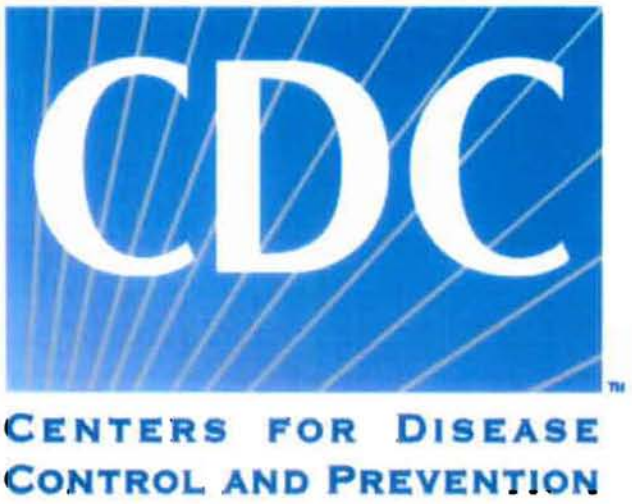
DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

National Center for Environmental Health/
Agency for Toxic Substances and Disease Registry
Lead Poisoning Prevention Branch



Advisory Committee on Childhood Lead Poisoning Prevention
March 18-19, 2008
Atlanta, Georgia

Record of the Proceedings

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List of Participants

ACCLPP Members
Dr. George Rhoads, Chair
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Dr. Sher Lynn Gardner
Ms. Valarie Johnson
Ms. Linda Kite
Dr. Michael Kosnett
Dr. Jessica Leighton
Dr. Megan Sandel
Dr. Wayne Snodgrass
Dr. Kevin Stephens, Sr.
Dr. Gail Wasserman
[via conference call]

Designated Federal Official
Dr. Mary Jean Brown,
Executive Secretary

***Ex-Officio* and Liaison Members**
Dr. Walter Alarcon (NIOSH)
Dr. Warren Friedman (HUD)
Ms. Melita Jordan (ASTHO)
Dr. Ezatollah Keyvan-Larijani (CSTE)
Ms. Jane Malone (AFHH)
Ms. Jacqueline Mosby (U.S. EPA)
Ms. Linda Murphy (Centers for Medicare and Medicaid Services)
[via conference call]
Dr. George Rodgers, Jr. (AAPCC)
Ms. Lori Saltzman (CPSC)
[via conference call]
Dr. Jan Towers (AANP)
[via conference call]
Mr. Jonathan Wilson (NCHH)

CDC Representatives
Dr. Thomas Sinks,
NCEH/ATSDR Deputy Director
[via conference call]
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Barry Brooks
Kimball Credle
Sara Donnelly (CDC Contractor)
Larry Franklin
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Joy Gulliksen
Samantha Harrykissan
Taran Jefferies
Claudine Johnson
Chinaro Kennedy
Shahed Lobal
Rose Pue
Paula Staley
Connie Thomas
Nikki Walker
LaToria Whitehead
Joyce Witt

Guest Presenters and Members of the Public
Cassandra Archie (Advocates for Educational Equity and Excellence)
Mark Carlton (Public)
Vivian Cross (Foundation for Educational Advancement, Inc. of CT)
Adrienne Ettinger (Harvard School of Public Health)
Anne Evens (University of Illinois, Chicago School of Public Health)
Elizabeth Foster (Mississippi Childhood Lead Poisoning Prevention Program)
Lori Genous (Mississippi Childhood Lead Poisoning Prevention Program)
Janice Scott (Southeastern Center for the Enhancement of Learning)
Joyce Swofford (Southeastern Center for the Enhancement of Learning)
Cassandra Brooks Thomas (Public)
Rosalind Volpe (International Lead Zinc Research Organization)
Martha Wood (Southeastern Center for the Enhancement of Learning)

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ADVISORY COMMITTEE ON
CHILDHOOD LEAD POISONING PREVENTION
March 18-19, 2008
Atlanta, Georgia

Draft Minutes of the Meeting

The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC), National Center for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR), Lead Poisoning Prevention Branch (LPPB) convened a meeting of the Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP). The proceedings were held on March 18-19, 2008 at the CDC Global Communications Center in Atlanta, Georgia.

Opening Session

Dr. George Rhoads, Chair of ACCLPP, called the meeting to order at 9:07 a.m. on March 18, 2008. He welcomed the attendees to the proceedings and opened the floor for introductions. The list of participants is appended to the minutes as Attachment 1.

Dr. Mary Jean Brown, Designated Federal Official of ACCLPP and Chief of LPPB, announced that voting members with a real or perceived conflict of interest related to any item on the March 18-19, 2008 ACCLPP agenda would be responsible for identifying these issues and recusing themselves from voting on these topics or participating in these discussions.

Update on LPPB Activities

Dr. Brown covered the following areas in her update. LPPB recently published two papers in response to ACCLPP's activities: "Interpreting and Managing Blood Lead Levels <10 µg/dL in

Children" and "Reducing Childhood Exposures to Lead." She pointed out that LPPB would provide copies of the published papers to the public upon request.

Dr. Brown conveyed that ACCLPP's Laboratory Workgroup has been regularly meeting via conference call to focus on the reliability and validity of blood lead testing instruments and also to determine whether the analytic error should be reduced from 4 to 2 µg/dL. The workgroup will continue to meet by conference call over the next two months to finalize and present its recommendations to ACCLPP for review and formal approval. The workgroup's report eventually will be submitted to the Centers for Medicare and Medicaid Services (CMS) or the Clinical Laboratory Improvement Amendments (CLIA).

The workgroup has nearly completed its charge of finalizing and presenting recommendations to ACCLPP, but Dr. Brown emphasized the need for these activities to continue. She pointed out that LPPB has greatly benefited from the workgroup's knowledge and expertise on issues related to LeadCare instruments that are CLIA-waived for saliva lead testing and other emerging laboratory issues. She hoped the workgroup would not disband after presenting the final recommendations to ACCLPP and would continue to provide guidance to CDC on an ad hoc basis.

Dr. Brown reminded the members that at a previous meeting, ACCLPP unanimously approved sending a letter to the International Code Council (ICC). ACCLPP's letter recommended the inclusion of lead paint hazards in model codes and standards because this approach is consistent with the *Healthy People 2010* goal of eliminating elevated blood lead levels (EBLLs) and would provide an opportunity to prevent lead exposure in U.S. children.

Dr. Brown made several announcements regarding ACCLPP's letter to ICC. CDC will update its web site with information about ICC's deliberations on April 3, 2008. The deadline for the public to submit comments on ICC's decision-making process is June 9, 2008. ICC advised ACCLPP to resend its letter by this deadline because the letter was sent before the public comment period of the hearing process was officially opened. ACCLPP's letter to ICC was distributed in the meeting packets for the members to review.

Dr. Brown reported that LPPB conducted its annual two-week program evaluation course with the Harvard School of Public Health. The 12 teams that LPPB sponsored included six state and local lead programs, four lead programs funded by the U.S. Environmental Protection Agency (EPA), and two environmental health programs. The 2007 program evaluation course was LPPB's first effort in sponsoring an international activity. Dr. Brown presented a logic model that one of the programs completed on a reproductive health program in the post-conflict area of Liberia.

Dr. Brown highlighted LPPB's key program services, epidemiology and surveillance activities. LPPB is now convening its quarterly partners' meetings via "e-meetings" and also is distributing quarterly newsletters to ensure that partners are kept informed.

The non-competitive review of LPPB's cooperative agreement is underway. The program announcement contains clear language for grantees to demonstrate capacity in screening 85%

of their designated high-risk populations by June 30, 2011. To achieve this goal, grantees must meet the following benchmarks by the end of the current grant cycle:

- obtain a regulatory or legislative mandate to perform inspections and require lead hazard reductions in units where children are lead poisoned;
- use dust wipe samples for clearance testing; and
- participate in EPA training programs and other activities.

LPPB's overarching goal in including the new language in the program announcement is to institutionalize a lead poisoning and lead poisoning prevention approach across all CDC-funded childhood lead poisoning prevention programs (CLPPPs). Grantees that fail to meet these benchmarks within a specified period of time will be penalized.

LPPB posted screening data from state and local programs for calendar year 2006 by state on its web site. Screening data by county will be added to the web site in the near future.

LPPB was unable to continue its efforts with the Lead Program Area Module. The CDC-designed database management system was unsuccessful despite extensive funding and other resources LPPB devoted to the project. However, LPPB recently completed negotiations to adopt a database management system developed by the California Department of Public Health that will improve data collection and submission between CDC and grantees. LPPB will make the system available to state and local CLPPPs after the system is tailored to be more generic.

Dr. Brown reported that LPPB's FY'09 appropriations will slightly decrease. LPPB's operating budget for FY'08 is $1 million less than FY'06. LPPB's extramural funds to support cooperative agreements were reduced as well.

Dr. Brown provided an update on LPPB's ongoing efforts to transition to healthy housing. LPPB has not been given Congressional authorization to spend childhood lead poisoning prevention dollars on healthy housing initiatives. However, LPPB leveraged funds for healthy housing activities from the CDC Coordinating Center for Environmental Health and Injury Prevention (CCEHIP) and the Office of Healthy Housing Lead Hazard Control at the U.S. Department of Housing and Urban Development (HUD).

LPPB used CCEHIP funds to support a one-year demonstration project for the city of Baltimore to make the transition from a CLPPP to a healthy homes program. During the project, Baltimore will determine the types of data that home visitors and inspectors should collect. The contract will provide the city of Baltimore with resources to gather information about strategies that were implemented to make the transition to healthy housing.

The demonstration project is expected to result in the development of a "cookbook" that could be distributed to other lead programs with an interest in making a transition to healthy housing. The cookbook will provide guidance on resources, advocates, training requirements and other tools that would be necessary. LPPB plans to present a draft outline of the cookbook during the Tri-Agency Conference in September 2008.

LPPB requested flexibility in the FY'09 President's budget to spend more dollars on healthy housing activities and also to support five underlying principles to make a transition to healthy housing. First, housing conditions play an important role in the health of the population. Second, the connection between housing and health is complex and requires the expertise of multiple scientific and technical disciplines to affect change. Third, the elimination of disparities in access to healthy, safe and affordable housing is essential to promoting environmental justice and building sustainable communities. Fourth, decision-making in the area of healthy housing should be guided by the best available science. Fifth, a recognized and committed workforce that is armed with a core set of competencies is critical.

Dr. Brown opened a competition to rename LPPB in support of its transition to healthy housing. The new name of "Healthy Housing/Lead Poisoning Prevention Branch" is being considered. However, concerns have been raised that the new name may be misinterpreted to mean LPPB is focusing on the "prevention" of both healthy housing and lead poisoning.

In further support of its transition, LPPB is offering cross-training in lead and healthy housing concepts. HUD is providing funds to CDC to incorporate a lead training course into the Healthy Housing Training Center Network with 16 academic institutions. The training is designed to reach sanitarians, community health nurses and other groups that would not otherwise receive lead training. Healthy homes concepts also have been included in lead training sponsored by the National Center for Healthy Housing (NCHH) Healthy Housing Solutions Program.

LPPB will collaborate with EPA on a branding concept for healthy housing. In July 2008, LPPB will convene a meeting with CDC-funded CLPPPs that have initiated the transition to healthy housing as well as four healthy homes programs funded by CDC's Environmental Health Services Branch. The meeting will provide a forum for the programs to explore strategies and discuss lessons learned in making a successful transition to healthy housing.

LPPB is making efforts to develop a science base for healthy housing. CDC, EPA, HUD and other federal agencies held a meeting in November 2007 to develop a new healthy housing surveillance system. The federal partners reviewed existing data systems, developed applications of current data collection systems and documented gaps.

The interagency meeting resulted in the formulation of a number of recommendations. For example, linkages should be made between the American Housing Survey and various surveys administered by CDC's National Center for Health Statistics. Relationships should be established with local fire departments to collect data on smoke alarm distribution programs.

The interagency meeting also resulted in several key outcomes. A memorandum of understanding (MOU) will be developed to facilitate data sharing across federal agencies. Healthy housing grantees or cooperative agreement partners will incorporate data collection strategies at local and state levels into the process as funding becomes available. Questions will be developed to add to existing surveys.

CDC and NCHH convened an expert panel in December 2007 to discuss housing interventions and supporting evidence. The expert panel was charged with providing guidance in four "buckets:"

- Interventions that currently have sufficient evidence to recommend immediate implementation, such as smoke alarms.
- Promising interventions that need more testing and evaluation in the field prior to recommending implementation.
- Interventions that need more formative research to determine their effectiveness and biologic plausibility.
- Interventions with no demonstrated record of effectiveness.

To fulfill its charge, the expert panel was divided into five small groups to review the literature in five major areas: (1) interior biological agents (toxins) interventions, (2) interior chemical agents (toxics) interventions, (3) external exposures, (4) structural deficiencies, and (5) the intersection between housing and community. To advance this initiative, CDC, NCHH and the expert panel will continue to weigh the evidence for and against the recommended interventions. Moreover, a white paper will be developed to highlight linkages between health and housing.

LPPB plans to present the draft white paper during the Tri-Agency Conference in September 2008 for review and comment by grassroots organizations and other participants. A panel of ~30 decision-makers, advocates and political staff also will be convened during the conference to discuss the draft white paper with participants. The primary outcome of this effort will be for the participants to suggest concrete suggestions that mortgage companies, insurance agencies, code enforcement agencies and other sectors can jointly implement to actually apply housing interventions to the field.

LPPB launched a study on chemical and allergen exposures in green-built versus conventionally-built properties. LPPB is collaborating with internal partners within CDC and external groups to strengthen environmental collection and sample analysis skills. LPPB hopes to enroll one elderly green-built property and one elderly conventionally-built low-income property in the study.

Elderly properties were selected in an effort to identify any long-term problems with green construction. The study is designed to test for allergens and chemicals; measure temperature and humidity; perform a visual inspection of the property, conduct dust sampling for fungi and allergens; and detect volatile organic chemicals, aldehydes and pesticides.

LPPB is conducting the study due to an upcoming natural experiment. The health benefits of green properties will be able to be measured as Section 8 multi-family buildings in the United States make a transition to green. The study also might provide an opportunity to identify specific green factors that actually contribute to health. The study will include a rigorous cost-benefit analysis.

Overall, Dr. Brown acknowledged the need to determine the type of surveillance for lead that will be necessary when the prevalence of EBLLs is <0.5 µg/dL. Most notably, pediatricians in

the United States will be extremely reluctant to routinely screen children at a low prevalence rate.

ACCLPP thanked Dr. Brown for presenting a comprehensive update on LPPB's activities. Several members advised LPPB to provide guidance at this time to inform the development of both lead and healthy housing indicators for *Healthy People 2020.*

Ms. Jane Malone is the ACCLPP liaison to the Alliance for Healthy Homes (AFHH). She provided additional details on the ICC process. ICC held hearings in February 2008 to listen to proposals that were submitted for the 2008-2009 cycle. Testimony given during the hearings specifically addressed two proposals on lead-based paint (LBP) hazards. Both proposals were rejected because ICC requested more clarity and specificity on a standard definition of "lead-safe work practices" (LSWPs). ICC also acknowledged that the existing code does not clearly define "lead-based paint."

Ms. Malone reported that ICC would hold final action hearings on the 2008-2009 proposals in September 2008. She encouraged ACCLPP members and their constituents to contact AFHH to assist in advancing this process. She pointed out that the most critical need at this point is for code officials, building department representatives and health department personnel throughout the country to become involved in this effort and present a unified voice to ICC.

On the one hand, Dr. Brown pointed out that ACCLPP did not have a quorum to take a formal vote on resending the letter to ICC. On the other hand, she noted that ACCLPP unanimously agreed to take this action during a previous meeting, but the letter was sent during the wrong time frame. Several ACCLPP members were in favor of sending a revised version of the letter to ICC or including new attachments with additional information.

Dr. Brown emphasized that ACCLPP would need to send the same letter to ICC with no changes or new attachments. However, she clarified that individual ACCLPP members are free to submit public comments to ICC as private citizens.

None of the voting members who were present objected to Dr. Brown's suggestion for ACCLPP to resend the same letter to ICC with no new attachments.

Overview of the Mississippi CLPPP

Ms. Lori Genous, Director of the Mississippi CLPPP, explained that the mission of the Mississippi CLPPP is to provide case management and follow-up to children with EBLLs, offer education and outreach, conduct environmental investigations, and offer guidance on lead testing to healthcare providers. The CLPPP is housed in the Mississippi State Department of Health (MSDH) Division of Genetics.

Ms. Genous highlighted a number of milestones in the history of the Mississippi CLPPP. Lead screening was initiated in the early 1990s as part of the Early Periodic Screening Diagnosis and

Treatment (EPSDT) Program. The first environmental lead investigator was hired in 1994 to conduct lead assessments. The first biannual meeting with partners and stakeholders was held in 1996 to discuss lead and environmental hazards.

A system was developed in 1997 to maintain blood lead data. A Lead Advisory Committee was established and held its first meeting in 1998. The System for Tracking Elevated Lead Levels and Remediation (STELLAR) was first utilized as a surveillance system in 2000. A program manager was hired and a health educator was contracted in 2002 to oversee program operations and data support.

The Childhood Lead Poisoning Prevention Guidance document was developed in 2003. CDC made an initial site visit in 2004 to evaluate program activities, assess data, and provide guidance to assist the CLPPP in improving capacity. Data were submitted to CDC for analysis for the first time in 2005.

CDC awarded cooperative agreement funds in 2006 for the elimination of lead poisoning with a comprehensive primary and secondary prevention approach. CDC made additional site visits in 2006 to offer technical assistance and program support. In 2007, a CLPPP case manager was hired, the lead poisoning elimination plan was completed, and a case management protocol was created. The development of screening and case management plans is underway.

Ms. Genous explained that federal legislation currently requires lead screening of all children enrolled in Medicaid at 12 and 24 months of age or through 72 months if the child has not previously been screened as part of the EPSDT Program. A risk assessment questionnaire is administered to children beginning at six months of age, but screening can be performed earlier if any of the questions are answered "yes."

Medicaid requirements for children to receive lead screening in Mississippi include a face-to-face interview with the head of household, a birth certificate, the parent's proof of birth in the United States, verification of income and proof of insurance. For all eligible children, the Medicaid specialist will ask the family to select a provider who can perform the following services: a comprehensive health and developmental history, physical examination, appropriate immunizations, BLLs and other laboratory tests, adolescent counseling, health education and other anticipatory guidance, and vision and hearing tests.

Ms. Genous reviewed the CLPPP's data collection process. The CLPPP receives blood lead test results from both the MSDH and private laboratories. Of 12 laboratories that report blood lead test results, eight submit data to the CLPPP electronically. The CLPPP also receives data from ~26 private medical clinics that report results monthly from tests analyzed by a handheld blood lead testing device.

Blood lead testing is not universal in Mississippi and the data only represent children in the state who are enrolled in Medicaid. The CLPPP uses STELLAR to maintain data and plan program activities. STELLAR data showed that 17% of children <72 months of age received a blood lead test in Mississippi in 2006. Of 40,794 children tested in 2006, 357 had BLLs $\geq$10 µg/dL. Of

357 children with EBLLs, 249 had BLLs 10-14 µg/dL and 108 had BLLs ≥15 µg/dL. Medicaid data in 2006 showed that 198,032 Medicaid-eligible children were ≤72 months of age

Ms. Genous summarized the CLPPP's case management and environmental assessment protocols. Mississippi initiates case management when a child has a confirmed venous BLL ≥10 µg/dL. The laboratory notifies the CLPPP about blood lead test results. The CLPPP program manager contacts the child's medical provider to give guidance on retesting and informing the family of the blood lead test results. The CLPPP program manager also contacts the case manager to initiate case management services. In addition to the case manager, the case management team also includes an environmental inspector, medical provider, parent and nutritionist if needed.

The CLPPP implements recommendations from CDC's publication on *Managing Elevated Blood Lead Levels Among Young Children*. Case managers follow CDC's guidance to provide the following services. Parents and other members of the public are counseled about lead poisoning and prevention. Case managers serve as a liaison between environmental assessors and primary healthcare providers to coordinate and implement services.

Assistance is given to assure the care of the child from initial case identification to final resolution. Collaborations are established with housing and environmental agencies to address lead prevention and elimination issues. Services are evaluated, advocacy is provided, and efforts are made to ensure individual assessment and diagnosis.

The CLPPP performed environmental assessments only for children with venous BLLs ≥30 µg/dL, and as a result, only 10 were done in 1994. Environmental assessments were performed on children with venous BLLs ≥25 µg/dL beginning in September 1994; those with venous BLLs ≥20 µg/dL beginning in February 1997; and those with venous BLLs 15-19 µg/dL beginning in June 2000. In 2005, the CLPPP's environmentalist initiated telephone counseling to families of children with a single venous BLL of 10-14 or 15-19 µg/dL. In 2007, the CLPPP's case manager began providing counseling to families of children with EBLLs.

The CLPPP now performs environmental assessments for children with venous BLLs >20 µg/dL or persistent BLLs 15-19 µg/dL. The assessments are conducted where the child spends at least six hours per week and include x-ray fluorescence readings as well as soil, dust wipe and water samples. Environmental assessments of children with BLLs ≥20 µg/dL increased from 65 children in 1995 to 113 children in 1998.

The number of dwellings where environmental assessments were conducted decreased from 116 in 2003 to 65 in 2007. The CLPPP defines "dwelling" as privately owned homes, Head Start centers, schools and daycare centers. A school bus and playgrounds at several public parks were also included as dwellings in the 2007 environmental assessments. The entire state of Mississippi has only one environmental assessor at this time.

Ms. Genous noted that in >90% of the assessments, hazardous amounts of lead-contaminated dust were found in the environment of children with EBLLs. Plastic mini-blinds or hazardous levels of lead in paint were found in the environment of >50% of children with EBLLs.

Ms. Elizabeth Foster is a Health Educator in the Mississippi CLPPP. She described the CLPPP's outreach and educational activities. The CLPPP will take a number of actions to reach specific grant objectives by June 30, 2008. An educational seminar or conference will be cosponsored. New partners will be identified and existing collaborators will be enhanced to meet the goals of the CLPPP and its partners. Information on at-risk children will be linked with asthma programs, Medicaid, the Women, Infant and Children's Program, and other data sources.

The CLPPP has made several accomplishments to date. The Mississippi Children's Justice Center is a CLPPP sub-grantee and will disseminate a wealth of information to pediatricians, including a risk assessment questionnaire for parents, articles on lead, CDC guidelines for lead poisoning, contact information of referral services for parents, and stories for children. The CLPPP and Jackson State University are collaborating on the "Hurricane Katrina Partnership" to provide faith-based organizations (FBOs) in the Gulf Coast with information on the health effects of lead.

The CLPPP is participating in the "Jackson Roadmap to Health Equity Project" to provide communities with information on environmental toxins in neighborhoods and homes. The CLPPP developed a statewide fact sheet on lead that is translated and published in a Spanish newsletter. The CLPPP partners with the "Communities in School Partnership" initiative to provide education on lead to students, teachers and parents. The CLPPP has given continuing education units on childhood lead poisoning and lead prevention to 225 childcare employees.

Ms. Foster highlighted key activities the CLPPP conducts in collaboration with its federal and state partners, including Medicaid, the Department of Environmental Quality, HUD and the Mississippi State University Extension Service:

- Provide lead poisoning prevention education and outreach on the hazards of LBP.
- Share data with Medicaid through a formal MOU.
- Maintain up-to-date lists of certified risk assessors and inspectors in the state of Mississippi.
- Inform the community as well as building and paint contractors about LBP hazards and regulations.
- Monitor housing programs and federal funding related to LBP.
- Submit quarterly reports to HUD with addresses in the state of Mississippi where LBP hazards have been found.
- Educate unlicensed in-home child care providers on childhood lead poisoning.
- Disseminate lead education materials.
- Convene video interactive conferences to provide LSWP training to contractors and rental property owners throughout the state.

Of Mississippi's 82 counties, 16 are considered to be high-risk based on a combination of the following factors: the proportion of pre-1950 housing units, the proportion of children in poverty, the number of children <6 years of age, the lead screening rate, the number of confirmed cases

with EBLLs ≥10 µg/dL, and the number of addresses where multiple children have had confirmed EBLLs within the past five years. The 16 high-risk counties accounted for ~68% of the cases in Mississippi in 2006.

Ms. Foster was pleased to report that the CLPPP's sub-grantees have conducted outstanding educational and outreach activities in the 16 high-risk counties. These initiatives have included educational booths at annual state training meetings; completion of the "Is Your Child At Risk?" survey; workshops to the Parent-Teacher Association, expectant mothers and childcare providers; community health fairs; lead poisoning sessions and an essay and poster contest for school children; door-to-door lead poisoning awareness and education; and outdoor festivals for families.

From July 2007 to February 2008, the CLPPP sponsored 22 health fairs and disseminated 1,635 brochures to 622 participants during these events. The CLPPP also made 18 presentations at conferences and disseminated 2,768 brochures to 786 participants. During 69 events, the CLPPP educated 3,540 adults, children and staff from February 2007 to February 2008.

Ms. Foster reviewed the CLPPP's major successes to date. The lead elimination plan was completed, approved and disseminated. The CLPPP case management protocol was implemented. A "Myths Versus Facts" document was developed. The reportable disease and conditions list was amended to require reporting of all BLLs to the CLPPP. Over 28,000 childhood lead poisoning prevention materials were distributed. However, the CLPPP recognizes the need to address its two key challenges of receiving sub-optimal data and obtaining Medicaid reimbursement for case management and environmental assessments.

Ms. Foster concluded that the CLPPP will participate in a number of conferences and workshops throughout 2008. These events will focus on case management and screening plans, lead poisoning and asthma, and LSWPs. In the future, the CLPPP will implement more housing-based strategies and enhance partnerships to develop investigation and enforcement policies. The CLPPP's future activities also include tracking environmental histories on housing; continuing to provide training to housing personnel; collaborating with sub-grantees to assist with housing-based prevention; and utilizing geographic information system mapping.

Update on LPPB's Faith-Based/Community Organization Initiative (FBCOI)

Ms. Rose Pue is a Public Health Advisor in LPPB. She explained that Presidential Executive Order 13199 was mandated in January 2001 and charged CDC with strengthening and expanding the role of FBOs and community-based organizations in addressing the nation's social problems. The overarching goal of this effort is to empower America's grassroots organizations and increase the confluence between health and faith.

The FBCOI is important to childhood lead poisoning prevention due to its capacity to engage partners in the science and practice of interventions and facilitate collaborations among places

of worship, communities and the public health system. The Pew Forum on Religion and Public Life recently administered a survey that showed 189 million of 225 million adults in the United States reported a religious affiliation. LPPB plans to incorporate the survey findings into the FBCOI to determine the number of children <6 years of age in this target population who reside in high-risk areas with lead hazards. LPPB also will include the survey data in a comprehensive strategy to eliminate childhood lead poisoning by 2010.

Ms. Pue announced that LPPB is partnering with the Mississippi CLPPP to advance the FBCOI and other EJ initiatives. Most notably, technical assistance and resources will be provided to religious and grassroots organizations to involve local community residents in lead poisoning prevention efforts. Ongoing activities with a demonstrated track record of success will be identified.

Collaborations will be established to conduct proposed initiatives. Contributions will be made to evidence-based health outcome information. Appropriate methods will be identified to evaluate the effectiveness of the FBCOI in childhood lead poisoning in Mississippi and other areas of the country. However, LPPB will not institutionalize the FBCOI until the evaluation is complete.

Ms. Pue concluded that LPPB addressed concerns related to the separation of church and state by designing the FBCOI with three key components. Government actions will have a secular purpose. FBCOI activities will not inhibit or advance any religion. The church and state will remain separate in all aspects of FBCOI.

Ms. LaToria Whitehead, of LPPB, provided additional details on LPPB's pilot of the FBCOI in Mississippi. The environment encompasses all places where persons live, work, play, worship and attend school. Strong linkages have been documented among social inequality, public health and the environment. Environmental justice (EJ) offers strategies to consider vulnerable populations, social injustices and health by seeking justice in situations of injustice.

EPA defines "EJ" as the fair treatment of all persons in environmental equity by enforcing laws, regulations and policies regardless of race, ethnicity or socioeconomic status. EJ is a human right rather than an earned right. Presidential Executive Order 12898 also defined "EJ" as federal actions that should be taken to address EJ in minority and low-income populations. As a result, all federal agencies are charged with integrating EJ into environmental health.

Minority and low-income populations are more prevalent in childhood lead poisoning than in any other public health sector due to the political and economic disenfranchisement of these groups. Compared to other groups, minority and low-income populations have more poverty, a stronger focus on race and socioeconomic factors, and a disproportionate disparity in health.

In 1988, the Mississippi Delta Development Commission issued two reports to highlight poor housing, economics, education and health disparities throughout the state. This initiative resulted in the development of an EJ plan to address the needs of underserved populations in Mississippi. In an effort to address these gaps in Mississippi, LPPB is including EJ into a comprehensive strategy to eliminate childhood lead poisoning by 2010 and is also piloting the FBCOI in the state.

Ms. Whitehead highlighted key outcomes of the FBCOI pilot in Mississippi. A sub-grantee of the Mississippi CLPPP will take policy and legislative actions to ensure housing remediation in the state. A health impact assessment will be conducted in two neighborhoods in Jackson, Mississippi. An EPA grant, survey data, information from community histories, and results of the health impact assessment will be used to emphasize the critical need for remediation of housing and changes in other policies to policymakers in Mississippi.

The FBCOI pilot in Mississippi will be designed to incorporate action, empowerment, capacity and a community voice. LPPB will use a number of factors to measure the success of the pilot: changes in existing policies, organization of a community-driven process, advocacy to policymakers, establishment of a strong infrastructure, and an increase in knowledgeable and empowered communities.

ACCLPP applauded the Mississippi CLPPP on making tremendous accomplishments in a short period of time, particularly the submission of quarterly reports to HUD on addresses where LBP hazards were found. However, several members were concerned about the ability of only one environmental assessor to serve the entire state of Mississippi and the absence of laws to enforce actions in housing with poor environmental assessment results.

Overview of LPPB's Study on State Lead Risk Reduction Laws

Dr. Chinaro Kennedy is the Team Leader of LPPB's Epidemiology and Surveillance Section. She described a study that LPPB is conducting with support by HUD to determine the effectiveness of primary prevention using state lead risk reduction laws. LPPB acknowledged the paucity of data that has been produced to date to examine the effectiveness of state-specific lead risk reduction laws in preventing or reducing lead poisoning among children living in high-risk areas.

The goal and objectives of the study are to determine whether laws aimed at eliminating exposure to LBP hazards resulted in a decline in the number of children who were lead poisoned. Conclusions also will be reached on whether states with specific LBP hazard risk reduction laws made a significant impact on the prevalence of childhood lead poisoning in high-risk areas or if those states had a lower incidence of childhood lead poisoning compared to states without specific laws.

Dr. Kennedy reviewed the background and rationale of the study. Lead poisoning continues to be an issue in many communities despite the success of preventing lead poisoning in the United States through the elimination of lead in paint and fuel. These communities are typically low-income and dominated by homes built before the elimination of lead in paint products. CDC funds 22 state health departments that have implemented specific laws to reduce or eliminate childhood lead poisoning. To date, only one study has examined the effectiveness of a state-specific LBP hazard reduction law in preventing or reducing childhood lead poisoning.

Dr. Kennedy summarized the design, methodology and variables of the study. LPPB will conduct a natural quasi-experiment to examine the effectiveness of lead risk reduction laws in Massachusetts and Maryland. Both of the intervention states have specific laws that are aimed at preventing or decreasing lead poisoning among children living in pre-1978 rental housing. Massachusetts has enacted the strictest lead-safe laws in the country, while Maryland has passed moderate lead-safe laws.

Mississippi will serve as the control in the study because the state has not enacted a law requiring lead hazard abatement, even for housing where lead-poisoned children have been identified. Moreover, the lead poisoning rate in Mississippi is comparable to Massachusetts and Maryland.

The study population will be limited to children <6 years of age with a valid blood lead test. The dependent variable will be BLLs $\geq$10 µg/dL and the independent variable will be LBP hazard reduction laws. Covariates will include the child's age, gender, address, insurance type and blood lead sample type; income and educational level of the care giver; the year the residence was built; case management and environmental assessment histories; and repairs the landlord or homeowner made based on a citation. The analysis plan will include both univariate and multivariate analyses to calculate means, proportions and frequencies; describe demographic, clinical, litigation and environmental data; and assess variances and covariances.

LPPB developed three key research questions and formulated a number of hypotheses to guide the study. First, are state-specific lead risk reduction laws effective in preventing or reducing childhood lead poisoning? LPPB's hypothesis is that states with specific laws to reduce lead risk in rental properties would have fewer new childhood lead poisoning cases over time compared to states without specific lead risk reduction laws. Moreover, the prevalence of lead poisoning would be lower in states with specific lead risk reduction laws compared to those without lead risk reduction laws, but with comparable housing. Units that are in compliance with state-specific requirements would be less likely to have successive children with EBLLs.

Second, will standardized rates of decline in EBLLs be greater in the intervention states compared to the general United States? LPPB's hypothesis is that over a ten-year period, standardized rates of decline in EBLLs would be greater in the intervention states compared to the general U.S. population.

Third, do standardized rates of decline in EBLLs differ by counties within the intervention and control states? LPPB's hypothesis is that rates of decline in EBLLs would most likely differ by county within the intervention and control states.

Dr. Kennedy highlighted the strengths and limitations of the study. On the one hand, the natural experimental design of the study will provide a unique opportunity to examine clinical and programmatic effects of laws aimed at decreasing exposure to an environmental toxin that results in adverse health outcomes among vulnerable populations. The study also will contribute to the existing body of literature on the reduction of exposure to lead and the subsequent development of childhood lead poisoning in the United States.

On the other hand, the study will be challenged in identifying actual "treatment" effects due to the non-random distribution of both measured and unmeasured factors. Other unmeasured covariates might mask or exaggerate the effect between state-specific lead risk reduction laws and childhood lead poisoning. The distribution of these risk factors is likely to be unequal without randomization. LPPB will make every effort to collect solid data and clearly distinguish between the enforcement of laws at state and local levels.

Several ACCLPP members made suggestions for LPPB to consider in refining the study design and methodology.

- LPPB should include another research question in the study to determine whether state-specific lead risk reduction laws or specific activities by state lead programs had the most significant impact in preventing or reducing childhood lead poisoning.
- LPPB should design the study to identify tools, personnel and other resources that are available to enforce state-specific lead reduction laws.
- LPPB should use the study to identify actions that are taken when groups or individuals do not comply with state-specific lead reduction laws.
- LPPB should design the study to determine the length of time required to bring groups or individuals in compliance with state-specific lead reduction laws and identify specific barriers to adherence.
- LPPB should make every effort to ensure the validity of blood lead tests of the study population because the results will vary due to different infrastructures of the intervention and control states.

Update by the Lead and Pregnancy Workgroup (LPWG)

Dr. Jessica Leighton, an ACCLPP member and chair of LPWG, provided a status report on LPWG's activities following the September 2007 meeting. She noted that the draft *Guidelines for the Identification and Management of Pregnant Women with Elevated Lead Levels* were distributed to ACCLPP for review, discussion and input.

LPWG made the following revisions to the chapters of the lead and pregnancy report after the September 2007 ACCLPP meeting:

- Chapter 1: Introduction
- Chapter 2: Adverse health effects of exposure to lead
- Chapter 3: Biokinetics and biomarkers of lead in pregnancy and lactation
- Chapter 4: Sources and pathways of lead exposure in pregnant women
- Chapter 5: Blood lead screening and follow-up testing in pregnancy and infancy
- Chapter 6: Environmental and medical management
- Chapter 7: Nutritional support
- Chapter 8: Indications, contraindications and adverse effects of chelation in the pregnant woman, fetus and newborn infant

- Chapter 9: Breastfeeding
- Chapter 10: Research, policy and health education needs
- Chapter 11: Resources and referral information

Dr. Leighton highlighted key points and recommendations in the lead and pregnancy report. The following points are emphasized in Chapter 1: "Introduction." Lead exposure remains a public health problem for women of childbearing age, the developing fetus and nursing infant. Little emphasis has been placed on developing guidelines for prenatal and public healthcare providers on the identification, treatment and follow-up of pregnant and lactating women with lead exposure. Identifying pregnant women with BLLs ≥5 µg/dL and ensuring a lead-safe environment for newborns will prevent adverse health outcomes in these children.

The following points are emphasized in Chapter 2: "Adverse health effects of exposure to lead." Recent evidence suggests that chronic low-level lead exposure has adverse health effects in both adults and children. No threshold level for these effects has been identified. Lead is a potent reproductive toxicant, but relatively little is known about the biological mechanisms of effect. Lead may adversely impact sexual maturation in the developing female and may reduce fertility, but evidence is limited.

Lead exposure has been associated with an increased risk of gestational hypertension. However, the magnitude of the effect, the exposure level at which risk begins to increase, and the greatest association between risk and acute or cumulative exposure remain uncertain. Some evidence supports an association between moderate levels of maternal lead exposure and spontaneous abortion. Research has suggested that maternal lead exposure may increase the risk of pre-term delivery, but these studies are inconsistent.

Data are inadequate to establish the presence or absence of an association between maternal lead exposure and major congenital anomalies in the fetus. Recent epidemiologic cohort studies suggest that even with maternal BLLs <10 µg/dL, prenatal exposure to lead is inversely related to fetal growth and neurobehavioral development independent of effects of postnatal exposure. Exact mechanisms remain uncertain.

The following points are emphasized in Chapter 3: "Biokinetics and biomarkers of lead in pregnancy and lactation." No accurate measure of total body lead has been established to date. Biomarkers are used to estimate lead body burden and assess lead dose to the fetus during pregnancy and to the infant during lactation. BLLs are the most well validated and widely available measure of lead exposure. However, a single blood lead measure at a given point in time will not provide an accurate indication of cumulative exposure or risk to the fetus or infant. Repeat testing might be necessary.

Bone is a potential source of endogenous lead exposure. Recent studies demonstrate that some maternal bone lead stores are mobilized during pregnancy and lactation. However, bone lead measurement is a research tool that is not available for routine clinical application at this time. Lead readily crosses the placenta by passive diffusion and has been measured in the fetal brain as early as the end of the first trimester. As a result, primary prevention of exposure is particularly important to reduce risk. Given the difficulty of accurately and precisely

measuring trace amounts of lead in human breast milk, routine measurement of breast milk lead is not warranted in clinical practice.

The following recommendations are highlighted to prevent or reduce lead exposure in pregnant women in Chapter 4: "Sources and pathways of lead exposure in pregnant women." Clay, soil, pottery, paint chips and other non-food items should never be eaten. Jobs or hobbies that might involve contact with lead should be avoided, such as construction work, home renovation or repair, furniture refinishing, and work involving firearms, arts and crafts, ceramics, stained glass, metals or color pigments.

Imported clay pots and dishes should not be used to cook, serve or store food. Chipped or cracked pottery should not be used. Repair work and remodeling on homes built before 1978 should be avoided. Health remedies and kohl, kajal, surma or other eye cosmetics from other countries should be avoided. Caution should be taken when consuming candies, spices and snack foods made in other countries. A balanced diet should be eaten with an adequate intake of iron and calcium.

The following recommendations are highlighted for blood lead screening in Chapter 5: "Blood lead screening and follow-up testing in pregnancy and infancy." Routine blood lead testing of pregnant women is recommended in clinical settings that serve populations at high-risk for lead exposure. State or local public health departments should identify high-risk populations of pregnant women to guide clinicians in determining the need for blood lead testing. Universal blood lead testing of all pregnant women in the United States is not recommended.

In clinical settings where routine blood lead testing of pregnant women is not indicated, healthcare providers should evaluate community-appropriate risk factors for exposure as part of a comprehensive occupational, environmental and lifestyle health risk assessment. Blood lead testing should be performed if a specific risk factor is identified.

When indicated, blood lead testing should take place at the earliest contact with the pregnant patient and also should be performed using venous blood lead tests. Follow-up blood lead testing is indicated for pregnant women with BLLs $\geq$5 µg/dL and their infants. Pregnant women with confirmed BLLs $\geq$45 µg/dL should be considered as "high-risk" and managed in consultation with experts in lead poisoning and high-risk pregnancies.

Tables 5-1 through 5-4 contain guidance in the following areas for clinicians and public health providers: (1) recommended actions by BLL in pregnancy; (2) the frequency of maternal blood lead follow-up testing during pregnancy; (3) follow-up of initial blood lead testing of the neonate <1 month of age; and (4) a schedule for subsequent follow-up blood lead testing in infants <6 months of age.

The following recommendations are highlighted for avoidance of lead exposure in Chapter 6: "Environmental and medical management." Point sources of exposure should be identified and eliminated or controlled. Occupational exposures and contact with potential take-home exposures to lead should be minimized. Recreational activities that might involve lead exposure should be avoided.

If renovation, remodeling or repairs are undertaken in homes built before 1978, potential exposure to lead paint and dust should be avoided by adhering to EPA's LSWPs, including isolation from the work area. Products that might contain lead should be avoided, including ceramics, herbal medicines, cosmetics, foods, spices, candies and other culturally-specific products produced outside of the United States. Drinking of lead-contaminated tap water should be avoided by using bottled or filtered water or flushing the tap. Pica behavior is common among women identified with high BLLs in pregnancy and should be assessed and discouraged.

The following medical management recommendations are highlighted in Chapter 6. For women with prenatal BLLs ≥15 µg/dL, management should include an environmental risk assessment by corresponding local or state health departments with subsequent source reduction and case management activities. Pregnant women with confirmed BLLs ≥45 µg/dL should be considered as "high-risk" and managed in consultation with experts in lead poisoning and high-risk pregnancies. Pregnant women with confirmed BLLs <45 µg/dL should be retested according to the schedules in Chapter 5 and Chapter 9 if breastfeeding.

Chapter 7 is a new chapter on "nutritional support" and is currently being developed.

The following recommendations are highlighted for chelation therapy in Chapter 8: "Indications, contraindications and adverse effects of chelation in the pregnant woman, fetus and newborn infant." Chelation treatment should be considered for pregnant women with BLLs >45 µg/dL and if organogenesis is complete (*i.e.*, after the first trimester). The decision to chelate should be performed in consultation with experts in lead poisoning and high-risk pregnancies.

Pregnant women with life-threatening lead encephalopathy should be chelated regardless of the trimester. Before considering chelation therapy in the pregnant woman or infant, BLLs should be repeated and confirmed using an additional venous blood lead sample collected within 24 hours. Chelation treatment must occur in a lead-free environment.

Pregnant women with confirmed BLLs ≥45 µg/dL should be considered as "high-risk" and managed in consultation with experts in lead poisoning and high-risk pregnancies. Infants 0-6 months of age with confirmed BLLs ≥45 µg/dL should be considered as candidates for chelation in consultation with a pediatric expert in lead chelation therapy. Insufficient data exist regarding the advisability of chelation for pregnant women with BLLs <45 µg/dL.

The following recommendations are highlighted for breastfeeding in Chapter 9. The purpose of these recommendations is to protect the nursing infant from exposure to unacceptable amounts of lead from breast milk. Therefore, the emphasis is on the infant's BLL. Care of the mother should conform to all current guidelines and be cognizant of recommendations for the management of lead-exposed adults.

If the maternal BLL closest to delivery or the infant venous BLL is ≥5 µg/dL, the infant should be monitored according to the schedule in Chapter 5. If BLLs ≥5 µg/dL persist in the nursing infant, extra attention should be paid to the identification of ongoing sources of lead. The concern

regarding infant BLLs ≥5 µg/dL must be balanced against recognized benefits of breastfeeding. The decision to discontinue breastfeeding is not desirable at infant BLLs <44 µg/dL unless a thorough investigation of the child's environment has revealed no quantitatively important sources of lead other than the mother's milk. Infant BLLs ≥45 µg/dL are cause for immediate concern.

Lactating women who become pregnant during lactation should be followed in accordance with the schedule for pregnancy. Infant formula that requires reconstitution should be prepared with bottled or filtered tap water. At a minimum, cold tap water should be used only after the line is sufficiently flushed for at least three minutes prior to use. State and local authorities should consider recommendations on lead levels in local tap water in regard to the use of such water in preparing infant formula.

Data do not exist to accurately weigh the risks of lead exposure from breast milk against the benefits of breastfeeding at maternal BLLs 20-40 µg/dL,. At these levels, the woman may continue to breastfeed if sequential BLLs of the mother and infant are performed to monitor trends in BLLs. Women with confirmed BLLs ≥40 µg/dL should not breastfeed.

Tables 9-1 through 9-4 contain guidance in the following areas: (1) the frequency of maternal blood lead follow-up testing during lactation to assess the risk of infant lead exposure from maternal breast milk; (2) recommended values estimated for breast milk by age in months; (3) the estimated daily intake of lead from breast milk at different maternal blood lead concentrations; and (4) estimated infant blood lead concentrations associated with different maternal blood lead concentrations.

The following research needs are highlighted in Chapter 10:

- Fundamental research needs
  - *Chelating agents*
  - Long-term prospective studies
  - Follow-up studies of pregnancy outcomes and infant development
  - BLL prediction
  - Therapeutic agents for BLLs <45 µg/dL
  - Thresholds for adverse affects
  - Lead absorption
  - Synergistic effects from multiple metal exposures
  - Gene-environment interactions

- Intervention studies
  - Nutrient supplements
  - Nutrient supplementation and biokinetics
  - Traditional medicines
  - Pica risk
  - Behavior modification for pica

- Treatment strategies
  - Education and developmental support
  - Health education
  - Cost and benefits of environmental interventions

- Screening efficacy
  - Costs of testing and follow-up care
  - Validation of risk assessment questionnaires
  - Alternative screening
  - Timing of blood lead testing during pregnancy
  - Cost and benefits of adolescent screening
  - Cost and benefits of multiple metal testing
  - Cost and benefits of filter paper testing

- Source identification and reduction

- Policy
  - Reimbursement for testing and follow-up
  - Regulation of contaminated cultural products, traditional medicines and dietary supplements
  - Warning labels
  - Inter-country reporting
  - Control of LBP hazards

- Health education
  - Incorporation of environmental health requirements into the basic health practitioner's curriculum
  - Resources to assist health practitioners in collecting information on sources of lead exposure
  - Solid examples of health education materials to collect, validate and disseminate

Dr. Leighton emphasized that LPWG's next steps would be to continue to refine the lead and pregnancy document, particularly to develop the new "nutritional support" chapter; extensively revise the "research needs" chapter; and ensure consistency of the text across all chapters.

Dr. Leighton reminded ACCLPP that Dr. Adrienne Ettinger, of the Harvard School of Public Health, is an LPWG member and editor of the lead and pregnancy report. She asked ACCLPP to submit additional feedback in writing to Dr. Ettinger with the page and line number identified for each comment. Drs. Ettinger and Warren Friedman, ACCLPP's *ex-officio* member for HUD, agreed to engage in an offline discussion regarding the language on a "lead-free" versus a "lead-safe" environment in Chapter 8.

Dr. Brown described CDC's next steps in finalizing, publishing and disseminating the lead and pregnancy report. After the draft report is finalized by LPWG and formally approved by ACCLPP, the document would be submitted to the CDC clearance process and the Office of

Management and Budget (OMB) external peer review process. The document would be revised based on these two processes, posted on the CDC web site for public comment, and re-revised based on the public comment period. The final report would be published in the *Morbidity and Mortality Weekly Report* or as a stand-alone document in a peer-reviewed journal.

Dr. Brown noted that in addition to drafting the lead and pregnancy report, LPWG is also charged with developing a rollout plan to disseminate the document. For example, an executive summary of the report or a succinct action guide could be developed and given to state and local health departments for further distribution to advocates, elected officials and other constituents.

ACCLPP applauded LPWG on the tremendous progress that was made after the September 2007 meeting to draft the lead and pregnancy report. ACCLPP particularly acknowledged Dr. Ettinger's diligent efforts, commitment and contributions to this initiative.

Several ACCLPP members made suggestions for LPWG to consider in its ongoing efforts to revise the report.

- Chapter 2: A meta-analysis should be performed to formally review existing studies on prenatal blood lead and cognitive effects. An additional table should be included to clearly summarize these findings.
- Chapter 4: A new recommendation should be added for pregnant women to avoid exposure when renovating or remodeling older homes.
- Chapter 4: The EPA Lead and Renovation Rule should be added as a new reference. Congress has urged EPA to issue the rule no later than March 31, 2008.
- Chapter 4: The recommendation to avoid eye cosmetics should be expanded to include other cosmetics.
- Chapter 4: The recommendation to avoid jobs that may involve contact with lead should be revised because some pregnant women would be unable to follow this guidance due to economic reasons.
- Chapter 4: The recommendation to avoid hobbies that may involve contact with lead should be revised to clarify "construction work, renovation or repair of homes built before 1978."
- Chapter 5: The reference to "see Table 5-1" should be deleted from the box of key recommendations.
- Chapter 5: New language should be added to clarify that universal blood lead screening is not recommended, but universal screening with questions for high-risk behaviors is recommended.
- Chapter 5: New language should be added to provide clinicians and public health providers with more information on risk factors for high-risk populations, such as living near a smelter or having a large proportion of recent immigrants in the community.
- Chapter 5: The language stating that "universal blood lead testing of all pregnant women in the United States is not recommended" should be placed as the first rather than the third bullet.

- Chapter 5: The recommendation should be changed to evaluate "community-specific" rather than "community-appropriate" risk factors.
- Chapter 6: The section on "safe home repair, remodeling and renovation" should be revised after EPA releases the Lead and Renovation Rule.
- Chapter 9: The recommendation should be reviewed to clarify whether the infant venous BLL or cord BLL should be monitored.
- Chapter 9: New language should be added to emphasize that ACCLPP expressed special concerns regarding BLLs 5-9 µg/dL in children <6 months of age.
- Chapter 9: New language should be added to explain that women with EBLLs who wish to breastfeed should consider both breastfeeding and supplementing with formula to diminish the net intake of lead to the infant.
- Chapter 10: An analysis should be performed to identify the cost and feasibility of filling the research needs.
- Chapter 10: The research need of "determining the blood lead threshold for adverse effects in vulnerable populations" should be deleted because the language suggests that a safe level for lead exists.
- Chapter 10: The entire chapter on research needs should be extensively edited because many of the recommendations extend beyond the focus of the document on lead and pregnancy.
- Chapter 10: The chapter should be structured with the same format as the other chapters; focus on the same population of pregnant women and young infants; and divided into specific sections, such as research needs on screening, the relative risk of certain BLLs and treatment.
- Chapter 10: The policy research needs should be stratified by recommendations to federal, state and local agencies due to differences in regulations among state and local health departments.
- Chapter 10: New language should be added to provide guidance on applying the policy recommendations in countries other than the United States.
- Chapter 10: The health education research needs should be expanded to highlight additional resources:
  - Training, materials and other resources to consumers, medical schools and employers.
  - Partnerships with professional societies to introduce lead and pregnancy and broader environmental health issues to healthcare providers during national conferences.
  - Continuing medical education (CME) to providers. For example, ATSDR's online curriculum offers CME and was recently updated to include both childhood and adult lead poisoning.

Overview of the Individuals with Disabilities Education Act (IDEA)

Ms. Valarie Johnson is an ACCLPP member. She described advocacy efforts that are being undertaken to use developmental delay to provide educational support and other services to

children with EBLLs. The "Kinship Project: Learning and Living With Lead" is a collaborative effort that is jointly conducted by Urban Parent to Parent and Advocates for Educational Equity and Excellence (A4EEE). The Kinship Project is guided by the following educational initiatives:

- Infants and toddlers enrolled in Part C of IDEA.
- Preschool to school-aged children who are making a transition from Part C to Part B of IDEA.
- Students in grades K-12 who are enrolled in IDEA Part B.
- Resources and support provided by the "No Child Left Behind" program.
- Disproportionate factors in urban special education programs.
- Policy and family educational advocacy efforts.

Ms. Johnson explained that a strong focus has been placed on childhood lead poisoning prevention of children 1-2 years of age due to numerous factors. Normal hand-to-mouth activity is most common in this age group. Crawling and other behaviors result in infants and toddlers coming into contact with lead dust in the home. The bodies of infants and toddlers absorb more lead than older children or adults. The impact of lead is greater because the brain and other body organs of infants and toddlers rapidly develop.

Ms. Johnson emphasized the critical need for parents, advocates, school systems and other stakeholders to use developmental delay as a mechanism to access services for children early in the process. To support the effort of linking lead poisoning to educational outcomes, she asked ACCLPP to provide input on two key questions. First, what strategies can be implemented to ensure that infants and toddlers with lead poisoning have access to provisions under Part C of IDEA? Second, what approaches can be taken to continue the dialogue on the educational needs of children who live with lead?

Ms. Cassandra Archie, of A4EEE, provided additional information on IDEA. The Kinship Project was developed due to the importance of accessing and interpreting information to effectively use IDEA as a tool to provide services for students with developmental disabilities. IDEA is a federal grant program that assists states in operating a comprehensive statewide program of early intervention services for infants and toddlers 0-2 years of age and their families.

IDEA was established in 1975 with four components. Part A provides administrative resources to states. Part B gives provisions to children in grades K-12. Part C provides services to infants and toddlers through two years of age. Part D provides "research-to-practice" funding to Parent Information Centers and other initiatives.

Ms. Archie reviewed a number of key points in IDEA Part C. Congress emphasized an urgent and substantial need to enhance the development of infants and toddlers with disabilities, minimize their potential for developmental delay, and recognize significant brain development that occurs during the first three years of a child's life. The 27th Annual Report of IDEA Part C found that ~2.2% of children born receive special education services. States are not required to report the proportion of infants in this population who receive services due to EBLLs. In 2002-

2003, 66% of infants and toddlers enrolled in IDEA Part C were determined to be eligible for Part B services.

IDEA Part C provides services to infants and toddlers through two years of age who are experiencing developmental delay. Federal funds are allocated to all 50 states to implement this provision of the law, but states have different criteria and eligibility requirements to determine "developmental delay." The law also gives states discretion to focus on infants and toddlers who are at risk. However, only eight states use discretionary Part C dollars to provide services to at-risk infants and toddlers.

Ms. Archie reviewed a number of key points in IDEA Part B. This provision of the law provides services to children three years of age with developmental delays. Each state that receives Part B dollars maintains a 619 coordinator to oversee regulatory requirements of the program and coordination of funds. Although the law specifically defines developmental delays for children 3-9 years of age, states are given discretion to create a subset of this age group. As a result, most states limit developmental delays to children 3-5 years of age under IDEA Part B.

IDEA Part B is structured with 13 federal classifications for students that each state is required to report to Congress. Lead poisoning is included in the "other health impaired" (OHI) classification, but this condition is not officially defined in the law. However, lead poisoning is listed as one of the examples in the federal regulations for the OHI classification.

The OHI classification is defined in federal regulations as having limited strength, vitality or alertness, including heightened alertness with respect to the educational environmental, that is due to chronic or acute health problems, such as asthma, attention deficit disorder, attention deficit hyperactive disorder (ADHD), diabetes, epilepsy, a heart condition, hemophilia, lead poisoning or leukemia.

The federal regulations further state that these conditions must adversely affect the child's educational or functional performance. The largest proportion of children with EBLLs most likely would fall under the "learning disabled" and "multiple disabilities" classifications of IDEA Part B. Because states have discretion in developing and interpreting eligibility criteria for lead poisoning and other conditions under Part B, many children with developmental disabilities who are eligible for IDEA are not receiving services.

Ms. Archie urged ACCLPP to use its scientific expertise to raise awareness within IDEA about the impact of EBLLs on learning. She confirmed that advocacy efforts could play a significant role in improving IDEA for children because grassroots organizations convinced Congress to include autism as an IDEA classification. She announced that the reauthorization of regulations under IDEA Part C is underway. The public comment period closed in July 2007, but the proposed regulations have not been finalized to date. However, states will no longer be able to use IQ discrepancies alone or IQ as a measure for IDEA eligibility beginning in 2010.

ACCLPP thanked Ms. Johnson and Ms. Archie for giving an informative and helpful presentation. Dr. Brown noted that time was set aside on the following day for ACCLPP to discuss potential action items and future activities related to educational intervention strategies.

Public Comment Session

Dr. Friedman announced that 34 C.F.R. 300.7(c)(9)(i) is the Department of Education regulation that governs the inclusion of lead poisoning in IDEA Part B.

Dr. Vivian Cross is the Executive Director of the Foundation for Educational Advancement, Inc. of Connecticut (FEACT). She announced that the state of Connecticut extensively discussed the classification of OHI due to lead poisoning for two years. The *Parent Handbook for Special Education* mentioned OHI due to lead poisoning and listed a number of categories, but lead poisoning and sickle cell anemia were excluded. However, the entire handbook was later revised to explicitly include OHI due to lead poisoning.

Dr. Cross reiterated Ms. Archie's concern that children with developmental disabilities who are eligible for IDEA are not receiving services. She hoped ACCLPP would establish a new workgroup to address this issue.

With no further discussion or business brought before ACCLPP, Dr. Rhoads recessed the meeting at 4:35 p.m. on March 18, 2008.

Overview of Local Research on Lead Poisoning and School Performance

Dr. Rhoads reconvened the ACCLPP meeting at 9:10 a.m. on March 19, 2008 and yielded the floor to the first presenter.

Ms. Anne Evens is a Ph.D. candidate at the University of Illinois, Chicago School of Public Health. She described local research efforts that are underway to match blood lead testing with school readiness or performance.

Study 1 was conducted by the state of North Carolina to determine whether BLLs in early childhood were related to educational achievement in early elementary school as measured by performance on end-of-grade testing. The study was published in August 2007.

The study design and methodology included educational testing data for fourth grade students in four cohorts from 2000-2004. Data were collected from the North Carolina Education Research Data Center and linked to blood lead surveillance data for seven counties in North Carolina. The data were analyzed using exploratory and multivariate statistical methods. BLLs were linked to fourth grade reading and math tests. Of 8,600 children in the data set, 55% were African American and 49% were white.

The percentage of children with blood lead results varied from 20%-50% among the seven counties. The study was controlled for educational level of the parent, enrollment in a certain school system or district, and household income based on participation in a free or reduced lunch program. Children who spoke English as a second language were excluded from the

study. The major limitation of the study was the exclusion of maternal IQ or home environment score.

The results and conclusions of the North Carolina study are summarized as follows. A strong association was seen between a BLL of 5 µg/dL and a decline in reading and math scores. This impact was found to be extremely significant in comparison to covariate effects that are typically considered to be profoundly influential on educational outcomes. Early childhood lead exposures appeared to have a greater impact on performance for the reading rather than the math portions of the tests.

The impact of lead on standardized test results was sufficient to ensure that some children who would have otherwise passed the grade were failed. Lead was found to impact retention rates. BLLs and income as measured by participation in a free or reduced lunch program had comparable impacts on test scores. North Carolina plans to expand the study to more counties and follow children through high school.

Study 2 is currently being conducted by the city of Chicago with five birth cohorts of children born in 1994-1998 and enrolled in Chicago public schools. Administrative data sets were matched to birth registry data, blood lead data and school performance data. The number of children in the study with both health department and school records totaled 144,080.

The Chicago study was designed to answer three research questions. Do children with higher BLLs score significantly lower on standardized tests than those with lower BLLs? Do children with higher BLLs receive special education services at a significantly higher rate than those with lower BLL results? What are the increased costs of providing educational services to children with lead poisoning?

Several requirements and guiding principles were identified to inform the study. All children in Chicago are considered to be at high risk for lead poisoning. The Chicago Department of Public Health (CDPH) requires blood lead testing at school entry; entry into any licensed preschool or daycare program; and enrollment in Medicaid at 1 and 2 years of age. CDPH also has developed broad guidelines to screen all children six months to six years of age in Chicago. Blood lead testing rates in Chicago are 30% for children one year of age and >90% for school-aged children.

The study design and methodology included a log of school failure, information on the use of special education services, and the Illinois and Iowa Achievement Tests as school performance measures. These tests are administered to all children at several grade levels. Multiple measures were used to determine exposure to lead, including BLLs at two years of age, peak BLLs, areas under the curve and concurrent BLLs. Data were collected from the birth registry database to determine specific covariates, such as socioeconomic status of the parent, medical information on prenatal care and birth of the child, and maternal and paternal ages and education.

Of ~28,000 children in each of the five birth cohorts from 1994-1998, 41% were African American, 34% were white, 21% were Hispanic, 89% received either free or reduced lunch, and

7% had an individualized education plan. In terms of maternal education, 75% of mothers completed high school and 20% completed college. Data are still being collected for the Chicago study at this time, but preliminary results are expected to be generated by the end of 2008.

Study 3 is currently being conducted by the state of Rhode Island as an intervention study to examine the relationship between lead poisoning and kindergarten readiness. Administrative data sets were matched with blood lead results and reading readiness measured at the beginning of kindergarten. In Rhode Island, 90% of children have a blood lead test at school entry.

The study was designed to evaluate whether children with low reading readiness scores and EBLLs benefited from focused reading skill classes as measured by a follow-up reading readiness assessment. This intervention was studied in previous research and was shown to be successful. The study population included ~4,500 children in three school cohorts from 2004-2006. Data are still being collected and refined for the Rhode Island study at this time, but preliminary results are expected to be generated by the end of 2008.

Study 4 is currently being conducted by the state of Connecticut to examine the relationship between lead poisoning and grade school performance. Blood lead results were collected for ~25% of children in the study. The Developmental Reading Assessment and the Connecticut Mastery Test that is administered to children in grades 3-9 were used to measure school performance.

Ms. Evens highlighted a number of potential policy outcomes from the studies:

- Increased interest in linking local data with health and school performance data.
- Increased emphasis on school performance testing and retention in the "No Child Left Behind" Program, particularly in response to the North Carolina study that showed an impact of lead exposure on retention.
- Increased interest among education advocates.
- A closer working relationship between health and education departments.
- Increased attention on school readiness with opportunities to improve health outcomes across a number of indicators.
- Additional research efforts to quantify the cost of lead poisoning to public school systems, provide local data, facilitate policy change at the local level, and leverage more funding for primary prevention at local and state levels.

Ms. Evens announced that the study investigators have convened an informal research workgroup to make the studies more consistent and robust. She made three requests to support this effort. First, CDC should distribute the completed studies to CLPPPs to take action on the findings and explore the possibility of replicating the studies in the future. Second, ACCLPP should provide the study investigators with information on additional research efforts on lead poisoning and school performance. Third, ACCLPP should provide input on whether the designs, methodologies and research questions of the studies are appropriate.

Dr. Snodgrass advised the study investigators to review the extensive pediatric literature on various enrichment programs for cognitive behavioral developmental outcomes and improvement in younger children beginning at one year of age. He pointed out that these studies demonstrated improvements in cognitive outcomes with enrichment programs and other early intervention activities in other settings.

Overview of Connecticut's Health Education Lead Poisoning (HELP) Activities

Dr. Cross dedicated her presentation to innocent children who need crucial early intervention, special education or other related services as a result of being victims of, impaired by, or dying from lead poisoning. She described completed and ongoing efforts in Connecticut to address the intersection between health education and childhood lead poisoning.

A HELP public service announcement was broadcast in Connecticut. A diverse group of legislators, policymakers and community representatives was convened to specifically focus on HELP issues. A statewide conference was held with educators representing 26 school districts. A survey was administered during the conference and showed that 58% of educators in attendance answered "true" or "I don't know" to the question of whether the human body needs a small amount of lead for good nutrition.

A legislative and informational forum was convened with multiple state agencies representing the sectors of public health, policy, education and developmental services. This effort was undertaken because the Connecticut State Department of Education was excluded as a state partner in the *Lead Task Report and Recommendations.*

The initial forum resulted in additional regional, state and local forums; the establishment of the Connecticut Childhood Lead Poisoning Elimination Task Force; and the development of a plan to eliminate childhood lead poisoning in Connecticut by 2010. The overarching objective of the Lead Task Force and follow-up forums was to facilitate a collaborative effort rather than a silo approach among all health, provider and educational service agencies throughout the state.

Students, legislators, foundations, health officials and other stakeholders in the state of Connecticut participated in a historic lead legislation press conference. The governor officially named January 31 as Connecticut's "Health Education Lead Poisoning Day."

A national lead survey was administered to determine the educational implications of childhood lead poisoning. Of 111 survey respondents representing 29 states, either 100% or 99% identified five key needs to advance HELP activities:

- Early intervention services for lead-poisoned children.
- Professional development and training for educators and health professionals.
- Higher education course requirements for health, education and social service providers.

- Federal and state guidelines or policies to identify, evaluate and provide services to impaired children who qualify for services under IDEA or Section 504 of the Rehabilitation Act.
- Universal lead screening for all children 1-3 years of age in Connecticut.

Dr. Cross highlighted additional HELP activities that are underway in Connecticut. Universal blood lead screening will become effective in Connecticut beginning in January 2009. FEACT established a web site at www.feact.org and has received 19,085 hits from 21 countries over the period of October 2006 to March 9, 2008. To date, nearly 350 educators throughout the state have received HELP training and continuing education from nationally renowned experts.

A survey was administered during the Connecticut Educators Forum in January 2008. Of all survey respondents, either 100% or 98% identified four critical needs to advance HELP activities:

- Lead-safe schools, preschools and Head Start facilities.
- Research to identify the magnitude of childhood lead poisoning in Connecticut.
- Early intervention services for lead-poisoned children <6 years of age.
- Guidelines or policies to identify, evaluate and provide services to children who qualify for services under IDEA or Section 504 of the Rehabilitation Act.

Dr. Cross conveyed that the HELP initiative was established with a multifaceted and multidisciplinary group of stakeholders to keep children lead-safe and lead-free and also assist children who are impaired due to lead poisoning. Photographs of normal brain development and the impaired brain of a lead-exposed child are presented during HELP training sessions to illustrate the disruption of lead on neural stem and precursor cell growth.

Efforts are underway in Connecticut to adopt three models of diagnostic assessments and interventions to make further progress on HELP activities: (1) a neurodevelopmental assessment and intervention model supported by the "All Kinds of Minds" and "Schools Attuned" programs; (2) a structural cognitive modifiability model supported by the "Learning Propensity Assessment Device" and "Instrumental Enrichment Program;" and (3) a child development model supported by the "School Development Program."

Dr. Cross outlined Connecticut's next steps to advance HELP activities. Additional progress will be made on the landmark Duke University study with support from the Connecticut Speaker of the House, several state agencies, foundations and communities. More actions will be taken to discontinue the current practice of denying crucial services to lead-poisoned children.

Efforts will be made to increase compliance with IDEA Parts B and C and Section 504 of the Rehabilitation Act. A call to action will be launched on behalf of lead-impaired children. A request will be made for CDC to convene a workgroup or task force to address the health education needs of children who are impacted or impaired as a result of exposure to lead.

Overview of the Southeastern Center for the Enhancement of Learning (SCEL)

Dr. Martha Wood is the Director of SCEL. She explained that SCEL was founded with a number of principles, including the Learning Propensity Assessment Device, cognitive functioning, structural cognitive modifiability and brain plasticity. These concepts are supported by brain research that shows the brain can be retrained for individuals to learn.

SCEL is guided by an assessment component and the "Instrumental Enrichment" intervention that was expanded to include children three years of age through adulthood. The intervention is designed with a basic program for young children and a standard program for public schools or one-on-one intervention.

SCEL provides training to teachers in using the Instrumental Enrichment intervention. The program requirements include 40 hours of training for each year of the three levels of implementation. SCEL acknowledges that if specific cognitive deficiencies in children are diagnosed, prerequisites for learning can then be identified.

ACCLPP applauded the speakers for making comprehensive presentations on ongoing research and successful models of educational intervention strategies at state and local levels. Dr. Rhoads opened the floor for ACCLPP to discuss, provide input or suggest next steps in focusing on the relationship between lead-exposed children and educational interventions.

- The lead poisoning and school performance studies should be designed to collect more data on the actual impact of educational interventions on redressing school performance of lead-exposed children.
- The lead poisoning and school performance studies should be controlled for ADHD to determine interactive or primary effects.
- The Chicago study should be designed to gather data from the legal system and link to existing longitudinal cohorts. This approach could be used to collect information in a cost-effective manner to determine the long-term consequences of adults who were lead poisoned as children. For example, ICF International has published papers on the relationship between adult criminal activities and early childhood lead exposure. ICF's research questions, approach, design and methodology could be adapted to the ongoing lead poisoning and school performance studies.
- Data should be collected in the lead poisoning and school performance studies to answer additional research questions: (1) Should interventions be prolonged until a child shows developmental delay or should the risk factor of lead exposure make the child presumptively eligible for developmental delay? (2) Is a regular or specialized form of enrichment required for the lead-exposed brain that learns differently? (3) What is the best age group to target educational interventions to young children and receive the most significant impact?
- ACCLPP should formulate recommendations that are specifically targeted to CDC's public health mission. For example, ACCLPP could provide guidance on the critical need for lead-safe schools, daycare centers and Head Start facilities

due to the large proportion of lead-poisoned children who are repeatedly exposed while attending school.

- ACCLPP should provide guidance to CDC on lead-poisoned children 0-5 years of age who are eligible for early intervention services, but do not receive these benefits from state health departments.
- ACCLPP should establish a new workgroup to address the impact of educational interventions on lead-poisoned children. The workgroup's charge should focus on three key activities: (1) compile existing evidence; (2) review IDEA Parts C and D, Special Education and model regulations to provide guidance to state and local governments; and (3) describe specific action steps for parents, clinicians and educators.
- CDC should encourage CLPPPs to continue to implement and enhance successful strategies for children with EBLLs while new research is being generated. These approaches include nutritional interventions, developmental assessments at an early age, and strong linkages among childhood lead poisoning, educational, case management and early intervention agencies.

In response to the suggestion to make schools lead-safe, Dr. Brown emphasized that she would be extremely reluctant to devote LPPB funding and resources to this effort. She pointed out that a number of studies have found no clear relationship between EBLLs and lead hazards in schools. She also noted that solid research has been produced to demonstrate an association between EBLLs and lead paint in the homes of children.

A motion was properly placed on the floor and seconded by Ms. Johnson and Dr. Sandel, respectively, for ACCLPP to establish a new workgroup to address issues related to the educational implications of lead-poisoned children, development assessments and early intervention services for children 0-3 years of age. ACCLPP **unanimously approved** the motion.

The ACCLPP members made several suggestions to guide the establishment of the new "Educational Interventions for Lead-Exposed Children Workgroup." The workgroup should be represented by a diverse group of stakeholders in multiple sectors, including the medical and research communities, parents and grassroots organizations, to interpret IDEA and other laws with a unified voice. The representation of advocates on the workgroup will be critical to advance the recommendations beyond CDC's limitations as a federal agency.

Dr. Walter Rogan, ACCLPP's *ex-officio* member for the National Institute of Environmental Health Sciences, should serve on the workgroup to formulate concrete research strategies for intervention programs. A representative of the U.S. Department of Education also should be invited to serve on the workgroup to provide technical assistance. The workgroup's activities should not be limited to lead poisoning due to LPPB's ongoing efforts to transition to healthy housing.

Dr. Brown confirmed that over the next six to eight weeks, actions would be taken to establish the workgroup with ACCLPP members and liaisons, CDC staff, educational partners and other expertise as suggested by ACCLPP. The workgroup would initially meet by conference call, but

face-to-face meetings would be convened in the future. Dr. Brown encouraged ACCLPP to provide her with additional input on the workgroup's composition and charge.

The following ACCLPP members, liaisons and *ex-officios* volunteered to serve on the new workgroup: Ms. Johnson, Ms. Jordan, Ms. Kite, Ms. Mosby and Drs. Angeloni, Friedman, Keyvan-Larijani, Sandal and Gardner (based on her schedule). Dr. Brown and Ms. Connie Thomas, of LPPB, would represent CDC on the workgroup.

Update on Non-Residential Paint Activities

Ms. Wendy Blumenthal, of LPPB, reported that the Interagency Workgroup on Import Safety was established by a Presidential Executive Order in July 2007. The workgroup is charged with performing a comprehensive review of current import safety practices and identifying areas where improvements can be made. The workgroup is represented by senior Administration officials, including HHS as the chair, EPA, Consumer Product Safety Commission (CPSC), Department of Homeland Security, Department of Justice, Department of State, Department of Commerce and U.S. Trade officials.

The workgroup released a strategic framework in September 2007 and opened a public comment period for this document through October 2007. The workgroup subsequently released the "Action Plan for Import Safety" in November 2007 with 14 broad recommendations and 50 action steps in the areas of prevention, intervention and response. Each action step identifies a lead agency and outlines either a short- or long-term time frame.

Ms. Blumenthal summarized the key recommendations and action items of the action plan. New and existing safety standards should be created and strengthened. This goal should be achieved by extending mandatory manufacturer or importer certification requirements to all CPSC statutes. Public-private sector programs should be used to develop safety standards that eventually could be adopted by federal agencies.

Compliance of foreign producers should be verified through certification with U.S. safety and security standards. This goal should be achieved by requiring mandatory certification for high-risk products governed by the Food and Drug Administration. Voluntary certification programs should be jointly developed by federal agencies, the importing community and other members of the public.

Good importer practices should be promoted. Penalties should be enhanced and strong enforcement actions should be taken to ensure accountability. These goals should be achieved by amending the Consumer Product Safety Act (CPSA), Food, Drug and Cosmetic Act, and other laws to include asset-forfeiture remedies for criminal offenses. CPSA should be modified to raise the statutory civil penalty cap for a related series of violations to $10 million.

Customs and Border Patrol mitigation guidelines should be strengthened. The maximum penalty for importers with repeat violations should be increased. The current requirement to

notify offending parties that violate CPSA should be removed. Product safety should be made an important principle of diplomatic relationships with foreign countries. The profile of relevant foreign assistance activities should be increased.

Federal government procedures and requirements for processing import shipments should be harmonized across different federal agencies. A single window interface should be completed to facilitate the exchange of import data between federal agencies and the private sector. An Interactive Import Safety Information Network should be created.

Laboratory capacity should be expanded and rapid test methods for quick identification of hazards should be developed. These goals should be achieved by strengthening field laboratory capacity for testing and developing analytical tools for enhanced rapid screening. Rapid test methods should be created to determine the admission of products to the United States. The protection of intellectual property rights should be enhanced to strengthen consumer safety.

The effectiveness of product recalls should be maximized. This goal should be achieved by amending CPSA to make the sale of a product after recall illegal for any manufacturer, distributor or retailer. CPSC should be given authorization to follow-up recalls and require all recalling firms to provide the names and addresses of companies that supplied or received recalled products.

Federal and state collaborations should be maximized. This goal should be achieved by reviewing admissibility policies to improve the use of evidence and laboratory results from state investigations. Consumer notification of product recalls should be expedited. This goal should be achieved by developing best practices in using Smart Cards and other product tracking technologies to expedite notification of recalls to consumers. The use of electronic track-and-trace technologies should be expanded across the entire import life cycle.

Ms. Blumenthal announced that both the House and Senate passed consumer product legislation in December 2007 and March 2008, respectively. The bill was resubmitted to the House for another vote after the Senate made amendments and will be enacted at the time of the President's signature. The bill calls for CPSC reauthorization with an annual increase in appropriations, an increase of ~$26 million in 2009, an increase of $155 million by 2015, an increase in staff to at least 500 personnel, and 50 new personnel at ports of entry.

The consumer product legislation further calls for a ban on children's products with lead and would be enforced one year from enactment. The ban would cover any product or its part, including jewelry, that contains lead or lead compounds >0.03% in weight based on the total weight of the part. The ban would reduce the threshold from >0.03% to 0.01% from three years of enactment, but CPSC would be required to propose an alternative measurement if the reduced threshold is found to be technologically unfeasible.

Exceptions to the ban would include components that are inaccessible within the product, certain electronics and possibly lead crystal. The ban also calls for a change in the paint

standard from 0.06% to 0.009% for all products that fall under CPSA. Similar to the ban on children's products, the ban on paint also would be enforced one year from enactment.

The consumer product legislation proposes to increase caps for civil penalties under both CPSA and the Federal Hazardous Substances Act. The maximum civil penalty for a single violation would increase from $5,000 to $250,000. The maximum civil penalty for a series of violations would increase from $1.25 million to $20 million. CPSC would initiate rulemaking for additional criteria for civil penalties. The maximum length of time of imprisonment for knowing and willful violations would increase from one year to five years.

CPSC would partner with the National Academy of Sciences and the National Institute of Standards and Technology to study the feasibility of establishing a standardized measure for lead content based on a unit of mass per area rather than the current measure of lead concentrations. Procedures would be developed to certify and monitor activities by independent laboratories that test for adherence to federal safety standards.

Ms. Blumenthal described a new project that LPPB and ATSDR are jointly conducting to improve risk assessment and identification of lead sources. This effort was initiated in response to a request for guidance by a local health department in Missouri. The health department informed ATSDR of its inability to remove lead-contaminated products from facilities that are found during food and other routine inspections.

LPPB and ATSDR will conduct a number of activities to support the new project: (1) develop and distribute sampling and testing guidance, tools and other resources to risk assessors; (2) identify and disseminate various strategies to enforce lead violations; (3) enhance knowledge of existing reporting mechanisms to state and federal agencies; and (4) establish an interstate alert system to improve surveillance and data exchange of lead-contaminated products across different states. The project will result in the development of a guidance document and the provision of training to assist programs in using this tool.

LPPB and ATSDR will take several actions to advance the project: (1) convene internal conference calls to determine staff resources, (2) draft an outline of the guidance document, (3) conduct site visits to ATSDR Region 7 to better understand issues at the local level, (4) contact programs to obtain information on successful models and lessons learned, and (5) solicit additional input from federal partners.

Update by the Import Safety Workgroup

Dr. Michael Kosnett is an ACCLPP member and chair of the workgroup that was established to formulate recommendations on the import, export and disposal of lead-containing toys and other products to children. He reported that after the September 2007 meeting, the workgroup drafted a letter to Dr. Julie Gerberding, Director of CDC, and forwarded the document to the ACCLPP voting members for review and comment.

The letter was revised, finalized, formally approved by the voting members, and sent to Dr. Gerberding on November 24, 2007. Dr. Gerberding forwarded ACCLPP's letter to the HHS Secretary on March 3, 2008. ACCLPP's letter, attachments and Dr. Gerberding's response were included in the meeting packets for review.

Dr. Kosnett announced that the workgroup would convene a conference call over the next two weeks to discuss next steps to advance ACCLPP's import safety recommendations beyond the letter to Dr. Gerberding. In the interim, he requested ACCLPP's input on this issue and raised a number of key points to guide the discussion.

- Additional information is needed about risk assessments that were performed and the extent to which CDC or CPSC provided expertise in proposing the new thresholds for lead in products and paint in the consumer product legislation. This information is needed to determine whether the new thresholds would be protective of health.
- The proposed bill does not mention ACCLPP's recommendation to promote a worldwide ban on the use of lead in products commonly used by children. ACCLPP should follow-up with the HHS Secretary to make a stronger case for this particular issue.
- Support and resources are needed to advance ACCLPP's recommendation to convene an international public health conference and other educational activities to increase lead hazard awareness among key U.S. trading partners. For example, HHS or the Department of State could establish public-private partnerships to leverage resources for this effort.
- Additional information is needed on whether recalls outlined in the Action Plan for Import Safety would apply to the export of products.
- Clarification is needed on whether ACCLPP, as a federal advisory committee, would be allowed to provide educational testimony to Congress on import safety.

Ms. Lori Saltzman, ACCLPP's *ex-officio* member for CPSC, joined the meeting by conference call. She announced that CPSC would convene a meeting in May 2008 to review provisions in the proposed consumer product legislation, including those addressing lead. The meeting would be open to the public with time set aside for public comment. She would provide Dr. Brown with additional details about the meeting for circulation to ACCLPP.

Ms. Saltzman reported that she was unable to respond to Dr. Kosnett's requests for additional information on recalls of exported products and the risk assessment process used to propose the new thresholds for lead in products and paint in the consumer product legislation. She confirmed that she would provide Ms. Blumenthal with contact information for the head of the Office of Compliance to assist the workgroup in obtaining more details about these issues.

In terms of ACCLPP's recommendation to convene an international public health conference, Ms. Saltzman noted that CPSC's International Program frequently communicates with China and other countries. CPSC also has established technical workgroups to educate importers and manufacturers in various countries about U.S. regulations. She conveyed that CPSC's existing

relationships with other countries might serve as a valuable resource in convening an international public health conference.

Dr. Brown made several remarks in response to the comments by Dr. Kosnett and Ms. Saltzman. The HHS Secretary has 30 days from March 3, 2008 to respond to ACCLPP's letter. After April 3, 2008, the letter would be placed in the public domain for individual ACCLPP members or other groups to use or widely disseminate.

In terms of the upcoming CPSC meeting, Dr. Brown would follow-up with the CDC Committee Management Office to determine whether ACCLPP should provide public comments as a formal advisory committee or if individual members should give public comments as private citizens.

To assist in advancing ACCLPP's import safety recommendations, Dr. Brown would convene a conference call with the ACCLPP workgroup and federal staffers on the Interagency Workgroup on Import Safety. She emphasized that strategies in this effort would be limited because ACCLPP voting members are special government employees and are prohibited from lobbying. However, individual ACCLPP members are free to contact their elected officials or sponsors of the consumer product legislation as private citizens.

Dr. Brown noted that she would give serious consideration to this matter to assure ACCLPP's transparency to the public in "educating" rather than "lobbying" Congress. She would contact the Committee Management Office to determine whether ACCLPP, as a federal advisory committee, would be allowed to provide educational testimony to Congress or give briefings to staffers on import safety. She would report her findings to ACCLPP the week of March 24, 2008.

The ACCLPP members made a number of suggestions to advance the import safety guidance.

- Partnerships should be established with the World Health Organization's Office of Children's Environmental Health, the Chinese government and other international agencies to leverage public funding to convene an international public health conference.
- Academic institutions, foundations and other groups should be contacted to leverage private funding to convene an international public health conference.
- ACCLPP's liaison members for AFHH, the American Academy of Pediatrics and the American Public Health Association (APHA) should ask their respective organizations to take the following actions: (1) lobby and advocate for the consumer product legislation after ACCLPP's import safety recommendations become a part of the public domain; (2) broadly distribute ACCLPP's guidance; and (3) give Congressional testimony on import safety.
- Additional information should not be requested at this time on the risk assessment process that was used to propose the new thresholds for lead in products and paint in the consumer product legislation. The Congressional authorization process for this bill is underway. After the bill is authorized and appropriated, ACCLPP should determine whether the new thresholds are protective of health and provide guidance at that time if needed.

Dr. Brown announced that the terms of three ACCLPP members would expire after the current meeting. Ms. Valarie Johnson was acknowledged as the first ACCLPP member to represent parents. She is the mother of a child with an EBLL and a tireless advocate for childhood lead poisoning.

Dr. Kevin Stephens was recognized for his service on both ACCLPP and LPWG. He was also commended for his valuable expertise and support to CDC in rebuilding the Louisiana CLPPP following Hurricane Katrina. Dr. Stephens is the Health Director of the New Orleans Department of Health. Dr. Wayne Snodgrass was recognized for contributing his tremendous expertise on lead toxicity to ACCLPP and CDC.

Dr. Brown presented plaques to the three outgoing members to formally acknowledge their outstanding dedication, commitment and contributions to ACCLPP, CDC and the health of children in the United States.

Dr. Brown provided clarification in response to Dr. Angeloni's questions regarding new members and future meeting agendas. Current and former ACCLPP members, federal agency staff, non-governmental organizations and the general public can nominate potential candidates. The initial slate of nominees is submitted to Dr. Gerberding and the HHS Secretary.

The CDC Director has delegated responsibility to Dr. Brown to determine whether ACCLPP nominees have relevant scientific expertise and other appropriate qualifications to meet the charter requirements for a fairly balanced committee in terms of points of view represented. After the internal review, CDC submits the final slate of nominees to the HHS Secretary. The final selection and approval of new members are beyond CDC's control and are at the discretion of the HHS Secretary.

For the current rotation, Dr. Brown announced that the HHS Secretary has confirmed three new members who will replace the three outgoing members. One of the new members is the parent of a lead-poisoned child. Dr. Brown encouraged ACCLPP to provide her with names of potential candidates on a regular basis because formal approval of a new member is a six- to nine-month process. Moreover, three candidates must be nominated for every one outgoing member.

In terms of future agendas, Dr. Brown pointed out that LPPB polls the ACCLPP members by e-mail following each meeting to obtain suggestions on potential topics. She explained that agendas of all federal advisory committees are required to be announced in the *Federal Register* 60 days in advance of a meeting.

Mr. Barry Brooks, of LPPB, confirmed that the ACCLPP members would be polled by e-mail the first week of July 2008 to suggest potential agenda items for the October 2008 meeting.

[redacted]

Dr. Rhoads opened the floor for public comments; no participants responded.

[redacted]

The next ACCLPP meeting would be held in San Diego, California on October 29-30, 2008. To accommodate the schedules of persons who would attend APHA's annual conference, the ACCLPP meeting would be structured for the half-day session to be held on day 1 and the full-day session to be held on day 2.

ACCLPP applauded Mr. Brooks, Ms. Claudine Johnson and other LPPB staff for providing outstanding administrative support and making logistical arrangements for the meeting.

With no further discussion or business brought before ACCLPP, Dr. Rhoads adjourned the meeting at 12:35 p.m. on March 19, 2008.

I hereby certify that to the best of my knowledge, the foregoing Minutes of the proceedings are accurate and complete.

Date

George G. Rhoads, M.D., M.P.H.
Chair, Advisory Committee on
Childhood Lead Poisoning Prevention

Public Comment Session

Dr. Rhoads opened the floor for public comments; no participants responded.

Closing Session

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5/27/2008
Date

George G. Rhoads, M.D., M.P.H.
Chair, Advisory Committee on
Childhood Lead Poisoning Prevention