

Jeb Bush
Governor



John O. Agwunobi, M.D.
Secretary

July 8, 2002

Mike Smiley
Grants Management Specialist
Grants Management Branch
Procurement and Grants Office
Centers for Disease Control and Prevention
255 East Paces Ferry Road, MS-E13
Atlanta, GA 30305

Reference: H64/CCH408427-11

Dear Mr. Smiley:

Attached are the original and two copies of our calendar year 2001 annual report. The report contains progress on relevant milestones. It also contains updates on objectives still pending completion. Should you have questions, please call me at (850) 245-4444, extension 2869.

Sincerely,

A handwritten signature in cursive script that reads "Trina Thompson".

Trina Thompson, M.A., Coordinator
Childhood Lead Poisoning Prevention
Program

TKT/tkt

Enclosures

cc: Sharon Heber, Dr.P.H., Director, Division of Environmental Health
David Johnson, M.D. M.S., Chief, Bureau of Environmental Epidemiology
Alan Rowan, Dr.P.H., Supervisor, Environmental Health Surveillance



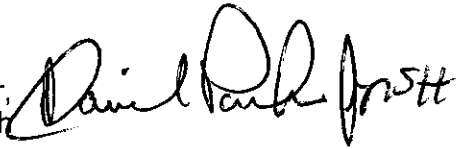
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MEMORANDUM

Date: July 8, 2002

To: County Health Department Directors/Administrators
Attn: Environmental Health Directors
Attn: Nursing Directors
Attn: Epidemiologists

Through: Sharon Heber, Dr.P.H., Director,
Division of Environmental Health 

From: David Johnson, M.D. M.S., Chief, 
Bureau of Environmental Epidemiology

Subject: 2001 Annual Analysis of Childhood Lead Poisoning Surveillance Data

We are pleased to furnish you a copy of the annual analysis of 2001 Childhood Lead Poisoning Prevention Program data. The program maintains a database consisting of blood lead tests performed by the Department of Health, Bureau of Laboratories (State Laboratory), and reports from private clinical laboratories. The State Laboratory submits records based on the completed blood lead test requisition form that accompanies each blood specimen. Please note that a majority of the analyses do not include private laboratory data. Private laboratories do not routinely report demographic data that are necessary for the analyses performed. In addition, all private laboratories do not report all blood lead tests performed.

A brief explanation of the data tables is included. The information contained in this report reflects the most frequently requested data. If you need additional data specific to your county or would like all or part of the public laboratory test data sent to your county, please contact Dr. Alan Rowan at (850) 245-4444, extension 2159; SUNCOM 205-4444, extension 2159, or Trina Thompson at (850) 245-4444, extension 2869; SUNCOM 205-4444, extension 2869. Your requests and comments guide our efforts to improve the annual and quarterly reports.

**Florida Department of Health
Childhood Lead Poisoning Prevention Program
Calendar Year 2001 Annual Report**

Reference: H64/CCH408427-11

Cooperative agreement for surveillance of elevated blood lead levels in children

INTRODUCTION

Florida is the fourth largest state in the nation, has the nation's fourth largest live birth rate, is home to an estimated one million children less than 72 months of age, and has over 300,000 Medicaid-eligible children in the same age range. The many subtle demographic and socioeconomic differences in this pediatric population underscore the importance of addressing the preventable condition of childhood lead poisoning. The Centers for Disease Control and Prevention's (CDC's) Lead Poisoning Prevention Branch and the national health plan, Healthy People 2010, have established an objective for the elimination of elevated blood lead levels in children. The Florida Department of Health is preparing to meet this challenging objective in a number of ways.

For calendar year 2001, 72,651 total tests were performed on an unduplicated count of 69,264 children less than 72 months of age. These reports were submitted by the Department of Health, Bureau of Laboratories (state laboratory) and by reporting private laboratories to the program. Of those children tested, 2,417 had blood lead levels greater than or equal to 10 micrograms per deciliter ($\geq 10\mu\text{g/dL}$), including all test types (capillary, venous and unknown). The program does not regularly produce rates because many children are not screened and private laboratories often submit data that exclude results less than 10 micrograms per deciliter. Therefore, a reliable denominator is not available. Although the public laboratory does submit complete records, this subset of children may not be representative for estimating statewide prevalence.

The program conducts laboratory-based surveillance, though plans to incorporate local-level case management data are underway through the use of Merlin, the Department of Health's on-line, statewide, reportable disease system. The program was established in 1992 with funding from the CDC. The program began collecting data in 1993. The database is housed in the Department of Health, Bureau of Environmental Epidemiology in Tallahassee. Lead poisoning became a notifiable disease in Florida in 1992. The case definition of childhood lead poisoning is a venous blood sample result of ≥ 10 micrograms per deciliter ($\mu\text{g/dL}$) from a child less than 72 months of age.

Two persons staff the program. Trina Thompson, M.A., is Coordinator, and Susan Limbaugh, L.P.N., is Assistant Coordinator. The program's Supervisor, Alan Rowan, Dr.P.H., and Principal Investigator, David Johnson, M.D., M.S., oversee the activities and consult with the staff. Program staff maintains laboratory data in Microsoft Access, entering data into flat ASCII files for each calendar year. The program's database now contains nearly 400,000 records. Blood lead level results and accompanying information are routinely entered, checked for quality, and merged to the main database.

The state laboratory and several reporting private laboratories submit records on a weekly or monthly basis. The Florida Statutes, Chapter 381, "Report of Diseases of Public Health Significance to Department", and Chapter 64D-3, of the *Florida Administrative Code*, "Control of Communicable Diseases and Conditions Which May Significantly Affect Man",

address the reporting of notifiable diseases by laboratories. Laboratories have a 72 -hour time frame in which to report an elevated blood lead level with the following identifying information:

- Name and date of birth of the patient from whom the specimen was taken;
- Name, address, and telephone number of the processing laboratory; and
- Diagnostic test performed, specimen type and result.

In addition to the above, they must supply either of the following:

- Address, telephone number, race, sex, ethnicity and social security number of the patient, or, if these are not available then
- Name, address, and telephone number of the submitting physician or health care provider.

In addition to these minimum mandatory requirements outlined in the Florida Administrative Code, the program also requests:

- An indication if the individual is receiving Medicaid;
- That all blood lead test results (not only those greater than or equal to 10 micrograms per deciliter) be reported; and
- That all reports be submitted via regular mail service on computer diskette or encrypted and emailed.

The statute does not require blood lead levels less than 10µg/dL to be reported. Florida does not have a law mandating that laboratories submit all identifying information for the purpose of notifying the program of blood lead levels. The state laboratory requires that all parties responsible for the collection of blood samples submit complete identifying information. In turn, the state laboratory provides the program with the most complete records (including Medicaid status). Fifteen private laboratories regularly submitted data to the program during 2001. Some private laboratories report completely, but others do not submit records <10µg/dL or supply information essential for proper surveillance, including Medicaid status and the other variables referred to above. The program coordinator attempts to contact private laboratories to request that reports be submitted within 72-hours and that complete identifying information for elevated and non-elevated tests be submitted. Private laboratory reporting does continue to improve and is an important source of data.

Lead is an Important Pediatric Health Problem

Despite the elimination of lead from gasoline and interior house paint in this country, lead from these sources remains in the environment and houses. The CDC has termed excessive absorption of lead as "one of the most common pediatric health problems in the United States today and it is entirely preventable" (CDC 1991). Lead-based paint hazards in older homes remain the primary source of high-dose lead exposure for preschool-aged children (CDC 1997:13, Children's Environmental Health Network 1997:3). Children are at particular risk for lead exposure due to their regular hand-to-mouth activity during daily play where lead-based paint is peeling or flaking. The dust from this deteriorating paint is easily ingested and is a significant source of exposure.

Children 9 months of age to 2-1/2 years of age are at greatest risk of lead poisoning. They have greater hand-to-mouth activity, their brains are more sensitive to the toxic effects of lead, and they absorb a greater percentage of the lead that is ingested. For comparison, where an adult will absorb 10 percent of ingested lead, a toddler will absorb 50 percent of ingested lead (Children's Environmental Health Network 1997:1). Children's developing nerves are more

susceptible because the cell membrane activity and enzymes are affected by lower levels of lead (Cassarett, Dull 1995). Children less than 72 months of age continue to have increased risk for lead poisoning, which gradually decreases until they are six years of age. After six years of age, the risk is generally low, but special circumstance may increase risk. For example, a child who is developmentally delayed may retain hand-to-mouth behavior.

Ingested lead is readily available to a child's body during early growth and development. Children are very different from adults physiologically. Pound for pound, young children breathe more, eat more and drink more than adults and double their weight in their first four months of life (Children's Environmental Health Network 1997:1). For example, proportionately, an average one-year-old eats two to seven times more grapes, bananas, pears, carrots and broccoli than an adult (Ibid:2). Children have greater need for calcium than do adults for developing bones and will absorb more of this element when it is ingested. If lead is ingested, the body will mistake it for calcium and absorb the lead in place of calcium.

Other effects of lead poisoning may include diminished intelligence, learning disabilities, delayed congenital development, interference with calcium metabolism, reduced heme syntheses (or the body's ability to manufacture red blood cells), reduced kidney function, and damage to the central nervous system. The damage to the central nervous system is not reversible. The extent to which these effects will be present in a child depends on a number of factors, including the duration and intensity of exposure. These factors are still being studied to determine long-term effects of exposure on children.

SELECTED PROGRAM ACTIVITIES CALENDAR YEAR 2001

The program conducts grant business by the fiscal year July 1 to June 30, but produces quarterly and annual reports on the calendar year. Below is a bulleted summary of activity highlights from calendar year 2001.

- The program received at least 53 requests for data during calendar year 2001. Varying degrees of information were requested by concerned parents, realtors and home owners inquiring about the disclosure law, researchers from Florida universities, private construction consultants, graduate students whose projects or theses involves lead poisoning, and local county health departments. Fulfilling these requests required simple tasks such as providing educational materials, or more complex tasks of querying data from the main database and preparing appropriate explanations. Below are summaries of selected data requests.
- Former program supervisor, Dr. Russ Mardon; coordinator, Ms. Trina Thompson, and in-kind contributor Dr. Joe Sekerke met with staff of the Department of Community Affairs, Bureau of Community Development, on January 23, 2001. Ms. Thompson gained a key contact, Mr. Harold Eastman, who works in the Community Development Block Grant Section of that bureau. Mr. Eastman provided an overview of what he and other staff do, which includes conducting detailed presentations to the public on what is expected by the new Housing and Urban Development regulation regarding Section 8 housing. Ms. Thompson shared educational materials with Mr. Eastman, including the screening guidelines. Mr. Eastman and Ms. Thompson preliminarily sketched a project to match Section 8 housing addresses with addresses in the lead database where children were reported with elevated blood lead levels. This address matching may expedite addressing lead hazards in units where it is most needed.

- A private company requested Duval County-specific data. The company explained it was engaged in studying background exposure and requested age, zip code, sex, all results, and the dates the blood was collected, for years 1993-2000. Program staff responded with a data file.
- Ms. Thompson provided a letter of support for Janvier Gasana, M.D., Ph.D., Assistant Professor, Florida International University, for use in an application for grant funds from NIEHS to educate community members about identifying and controlling lead hazards. Ms. Thompson also provided data on the number of children screened 1995-2000 for Dr. Gasana's grant application.
- The Lakeland Housing Authority contacted the program to inquire interest on a matching project that would inform the Authority if its tenants include children with elevated blood lead levels. The Authority was in the process of having its units inspected for lead hazards and wanted to expedite inspection and any necessary remediation in units where children, who have elevated blood lead levels, are living. The Authority intended to use the form to obtain permission from parents to request a lead level drawn on the children living in their units. Ms. Thompson would then query the children's names from the database and inform the Authority if any tenant children had documented blood lead levels. Ms. Thompson emailed a Release of Medical Information to the Lakeland Housing Authority for them to use and return to the program, before matching work could begin. Ms. Thompson communicated with the Authority on many occasions over the course of two calendar quarters, but has not received a confirmatory indication if the Authority will proceed or if the project has been delayed or cancelled.
- A private company based in North Carolina contacted the program to request information on blood lead levels in the Tampa area. The company was contracted to conduct risk assessment on secondary smelters in the Tampa area. The coordinator provided a number of annual reports.
- At the end of May, program staff released a memorandum to county health department directors. The memorandum serves as a reminder that there should be a staff person designated to conduct follow-up for elevated blood lead levels found in children. The coordinator drafted the memorandum with the input of the Maternal and Child Health Liaison who oversees county health department case managers. The liaison, Ms. Charlotte Curtis, has received several calls from county health department staff who wished to report that they do have a designee who performs this essential follow-up.
- The program coordinator conducted training on the basics of lead poisoning for the Family Health Line telephone staff on April 24. The Family Health Line, created by the Department of Health, offers a toll free number to pregnant and nursing mothers on a range of health and safety topics. The coordinator notified the contact in the Division of Maternal and Child Health that she would like to add childhood lead poisoning to the list of topics that the telephone staff reviews with callers. The contact informed the coordinator that this could easily be arranged at no cost to the lead program. The coordinator also supplied telephone staff with a large quantity of brochures, stickers and magnets for inclusion in the packets mailed to callers. In May, telephone staff requested more detailed information regarding the maternal transmission of lead to the fetus. The coordinator drafted a brief summary of the key points and Dr. Joe Sekerke, toxicologist in the Bureau of Environmental Epidemiology, reviewed it before it was sent to telephone staff.

- Program staff are very happy to report that the program is now in compliance for submitting annual extracts of data to the CDC. The program successfully submitted data for years 1993 through 2000. The program's CDC data contact, Ms. Wendy Blumenthal notified the coordinator on May 23 that the 1993-1999 data were successfully filtered and are ready for importing to the national database. Data for year 2000 were submitted in time to be processed along with other grantees' data and will be filtered at a later date.
- Program staff are pleased to announce their success in procuring a contract with the National Institute for Occupational Safety and Health (NIOSH) for adult blood lead epidemiology and surveillance (ABLES). The ABLES program will have its own part-time staff person for data compilation. Childhood lead poisoning program staff anticipate that this new contract will complement current prevention efforts in the pediatric population. Most of adult lead exposure takes place in the workplace through inhalation of contaminated dust. Where adults are thus exposed, they can inadvertently bring dust home and expose their children. As adult exposures are documented, education efforts will be focused to inform adults on prevention for themselves and their children. Adults will also be given information on testing their children at their own provider or through their local county health department. Staff of the Pinellas and Duval County Childhood Lead Poisoning Prevention programs will be consulted for their expertise in addressing adult exposures. Pinellas County in particular has managed many adult cases in construction and bridge repair occupations.
- Lead Extended Data Screens for Merlin were published (made available in Merlin) on December 4, 2001. CHD staff can now enter data on lead poisoning case management and follow-up. Merlin assigns a number to each case enabling communication of confidential information by email, using the case number and not the client name.
- Merlin has a report capability that is run weekly by programmers. This report shows lead cases for the preceding week and any updates submitted on previously reported cases. Ms. Limbaugh extracts a flat file of data from the Merlin report, imports it into the program's Access database, and uses the file to update existing records. Data received through the Merlin flat file include correct spelling of names, birth dates, race, ethnicity, social security number, addresses and test type in addition to follow-up case management.
- The program received \$30,000 supplemental funding from CDC, which will be used to cover the expenses of programming extended data screens in the Merlin System. Case closure screens are being finalized and will soon be on the test site. Implementation of Merlin greatly facilitates receipt of data from all county health departments. This system further increases the program's capacity to compile case management and elevated blood lead investigation data for quarterly and annual reports on a statewide basis.
- Ms. Limbaugh attended the CDC Region IV Conference in North Carolina and gave a presentation entitled Merlin Surveillance System: Capturing Lead Data, which Ms. Thompson had prepared. This presentation introduced the Merlin system and outlined the program's expectations for Merlin to assist in fulfilling surveillance objectives. Both staff members actively participated in the program planning committee that prepared the agenda and invited speakers for the meeting.

- Ms. Thompson met with members of the Information Technology team regarding preliminary drafting of lead screens for the new CENTRAX system. The Department of Health's Division of Environmental Health is developing CENTRAX. This system will be accessed through the department's intranet. The graphical user interface resembles Microsoft Excel. Ms. Thompson was assured that the program will have detailed entry screens to collect information on elevated blood lead level investigations. Eventually, the program would like to have a link from Merlin to CENTRAX that will allow the nursing section of local county health departments to make referrals for the investigations and prevent duplicative data entry if a child's address and demographics are already entered into Merlin. Development of these CENTRAX screens is slated for 2003.
- In October, the program fielded several calls regarding Christmas lights sold through Wal-Mart. The package displayed a warning of lead on the light strands, with a notice that users should wash their hands. Program staff explained the basics of lead safety when handling objects containing lead. Information and concern about the Christmas lights also appeared on the Children's Environmental Health Network list serve.
- During fourth quarter, program staff distributed over 1,000 screening guidelines, high-risk maps and other educational materials to county health departments. This mass mailing equips lead contacts at the local level with materials for private providers. Providing physicians whose practices are in designated high-risk areas with these screening tools is a program priority. This distribution works toward fulfilling objectives in screening, bringing about follow-up care, and public and professional education.
- Program staff also completed mailing of brochures in English, Spanish and Creole, guideline documents and maps, and stickers, to the department's Children's Medical Services (CMS) district staff offices, including headquarters staff.
- Reaching Medicaid children is an ongoing primary component of program activities. In October, Dr. Joe Sekerke and Ms. Susan Limbaugh released a cover letter and data to the program's primary Medicaid contact person, Ms. Anne Boone, at the Agency of Health Care Administration. These materials represent the initial attempt at matching Medicaid data with the program's lead screening data. Medicaid data were obtained directly from the Agency of Health Care Administration (AHCA). Ms. Thompson and Dr. Sekerke met with Ms. Boone and other AHCA contact persons in January and obtained feedback on this file.
- Dr. Sekerke programmed the visual basic routine that matches the Medicaid and lead screening records. He agreed to make minor modifications to the routine to satisfy Ms. Boone and others' requests. Ms. Thompson and Dr. Sekerke will release a second file with the requested modifications, on or before April 15, 2002. This meeting is a step in the process of standardizing protocols for matching Medicaid data with screening data, and returning a file for Medicaid to use in addressing screening rates with Medicaid providers.
- Additional dialogue during this meeting led to plans for further collaboration between the lead program and Medicaid managed care. Ms. Thompson will be meeting with Ms. Boone and representatives from Medicaid managed care in February or March 2002 to discuss how to increase communication between county health departments and regional managed care contacts. The desired outcome is an increase in confirmatory testing and case management for children whose providers are part of

Medicaid managed care organizations. Up to 30 percent of Medicaid children in Florida are in Medicaid managed care. It is difficult to determine from laboratory results if children are in Managed care, but agents from AHCA will work jointly with Ms. Thompson and county health departments to identify these children and improve their case management.

- Ms. Thompson prepared a presentation entitled Childhood Lead Poisoning: Opportunities for Collaboration. Ms. Melanie Thoenes of the Pinellas County Childhood Lead Poisoning Prevention Program gave the presentation to the Joint Children's Medical Services and County Health Department Directors meeting. Children's Medical Services is a Department of Health section that facilitates the provision of services to medically needy children. Services include case management and follow-up for children with blood lead levels greater than or equal to 20 micrograms per deciliter ($\mu\text{g}/\text{dL}$). Children's Medical Services staff are also valued partners in educating low-income families about the risks of lead poisoning.
- Program staff have assessed that in addition to Broward, Hillsborough, Orange, and Palm Beach counties, Escambia, Polk, and Volusia counties also warrant additional attention to childhood lead poisoning. This conclusion is based on the numbers of older housing units and at-risk children residing in these counties. Program staff propose addressing childhood lead poisoning in these three counties in next fiscal year, by including them in specific objectives and planning to allot them a modest amount of funds to provide direct services or pay for OPS staff to assist with tracking and follow-up.

Laboratory Reporting

The program's assistant coordinator, Ms. Susan Limbaugh, is documenting all laboratory activity, describing current reports, and noting quality and consistency. This journal will better enable the program to monitor laboratory reporting, track trends, and will facilitate communicating with private laboratories about specific reporting problems. Following are key laboratory events from 2001.

- The program received communication from MedTox Laboratories that LeadTech is now a division of MedTox. While MedTox itself submitted a medium volume, LeadTech had consistently submitted a large volume of tests biweekly by encrypted email. In late January, MedTox submitted a large volume of paper data, approximately 500 tests, for blood samples analyzed in December. Due to the fact that these tests were received after data for the fourth quarterly report was prepared for processing, the number of tests may appear decreased as compared with last year's fourth quarterly report. A MedTox contact person has assured program staff that plans are underway to submit data electronically and in a timely manner.
- In line with several related objectives to improve laboratory reporting and the overall statewide surveillance system, Ms. Thompson and Ms. Limbaugh designed a laboratory survey to elicit many details about the ten private laboratories that submit results to the program at least once each month. The survey is in Microsoft Excel worksheets. The survey sheets, released by email in August 2001 to key lab contact persons, has several sections including Communications, Laboratory Protocols, Descriptive Statistics, and Missing Field Values and Other Issues. Though each survey was formatted similarly, the questions in the Missing Field Values and Other Issues section

were tailored for each lab. This latter section asked laboratories about data problems specific to their paper or electronic files. Ms. Limbaugh emailed the survey to 16 laboratories and received 12 responses in varying degrees of completeness. Following are selected details from analysis:

- All laboratories were asked to estimate the number of blood samples analyzed annually for lead, both nationwide and for Florida. Only five laboratories were able to estimate a number for Florida. Program staff had intended to use these estimates to ensure laboratories are submitting all blood lead tests to the program.
- Two of the responding laboratories analyze samples in Florida. All other laboratories perform analysis at branches in other states. There are often convoluted pathways by which laboratories submit data to the program. Understanding these pathways will assist in data quality assurance. Further communication is needed with most laboratories to map these pathways and eliminate duplicative submissions.

Data

Program staff are pleased to report that the number of results submitted to the program increased in 2001, as compared to data received in 2000. This increase fulfills portions of several closely related program objectives for screening and surveillance. As in the abstract, program staff are discussing this data increase as representing an increase in actual screening. Program staff distributed large quantities of screening guidelines and maps to county health department contact persons, who in turn provided them to private physicians and practices. This distribution is an ongoing important step in increasing providers' awareness about childhood lead poisoning and encouraging them to screen. As private providers increase screening, it is reasonable to conclude that an increase in laboratory data represent an increase in children screened.

Improvements in laboratory reporting may also be responsible for the increase, i.e.: in the number of usable records that program staff can query. The quality of laboratory records improves incrementally each year, though problems remain. Program staff continue to ask laboratories to provide complete demographics and an indicator of whether a child is on Medicaid. The program's continued work on matching Medicaid data with laboratory data should contribute to the identification of Medicaid children in the database, though receiving this indication directly from laboratories would be more efficient.

Expectations through June 30, 2002

In addition to producing an annual report for calendar year 2001, program staff anticipate addressing several objectives through the remainder of the fiscal year. Under Screening and Professional Education, staff will continue to provide screening guidelines to private providers by way of the key contacts in county health departments, and will develop submissions for provider newsletters.

For Statewide Surveillance, program staff will continue with the implementation of Merlin extended lead data screens. At least six county health departments have entered active case information into the new screens. One county health department has requested training on using the screens. Program staff will assist with scheduling and giving this training. Ms.

Thompson will also be meeting with Medicaid contact persons to further collaborate on connecting local level case management with key Medicaid Managed care staff.

DATA REVIEW

The data contained in this report have several limitations. The program does not receive complete information from all private clinical laboratories. Private laboratory data are included in a limited capacity in this report. Counties that use private laboratories for a large portion of their blood lead tests may not have a true representation of the extent of childhood lead poisoning in their area. An unknown, but possibly large, percentage of the tests performed by private physicians are not included in this report.

The program is attempting to overcome the data limitations in two ways. The first is the implementation of the reportable disease system Merlin. This system will collect additional information that is required for blood lead surveillance, and will capture case management and environmental investigation information entered by county health department staff. The program will have access to all entered information and these data will greatly supplement quarterly and annual reporting. The second approach to overcoming the data limitations is to coordinate with the private clinical laboratories to electronically report all blood lead tests performed, with complete identifying information. Program staff contact laboratory representatives to encourage complete reporting.

There has been a decline in the number of samples submitted to the program by the Department of Health, Bureau of Laboratories (state laboratory), which provides complete identifying and demographic information, and a concomitant increase in records submitted by private laboratories. See Table 1. for a listing of records submitted to the program from the state lab and private laboratories 1995-2001. These numbers include laboratory records submitted for children older than 72 months of age.

Table 1. Laboratory results submitted to the program for 1993-2001

	1993	1994	1995	1996	1997	1998	1999	2000	2001
State Lab	85,410	58,499	41,382	34,068	33,584	29,633	26,930	23,331	20,212
Private Labs	5	1,657	7,585	17,269	18,395	14,569	22,798	44,366	65,277

There was a decrease in the number of children found with elevated, or confirmed, venous blood lead levels from 550 in 2000 to 467 in 2001 (see Tables 3 and 4). While this decrease is a positive step toward the elimination of childhood lead poisoning in Florida, program staff are aware that they have not received all screening results and that not all at-risk children are screened. Program staff continue to distribute the statewide screening guidelines document first released in late year 2000. As private providers are stimulated to screen children for blood lead according to the guidelines, an increased number of elevated blood lead levels may be uncovered.

Graph Data

Comparisons of the children screened, found with elevated blood lead levels of all test type, and found with confirmed (venous) lead levels, by race, sex, and age, for 2001 are shown

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Graph Data

Comparisons of the children screened, found with elevated blood lead levels of all test type, and found with confirmed (venous) lead levels, by race, sex, and age, for 2001 are shown

in graphs 1-3. The graphs represent data submitted by the state laboratory. Private laboratory data are not included due to the lack of demographic data. A summary of the data provided by the State Laboratory follows:

Graph 1

Children (all children <72 months of age tested for blood lead)

- 39 percent were African American and 45 percent were European American. The remaining 16 percent were composed of Native American, Asian or Pacific Islander, or had unknown race indications.
- 51 percent were male and 49 percent were female.

Graph 2

Children with Elevated Tests (All test types, capillary, venous and unknown. Tests $\geq 10\mu\text{g/dL}$)

- 45 percent were African American and 30 percent were European American. The remaining 25 percent were composed of Native American, Asian or Pacific Islander, or had unknown race indications.
- 55 percent were male and 45 percent were female.

Graph 3

Children Confirmed as Lead Poisoned (Venous Tests $\geq 10\mu\text{g/dL}$)

- 43 percent were African American and 14 percent were European American. The remaining 43 percent were composed of Native American, Asian or Pacific Islander, or had unknown race indications.
- 54 percent were male and 46 percent were female.

These data indicate that male children were slightly more likely to be confirmed as lead poisoned. These data also show that nearly three times as many African American children were confirmed as lead poisoned compared to European American children. These data are consistent with national data showing that non-Hispanic blacks are more at risk for lead poisoning than children in other race groups (MMWR, February 21, 1997).

One trend in statewide case management appears to be low compliance in follow-up testing for children with initial blood lead levels $\geq 10\mu\text{g/dL}$. Factors that influence follow-up tracking include providers using different laboratories for initial and confirmatory test analysis, incomplete reporting by laboratories and providers, and incomplete demographic information for tested children. Individual counties will need to evaluate local follow-up performance, especially where private laboratories are used for blood lead analyses.

Current Florida guidelines for childhood lead poisoning have established specific classes of lead poisoning and standards of care (time limits for venous blood sample follow-up of initial capillary blood sample tests, education, environmental actions, etc.) for each level of lead poisoning based on blood analysis results. The class levels and venous follow-up timeframes for initial capillary tests are:

<u>Class Levels</u>	<u>Follow-up Time</u>
10-14 $\mu\text{g/dL}$	90 days
15-19 $\mu\text{g/dL}$	30 days
20- 44 $\mu\text{g/dL}$	7 days
45- 69 $\mu\text{g/dL}$	2 days
$\geq 70\mu\text{g/dL}$	Immediately

Calculations based on elevated ($\geq 10\mu\text{g/dL}$) initial capillary test reports received from all laboratories from July 2000 through June 2001 (See Table 5) show that the following received follow-up tests according to time limits established by Florida guidelines:

- approximately 29 percent of children with initial capillary test results 10-14 $\mu\text{g/dL}$.
- approximately 24 percent of children with initial capillary test results 15-19 $\mu\text{g/dL}$.
- approximately 4 percent of children with initial capillary test results 20-44 $\mu\text{g/dL}$.
- 100 percent of children with initial capillary test results 45-69 $\mu\text{g/dL}$.
- No initial capillary tests $\geq 70\mu\text{g/dL}$ were reported.

The goal is that 100 percent of children with elevated initial capillary blood lead tests ($\geq 10\mu\text{g/dL}$) receive timely follow-up. Private laboratory reporting continues to be challenging for data analysis. For this report, private laboratory data were merged with Bureau of Laboratories' data to facilitate the identification of follow-up tests that were performed by private laboratories (see Tables 2 and 4). Each laboratory has different reporting deficits. Missing data elements include some or all of the following: children's addresses, test type, date of birth, indication if child is on Medicaid, provider of sample (e.g., physician or other health care provider who ordered the test), date that the blood was collected, and date the laboratory analyzed the sample and posted a result. If any of these data elements are missing, a follow-up test may not be recorded in the data tables.

Many of all elevated reports for children submitted by private laboratories do not indicate test type, or if blood samples drawn were capillary or venous. These private laboratories combined analyze a greater number of samples than the State Laboratory alone. Given the magnitude of incomplete records submitted by private laboratories, the program may be underestimating the extent of lead poisoning in Florida. In order to compile the most accurate representation possible of the screened, elevated blood lead and lead poisoned populations, the program continues efforts to improve completeness and accuracy of data reporting by working with private laboratories.

2001 Annual Report

Explanation of Tables and Graphs

TABLE 1. 2001 Data: This table shows the number of specimens collected, the number of children tested (some children may have been tested multiple times), and the number and percentage of children who received Medicaid within each county. "Number of tests done", is a count of the number of blood specimens of sufficient quantity and quality that were received in the specified period. "Number of children tested", is determined by eliminating duplicate records on the same child using the child's last name, first name, and birthday as sort fields. Whether a child is a Medicaid recipient or not is determined by examining if she/he has a corresponding Medicaid number. If there is none, the child is categorized as a non-Medicaid child. The numbers used in this table are based on reports received from the Department of Health, Bureau of Laboratories, for the time period indicated. Tests performed by private laboratories are not reflected in this table.

TABLE 2. 2001 Data: This table shows the number of specimens collected and the number of children tested (some children may have been tested multiple times). "Number of tests done", is a count of the number of blood specimens of sufficient quantity and quality that were received in the specified period. "Number of children tested" is determined by eliminating duplicate records on the same child using the child's last name, first name, and birthday as sort fields. The numbers used in this table are based on reports received from reporting private laboratories for the time period indicated. Few reporting private laboratories submit Medicaid status, thus it cannot be included as in Table 1.

TABLE 3. 2001 Data: This table shows, by county, the number of children with venous tests in the indicated result categories. The Florida case definition for a lead poisoned child is one whose blood lead test of a sample drawn by the venous method is $10\mu\text{g}/\text{dL}$ or higher. The grouping of results follows the Florida guidelines. The numbers used in this table are based on reports received from the Department of Health, Bureau of Laboratories, for the time period indicated. Tests performed by private laboratories are not reflected in this table.

TABLE 4. 2001 Data: This table shows, by county, the number of children with venous tests in the indicated result categories. The Florida case definition for a lead poisoned child is one whose blood lead test of a sample drawn by the venous method is $10\mu\text{g}/\text{dL}$ or higher. The grouping of results follows the Florida guidelines. The numbers used in this table are based on reports received from reporting private laboratories.

TABLE 5. July 2000- June 2001 Data: This table shows, by county, the number and percent of initial capillary tests with results $\geq 10\mu\text{g}/\text{dL}$ with confirmatory venous tests within the time period specified by Florida guidelines. Ideally, each initial capillary test with a result $\geq 10\mu\text{g}/\text{dL}$ should have a venous confirmatory test within the time period specified by Florida guidelines. The numbers used in this table are based on reports received from the Department of Health, Bureau of Laboratories, and private clinical laboratories for the time period indicated on the table.

GRAPH 1. 2001 Data: This graph shows the proportion of all children with reported blood lead analyses by race, gender, and age groups (in months). The total population represents all children less than 72 months of age for whom a blood lead analysis result was reported by the Bureau of Laboratories. Private clinical data were not used for this analysis due to lack of demographic information.

GRAPH 2. 2001 Data: This graph shows the proportion of all children with capillary or venous blood lead analyses $\geq 10\mu\text{g}/\text{dL}$ by race, gender, and age groups in months. The total population

represents all children less than 72 months of age for whom a blood lead analysis result $\geq 10\mu\text{g/dL}$ was reported by the Bureau of Laboratories. Private clinical data were not used for this analysis due to lack of demographic information.

GRAPH 3. 2001 Data: This graph shows the proportion of all children with venous blood lead analyses $\geq 10\mu\text{g/dL}$ by race, gender, and age groups in months. The total population represents all children less than 72 months of age for whom a venous blood lead analysis result $\geq 10\mu\text{g/dL}$ was reported by the Bureau of Laboratories. Private clinical data were not used for this analysis due to lack of demographic information.

Table 1. Number of blood lead tests, number of children <72 months of age tested, and percentage receiving Medicaid, by county and sample type, 2001. Based on records from the Department of Health Bureau of Laboratories.

County	Number of Tests Performed			Number of Children Tested			Received Medicaid?				
	Capillary	Venous	Total	Capillary	Venous	Total	Yes	%	No	%	Total
Alachua	235	5	240	227	5	232	183	84%	36	16%	219
Baker	88	2	90	82	2	84	83	99%	1	1%	84
Bay	3	95	98	3	95	98	2	2%	88	98%	90
Bradford	151	0	151	140	0	140	108	78%	30	22%	138
Brevard	341	17	358	327	17	344	188	58%	137	42%	325
Broward	2	32	34	1	32	33	2	8%	22	92%	24
Calhoun	11	4	15	10	4	14	10	77%	3	23%	13
Charlotte	360	0	360	350	0	350	161	50%	164	50%	325
Citrus	2	0	2	2	0	2	2	100%	0	N/A	2
Clay	436	3	439	390	3	393	379	97%	12	3%	391
Collier	12	0	12	11	0	11	9	82%	2	18%	11
Columbia	128	1	129	122	1	123	90	76%	28	24%	118
Dade	16	978	994	16	972	988	0	N/A	741	100%	741
Desoto	2	13	15	2	13	15	14	100%	0	N/A	14
Dixie	145	0	145	135	0	135	114	90%	13	10%	127
Duval	3563	141	3,704	3268	119	3,387	2177	67%	1085	33%	3,262
Escambia	237	5	242	221	5	226	130	64%	73	36%	203
Flagler	215	1	216	198	1	199	189	95%	9	5%	198
Franklin	40	2	42	33	2	35	17	57%	13	43%	30
Gadsden	2	0	2	2	0	2	0	N/A	2	100%	2
Gilchrist	80	2	82	70	2	72	65	94%	4	6%	69
Glades	0	0	0	0	0	0	0	N/A	0	N/A	0
Guif	0	0	0	0	0	0	0	N/A	0	N/A	0
Hamilton	46	1	47	43	1	44	34	83%	7	17%	41
Hardee	100	20	120	96	8	104	81	81%	19	19%	100
Hendry	0	0	0	0	0	0	0	N/A	0	N/A	0
Hernando	147	1	148	145	1	146	142	97%	4	3%	146
Highlands	1	1	2	1	1	2	2	100%	0	N/A	2
Hillsborough	427	57	484	410	53	463	79	19%	341	81%	420
Holmes	52	0	52	49	0	49	44	90%	5	10%	49
Indian River	0	9	9	0	5	5	4	80%	1	20%	5
Jackson	16	2	18	16	2	18	16	100%	0	N/A	16
Jefferson	0	0	0	0	0	0	0	N/A	0	N/A	0
Lafayette	30	0	30	28	0	28	28	100%	0	N/A	28
Lake	528	4	530	478	4	482	236	56%	186	44%	422
Lee	0	0	0	117	2	119	0	N/A	0	N/A	0
Leon	118	2	120	0	0	0	44	47%	50	53%	94
Levy	18	3	21	18	3	21	16	76%	5	24%	21
Liberty	1	2	3	1	2	3	3	100%	0	N/A	3
Madison	0	0	0	0	0	0	0	N/A	0	N/A	0
Manatee	45	4	49	42	2	44	31	70%	13	30%	44
Marion	1216	37	1,253	1112	36	1,148	1012	90%	110	10%	1,122
Martin	370	21	391	350	21	371	300	84%	58	16%	358
Monroe	0	4	4	0	4	4	0	N/A	4	100%	4
Nassau	8	0	8	8	0	8	4	57%	3	43%	7
Okaloosa	0	0	0	0	0	0	0	N/A	0	N/A	0
Okeechobee	0	0	0	0	0	0	0	N/A	0	N/A	0
Orange	281	3	284	266	3	269	160	65%	88	35%	248
Osceola	298	2	300	287	2	289	192	70%	81	30%	273
Palm Beach	515	204	719	491	192	683	215	32%	461	68%	676
Pasco	244	20	264	235	20	255	165	68%	76	32%	241
Pinellas	2994	1045	4,039	2785	986	3,771	1776	56%	1408	44%	3,184
Polk	218	35	253	203	35	238	133	62%	82	38%	215
Putnam	84	5	89	80	5	85	52	69%	23	31%	75
Santa Rosa	10	3	13	6	3	9	1	11%	8	89%	9
Sarasota	591	18	609	543	16	559	330	65%	175	35%	505
Seminole	225	2	227	222	2	224	192	90%	22	10%	214
St. Johns	230	1	231	214	1	215	208	98%	4	2%	212
St. Lucie	17	166	183	17	162	179	122	78%	34	22%	156
Sumter	331	14	345	308	13	321	232	75%	77	25%	309
Suwannee	80	2	82	75	2	77	66	87%	10	13%	76
Taylor	7	0	7	7	0	7	6	86%	1	14%	7
Union	29	1	30	27	1	28	26	96%	1	4%	27
Volusia	574	21	595	496	20	516	465	93%	35	7%	500
Wakulla	46	13	59	40	11	51	51	100%	0	N/A	51
Walton	20	2	22	16	2	18	18	100%	0	N/A	18
Washington	107	3	110	104	3	107	105	97%	3	3%	108
Total	16,091	3,029	19,120	14,946	2,897	17,843	10,514	64%	5,858	36%	16,372

Table 2. Number of blood lead tests, number of children <72 months of age tested, by county and sample type, 2001, based on records from reporting private laboratories. Medicaid status is not included because it is not consistently submitted.

County	Number of Tests Performed				Number of Children Tested			
	Capillary	Venous	Unknown	Total	Capillary	Venous	Unknown	Total
Alachua	720	2	457	1,179	703	2	426	1,131
Baker	4	0	35	39	4	0	29	33
Bay	9	3	161	173	9	3	161	173
Bradford	77	0	25	102	74	0	25	99
Brevard	4	1	361	366	4	1	355	360
Broward	524	72	5941	6,537	520	69	5727	6,316
Calhoun	0	3	23	26	0	3	22	25
Charlotte	23	0	29	52	21	0	26	47
Citrus	280	3	26	309	275	3	26	304
Clay	19	1	82	102	19	1	78	98
Collier	113	1209	170	1,492	109	1157	161	1,427
Columbia	424	9	166	599	411	9	144	564
Dade	1406	168	12118	13,692	1369	154	11605	13,128
Desoto	0	0	43	43	0	0	40	40
Dixie	52	4	6	62	51	4	6	61
Duval	25	51	760	836	25	49	703	777
Escambia	15	690	482	1,187	14	680	456	1,150
Flagler	8	0	17	25	8	0	17	25
Franklin	69	0	20	89	69	0	17	86
Gadsden	3	11	51	65	3	11	51	65
Gilchrist	70	11	9	90	68	10	9	87
Glades	0	0	59	59	0	0	54	54
Gulf	63	0	7	70	63	0	7	70
Hamilton	172	0	15	187	169	0	15	184
Hardee	1	1	186	188	1	1	166	168
Hendry	5	16	264	285	5	15	252	272
Hernando	9	0	117	126	8	0	112	120
Highlands	4	5	434	443	4	5	417	426
Hillsborough	266	127	4533	4,926	261	125	4284	4,670
Holmes	0	0	31	31	0	0	28	28
Indian River	878	0	76	954	869	0	76	945
Jackson	1	0	27	28	1	0	27	28
Jefferson	2	0	8	10	2	0	8	10
Lafayette	7	0	18	25	7	0	18	25
Lake	23	2	186	211	23	2	179	204
Lee	41	40	1352	1,433	40	40	1305	1,385
Leon	29	460	340	829	28	445	335	808
Levy	225	11	53	289	216	11	48	275
Liberty	2	0	2	4	2	0	1	3
Madison	5	0	117	122	5	0	114	119
Manatee	0	4	782	786	0	4	764	768
Marion	57	1	32	90	52	1	32	85
Martin	28	10	171	209	28	9	164	201
Monroe	0	0	147	147	0	0	143	143
Nassau	0	0	24	24	0	0	20	20
Okaloosa	59	6	222	287	59	6	221	286
Okeechobee	45	1	537	583	44	1	523	568
Orange	823	8	927	935	815	8	887	1,710
Osceola	22	0	172	194	22	0	166	188
Palm Beach	743	18	2002	2,763	731	18	1939	2,688
Pasco	152	5	796	953	151	5	766	922
Pinellas	286	96	961	1,343	281	92	886	1,259
Polk	1206	4	1905	3,115	1191	4	1716	2,911
Putnam	29	0	397	397	29	0	384	413
Santa Rosa	3	78	113	194	3	76	111	190
Sarasota	99	1	483	583	97	1	460	558
Seminole	351	0	225	576	344	0	215	559
St. Johns	121	6	36	163	121	6	35	162
St. Lucie	379	6	817	1,202	374	6	793	1,173
Sumter	37	43	27	107	37	42	26	105
Suwannee	119	0	45	164	115	0	43	158
Taylor	1	9	6	16	1	9	6	16
Union	21	0	15	36	21	0	15	36
Volusia	36	20	367	423	36	19	355	55
Wakulla	6	0	11	17	6	0	11	17
Walton	2	1	61	64	2	1	61	64
Washington	1	0	22	23	1	0	20	21
Total	10,204	3,217	40,110	53,531	10,021	3,108	38,292	51,421

Table 3. Children <72 months of age, venous samples grouped by county, 2001, based on records from the Department of Health Bureau of Laboratories

County	Venous Test Results (µg/dL)					Total
	0-9	10-14	15-19	20-44	45-69	
Alachua	5	0	0	0	0	5
Baker	1	0	1	0	0	2
Bay	94	0	1	0	0	95
Bradford	0	0	0	0	0	0
Brevard	15	2	0	0	0	17
Broward	31	1	0	0	0	32
Calhoun	4	0	0	0	0	4
Charlotte	0	0	0	0	0	0
Citrus	0	0	0	0	0	0
Clay	3	0	0	0	0	3
Collier	0	0	0	0	0	0
Columbia	1	0	0	0	0	1
Dade	885	69	16	2	0	972
Desoto	13	0	0	0	0	13
Dixie	0	0	0	0	0	0
Duval	87	17	6	9	0	119
Escambia	4	1	0	0	0	5
Flagler	1	0	0	0	0	1
Franklin	2	0	0	0	0	2
Gadsden	0	0	0	0	0	0
Gilchrist	2	0	0	0	0	2
Glades	0	0	0	0	0	0
Gulf	0	0	0	0	0	0
Hamilton	1	0	0	0	0	1
Hardee	3	0	1	4	0	8
Hendry	0	0	0	0	0	0
Hernando	1	0	0	0	0	1
Highlands	1	0	0	0	0	1
Hillsborough	52	0	1	0	0	53
Holmes	0	0	0	0	0	0
Indian River	2	0	2	1	0	5
Jackson	2	0	0	0	0	2
Jefferson	0	0	0	0	0	0
Lafayette	0	0	0	0	0	0
Lake	3	1	0	0	0	4
Lee	0	0	0	0	0	0
Leon	2	0	0	0	0	2
Levy	3	0	0	0	0	3
Liberty	2	0	0	0	0	2
Madison	0	0	0	0	0	0
Manatee	0	0	2	0	0	2
Marion	33	2	0	1	0	36
Martin	19	1	1	0	0	21
Monroe	4	0	0	0	0	4
Nassau	0	0	0	0	0	0
Okaloosa	0	0	0	0	0	0
Okeechobee	0	0	0	0	0	0
Orange	3	0	0	0	0	3
Osceola	2	0	0	0	0	2
Palm Beach	170	14	5	3	0	192
Pasco	20	0	0	0	0	20
Pinellas	962	16	3	5	0	986
Polk	33	2	0	0	0	35
Putnam	5	0	0	0	0	5
Santa Rosa	3	0	0	0	0	3
Sarasota	15	1	0	0	0	16
Seminole	2	0	0	0	0	2
St. Johns	1	0	0	0	0	1
St. Lucie	159	3	0	0	0	162
Sumter	12	1	0	0	0	13
Suwannee	1	1	0	0	0	2
Taylor	0	0	0	0	0	0
Union	1	0	0	0	0	1
Volusia	18	1	1	0	0	20
Wakulla	9	2	0	0	0	11
Walton	1	1	0	0	0	2
Washington	3	0	0	0	0	3
Total	2,696	136	40	25	0	2,897

Table 4. Children <72 months of age, venous samples grouped by results, by county, 2001, based on records from private laboratories.

County	Venous Test Results (µg/dL)					Total
	0-9	10-14	15-19	20-44	45-69	
Alachua	2	0	0	0	0	2
Baker	0	0	0	0	0	0
Bay	2	0	1	0	0	3
Bradford	0	0	0	0	0	0
Brevard	0	1	0	0	0	1
Broward	59	4	1	4	1	69
Calhoun	3	0	0	0	0	3
Charlotte	0	0	0	0	0	0
Citrus	2	0	1	0	0	3
Clay	1	0	0	0	0	1
Collier	1115	20	10	12	0	1,157
Columbia	6	0	0	3	0	9
Dade	42	82	22	7	1	154
Desoto	0	0	0	0	0	0
Dixie	4	0	0	0	0	4
Duval	35	10	2	2	0	49
Escambia	668	9	3	0	0	680
Flagler	0	0	0	0	0	0
Franklin	0	0	0	0	0	0
Gadsden	9	1	1	0	0	11
Gilchrist	9	1	0	0	0	10
Glades	0	0	0	0	0	0
Gulf	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0
Hardee	0	1	0	0	0	1
Hendry	14	0	0	1	0	15
Hernando	0	0	0	0	0	0
Highlands	3	0	2	0	0	5
Hillsborough	115	8	2	0	0	125
Holmes	0	0	0	0	0	0
Indian River	0	0	0	0	0	0
Jackson	0	0	0	0	0	0
Jefferson	0	0	0	0	0	0
Lafayette	0	0	0	0	0	0
Lake	1	0	0	1	0	2
Lee	40	0	0	0	0	40
Leon	433	10	2	0	0	445
Levy	11	0	0	0	0	11
Liberty	0	0	0	0	0	0
Madison	0	0	0	0	0	0
Manatee	0	2	1	1	0	4
Marion	1	0	0	0	0	1
Martin	8	1	0	0	0	9
Monroe	0	0	0	0	0	0
Nassau	0	0	0	0	0	0
Okaloosa	6	0	0	0	0	6
Okeechobee	1	0	0	0	0	1
Orange	2	2	1	3	0	8
Osceola	0	0	0	0	0	0
Palm Beach	10	7	1	0	0	18
Pasco	2	2	0	1	0	5
Pinellas	82	6	4	0	0	92
Polk	0	2	1	1	0	4
Putnam	0	0	0	0	0	0
Santa Rosa	6	0	0	0	0	6
Sarasota	6	0	0	0	0	6
Seminole	76	0	0	0	0	76
St. Johns	0	1	0	0	0	1
St. Lucie	0	0	0	0	0	0
Sumter	42	0	0	0	0	42
Suwannee	0	0	0	0	0	0
Taylor	8	0	1	0	0	9
Union	0	0	0	0	0	0
Volusia	17	2	0	0	0	19
Wakulla	0	0	0	0	0	0
Walton	1	0	0	0	0	1
Washington	0	0	0	0	0	0
Total	2,842	172	56	36	2	3,108

Table 5. Venous confirmation of initial capillary test results >=10ug/dL, children <72 months of age, by county, 2000.
Based on records from the Department of Health Bureau of Laboratories.

County	Initial Capillary 10-14 ug/dL			Initial Capillary 15-19 ug/dL			Initial Capillary 20-24 ug/dL			Initial Capillary 45-69 ug/dL								
	Venous Confirmation		% Confirmed Per Guidelines	Venous Confirmation		% Confirmed Per Guidelines	Venous Confirmation		% Confirmed Per Guidelines	Venous Confirmation		% Confirmed Per Guidelines						
	Total	<= 90 Days		> 90 Days	Total		<= 30 Days	> 30 Days		Total	<= 7 Days		> 7 Days	Total	<= 2 Days	> 2 Days		
Alachua	5	1	0	20.0%	4	1	0	25.0%	1	0	0	0.0%	0	0	0	0	0	N/A
Baker	4	0	0	0.0%	1	0	0	0.0%	0	0	0	0	0.0%	0	0	0	0	N/A
Bay	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Bradford	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Brevard	11	6	3	54.5%	6	1	3	16.7%	0	0	0	0	N/A	0	0	0	0	N/A
Broward	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Calhoun	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Charlotte	2	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Citrus	1	1	0	100.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Clay	4	1	1	25.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Collier	2	1	0	50.0%	0	0	0	N/A	1	0	0	0	0.0%	0	0	0	0	N/A
Columbia	3	0	0	0.0%	0	0	0	N/A	1	0	0	0	0.0%	0	0	0	0	N/A
Dade	14	2	0	14.3%	1	0	0	0.0%	3	0	0	0	0.0%	0	0	0	0	N/A
DeSoto	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Dixie	2	0	0	0.0%	0	0	0	N/A	1	0	0	0	0.0%	0	0	0	0	N/A
Duval	64	23	6	42.6%	16	8	4	50.0%	11	1	7	9.1%	1	1	0	0	0	100.0%
Escambia	9	3	0	33.3%	4	1	0	25.0%	0	0	0	0	N/A	0	0	0	0	N/A
Flagler	1	0	0	0.0%	0	0	0	0.0%	0	0	0	0	N/A	0	0	0	0	N/A
Franklin	2	0	0	0.0%	1	0	0	0.0%	0	0	0	0	N/A	0	0	0	0	N/A
Gadsden	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Gilchrist	1	0	1	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Glades	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Gulf	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Hamilton	0	0	0	N/A	1	1	0	100.0%	1	0	0	0	0.0%	0	0	0	0	N/A
Hardee	3	3	0	100.0%	2	1	0	50.0%	0	0	0	0	0.0%	0	0	0	0	N/A
Hendry	2	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Hernando	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Highlands	0	0	0	N/A	0	0	0	N/A	1	0	0	0	0.0%	0	0	0	0	N/A
Hillsborough	7	2	2	28.6%	1	0	0	0.0%	2	1	0	0	50.0%	0	0	0	0	N/A
Holmes	2	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Indian River	1	0	0	0.0%	2	2	0	100.0%	3	0	0	0	0.0%	0	0	0	0	N/A
Jackson	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Jefferson	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Lafayette	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Lake	5	1	0	20.0%	4	0	0	0.0%	2	0	0	0	0.0%	0	0	0	0	N/A
Lee	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Leon	2	0	0	0.0%	1	0	0	0.0%	1	0	0	0	0.0%	0	0	0	0	N/A
Levy	4	2	1	50.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Liberty	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Madison	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Manatee	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Marion	14	8	1	57.1%	2	1	1	50.0%	1	0	0	0	0.0%	0	0	0	0	N/A
Martin	3	1	0	33.3%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Monroe	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Nassau	0	0	0	N/A	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A
Okaloosa	1	0	0	0.0%	0	0	0	N/A	0	0	0	0	N/A	0	0	0	0	N/A

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Table 5. Continued

County	Initial Capillary 10-14ug/dL			Initial Capillary 15-19ug/dL			Initial Capillary 20-44ug/dL			Initial Capillary 45-99ug/dL		
	Total	Venous Confirmation ≤ 90 Days	% Confirmed Per Guidelines	Total	Venous Confirmation ≤ 30 Days	% Confirmed Per Guidelines	Total	Venous Confirmation ≤ 7 Days	% Confirmed Per Guidelines	Total	Venous Confirmation ≤ 2 Days	% Confirmed Per Guidelines
Okeechobee	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Orange	13	4	30.8%	3	0	0.0%	2	0	0.0%	0	0	N/A
Osceola	0	0	N/A	1	0	0.0%	0	0	N/A	0	0	N/A
Palm Beach	19	2	10.5%	2	0	0.0%	1	0	0.0%	0	0	N/A
Pasco	12	4	33.3%	2	0	0.0%	1	0	0.0%	0	0	N/A
Pinellas	44	20	45.5%	9	2	22.2%	1	0	0.0%	0	0	N/A
Polk	15	0	0.0%	5	1	20.0%	1	0	0.0%	0	0	N/A
Putnam	4	0	0.0%	0	0	N/A	4	0	0.0%	0	0	N/A
Santa Rosa	7	1	14.3%	0	0	N/A	0	0	N/A	0	0	N/A
Sarasota	1	0	0.0%	1	0	0.0%	1	0	0.0%	0	0	N/A
Seminole	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
St. Johns	5	3	60.0%	0	0	N/A	0	0	N/A	0	0	N/A
St. Lucie	12	0	0.0%	3	0	0.0%	0	0	N/A	0	0	N/A
Sumter	8	1	12.5%	2	1	50.0%	3	0	0.0%	0	0	N/A
Suwannee	4	1	25.0%	0	0	N/A	0	0	N/A	0	0	N/A
Taylor	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Union	1	0	0.0%	2	0	0.0%	0	0	N/A	0	0	N/A
Volusia	16	2	12.5%	7	0	0.0%	5	0	0.0%	0	0	N/A
Wakulla	1	1	100.0%	0	0	N/A	1	0	0.0%	0	0	N/A
Walton	1	0	0.0%	0	0	N/A	0	0	N/A	0	0	N/A
Washington	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Total	328	94	28.7%	83	20	24.1%	50	2	4.0%	1	1	100.0%

Confirmation time periods conform to Florida guidelines.

Per Florida guidelines, all initial capillary tests with results $\geq 10\text{ug/dL}$ should have venous confirmation tests within a time period specified by the same guidelines. The confirmation time period depends upon the category within which the initial capillary tests results fall.

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