



DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
2300 E STREET NW
WASHINGTON DC 20372-5300

IN REPLY REFER TO
BUMEDINST 6200.14A
BUMED-M3F4
9 Jul 2003

BUMED INSTRUCTION 6200.14A

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Department Personnel

Subj: PEDIATRIC LEAD POISONING PREVENTION (PLPP) PROGRAM

- Ref:
- (a) U.S. Department of Health and Human Services, Healthy People 2010: Understanding and Improving Health, Nov 2000
 - (b) U.S. Department of Health and Human Services, Centers for Disease Control (CDC) and Prevention, Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials, Atlanta, 1997
 - (c) U.S. Department of Health and Human Services, CDC and Prevention, Preventing Lead Poisoning in Young Children, Oct 1991
 - (d) Public Law 102-550, Lead Based Paint Hazard Reduction Act of 1992
 - (e) Office of the Secretary of Defense memo, "Lead Based Paint (LBP) Assessment of Risk in Children, and Control of Hazards in Department of Defense (DOD) Housing and Related Structures" of 24 Nov 1992 (NOTAL)
 - (f) ASD(HA) and ASD(P&L) memo, Modification of Pediatric Blood Lead Screening Program of 26 Jun 1995 (NOTAL)
 - (g) BUMED msg R021930Z SEP 95
 - (h) COMNAVFACENGCOM ltr 11101 FAC 08T/1822B of 9 Nov 1992 (NOTAL)
 - (i) BUMED/NAVFAC ltr 29 May 1997 (NOTAL)

- Encl:
- (1) Sample Justification for Suspension of Universal Pediatric Lead Poisoning Prevention (PLPP) Program Screening
 - (2) Medical Screening Program

1. Purpose. The purpose of this revision is to modify the Navy Pediatric Lead Poisoning Prevention (PLPP) Program to reflect current consensus guidelines. The changes respond to the low number of elevated pediatric lead cases that were detected nationwide in both civilian and military populations.

2. Cancellation. BUMEDINST 6200.14.

3. Background

a. Children get lead poisoning primarily through ingestion of lead. Lead from deteriorating lead based paint (LBP), house dust and soil constitute the greatest threat. However, other sources such as family hobbies, drinking water contaminated by lead pipes or solder, airborne lead, consumer products and parental occupational contamination may also be significant contributors to pediatric lead poisoning. In 1978, LBP was removed from consumer use; however, many houses,

9 Jul 2003

especially those built before 1950, still contain LBP. Industrial paints may still contain higher levels of lead. Ingesting even small amounts of the metal increases a child's risk for developing permanent learning disabilities, reduced concentration and attentiveness, and behavioral problems.

b. Pediatric lead poisoning is still of national concern both because of its potential to profoundly impact health and because means are available to prevent exposure. The elimination of pediatric lead poisoning was designated by the U.S. Surgeon General as one of the objectives of Healthy People 2010 (reference (a)). The Centers for Disease Control and Prevention (CDC) has also advanced this national health goal by publishing pediatric blood lead screening guidelines at reference (h).

c. In 1991 the CDC issued a call for pediatric lead screening in all children 6 months to 6 years of age (reference (c)), in response to newly recognized hazards that lead posed to the pediatric population. Within a year, Congress passed the Residential Lead-Based Paint Hazard Reduction Act as part of Title X, the Housing and Community Development Act that focused on the reduction of lead hazards in the community.

d. In response to the CDC report and reference (d), the DOD issued a policy memorandum focusing on assessing health risks from LBP (reference (e)). By 1994, the Navy had a two-sided approach in effect whereby children received universal lead screening based on BUMEDINST 6200.14, Pediatric Lead Poisoning Prevention (PLPP) Program, and representative samples of the Navy's 100,000 housing units were inspected for lead contamination.

e. So successful was the program, that by 1995 DOD issued a memorandum modifying the PLPP (reference (f)). As an interim measure, until BUMEDINST 6200.14 could be rewritten, the medical treatment facility (MTF) was given the authority to suspend universal screening if 98 percent or greater of the children screened (aged 6 years or under) had non-elevated blood lead levels (BLLs) ($<10 \mu\text{g/dL}$). This was to be based on the number of children tested being of sufficient size to be representative of the community served.

f. Data derived from pediatric lead screening programs nationwide have further demonstrated a very low overall prevalence of lead poisoning. In 1997, reference (b) proposed elective substitution of the mandatory universal blood lead screening with targeted screening for certain low risk populations that met set criteria. Communities identified as exceptionally low risk could adopt alternative methods rather than targeted screening.

g. While the Navy criteria for suspending universal screening was more conservative in terms of BLLs than the CDC 1997 guideline, it does not incorporate the age of housing into the decision matrix as did the CDC.

4. Implementation

a. Each MTF must continue to operate a formal pediatric lead screening program. As with many environmental exposure monitoring programs, a team approach is necessary for program success. The PLPP team is responsible to the commanding officer of the MTF. The team may be

comprised of a physician (one or more of preventive medicine/public health physician, occupational medicine, pediatrician, obstetrician, family practitioner), an industrial hygienist, an environmental health officer, a laboratory officer, the cognizant housing/maintenance managers, a TRICARE coordinator, and a community health nurse. It may be adjusted as required to fit the demands and capabilities of a particular site.

b. References (f) and (g) allow the Navy to suspend universal lead screening for MTFs that treat low risk communities, if certain criteria are met. The PLPP team will establish the type of screening required for the MTF. Universal screening is the default unless enough information is available to justify a targeted screening program. To adopt a targeted program, 98 percent of children screened from the at-risk community population must have BLLs less than 10 µg/dL.

c. Children must have been screened in the community served by the MTF and demonstrated not to have elevated BLLs. The number or percentage of children screened from the at-risk population served by the MTF must be of sufficient size to be representative of, and to make a reasonable inference about, the community served. The decision to suspend screening for a given MTF must be based on local community data only (defined as the population served by the MTF). Data for multiple MTFs may not be aggregated into larger "communities." If the local medical facility lacks the statistical expertise to make this determination, epidemiologists or other public health professionals should be consulted. The Navy Environmental Health Center (NAVENVIRHLTHCEN) and local environmental preventive medicine units are available to assist. Once the decision to suspend universal screening is made, a letter detailing the justification shall be filed with NAVENVIRHLTHCEN. A sample format is provided as enclosure (1).

d. The Navy PLPP program is based on recommendations for medical screening and preventive measures set out by the CDC in reference (b). Details of the PLPP medical screening are shown in enclosure (2).

e. Discovery of sources of lead exposure shall initiate interventions designed to prevent the effects associated with long-term exposure, per reference (h). The PLPP team will re-assess the existing level of pediatric lead screening in light of the new information.

f. The above modification of mandatory blood lead screening should not be interpreted, and must not be used, to preclude, proscribe, or substitute for any diagnostic or therapeutic decision of a competent health care provider concerning childhood lead poisoning. This policy pertains only to the assessment of risk for exposure to environmental lead and to the routine screening of children for possible lead poisoning by blood lead determination. It must not be used to limit or constrain clinical decisions in the care rendered to patients.

5. Responsibilities in the PLPP Program

a. DOD is required to comply with all Federal, State, interstate, local, and foreign country requirements for certification, licensing, and record-keeping, including payment of reasonable service charges, with respect to LBP, LBP activities, and LBP hazards per reference (d).

b. Commander, Naval Facilities Engineering Command (in accordance with reference (h) or most current letter):

(1) Evaluate family housing for lead-based paint, lead dust, and lead in the soil.

(2) Assess the risk to the occupant resulting from any elevated lead levels identified through sampling.

(3) Abate "major risks" to a level at which it is possible to maintain LBP.

c. NAENVIRHLTHCEN

(1) Maintains letters justifying suspension of universal screening by MTF.

(2) Maintains a central database from the information supplied by the MTFs.

(3) Generates annual reports to comply with DOD requirements in reference (c).

d. MTF

(1) Ensures that all children are assessed for lead poisoning using the Lead Exposure Risk Assessment Questionnaire following the schedule shown in enclosure (2).

(2) Provides BLLs as part of either universal or targeted screening following enclosure (2).

(3) Provides a letter to NAVENVIRHLTHCEN justifying targeted screening, if universal screening is not required as shown in enclosure (2).

(4) Ensures that the laboratory supporting the PLPP participates in a blood lead proficiency testing program.

(5) Provides education and outreach programs.

(6) Complies with reporting requirements in paragraph 6.

(7) MTFs intending to suspend universal screening must forward a letter to NAVENVIRHLTHCEN substantiating the criteria in 4b and 4c.

e. Preventive Medicine (at local MTF level)

(1) As described in reference (h), preventive medicine will be represented on the NAVFACENGCOM response team and must keep a record of:

(a) All housing units rated as high LBP risk.

(b) Any abatement or remediation actions undertaken as a result of LBP surveys.

(2) Provides information (following Privacy Act constraints) on the results of blood lead tests to the cognizant facility and housing personnel to support the evaluation of housing units performed per reference (h). Use NAVMED 6200/1, paragraph 6d, to provide this information.

6. Form. NAVMED 6200/1 (Rev. 1-2003), Blood Lead Level Report Form, is available at: <http://navymedicine.med.navy.mil/instructions/directives/> at the Forms tab. This form is approved for local reproduction.

7. Report. This annual report is assigned report control symbol MED 6200-5 and has been approved by Chief, BUMED for 3 years only from the date of this instruction.

a. Any testing that indicates elevated lead in housing or day care units shall be reported by preventive medicine to local military and civilian health care providers.

b. Reports required by Federal, State, or local agencies shall be filed by the cognizant naval hospital, facility, and housing command, depending on the type of reports and the procedures dictated by Federal, State, and local standards.

c. MTF health care providers shall immediately inform preventive medicine of elevated BLLs in addition to capturing relevant laboratory and other clinical information using the most current Composite Health Care System (CHCS).

d. Preventive medicine is required to send annual electronic reports to NAVENVIRHLTHCEN using the PLPP form available at the NAVENVIRHLTHCEN Web site at http://www.nehc.med.navy.mil/ocmed/qtr_BLLRForm.doc. Preventive medicine (or equivalent) shall verify that pediatric blood tests are captured in CHCS by the appropriate health care provider, and will report elevated BLLs in the Navy Disease Reporting System (NDRS) database. Reports are due each January for information collected during the previous year.



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Vice Chief

Available at: <http://navymedicine.med.navy.mil/instructions/directives/default.asp>

MEDICAL SCREENING PROGRAM

1. Introduction. Screening is to be provided by all MTFs serving children. Universal screening is required unless the facility meets criteria for targeted screening. Whether universal or targeted screening is used depends on lead levels in the community served by the local MTF. Risk assessment is based on the Lead Exposure Risk Assessment Questionnaire (attachment A). A child with at least one "yes" answer is considered high risk for lead exposure. A child with all "no" answers is considered low risk. When "don't know" answers cannot be resolved, classification into a risk group will be left to the physician's judgment. The completed questionnaire will be placed in the child's health care record. Electronic or paper copies of any "high risk" documents must be forwarded to the cognizant preventive medicine department for appropriate action.

2. Universal Screening Program Requirements

a. The universal screening program consists of the Lead Exposure Risk Assessment Questionnaire and a BLL test. The questionnaire is offered at the 6 month well-baby visit (or at the child's next visit if the child is older than 6 months). The questionnaire provided captures the minimum information required. Additional questions can be added to address local situations. BLL analysis will be performed using CDC certified labs. A listing of currently certified laboratories is maintained on the following NAVENVIRHLTHCEN Web site at: <http://www-nehc.med.navy.mil/occmcd/leadlab.htm>. If elevated BLLs are found using capillary blood, confirmatory venous blood specimens should be sent for analysis.

b. Screening Schedule. The following provides a minimum screening schedule for children aged 6 to 72 months (Flowchart A). The schedule is not rigid. Rather, it is a guide for pediatric health care providers and screening programs to use in conjunction with other pertinent information in determining when an individual child should be tested.

(1) Children 6 to 72 months of age. A questionnaire shall be offered at 6 months (or at the child's next visit if the child is older than 6 months). The document should be reviewed at each of the subsequent well baby or well child health visits.

(a) Low risk. A child at low risk for exposure to lead sources by questionnaire shall have an initial blood lead test at 12 months of age. If the BLL is less than 10 $\mu\text{g}/\text{dL}$, the child should be retested only if indicated clinically or when risk status changes based on positive response on subsequent questionnaires. If a blood lead test result is elevated, actions and retesting should follow the schedule in Table 1.

(b) High risk. A child at high risk for exposure to lead sources by questionnaire should have an initial blood lead test at 6 months of age. If the initial BLL is less than 10 $\mu\text{g}/\text{dL}$, the child should be re-screened (both questionnaire and BLL) every 6 months. If the BLL is elevated, actions and retesting should follow the schedule in Table 1. Once two subsequent consecutive measurements are less than 10 $\mu\text{g}/\text{dL}$, testing frequency can be decreased to once annually until 6 years of age. If any blood lead test result is elevated, actions and retesting should follow the schedule set out in Table 1.

(2) Children >72 months. Screenings beyond 72 months may be performed if indicated (for example, a developmentally delayed child with pica). These children should otherwise receive follow-up as described in Table 1.

3. Targeted Screening Program

a. The Lead Exposure Risk Assessment Questionnaire and the tests for BLLs that are used for universal screening will also be used in the targeted screening program. Unlike universal screening, only children at high risk will be routinely offered blood lead testing. High risk children will be identified based on the questionnaire responses, historical information regarding the child or their environment, or clinical suspicion.

b. Once identified, a "high risk" child will be offered BLL testing as follows (Flowchart B):

(1) A child at high risk for exposure to lead sources by questionnaire should have an initial blood lead test at 12 months of age. If the initial BLL is less than 10 µg/dL, the child should be re-evaluated by questionnaire every 12 months until 6 years of age.

(2) If the BLL is elevated, actions and retesting should follow the schedule in Table 1. Once two subsequent consecutive measurements are less than 10 µg/dL, testing frequency can be decreased to once annually. If any blood lead test result is elevated, actions and retesting should follow the schedule shown in Table 1.

4. Evaluation and Management

a. A multi-tiered approach and case management should be instituted based on CDC guidelines. Table 1 contains guidelines for medical management based on elevated venous BLLs following current CDC guidelines.

b. Preventive medicine (with medical consultation from the health care providers and technical support from the Industrial Hygiene Department) will obtain a history to assess for possible sources of lead exposure (glazed pottery, hobbies, occupations, etc.). They will also perform appropriate environmental sampling, forward the samples to the appropriate laboratory, and counsel the parents on the results of the evaluation, including environmental sampling test results.

c. Once a case is identified, the preventive medicine department must ensure that the appropriate agency is notified for environmental risk assessment as discussed below. Additional cases may also be identified for environmental risk assessment based on a health care provider's clinical judgment.

(1) Requests for environmental risk assessment must be made to facilities and housing commands if the child lives in military housing or attends a military day care facility.

(2) Families who rent or own their homes must be counseled on local nonmilitary remediation resources and made aware of the local public health department requirements. Preventive medicine shall report elevated BLLs of children residing in these facilities to the local public health department.

d. When an environmental assessment of a child who lives in a military housing unit reveals the source of lead poisoning was largely a factor of the dwelling, the family must be moved to an alternate unit at Navy expense until abatement is completed as required by reference (e).

5. Counseling

a. Counseling or information handouts must be provided by health care providers to parents in the following circumstances:

(1) All children enrolled in a universal screening program.

(2) All children identified as “high risk” by positive response to the Lead Exposure Risk Assessment Questionnaire (attachment (A)).

(3) By preventive medicine as part of the environmental evaluation when requested by the child’s health care provider.

The Environmental Protection Agency (EPA) has developed several pamphlets that are available on their Web site at: <http://www.epa.gov/docs/opptintr/lead/leadpbed.htm#Booklets>. Currently, a relatively concise EPA pamphlet entitled “Protect Your Family From Lead In Your Home” is available at: <http://www.epa.gov/lead/leadpdf.pdf>, and a more thorough reference may be reviewed at <http://www.epa.gov/lead/leadrev.pdf>.

b. The facilities and housing command will provide appropriate information to the occupants of the unit tested, as well as occupants of units expected to have similar LBP hazards, as shown in reference (i).

6. Further Information. The 1997 CDC guidelines and subsequent updates contain further detailed information on targeted screening and treatment of lead poisoning in children. They can be accessed on the CDC Web site at: <http://www.cdc.gov/nceh/lead/guide/guide97.htm>.

LEAD EXPOSURE RISK ASSESSMENT QUESTIONNAIRE

Child's Name _____ Date of Birth _____
Address _____ Zip Code _____
Sponsor's Social Security Number _____
This address is (circle one): Military Nonmilitary
Specify housing area or subdivision if known/applicable _____

Does your child: (Circle one answer for each question.)

- | | | | |
|---|-----|----|------------|
| 1. Live in a house that was built before 1950? | Yes | No | Don't Know |
| 2. Live in or regularly visit a house, day care center, or preschool that was built before 1980 which has peeling or chipping paint, or is undergoing renovation or remodeling? | Yes | No | Don't Know |
| 3. Have a brother, sister, housemate, or playmate who has or once had lead poisoning or a high blood lead level? | Yes | No | Don't Know |
| 4. Live or spend time with someone whose job or hobbies involve exposure to lead? (Examples: Reloads ammunition, makes fishing weights, makes ceramics, makes stained glass, works at a firing range, works with industrial or shipboard paint removal, works with electrical or torch soldering, makes soft metal castings.) | Yes | No | Don't Know |
| 5. Live or spend time near any location that you think might release lead (lead smelter, radiator shop, battery recycler, etc.)? | Yes | No | Don't Know |
| 6. Live in or regularly visit a house, day care unit, or preschool that was identified by a DOD inspection team as a major risk for lead? | Yes | No | Don't Know |

Completed by _____ Date _____
Reviewed by _____ Date _____

Medical Treatment Facility

The child's parent or guardian will be provided with a note (see Web site: <http://www.cdc.gov/nceh/lead/lead.htm> for guidance) indicating potential exposure to lead. When the blood lead test result is received, forward to preventive medicine.

Blood lead level if appropriate

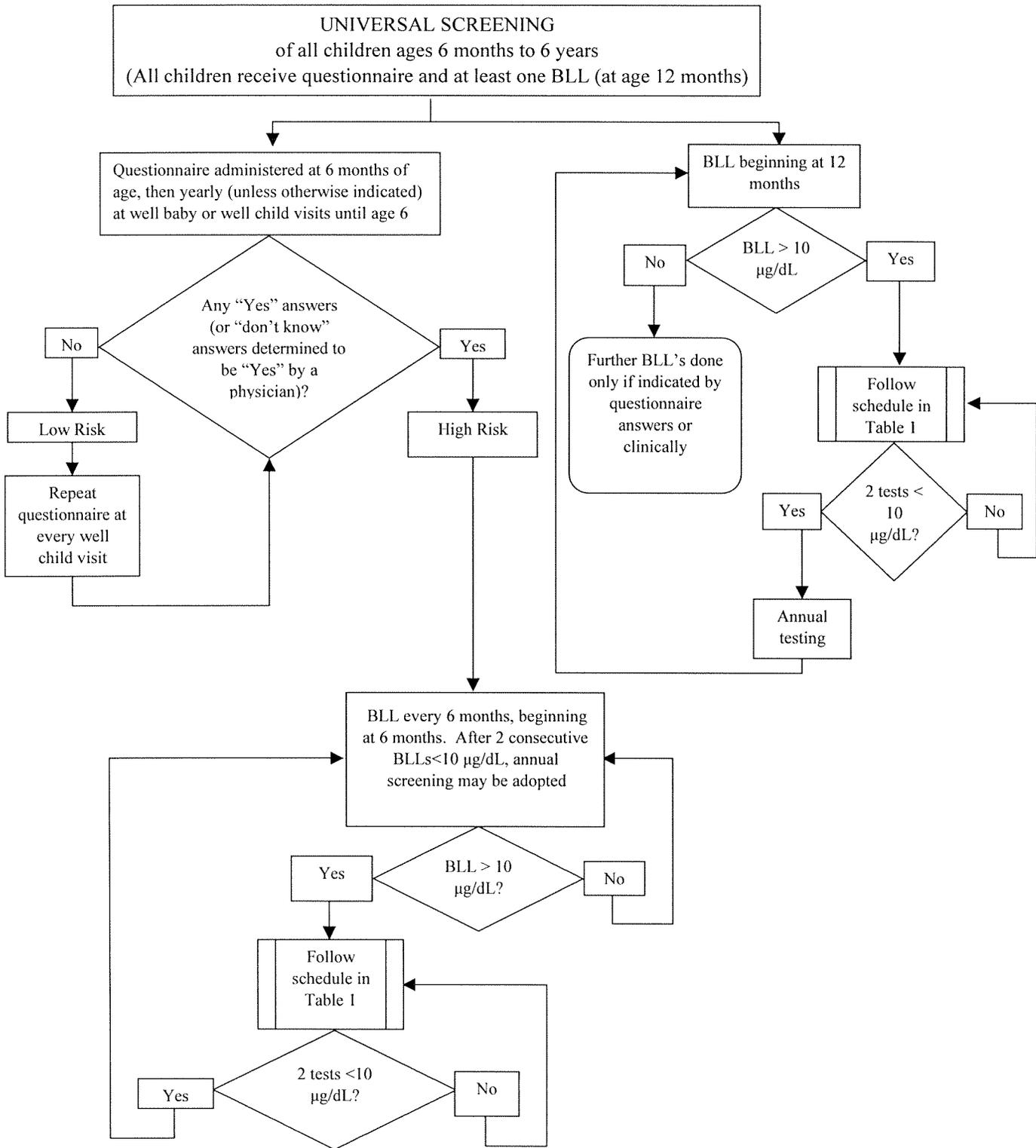
If child is "high risk" (i.e., if any answer is "Yes" or any "Don't Know" answer is determined by a physician to be "Yes"), forward copy of this form with blood lead level result to preventive medicine.

Table 1
Summary of CDC Recommendations for
Children with Confirmed (Venous) Elevated Blood Levels ¹

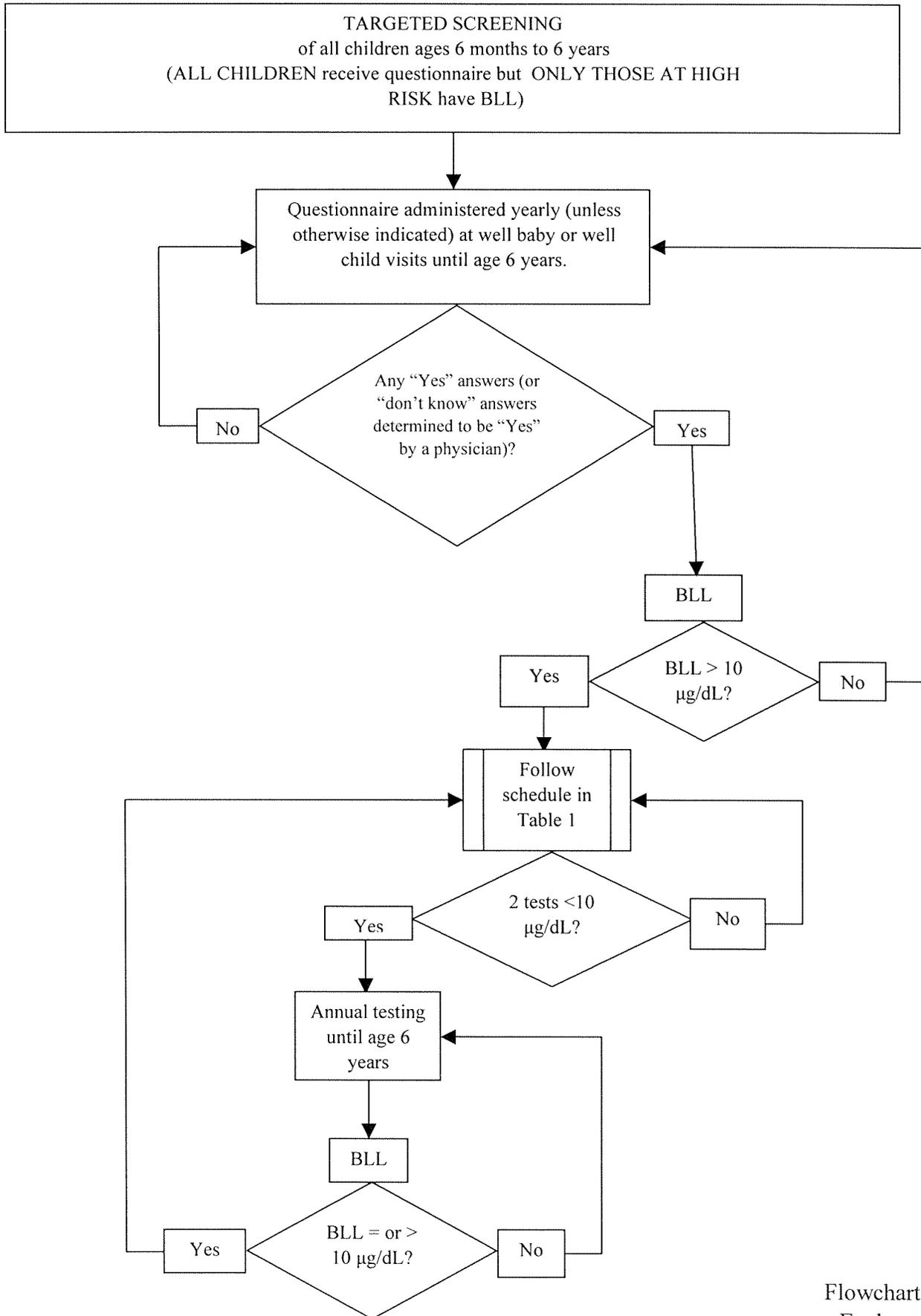
Blood Lead Level (µg/dL)				
10-14	15-19	20-44	45-69	>70
Lead education - Dietary	Lead education - Dietary	Lead education - Dietary	Lead education - Dietary	Hospitalize and commence chelation therapy
Repeat BLL test in 3 months, decrease to every 6-9 months when BLLs decline	Repeat BLL test in 1-3 months, decrease to every 3-6 months when BLLs decline	Repeat BLL test in 2-3 weeks, decrease to every 1-3 months when BLLs decline	Follow-up blood lead monitoring per chelation protocol	Proceed according to actions for 45-69 µg/dL
	Proceed according to actions for 20-44 µg/dL if: - A follow-up BLL is in this range at least 3 months after initial venous test or - BLLs increase	Complete history and physical exam Lab work: - Hemoglobin or hematocrit - Iron status	Complete history and physical exam Lab work: - Hemoglobin or hematocrit - Iron status - FEP or ZPP	
		Environmental investigation	Environmental investigation	
		Lead hazard reduction	Lead hazard reduction	
		Neurodevelopmental monitoring	Neurodevelopmental monitoring	
		Abdominal x-ray (if particulate lead ingestion is suspected) with bowel decontamination, if indicated	Abdominal x-ray with bowel decontamina- tion, if indicated Chelation therapy	

¹ Adapted from tables 3.1 and 3.3, Centers for Disease Control (CDC), Managing Elevated Blood Lead Levels Among Young Children: Recommendations for the Advisory Committee on Childhood Lead Poisoning Prevention, March 2002. (See Web site at: http://www.cdc.gov/nceh/lead/publications/pub_Reas.htm)

PEDIATRIC LEAD SCREENING ALGORITHM



PEDIATRIC LEAD SCREENING ALGORITHM



SAMPLE

From: (Medical Treatment Facility (MTF))
To: Commanding Officer, Navy Environmental Health Center

Subj: JUSTIFICATION FOR SUSPENSION OF UNIVERSAL PEDIATRIC LEAD
POISONING PREVENTION (PLPP) PROGRAM SCREENING

Ref: (a) BUMEDINST 6200.14A

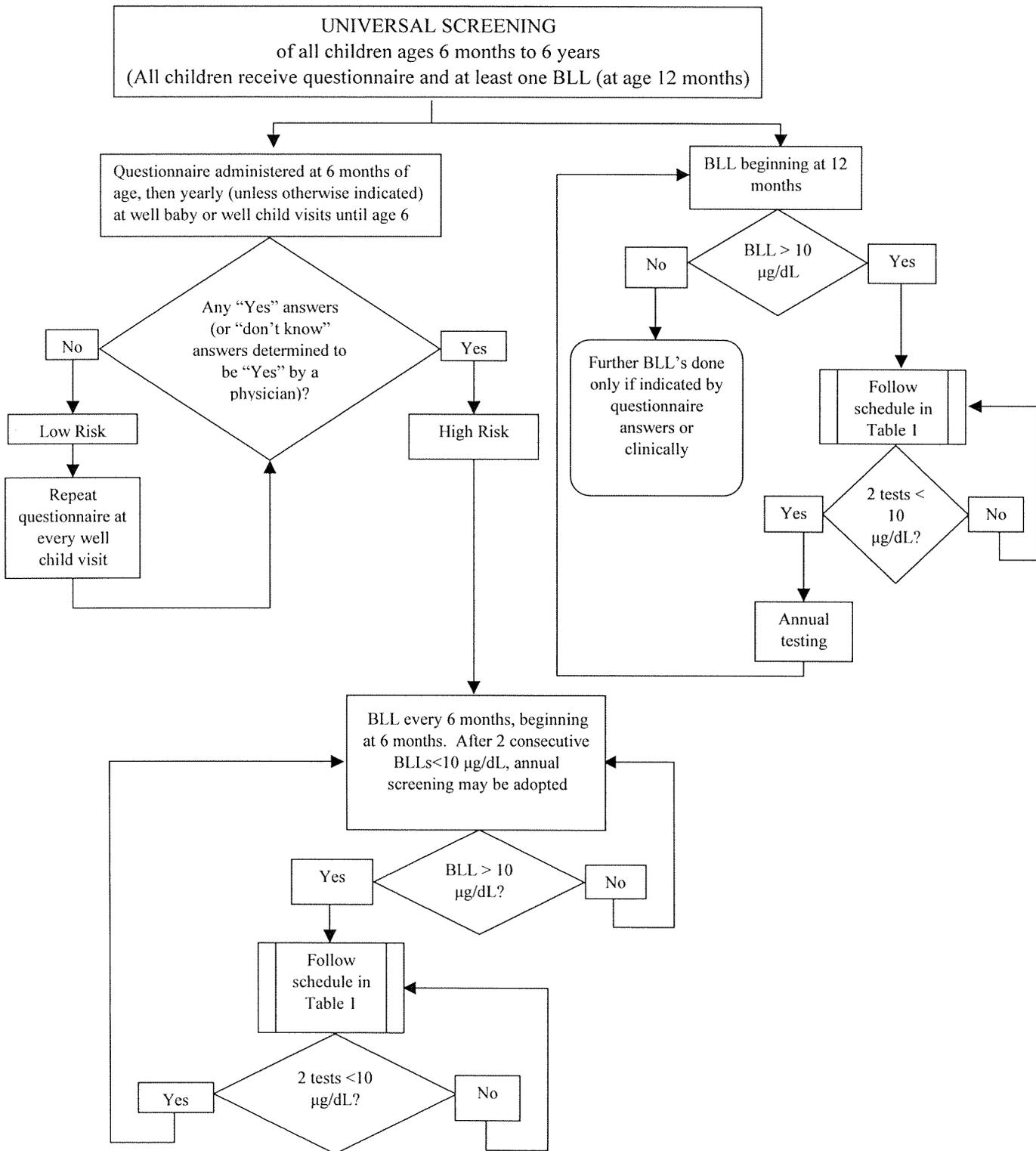
1. Reference (a) permits a medical treatment facility to suspend universal PLPP screening and change to targeted screening when specific criteria are met.
2. The number of children screened represents percent of the total children between age 6 months and 6 years cared for at this MTF. Based on the percentage of elevated BLLs on low risk children over the past years, this MTF forwards the following documentation to illustrate less than 2 percent of low risk children have elevated BLLs.

	Year	Year	Year	Total
Number of patients at low risk				
Number of low risk elevated BLLs				
Percent of low risk elevated BLLs				
Number of patients at high risk				
Number of high risk elevated BLLs				
Percent of high risk elevated BLLs				

3. Targeted screening of high risk children commenced on (date).
4. Point of contact on this subject is (complete name, telephone, fax, and e-mail).

Commanding officer signature

PEDIATRIC LEAD SCREENING ALGORITHM



PEDIATRIC LEAD SCREENING ALGORITHM

