

Appendix I: Other Resources

North Carolina Childhood Blood Lead Surveillance Data

"Target Population" is based on the number of live births in preceding years. "Number Tested" is an unduplicated count of children tested for lead poisoning within the calendar year. "Percent Tested" is the number of children tested divided by the target population. Children are counted as being tested for lead poisoning in successive years until they are confirmed to have a lead level ≥ 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$). Confirmation is based on a child receiving two consecutive blood lead test results ≥ 10 $\mu\text{g}/\text{dL}$ within a six-month period. "Confirmed" lead levels are based on the confirmation date and are classified according to the highest level confirmed during the calendar year. The categories "Confirmed 10-19" and "Confirmed ≥ 20 " are mutually exclusive.

"Percent Tested Among Medicaid**" is based on a data match of blood lead tests with Medicaid encounter data and includes ages 9-35 months. This larger 9-35 months category reflects Health Check visits and blood lead testing for children around their first and second birthdays and up to age three.

The numbers reported for North Carolina Childhood Blood Lead Surveillance Data may vary somewhat from previous reports due to ongoing data corrections.

2011 NORTH CAROLINA CHILDHOOD BLOOD LEAD SURVEILLANCE DATA, BY COUNTY

County	Ages 1 and 2 Years Tested for Lead Poisoning						Ages 6 Months to 6 Years		
	Target Population*	Number Tested	Percent Tested	Tested Among Medicaid**	Lead ≥10	Percent ≥10	Number Tested	Confirmed 10-19	≥20
ALAMANCE	3,740	1,828	48.9	74.7	15	0.8	2,303	4	1
ALEXANDER	786	469	59.7	78.3	1	0.2	594		
ALLEGHANY	210	153	72.9	91.3			187		
ANSON	551	300	54.4	86.3	4	1.3	514	1	1
ASHE	529	364	68.8	82.4			427		
AVERY	332	261	78.6	89.4			292		
BEAUFORT	1,135	828	73.0	88.3	5	0.6	915	3	
BERTIE	427	298	69.8	87.8	5	1.7	364	3	2
BLADEN	748	495	66.2	89.4	1	0.2	538	1	
BRUNSWICK	2,158	1,390	64.4	69.7	7	0.5	1,658		
BUNCOMBE	5,243	3,301	63.0	82.4	7	0.2	3,628	4	
BURKE	1,837	1,393	75.8	90.0	8	0.6	1,554	1	
CABARRUS	4,893	2,906	59.4	85.5	3	0.1	3,285		
CALDWELL	1,655	1,225	74.0	89.1	2	0.2	1,326		
CAMDEN	193	98	50.8	85.9	1	1.0	125		
CARTERET	1,208	835	69.1	92.1	3	0.4	908		
CASWELL	390	211	54.1	86.5	1	0.5	279		
CATAWBA	3,732	2,501	67.0	86.1	5	0.2	2,810		
CHATHAM	1,329	557	41.9	76.4	3	0.5	646	1	
CHEROKEE	485	266	54.8	82.4	1	0.4	410		
CHOWAN	339	201	59.3	83.2	2	1.0	227	1	
CLAY	172	130	75.6	86.4			182		
CLEVELAND	2,327	1,495	64.2	89.5	6	0.4	2,144		
COLUMBUS	1,358	969	71.4	87.7	3	0.3	1,258		
CRAVEN	3,384	2,175	64.3	93.1	8	0.4	2,481	1	
CUMBERLAND	12,033	4,136	34.4	80.0	18	0.4	5,043	3	1
CURRITUCK	471	182	38.6	67.2	1	0.5	262		
DARE	758	317	41.8	74.7	2	0.6	376		
DAVIDSON	3,616	2,207	61.0	85.1	8	0.4	2,449	4	1
DAVIE	848	481	56.7	85.6	4	0.8	524		
DUPLIN	1,603	1,029	64.2	83.1	4	0.4	1,227		
DURHAM	8,680	4,156	47.9	81.6	12	0.3	5,347	2	2
EDGECOMBE	1,445	1,088	75.3	86.3	10	0.9	1,254	3	
FORSYTH	9,527	6,053	63.5	88.9	20	0.3	6,572	6	1
FRANKLIN	1,331	713	53.6	82.2	3	0.4	813	2	
GASTON	5,330	1,755	32.9	60.5	7	0.4	2,371	1	1
GATES	212	86	40.6	83.7	1	1.2	132		
GRAHAM	174	111	63.8	80.3	1	0.9	147		1
GRANVILLE	1,260	625	49.6	75.4	1	0.2	689	1	
GREENE	510	290	56.9	74.8	2	0.7	387		
GUILFORD	12,153	9,175	75.5	92.6	27	0.3	11,105	13	1
HALIFAX	1,284	1,092	85.0	94.4	11	1.0	1,169	4	
HARNETT	3,491	1,803	51.6	91.3	9	0.5	2,311	2	
HAYWOOD	1,111	680	61.2	85.8	1	0.1	749		
HENDERSON	2,254	1,277	56.7	82.3	3	0.2	1,748		1
HERTFORD	553	365	66.0	88.1	1	0.3	461		1
HOKE	1,861	721	38.7	84.5	3	0.4	852		
HYDE	103	64	62.1	76.1			72		
IREDELL	3,736	1,817	48.6	83.6	8	0.4	2,138	1	
JACKSON	894	524	58.6	87.6	2	0.4	596		
JOHNSTON	4,678	2,144	45.8	75.5	7	0.3	2,798	2	

*Target Population is based on the number of live births in 2009 and 2010

**Includes ages 9-11 months

Prepared by Children's Environmental Health Unit

Last updated 09/12/2013

2011 NORTH CAROLINA CHILDHOOD BLOOD LEAD SURVEILLANCE DATA, BY COUNTY

County	Ages 1 and 2 Years Tested for Lead Poisoning						Ages 6 Months to 6 Years		
	Target Population*	Number Tested	Percent Tested	Percent Tested Among Medicaid**	Lead ≥10	Percent ≥10	Number Tested	Confirmed 10-19	≥20
JONES	195	169	86.7	80.9			201		
LEE	1,725	1,191	69.0	84.5	3	0.3	1,520	1	
LENOIR	1,459	947	64.9	86.1	8	0.8	1,355	4	
LINCOLN	1,663	501	30.1	42.3			729		
MACON	664	419	63.1	87.7	2	0.5	563		
MADISON	346	236	68.2	85.2			288		
MARTIN	550	381	69.3	87.2	1	0.3	499		
MCDOWELL	963	603	62.6	81.6	4	0.7	721		
MECKLENBURG	28,348	9,161	32.3	65.6	15	0.2	11,454	2	
MITCHELL	284	165	58.1	81.5	2	1.2	202		
MONTGOMERY	650	538	82.8	93.3			683		
MOORE	1,877	1,180	62.9	83.3	2	0.2	1,430		
NASH	2,438	1,785	73.2	92.5	10	0.6	2,117	3	
NEW HANOVER	4,575	3,662	80.0	86.0	8	0.2	4,458	1	2
NORTHAMPTON	427	318	74.5	91.3	1	0.3	378		
ONSLOW	8,352	2,548	30.5	60.9	13	0.5	3,094	2	2
ORANGE	2,509	1,005	40.1	72.8	1	0.1	1,199	1	
PAMLICO	215	138	64.2	83.8			165		
PASQUOTANK	1,059	559	52.8	85.4	4	0.7	670		1
PENDER	1,187	789	66.5	73.6	2	0.3	927		
PERQUIMANS	265	141	53.2	81.6	1	0.7	166		
PERSON	910	475	52.2	76.4	2	0.4	691		
PITT	4,451	1,684	37.8	81.5	4	0.2	2,228	1	
POLK	293	115	39.2	74.4	2	1.7	184		
RANDOLPH	3,382	1,999	59.1	82.9	8	0.4	2,314	1	
RICHMOND	1,219	788	64.6	79.8	4	0.5	961	2	
ROBESON	4,232	2,811	66.4	86.1	8	0.3	3,329	1	
ROCKINGHAM	1,991	1,051	52.8	78.5	3	0.3	1,344		
ROWAN	3,224	1,703	52.8	78.2	13	0.8	2,105	2	
RUTHERFORD	1,449	665	45.9	78.8	3	0.5	1,040	2	
SAMPSON	1,781	1,419	79.7	91.9	7	0.5	1,556	2	
SCOTLAND	1,001	684	68.3	80.9	2	0.3	719		
STANLY	1,406	1,157	82.3	94.4	2	0.2	1,215		1
STOKES	862	540	62.6	83.4	4	0.7	601		
SURRY	1,672	1,148	68.7	82.4	7	0.6	1,263		
SWAIN	353	311	88.1	78.6			338		
TRANSYLVANIA	588	224	38.1	66.2			331		
TYRRELL	92	64	69.6	91.1	1	1.6	71		
UNION	5,016	1,680	33.5	72.6	5	0.3	2,339		
VANCE	1,231	681	55.3	71.4	1	0.1	800	1	
WAKE	25,715	10,014	38.9	78.5	21	0.2	11,550	6	
WARREN	416	264	63.5	85.9			302		
WASHINGTON	299	222	74.2	92.6	2	0.9	267	1	
WATAUGA	704	561	79.7	96.1	3	0.5	686		
WAYNE	3,284	2,379	72.4	87.5	6	0.3	2,953	3	1
WILKES	1,377	615	44.7	78.6	6	1.0	690	2	
WILSON	2,122	1,528	72.0	91.9	7	0.5	1,780	2	
YADKIN	833	567	68.1	87.4	5	0.9	641	1	1
YANCEY	356	233	65.4	84.7	1	0.4	275		
STATE	249,087	129,558	52.0	80.7	461	0.4	156,039	105	22

*Target Population is based on the number of live births in 2009 and 2010

**Includes ages 9-11 months

Prepared by Children's Environmental Health Unit

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**NORTH CAROLINA DIVISION OF PUBLIC HEALTH
FOLLOW-UP SCHEDULE FOR DIAGNOSTIC / CONFIRMED BLOOD LEAD LEVELS
FOR CHILDREN UNDER THE AGE OF SIX**

Blood Lead Level	Response (Clinical and environmental follow-up is based on the rounded test result.)
<p style="text-align: center;"><5 µg/dL (reported result less than 4.50 µg/dL)</p>	<ul style="list-style-type: none"> • Report blood lead test result to parent & document notification • Educate family about lead sources, environmental assessment & prevention of lead exposure • Perform <u>another</u> blood lead test at age 2, earlier if risk of exposure increases
<p>All diagnostic (i.e., confirmation) tests should be performed as soon as possible within the time periods listed below. If diagnostic test result falls into a lower category - follow response for that risk category. If diagnostic or follow-up test result falls in a higher category – conduct <u>another</u> (venous) diagnostic test based on the higher risk category & follow response for that risk category.</p>	
<p style="text-align: center;">5-9 µg/dL (reported result 4.50- 9.49 µg/dL)</p> <p style="color: red;">(Diagnostic test within 3 months)</p>	<ul style="list-style-type: none"> • Report blood lead test result to parent & document notification • Educate family about lead sources, environmental assessment & prevention of lead exposure <p>If diagnostic test result is 5-9 µg/dL</p> <ul style="list-style-type: none"> • Conduct nutritional assessment and refer to the WIC Program • Take environmental history to identify lead sources & emphasize the importance of environmental assessment to identify and mitigate lead hazards • Continue follow-up testing every 3 months until 2 consecutive tests are <5 µg/dL • Test other children under the age of six in same household
<p style="text-align: center;">10-19 µg/dL (reported result 9.50- 19.49 µg/dL)</p> <p style="color: red;">(Diagnostic test within 1 month)</p>	<ul style="list-style-type: none"> • Report blood lead test result to parent & document notification • Educate family about lead sources and prevention of lead exposure <p>If diagnostic test result is 10-19 µg/dL</p> <ul style="list-style-type: none"> • Conduct nutritional assessment and refer to the WIC Program • Take environmental history to identify sources of lead exposure • Refer to local health department for environmental investigation • Continue follow-up testing every 1-3 months until 2 consecutive tests are <5 µg/dL • Test other children under the age of six in same household
<p style="text-align: center;">20-69 µg/dL (reported result 19.50- 69.49 µg/dL)</p> <p style="color: red;">(Diagnostic test within 1 week at 20-44 µg/dL within 48 hours at 45-59 µg/dL within 24 hours at 60-69 µg/dL)</p>	<ul style="list-style-type: none"> • Report blood lead test result to parent & document notification • Educate family about lead sources and prevention of lead exposure <p>If diagnostic test result is 20-69 µg/dL</p> <ul style="list-style-type: none"> • Conduct nutritional assessment and refer to the WIC Program • Take environmental history to identify sources of lead exposure • Refer to local health department for required environmental investigation • Provide clinical management • Refer children to CDSA* Early Intervention or CC4C** as appropriate • Refer to Social Services as needed for housing or additional medical assistance • Continue follow-up testing every 1 month until 2 consecutive tests are <5 µg/dL • Test other children under the age of six in same household
<p style="text-align: center;">≥70 µg/dL (reported result greater than or equal to 69.50 µg/dL)</p> <p style="color: red;">(Diagnostic test immediately as emergency lab test)</p>	<ul style="list-style-type: none"> • Report blood lead test result to parent & document notification • Educate family about lead sources and prevention of lead exposure <p>If diagnostic test result is ≥70 µg/dL</p> <ul style="list-style-type: none"> • Hospitalize child and begin medical treatment immediately • Conduct nutritional assessment and refer to the WIC Program • Take environmental history to identify sources of lead exposure • Refer to local health department for required environmental investigation • Refer children to CDSA* Early Intervention or CC4C** as appropriate • Refer to Social Services as needed for housing or additional medical assistance • Continue follow-up testing every 1 month until 2 consecutive tests are <5 µg/dL • Test other children under the age of six in same household

*Children’s Developmental Service Agency

**Care Coordination for Children

Summary of Public Health Actions Based on Maternal and Infant Blood Lead Levels

All Women of Child-Bearing Age

Provide anticipatory guidance, provide health education materials, test workers according to established guidelines, and manage elevated BLLs according to adult lead guidelines. (OSHA Medical Guidelines)

Pregnant Women

Confirm and referrals

Provide anticipatory guidance

Notify health department

Consider chelation therapy; Consult with an expert in lead poisoning

Environmental assessment & abatement of lead paint hazards

Medical emergency

Chelation therapy

Lactating Women

Breastfeeding should be encouraged

Breastfeeding may be initiated if infant's BLLs monitored

Medical removal from occupational exposure

Lactation should be continued, but breast milk should be pumped and discarded until BLLs <40

Neonates (<1 Month of Age)

Follow-up test within 1 month

Follow-up test within 2 weeks

Follow-up test within 24 hours

Follow local pediatric lead screening guidelines

Consider chelation therapy; Consult with an expert in lead poisoning

Infants (1 - 6 Months)

Follow-up test within 1-3 months

Follow-up test within 3 months

Follow-up test within 1-3 months

Follow-up test within 1 month

Follow-up test within 24 hours

Follow local pediatric lead screening guidelines

Consider chelation therapy; Consult with an expert in lead poisoning

Micrograms/Deciliter 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

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