Recommendations From

The Advisory Committee On Childhood Lead Poisoning Prevention

On

The Lead Screening Exception For Children Eligible For Medicaid

September 2002

Note to readers: The following recommendations from ACCLPP are presented in the form of guidance from CMS to states. Thus, everything that appears from this page forward should, unless otherwise noted, be imagined to be part of a package of guidance sent by CMS to state Medicaid agencies, ***exactly as it would look***. It is our hope that this format will promote clarity now and may simplify future implementation by CMS.

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Foreword from the Advisory Committee on Childhood Lead Poisoning Prevention

In 2000, the Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP)[1] accepted a request from the Secretary of Health and Human Services for guidance on improving lead screening for young Medicaid beneficiaries who are at risk for lead exposure. An ACCLPP workgroup considered the input of staff of the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare and Medicaid Services (CMS) and from state agency representatives and ACCLPP members. The workgroup monitored state screening strategies and developed draft recommendations that were substantially reworked by the full ACCLPP. The new CMS policy presented here is based on ACCLPP recommendations and represents the response of this diverse group of experts to the most recent findings on the nature and extent of childhood lead poisoning in the US today.

ACCLPP believes that states in which childhood lead exposure is relatively rare are justified in seeking ways to limit Medicaid lead screening to sub-populations at risk. States in which lead exposure is common, but only in certain geographic areas or among certain groups, also have a legitimate interest in targeting resources where they will do the most good. At the same time, ACCLPP wants to ensure that, in a world of competing interests and scarce resources, strategies for targeted lead screening are based on sound science and that children who are at risk for lead exposure are screened through positive effort on the part of all sectors of the Medicaid program. The potential for lasting harm caused by early childhood lead exposure remains a serious one among young Medicaid beneficiaries. Lead screening in this group must not be abandoned, nor should it be left to chance.

The new Lead Screening Exception (LSE) process that is described in the following document is intended to accomplish important public health goals while providing maximum flexibility to states. Central principles that have guided the development of this policy are described below.

Guiding Principles of the LSE Process

- The LSE process should lead to effective and sophisticated state policies for identifying through screening those children with elevated blood lead levels (BLLs) who are enrolled in Medicaid. States are encouraged to screen "smarter" rather than "less." The fact that not all Medicaid children need screening in all states should not undermine the screening activities of states with universal screening policies.

- The process should not be so burdensome that states choose to do nothing, potentially assuring continued poor performance. In many states that currently disregard the Medicaid lead screening requirement, it is certain that unidentified childhood lead exposure still occurs. Children in these states will benefit from a well-designed screening program and prompt interventions for identified exposures.

- The process will not alter state responsibility under the Federal EPSDT statutory requirement. Each state retains the obligation to provide required EPSDT lead screening unless it has received an LSE.

- The process must promote the identification of areas and populations of highest risk within each state that chooses to participate. Effective targeting based on reliable data

can illuminate "pockets" of increased risk within a larger population. States with significant variation in the magnitude of local lead exposures should not rely on the use of statewide blood lead prevalence figures to characterize this public health problem.

- Developing an LSE application should prompt a planning process that uses available (or reasonably obtainable) data to illuminate patterns of exposure. The lack of extensive and complete blood lead surveillance data is not an insurmountable obstacle to reasonable targeting. States can benefit from encouragement to think about how the problem of lead poisoning is manifest in their Medicaid populations today and how best to deal with it.

- The process must accommodate variation among states in the magnitude of risk for childhood lead exposure, in program capacities, and in degrees of public and political support for prevention activities. It cannot result in the arbitrary disqualification of states that might benefit. In particular, the process cannot be based on an unattainable "gold standard" for blood lead screening data. The process is built on recognition of the realities of variation in lead risk within states, declining prevalence, low screening rates, and incomplete blood lead surveillance.

- The application process should be based on helpful federal guidance that provides a clear vision of what successful applications would look like.

- The review of LSE applications should be performed by individuals with relevant substantive experience. The outcome should be based on careful review by experts in the theoretical and practical issues involved in targeting screening, rather than on formula or political decision.

- The process must incorporate evaluation procedures that will enable assessment of the impact of the LSE program on service delivery and case identification. A federal evaluation component validates the importance of the activity, while creating a framework for future planning and goal setting.

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EXECUTIVE SUMMARY

The Centers for Medicare and Medicaid Services (CMS) announces the availability of Lead Screening Exceptions (LSE), a new option under the Early and Periodic Screening, Diagnosis, and Treatment Program (EPSDT) to improve lead screening services for Medicaid eligible children through strategic, data-based targeting. The goal of the LSE is to encourage states to develop comprehensive approaches that improve blood lead screening among young Medicaid beneficiaries who are at risk for lead exposure while remaining responsive to local conditions. States will be accorded flexibility to prioritize Medicaid lead screening on the basis of analysis of relevant data. In exchange, they must demonstrate intensified screening among at-risk populations.

The LSE process is intended to:

- Promote the use of data analysis and innovation by states to improve screening among children with significant lead risks, and to reduce screening among children at lower risk;
- Promote access by states to relevant guidance and expertise in epidemiology and public health practice;
- Provide to states guidance and feedback that is actionable and advances public health objectives;
- Promote understanding of disparities in lead exposure risk within states;
- Promote effective collaboration between state Medicaid agencies and childhood lead poisoning prevention programs to ensure optimum outcomes for children served by Medicaid;
- Improve the likelihood that children with elevated blood lead levels (BLLs) will receive appropriate follow-up care; and,
- Make possible the monitoring of the impact of LSEs on screening practices for Medicaid children at increased risk for lead poisoning.

States seeking an exception to the current CMS policy that requires lead screening of all young children in Medicaid must develop detailed proposals. These proposals must describe screening objectives, proposed screening approaches, and justification for the selected approach. State proposals that are deemed responsive to the guidance that follows will receive prompt review as described herein. Within the framework outlined in the guidance, states have flexibility to design targeting plans that meet their unique needs. A Medicaid Lead Screening Peer Review Committee (PRC), primarily comprising experts in epidemiology and childhood lead poisoning prevention, will review applications. The PRC will recommend CMS approval or denial of LSE requests. If denial is recommended, the PRC will offer suggestions about how to strengthen the state's application for subsequent reapplication. States that receive LSEs shall implement their proposed screening plans in lieu of the current Medicaid policy of routine lead screening for all young children and participate in required evaluation and monitoring activities.

The guidance is organized as follows:

- *The Foreword* describes the thinking of the ACCLPP that formed the basis of the LSE process, and may be of interest to states considering applying for LSEs.

- *The Introduction* contains background information on recent trends in childhood lead poisoning and findings relevant to the population of young Medicaid beneficiaries.

- *Part 1* describes the process for states to use in requesting an LSE and for Department of Health and Human Services (HHS) to use in reviewing, awarding, and overseeing LSEs.

- *Part 2* describes required elements of state LSE applications.

- *Part 3* presents a set of evaluation measures to be used in the future by states and federal agencies to monitor state performance in providing EPSDT lead screening to children enrolled in Medicaid on an ongoing basis and to evaluate systematically the impact of LSEs.

- Appendices: Appendices A - C present hypothetical state targeting strategies. The first strategy (Appendix A) is presented as a detailed request for an LSE from a fictitious states.. The other two strategies (Appendices B and C) are abbreviated outlines from fictitious states and could be developed into full LSE proposals. The purpose of these appendices is to illustrate practical examples of alternative approaches and to demonstrate the format for submitting requests. Appendix D contains a list of resources.

[DRAFT] CMS GUIDANCE FOR STATE MEDICAID AGENCIES ON THE LEAD SCREENING EXCEPTION FOR CHILDREN ELIGIBLE FOR MEDICAID

Introduction

Childhood lead poisoning in the US.

In the United States today, childhood lead poisoning remains a vexing public health problem, with significant risk to vulnerable populations enduring even in the face of overall progress. Blood lead levels (BLLs) continue to decline across the general population, largely due to the continuing public health benefits of regulatory decisions to ban lead in paint, gasoline, food cans, and other consumer products and to reduce industrial emissions. At the same time, some communities face persistently high rates of elevated blood lead levels, as described by the Centers for Disease Control and Prevention (CDC) in an analysis of selected state surveillance data from 1999[2].

The risk for childhood lead exposure varies widely from place to place, posing a major challenge to development of a sensible and sensitive national screening policy. Even in relatively small geographic areas, there can be significant disparities in risk. A recent analysis of data on blood lead screening from seven cities demonstrated that more than 50 percent of the children with elevated BLLs lived in just 11.3 percent of ZIP codes[3].

Medicaid screening for lead poisoning.

Against this background of geographic variation, there remains a consistent and important association between childhood lead poisoning and poverty, found in data both from national surveys and from state and local blood lead surveillance. Consistent with federal law requiring blood lead screening appropriate for age and risk factors, the Centers for Medicare and Medicaid Services (CMS, formerly HCFA) policy since 1989 has required a blood lead test for all young children enrolled in Medicaid. The General Accounting Office (GAO) and CDC estimate that Medicaid enrollees account for an estimated 60 percent of all children with blood lead elevations and up to an estimated 93 percent of severely lead poisoned children[4]. These data confirm the vital importance of ensuring effective blood lead screening policies within the Medicaid program in order to identify children with blood lead elevations and to provide appropriate interventions.

However, performance has fallen far short of the policy requiring routine screening. A 1998 GAO report estimated that only 19 percent of young Medicaid enrollees had been screened. These low rates are confirmed by states' self-reported data: only 8 of 42 states reported a Medicaid lead-screening rate above 20 percent for 1- and 2-year-olds in their FY 99 reports to the federal Medicaid agency. These low rates mean that the vast majority of lead-poisoned children served by Medicaid are never identified or treated, and that the lead hazards in their environments are likely left uncontrolled. (A separate report by ACCLPP explores the reasons behind these low screening rates and offers recommendations[5]).

The challenge at hand.

Many children from low-income communities continue to face high risk for lead poisoning, and the disparities in risk between these children and other children continue to widen. At the same time, as a result of the downward national trend in blood lead levels overall, there are many low-risk areas scattered throughout the country. In response to these changing patterns of lead exposure, several

states sought federal approval to screen Medicaid children selectively instead of uniformly, in a manner similar to the one recommended by CDC for the broader population. The challenge at hand now is to develop updated lead screening policies for children served by Medicaid that simultaneously strive to **improve the identification of children with lead-poisoning** while **responding to the downward secular trend in blood lead prevalence rates.**

Part 1: The Lead Screening Exception (LSE) Request Process

CMS announces the availability of a Lead Screening Exception (LSE), a new option under EPSDT to improve lead screening services for Medicaid children through strategic, data-based targeting in lieu of routine lead screening for all enrollees. The goal of the LSE is for states to develop comprehensive approaches to ensuring adequate blood lead screening among children in Medicaid while remaining responsive to local conditions. States will have flexibility to determine approaches for prioritizing lead screening within Medicaid. In exchange they must demonstrate intensified screening among populations they identify as at-risk, on the basis of analysis of data.

Goals of LSE Process.
The LSE process will assist states to:

- Improve screening of children with significant risks for lead exposure by encouraging innovation and analysis by states; and at the same time, reduce screening of children at lower risk by providing states with maximal flexibility within reasonable parameters;
- Gain access to relevant expertise and judgment about lead poisoning epidemiology and related public health practice, and to make use of guidance and feedback that is actionable and advances public health objectives;
- Understand disparities in lead exposure risk within states;
- Improve screening performance and compliance with state Medicaid lead screening policies;
- Improve collaboration between state Medicaid agencies and Childhood Lead Poisoning Prevention programs to ensure optimal outcomes for children served by Medicaid;
- Ensure that children with blood lead elevations receive appropriate follow-up care; and,
- Monitor the impact of the LSE on screening practices for Medicaid children at increased risk for lead poisoning.

Lead Screening Exception (LSE) Request Process.
Under this new option, states may opt to develop detailed proposals describing their state-specific screening objectives, proposed screening approaches, and justification for their approach. All states are eligible to apply for an LSE.

Minimum Requirements:
State proposals must:

- Reflect a commitment to the public health goals of screening children appropriate for age and risk factors;

- Comply with the format and content parameters outlined in Part 2 of this guidance;
- Describe an evaluation component that is linked to their strategy and consistent with Part 3 of this Guidance;
- Describe incentives for providers to improve compliance with stated screening policies for children at highest risks;
- Describe programs to ensure environmental follow-up for lead poisoned children eligible for Medicaid, since any treatment regimen that does not control lead exposure is inadequate; and,
- Contain a Memorandum of Understanding (MOU) between the state Medicaid agency and the agency responsible for childhood lead poisoning prevention program (usually the state health department) that specifies joint and separate responsibilities for program development, implementation, data sharing, and evaluation, among others.

CMS expects that applications will be developed jointly by the state Medicaid agency and the agencies responsible for childhood lead poisoning prevention and follow-up activities, usually the health department. In some jurisdictions, other agencies such as housing or environmental agencies may share responsibility for relevant program elements. If so, they should be partners to the application as well.

Lead Screening Exception (LSE) Review Process.

Unlike some other Medicaid "waiver" programs, the LSE process does not depend primarily on review or approval by federal agency staff or officials. Instead, the process utilizes a "peer review" model[6].

A new Medicaid Lead Screening Peer Review Committee (PRC) appointed by CDC will review all state applications for an LSE. The PRC will comprise six experts in epidemiology and lead screening practices and one expert who will represent Medicaid beneficiaries, for a total of seven voting members. The expert members of the PRC will be drawn from current and former staff and directors of state and local lead poisoning prevention programs and health departments. These members will have formal training in epidemiology and/or experience applying epidemiological principles to lead poisoning prevention. It is expected that most will have first-hand experience in examining differential risk and tailoring targeting strategies for lead poisoning. The representative of Medicaid beneficiaries should be familiar with the EPSDT program and its outreach provisions, and have some familiarity with lead screening issues. The box on the following page provides additional information about the establishment of the PRC. CMS and CDC will each have one non-voting ex-officio member of the PRC. PRC members will be expected to recuse themselves from review of their home state program, if applicable.

The PRC will recommend CMS approval or denial of an LSE application. In case of denial, the PRC will offer suggestions about how to strengthen the application for subsequent reapplication. Unless CMS identifies a discrepancy or inconsistency with Medicaid law, CMS would then award LSEs only to those states recommended by PRC.

States that receive an LSE shall implement their proposed screening plans in lieu of the current Medicaid policy of routine lead screening for all young children, and participate in required evaluation and monitoring activities.

The PRC will meet to review LSE applications at least once a year, or more frequently if necessary to meet demand. Applications for the first review cycle will be due to CMS by [Insert date and time], with decisions rendered by [Insert date and time]. Applications for the second review cycle will be due to CMS by [Insert date and time], with decisions rendered by [Insert date and time]. A schedule for subsequent review cycles will be available [on the CMS web site].

[THIS BOX WOULD NOT APPEAR IN THE CMS GUIDANCE PACKAGE.]

Establishment of the Peer Review Committee

Around the time the LSE guidance is promulgated by CMS, CDC will publish an announcement of the plan to establish the PRC. CDC's announcement will explain the role of the PRC and the qualifications of desired members. CDC grantees, state Medicaid agencies, ACCLPP, and other interested parties will be asked to nominate peers to serve on the Committee. CDC will review nominations and invite qualified individuals to serve as members. Members will serve staggered four-year terms. CDC will periodically publish announcements seeking nominations for new members.

Reviewers will have program experience and expertise. Nomination to the PRC would be an honor and a means of recognizing the expertise, leadership, and contributions of individuals associated with state or local lead poisoning prevention programs and health departments. The review process will ensure that decisions about targeted lead screening are made on the basis of scientific analysis of data.

CDC's role in reviewing LSE applications is limited to facilitation of the process through provision of administrative, meeting, and travel support. CMS's role is limited to receiving and logging state proposals and the subsequent forwarding of these proposals to CDC for delivery to the PRC; CMS will also award LSEs based on PRC decisions. ACCLPP recommends that the costs of administering the PRC be borne by CMS and transferred to CDC to fund expenses. PRC members' daily salary and travel expenses will be paid by CDC in a manner similar to the one used to cover expenses of federal Advisory Committee members.

CDC may play an important role in providing technical assistance to states as they develop data analysis and presentation components of their LSE applications, possibly by designating a staff epidemiologist to consult with states on these issues.

Part 2: Format and Content of the Request for a Lead Screening Exception

Required Format – The request must contain the following sections:

1. Background and need.

    a. Summary of patterns of lead exposure and lead screening in your state, with particular reference to the population of young children who are eligible for Medicaid services.

    b. Summary of existing blood lead data, by year, including number and percent of children under age 6 screened and number identified with BLLs of 10 μg/dL or greater, by age and income level. Also, present this information for the population of children enrolled in Medicaid, if it is available.

    c. Summary of current EPSDT lead screening protocols and contracts with Medicaid managed care organizations and providers.

    d. Summary of current programs to ensure environmental follow-up care for lead poisoned children eligible for Medicaid, including policies for Medicaid reimbursement of case management and environmental investigation services.

2. Strategy

    a. One-page narrative or outline summary of strategy for targeting blood lead screening in the Medicaid population.

    b. Description of strategy in matrix or outline format, showing
        i. individual steps, including an evaluation step
        ii. for each step, necessary inputs
        iii. for each step, background information sources to be used
        iv. relevance of each step to the overall strategy

    c. Brief additional narrative, where necessary to expand or clarify a point in your matrix or outline.

3. Workplan

    a. Matrix showing, for each identified input (above)
        i. current status
        ii. objectives
        iii. resources needed and how the need will be addressed
        iv. timeline
        v. evaluation

    b. Additional narrative explanation of workplan, where necessary. Use this part for additional information on how resource needs will be addressed.

Required content: The following areas must be addressed to the extent applicable to the proposed strategy and local conditions.

A state's screening strategy should be based on specific features of its lead poisoning problems, taking into account both data that predict lead-exposure risk (e.g., census data on housing age and poverty) and existing screening and case data. The application should include an analysis of these data and show how the analysis has informed the development of a targeting strategy.

Elements to consider in lead risk analysis for Medicaid population:

- Analysis and implications of past blood lead screening in the state and within sub-divisions and sub-populations of the state.
- Analysis and implications of census data, using data from the 2000 census.
- Implications of individual reports of lead poisoned children.
- Immigrant or other cultural subgroups that may be at increased risk.
- Occupational or industrial sites that may increase risk for lead exposure.
- Analysis and implications of adult lead surveillance data.

Elements of a risk-based targeting strategy:

- How high-risk subgroups will be identified.
- How efforts to increase screening in high-risk groups will be accomplished.
- Criteria for allowing a subgroup (ZIP code, neighborhood) to be designated as "lower risk."
- Efforts to assess individual risk among children in sub-groups designated as "lower risk," e.g., use of personal risk assessment questionnaires.

A state's implementation plan should take into account the features and limitations of the state's policies, programs, and personnel, especially with regard to:

- Specific proposed changes to Medicaid lead screening policy, protocols, and contracts. States must describe their current EPSDT lead screening protocols, explain how they are incorporated into contracts with Medicaid managed care organizations and providers, and how these will be revised pursuant to the LSE.

- Strategies for informing pediatric health care providers of targeted screening requirements for Medicaid.

- Strategies for providers to use in determining whether an individual child in their care is in a target group or lives in a target area at the time of the child's visit to the provider.

- Strategies to provide ongoing individual feedback on screening performance to targeted providers, practices, or MCOs.

- Strategies to overcome identified obstacles to screening, such as physician resistance or misinformation, concerns about reimbursement rates, policies on off-site blood draw, and any other obstacles that have been identified within the state.

State applications must also cover the following key program issues:

- The working relationship between the state Medicaid agency and the lead poisoning prevention program. The relationship should make possible adequate data-sharing, follow-up care, and community leadership.

- How "lower risk" subgroups will be periodically re-evaluated to assure that they continue to be "lower risk."

- How follow-up care consistent with current recommendations[7] will be provided for children with elevated BLLs. (For blood lead screening to be a meaningful prevention service, identification of a child with an elevated BLL must trigger services that will lower the child's BLL. As noted by CDC and AAP, any treatment regimen that does not control lead exposure is inadequate. Moreover, case management and environmental investigation are recognized and required services that are covered by Medicaid and a traditional component of EPSDT programs.)

- How the revised Medicaid lead screening strategy will be disseminated and explained to targeted groups and communities, in order to ensure that those who are affected by the proposed strategy are fully informed about the basis, purpose, and projected impact of the strategy.

- Provisions for appropriate referrals and linkages to complementary programs and services needed by lead-poisoned children, including education, early intervention, WIC, and housing.

Appendices A - C offer illustrative examples of strategies for three different hypothetical states to use as guidance in developing state-specific screening strategies. States requesting an LSE may

adopt these strategies singly or in combination. Alternatively, they may propose a strategy other than the recommended strategies. States should note that these strategies vary considerably. Some are based on the availability of considerable lead screening data, while others rely on proxy data. The key is the appropriateness of the proposed strategy to the unique confluence of circumstances in each state.

Part 3: Systematic Evaluation of Targeted Screening

A state that receives an LSE is provided the flexibility to determine its own approach to targeted lead screening. In exchange, the state must demonstrate that the selected approach is both adequate to identify high-risk children, and responsive to local conditions. Ongoing evaluation of the impact of approved LSEs is essential to ensuring that young Medicaid beneficiaries are not adversely affected. Responsibility for ongoing evaluation will be a joint effort. States are required to include performance measures in their LSE requests and to monitor and report progress. Additionally, ongoing evaluation of LSEs will be performed jointly by CMS and CDC, with the periodic advice of the Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP). In addition, the performance of states that do not request or receive LSEs will also be evaluated periodically to ensure that adequate EPSDT lead screening is provided to children in non-LSE states.

Required Elements: State-Specific Evaluation of Targeting Strategy and Screening Performance Among Young Medicaid Beneficiaries

States with approved LSEs are required to submit reports to CMS at least every 2 years. Reports must contain the following:

1. Brief narrative, describing progress in each of the performance measures listed in the original LSE submission or negotiated as part of the exception process.

2. Data table showing, by Medicaid status, for each year in the reporting period:

    a. Number and proportion of children targeted for screening that received screening.
    b. Number and proportion of tested children identified with elevated BLLs.
    c. Number and proportion of children with elevated BLLs who received complete environmental investigations, for whom lead hazards were identified, and for whom lead hazards were remediated.
    d. Additional information about follow-up services provided, including the number of children with elevated BLLs who received case management services.

3. Analysis of annual screening and case identification numbers and rates, by Medicaid status, both prior to and following the exception.

4. Documentation of ongoing collaboration between the state Medicaid agency and the childhood lead poisoning prevention program (or governmental agency responsible for childhood lead poisoning), including memoranda of agreement allowing data sharing, joint meetings, and state and local review and interpretation of data.

5. With respect to the participation of Medicaid managed care plans in the state's targeted lead screening strategy:

    a. An analysis, by plan, of compliance with the requirements of the targeted screening strategy.
    b. For plans not in compliance, a description of actions taken by the state Medicaid agency to bring about plan compliance.

6. For designated low-risk sub-populations among whom no screening has been conducted, an analysis of secondary data demonstrating that Medicaid children who were thought to be at low risk remain at low risk. Sources of such data might include census data, nutritional evaluations (i.e., WIC records), housing surveys, and adult/occupational lead registry data, as well as identification of new products or practices presenting lead exposure within the community. If secondary data indicate that risk in a sub-population has increased since the LSE was approved, states must implement routine screening or an intensive screening program in the subpopulation until enough screening data can be collected to develop more precise targeting strategies for the subpopulation.

7. A description of ongoing efforts to ensure that blood lead screening services are available for Medicaid children whose families request them.

8. Description and findings of any research conducted to evaluate the effectiveness of screening strategies implemented as part of the LSE. States reporting research results may use evaluation reports as a vehicle to request modifications to their LSEs.

Elements of Federal Evaluation of Blood Lead Screening Among Young Medicaid Beneficiaries.

1. LSEs are renewable every 4 years. Objective reviews of state blood lead screening performance (in LSE and non-LSE states) will be conducted every 4 years on all states, beginning 2 years after award of the initial LSEs.

2. CMS will procure an independent evaluation contract to conduct an objective review of state lead screening performance for young children enrolled in Medicaid, as follows:

    a. For *all* states, CMS will make available to the contractor data from CMS annual 416 reports and any other data systems containing state-specific individual or aggregated lead screening data; and, CDC will make available data from its grantee state blood lead surveillance reports and the national blood lead surveillance database. Alternatively, the agencies may review these data themselves and report on the data to the contractor.
    b. For all states, the contractor will describe screening performance by state, rank states' screening performance relative to each other, and identify by name those states providing exemplary, average, or substandard lead screening services. The contractor will also report on innovations in lead screening practices and obstacles to improved screening performance using individual states as case studies.
    c. For states with an LSE in place, the contractor will review and summarize the state reports of progress toward stated performance goals.
    d. Although states with LSEs are required to determine whether children who have been excepted from blood lead testing in that state remain at low risk for lead exposure (through review of secondary data), the contractor may be asked to perform an additional review and determination of this aspect of a state's situation.
    e. The contractor will also provide to CMS, CDC, and to the ACCLPP an annual report summarizing the lead screening performance of state Medicaid programs and the national impact of the LSE no later than 60 days following the close of the federal fiscal year. This report will be considered a matter of public record.

3. On the basis of the objective review conducted by the contractor, CMS and CDC will provide feedback and recommend any necessary changes to a state's approved LSE strategy, within 120 days of receiving the contactor's report.

List of Abbreviations

AAP	American Academy of Pediatrics
ACCLPP	Advisory Committee on Childhood Lead Poisoning Prevention
BLL	Blood lead level
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services (formerly, the Health Care Financing Administration or HCFA)
EPSDT	Early and Periodic Screening, Diagnostic, and Treatment Program
GAO	US General Accounting Office
HHS	US Department of Health and Human Services
MCO	Managed care organization
PRC	Peer Review Committee
LSE	Lead Screening Exception

Endnotes

[1] The Advisory Committee on Childhood Lead Poisoning Prevention provides advice and guidance to the Secretary of Health and Human Services (and Assistant Secretary for Health and Director of CDC) regarding new scientific knowledge and technological developments and their practical implications for childhood lead poisoning prevention efforts and practices.

[2] CDC, *Blood Lead Levels in Young Children, United States and Selected States 1996 – 1999*, MMWR, 2000: 49:1133-7.

[3] Brown MJ, Shenassa E, Tips N, *Small Area Analysis of Risk for Childhood Lead Poisoning*, Washington, DC: Alliance To End Childhood Lead Poisoning, April 2001.

[4] Kaufmann R, Clouse TL, Olson DR, Matte TD, *Elevated Blood Lead Levels and Blood Lead Screening Among US Children Aged One to Five Years: 1988-1994*, Pediatrics, Vol. 106 No. 6 December 2000.

[5] Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP), Recommendations for Blood Lead Screening of Young Children Enrolled in Medicaid: Targeting a Group at High Risk, *MMWR* Recommendations and Reports, December 8, 2000 / Vol. 49 / No. RR-14.

[6] This approach is loosely based on an initiative that has been used successfully by the National Highway and Traffic Safety Administration (NHTSA), US Department of Transportation. NHTSA makes an assessment service available on request to states that wish to review and improve some aspect of their highway safety programs. This program has been well received by the states and has even been copied by some for-profit entities offering a similar service. For more information, go to www.nhtsa.dot.gov/safecommunities/Strive/contents.html.

[7] Centers for Disease Control and Prevention. *Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention*, Atlanta: CDC, 2002.

Appendices to Accompany the Recommendations from

The Advisory Committee On Childhood Lead Poisoning Prevention on

The Lead Screening Exception For Children Eligible For Medicaid

September 2002

APPENDIX A

A Request for a Lead Screening Exception from the Fictitious State of Centralia,
Embodying the Targeting Strategy:
"Intensive Screening in Targeted Sub-populations"

[EDITOR'S NOTE: THIS FICTITIOUS APPLICATION IS NOT COMPLETE. IT DOES NOT INCLUDE ATTACHMENTS THAT ARE REFERRED TO. ALSO, A REAL REQUEST UTILIZING THIS STRATEGY WOULD INCLUDE SCIENTIFIC AND DATABASE CITATIONS, WHICH ARE NOT PRESENT HERE. IT SHOULD BE SEEN AS A REASONABLE, IF INCOMPLETE, EXAMPLE OF A TYPE OF STRATEGY.]

PART 1: BACKGROUND AND NEED

A. The state of Centralia is large, in both area and population. The majority of the state's population is concentrated in the two largest cities, South Falls and River City, where there is a substantial amount of older, distressed housing and associated childhood lead poisoning. Some inroads have been made in improving Medicaid lead screening, particularly in managed care plans in these two cities. However, there is plenty of room for further improvement. Not much screening has been performed outside the distressed neighborhoods in South Falls and River City; providers outside the two cities have been unenthusiastic about lead screening, despite the federal Medicaid requirement. Census data suggest that the risk for childhood lead exposure is low in the state's rural areas. Even so, there exists the potential for exposure from several sources, including: deteriorating older housing in smaller urban areas, particularly in the north-central part of the state; industrial point-sources found in the southwest quadrant of the state; lead-containing products used by some ethnic groups; and, lead contamination associated with parental jobs and hobbies. Thus, screening is necessary in some places and among some groups of children outside the two big cities.

Based on these facts, Centralia seeks a Lead Screening Exception for the population of young Medicaid enrollees who live outside the two cities, South Falls and River City. (The state will continue unchanged its present requirement of lead screening for *all* Medicaid-eligible children in the two cities.) The state has formed an advisory group to develop this request. (See [hypothetical] Attachment A for information on this group.) Providers and managed care organizations that serve Medicaid enrollees outside the two big cities have expressed a willingness to perform targeted screening, and are encouraging of efforts by the state Medicaid agency (SMA) and the state Childhood Lead Poisoning Prevention Program (CLPPP) to develop this request. (See [hypothetical] Attachment B for letters of support.)

B. Presentation of Centralia's lead data

As may be seen in Table 1 (below), the state has collected blood lead data on children screened during the last 4 years. Although the data for children with blood lead elevations is relatively complete, it has been impossible to collect complete data on children whose tests results are below 10μg/dL. Medicaid status is missing from nearly all reported tests, and address data is

incomplete or missing for more than 60%, so it is difficult to estimate the amount of screening that has taken place strictly among children in Medicaid, or among children who live in areas outside of the two major cities. By comparing the number of screening tests in the CLPPP blood lead surveillance database with the number reported to the state Medicaid agency by managed care organizations that serve Medicaid enrollees in the two cities, we conclude that very little screening has been done in areas outside these cities. Therefore, we will not use blood lead data as the main source of predictive information about lead risk for children who live outside the two big cities.

Table 1: Number of children, aged 9-72 months, screened, and number elevated

Year	# of children screened	# of children with blood lead levels of 10 µg/dL or greater	# of children with blood lead levels of 20 µg/dL or greater	
1998				
1999				
2000				
2001				

Editor's note: the data table shown here represents a minimum number of fields. Many states will have additional data, which should be presented in a table format such as this one. Additional data, by year, might include: number of Medicaid enrollees; number of Medicaid enrollees who received blood lead screening; number of Medicaid enrollees with blood lead levels of 10 or greater and 20 or greater; screening and cases by geographic area of the state.

C. EPSDT Protocols and Contracts with Medicaid MCOs and Providers

In the two major cities, all children enrolled in Medicaid are cared for in managed care settings. Attachment C contains summaries of contracts with the managed care plans and copies of those sections specifying required lead screening and follow-up services. [Hypothetical] Attachment D contains EPSDT protocols and periodicity information for the state.

D. Summary of policies and programs for follow-up care for children with blood lead levels of 20 µg/dL or greater.

[Hypothetical] Attachment E contains a follow-up care policy summary and protocols. [Hypothetical] Attachment F contains data from 1998-2001 on environmental investigations and abatements performed in connection with children identified with blood lead levels of 20 µg/dL or greater. [Hypothetical] Attachment G contains a summary of the agreement between the state health department and the state Medicaid agency regarding reimbursement of environmental assessments performed in the homes of lead poisoned children.

PART 2 A: ***ONE-PAGE NARRATIVE OR OUTLINE SUMMARY: STRATEGY FOR TARGETING BLOOD LEAD SCREENING IN THE MEDICAID POPULATION OF THE STATE OF CENTRALIA*** *(excluding the sub-populations of South Falls and River City, where routine screening of all 12- and 24-month-old children enrolled in Medicaid will continue to be required).*

Step 1: Subdivide the population of Medicaid enrollees (outside the two cities) according to risk for lead exposure.

- Examine existing statewide information on 3 main types of risk factors, i.e., exposures related to old housing and industry, to race/ethnicity, and to jobs/hobbies.
- Examine census data at the census block-group level, using standard census variables (see references), and industrial emissions data to determine geographic patterns of potential lead exposure
- Examine state's blood lead data to identify the patterns of screening and case finding, and to learn about any unusual (i.e., non-housing-related) exposures.
- Match Medicaid enrollment data with blood lead surveillance data.
- Identify patterns of screening and case finding among Medicaid enrollees.

Step 2: Develop a targeting approach

- Continue to require routine blood lead screening of all young Medicaid enrollees living in South Falls and River City.
- Develop a formula and rank according to lead risk, all ZIP codes in the state other than those in the two biggest cities, on the basis of census data variables examined at the block-group level, Medicaid enrollment data, and blood lead surveillance data.
- Require screening for all Medicaid enrollees ages 12 to 25 months who live in the xx% of all ZIP codes in the state (outside the two cities) in which the risk for childhood lead exposure is predicted to be the highest. **(Editor's note: No percent is specified in this fictitious scenario, in order to avoid the question of a "recommended" cut-off point for determining where routine screening should take place. The percent of ZIP codes selected for screening should be based on a number of factors, with the most weight given to the level of predicted risk in the top echelon of ranked ZIP codes. Obviously, it is critical that screening be conducted among children with substantial risk.)**
- Require lead screening among any additional groups of children who are identified as being at-risk and who might be difficult to target on the basis of ZIP code (e.g., children with risk that is based on practices in ethnic groups or parental jobs/hobbies).

Step 3: Provide intensive screening for at-risk children

- Address obstacles to screening (including EPSDT protocols, reimbursement levels, provider awareness, and managed-care contract language). Consider providing temporary use of hand-held blood lead analyzers to clinics or providers that serve children in at-risk ZIP codes.
- Widely disseminate information about Centralia's new targeting policy.

- Encourage key providers to screen, using regular surveillance reports and customized letters (see next step).

Step 4: Track and monitor screening, using the results to inform future efforts

- Track screening tests and results for children identified as living in designated high-risk ZIPs
- Identify key providers, based on list of enrollees in need of screening.
- Notify key providers of names of children in their care who lack required screening
- Utilize provider feedback and incentives/disincentives to bring about required screening in target population

PART 2B: *STRATEGY IN MATRIX FORMAT*

Strategy component	Necessary inputs (e.g., data, activities, competencies, policies)	References	Relevance to overall goal
Step 1: Subdivide the population of Medicaid enrollees according to risk for lead exposure			
Consider all types of exposure risk and environmental sources	➢ Surveillance reports ➢ Individual case reports or case series of unusual exposure sources	➢ CDC 1997 Screening Guidance[1] ➢ CDC surveillance info, state reports[2]	Determine specifics of state exposure sources
Examine census data	➢ *Census data files (e.g,* **housing age, ownership, etc)** ➢ **Decisions about choice of variables**	➢ CDC web site[3] ➢ **References on choosing variables[4]**	Use certain census variables **to identify areas predicted to be high risk**
Examine surveillance data on blood lead levels (BLLs)	➢ **Electronic database** ➢ **Lab reporting laws** ➢ **Collection of key variables (age, address, Medicaid status)**	➢ *Foundations* Report from the Alliance T o End Childhood Lead Poisoning[5] ➢ NCSL info on state reporting and screening laws[6]	BLL data **make it possible to** examine **screening and case-**rates
Develop data sharing between CLPPP and SMA	➢ **Match** Medicaid enrollment **data with** blood lead **surveillance** data	➢ **CDC report on state** activities to improve Medicaid lead screening[7 8] ➢ *See note 5.* ➢ Lead surv listserv[9]	**Linked data make it possible** to determine screening and case patterns among children in Medicaid, identify at-risk individuals
Identify patterns of screening and cases	➢ **Report** on lead screening and **cases in Medicaid population** ➢ (Optional) Map BLL data, census info, Medicaid enrollment data	➢ See above-referenced sources	Ready information for decision making. Spatial displays of patterns of screening and case finding are useful in planning and supporting LSE
Step 2: Develop a targeting approach			
Continue to screen all young Medicaid beneficiaries in two largest cities	➢ No additional		
Rank ZIP codes according to risk	➢ **Formula for ranking ZIP codes**	➢ **See above-referenced sources**	**Makes it possible to identify individuals in need of screening by their ZIP of residence**

Strategy component	Necessary inputs (e.g., data, activities, competencies, policies)	References	Relevance to overall goal
Determine screening requirement for at-risk children other than those to be screened on the basis of their ZIP code	➢ Data on exposure patterns and sources ➢ Evaluation of risk assessment questionnaires on exposure sources, other than lead based paint, such as, use of ethnic remedies, cookware, take-home and hobby-related exposure. ➢ Alternative screening triggers	➢ CDC listserv, information on questionnaires currently used in other states ➢ 1997 CDC guidelines (see Endnote 1)	Makes it possible to identify children who might be exposed to lead outside of target ZIP codes.
Step 3: Provide intensive screening for at-risk children			
Remove obstacles to screening	➢ Adequate reimbursement for screening ➢ EPSDT protocols ➢ Managed-care contract language ➢ Ancillary policies, e.g., policies on on-site blood draw, payment of family's transportation costs to lab for blood draw	➢ See CDC's lead surveillance listserv for information and queries regarding common practices in various states and locales ➢ MMWR on Medicaid screening (See Endnote 8) ➢ GWU website for model contracting language[10]	Improve compliance of both providers and parents in meeting screening requirements
Disseminate information about new targeting policy.	➢ Targeted information campaign	➢ CDC and other sources of information on public education campaigns	Improve knowledge among health agencies, providers, policy makers, and parents, about importance of lead screening among target population
Encourage key providers.	➢ Reports on screening and case finding in target ZIP codes ➢ Customized letter, listing individuals in need of screening	➢ See above-referenced sources	Improve provider compliance with targeted lead screening requirement
Step 4: Track and monitor screening, using the results to inform future efforts			
Track screening tests and results for children identified as living in designated high-risk ZIPs	➢ State Medicaid agency data query, selecting names of Medicaid enrollees living in the top xx% of ranked ZIPs ➢ Surveillance data on children screened	➢ See above-referenced sources	Enables notification of key providers and evaluation of success of targeting requirement

Strategy component	Necessary inputs (e.g., data, activities, competencies, policies)	References	Relevance to overall goal
Notify providers of names of children in their care who lack required screening	➢ Customized letters to providers ➢ List of individual children in need of screening, by provider	➢ *Track, Monitor, and Respond* report from the Alliance to End Childhood Lead Poisoning [11]	Encourages compliance among providers
Utilize provider incentives/disincentives to bring about required screening in target population	➢ Medicaid-MCO contracts ➢ Dissemination of screening and surveillance reports that are provider-specific. ➢ Customized letters to providers, presenting feedback on their screening performance	➢ See above-referenced sources	Same as above.

PART 3A: *WORKPLAN IN MATRIX FORMAT*

Address each identified input from strategy table, showing current status, objectives, necessary resources (policies, protocols, personnel, and other resources), and timeline, as follows:

Step 1: Subdivide the population of Medicaid enrollees according to risk for lead exposure

Input	Current Status	Objectives	Resources	Timeline	Performance measures
State lead surveillance reports	Have in hand 10 years of blood lead surveillance reports	Prepare brief summary of surveillance findings, focused on major identified sources of lead exposure in state	Childhood Lead Poisoning Prevention Program (CLPPP) staff and state Medicaid agency (SMA) staff time to examine and discuss reports	Within 1 month of LSE, complete brief background report on lead exposure, based on surveillance reports	Objective met? yes no On time? yes no
Individual case reports of unusual exposure sources	Have held discussions with Indian Health Service staff and staff of state and local CLPPPs on exposures that are non-housing-related.	Prepare summary of unusual cases for use in deciding on target populations.	CLPPP and SMA staff time sufficient to complete summary background report.	Within 1 month of LSE, circulate draft summary of discussions; receive feedback from locales and tribes. Within 2 months complete final report	Objective met? yes no On time? yes no
Census data and decisions on choice of variables	State health department has extensive maps showing concentrations of old housing and poverty	CLPPP and SMA prepare joint analysis of census data variables on old housing and poverty	No additional	Within 1 month of LSE, develop analysis of census data	Objective met? yes no On time? yes no
Electronic blood lead surveillance database	State health department maintains a database of elevated blood lead levels	No additional objectives	-----	-------	
Lab reporting laws	State has been unsuccessful at getting a statutory	No additional objectives (NOTE: the public health agency	------	-------	

Input	Current Status	Objectives	Resources	Timeline	Performance measures
	requirement for **reporting of all blood lead levels**	has a longterm objective to strengthen the reporting law)			
Collection of key variables (age, address, Medicaid status)	Existing blood lead database lacks Medicaid status, but has age and address for all children with elevated blood lead levels	No additional objectives	------	------	
Multi-year data	Have in hand data on blood lead screening and cases from 1998-2001	No additional objectives	------	------	
Data matching: Medicaid enrollment **data linked to BLL data**	SMA and health department have **begun efforts to match selected variables in Medicaid enrollment** database with blood lead screening data	Determine blood lead screening status of all children in the Medicaid enrollment database who are 9-**35 months of age.**	Information Technology (IT) staff time (both health department and SMA) to complete **matches and generate matched** file	Within 3 months of LSE, completion of matched file	Objective met? yes no On time? yes **no**
Map BLL data in Medicaid and non-Medicaid population [OPTIONAL INPUT, FOR USE IN EDUCATING DECISION-MAKERS AND PROVIDERS]	Mapping of census data and BLL data currently exists, but is not Medicaid specific	Develop mapped "overlay" display of geographic distribution of Medicaid enrollees, Medicaid screening, and elevated BLLs in Medicaid enrollees	CLPPP staff to perform mapping IT staff from SMA and CLPPP to add Medicaid specificity	Within 4 months of LSE, completion of mapped overlays, if staff support available	Objective met? yes no On time? yes no
Map census data elements associated **with lead risk [OPTIONAL INPUT, SEE CELL ABOVE]**	same as cell above	Develop mapped overlay of distributions of old housing plus poverty	CLPPP staff to perform mapping	same	Objective met? yes, no On time? yes no

Step 2: Develop a targeting approach

Input	Current Status	Objectives	Resources needed	Timeline	Performance measures
Formula for ranking ZIP codes according to risk	Formula to be developed, based on formulas used by other states	Develop formula for ranking ZIP codes according to lead risk and apply to ZIPs outside two largest cities	CLPPP and SMA staff time to review other state's formulas and develop and appy one to rank Centralia ZIPs.	Within 5 months of LSE, rank according to lead risk all ZIP codes in the state, outside of the two largest cities	After 1 year, re-visit rankings; analyze screening and case rates in target ZIP codes. Identify problems, make improvements.
Questionnaire on exposure sources, other than lead based paint, specifically use of ethnic remedies, cookware, take-home and hobby-related exposure.	CLPPP staff has collected questionnaires used in other states	Based on findings from Step 1, develop a questionnaire, translated into Spanish and Hmong. Disseminate to all relevant providers plus, relevant local community groups	CLPPP staff time to develop questionnaire based on findings from Step 1 List of target sites for dissemination, in addition to statewide provider list and statewide public health agency list.	Within 5 months of LSE, develop and disseminate questionnaire, based on findings in Step 1.	Objective met? yes no On time? yes no

Step 3: Provide intensive screening for at-risk children

Input	Current Status	Objectives	Resources needed	Timeline	Performance Measures
Adequate reimbursement for screening	Reimbursement rates under review	Determine whether reimbursement for screening is adequate and appropriate	SMA staff time to review rates and develop any additional policies	Within 6 months of LSE, correct any identified reimbursement problems	Will be evaluated as part of larger ongoing evaluation of reimbursement rates.
EPSDT protocols	Protocols currently under review	Alter EPSDT protocols to reflect targeted screening policy	SMA staff time to review and alter protocols	Within 6 months of LSE make necessary alterations to EPSDT protocols.	Objective met? yes, no On time? yes, no
Medicaid-Managed care contract language	Existing contracts in 3 towns under review for screening language	Determine whether current language needs to be changed	SMA staff time to review current language and make necessary changes	Within 6 months of LSE make necessary changes in contract language	Objective met? yes, no On time? yes, no

Input	Current Status	Objectives	Resources needed	Timeline	Performance Measures
Ancillary policies, e.g. policies on on-site blood drawing	Additional policies with possible impact on screening have not yet been reviewed	Determine whether additional policy changes needed, make identified changes	same as cell above	Within 12 months of LSE, examine current policies, make changes	Objective met? yes, no On time? yes, no
Information campaign about Centralia's new targeting policy.	Provider groups and managed care plans are aware that Centralia is developing a request for an LSE	Develop information (letter, FAQs, and brochure) and mail to provider groups, managed care plans, local public health agencies, and key providers	SMA and CLPPP staff time to develop information materials	Within 6 months of LSE, develop info materials and complete mailing	Objective met? yes, no On time? yes, no
Regular surveillance reports and customized letters to encourage key providers to screen	State CLPPP produces two BLL surveillance reports per year.	Develop additional section in surveillance report, highlighting Medicaid screening in target areas	SMA and CLPPP staff sufficient to continue matching of databases, in order to analyze targeted screening	Ongoing	

Step 4: Track and monitor screening, using the results to inform future efforts

Input	Current Status	Objectives	Resources needed	Timeline	Performance Measures
Lists of individual Medicaid enrollees in target ZIP codes	pending	Generate the list at least twice a year Use list to check screening rates among target population	IT staff of SMA to make routine database queries	Ongoing	At the end of 24 months after the LSE, determine whether lists have been generated on a regular basis and results used to improve provider performance
Surveillance data	pending	no additional	-----	-----	-----
List of key providers, based on list of enrollees in need of	pending	Mail customized letters to key providers with lists of	SMA staff to oversee generation of customized lists and	Ongoing	At the end of 24 months, analyze effect of letters, based on

Input	Current Status	Objectives	Resources needed	Timeline	Performance Measures
screening.		children in their care who need screening.	mailout, and do follow-up with providers		informal provider survey.
Contract language	review underway	no additional	-----	-----	-----
Provider-specific screening reports	not done	Generate screening reports on children in the targeted area, by provider	Staff time of SMA and CLPPP to generate and update reports	Ongoing	At the end of 24 months, analyze effect of reports, based on provider survey

PART 3 B: ADDITIONAL NARRATIVE EXPLANATION OF INDIVIDUAL ASPECTS OF MATRIX CONTENTS, WHERE NECESSARY.

- CLPPP staff called for in this workplan are funded by a grant from CDC; .5 FTE for year 01 of LSE and .25 FTE for years 02 and 03 have been budgeted and approved. (See Attachment H for relevant pages from CLPPP grant proposal to CDC.)

End Notes

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[1] *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials. CDC 1997*

[2] Contact the Lead Poisoning Prevention Branch for updated surveillance reports from various states: *LPPB,, MS E-25, Atlanta GA 30333*

[3] For selected lead poisoning-related census variables (1990 census) by county and ZIP code, go to http://www2.cdc.gov/nceh/lead/census90/house07/house07.htm

[4] Brown, MJ etc—references here to be added

[5] *The Foundations of Better Lead Screening for Children in Medicaid: Data Systems and Collaboration.* The Alliance to End Childhood Lead Poisoning, April, 2000. This report is available on the Alliance website www.aeclp.org, and by contacting the Alliance at aeclp@aeclp.org. The Alliance can be reached at 202-543-1147.

[6] An updated summary of state statutes relevant to childhood lead poisoning is available on the NCSL website at www.ncsl.org

[7] *Working with Medicaid: A Resource Guide for Childhood Lead Poisoning Prevention Programs, 2001. CDC, 2001 (*Contact the Lead Poisoning Prevention Branch at CDC for a copy: LPPB,, MS E-25, Atlanta GA 30333)

[8] *Recommendations for Blood Lead Screening of Young Children Enrolled in Medicaid: Targeting a Group at High Risk.* Advisory Committee on Childhood Lead Poisoning Prevention. MMWR December 8, 2000/Vol.49/No.RR-14

[9] CDC manages a listserv for its grantees and others who are interested in childhood lead screening and surveillance issues. For information on subscribing contact LPPB at MS E-25, Atlanta GA 30333.

[10] Sample contract specifications are available free at http://www.gwu.edu/~chsrp/

[11] *Track, Monitor, and Respond: Three Keys to Better Lead Screening for Children in Medicaid*, August 2001. Alliance to End Childhood Lead Poisoning (available from the Alliance at aeclp@aeclp.org, or on the Alliance website, www.aeclp.org. The Alliance can be reached at 202-543-1147

APPENDIX B

A Request for a Lead Screening Exception from the Fictitious State of Southland, Embodying the Targeting Strategy:

"Intensive Screening in Targeted Sub-populations and Ongoing Evaluation of ZIP Codes"

[EDITOR'S NOTE: THIS FICTITIOUS APPLICATION IS NOT COMPLETE. IT IS PROVIDED IN AN ABBREVIATED FORM WITHOUT THE REQUIRED COMPLETE DESCRIPTION OF THE STRATEGY OR WORKPLAN, AND IT DOES NOT ADDRESS ALL THE REQUIRED AREAS. IT SHOULD BE USED FOR REFERENCE PURPOSES ONLY, AS A TYPE OF SUGGESTED STRATEGY. IT SHOULD NOT BE SEEN AS AN EXAMPLE OF A COMPLETE REQUEST FOR A LEAD SCREENING EXCEPTION.]

PART 1: BACKGROUND AND NEED

Southland is a large fictitious state in the southeastern United States with the following attributes:

- The majority of the state's childhood population is distributed fairly evenly across the state's 533 ZIP codes.
- The majority of the state's children who live in poverty are also scattered evenly throughout the state.
- In the state's 533 ZIP codes, the percent of housing built before 1950 ranges from 0.2% to 76.1%.
- 450 ZIP codes (84%) have less than 27% of housing built before 1950.
- There are no significant point sources of lead, such as mines or smelters in the state.

Since 1998, Southland has *de facto* applied a basic targeting strategy (See [Hypothetical} Appendix A), in conjunction with our call for state health-care providers to meet the federal requirement of universal screening of the entire Medicaid population at ages 12 and 24 months. That is, this state has focused *extra* attention on screening among children in 64 ZIP codes that we identified as HR, high-risk ZIP codes, using the basic targeting strategy as follows: we analyzed a combination of existing blood lead data, census data on housing age, race/ethnicity, and poverty. Thus we are confident that these 64 ZIP codes are among those with both the highest prevalence and the greatest number of children with elevated blood lead levels in the state. We then focused intensive screening on the sub-population of children in the Medicaid program whom we identified as being at highest risk on the basis of their having an address within the 64 HR ZIP codes.

Presentation of Southland's lead data.

For the past 3 years the Southland Department of Public Health and the Department of Medical Security have collected data for all ZIP codes in the state. Our determination of whether or not a ZIP code is to be considered HR is based on our confidence in the estimate of the percent of children with blood lead levels $\geq$ 10 µg/dL in the ZIP code. There must be both a sufficient

number of children living in the ZIP code and a sufficient number of children tested to allow us to construct a reasonably narrow 95% confidence interval around the prevalence estimate. As Table 1 indicates, some ZIP codes may have enough data collected in a single year to allow a sufficient level of confidence. In other ZIP codes, we need to combine several years of data in order to improve the precision of the estimate (See Table 1). We have identified 21 ZIP codes within the set of 64 "high-risk" ZIP codes in which there has been enough screening to enable us to establish the level of risk for childhood lead exposure with adequate certainty.

[PARTIAL TABLE SHOWN FOR PURPOSES OF CLARIFICATION—A COMPLETE TABLE WOULD BE NECESSARY IN A REAL APPLICATION] Table 1: Status of screening by ZIP codes studied, Southland 1997-2000

ZIP Code	# years of data	% pre-1950 housing	# children aged 1-2 years	% children <6 years old in poverty	Estimated # children, aged 1-2 years in poverty*	# children screened	# children with BLL ≥ 10 µg/dL	% children with elevated BLL (95% CI)	Determination
36***	0	30.9	7	100%	7	0	?	?	Collect more data
36***	2	30.5	670	45%	302	356	63	17.7% (13.9, 21.9)	Universal Screening
36***	3	27.5	102	12%	12	4	0	0	Collect more data
36***	1	24.9	981	49%	481	219	15	6.8% (2.3, 11.3)	Screen by Questionnaire
36***	1	24.7	34	18%	6	10	2	20% (Cannot Determine)	Collect more data

Part 2A: *NARRATIVE OR OUTLINE SUMMARY:*
STRATEGY FOR TARGETING BLOOD LEAD SCREENING IN THE MEDICAID POPULATION OF THE STATE OF SOUTHLAND

We propose the following targeting strategy:

1. For the 21 ZIP codes for which we have sufficient representative blood lead screening data to classify the ZIP code, we propose the following:

- Continue universal screening in 9 ZIP codes.

- In 5 of the remaining 12 ZIP codes there are no children living in poverty and thus no Medicaid enrollees.

- We have designated as "low-risk" (LR) the remaining 7 ZIP codes. During the period 1998-2000, in these ZIP codes at least 80% of the 1 and 2 year old children in Medicaid have received blood lead tests **and** the upper 95% confidence interval for the prevalence of blood lead levels $\geq$ 10 µg/dL is less than 12% (cut-off point recommended in 1997 CDC guidance, *Screening Young Children for Lead Poisoning).* **(Editor's note: Southland health officials chose to use 12% as its cut-off point for determining where routine screening should take place, but states are free to choose a different number if appropriate.)**

- We request a Lead Screening Exception (LSE) for children living in 7 identified LR ZIP codes in Southland In these ZIP codes, in lieu of routine blood lead testing for all 12- and 24-month-old Medicaid enrollees, parents or guardians of these children will be asked to respond to a 5-question Lead Risk Questionnaire. (See [Hypothetical Appendix B.) In the event of 1 or more "yes" or "unknown" answers to the 5 questions, the child will receive a blood lead test. If all answers are "no" the child will not receive a blood lead test. (See Table 1).

2: **In all other ZIP codes in which Medicaid enrollees live, routine blood lead screening of all children enrolled in Medicaid will continue to be required at the EPSDT health surveillance visits at 1 and 2 years of age.**

3: In addition, we will continue to evaluate the ZIP codes of Southland using blood lead data on the following basis:

- Establish Risk:

    - Make a concerted effort in 50 of the ZIP codes determined to be at highest risk on the basis of census indicators and in which the status (i.e., HR, high-risk, universal screening or LR, low-risk, use of questionnaire) has not yet been established, to screen as many at-risk children as possible, and to develop valid data for determining prevalence.

- Educate health care providers by disseminating information on targeting strategy at their meetings.

- Address obstacles to screening by working with pediatric providers in the 50 ZIP codes selected for study. An individual provider will receive a list of children in his/her practice who meet the criteria of being enrolled in Medicaid, being 1-or-2 year(s) old, and living in one of the 50 ZIP codes under study. These children should be tested during their next EPSDT health surveillance visit.

- For each study ZIP code in which at least 80% of 1-and 2-year-old Medicaid enrollees have been screened, estimate the prevalence of BLLs of 10 μg/dL or greater by dividing the number of cases by the number tested.

- Calculate 95% confidence intervals. In ZIP codes where the upper value of the 95% confidence interval of the BLL prevalence is less than 12%, discontinue routine blood lead screening and initiate use of the individual-risk questionnaire.

- Provide intensive screening

  - Address obstacles to screening among children living in ZIP codes designated as universal

  - Provide feedback to providers on screening performance and case finding.

  - Link Medicaid and surveillance data for ZIP codes designated as HR. Notify providers of patients in their practices who are in need of testing.

- Monitor impact of targeted screening

  - Review medical records for questionnaire data in clinical settings in newly designated LR ZIP codes.

  - Continue to track and monitor blood lead testing statewide to identify changes in patterns of exposure.

  - Collaborate with the adult lead poisoning registry to identify new point sources that might contribute to childhood lead exposure.

APPENDIX C

A Request for a Lead Screening Exception from the Fictitious State of Great North, Embodying the Targeting Strategy:
"Periodic Statewide Survey of Medicaid Enrollees Aged 9-35 Months"

[EDITOR'S NOTE: THIS FICTITIOUS APPLICATION IS NOT COMPLETE. IT IS PROVIDED IN AN ABBREVIATED FORM WITHOUT THE REQUIRED COMPLETE DESCRIPTION OF THE STRATEGY OR WORKPLAN, AND IT DOES NOT ADDRESS ALL THE REQUIRED AREAS. IT SHOULD BE USED FOR REFERENCE PURPOSES ONLY, AS A TYPE OF SUGGESTED STRATEGY. IT SHOULD NOT BE SEEN AS AN EXAMPLE OF A COMPLETE REQUEST FOR A LEAD SCREENING EXCEPTION.]

PART 1: BACKGROUND AND NEED

Great North is a Northwestern state with the following attributes:

- The majority of the state is rural and there are few industrial sites or population centers.
- The majority of the state's children who live in poverty live in the state capital but a sizeable minority live more than 100 miles from the closest population center with more than 3500 residents.
- Most Medicaid enrolled children receive their healthcare at a community-based health center or at one of 3 health maintenance organizations.
- The median year built for housing statewide in 1980.
- There are concerns that exposure to lead among indigenous peoples with a traditional lifestyle may not be identified by reliance on frequently used census measures of risk such as poverty or age of housing.

Presentation of Great North Lead Data

It has been difficult to implement routine lead screening among the state's Medicaid enrolled children, primarily because health care providers are convinced that it is unnecessary. (See Table 1) However, previous State Health Department blood lead surveys of young children thought to be at highest risk on the basis of analysis of census data, have indicated that the prevalence of blood lead elevation was less than 3% and there were no cases of serious lead exposure (blood lead levels $\geq$ 20 µg/dL) identified. Because of the relatively limited nature of these surveys, (2 surveys of children attending WIC clinics, one during the period April-October, 1998, and the other a year later, during the same months), child advocates remained concerned that some children may have a high risk for lead exposure. Thus, the state Medicaid and Lead Poisoning Prevention Program are proposing to undertake an innovative surveillance project calling for routine

lead testing of all blood samples drawn on Medicaid enrolled children during the months of July, August and September 2003.

Table 1: **Results of two consecutive surveys of blood lead levels among children aged 9-35 months attending WIC clinics in Great North**

Survey year	# children, aged 9-35 months, receiving a blood lead test	# (%) of tested children with blood lead levels between 10 and 15 µg/dL	# (%) of tested children with blood lead levels above 15 µg/dL
1998	829	4	0
1999	786	3	0

PART 2 A: *ONE-PAGE NARRATIVE OR OUTLINE SUMMARY: STRATEGY FOR TARGETING BLOOD LEAD SCREENING IN THE MEDICAID POPULATION OF THE STATE OF GREAT NORTH*

Strategy for Blood Lead Surveillance in the Medicaid Population of Great North

We propose the following surveillance strategy:

1. Generate a list of all laboratories in the state that draw pediatric venous samples for Medicaid enrollees.

2. Generate a list of all Medicaid enrollees 1-2 years old who are members of a health maintenance organization.

3. Notify laboratories that for the 3-month period (July-September, 2003), when any venous sample is drawn on a child between 9 and 35 months of age who is enrolled in Medicaid, a second tube, pediatric green or purple top, should be drawn and sent to the state laboratory for blood lead testing. Parents will be informed of this procedure and asked to consent. The laboratory will collect non-identifiable data including the date and the number of parents who refuse the extra blood sample.

4. Notify parents by mail that this procedure will be in place for 3 months and request their cooperation.

5. Special notification of health maintenance laboratories of 9-35 month old Medicaid enrolled children to allow the staff to easily identify enrollees.

We will evaluate the data we collect to:

A. Establish Risk

1. The age, race/ethnicity, address and iron status (if available) for the children tested will be collected.

2. Children with blood lead levels ≥ 10 µg/dL will be compared to children with lower levels.
3. Risk factors that predict blood lead elevations, if any are found, will be determined.
4. Prevalence estimates for children living in specific areas, members of specific cultural groups or with specific socio-economic or nutritional characteristics will be generated.

B. Provide Intensive Screening to Areas with Established Risk

1. If evaluation of the data generated indicates that there are areas in Great North with a prevalence of elevated blood lead levels ≥ 12 % (the cut-off point recommended in CDC's 1997 screening guidance *Screening Young Children for Lead Poisoning)*, we will design and implement, with CDC assistance, an intensive screening program in those areas. The screening results will then be used to modify screening requirements consistent with findings.
2. We will also work with pediatric health care providers in those areas to ensure that not only Medicaid enrolled children, but others living in the same area or who share similar risk characteristics, are screened appropriately.

C. Monitor Impact of Targeted Screening

1. On an ongoing basis, we will continue to track and monitor all blood lead test results reported to the state laboratory to identify unexpected clusters of lead exposure and monitor the effectiveness of the targeting strategy.

2. We will also continue to monitor the adult lead poisoning registry to identify new point sources or other potential lead sources that might contribute to childhood lead exposure.

APPENDIX D
Suggested Resources for States

PART 1: Introduction

This appendix lists resources that may be of utility to states in developing their LSE applications. It includes publication references, web sites, organizations, and other resources.

Once this guidance is published, this list of resources will be maintained as a living document on CDC's web site, and linked to the CMS web site. We expect that it will eventually contain text or links to actual state LSE applications and related documents, as well as links to relevant evaluation documents.

PART 2: Available Resources

Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials. CDC 1997. The 1997 guidance contains recommendations for targeting lead screening on an individual state basis and includes discussion and tools that may be of utility to states in developing strategies for targeting screening in the Medicaid population. Available at http://www.cdc.gov/nceh/lead/guide/guide97.htm

For updated surveillance reports from various states, contact the Lead Poisoning Prevention Branch at the Centers for Disease Control and Prevention at *MS E-25, Atlanta GA 30333; Phone 404-498-1420; or website http://www.cdc.gov/nceh/lead/lead.htm*

For selected lead poisoning-related census variables (1990 census) by county and ZIP code, go to http://www2.cdc.gov/nceh/lead/census90/house07/house07.htm

Brown MJ, Shenassa E, Tips N, *Small Area Analysis of Risk for Childhood Lead Poisoning*, Alliance To End Childhood Lead Poisoning, April 2001.

The Foundations of Better Lead Screening for Children in Medicaid: Data Systems and Collaboration. The Alliance To End Childhood Lead Poisoning, April 2000. This report describes examples of states efforts to improve data systems and work with other agencies to screen high risk children. It is available on the Alliance website www.aeclp.org, and by contacting the Alliance at aeclp@aeclp.org. The Alliance can be reached at 202-543-1147.

An updated summary of state statutes relevant to childhood lead poisoning is available on the National Conference of State Legislatures (NCSL) website at www.ncsl.org.

*Working with Medicaid: A Resource Guide for Childhood Lead Poisoning Prevention Programs, 2001. CDC, 2001 (*Contact the Lead Poisoning Prevention Branch at CDC for a copy: LPPB, MS E-25, Atlanta GA 30333)

Recommendations for Blood Lead Screening of Young Children Enrolled in Medicaid: Targeting a Group at High Risk. Advisory Committee on Childhood Lead Poisoning Prevention. MMWR December 8, 2000/Vol.49/No.RR-14

Sample Medicaid managed care contract specifications for lead poisoning are available free at http://www.gwu.edu/~chsrp/

Track, Monitor, and Respond: Three Keys to Better Lead Screening for Children in Medicaid, August 2001. This report summarizes and showcases examples of efforts by childhood lead poisoning programs and state Medicaid agencies to improve provider compliance with Medicaid lead screening policy through careful monitoring of blood lead screening data. Alliance To End Childhood Lead Poisoning (available from the Alliance at aeclp@aeclp.org, or on the Alliance website, www.aeclp.org. The Alliance can be reached at 202-543-1147.