 years living in poverty compared to 5,074 rental houses, these data further support the fact that efforts to eliminate childhood lead poisoning in Iowa must focus on both owner-occupied and rental housing.



IA	
PUMA	
100	(117 owner-occupied; 204 rental)
200	(234 owner-occupied; 205 rental)
300	(162 owner-occupied; 276 rental)
400	(42 owner-occupied; 223 rental)
500	(229 owner-occupied; 523 rental)
600	(318 owner-occupied; 214 rental)
700	(0 owner-occupied; 26 rental)
800	(165 owner-occupied; 360 rental)
900	(303 owner-occupied; 142 rental)
1000	(177 owner-occupied; 168 rental)
1100	(238 owner-occupied; 206 rental)
1200	(366 owner-occupied; 444 rental)
1300	(469 owner-occupied; 423 rental)
1600	(91 owner-occupied; 194 rental)
1700	(85 owner-occupied; 169 rental)
1800	(233 owner-occupied; 358 rental)
1900	(137 owner-occupied; 446 rental)
14-1500	(565 owner-occupied; 493 rental)

**2000 Census Public Use Microdata Areas (PUMA)
 Number of Owner-Occupied and Rental Units
 With a Child Under the Age of 6 Years in Poverty**

DATA ON LEAD-BASED PAINT HAZARDS IN IOWA

A number of studies (need to add references) have concluded that the level of lead in dust on surfaces that a child has contact with is the most important factor in determining whether a child will be lead-poisoned. In further discussing the issue of lead dust, the property owners on Iowa's Strategic Planning Committee had questions about the source(s) of the lead in dust on surfaces such as floors and window sills and whether improved housekeeping is adequate to keep the level of lead in dust at an acceptable level.

Factors Related to the Level of Lead in Dust

While many studies have reported that the level of lead in dust, particularly on floors, has a significant relationship to a child's blood lead level, there are fewer studies that have tried to discover the source(s) of the lead in dust. The studies on this issue have reached conflicting conclusions. Some had concluded that the most important source of lead in the dust on interior floors is lead in exterior soil. Other studies have concluded that there is no way to predict the level of lead in the dust on interior floors. The studies may have reached different conclusions because they were conducted under different conditions. The studies that concluded that soil was the major contributor to lead in dust on interior floors were conducted in urban environments where virtually all of the soil in entire neighborhoods was highly contaminated, but the levels of lead in the paint on the homes was relatively low. The studies that concluded that the levels of lead in dust on interior floors could not be predicted often did not look at the condition of the paint or whether the level of lead in paint was above a certain level.

In 2001, IDPH collected dust samples in 27 homes associated with lead-poisoned children. These samples were conducted to determine whether the IDPH assumption that the level of lead in dust could be predicted by the presence of lead-based paint and the condition of the paint was valid.

In 2004, IDPH reexamined these data to see if the data could answer some of the committee's questions. Specifically, IDPH examined the levels of lead in dust on entry floors, non-entry floors, and window sills to see if any of the following variables were related to whether the dust lead level on the surface was above the safe level:

- The presence of bare soil on the exterior of the home.
- The presence of lead-based paint on the exterior of the home.
- The presence of lead-based paint on the closest interior surface.
- The condition of the paint on the closest interior surface.
- Whether the level of lead-based paint on the closest interior surface was greater than or equal to 3 milligrams per square centimeter (mg/cm^2).
- Whether the level of lead-based paint on the closest interior surface was greater than or equal to 5 milligrams per square centimeter (mg/cm^2).
- Whether the level of lead-based paint on the closest interior surface was greater than or equal to 10 milligrams per square centimeter (mg/cm^2).

Table 5 below shows the results of these analyses.

Table 5
Results of IDPH Data from 27 Homes

Surface	Conditions	p-value
Entry Floors (N=27)	Bare Soil	0.3817
	Exterior Lead-Based Paint Present	0.0412
	Interior Lead-Based Paint Present	0.0463
	Condition	0.1498
	Lead-Based Paint ≥ 3 mg/cm ²	0.0180
	Lead-Based Paint ≥ 5 mg/cm ²	0.0109
	Lead-Based Paint ≥ 10 mg/cm ²	0.2668
Non-Entry Floors (N=53)	Bare Soil	0.1154
	Exterior Lead-Based Paint Present	0.2885
	Interior Lead-Based Paint Present	0.0303
	Condition	0.0298
	Lead-Based Paint ≥ 3 mg/cm ²	0.0541
	Lead-Based Paint ≥ 5 mg/cm ²	0.0217
	Lead-Based Paint ≥ 10 mg/cm ²	0.0256
Window Sills (N=54)	Bare Soil	0.0001
	Exterior Lead-Based Paint Present	0.0002
	Interior Lead-Based Paint Present	<0.0001
	Condition	<0.0001
	Lead-Based Paint ≥ 3 mg/cm ²	<0.0001
	Lead-Based Paint ≥ 5 mg/cm ²	<0.0001
	Lead-Based Paint ≥ 10 mg/cm ²	<0.0001

On "entry" floors, the most significant factors were whether the exterior of the house had ever been painted with lead-based paint and whether the level of lead in paint on the nearest painted surface (usually a baseboard, door, or door casing) was greater than or equal to 5 mg/cm².

On "non-entry" floors, the most important factors were whether the nearest surface had a lead level in the paint that was greater than or equal to 5 mg/cm² and the condition of the paint on that surface.

For window sills, all of the factors were significant. However, logistic regression modeling showed that the factors that did the best job of predicting whether the dust lead level would be above the safe level were:

- Whether the level of lead in paint on the nearest painted surface was greater than or equal to 5 milligrams per square centimeter.
- Whether the paint was deteriorated.
- Whether there had ever been lead-based paint on the exterior of the home.
- Whether bare soil was present on the exterior of the home.

While this was a small sample, the data do show that interior lead-based paint is an important contributor to the level of lead in dust on floors and window sills in Iowa homes. This means that hazards inside the house and hazards on the exterior of the home must be controlled to make a home lead-safe.

Housekeeping versus Lead-Hazard Repair

All of the current studies (need citations) on the efficacy of cleaning as a method of lead hazard control have been conducted under conditions that included stabilization of all deteriorated painted surfaces in the home before the cleaning was conducted. Therefore, these studies do not provide any useful information on the issue of whether housekeeping alone can keep the levels of lead in dust at a safe level without stabilizing deteriorated paint surfaces. However, it is possible to predict the level of lead in dust on a floor that would come from one paint chip if it was ground into house dust and uniformly spread over a floor. For example, it is common to find lead-based paint on window sills, sashes, and troughs with a level of at least 10 mg/cm². If a paint chip of one square centimeter in size was ground into house dust and spread over the floor of a room that was 10 feet by 10 feet, the level of lead in the dust on the floor would be:

$$\frac{10 \text{ milligrams} \times 1000 \text{ micrograms per milligram}}{10 \text{ feet} \times 10 \text{ feet}} = \frac{10,000}{100} = 100 \text{ micrograms per square foot of lead in dust on the floor}$$

The safe level of lead in dust on a floor is less than 40 micrograms per square foot. The calculations from this scenario show that it is unlikely that housekeeping alone can keep the level of lead in dust on a floor at a safe level if there is any peeling and chipping paint on the interior of a home. The paint must be stabilized and maintained in good condition for the housekeeping efforts to be successful.

Approaches to Lead Hazard Control

There are three approaches to lead hazard control:

1. Remove all lead-based paint from a home.
2. Teach people to live with lead-based paint hazards by keeping their homes clean.
3. Repair lead-based paint hazards and teach people to live with lead by maintaining paint in good condition and keeping their homes clean.

The first option has been judged by most policy makers (need references) as impractical unless a property is going through gut rehabilitation. The data presented here show that the second option is unlikely to keep children's blood lead levels at a safe level. This leaves the third option as the only practical and safe option for most homes. The success of this option depends on changing the behavior of the property owner and the occupant to ensure that the paint is maintained in good condition and changing the behavior of the occupant to ensure that the house is kept clean.

BACKGROUND ON IOWA'S HOUSING

In December 2000, the Governor's Housing Task Force issued its report, which is: *A Comprehensive Housing Strategy for Iowa: Report to the Governor from the Iowa Housing Task Force*. In January 2003, a report that had been commissioned by the Iowa Finance Authority and the Iowa Department of Economic Development was issued. It is: *Housing and Community Development in Iowa in 2000: Meeting the Challenges of the Next Decade – A Report to the Iowa Finance Authority and the Iowa Department of Economic Development* (Heather MacDonald, Graduate Program in Urban and Regional Housing, University of Iowa). These reports do an excellent job of summarizing housing issues in Iowa.

The following quotations are from *A Comprehensive Housing Strategy for Iowa: Report to the Governor from the Iowa Housing Task Force* (December 2000):

"Nearly all the growth of housing has been concentrated in just six metropolitan counties, creating single family housing markets too costly for even two-earner families. Meanwhile, across two-thirds of the State, in rural areas and pockets in urban areas, the housing market has stagnated and even declined. In some areas, economic development is stifled by the lack of market-rate housing appealing to business people looking to relocate, and even to current residents earning above the median income for the state."

"Long-standing problems continue to worsen. These are issues such as the lack of financing for rehabilitation of owner-occupied homes for low-income families; the lack of affordable rental housing for families with extremely low incomes, especially those in need of supportive services; the scarcity of transitional housing that is a stepping stone away from abusive domestic situations; and the lack of street-life appealing to young Iowans and "empty nesters" caused by the lack of housing in downtowns."

"As the state attempts to solve the problems of exodus of young people, workforce shortages, migration from rural to suburban and urban areas, increasing numbers of families in poverty, aging of the population, immigrant and refugee arrivals, and raising the educational levels in schools with high percentages of low-income children, it will be necessary to deal with Iowa's housing problems. The solutions to such a multi-faceted problem will require a coordinated approach to assure efficiency, avoid duplication, and maximize leverage of private financing. Until now, there has not been a strategic plan or comprehensive approach to the housing needs of Iowans."

The following quotations are from *Housing and Community Development in Iowa in 2000: Meeting the Challenges of the Next Decade – A Report to the Iowa Finance Authority and the Iowa Department of Economic Development* (Heather MacDonald, Graduate Program in Urban and Regional Housing, University of Iowa).

"All sizes of metropolitan communities had a higher share of their housing stock constructed in the last two decades than similarly sized non-metro places. The non-metro housing stock is far more likely to have been built before 1960, with almost half the stock of rural non-metro places built before 1940. The age of the housing stock is one indicator of its likely condition, but it is not the only one. Age is likely to interact with property values. Older homes in higher-priced markets may be well maintained, while the reverse may be true in low-priced markets. While Iowa's housing affordability compares reasonably or well with that of its neighboring states, the state may do much worse in a

comparison of housing condition. Iowa's housing stock is much older than that of other states in the region, and thus is more likely to have problems with lead-based paint."

"Housing quality is the most widespread of Iowa's problems. Stagnant and declining communities and inner city neighborhoods face an uphill battle maintaining population and economic growth with a deteriorating housing stock, and private funds for rehabilitation are especially limited in markets with low housing values. In many places, high vacancy rates are misleading - the supply of decent quality units may in fact be quite tight. Homes with lead-based paint pose a significant health threat in most parts of the state; more difficult to identify are other environmental hazards common in older poorly maintained homes. Older, less energy efficient homes often entail excessive heating cost burdens. **Because housing quality is a problem in so many communities, it is difficult to determine priorities for action (emphasis added).**"

"If the State's housing quality problems are not addressed, public health, economic development, and the fiscal basis of its many small rural communities will be threatened. Although Iowa has a somewhat more affordable housing stock than many of its neighbors, nearly 75,000 renter and 64,000 owner households had housing cost burdens that may limit their ability to pay for food, medical expenses, or other necessities. Ignoring the affordability crisis for those households will lead to increased urban sprawl, and a continuing shortage of labor. A carefully designed State Housing Trust Fund, combined with the related improvements in the development and service environment described above, could make significant headway in addressing these challenges over the next decade."

This report goes on to state that a community can justify investing in housing rehabilitation if this contributes to community development by helping a community attract new residents and economic growth and that a community can also justify investing in housing rehabilitation if this provides social equity by improving housing quality to a minimally decent standard. The report notes that public funds are needed where markets cannot provide enough financing and that the fairest and most efficient way to do this would be to target subsidies to communities and neighborhoods most likely to benefit based on evidence of local commitment, such as matching funds.

The report further states: "Rehabilitating homes to provide a minimum level of decent housing is different from rehabilitation to stimulate development. Lead-based paint (and other environmental hazards) threaten public health regardless of local political or economic capacity. It seems justifiable to target a portion of funds to those communities with the highest levels of children affected by lead paint." The report suggests that loans and grants to remediate environmental hazards in housing should be made available to property owners and owners of rental property. The report also suggests that the private lending market could play a role if a consortium of lenders could apply for Affordable Housing Program funds from the Federal Home Loan Bank Board to underwrite some of these programs. Finally, the report states: "**Iowa has an almost overwhelming number of homes with lead paint. But if lead paint remediation funds were targeted to those places with the greatest health threats, and within those places to households with children, the State could begin to make inroads on the problem.**"

These two reports clearly show that the quality of Iowa's housing must be improved.

IOWA'S EFFORTS TO PREVENT CHILDHOOD LEAD POISONING

Primary and secondary prevention are two methods of preventing childhood lead poisoning. Secondary prevention focuses efforts on identifying lead-poisoned children and working with the family and property owner to ensure that the child's blood lead level drops. Primary prevention is reducing hazards in a home so that children do not become lead-poisoned. According to the CDC, a childhood lead poisoning prevention program (CLPPP) should carry out the following activities:

- Assure that children are tested for lead poisoning. The CLPPP may provide blood lead testing for children who do not have a medical provider. This is a secondary prevention activity.
- Provide environmental and medical case management of lead-poisoned children. This includes assuring that lead hazards in dwellings associated with lead-poisoned children are corrected. In addition, this includes assuring that lead-poisoned children receive appropriate follow-up blood lead testing, developmental testing, and medical treatment. This is a secondary prevention activity.
- Educate and reach out to families and communities to prevent children from becoming lead-poisoned. This is a primary prevention activity.
- Manage blood lead testing data and data regarding case management activities. This is both a primary and a secondary prevention activity.
- Develop and carry out activities to reduce lead-based paint hazards in housing before a child is lead-poisoned. These activities should be carried out by state and local health departments in partnership with state and local agencies with responsibility for housing programs. This is a primary prevention activity.

IDPH's current childhood lead poisoning prevention efforts began in 1992 when IDPH received its first childhood lead poisoning prevention grant from CDC. IDPH now carries out all of these activities in cooperation with other state and local partners. The following are the major accomplishments of Iowa's childhood lead poisoning prevention program:

- Established the Bureau of Lead Poisoning Prevention as a "one-stop shop" for information on lead-based paint and lead poisoning prevention.
- Established and support local childhood lead poisoning prevention activities in 70 counties.
- Increased the rate of blood lead testing in children under the age of 6 years from 0 percent in 1992 to 57 percent for the 2001 birth cohort.
- Conducted a study to show that homeowners could safely repair lead hazards in their homes.
- Established a lead-based paint activities training and certification program and pre-renovation notification program that are authorized by the U.S. Environmental Protection Agency (EPA).
- Received approval from EPA to use an Iowa pamphlet in place of the federal pamphlet for the real estate disclosure and pre-renovation notification program.

- Developed a statewide blood lead testing plan, which has been updated twice.
- Assisted four Iowa communities in receiving U.S. Department of Housing and Urban Development (HUD) lead hazard reduction grants.
- Revised certification regulations to include the sampling technician discipline to assist state and local housing agencies in implementing HUD's lead-safe housing regulation.
- Assisted local agencies in providing lead-safe work practices to training to 2,300 contractors and property owners.
- Provided lead-safe work practices training to 1,000 contractors and property owners.
- Secured additional state funding for the childhood lead poisoning prevention program.
- Revised regulations to allow registration of lead-safe work practices contractors beginning in May 2004.
- Programs such as Medicaid, WIC, HOPES/Healthy Families, and Head Start that work with high-risk families are all providing information to their clients about childhood lead poisoning and lead hazards and are referring their clients for blood lead testing. The current rate of testing for WIC children is 65 percent.

Current Challenges

The following are challenges that the IDPH childhood lead poisoning prevention program continues to face:

1. Although the rate of blood lead testing has increased, many young children are still not being tested for lead poisoning.
2. Although Iowa's data clearly indicate that the childhood lead poisoning problem is a statewide problem, CDC funds must be targeted to Iowa's largest cities. IDPH would have had to severely cut program activities in 37 counties in fiscal year 2004 if additional state funds had not been appropriated for the program.
3. Ten counties are dropping the childhood lead poisoning prevention program in fiscal year 2004 because of additional program requirements and decreased resources at the local level.
4. There is no statewide funding available to assist in completing hazard remediation in homes associated with lead-poisoned children.
5. There is no statewide funding available to assist in completing hazard remediation in homes to prevent children from becoming lead-poisoned.
6. IDPH does not have enough staff to provide the services that families, property owners, and health care providers need and to also meet increased federal mandates for planning and evaluation

IOWA'S EFFORTS TO IMPROVE HOUSING

Since housing is clearly the most significant factor in Iowa's childhood lead poisoning problem, it is important to review Iowa's efforts to improve housing. In July 2000, the Alliance to End Childhood Lead Poisoning (now the Alliance for Healthy Homes) issued an *Action Plan to Make High-Risk Housing Lead-Safe*. This plan states, "The booming U.S. economy provides an unprecedented opportunity to solve the problem of lead poisoning in low-income communities. In this environment of budget surpluses at the federal, state, and local levels and renewed private interest in inner-city investments we can solve this problem once and for all."

Unfortunately, there is no longer an "environment of budget surpluses at the federal, state, and local levels." In spite of this, both the Iowa Department of Economic Development and the Iowa Finance Authority are making efforts to implement the recommendations of the Governor's Housing Task Force and the recommendations contained in *Housing and Community Development in Iowa in 2000: Meeting the Challenges of the Next Decade – A Report to the Iowa Finance Authority and the Iowa Department of Economic Development* (Heather MacDonald, Graduate Program in Urban and Regional Housing, University of Iowa).

Iowa Department of Economic Development (IDED)

On July 9, 2003, IDED issued a Notice of Intended Action to change the rules for its Housing Fund program to reflect the findings of the Housing Study commissioned by IDED and the Iowa Finance Authority and completed by the University of Iowa in January 2003. The proposed changes included:

1. Setting a \$50,000 per unit assistance cap including all lead-based paint remediation activity. (Prior cap per unit was \$24,999.)
2. Establishing preferences for funding, including priority for persons with disabilities, persons/ households with income below 50 percent of area family median income, rehabilitated units that are suitable for children, and rehabilitated units in counties with a high incidence of lead in housing.

A public hearing was held on July 29, 2003. The Department received numerous comments from program operators, city and county officials, and nonprofit housing developers. In particular, there were many comments on the changes proposed to targeting of housing rehabilitation and the emphasis on lead hazard reduction. IDED decided to terminate the notice to further study the issues.

Iowa Finance Authority (IFA)

In 2003, the Iowa General Assembly established the State Housing Trust Fund within the Iowa Finance Authority (IFA). The two programs operated under the State Housing Trust Fund are the Local Housing Trust Fund Program and the Project-Based Housing Program. For calendar year 2004, the funding source for the Local Housing Trust Fund Program is \$480,000 from state appropriations. The funding source for the Project-Based Housing Program is \$320,000 from state appropriations. The total available funds for calendar year 2004 will be \$800,000.

Awards under the Low Housing Trust Fund Program may be used for housing, infrastructure, transitional, homeless, homeownership (production or rehabilitation), rental (affordable), capacity building, or other purposes that further goals of the State Housing Trust Fund.

The goal of the Project-Based Housing Program is to assist in funding development and preservation of affordable housing through the creation of additional single family and multifamily units. Owner-occupied rehabilitation is not eligible under the Project Based Housing Program.

IFA has received 21 applications requesting \$4,157,164 for calendar year 2004. The awards will not be announced until the gaming industry and the state of Iowa reach an agreement on the issue of refunding taxes collected by the state of Iowa in past years.

STRATEGIC PLAN TO ELIMINATE CHILDHOOD LEAD POISONING IN IOWA

CDC has suggested that childhood lead poisoning elimination efforts should be "targeted," that is, focused in certain geographic areas that account for the largest percentage of older housing and lead-poisoned children. CDC documents indicate that CDC believes that these areas would usually be inner-city neighborhoods in large metropolitan communities.

The nature of the childhood lead poisoning problem in Iowa makes it virtually impossible to eliminate childhood lead poisoning by using such a "targeted" approach. Iowa's analysis of data for housing, children in poverty, minority and Hispanic population, and the predicted number of lead-poisoned children presents significant evidence of a high number of lead-poisoned children throughout the state of Iowa. It is evident that childhood lead poisoning cannot be eliminated in Iowa without significant efforts in both the rural and urban counties. There may not be political support for additional regulatory requirements. Table 6 shows the distribution of pre-1950 housing units in Iowa. This shows that nearly 50 percent of the pre-1950 housing units are in counties that have less than 5,000 housing units.

Table 6 – Distribution of Pre-1950 Housing Units in Iowa

Number of Pre-1950 Housing Units Per County	Number of Counties	Number of Pre-1950 Housing Units	% Pre-1950 Housing Units
1,000 to 1,999	12	24,143	5.0%
2,000 to 2,999	28	63,061	13.0%
3,000 to 3,999	27	96,434	19.9%
4,000 to 4,999	11	48,349	10.0%
5,000 to 9,999	13	94,683	19.6%
10,000 to 14,999	3	38,116	7.9%
15,000 to 21,999	4	76,596	15.8%
>42,000	1	42,467	8.8%
Total	99	483,849	100.0%

Table 7 shows the distribution of estimated lead-poisoned children. This shows that nearly one-third of these children are estimated to be found in 71 counties of Iowa's 99 counties. The second one-third of these children are estimated to be found in 24 of Iowa's 99 counties. The final one-third of the children are estimated to be found in 5 of Iowa's 99 counties.

Table 7 – Distribution of Estimated Lead-Poisoned Children

Estimated Number of Lead-Poisoned Children Per County	Number of Counties	Number of Lead-Poisoned Children	% of Lead-Poisoned Children
0 to 99	70	3,917	32.5%
100 to 199	17	2,230	18.5%
200 to 299	5	1,245	10.3%
300 to 399	2	655	5.4%
500 to 799	4	2,642	21.9%
>1,300	1	1,352	11.2%
Total	99	12,041	100.0%

These data clearly show that Iowa cannot eliminate childhood lead poisoning by focusing only on a few inner-city areas in large, metropolitan cities. CDC also recognized this in its evaluation of Iowa's 2003-2004 proposal. This evaluation stated: "Although need is thoroughly addressed, if funded, the applicant is faced with parsing out their money to many local CLPPPs instead of just of one or two local urban CLPPPs with the bulk of the cases. This is an inherent reality in dealing with a rural state with a high quantity of older housing stock, and the applicant does their best to deal with this issue, but it is still a limitation."

Other Considerations

The following are some factors to consider in developing strategies to eliminate childhood lead poisoning in Iowa:

1. The prevalence of childhood lead poisoning in Iowa is dropping at the rate of about 0.5 to 1 percent each year. At that rate, it would take Iowa 10 to 15 years to get to elimination rather than the 6 years that Iowa has been given by CDC.
2. Since only 26 percent of Iowa's pre-1950 housing is classified as rental, strategies that focus exclusively on rental housing will probably not result in the elimination of childhood lead poisoning.
3. In Iowa, communities with a population of at least 15,000 are required to have rental housing regulations. These communities have 173,186 units of pre-1950 rental housing, which represents about 36 percent of Iowa's pre-1950 rental housing.
4. Any significant additions to current program efforts will require additional funding.
5. Historically, Iowa's legislature does not usually adopt regulatory approaches to solving problems unless one or more of the following can be shown:
 - Voluntary approaches have not worked.
 - The regulation is required by a federal funding agency.
 - The regulation will be enforced in Iowa by a federal agency if the state of Iowa does not adopt the regulation.
 - The regulated industry asked for the regulation to be adopted.
6. Agencies that carry out housing rehabilitation programs report that contractors are confused about lead regulations and how to integrate lead-safe work practices and HUD grant requirements into their routine work methods.
7. It can be costly for landlords to hire a trained individual to repair hazards in housing that receives tenant-based or project-based rental assistance.
8. HUD's lead regulations have made it harder for non-profit housing developers to create affordable housing in old inner-city neighborhoods.

9. It is difficult to maintain qualified lead-safe work practices and lead abatement contractors, even in areas where subsidized training is available.

GOALS, OBJECTIVES, ACTIVITIES, AND EVALUATION

The goals, objectives, and activities in this plan are based on those contained in the document, *Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead Paint Hazards* (February 2000, President's Task Force on Environmental Health Risks and Safety Risks to Children).

Goals

- 1 By 2010, produce an adequate supply of lead-safe housing for families with children by:**
 - A. Identifying and reducing lead-based paint hazards in housing where children under the age of 6 years live or spend time.**
 - B. Providing outreach and public education to increase awareness of lead hazards and how to address them.**
 - C. Improving enforcement of lead safety laws and regulations.**

- 2. By 2010, eliminate lead poisoning in Iowa children by:**
 - A. Increasing compliance with policies concerning blood lead testing.**
 - B. Providing and improving case management for children who are identified as lead-poisoned.**
 - C. Improving the use and communication of childhood lead surveillance data to target high-risk children and high-risk housing.**
 - D. Educating families and the public regarding the need for blood lead testing.**

LOGIC MODEL FOR IOWA'S STRATEGIC PLAN FOR THE ELIMINATION OF CHILDHOOD LEAD POISONING IN IOWA

Inputs	Activities	Outputs	Outcomes		
			Short-term	Intermediate	Long-term
CDC, EPA, and HUD funds	Remediate lead-based paint hazards in homes associated with lead-poisoned children and in homes receiving federal, state, and other housing rehab funds.	Number of homes where lead hazard remediation is completed.	Increase in the number of lead-safe homes available to families with children.	Increase in the number of lead-safe homes available to families with children.	Increase in the number of lead-safe homes available to families with children.
State funds	Train homeowners and contractors in lead-safe work practices.	Number of people trained in lead-safe work practices.	Increase in the number of contractors, homeowners, and volunteers using lead-safe work practices.	Increase in the number of contractors, homeowners, and volunteers using lead-safe work practices.	
Local funds	Provide information about lead-based paint hazards to first-time home buyers and future parents.	Number of people receiving information about lead-based paint hazards.	Increased awareness of childhood lead poisoning and lead-based paint hazards.	Increase in the number of property owners who make their homes lead-safe.	
	Increase compliance with the federal real estate disclosure rule.				
State and local health and housing staff	Increase compliance with the state pre-renovation notification requirement.				
Current federal and state regulations	Educate families, health care providers, and the public regarding the need for blood lead testing.	Number and percentage of Medicaid and non-Medicaid children tested for lead poisoning.	Increase in the percentage of Medicaid and non-Medicaid children tested for lead poisoning.	Increase in the number and percentage of Medicaid and non-Medicaid children tested for lead poisoning.	Reduction in the number of lead-poisoned children.
	Improve case management of lead-poisoned children.	Time needed for a child's blood lead level to drop.	Decrease in the time needed for a child's blood lead level to drop.	Decrease in the time needed for a child's blood lead level to drop.	

Objectives and Activities

1. By 2010, produce an adequate supply of lead-safe housing for families with children by:

A. Identifying and reducing lead-based paint hazards in housing where children under the age of 6 years live or spend time.

Objective 1-A1-2005: By June 30, 2005, increase the number of homes associated with a lead-poisoned child where lead hazard remediation has been completed from the current 300 per year to 500 per year.			
Objective 1-A1-2007: By June 30, 2007, increase the number of homes associated with a lead-poisoned child where lead hazard remediation has been completed from the current 300 per year to 700 per year.			
Objective 1-A1-2009: By December 31, 2009, increase the number of homes associated with a lead-poisoned child where lead hazard remediation has been completed from the current 300 per year to 1,000 per year.			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Follow up at least twice each year to remind property owners of the need complete lead hazard remediation in homes associated with a lead-poisoned child.	Since fiscal year 2000, this approach has resulted in a two-fold to four-fold increase in the number of homes where remediation has been completed.	Semi-annually.	IDPH staff. Staff of local CLPPPs.
Evaluation Measure for Objective: Number of homes associated with a lead-poisoned child where lead hazard remediation is completed.			
Frequency of Reporting: Quarterly.			
Data Source(s): STELLAR (Systematic Tracking of Elevated Lead Levels and Remediation) quarterly reports.			

Objective 1-A2-2005: By June 30, 2005, increase the number of homes where lead hazard remediation is completed using Community Development Block Grant funds, HUD Lead Hazard Remediation funds, USDA Rural Development funds, and other federal and state fund. (Baseline and target for increase to be determined by 10/30/2004.)

Objective 1-A2-2007: By June 30, 2007, increase the number of homes where lead hazard remediation is completed using Community Development Block Grant funds, HUD Lead Hazard Remediation funds, USDA Rural Development funds, and other federal and state funds. (Baseline and target for increase to be determined by 10/30/2004.)

Objective 1-A2-2009: By December 31, 2009, increase the number of homes where lead hazard remediation is completed using Community Development Block Grant funds, HUD Lead Hazard Remediation funds, USDA Rural Development funds, and other federal and state funds. (Baseline and target for increase to be determined by 10/30/2004.)

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Survey entitlement cities, the Iowa Department of Economic Development, Iowa Finance Authority, and Iowa communities receiving lead hazard remediation funds to determine the baseline and targets for increase for this measure.	Educating decision-makers about lead-based paint hazards and the importance of having safe housing available for families with children may cause them to apply for or allocate funds for housing projects rather than other infrastructure projects.	By 10/30/2004	IDPH staff
Send a letter to each city mayor and each county board of supervisors encouraging them to consider using available funds to improve housing quality and remediate lead-based paint hazards		By 12/30/2004.	IDPH staff on behalf of the committee.

Evaluation Measure for Objective: Number of homes where lead hazard remediation is completed using Community Development Block Grant funds, HUD Lead Hazard Remediation funds, USDA Rural Development funds, and other federal and state funds.

Frequency of Reporting: Annually

Data Source(s): Iowa Department of Economic Development, Iowa Finance Authority, USDA Rural Development, 9 entitlement cities, cities receiving HUD Lead Hazard Remediation funds.

B. Providing outreach and public education to increase awareness of lead hazards and how to address them.

Objective 1-B1-2005: By June 30, 2005, increase the number of people who have completed an approved lead-safe work practices training program from the current 3,300 to 4,300.

Objective 1-B1-2007: By December 31, 2007, increase the number of people who have completed an approved lead-safe work practices training program from the current 3,300 to 7,500.

Objective 1-B1-2009: By December 31, 2009, increase the number of people who have completed an approved lead-safe work practices training program from the current 3,300 to 10,000.

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Add a training calendar to the IDPH web site so to link training providers to those who want to take a lead-safe work practices training course.	This will make it easier for people who want to take a course to find one in Iowa.	By 11/30/2004.	IDPH staff.
Add a list of contractors who have completed lead-safe work practices registration per Iowa Administrative Code 641--Chapter 70 to the IDPH web site.	The recognition associated with being a registered contractor will increase the number of people taking training and becoming registered.	By 9/30/2004.	IDPH staff.
Investigate the feasibility of offering lead-safe work practices training over the Internet. Determine the cost of developing the training, interested training providers, cost of offering the training, and changes needed for the curriculum.	It is difficult for people to fit an 8-hour class into their schedules. A number of people have asked if the training was offered via the Internet and have stated that it would be easier for them to take the course in this way.	By 12/31/2004.	IDPH staff.
Investigate the feasibility of incorporating lead-safe work practices training into high school and community college building trades programs. Identify interested training providers and changes needed for the curriculum.	Incorporating lead-safe work practices training into high school and community college building trades programs will ensure a continuous supply of trained contractors in the future.	By 12/31/2004.	IDPH staff.
Develop the curriculum for a three-hour lead-safe work practices refresher course.	Staff of housing agencies believe that a refresher course is needed because contractors are not following lead-safe work practices in the field.	By 6/30/2005.	IDPH staff.
Write a letter to HUD asking the agency to change its regulations to require a three-hour lead-safe work practices refresher course.	There is little incentive for contractors to take a refresher course if it is not required by HUD.	By 12/31/2004.	IDPH staff on behalf of the committee.

Evaluation Measure for Objective: The number of people who complete an approved lead-safe work practices training course.

Frequency of Reporting: Quarterly.

Data Source(s): Required reports sent to IDPH by training providers.

Objective 1-B2-2005: By June 30, 2005, increase the number of people who receive information about lead hazards through first-time homebuyer programs. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B2-2007: By June 30, 2007, increase the number of people who receive information about lead hazards through first-time homebuyer programs. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B2-2009: By December 31, 2009, increase the number of people who receive information about lead hazards through first-time homebuyer programs. (Baseline and target for increase to be determined by 12/31/2004.)

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Do a survey to collect information about first-time homebuyer courses that are currently offered in Iowa.	It is critical that first-time home buyers receive information about lead poisoning and lead-based paint hazards before they purchase a home. Educating first-time home buyers about lead-based paint hazards and methods that they can use to make their homes safe will cause them to purchase homes that are lead-safe or, if they purchase a home with lead-based paint hazards, to make the home lead-safe.	By 11/1/2004.	IDPH staff.
Use the information collected through the survey to determine the baseline and targets for increase for this measure.		By 12/31/2004	IDPH staff
Contact each agency that offers a course to ask them to include information about lead hazards in the course and to offer specific materials that can be added to the course.		By 12/31/2004.	IDPH staff.
Ask each agency that agrees to include the information on lead hazards to report the number of people who complete the first-time homebuyer course.		By 2/15/2005.	IDPH staff.

Evaluation Measure for Objective: Whether the survey and contacts are completed by the deadlines and the number of agencies that agree to include information on head hazards in the course and to report information to IDPH.

Frequency of Reporting: Monthly.

Data Source(s): Records of research done to identify agencies offering the courses. Copies of memos sent to the agencies and responses received from the agencies offering the courses. List of agencies that agree to offer the courses. Number of people completing the course as reported by each agency.

Objective 1-B3-2005: By June 30, 2005, increase the number of people who receive information about lead hazards through baby-sitting classes, family living classes, preconception education, maternal WIC visits, and maternal health clinics. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B3-2007: By June 30, 2007, increase the number of people who receive information about lead hazards through baby-sitting classes, family living classes, preconception education, maternal WIC visits, and maternal health clinics. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B3-2009: By December 31, 2009, increase the number of people who receive information about lead hazards through baby-sitting classes, family living classes, preconception education, maternal WIC visits, and maternal health clinics. (Baseline and target for increase to be determined by 12/31/2004.)

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Do a survey to collect information about baby-sitting classes, family living classes, preconception education, maternal WIC visits, and maternal health clinics that provide information about lead hazards to their clients and/or students.	It is critical that future parents receive information about lead poisoning and lead-based paint hazards before a child is born. Educating future parents about lead-based paint hazards and methods that they can use to make their homes safe for children will cause them to take steps to make their homes lead-safe.	By 12/1/2004	IDPH staff.
Use the information collected through the survey to determine the baseline and targets for increase for this measure.		By 12/31/2004.	IDPH staff.
Contact each agency that offers a class to ask them to include information about lead hazards in the course and to offer specific materials that can be used.		By 2/28/2005.	IDPH staff.
Ask each agency that agrees to include the information on lead hazards to report the number of people who receive the material.		By 3/31/2005.	IDPH staff.

Evaluation Measure for Objective: Whether the survey and contacts are completed by the deadlines and the number of agencies that agree to include information on head hazards in the course and to report information to IDPH.

Frequency of Reporting: Monthly.

Data Source(s): Records of research done to identify agencies offering the classes. Copies of memos sent to the agencies and responses received from the agencies offering the classes. List of agencies that agree to offer the classes. Number of people completing the class as reported by each agency.

Objective 1-B4-2005: By June 30, 2005, increase the number of volunteer painting programs (Paint-A-Thons) that use lead-safe work practices. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B4-2007: By June 30, 2007, increase the number of volunteer painting programs (Paint-A-Thons) that use lead-safe work practices. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B4-2009: By December 31, 2009, increase the number of volunteer painting programs (Paint-A-Thons) that use lead-safe work practices. (Baseline and target for increase to be determined by 12/31/2004.)

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Do a survey to collect information about agencies and government entities that currently sponsor volunteer painting activities.	Many volunteer painting programs (Paint-A-Thons) currently do not use lead-safe work practices. In the summer of 2003, two news articles in Iowa newspapers clearly showed volunteer programs using unsafe work practices to repaint older homes. Educating these programs about the need to use lead-safe work practices to protect the volunteers and residents of the homes will cause them to start using lead-safe work practices.	By 11/1/2004	IDPH staff.
Use the information collected through the survey to determine the baseline and targets for increase for this measure.		By 12/31/2004.	IDPH staff.
Contact each agency and government entity that currently sponsors volunteer painting activities to ask them to use lead-safe work practices and to offer information and training on lead-safe work practices.		By 12/31/2004.	IDPH staff.
Ask each agency and government entity that agrees to use lead-safe work practices in their volunteer painting activities to report the number of events that they sponsor and the number of homes that are repainted.		By 2/15/2005.	IDPH staff.

Evaluation Measure for Objective: Whether the survey and contacts are completed by the deadlines and the number of agencies and government entities that agree to use lead-safe work practices in volunteer painting activities and to report information to IDPH.

Frequency of Reporting: Monthly.

Data Source(s): Records of research done to identify agencies and government entities offering volunteer painting programs. Copies of memos sent to the agencies and responses received from the agencies and government entities offering the programs. List of agencies and government entities that agree to use lead-safe work practices and to report to IDPH. Number of volunteer painting events and homes that are repainted using lead-safe work practices.

Objective 1-B5-2005: By June 30, 2005, increase the number of property owners participating in community efforts regarding lead-based paint hazards in communities. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B5-2007: By June 30, 2007, increase the number of property owners participating in community efforts regarding lead-based paint hazards in communities. (Baseline and target for increase to be determined by 12/31/2004.)

Objective 1-B5-2009: By December 31, 2009, increase the number of property owners participating in community efforts regarding lead-based paint hazards in communities. (Baseline and target for increase to be determined by 12/31/2004.)

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Contact landlords to invite them to participate in state and community forums on lead-based hazards and actions that can be taken in the community.	Landlords will be more likely to take steps to make their properties lead-safe if communities ask for their input in developing community approaches and if the landlords feel that the communities are helping them to overcome barriers.	By 11/1/2004.	IDPH staff.
Work with landlords through the community forums to identify barriers to making rental properties lead-safe.		By 12/31/2004.	IDPH staff.
Work with landlords through the community forums to develop solutions to the identified barriers to making rental properties lead-safe.		By 2/15/2005.	IDPH staff.

Evaluation Measure for Objective: Whether the contacts, identification of barriers, and identification of solutions are completed by the deadlines and the number of landlords who agree to participate in community efforts.

Frequency of Reporting: Monthly.

Data Source(s): Records of contacts and invitations to landlords and minutes of community efforts to document the participation of landlords.

Objective 1-B6-2005: By June 30, 2005, increase the number of child care health consultants who have received comprehensive training on lead-based paint hazards from the current 0 to 20.

Objective 1-B6-2007: By June 30, 2007, increase the number of child care health consultants who have received comprehensive training on lead-based paint hazards from the current 0 to 40.

Objective 1-B6-2009: By December 31, 2009, increase the number of child care health consultants who have received comprehensive training on lead-based paint hazards from the current 0 to 60.

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Develop a 3-hour training program for child care health consultants to be offered via the Iowa Communications Network (ICN).	Iowa's child care health consultants spend considerable advising daycare homes and child care centers on health issues. These consultants can provide more specific advice and information on lead-based paint hazards if they have completed more comprehensive training on these issues.	By 11/1/2004.	IDPH staff.
Offer the training program at least twice.		By 6/30/2005.	IDPH staff.

Evaluation Measure for Objective: Whether the curriculum is developed and the course is offered by the deadlines. Number of child care health consultants who complete the training.

Frequency of Reporting: Quarterly.

Data Source(s): The curriculum and training certificates issued to those who complete the curriculum.

C. Improving enforcement of lead safety laws and regulations.

Objective 1-C1-2005: By June 30, 2005, increase the effectiveness of federal real estate disclosure by increasing the rate of compliance from the current 38 percent to 50 percent. (Note: Baseline obtained from HUD data.)			
Objective 1-C1-2007: By June 30, 2007, increase the effectiveness of federal real estate disclosure by increasing the rate of compliance from the current 38 percent to 65 percent. (Note: Baseline obtained from HUD data.)			
Objective 1-C1-2009: By December 31, 2009, increase the effectiveness of federal real estate disclosure by increasing the rate of compliance from the current 38 percent to 80 percent. (Note: Baseline obtained from HUD data.)			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Write letters to EPA Region VII and to HUD to ask them to target compliance inspections to properties built before 1950.	Many enforcement actions in Iowa are currently taken in properties built from 1965 to 1978. Enforcement of the real estate disclosure regulation in these properties does little to prevent childhood lead poisoning since they usually do not contain lead-based paint hazards.	By 9/30/2004.	IDPH on behalf of the committee.
Write a letter to EPA Region VII asking it to develop a press release about violations of the real estate disclosure rule in Iowa and the penalties that have been assessed.	Publicizing violations and penalties will cause property owners to comply with the real estate disclosure rule.	By 9/30/2004.	IDPH on behalf of the committee.
Evaluation Measure for Objective: Whether the letters are written to HUD and EPA by the deadlines, the response received from HUD and EPA, and whether EPA issues the requested press release.			
Frequency of Reporting: Quarterly.			
Data Source(s): Copies of letters sent to HUD and EPA, a copy of the press release, and copies of the papers in which the press release appeared.			

Objective 1-C2-2005: By June 30, 2005, increase the effectiveness of Iowa's pre-renovation notification regulation by increasing the rate of compliance from the current 8 percent to 25 percent.			
Objective 1-C2-2007: By June 30, 2007, increase the effectiveness of Iowa's pre-renovation notification regulation by increasing the rate of compliance from the current 8 percent to 75 percent.			
Objective 1-C2-2009: By December 31, 2009, increase the effectiveness of Iowa's pre-renovation notification regulation by increasing the rate of compliance from the current 8 percent to 90 percent.			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Increase the number of contractors spot-checked each year through random spot checks from 40 to 80.	Increasing the number of spot checks will alert contractors to the fact that they are expected to comply with the regulation and should lead to improved compliance.	By 6/30/2005.	IDPH staff.
Issue a press release to publicize violations of the pre-renovation notification and penalties.	Publicizing violations and penalties will cause contractors to comply with the pre-renovation notification regulation.	By 2/15/2005.	IDPH staff.
Provide information about the pre-renovation notification to 300 retail lumber businesses, 300 retail hardware stores, and 100 retail paint stores that are listed in Iowa on-line phone books and ask them to make this information available to contractors and consumers.	These strategies will result in information about the pre-renovation notification rule being given to more contractors.	By 6/30/2005.	IDPH staff.
Provide information about the pre-renovation notification to 106 Iowa jurisdictions that have building code requirements and ask them to include this information with building permits for target housing.		By 6/30/2005.	IDPH staff.
Conduct 40 compliance inspections in homes built before 1950 based on data obtained from building permits in Des Moines, Council Bluffs, Sioux City, Dubuque, and Davenport.	Compliance with the pre-renovation notification regulation is more important in older homes that are likely to contain lead-based paint.	By 6/30/2005.	IDPH staff.
Evaluation Measure for Objective: Percentage of contractors found to be in compliance with the pre-renovation notification regulation. Number of spot checks that are targeted through building permits. Whether the press release is issued by the deadline.			
Frequency of Reporting: Monthly.			
Data Source(s): Documentation of the results of using building permits to target compliance. Records of compliance checks done for the pre-renovation notification program. Copy of the press release that is issued and copies of the newspapers that pick up the press release.			

2. By 2010, eliminate lead poisoning in Iowa children by:

A. Increasing compliance with existing policies concerning blood lead testing.

Objective 2-A1-2005: By June 30, 2005, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 65 percent for both Medicaid and non-Medicaid children.

Objective 2-A1-2007: By June 30, 2007, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 80 percent for both Medicaid and non-Medicaid children.

Objective 2-A1-2009: By December 31, 2009, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 90 percent for both Medicaid and non-Medicaid children.

First-Year Activities	Rationale	Time Frame	Team Member Responsible
Local providers for Medicaid informing and care coordination, WIC, Headstart, HOPES/Healthy Families, and child care will continue to refer children to providers for blood lead testing.	Bringing attention to the need for children to be tested for lead poisoning through individual referrals, providing information to providers, and working with individual counties that have low testing rates have all been successful strategies in the past.	Ongoing.	Staff of local providers.
Send letters to the local board of health, community empowerment board, and local health care providers in the 10 counties with the lowest rate of blood lead testing asking them to increase blood lead testing in their counties.		By 12/31/2004.	IDPH staff.
Ensure that articles reminding providers of the need to test children are published by the Iowa section of the American Academy of Pediatrics, the Iowa Academy of Family Physicians, the Iowa Medical Society, and the Care for Kids (Medicaid) newsletter.		By 12/31/2004.	IDPH staff.

Evaluation Measure for Objective: Percentage of children tested for lead poisoning by birth cohort for Medicaid and non-Medicaid children.

Frequency of Reporting: Semi-annually.

Data Source(s): Childhood blood lead surveillance database.

B. Providing and improving case management for children who are identified as lead-poisoned.

Objective 2-B1-2005: By June 30, 2005, decrease the average length of time for venous blood lead levels in children under the age of 3 years to drop to less than 20 µg/dL from the current 24 weeks to 20 weeks.			
Objective 2-B1-2007: By June 30, 2007, decrease the average length of time for venous blood lead levels in children under the age of 3 years to drop to less than 20 µg/dL from the current 24 weeks to 10 weeks.			
Objective 2-B1-2009: By June 30, 2009, no children will be identified with venous blood lead levels greater than or equal to 20 µg/dL.			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Ensure that articles reminding providers of the need to do frequent follow-up testing for children with venous blood lead levels greater than or equal to 20 µg/dL are published by the Iowa section of the American Academy of Pediatrics, the Iowa Academy of Family Physicians, the Iowa Medical Society, and the Care for Kids (Medicaid) newsletter.	Providers need to be reminded of the importance of frequent follow-up testing for children with venous blood lead levels greater than or equal to 20 µg/dL. Providers view these publications as credible sources of information and are likely to follow guidance contained in these publications.	By 11/1/2004.	IDPH staff.
Follow up with families whose children have venous blood lead levels greater than or equal to 20 µg/dL at least twice each month to monitor compliance with environmental and medical recommendations	Frequent follow-up with families will help to identify barriers to getting follow-up testing and will reveal information about whether lead hazard remediation has been started and is being done safely.	Ongoing.	IDPH staff. Local CLPPP staff.
Evaluation Measure for Objective: The average length of time for a venous blood lead level to drop to less than 20 µg in children under the age of 3 years.			
Frequency of Reporting: Semi-annually.			
Data Source(s): Surveillance and case management data.			

C. Improving the use and communication of childhood lead surveillance data to target high-risk children and high-risk housing.

Objective 2-C1-2005: By June 30, 2005, use childhood lead surveillance data to revise the statewide blood lead testing plan, this elimination plan, and the message communicated to the public and to health care providers to reflect any new information about targeting high-risk children and high-risk housing.			
Objective 2-C1-2007: By June 30, 2007, use childhood lead surveillance data to revise the statewide blood lead testing plan, this elimination plan, and the message communicated to the public and to health care providers to reflect any new information about targeting high-risk children and high-risk housing.			
Objective 2-C1-2009: By December 31, 2009, use childhood lead surveillance data to report final progress towards the elimination of childhood lead poisoning in Iowa.			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Evaluate and if necessary, revise the statewide blood lead testing plan.	Using data to illustrate the childhood lead poisoning problem in Iowa has been an effective means of gaining community and legislative support for Iowa's program. Continuing analysis and use of these data will document progress towards elimination and if necessary, refine the approach needed to get to elimination of childhood lead poisoning.	By 1/1/2005.	IDPH Child Health Advisory Team.
Evaluate and if necessary, revise the statewide childhood lead poisoning elimination plan.		By 1/1/2005.	Childhood Lead Poisoning Elimination Committee.
Review all IDPH publications and if necessary, revise them to reflect current information about targeting high-risk children and high-risk housing.		By 2/15/2005.	IDPH staff.
Evaluation Measure for Objective: Whether the documents are revised by the deadlines.			
Frequency of Reporting: Quarterly.			
Data Source(s): Minutes of CHAT Team and Childhood Lead Poisoning Elimination Committee meetings where this is discussed that indicate the final conclusion. Copies of revised blood lead testing plan and childhood lead poisoning elimination plan. Copies of revised public information documents.			

D. Educating families and the public regarding the need for blood lead testing.

Objective 2-D1-2005: By June 30, 2005, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 65 percent for both Medicaid and non-Medicaid children.			
Objective 2-D1-2007: By June 30, 2007, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 80 percent for both Medicaid and non-Medicaid children.			
Objective 2-D1-2009: By December 31, 2009, increase the percentage of Iowa children receiving at least one blood lead test before the age of 6 years from the current 57 percent to 90 percent for both Medicaid and non-Medicaid children.			
First-Year Activities	Rationale	Time Frame	Team Member Responsible
Identify Internet sites that parents frequently consult about child health issues and contact the owners of these sites to ask that they place information about lead poisoning on the site or put a link to the IDPH lead information on their site.	Several parents on the IDPH Strategic Planning Committee and felt that additional information should be provided to the general public and parents as well as the information in objective 2-A1 that is targeted to health care providers and service providers.	By 1/1/2005.	IDPH Staff.
Do a press release about the need for children to be tested for lead poisoning.		By 4/1/2005.	IDPH Staff
Evaluation Measure for Objective: Percentage of children tested for lead poisoning by birth cohort for Medicaid and non-Medicaid children.			
Frequency of Reporting: Semi-annually.			
Data Source(s): Childhood blood lead surveillance database.			

Overall Program Evaluation Measures

2005 Evaluation Measure: By June 30, 2005, decrease the prevalence of lead poisoning among Medicaid children from the current 12 percent to 11 percent and among non-Medicaid children from the current 5 percent to 4 percent.

2007 Evaluation Measure: By June 30, 2007, decrease the prevalence of lead poisoning among Medicaid children from the current 12 percent to 5 percent and among non-Medicaid children from the current 5 percent to 2 percent.

2009 Evaluation Measure: By December 31, 2009, decrease the prevalence of lead poisoning among Medicaid children from the current 12 percent to 0 percent and among non-Medicaid children from the current 5 percent to 0 percent.

Frequency of Reporting: Semi-annually.

Data Source(s): Childhood blood lead surveillance database.