State of Illinois
Rod R. Blagojevich, Governor

Department of Public Health
Damon T. Arnold, M.D., M.P.H., Director

Illinois Lead Program Surveillance Report - 2007

September 2008

Illinois Department of PUBLIC HEALTH

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Table of Contents

List of Tables

List of Figures

Getting the Word Out on Lead
September 2008

The Illinois Lead Program is pleased to present the 2007 annual surveillance report. The report provides information on the number of children screened and identified with lead poisoning by county, age, race and blood lead levels. The program is committed to the Healthy People 2010 goal of eliminating elevated blood lead levels in children.

The significant decline in the number of known lead poisoned children in Illinois from 45,809 (18.7 percent) in 1997 to 5,270 (1.8 percent) in 2007 is a public health success story. However, Illinois still ranks at the top nationally in the number of lead poisoned children. Standard indicators that put children at highest risk for lead poisoning include age of child, age of housing, socioeconomic status, and racial and ethnic disparities where use of certain products predisposes them to lead. Children younger than 3 years of age are at highest risk for blood lead poisoning due to their hand-to-mouth activities. The Illinois Lead Poisoning Prevention Act has been amended to initiate inspection of dwelling and common place areas of children younger than 3 years of age with lead levels of 10 microgram per deciliter or higher.

The primary source of lead poisoning in children is lead-based paint most abundantly found in pre-1978 housing units. In accordance with the Lead Disclosure Rule, landlords and realtors are required to notify tenants and potential home owners of any known lead-based paint hazards before the lease or sale of their housing units built before 1978. In 2008, the United States Environmental Protection Agency published the pamphlet "Lead Safety During Renovation" as part of the Renovation, Remodeling and Painting Rule (RRP Rule). The RRP rule becomes fully effective in 2010. Federal regulations require contractors to provide the "Renovate Right" pamphlet to owners and occupants prior to starting work in pre-1978 housing. Contractors also are required to provide the pamphlet to owners and operators of child-care facilities and schools built before 1978 and also to parents and guardians of children attending such schools.

The U.S. Centers for Disease Control and Prevention (CDC) has set an ambitious goal for its partners to screen 85 percent of high risk children by 2010. To accomplish this goal, the Illinois Department of Public Health is in the process of establishing a Memorandum of Understanding with the departments of Healthcare and Family Services and Human Services to share lead screening related data. The CDC recommends that children with blood lead levels of 15 micrograms per deciliter and higher be provided follow-up services. The follow-up services include medical and case management. The Illinois Lead Program, its delegate agencies and local health departments provide these services to children younger than 3 years of age residing in Illinois with blood lead levels of 10 micrograms per deciliter and above.

For more information on the elimination of childhood lead poisoning, call the Illinois Lead Program at 866-909-3572 or 217-782-3517 or visit http://www.idph.state.il.us/envhealth/ehpublications.htm#lead. The hearing impaired may dial 800-547-0466. We look forward to a new and continued collaboration as the Illinois Lead Program transitions into the federally directed "Healthy Home Initiative" that addresses other hazards in the home that may affect the health of a child.

Sincerely,

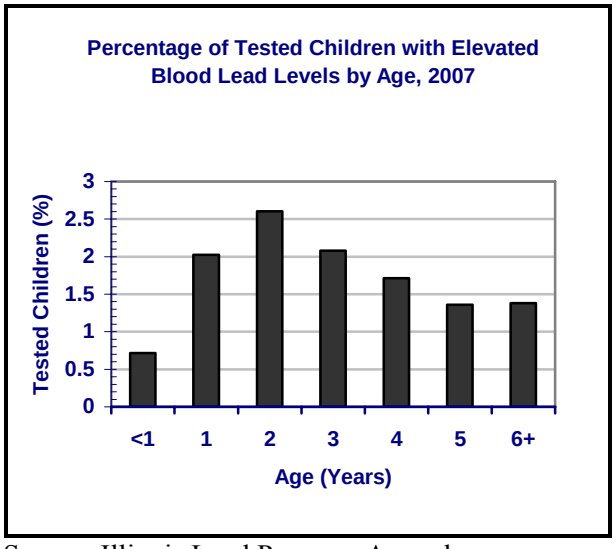
Damon T. Arnold, M.D., M.P.H.
Director, Illinois Department of Public Health

Summary Statistics

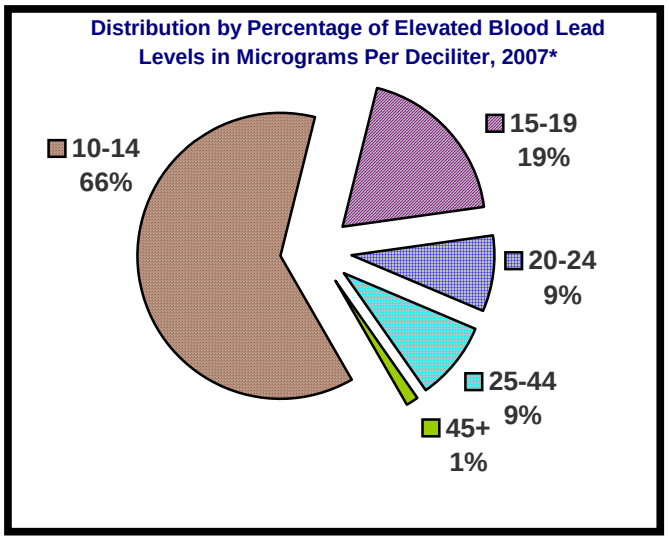
Here are some highlights of blood lead testing performed in 2007:

- 340,985 blood lead tests were reported on 296,998 Illinois children. Some children were tested for lead poisoning multiple times.
- 5,270 children (1.8 percent) had at least one blood lead test result ≥ 10 mcg/dL
- 1,990 children (0.7 percent) had at least one blood lead test ≥ 15 mcg/dL
- 79 children were identified with severe lead poisoning (≥ 45 mcg/dL)
- 97 laboratories in Illinois and other states reported lead results to the Illinois Department of Public Health

Figure 1 indicates that children between the ages of 1 and 3 are at highest risk for lead poisoning. Figure 2 shows that 66 percent of known lead poisoned children have lead levels below 15 micrograms per deciliter. In 2006, Illinois amended the Lead Poisoning Prevention Act to initiate home inspections for children 3 years of age and younger with lead levels of 10 micrograms per deciliter and above.



Source: Illinois Lead Program Annual Surveillance Report
Figure 1



Source: Illinois Lead Program Annual Surveillance Report
Figure 2

At What Age Should Children be Tested?

Illinois law requires that children between 6 months and 7 years of age who live in high risk areas be tested before attending a licensed day care, school or kindergarten. Early detection is important since damage from lead poisoning can be minimized or prevented when it is discovered early in an affected child's development.

As Figure 1 suggests, children are most likely to become lead poisoned once they are able to crawl and walk. Therefore, the Illinois Department of Public Health recommends that children be tested at 1 and 2 years of age. This is consistent with federal policies that require Medicaid-enrolled children to be tested at 1 and 2 years of age.

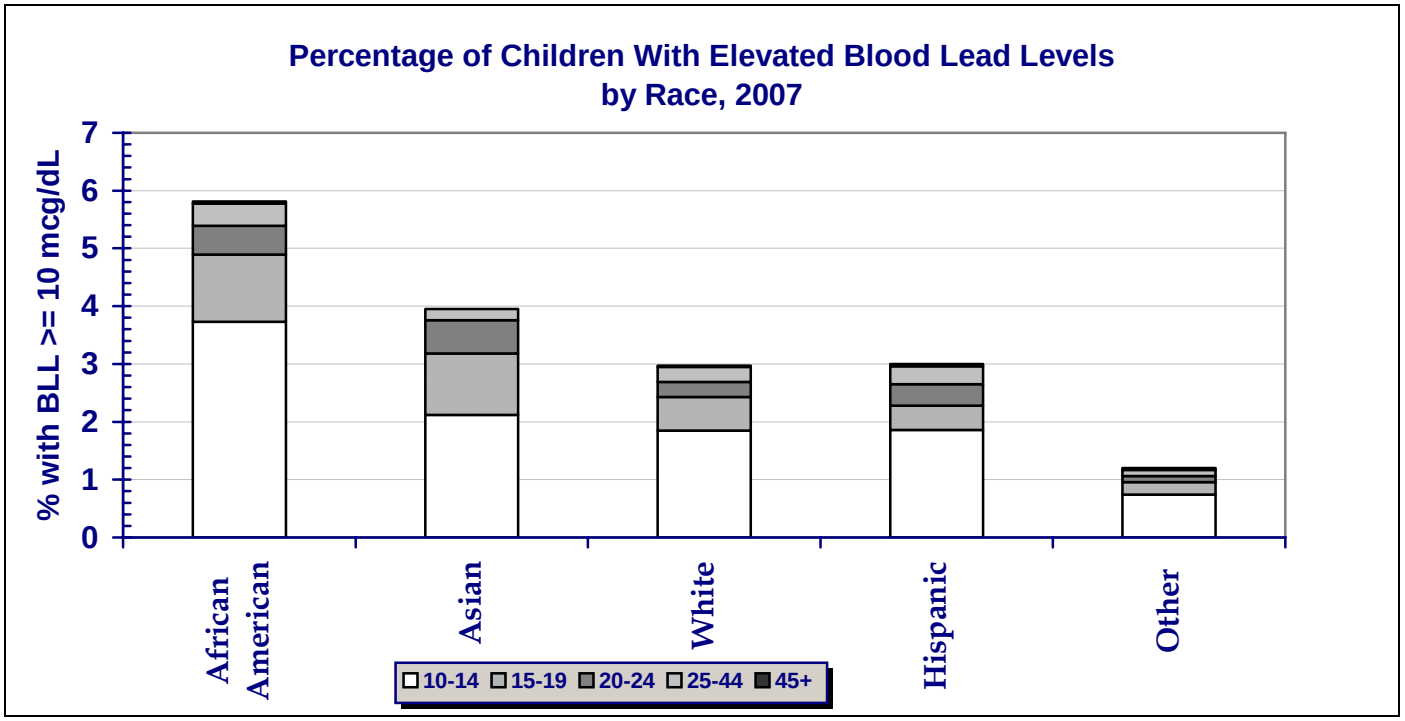
The American Academy of Pediatrics and the U.S. Centers for Disease Control and Prevention also highly recommend that 1-and 2-year-olds be routinely tested for lead poisoning.

Lead Poisoning and Race

Collection of race and ethnicity data is a challenge. Figure 3 demonstrates the difference in lead poisoning by race. The chart reflects the elevated blood lead levels of children whose racial status were revealed.

African-American children are twice as likely to be affected by lead poisoning compared to Caucasian or Hispanic children. Lead poisoning in Asian children is on the rise. Most of the racial difference is attributed to the fact that minorities are more likely to live in older housing, common to high-risk ZIP codes. While lead paint is the source of most lead-poisoning cases, folk remedies and products containing lead and made outside the United States may also contribute to the higher lead poisoning rates of minority children.

Efforts to continue the elimination of the preventable causes of lead poisoning among children of all races is highly recommended.



Source: Illinois Lead Program Annual Surveillance Report
Figure 3

Detailed breakdowns of the numbers of children screened and those with elevated results are provided in Tables 1 and 2 in the following pages.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Illinois Lead Program Annual Surveillance Report 2007

Table 1. Lead Screening Activities: 2006 - 2007

2006		2007	
Total children tested	278,078	Total children tested	296,998
Number with results ≥ 10 mcg/dL	6,460	Number with results ≥ 10 mcg/dL	5,270
Number with results ≥ 15 mcg/dL	2,154	Number with results ≥ 15 mcg/dL	1,990

Children Screened With Elevated Blood Lead Levels By Geographic Region

Lead Levels ≥ 10 mcg/dL			Lead Levels ≥ 15 mcg/dL			Lead Levels ≥ 10 mcg/dL			Lead Levels ≥ 15 mcg/dL		
Chicago	3,371	(52%)	Chicago	1,110	(51%)	Chicago	2,627	(49.8%)	Chicago	957	(48%)
Downstate	3,109	(48%)	Downstate	1,064	(49%)	Downstate	2,643	(50.2%)	Downstate	1,033	(52%)

County	2000 CENSUS Population of Children 6 Years and Younger	2006						2007					
		Total Tested	10-14	15-19	20-24	25-44	45 +	Total Tested	10-14	15-19	20-24	25-44	45 +
			mcg/dL						mcg/dL				
Adams	5,652	959	22	9	2	1	0	890	24	10	2	6	1
Alexander	889	190	4	0	0	1	0	131	6	0	0	0	0
Bond	1,425	292	4	0	1	1	0	267	4	3	0	0	0
Boone	4,735	735	17	3	0	4	0	882	7	2	1	3	0
Brown	410	75	1	0	0	0	0	98	3	0	0	0	0
Bureau	3,015	352	8	1	0	1	0	399	3	2	2	0	1
Calhoun	373	80	0	0	0	0	0	66	2	0	0	0	0
Carroll	1,159	306	6	5	1	0	0	265	6	3	0	0	0
Cass	1,376	346	10	7	2	1	0	322	6	3	0	0	0
Champaign	15,229	1,880	35	4	0	2	1	1997	12	2	3	0	0
Christian	2,763	545	6	2	2	1	0	534	1	0	0	1	0
Clark	1,308	306	5	0	0	0	0	301	5	1	0	1	0
Clay	1,231	295	10	5	0	1	0	282	5	0	0	0	0
Clinton	2,765	289	2	1	0	0	0	331	4	0	1	0	0
Coles	3,762	598	9	3	4	1	1	750	7	2	1	1	1
Cook w/o Chicago	241,425	34,358	275	96	42	33	7	39,332	267	74	54	40	11
Chicago	308,416	102,847	2,234	620	234	214	42	105,788	1,670	470	214	227	46

County	2000 CENSUS Population of Children 6 Years and Younger	2006						2007					
		Total Tested	10-14	15-19	20-24	25-44	45+	Total Tested	10-14	15-19	20-24	25-44	45+
Crawford	1,408	263	3	0	1	0	0	269	2	0	1	0	0
Cumberland	871	160	1	0	0	0	0	159	0	0	0	0	0
DeKalb	7,983	693	13	2	0	0	0	647	5	1	0	0	0
DeWitt	1,430	298	5	0	0	0	0	290	5	1	2	2	0
Douglas	2,055	274	3	2	1	1	0	324	1	1	1	1	0
DuPage	89,349	5,096	30	4	2	1	0	5,971	17	7	2	2	0
Edgar	1,395	247	4	4	0	1	0	285	6	1	1	0	0
Edwards	552	134	1	0	0	0	0	158	1	0	0	0	0
Effingham	3,210	688	12	1	3	1	0	673	10	0	0	1	0
Fayette	1,711	391	8	0	0	1	0	413	4	0	0	1	0
Ford	1,228	71	3	1	0	0	0	68	0	1	0	0	0
Franklin	3,235	401	4	2	1	1	0	532	6	3	1	0	0
Fulton	2,836	439	9	3	0	0	2	431	12	5	4	2	0
Gallatin	472	134	3	0	0	0	0	155	0	0	0	0	0
Greene	1,224	305	3	0	0	0	0	311	1	1	1	0	0
Grundy	3,928	353	1	1	0	1	0	378	1	1	1	1	0
Hamilton	627	110	4	0	0	0	0	165	1	0	0	0	0
Hancock	1,380	432	11	4	1	1	1	401	3	1	0	2	0
Hardin	348	51	2	2	0	0	1	57	0	1	0	0	0
Henderson	498	125	2	0	0	0	0	112	1	1	0	0	0
Henry	3,959	890	7	4	4	3	1	925	16	8	0	1	0
Iroquois	2,432	329	16	1	0	1	1	297	5	2	1	0	0
Jackson	4,238	955	8	2	1	0	0	1,000	9	3	1	1	0
Jasper	823	125	0	1	1	0	0	150	1	0	0	0	0
Jefferson	3,236	557	1	1	0	1	0	574	1	2	0	1	0
Jersey	1,670	354	4	0	0	0	0	327	2	0	0	0	1
JoDaviess	1,643	146	2	0	0	0	0	161	2	0	0	0	0
Johnson	918	87	0	0	0	0	0	84	0	0	0	0	0
Kane	56,926	10,211	213	56	30	30	1	11,278	167	49	20	22	6
Kankakee	10,534	2,574	38	7	0	2	1	2,521	28	10	6	2	0
Kendall	8,217	411	1	2	0	0	0	590	4	1	0	2	0
Knox	4,157	899	36	13	5	6	0	1,265	30	12	4	5	0
Lake	73,888	8,669	46	16	5	5	1	10,815	41	12	4	5	0
LaSalle	9,755	1,177	16	3	3	0	0	1,321	13	6	2	2	0

County	2000 CENSUS Population of Children 6 and Younger	2006						2007					
		Total Tested	10-14	15-19	20-24	25-44	45 +	Total Tested	10-14	15-19	20-24	25-44	45 +
Lawrence	1,134	415	9	2	2	1	0	384	2	3	0	0	0
Lee	2,546	269	8	2	3	1	1	184	6	0	2	1	0
Livingston	3,500	832	29	4	0	2	1	765	24	1	0	2	0
Logan	2,246	339	8	4	0	1	0	352	3	1	1	0	0
McDonough	1,848	340	4	4	0	1	1	321	7	0	1	0	0
McHenry	29,768	2,294	16	5	0	1	1	2,709	11	5	2	5	0
McLean	13,918	2,014	18	4	3	1	0	2,060	13	5	2	0	1
Macon	9,868	2,982	126	25	7	7	1	3,193	104	27	7	8	0
Macoupin	3,897	548	12	1	0	1	1	599	5	0	1	1	0
Madison	22,293	2,665	39	18	4	1	2	2,836	19	8	2	3	0
Marion	3,439	700	9	1	0	0	0	707	5	1	1	1	0
Marshall	981	114	1	1	1	1	1	158	4	3	1	3	0
Mason	1,314	274	7	3	1	0	0	291	8	2	0	2	0
Massac	1,349	155	0	0	0	0	0	201	1	0	0	0	0
Menard	951	97	0	0	0	0	0	132	1	0	0	0	0
Mercer	1,323	333	14	1	2	0	0	331	8	2	0	2	0
Monroe	2,525	198	1	0	0	0	0	239	1	0	0	0	0
Montgomery	2,298	515	6	0	0	0	0	581	6	7	0	3	0
Morgan	2,769	601	18	9	4	1	0	596	10	5	0	2	0
Moultrie	1,261	130	2	0	0	0	0	123	1	0	0	0	0
Ogle	4,309	309	6	2	1	0	0	369	5	2	1	2	0
Peoria	18,178	2,856	142	52	21	16	0	3,382	100	53	15	7	0
Perry	1,721	316	5	1	1	0	0	367	2	1	0	0	0
Piatt	1,291	188	4	1	0	1	0	237	2	1	0	0	0
Pike	1,315	325	9	2	2	0	0	330	4	3	0	0	0
Pope	234	22	0	0	0	0	0	37	0	0	0	0	0
Pulaski	644	91	0	2	0	1	0	108	0	0	0	1	0
Putnam	433	45	0	1	0	0	0	64	1	0	0	0	0
Randolph	2,559	378	11	0	0	0	0	390	2	1	1	0	0
Richland	1,290	289	2	1	0	0	0	216	0	0	0	0	0
Rock Island	13,472	4,061	115	34	6	12	3	4,589	81	28	13	14	4
St. Clair	25,318	5,543	139	35	8	7	0	6,849	87	25	7	10	1
Saline	2,163	539	9	3	1	0	0	746	3	2	3	4	0

County	2000 CENSUS Population of Children 6 Years and Younger	2006						2007					
		Total Tested	10-14	15-19	20-24	25-44	45 +	Total Tested	10-14	15-19	20-24	25-44	45+
Sangamon	17,656	3,093	61	17	12	13	1	2,918	39	15	5	4	2
Schuyler	543	87	0	0	0	0	0	51	3	0	0	0	1
Scott	397	102	6	1	0	0	0	96	1	0	1	0	0
Shelby	1,695	308	5	2	0	0	0	312	6	0	0	0	0
Stark	499	132	3	1	1	1	0	110	3	0	0	0	0
Stephenson	4,079	1,116	36	17	8	4	0	1,238	39	7	6	7	0
Tazewell	10,969	1,885	13	3	0	0	0	1,734	14	1	2	1	0
Union	1,459	382	2	3	2	3	0	328	1	1	1	0	0
Vermilion	7,650	1,145	37	11	1	3	1	1,677	41	16	6	4	0
Wabash	988	280	7	3	0	0	0	336	9	1	1	0	0
Warren	1,380	236	6	0	0	1	0	252	7	3	2	1	0
Washington	1,165	101	2	0	1	0	0	149	1	0	0	2	0
Wayne	1,352	416	12	3	0	0	0	428	2	0	0	0	0
White	1,102	246	8	1	1	0	0	342	4	1	1	1	0
Whiteside	5,166	1,289	16	1	2	2	0	1,300	9	2	2	2	2
Will	67,427	5,186	44	9	0	6	1	6,465	27	7	8	9	1
Williamson	5,205	438	0	0	0	0	0	642	5	4	0	0	0
Winnebago	27,879	4,279	75	32	12	9	1	5,124	79	20	18	16	2
Woodford	3,036	244	6	0	0	0	0	274	4	1	0	0	0
Unidentified		43,834	40	14	3	3	0	43,033	33	24	18	9	0
Illinois Total	**1,243,832**	**278,078**	**4,306**	**1,210**	**453**	**415**	**76**	**296,997**	**3,280**	**991**	**461**	**459**	**79**

The information contained in this report is compiled by the Illinois Department of Public Health's Illinois Lead Program. Elevated blood lead levels (≥10 mcg/dL) are reported by laboratories, physicians, hospitals and other health care providers. Non-elevated results (< 10 mcg/dL) are reported by laboratories. Results on all children 15 years of age or younger are included in this report. The vast majority of tests (95 percent) are performed on children 6 years of age or younger. The total number of children screened in the activity summary boxes and total tested column for 2006 and 2007 are the actual numbers reported to the Department. These numbers include children tested for the first time, as well as those being retested. Where a child has multiple tests, the highest venous result is selected. If there is no venous test, the highest capillary result is selected.

Illinois law requires that results of all blood lead tests be reported to the Illinois Department of Public Health's Illinois Lead Program by the directors of laboratories performing the analyses. Physicians, hospital administrators, local health department administrators and directors of laboratories are also required to report blood lead results to the Department's Childhood Lead Poisoning Reporting System at 217-782-3517 or 866-909-3572. Reporting forms are available at the Department's Web site http://www.idph.state.il.us/envhealth/ehpublications.htm#lead. Environmental investigations are initiated at blood lead levels greater than or equal to 10 mcg/dL.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Table 2. Number of Children Screened With Elevated Blood Lead Levels: 2000 - 2007

County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Adams	5,652	566	611	502	545	534	985	959	890
		72	85	49	55	42	46	34	43
Alexander	889	130	161	141	110	166	190	190	131
		20	18	21	14	11	9	5	6
Bond	1,425	307	286	267	262	256	319	292	267
		27	7	7	7	4	9	6	7
Boone	4,735	286	330	411	497	452	638	735	882
		17	20	20	17	8	15	24	13
Brown	410	22	38	18	40	64	71	75	98
		4	4	0	2	3	1	1	3
Bureau	3,015	359	345	419	412	377	469	352	399
		15	4	18	13	3	9	10	8
Calhoun	373	34	59	64	87	64	56	80	66
		6	2	3	6	1	0	0	2
Carroll	1,159	239	299	280	270	272	251	306	265
		16	24	17	14	7	15	12	9
Cass	1,376	123	282	268	267	299	310	346	322
		10	22	25	19	13	16	20	9
Champaign	15,229	1,567	1,646	1,631	1,626	1,748	1,754	1,880	1,997
		56	50	51	56	32	47	42	17
Christian	2,763	427	313	287	356	498	365	545	534
		24	20	10	8	14	8	11	2
Clark	1,308	39	65	75	34	273	302	306	301
		0	3	2	0	10	6	5	7
Clay	1,231	195	213	360	313	313	289	295	282
		9	12	19	6	6	13	16	5
Clinton	2,765	48	126	112	185	169	262	289	331
		3	5	0	0	1	7	3	5
Coles	3,762	192	294	366	389	484	598	598	750
		16	10	13	3	11	20	18	12
Cook w/o Chicago	241,425	21,416	27,850	29,713	32,837	31,189	32,770	34,358	39,332
		1,139	1,109	956	843	629	593	453	446

County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Chicago	308,416	113,547	118,787	112,359	113,023	105,047	101,033	102,847	105,788
		17,003	13,803	11,303	8,325	6,106	4,466	3,344	2,627
Crawford	1,408	109	122	228	326	285	262	263	269
		5	1	6	5	10	7	4	3
Cumberland	871	58	84	66	74	144	179	160	159
		1	3	4	3	3	5	1	0
DeKalb	7,983	374	436	434	567	774	662	693	647
		26	34	21	22	16	10	15	6
DeWitt	1,430	257	259	292	343	294	303	298	290
		40	26	18	12	10	4	5	10
Douglas	2,055	94	115	140	219	244	281	274	324
		6	13	5	7	8	7	7	4
DuPage	89,349	3,345	4,565	4,573	5,101	7,900	4,636	5,096	5,971
		152	106	93	79	99	46	37	28
Edgar	1,395	197	215	199	192	179	344	247	285
		22	25	13	19	9	9	9	8
Edwards	552	51	74	93	130	113	172	134	158
		9	3	6	4	3	5	1	1
Effingham	3,210	73	226	215	216	343	609	688	673
		2	7	6	5	11	9	17	11
Fayette	1,711	326	359	346	378	387	401	391	413
		11	16	23	22	9	12	9	5
Ford	1,228	125	137	143	134	106	62	71	68
		13	9	6	4	1	1	4	1
Franklin	3,235	230	279	294	305	250	295	401	532
		15	17	8	14	12	1	8	10
Fulton	2,836	351	399	328	412	368	437	439	431
		52	42	33	29	28	34	14	23
Gallatin	472	87	119	153	100	98	130	134	155
		3	1	3	1	2	0	3	0
Greene	1,224	175	223	232	287	286	303	305	311
		24	27	26	24	12	10	3	3
Grundy	3,928	281	284	259	258	287	313	353	378
		10	11	7	2	1	0	3	4
Hamilton	627	100	113	102	90	103	94	110	165
		13	14	5	3	5	7	4	1

County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Hancock	1,380	344	425	359	342	363	366	432	401
		47	45	28	23	20	18	18	6
Hardin	348	31	43	36	55	81	57	51	57
		7	7	6	4	2	1	5	1
Henderson	498	130	104	81	111	123	177	125	112
		14	7	4	1	2	3	2	2
Henry	3,959	178	280	254	303	729	1,002	890	925
		23	35	32	24	29	39	19	25
Iroquois	2,432	344	322	285	343	328	278	329	297
		13	16	10	11	13	7	19	8
Jackson	4,238	709	775	705	820	814	823	955	1,000
		29	19	31	26	19	11	11	14
Jasper	823	55	78	51	72	121	154	125	150
		5	0	1	1	3	6	2	1
Jefferson	3,236	398	404	310	233	542	675	557	574
		15	14	10	11	9	11	3	4
Jersey	1,670	108	148	151	237	242	297	354	327
		4	7	4	1	4	6	4	3
JoDaviess	1,643	158	176	189	183	184	136	146	161
		11	5	7	6	7	4	2	2
Johnson	918	59	43	55	52	59	74	87	84
		3	2	2	0	0	0	0	0
Kane	56,926	6,243	7,610	7,575	9,020	6,332	9,910	10,211	11,278
		583	493	439	504	229	380	330	264
Kankakee	10,534	1,947	2,441	2,721	2,774	2,451	2,435	2,574	2,521
		841	235	157	134	71	50	48	46
Kendall	8,217	248	315	290	363	372	319	411	590
		8	11	8	4	9	6	3	7
Knox	4,157	791	795	785	811	903	915	899	1,265
		63	71	73	68	63	67	60	51
Lake	73,888	6,219	7,131	7,697	7,790	8,026	8,542	8,669	10,815
		202	185	190	139	100	117	73	62
LaSalle	9,755	1,164	1,231	1,498	1,331	1,518	1,313	1,177	1,321
		60	50	65	54	44	38	22	23
Lawrence	1,134	308	279	279	286	299	424	415	384
		17	15	5	7	7	8	14	5

County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Lee	2,546	210	182	141	186	291	323	269	184
		21	16	11	12	18	14	15	9
Livingston	3,500	891	870	852	804	758	720	832	765
		56	64	50	44	38	22	36	27
Logan	2,246	334	366	345	329	352	356	339	352
		26	17	19	11	13	7	13	5
McDonough	1,848	209	319	256	252	298	348	340	321
		24	29	6	8	8	9	10	8
McHenry	29,768	1,059	1,353	1,668	1,600	1,734	1,756	2,294	2,709
		41	53	39	41	21	19	23	23
McLean	13,918	1,726	1,758	1,714	1,863	1,893	1,929	2,014	2,060
		80	74	60	50	32	28	26	21
Macon	9,868	2,556	2,855	2,765	3,001	2,906	3,008	2,982	3,193
		304	286	240	242	179	171	166	146
Macoupin	3,897	509	540	582	588	483	554	548	599
		33	30	37	21	10	13	15	7
Madison	22,293	1,319	1,808	2,065	2,205	2,386	2,389	2,665	2,836
		137	93	72	76	57	49	64	32
Marion	3,439	330	743	799	718	711	634	700	707
		16	38	34	25	20	13	10	8
Marshall	981	85	101	94	103	107	112	114	158
		11	8	6	4	4	3	5	11
Mason	1,314	189	213	240	186	178	164	274	291
		12	11	8	10	11	7	11	12
Massac	1,349	52	75	70	87	119	148	155	201
		7	6	2	2	1	2	0	1
Menard	951	63	66	111	139	105	68	97	132
		0	3	0	8	5	5	0	1
Mercer	1,323	205	219	272	256	275	362	333	331
		23	32	49	22	5	10	17	12
Monroe	2,525	76	110	117	168	163	189	198	239
		2	1	6	9	5	7	1	1
Montgomery	2,298	459	441	448	409	427	480	515	581
		35	24	18	12	14	17	6	16
Morgan	2,769	465	624	539	649	625	645	601	596
		52	57	41	38	24	38	32	17

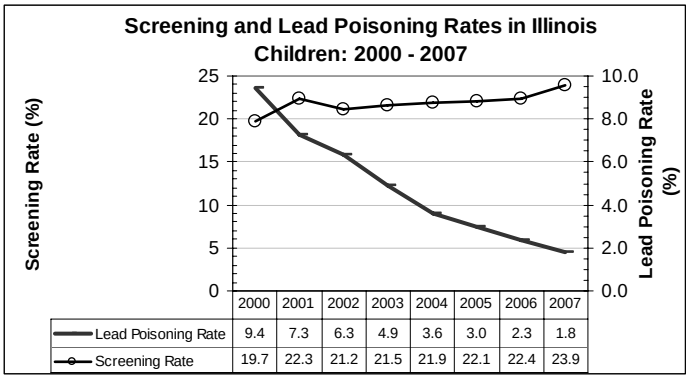
County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Moultrie	1,261	89	98	116	103	95	133	130	123
		1	5	4	1	1	1	2	1
Ogle	4,309	398	405	411	440	384	347	309	369
		26	24	10	18	13	8	9	10
Peoria	18,178	1,770	2,254	2,062	2,041	2,080	2,668	2,856	3,382
		354	321	324	297	211	267	231	175
Perry	1,721	81	151	200	211	197	247	316	367
		10	23	19	17	12	4	7	3
Piatt	1,291	155	183	164	198	195	187	188	237
		10	22	8	13	8	7	6	3
Pike	1,315	320	302	258	295	309	358	325	330
		21	23	12	15	11	15	13	7
Pope	234	20	11	19	24	27	23	22	37
		2	1	1	0	0	0	0	0
Pulaski	644	51	63	83	94	78	54	91	108
		10	8	8	7	3	3	3	1
Putnam	433	49	40	49	71	45	53	45	64
		0	0	1	0	1	1	1	1
Randolph	2,559	331	410	376	412	370	361	378	390
		27	26	26	25	25	24	11	4
Richland	1,290	114	99	88	177	213	251	289	216
		13	5	2	6	6	9	3	0
Rock Island	13,472	2,920	2,940	3,190	3,703	3,781	3,839	4,061	4,589
		363	323	329	572	225	196	170	140
St. Clair	25,318	3,926	4,149	4,020	4,080	5,000	5,274	5,543	6,849
		481	425	305	259	216	226	189	130
Saline	2,163	530	486	476	516	475	558	539	746
		25	9	20	13	13	9	13	12
Sangamon	17,656	2,216	2,805	2,821	2,904	2,408	3,022	3,093	2,918
		225	179	140	118	84	116	104	65
Schuyler	543	29	27	35	44	61	99	87	51
		5	7	5	4	3	4	0	4
Scott	397	33	63	68	85	81	134	102	96
		2	5	3	3	0	6	7	2
Shelby	1,695	129	161	220	247	252	274	308	312
		7	5	12	9	6	8	7	6

County	2000 Population of Children 6 Years and Younger	Number of Illinois Children Screened With Elevated Blood Lead Levels: 2000-2007* The top row of each county represents the total number of children tested for lead poisoning. The bottom row of each county represents the number of children tested for lead poisoning having an elevated blood lead level of 10 microgram per deciliter and higher.							
		2000	2001	2002	2003	2004	2005	2006	2007
Stark	499	18	31	40	34	80	139	132	110
		4	3	3	2	6	4	6	3
Stephenson	4,079	935	1,156	1,060	1,186	1,060	1,131	1,116	1,238
		168	180	118	84	63	68	65	59
Tazewell	10,969	1,095	1,001	1,050	999	1,058	1,103	1,885	1,734
		35	27	26	24	25	26	16	18
Union	1,459	151	156	153	182	160	186	382	328
		17	16	11	12	8	6	10	3
Vermilion	7,650	814	900	882	950	696	825	1,145	1,677
		84	83	86	67	41	67	53	67
Wabash	988	153	177	221	236	228	295	280	336
		19	15	22	16	16	12	10	11
Warren	1,380	229	214	191	304	271	290	236	252
		23	23	22	29	11	11	7	13
Washington	1,165	28	38	38	62	60	100	101	149
		2	2	3	3	2	2	3	3
Wayne	1,352	415	353	356	407	389	425	416	428
		14	12	16	11	13	11	15	2
White	1,102	208	240	244	259	296	310	246	342
		17	13	14	12	8	14	10	7
Whiteside	5,166	867	1,006	942	1,280	1,229	1,377	1,289	1,300
		71	76	55	30	21	32	21	17
Will	67,427	2,678	3,108	2,973	3,356	3,934	4,415	5,186	6,465
		231	170	143	133	71	57	60	52
Williamson	5,205	306	350	277	279	293	298	438	642
		6	10	4	3	9	3	0	9
Winnebago	27,879	4,162	4,361	4,191	4,450	4,267	4,086	4,279	5,124
		239	252	218	207	209	160	129	135
Woodford	3,036	85	122	133	102	81	123	244	274
		5	10	3	0	3	3	6	5
Unidentified		47,508	54,934	43,894	39,212	50,940	49,956	43,834	47,097
		449	338	111	33	66	88	60	84
Illinois	1,243,832	272,897	297,666	279,610	281,303	282,337	275,108	278,078	296,998
		23,063	20,251	16,653	13,182	9,843	8,123	6,460	5,270
U.S.Totals	23,304,631	2,216,700	2,538,008	2,652,964	2,989,517	2,994,677	2,975,794	3,262,866	Not Available
		87,782	76,992	67,914	59,759	52,682	47,147	39,526	Not Available

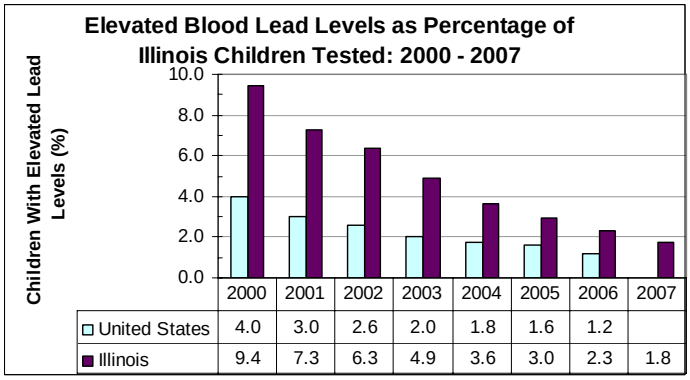
Source: Illinois Lead Program Annual Surveillance Report 2007, CENSUS 2000, U.S. Centers for Disease Control and Prevention.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Elevated Blood Lead Levels as Percentage of Illinois Children Tested: 2000-2007

Since 1997, Illinois has successfully addressed childhood lead poisoning, with rates of testing increasing and fewer children with elevated blood lead levels being found. Figure 4 illustrates the screening and lead poisoning rates in Illinois children 6 years of age and younger. The lead poisoning rate is based on the number of children tested. The number of children with elevated blood lead levels decreased from 18.7 percent in 1997 to 1.8 percent in 2007. Although the testing rate for lead poisoning has remained fairly constant, the overall testing rate increased from 19.7 percent in 2000 to 23.9 percent in 2007.



Source: Illinois Lead Program Annual Surveillance Report 2007
Figure 4



Source: Illinois Lead Program Annual Surveillance Report 2007. The United States average is based on the National Health and Nutritional Survey (NHANES). The NHANES 2002-2004 indicates 1.2 percent of children in the United States are lead poisoned.
Figure 5

Despite the decline in lead poisoning rates, the percentage of children with elevated lead levels far exceeds the national estimate across the years (Figure 5). Illinois still leads the nation in the number of lead poisoned children. In 2007, approximately 5,270 children were identified in Illinois with elevated lead levels.

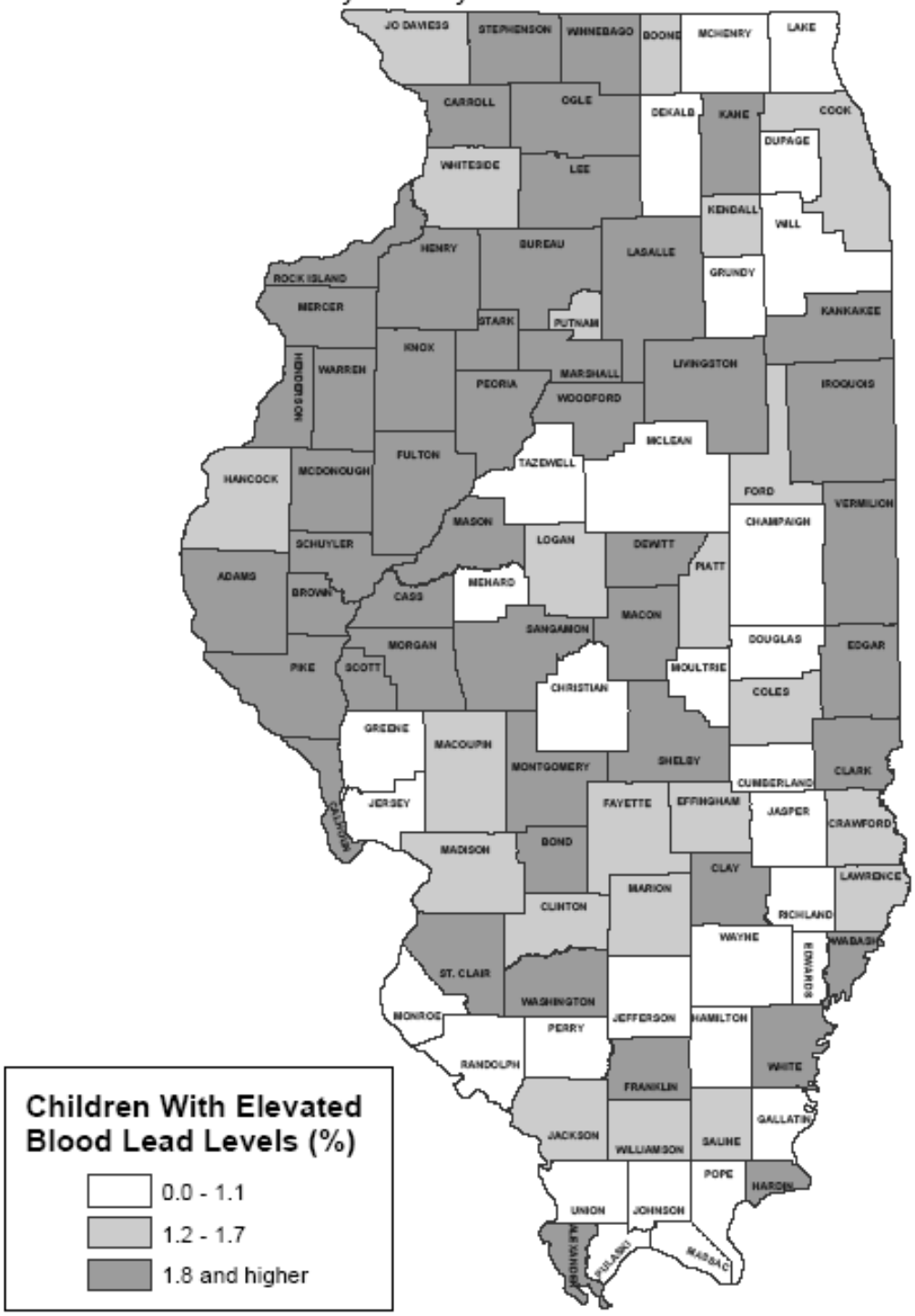
The distribution of lead poisoned children 6 years of age and younger is shown in Figure 6. In 2007, 1.8 percent of Illinois children had elevated blood lead levels compared to 1.2 percent nationally.

The number of children with severe levels of blood lead also has decreased through time. Table 3 shows the percentage of lead poisoned children by age and level of lead in the blood. In 2007, 77 children (0.03 percent) had lead levels of 45 micrograms per liter and higher compared to 207 children in 2000 (0.08 percent).

Year	Total Number of Children Tested	Table 3. Elevated Blood Lead Levels as Percentage of Illinois Children Tested by Year and Levels: 2000 – 2007				
		10-14 mcg/dL	15-19 mcg/dL	20-24 mcg/dL	25-44 mcg/dL	45+ mcg/dL
2000	244,442	6.05	1.89	0.77	0.64	0.08
2001	277,788	4.65	1.50	0.56	0.51	0.07
2002	263,069	4.06	1.26	0.51	0.43	0.06
2003	267,997	3.21	0.95	0.36	0.34	0.05
2004	272,757	2.40	0.69	0.24	0.24	0.03
2005	275,108	1.95	0.55	0.22	0.20	0.03
2006	278,078	1.55	0.44	0.16	0.15	0.03
2007	296,998	1.10	0.33	0.16	0.15	0.03

Illinois Department of Public Health

Percentage of Children 6 Years of Age and Younger With Elevated Blood Lead Levels in 2007 by County Based on Number of Children Tested



Source: Illinois Lead Program Annual Surveillance Report 2007

Note - The national average number of lead poisoned children is 1.2 percent.

- The Illinois average number of lead poisoned children was 1.8 percent in 2007.

Figure 6

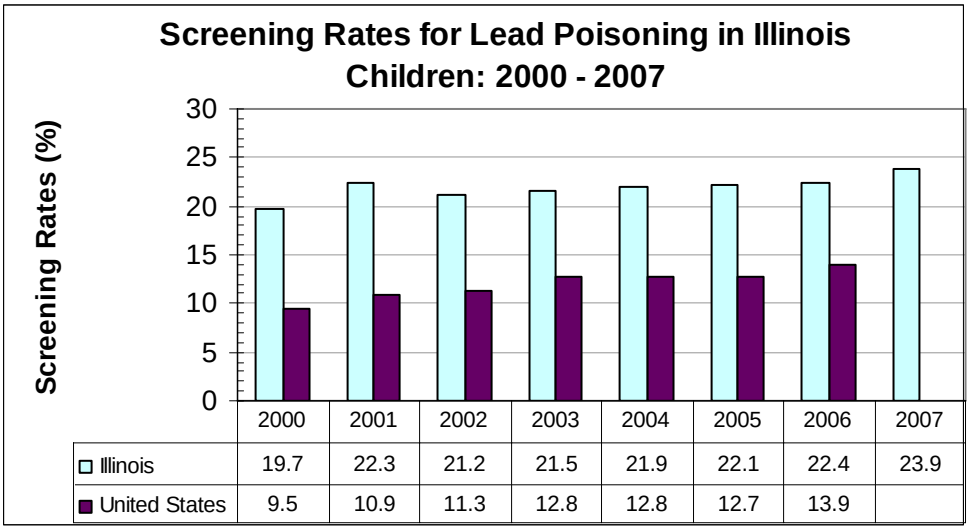
ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Table 4. Screening Rates for Lead Poisoning in Illinois Children: 2000-2007

County	2000 CENSUS Population of Children 6 Years and Younger	Screening Rates for Lead Poisoning in Illinois Children (%): 2000 - 2007							
		2000	2001	2002	2003	2004	2005	2006	2007
Adams	5,652	10	11	9	10	9	17	17	16
Alexander	889	15	18	16	12	19	21	21	15
Bond	1,425	22	20	19	18	18	22	20	19
Boone	4,735	6	7	9	10	10	13	16	19
Brown	410	5	9	4	10	16	17	18	24
Bureau	3,015	12	11	14	14	13	16	12	13
Calhoun	373	9	16	17	23	17	15	21	18
Carroll	1,159	21	26	24	23	23	22	26	23
Cass	1,376	9	20	19	19	22	23	25	23
Champaign	15,229	10	11	11	11	11	12	12	13
Christian	2,763	15	11	10	13	18	13	20	19
Clark	1,308	3	5	6	3	21	23	23	23
Clay	1,231	16	17	29	25	25	23	24	23
Clinton	2,765	2	5	4	7	6	9	10	12
Coles	3,762	5	8	10	10	13	16	16	20
Cook w/o Chicago	241,425	9	12	12	14	13	14	14	16
Chicago	308,416	37	39	36	37	34	33	33	34
Crawford	1,408	8	9	16	23	20	19	19	19
Cumberland	871	7	10	8	8	17	21	18	18
DeKalb	7,983	5	5	5	7	10	8	9	8
DeWitt	1,430	18	18	20	24	21	21	21	20
Douglas	2,055	5	6	7	11	12	14	13	16
DuPage	89,349	4	5	5	6	9	5	6	7
Edgar	1,395	14	15	14	14	13	25	18	20
Edwards	552	9	13	17	24	20	31	24	29
Effingham	3,210	2	7	7	7	11	19	21	21
Fayette	1,711	19	21	20	22	23	23	23	24
Ford	1,228	10	11	12	11	9	5	6	6
Franklin	3,235	7	9	9	9	8	9	12	16
Fulton	2,836	12	14	12	15	13	15	15	15
Gallatin	472	18	25	32	21	21	28	28	33
Greene	1,224	14	18	19	23	23	25	25	25
Grundy	3,928	7	7	7	7	7	8	9	10
Hamilton	627	16	18	16	14	16	15	18	26
Hancock	1,380	25	31	26	25	26	27	31	29
Hardin	348	9	12	10	16	23	16	15	16
Henderson	498	26	21	16	22	25	36	25	22
Henry	3,959	4	7	6	8	18	25	22	23
Iroquois	2,432	14	13	12	14	13	11	14	12
Jackson	4,238	17	18	17	19	19	19	23	24

County	2000 CENSUS Population of Children 6 Years and Younger	Screening Rates for Lead Poisoning in Illinois Children (%): 2000 - 2007							
		2000	2001	2002	2003	2004	2005	2006	2007
Jasper	823	7	9	6	9	15	19	15	18
Jefferson	3,236	12	12	10	7	17	21	17	18
Jersey	1,670	6	9	9	14	14	18	21	20
JoDaviess	1,643	10	11	12	11	11	8	9	10
Johnson	918	6	5	6	6	6	8	9	9
Kane	56,926	11	13	13	16	11	17	18	20
Kankakee	10,534	18	23	26	26	23	23	24	24
Kendall	8,217	3	4	4	4	5	4	5	7
Knox	4,157	19	19	19	20	22	22	22	30
Lake	73,888	8	10	10	11	11	12	12	15
LaSalle	9,755	12	13	15	14	16	13	12	14
Lawrence	1,134	27	25	25	25	26	37	37	34
Lee	2,546	8	7	6	7	11	13	11	7
Livingston	3,500	25	25	24	23	22	21	24	22
Logan	2,246	15	16	15	15	16	16	15	16
McDonough	1,848	11	17	14	14	16	19	18	17
McHenry	29,768	4	5	6	5	6	6	8	9
McLean	13,918	12	13	12	13	14	14	14	15
Macon	9,868	26	29	28	30	29	30	30	32
Macoupin	3,897	13	14	15	15	12	14	14	15
Madison	22,293	6	8	9	10	11	11	12	13
Marion	3,439	10	22	23	21	21	18	20	21
Marshall	981	9	10	10	10	11	11	12	16
Mason	1,314	14	16	18	14	14	12	21	22
Massac	1,349	4	6	5	6	9	11	11	15
Menard	951	7	7	12	15	11	7	10	14
Mercer	1,323	15	17	21	19	21	27	25	25
Monroe	2,525	3	4	5	7	6	7	8	9
Montgomery	2,298	20	19	19	18	19	21	22	25
Morgan	2,769	17	23	19	23	23	23	22	22
Moultrie	1,261	7	8	9	8	8	11	10	10
Ogle	4,309	9	9	10	10	9	8	7	9
Peoria	18,178	10	12	11	11	11	15	16	19
Perry	1,721	5	9	12	12	11	14	18	21
Piatt	1,291	12	14	13	15	15	14	15	18
Pike	1,315	24	23	20	22	23	27	25	25
Pope	234	9	5	8	10	12	10	9	16
Pulaski	644	8	10	13	15	12	8	14	17
Putnam	433	11	9	11	16	10	12	10	15
Randolph	2,559	13	16	15	16	14	14	15	15
Richland	1,290	9	8	7	14	17	19	22	17
Rock Island	13,472	22	22	24	27	28	28	30	34
St. Clair	25,318	16	16	16	16	20	21	22	27
Saline	2,163	25	22	22	24	22	26	25	34
Sangamon	17,656	13	16	16	16	14	17	18	17
Schuyler	543	5	5	6	8	11	18	16	9

County	2000 CENSUS Population of Children 6 Years and Younger	Screening Rates for Lead Poisoning in Illinois Children (%): 2000 - 2007							
		2000	2001	2002	2003	2004	2005	2006	2007
Scott	397	8	16	17	21	20	34	26	24
Shelby	1,695	8	9	13	15	15	16	18	18
Stark	499	4	6	8	7	16	28	26	22
Stephenson	4,079	23	28	26	29	26	28	27	30
Tazewell	10,969	10	9	10	9	10	10	17	16
Union	1,459	10	11	10	12	11	13	26	22
Vermilion	7,650	11	12	12	12	9	11	15	22
Wabash	988	15	18	22	24	23	30	28	34
Warren	1,380	17	16	14	22	20	21	17	18
Washington	1,165	2	3	3	5	5	9	9	13
Wayne	1,352	31	26	26	30	29	31	31	32
White	1,102	19	22	22	24	27	28	22	31
Whiteside	5,166	17	19	18	25	24	27	25	25
Will	67,427	4	5	4	5	6	7	8	10
Williamson	5,205	6	7	5	5	6	6	8	12
Winnebago	27,879	15	16	15	16	15	15	15	18
Woodford	3,036	3	4	4	3	3	4	8	9
United States		10	11	11	13	13	13	14	
Illinois	1,243,832	20	22	21	22	22	22	22	24
County Mean		12	14	14	15	16	17	18	19
Minimum		2	3	3	3	3	4	5	6
Maximum		37	39	36	37	34	37	37	34

Source: Illinois Department of Public Health, Illinois Lead Program Annual Surveillance Report 2007
Screening rate is the percentage of children tested for blood lead poisoning compared to the total population of each county.

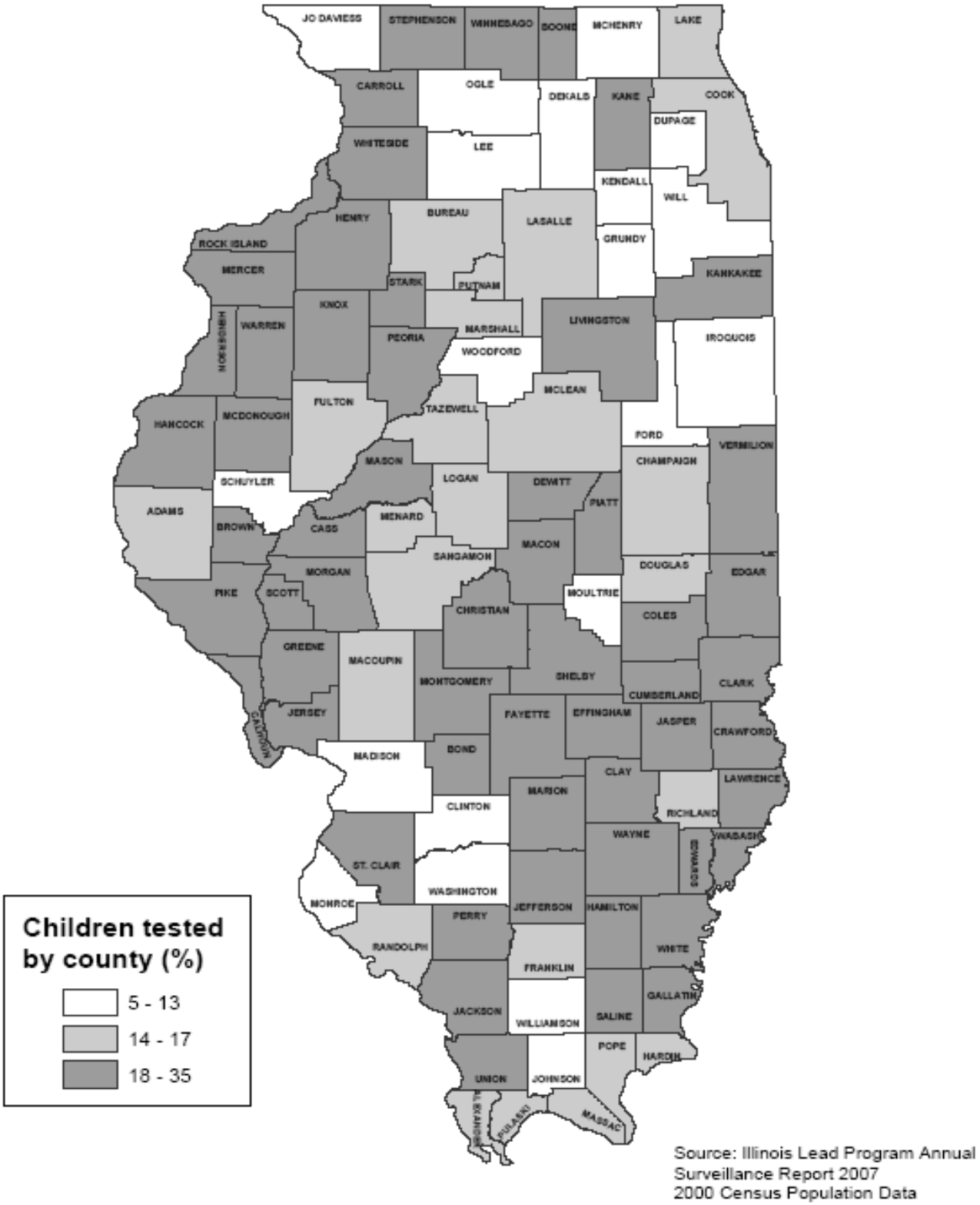


Source: Illinois Lead Program Annual Surveillance Report 2007, U.S. Centers for Disease Control and Prevention, 2000 CENSUS
Figure 7

Screening rate is the percentage of children tested for blood lead poisoning compared to the total population (Figure 8).

Illinois Department of Public Health

Percentage of Children 6 Years of Age and Younger Tested by County in 2007



Source: Illinois Lead Program Annual Surveillance Report 2007
2000 Census Population Data

Figure 8

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Table 5. Lead Poisoning Rate of Children Younger Than 3 Years of Age: 2007

County	Lead Poisoning Rates for Children Younger Than 3 Years of Age				
	2000 CENSUS Population of Children younger 3 Years of Age	Number of Children Tested (n)	Children with Elevated Lead Levels of 10 mcg/dL and over (n)	Lead Poisoning Rate Based on Number of Children Tested (%)	Population of Children Tested (%)
Adams	2,527	568	29	5.1	22
Alexander	373	46	0	0.0	12
Bond	570	216	5	2.3	38
Boone	1,858	550	7	1.3	30
Brown	153	57	3	5.3	37
Bureau	1,243	172	6	3.5	14
Calhoun	150	51	2	3.9	34
Carroll	548	122	4	3.3	22
Cass	548	138	3	2.2	25
Champaign	6,297	1,561	10	0.6	25
Christian	1,254	368	0	0.0	29
Clark	578	220	3	1.4	38
Clay	525	203	4	2.0	39
Clinton	1,274	267	5	1.9	21
Coles	1,722	525	8	1.5	30
Cook (w/o Chicago)	99,957	19,488	240	1.2	19
Crawford	661	218	3	1.4	33
Cumberland	418	122	0	0.0	29
DeWitt	611	164	5	3.0	27
DeKalb	3,348	282	3	1.1	8
Douglas	819	220	2	0.9	27
DuPage	38,787	3,057	12	0.4	8
Edgar	683	162	5	3.1	24
Edwards	248	86	1	1.2	35
Effingham	1,462	312	7	2.2	21
Fayette	802	343	5	1.5	43
Ford	545	31	1	3.2	6
Franklin	1,311	261	4	1.5	20
Fulton	1,231	188	15	8.0	15
Gallatin	198	104	0	0.0	53
Greene	534	186	3	1.6	35
Grundy	1,460	168	2	1.2	12
Hamilton	288	105	0	0.0	36
Hancock	664	272	4	1.5	41
Hardin	166	25	0	0.0	15
Henderson	269	64	2	3.1	24
Henry	1,790	568	13	2.3	32

County	Lead Poisoning Rates for Children Younger Than 3 Years of Age				
	2000 CENSUS Population of Children younger 3 Years of Age	Number of Children Tested (n)	Children with Elevated Lead Levels of 10 mcg/dL and over (n)	Lead Poisoning Rate Based on Number of Children Tested (%)	Population of Children Tested (%)
Iroquois	1,120	117	3	2.6	10
Jackson	1,802	743	12	1.6	41
Jasper	322	122	1	0.8	38
Jefferson	1,343	420	2	0.5	31
Jersey	756	249	3	1.2	33
JoDaviess	727	84	0	0.0	12
Johnson	391	32	0	0.0	8
Kane	20,958	6,125	147	2.4	29
Kankakee	4,373	1,260	27	2.1	29
Kendall	2,585	316	5	1.6	12
Knox	1,919	771	32	4.2	40
LaSalle	4,209	626	8	1.3	15
Lake	31,118	5,069	27	0.5	16
Lawrence	510	274	3	1.1	54
Lee	1,149	117	3	2.6	10
Livingston	1,423	504	18	3.6	35
Logan	993	232	4	1.7	23
Macon	4,355	1,926	79	4.1	44
Macoupin	1,670	438	6	1.4	26
Madison	960	1,623	16	1.0	169
Marion	1,567	564	5	0.9	36
Marshall	419	70	5	7.1	17
Mason	555	167	7	4.2	30
Massac	564	69	0	0.0	12
McDonough	873	230	6	2.6	26
McHenry	1,230	1417	10	0.7	115
McLean	5,740	1,491	15	1.0	26
Menard	396	105	0	0.0	27
Mercer	593	201	8	4.0	34
Monroe	1,065	161	1	0.6	15
Montgomery	1,005	427	13	3.0	42
Morgan	1,173	370	9	2.4	32
Moultrie	545	66	1	1.5	12
Ogle	1,883	187	7	3.7	10
Peoria	7,528	2,194	101	4.6	29
Perry	730	216	1	0.5	30
Piatt	570	133	2	1.5	23
Pike	609	242	5	2.1	40
Pope	121	14	0	0.0	12
Pulaski	269	44	0	0.0	16
Putnam	202	25	1	4.0	12
Randolph	1,100	278	3	1.1	25

County	Lead Poisoning Rates for Children Younger Than 3 Years of Age				
	2000 CENSUS Population of Children younger 3 Years of Age	Number of Children Tested (n)	Children with Elevated Lead Levels of 10 mcg/dL and over (n)	Lead Poisoning Rate Based on Number of Children Tested (%)	Population of Children Tested (%)
Richland	595	141	0	0.0	24
Rock Island	5,750	2,428	90	3.7	42
Saline	924	430	7	1.6	47
Sangamon	7,299	1,796	40	2.2	25
Schuyler	243	31	3	9.7	13
Scott	202	61	1	1.6	30
Shelby	786	238	4	1.7	30
St. Clair	10,450	3,891	68	1.7	37
Stark	245	59	2	3.4	24
Stephenson	1,782	693	31	4.5	39
Tazewell	4,698	1112	12	1.1	24
Union	559	154	1	0.6	28
Vermilion	3371	845	39	4.6	25
Wabash	431	192	9	4.7	45
Warren	623	153	7	4.6	25
Washington	501	53	0	0.0	11
Wayne	627	264	1	0.4	42
White	446	209	5	2.4	47
Whiteside	2,321	826	14	1.7	36
Will	24,640	3,066	31	1.0	12
Williamson	2,193	284	0	0.0	13
Winnebago	11,728	3,114	86	2.8	27
Woodford	1,366	185	4	2.2	14
Unidentified		22,746	58	0.3	
Chicago*	131,760	54,430	1,431	2.6	41
Illinois	500,832	**158,610**	**2,956**	**1.9**	**32**

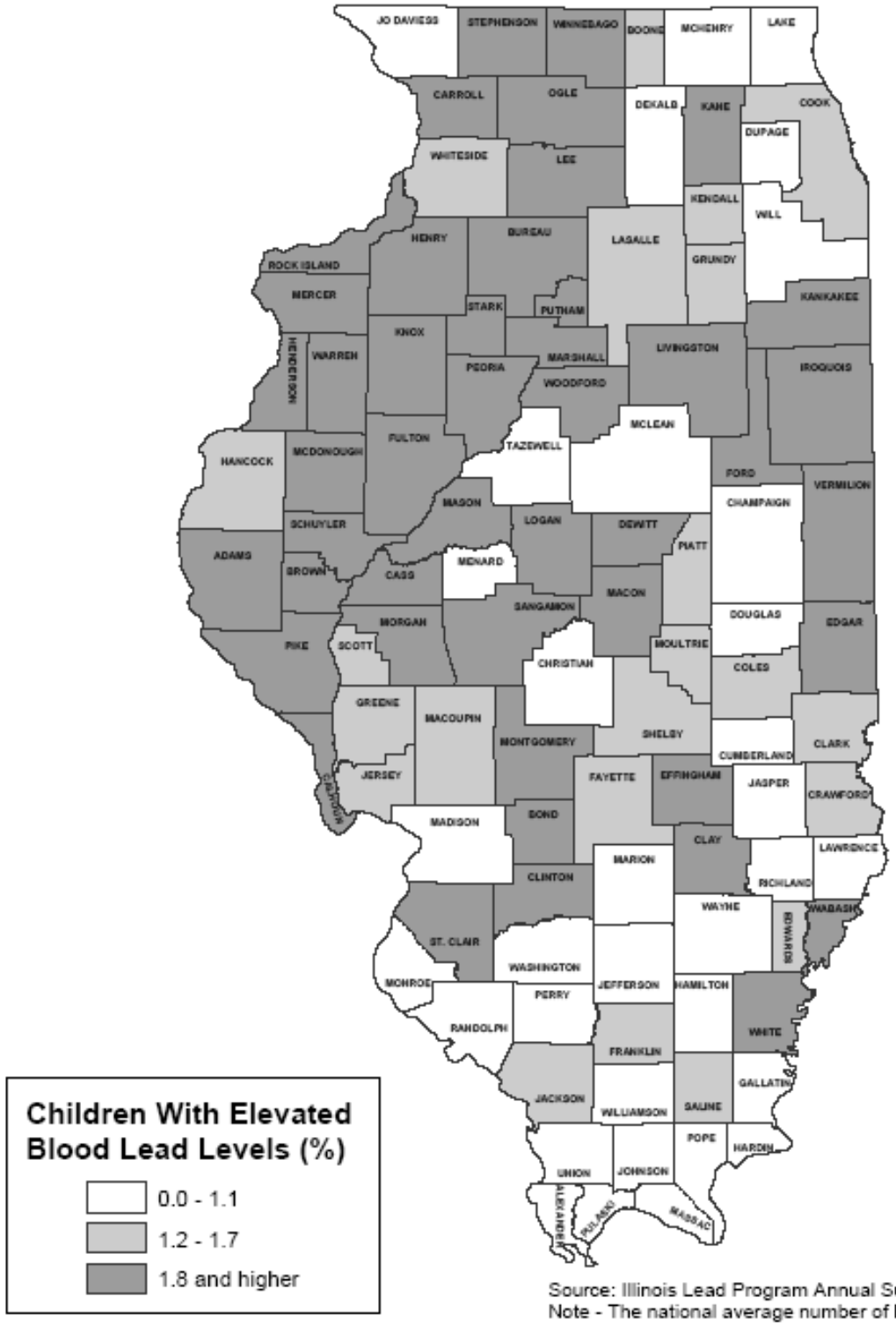
Source: Illinois Lead Program Annual Surveillance Report 2007 and U.S. Census Bureau: 2000
*city of Chicago only

Thirty two percent of the population of Illinois children less than 3 years of age was tested for blood lead poisoning in 2007. Of the 158,610 children tested, 1.9 percent was lead poisoned. The median testing rate by county was 26 percent. The counties of Bond, Boone, Brown, Calhoun, Christian, Clark, Clay, Coles, Crawford, Cumberland, De Witt, Douglas, Edwards, Fayette, Gallatin, Greene, Hamilton, Hancock, Henry, Jackson, Jasper, Jefferson, Jersey, Kane, Kankakee, Knox, Lawrence, Livingston, Macon, Marion, Mason, Menard, Mercer, Montgomery, Morgan, Peoria, Perry, Pike, Rock Island, Saline, Scott, and the city of Chicago tested above the county median.

Figure 9 shows the percentage of Illinois children younger than 3 years of age with elevated blood lead levels by county based on number of children tested. The lead poisoning rate of Illinois children was 1.9 percent for 2007 with a range of 0 to 10. Fifty-four counties exhibited lead poisoning rates of 1.9 percent and above.

Illinois Department of Public Health

Percentage of Children Younger Than 3 Years of Age With Elevated Blood Lead Levels in 2007 by County Based on Number of Children Tested



Source: Illinois Lead Program Annual Surveillance Report 2007

Note - The national average number of lead poisoned children is 1.2 percent.

- The Illinois average number of lead poisoned children was 1.8 percent in 2007.

Figure 9

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Sources of Lead Poisoning

A child can be exposed to lead hazards through deteriorating lead-based paint, lead contaminated dust, soil, food and water. Before knowing its harmful effects, lead was used in paint, gasoline, water pipes, and many other products.

Lead-based paint, present on many surfaces in older or remodeled homes built before 1978, is the most significant source of lead poisoning cases in Illinois[1]. Harmful exposures to lead can be created when lead-based paint is deteriorated or improperly removed from surfaces by dry scraping, sanding, or open-flame burning. Figure 10 shows the percentage of Illinois children living in pre-1980 housing units. It is estimated that 2,211,499 housing units in Illinois contain lead. About 94 percent of the lead hazard units are occupied. Occupants of 20 percent of the lead hazard housing units in Illinois are low income, indicating that poverty contributes significantly to childhood lead poisoning. Figure 11 shows the percentage of Illinois children living below poverty and high-risk ZIP codes for lead poisoning. More than 66 percent of children enrolled in medical programs in 2006 were screened for lead poisoning. About 4.2 percent of the enrolled children were lead poisoned, a level that exceeds the national level of 2.5 percent.

Lead contaminated dust enters the body when individuals breathe or swallow airborne lead particles.

Lead contaminated soil is another source of lead poisoning. Scraping of exterior lead-based paint surfaces and use of lead gasoline in the past may have caused lead contamination of the soil. Lead in soil does not deteriorate or wash away, but is a permanent hazard.

Food may be contaminated through packaging or the use of enameled or ceramic pots and dishware, porcelain, lead crystal, holiday paper and party decorations.

Drinking water may be contaminated through lead solder on pipes and water heaters commonly found in older homes.

Other sources of lead poisoning may include: folk remedies such as "greta," "sindoor" and "azarcon" and cosmetics manufactured outside of the United States, hobbies such as refinishing furniture, casting ammunition, soldering, and making lead-glazed pottery or stained glass.

For more information on recalls of lead-contaminated products, visit the Web sites below:

Illinois Department of Public Health
http://www.idph.state.il.us/webapp/SRSApp/pages/index.jsp

Illinois Office of Attorney General
http://www.illinoisattorneygeneral.gov/consumers/MostWanted_RecallGuide_0708.pdf

Centers for Disease Control and Prevention
http://www.cdc.gov/nceh/lead/Recalls/default.htm

United States Consumer Product Safety Commission
http://www.cpsc.gov/recentrecalls.html

United States Government Recalls
www.recalls.gov

[1]National Survey of Lead and Allergens in Housing, Volume I: Analysis of Lead Hazards, FINAL REPORT, Revision 7.1, October 31, 2002, Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead Paint Hazards

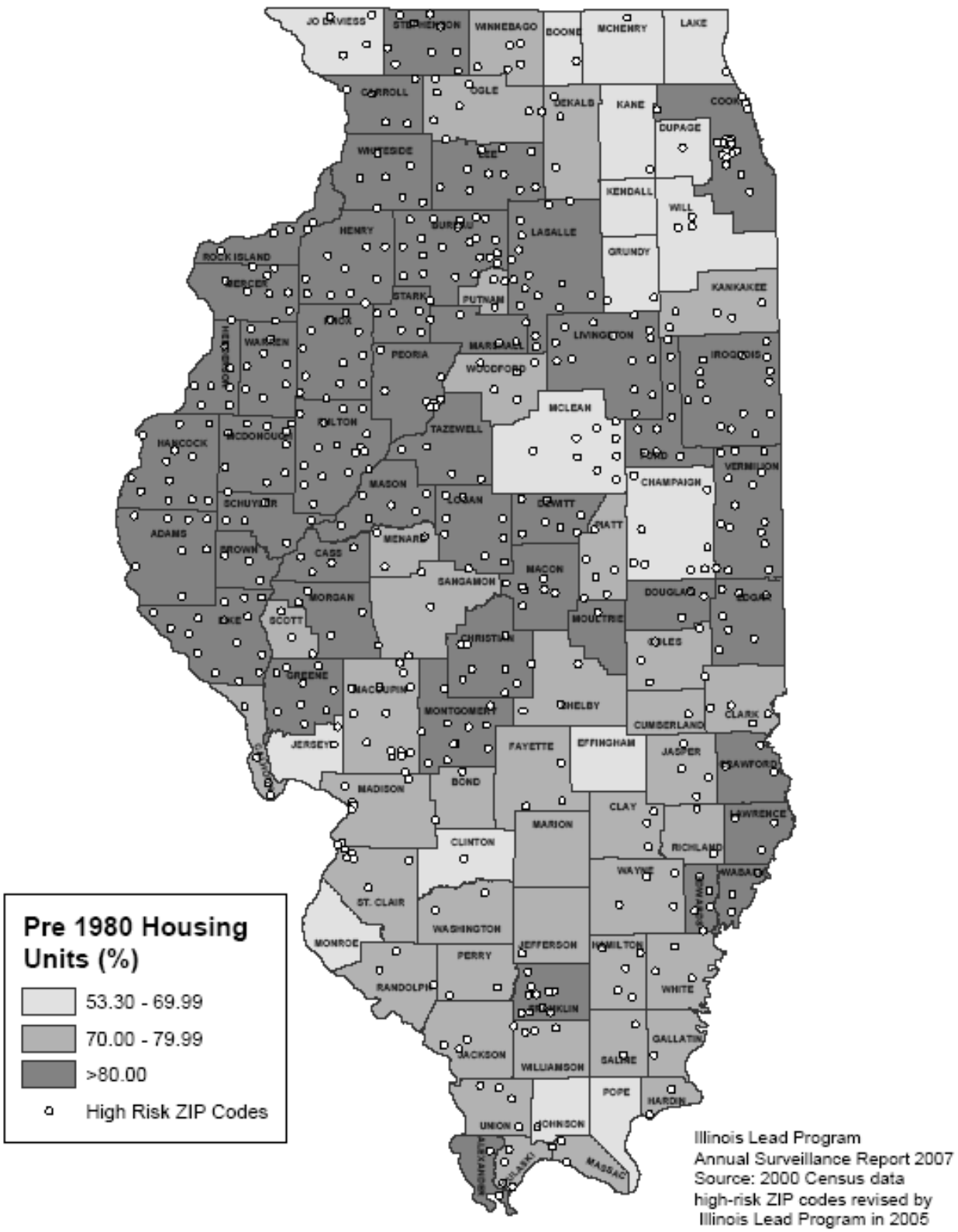

Illinois Department of Public Health
Percentage of Children Living in Housing Units Built Before 1980 by County
Pre 1980 Housing Units (%)
53.30 - 69.99
70.00 - 79.99
>80.00
High Risk ZIP Codes
Illinois Lead Program
Annual Surveillance Report 2007
Source: 2000 Census data
high-risk ZIP codes revised by
Illinois Lead Program in 2005

Figure 10

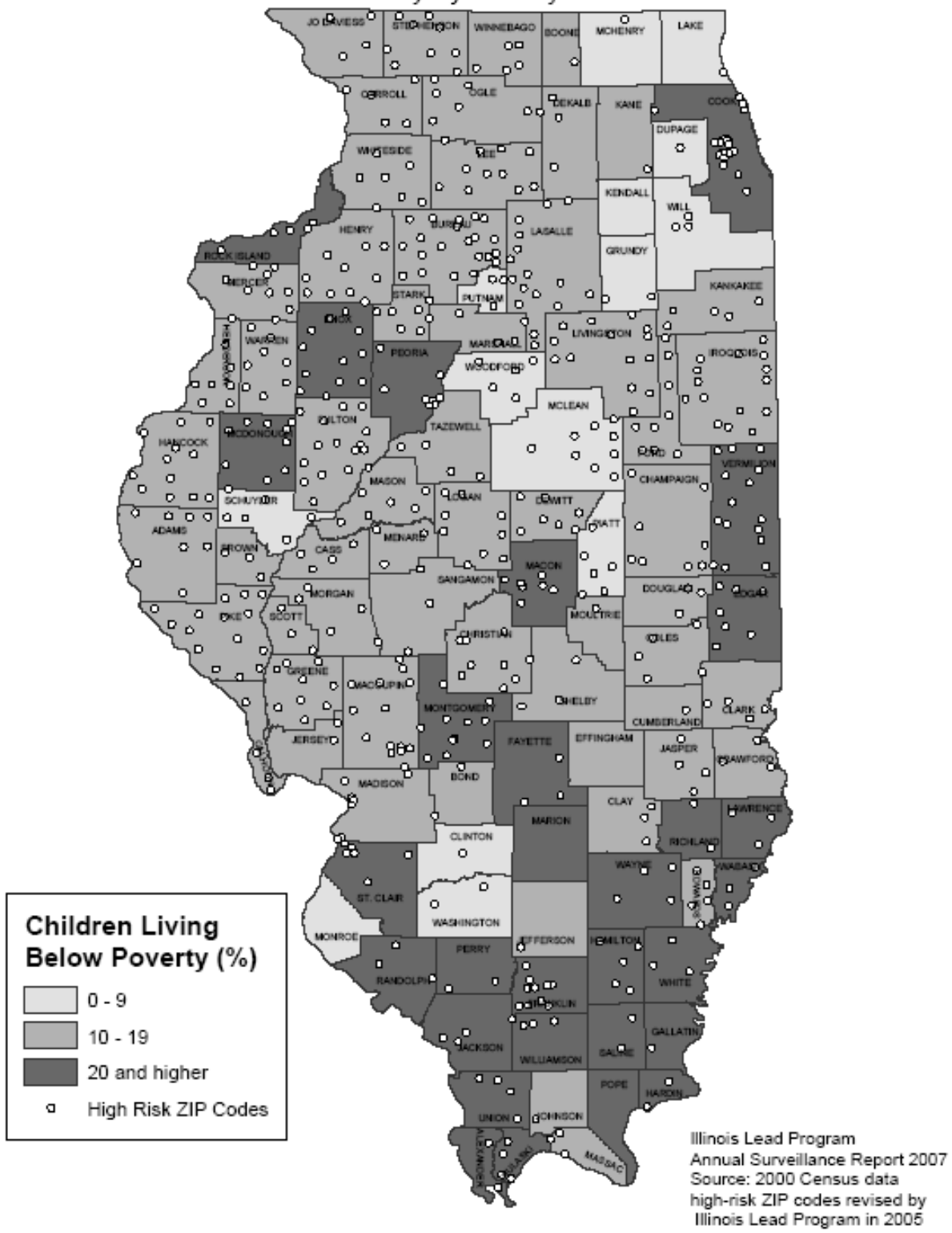

Illinois Department of Public Health
Percentage of Children 6 Years of Age and Younger Living Below Poverty by County
Children Living Below Poverty (%)
0 - 9
10 - 19
20 and higher
High Risk ZIP Codes
Illinois Lead Program
Annual Surveillance Report 2007
Source: 2000 Census data
high-risk ZIP codes revised by
Illinois Lead Program in 2005

Figure 11

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Adverse Effects of Lead Poisoning

Lead poisoning (also known as saturnism, plumbism, or painter's colic) is a medical condition caused by increased levels of lead in the blood. Everyone is exposed to small amounts of lead through air, soil, household dust, food, drinking water and various consumer products. Children are at highest risk for lead poisoning through ingestion because of their hand-to-mouth activities. In 2007, 296,998 Illinois children were tested for lead poisoning and 5,270 (1.8 percent) had elevated blood lead levels of 10 micrograms per deciliter and above.

Most children with elevated blood lead levels have no obvious acute symptoms of lead poisoning. Blood lead testing is the only effective way to detect lead poisoning. The non-specific symptoms of lead poisoning may include:

Irritability
Headaches
Sleeplessness
Vomiting
Diarrhea
Seizures
Loss of appetite and /or weight loss
Stomach aches and
Cramping / constipation

Severe cases of lead poisoning are rare. Anemia and fatigue are common. Damage to the nervous system may cause impaired mental function. Continued excessive exposure, as in an industrial setting, can affect the kidneys.

A 2008 study in Cincinnati of pregnant women who resided in areas of the city with a high concentration of older lead-contaminated housing showed that prenatal and early childhood lead exposure resulted in a decreased brain volume especially in male children[1]. Affected regions included portions of the brain responsible for mood regulation, emotional responses, impulse control, problem solving, and decision making. In a follow-up study, prenatal and postnatal blood lead concentrations were associated with higher rates of criminal activities in young adults involving violence[2].

Other resources regarding the adverse effects of lead in children include:

[1]Cecil, K.M.; Brubaker, C.J.; Adler, C.M.; Dietrich, K.N.; Altaye, M., et al. (2008) Decreased Brain Volume in Adults with Childhood Lead Exposure. PLoS Med 5(5): e112 doi:10.1371/journal.pmed.0050112.

[2]Wright, J.P.; Dietrich, K.N.; Ris, M.D.; Hornung, R.W.; Wessel, S.D., et al. (2008) Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood. PLoS Med 5(5): e101 doi:10.1371/journal.pmed.0050101.

Preventing and Screening for Childhood Lead Poisoning: A Reference Guide for Physicians and Health Care Providers. Illinois Department of Public Health: 2008.

U.S. Centers for Disease Control and Prevention: http://www.cdc.gov/lead/

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Medical and Environmental Case Management of Lead Poisoning

The Illinois Department of Public Health has grant agreements with 83 delegate agencies to provide case management care for lead poisoned children in 91 of 102 counties. Case management activities include education**,** home nursing visits and referrals for related services such as medical**,** nutritional supplementation and developmental testing. In collaboration with the Department, these delegate agencies provide community education and technical information to health care providers, families of lead poisoned children and the general public. Each of the delegate agencies use the STELLAR (Systematic Tracking of Elevated Lead Levels and Remediation) data processing system to maintain records for case management of children in the delegate agency's jurisdiction (Figure 12)**.**

Local health departments without a delegate agency agreement are designated as non-delegate agencies. There are currently 13 non-delegate agencies where case management is provided by the Illinois Lead Program regional nurse consultants.

Seventeen delegate agencies also provide environmental inspection services. Services include home inspections, risk assessment and abatement monitoring in addition to the case management services. Remediation is required by law when a lead hazard has been identified in a home where a lead poisoned child lives or regularly visits. Local health departments not covered by a delegate agency agreement are served by the Illinois Lead Program regional environmental health specialist. The environmental health specialists are housed in the Regional Offices of the Illinois Department of Public Health (Figure 13).

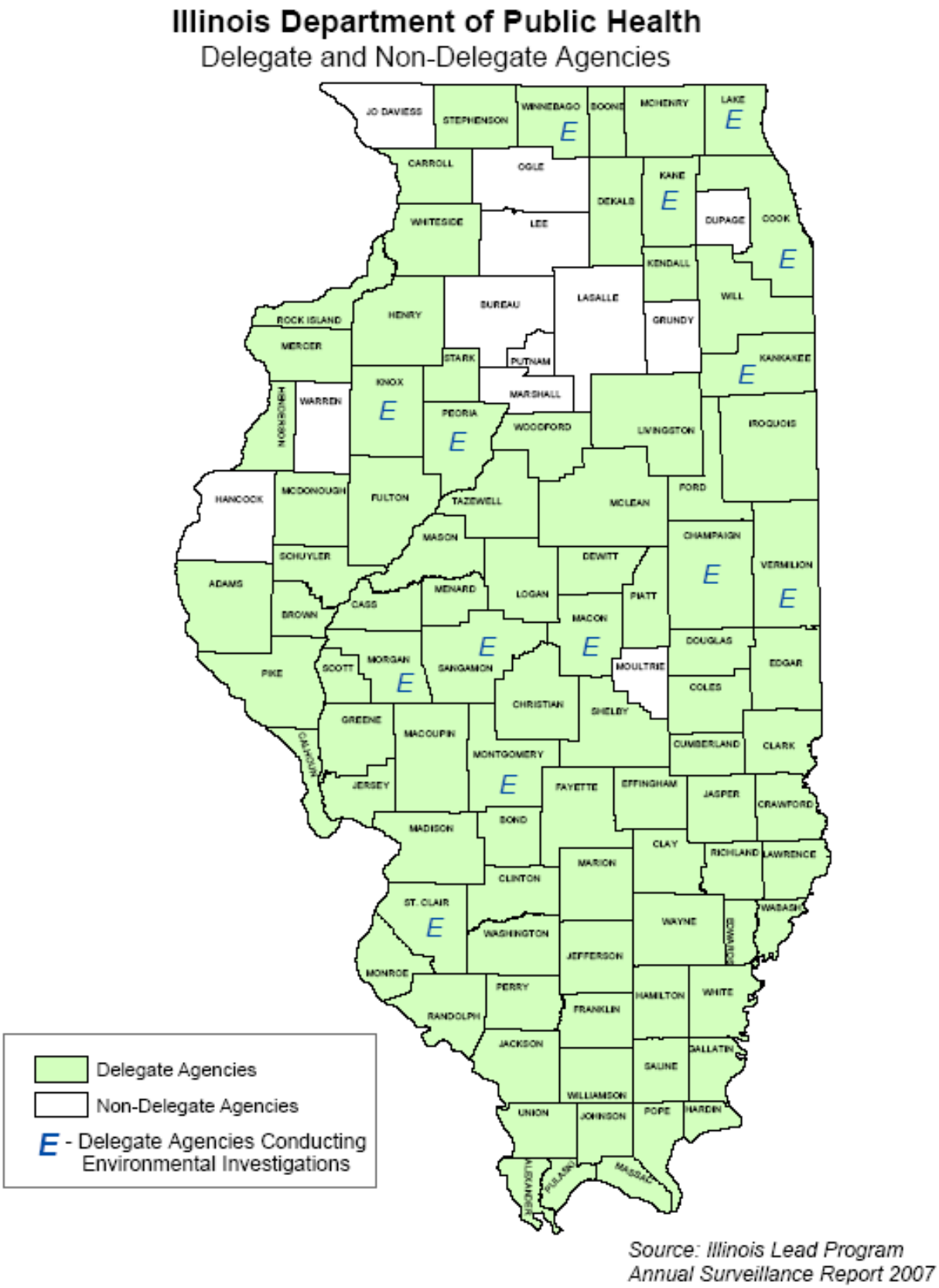
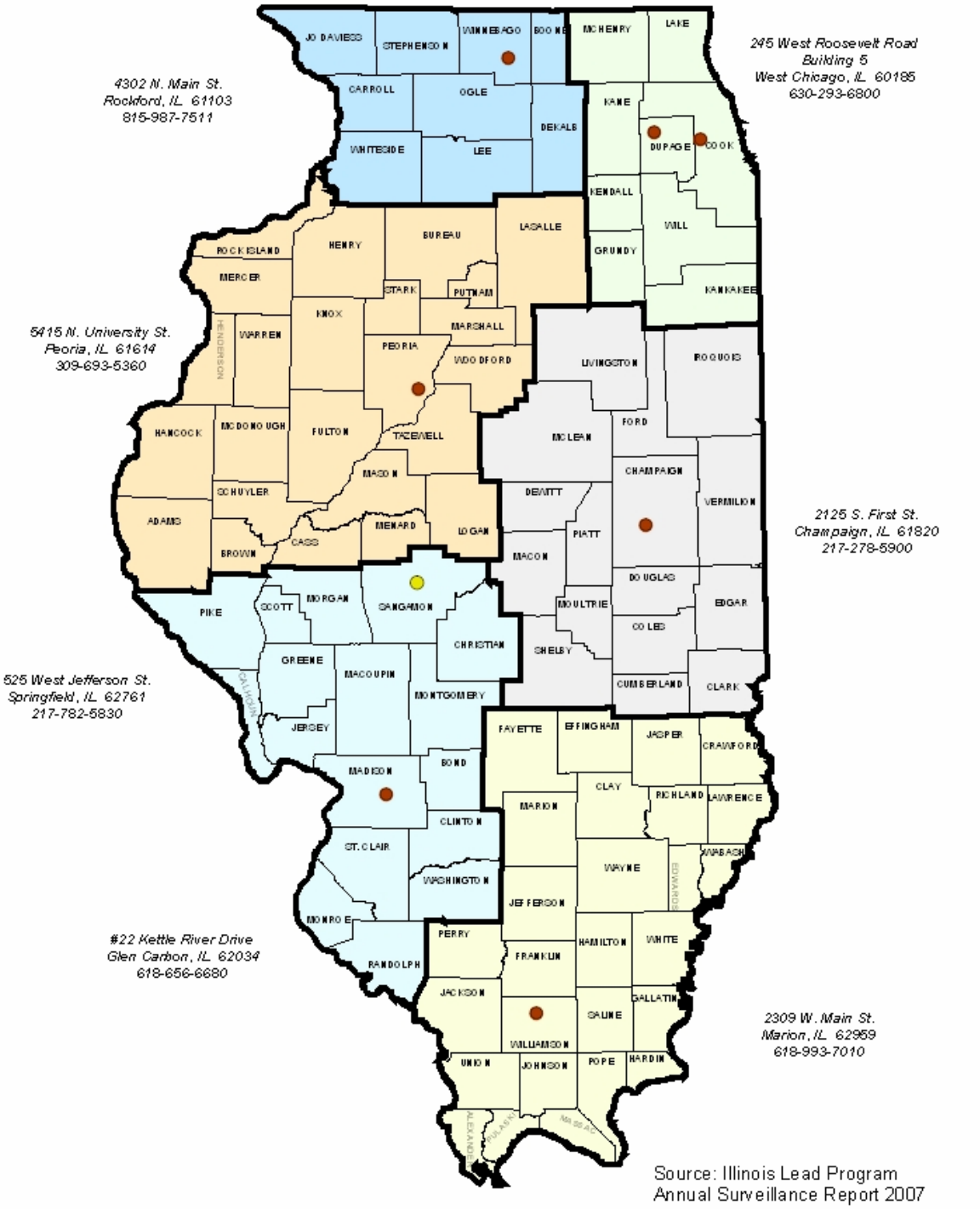

Illinois Department of Public Health
Delegate and Non-Delegate Agencies
JO DAVIESS
STEPHENSON
WINNEBAGO
E
BOONE
MCHENRY
LAKE
E
CARROLL
OGLE
DEKALB
KANE
E
DUPAGE
COOK
E
WHITESIDE
LEE
KENDALL
WILL
ROCK ISLAND
HENRY
BUREAU
LASALLE
GRUNDY
MERCER
STARK
PUTNAM
KANKAKEE
E
KNOX
E
MARSHALL
HENDERSON
WARREN
PEORIA
E
WOODFORD
LIVINGSTON
IROQUOIS
HANCOCK
MCDONOUGH
FULTON
TAZEWELL
MCLEAN
FORD
MASON
CHAMPAIGN
E
VERMILION
E
SCHUYLER
DEWITT
ADAMS
CASS
MENARD
LOGAN
PIATT
BROWN
MACON
E
DOUGLAS
EDGAR
PIKE
SCOTT
MORGAN
E
SANGAMON
E
MOULTRIE
COLES
CHRISTIAN
SHELBY
GREENE
MACOUPIN
CUMBERLAND
CLARK
CALHOUN
MONTGOMERY
E
JERSEY
FAYETTE
EFFINGHAM
JASPER
CRAWFORD
MADISON
BOND
CLAY
RICHLAND
LAWRENCE
MARION
CLINTON
ST. CLAIR
E
WAYNE
WABASH
EDWARDS
WASHINGTON
JEFFERSON
MONROE
PERRY
HAMILTON
WHITE
RANDOLPH
FRANKLIN
JACKSON
GALLATIN
SALINE
WILLIAMSON
UNION
JOHNSON
POPE
HARDIN
ALEXANDER
PULASKI
MASSAC
Delegate Agencies
Non-Delegate Agencies
E - Delegate Agencies Conducting Environmental Investigations
Source: Illinois Lead Program
Annual Surveillance Report 2007

Figure 12

Illinois Department of Public Health

Regional Offices of the Illinois Department of Public Health



Source: Illinois Lead Program
Annual Surveillance Report 2007
Note: Regional offices provide
nurse consultations and environmental
investigations

Figure 13

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Childhood Lead Poisoning Elimination Advisory Council

The Illinois Department of Public Health and its Childhood Lead Poisoning Elimination Advisory Council are dedicated to the reduction of exposures to lead for all Illinois children and to the achievement of the Healthy People 2010 goal of eliminating blood lead levels at or above 10 microgram per deciliter. The mission of the advisory council is to implement a comprehensive statewide strategic plan and foster creative partnerships.

The advisory council meets quarterly. The meeting is held in a central location in Bloomington, Illinois. The advisory council is divided into five subcommittees. Each subcommittee identifies or addresses goals and objectives related to the elimination of childhood lead poisoning: education awareness; evaluation, primary prevention, resources, and screening plan. Each committee has a facilitator who reports the progress made toward the completion of the goals and activities during meetings.

The advisory council is composed of a diverse network of dedicated stakeholders including physicians, nurses, health educators, nutritionists, demographers, environmental scientists, epidemiologists, clinical providers, and allied health professionals. Affiliations of stakeholders include city and county health departments, state agencies (Departments of Human Services, Financial and Professional Regulations, Healthcare and Family Services; Center for Health Statistics, Office of Planning and Economic Development), federal agencies (Housing and Urban Development, Environmental Protection Agency), universities (University of Illinois at Chicago, Southern Illinois University School of Medicine), hospitals (Children's Memorial Hospital, Chicago), community health centers (PCC Lake Street Family Center, Chicago), Illinois Poison Center, nonprofit organizations (nonprofit, professional), and other organizations serving disparate populations. Stakeholders bring a wide range of expertise in the areas of maternal and child health, lead elimination projects, Head Start collaborations, Medicaid, and WIC (Women, Infant and Children).

For more information on the Childhood Lead Poisoning Elimination Advisory Council and the Illinois Strategic Plan for the Elimination of Childhood Lead Poisoning, visit: http://www.idph.state.il.us/HealthWellness/StrategicLeadPlan.pdf or call the Illinois Lead Program at 866-909-3572 or 217-782-3517.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Contact Information

Illinois Department of Public Health
Illinois Lead Program
525 West Jefferson Street
Springfield, Illinois 62761
Telephone: 866-909-3572 or 217-782-3517
The hearing impaired can dial 800-547-0466
Web site: http://www.idph.state.il.us/envhealth/ehpublications.htm#lead

U.S. Centers for Disease Control and Prevention (CDC)
http://www.cdc.gov/lead/

National Lead Information Center
Telephone: 800-424-LEAD (5323)
Web site: www.epa.gov/lead

Printed by Authority of the State of Illinois
P.O. #559420 6.5M 10/08