

► UPDATE ON LEAD POISON-ING AND MANAGING LEAD

EXPOSURE......1, 6

► AAP'S TEXT4BABY PROGRAM UPDATE.....2

UNIVERSITY OF IOWA'S INSTITUTE FOR CLINCIAL AND TRANSLATIONAL SCIENCE....4

American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN

Iowa Chapter

The Heartland Pediatrician

Update on Lead Poisoning

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childhood lead poisoning in

the United States as a major public health problem by the year 2010. These include (1) targeting federal grants for low-income housing in order to act before children are poisoned, (2) expanding blood lead screening and follow up services for at-risk children, (3) improve prevention and research strategies, and (4) implement monitoring and surveillance programs. The 2010 goal has not been achieved.

In January 2012, the federal Advisory Committee on Childhood mation, such as retesting schedules and details on available serwas adopted by Centers for Disease Control (CDC) replacing the dren with any elevated BLL is **not feasible**.

Lead poisoning is completely preventable disease. term "blood lead level of concern" with a "reference value" based In 2000, the President's Task Force on Environ- on the 97.5th percentile of blood lead level distribution in children mental Health Risks and Safety Risks to Children 1-5 years of age in the U.S. Based upon current data that blood released, "Eliminating Childhood Lead Poisoning: <u>lead level is now 5µg/dL</u>. The most recent data from CDC show, A Federal Strategy Targeting Lead Paint Haz- that for 2007-2010, there were 162,719 children with blood lead (http://www.cdc.gov/nceh/lead/about/ levels $\geq 10 \, \mu g/dL$, a clear indication that the 2010 goal was not fedstrategy2000.pdf) recommended eliminating achieved. Furthermore, CDC data show that over 535,000 chil-

dren have blood lead levels $\geq 5 \mu g/dL$. Together, these and other data show the problem remains large. The ACLPP recommendations and the CDC responses published in the Morbidity and Mortality Weekly Report (MMWR) and Pediatrics can be found at www.cdc.gov/nceh/lead.

Historically, those children with a BLL of 10µg/dL or greater entered the CLPPP case management system. The parent and physician of these children were provided infor-

Lead Poisoning Prevention (ACLPP) released a report acknowl- vices. Families were also offered in-home education and environedging the cumulative scientific evidence concerning health immental investigations. However, federal funding for CLPPP propacts associated with blood lead levels (BLLs) less than 10µg/dL. grams nationwide has been eliminated. As a result, provision of A specific recommendation was made and, in December 2012, in-home education and environmental investigations for all chil-(con't p. 2)



A Note from the Chapter President

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Every day in our role as pediatricians and child health advocates we do our best to protect our patients; to counsel patients and their families on safety precautions and injury prevention. Sometimes our advice and anticipatory guidance are not enough to prevent violence or tragedy to strike our young patients. Natural disasters, domestic, school, and community violence (as both witnesses and victims), accidental and non-accidental trauma are not infrequent occurrences in the lives of our children and youth.

What are the steps we can take to prepare ourselves and the families we serve to address violence? What is needed is involvement by the whole community — school personnel, law enforcement, the health system, community-based organizations, families, and young people themselves. (con't p. 3)

Update on Lead Poisoning (con't)



As a result, physicians who care for children should not only test for BLL in all children who screen for high risk (or test children living in high risk areas), but will also need to be the primary point of information to discuss sources of lead, education on removal of the sources, and provide information on the treatment of elevated lead levels. This can be daunting in the era of decreased knowledge of environmental health and little time available for such education. Physicians are encouraged to reach out to specialists in pediatric environmental health for information regarding these recommendations. A one page resource for health care professionals is available through the Pediatric Environmental Health Specialty Unit (PEHSU) website (www.pehsu.net).

For more information, physicians in Region 7 (Iowa, Kansas, Missouri and Kansas) can contact the Mid-America PEHSU at 1-800-421-9916 or Jennifer Lowry, MD at Children's Mercy Hospital, Kansas City, MO (1-800-GO-MERCY).

Please refer to Pages 6—7 for detailed information and recommendations on managing lead exposure.



CATCH grants supports pediatricians and residents to collaborate within their communities so that all children have access to needed health services and a medical home. Each AAP Chapter has at least one Chapter CATCH Facilitator, and each District has a District CATCH Facilitator and a Resident CATCH Liaison. They are available to:

- Provide assistance to applicants and grantees
- Review and score CATCH grant applications
- Assist projects in linking to local resources
- Promote CATCH projects in their community

The CATCH Call for Proposals is NOW OPEN! Submissions due 2:00 pm CDT **July 31, 2013**. For assistance, contact Iowa AAP CATCH Facilitator, Dr. Amy Shriver at shriveAE@unitypoint.org.



Congratulations to
Dr. Linda Delissio (Bettendorf)
on receiving a
2013 CATCH Planning Grant!





www.childrensmercy.org/cmhn Children's Mercy Hospital | Kansas City, Missouri



A Note from the Chapter President

(con't from page 1)

The components of a well-functioning system include awareness, prevention, identification, and intervention. A rapid response team and preparedness action plan are also essential (especially when there are many individuals involved with various levels of injury). There is also a need for actions and programs to address the long term effects of violence and disaster.

Our chapter of the AAP in conjunction with the University of Iowa Children's Hospital is sponsoring a daylong seminar on September 9, 2013 that will offer practical advice on how we can be better prepared to address youth violence. Topics include: pediatric bereavement, bullying, acute head trauma, and policy levers. The national AAP and the Council on Injury, Violence, and Poison Prevention have many resources to help our members and the families

they serve become more comfortable with their role in preventing and addressing youth violence. Please visit www.aap.org. for policy statements, publications, and family and youth resources.

Sending wishes to you and your patients and their families a safe and healthy summer season.

Best in health- Debra

Best in health
Debra



Pediatric Bereavement Lecture by Dr. David Schonfeld will be held at the University of Iowa College of Medicine on September 9, 2013.

For You and Your Patients: AAP's text4baby program

Since February 2010, pregnant women and new moms have been receiving information to help them care for their health and give their babies the best possible start in life. This has been made possible by **text4baby** – a FREE text messaging service that sends 3 health messages to these women each week from pregnancy until the baby is 12 months old. Women can sign up for the free service by texting BABY to 511411(or BEBE for Spanish), and it's even timed to their due date or baby's date of birth.

Sample Messages Reinforcing

Newborn: Congratulations! After leaving the hosp baby's 1st Dr's visit is in 2-3 days. If you need help cashs call Marketing at 877-540-7469.

3-5 days: Worried your baby is sick or has a fever?
It's very important to take his temperature & call the
doctor file is too bot, fussy, crying or not editing.
I meanth: Make sure your baby spends firme on his
tummy when he's awake & you've in the toom. His
neck, back & arms will get strong!

2 months: Your baby's mouth needs cleaning now even before the first tooth! Wipe your baby's gums each day with a wet washcloth or use a soft baby took because it is not so to the soft baby

4 months: Keep boby away from tobacco smoke. It can damage boby's theart, lungs & brain and increase boby's chances of getting colds & ear infections.

recognize faces & take turns "talking" with you.
He may sit without help & try to stand & bounce with support.

9 months: When your bathy outgrows his infant car.

seat, use a convertible car seat. Your child should ride rear-facing until age 2 to keep him safe.

12 months: If you've breastfed for a year, you may want to keep going. You and your child will still get lots of great benefits!

The success of **text4baby** is dependent on the network of passionate, energetic partners. Outreach partners include state and local health departments, community health centers, WIC programs, health

Are you breastfeeding, Mom? Great job! Breast milk is the best food for baby. Questions? Call the National Breastfeeding Helpline at 800-994-9662.

plans, retail partners, community organizations, major medical associations including the AAP, and nonprofit organizations dedicated to the health of mothers, babies, and families. If you are interested in becoming an outreach partner visit www.text4baby.org.

For more information, visit the **text4baby** Web site at **www.text4baby.org**. Need more information? E-mail AAP staff at <u>rjarrett@aap.org</u> to let us know how AAP can help you to promote **text4baby** in your practice or community!

Free msg: Your baby's mouth needs cleaning now—even before the first tooth! Wipe your baby's gums each day with a wet washcloth or use a soft baby toothbrush

text4baby! There is no cost to your patients to sign up. *Use the tear pads as a "prescription" and give a sheet to each of your patients who have a baby under age one. Also give it to your repearant mean.

Talk to families about

- Place text4baby tear-off pads next to your check-in/check-out desks and ask staff to encourage moms to take a sheet.
 Put up text4baby flyers in your waiting areas, exam rooms and bulletin.
- Promote text4baby (@mytext4baby) via your practice's Twitter account or Facebook page.
- Add the text4baby web button to your practice's website.
 Add a text4baby reminder prompt into your electronic health record.

Review all of the text4baby messages at www.cop.org/text4baby. Get more information and order free materials at www.text4baby.org.

"Text4Boby is an innovative approach to reaching young mothers during pregnancy and their boby's first year. The messages are practical, timely, and important. One great thing is that many messages include phone numbers for resources that can be called on the spot from the text messages for example, If a man is feeling depressed, she can immediately call a hotline from the message." John C. Duby, MD, FAAP

The Vilsack Foundation to Gift Reach Out and Read Iowa \$50,000

This summer, the Vilsack Foundation, led by former Iowa First Lady, Christie Vilsack, is planning to gift Reach Out and Read Iowa \$50,000 as part of its ongoing literacy legacy. The gift will be announced at the Blank Children's Hospital in Des Moines, tentatively scheduled for June 10. The hospital was the first Reach Out and Read program in Iowa, established in 1998.

Christie Vilsack is known for her strong support of literacy initiatives and is a long-time Reach Out and Read champion. Vilsack was instrumental in establishing the Reach Out and Read Iowa Coalition as her literacy legacy through her leadership and a generous contribution from the Vilsack Foundation. Vilsack's interest in Reach Out and Read stemmed from her work as First Lady and with the Iowa Stories 2000 Foundation. She served as the Chair of

Reach Out and Read Iowa's Advisory Committee until 2009 and

on the National Reach Out and Read Board of Directors from 2006-2009. Recently, Vilsack joined the United States Agency for International Development (USAID) as a senior advisor on international education.



Reach Out and Read Iowa and the Iowa AAP Chapter extend our deep gratitude and appreciation to the Vilsack Foundation and Christie Vilsack.

Iowa AAP is proud to be the fiscal agent for Reach Out and Read Iowa.

PROGRAM SPOTLIGHT: ICTS

Introducing the University of Iowa Clinical and Translational Science Child Health Core

What is the ICTS Child Health Research Core?

For the first time, the Clinical and Translational Science grant at the University of Iowa includes a Child Health Research Core. The goal of this group is to improve child health and wellness through evidence-based research. Integration of the statewide child health delivery model will facilitate building the network required for us to be successful. We plan to:

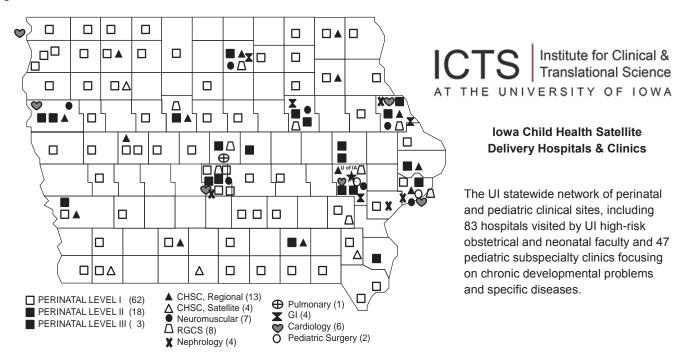
- Engage community providers and families to participate in research.
- Implement innovative, value-based healthcare delivery approaches and establish "Health Homes."
- Enable children with special needs to remain within their community and still receive excellent care and the possibility to participate in research trials.
- Promote investigator-initiated child health research by serving as a research incubator hub facilitated by the support of a Research Navigator.
- Increase research efficiency.
- Establish a web-based protal to link the UI's network of perinatal and pediatric clinical sites and to provide access to bio-repositories and clinical and research datasets

Adopting the "Life Course Perspective

We will use a disease-agnostic "Life Course Perspective" approach that recognizes that an individual's health trajectory is determined by early life events and the interplay between a range of risk and protective factors (e.g., genetics, environmental exposures, socioeconomic status, health behaviors). Life Course Perspective research also identifies factors leading to physical and emotional well-being. Iowa possesses unique characteristics required for completion of longitudinal studies that define these health determinants: a stable population and a high volunteer rate. In addition, the UI is directly affiliated with its state's newborn screening laboratory. This relationship provides for ready access to statewide neonatal metabolic screening data that is useful to many investigators.

Statewide Collaboration

The unique setting of the UI's statewide child health satellite clinical care delivery system will facilitate sharing of programs and resources within Iowa communities.



PROGRAM SPOTLIGHT: ITSC

Our Services

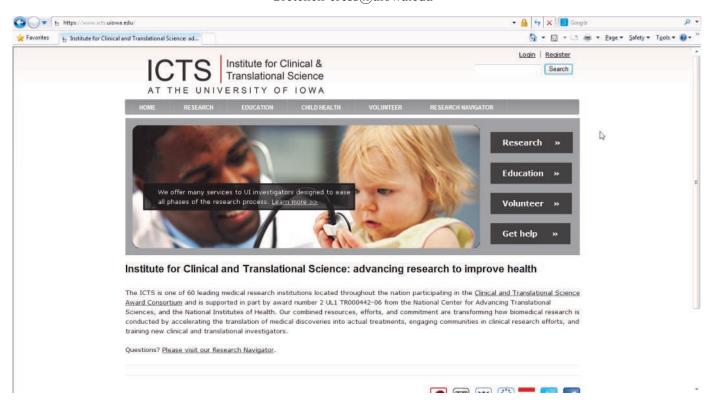
The UI health care delivery model also offers numerous databases that can be used in translational research and integrated in the ICTS data warehouse. The ICTS data warehouse brings together a wealth of clinical, image, and specimen databases right to your desktop. The data warehouse can consolidate local UIHC Epic (Clarity), XNAT, and Cancer Tissue core databases together within a single domain to provide users with a veritable "one stop shopping" GE-IDX data experience.

The extensive resources of the Child Health Research Core are investigator-ready:

- We are very excited about our New Children's Hospital currently under construction and slated to open in 2016. The new facility includes a research facility that was designed by Child Health Core leaders. Within the research space there is a 1,188 sq. ft inpatient area and a 2,066 sq ft outpatient node. The exam rooms are equipped with telelink capabilities which allow for access to facilities throughout Iowa.
- New investigators have access to mentoring from the rich pool of experienced investigators available at the UI.
- Service vouchers for use of ICTS services (e.g., statistical consultation, research coordinators, data management) are provided to support new research. Vouchers will also be available to support development of national child health research networks (e.g., PROS, PRIS, and CORNET) and participation in trials sponsored by these networks.

The Child Health Care Research Core is here to support you. For more information, contact:

Research Navigator Gretchen Cress (319) 356-2151 Gretchen-cress@uiowa.edu



Visit the Institute for Clinical and Translational Science at https://www.icts.uiowa.edu/

To hear Dr. Patrick Brophy speak more about the ICTS, check out the Iowa AAP You Tube Channel!



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Recommendations on Medical Management of Childhood Lead Exposure and Poisoning

No level of lead in the blood is safe. In 2012, the CDC established a new "reference value" for blood lead levels (5 mcg/dL), thereby lowering the level at which evaluation and intervention are recommended (CDC).

Lead level	Recommendation
< 5 mcg/dL	 Review lab results with family. For reference, the geometric mean blood lead level for children 1-5 years old is less than 2 mcg/dL. Repeat the blood lead level in 6-12 months if the child is at high risk or risk changes during the timeframe. Ensure levels are done at 1 and 2 years of age. For children screened at age < 12 months, consider retesting in 3-6 months as lead exposure may increase as mobility increases. Perform routine health maintenance including assessment of nutrition, physical and mental development, as well as iron deficiency risk factors. Provide anticipatory guidance on common sources of environmental lead exposure: paint in homes built prior to 1978, soil near roadways or other sources of lead, take-home exposures related to adult occupations, imported spices, cosmetics, folk remedies, and cookware.
5-14 mcg/dL	 Perform steps as described above for levels < 5 mcg/dL. Re-test venous blood lead level within 1-3 months to ensure the lead level is not rising. If it is stable or decreasing, retest the blood lead level in 3 months. Refer patient to local health authorities if such resources are available. Most states require elevated blood lead levels be reported to the state health department. Contact the CDC at 800-CDC-INFO (800-232-4636) or the National Lead Information Center at 800-424-LEAD (5323) for resources regarding lead poisoning prevention and local childhood lead poisoning prevention programs. Take a careful environmental history to identify potential sources of exposures (see #5 above) and provide preliminary advice about reducing/eliminating exposures. Take care to consider other children who may be exposed. Provide nutritional counseling related to calcium and iron. In addition, recommend having a fruit at every meal as iron absorption quadruples when taken with Vitamin C-containing foods. Encourage the consumption of iron-enriched foods (e.g., cereals, meats). Some children may be eligible for Special Supplemental Nutrition Program for Women, Infants and Child (WIC) or other nutritional counseling. Ensure iron sufficiency with adequate laboratory testing (CBC, Ferritin, CRP) and treatment per AAP guidelines. Consider starting a multivitamin with iron. Perform structured developmental screening evaluations at child health maintenance visits, as lead's effect on development may manifest over years.
15-44 mcg/dL	 Perform steps as described above for levels 5-14 mcg/dL. Confirm the blood lead level with repeat venous sample within 1 to 4 weeks. Additional, specific evaluation of the child, such as abdominal x-ray should be considered based on the environmental investigation and history). Gut decontamination may be considered if leaded foreign bodies are visualized on x-ray. Any treatment for blood lead levels in this range should be done in consultation with an expert. Contact local PEHSU or PCC for guidance; see resources on back for contact information.
>44 mcg/dL	 Follow guidance for BLL 15-44 mcg/dL as listed above. Confirm the blood lead level with repeat venous lead level within 48 hours. Consider hospitalization and/or chelation therapy (managed with the assistance of an experienced provider). Safety of the home with respect to lead hazards, isolation of the lead source, family social situation, and chronicity of the exposure are factors that may influence management. Contact your regional PEHSU or PCC for assistance.

Principles of Lead Exposure in Children

- A child's blood lead concentration depends on their environment, habits, and nutritional status. Each of these can influence lead absorption. Children with differing habits or nutritional status but who live in the same environment can vary on blood lead concentration. Further, as children age or change residences, habits or environments change creating or reducing lead exposure potential.
- While clinically evident effects such as anemia, abdominal pain, nephropathy, and encephalopathy are seen at levels >40 μg/dL, even levels below 10 μg/dL are associated with subclinical effects such as inattention and hyperactivity, and decreased cognitive function. Levels above 100 μg/dL may result in fatal cerebral edema.
- Lead exposure can be viewed as a lifelong exposure, even after blood lead levels decline. Bone acts as a reservoir for lead over an individual's lifetime. Childhood lead exposure has potential consequences for adult health and is linked to hypertension, renal insufficiency, and increased cardiovascular-related mortality.
- Since lead shares common absorptive mechanisms with iron, calcium, and zinc, nutritional deficiencies in these minerals promotes lead absorption. Acting synergistically with lead, deficiencies in these minerals can also worsen lead-related neurotoxicity.

Recommendations on Medical Management of Childhood Lead Exposure and Poisoning

Principles of Lead Screening

Lead screening is typically performed with a capillary specimen obtained by a finger prick with blood blotted onto a testing paper. Testing in this manner requires that the skin surface be clean; false positives are common. Therefore, elevated capillary blood lead levels should be followed by venipuncture testing to confirm the blood lead level. In cases where the capillary specimen demonstrates an elevated lead level but the follow-up venipuncture does not, it is important to recognize that the child may live in a lead-contaminated environment that resulted in contamination of the finger tip. Efforts should be made to identify and eliminate the source of lead in these cases. Where feasible, lead screening should be performed by venipuncture.

Principles of Iron Deficiency Screening

- The iron deficiency state enhances absorption of ingested lead.
- Hemoglobin is a lagging indicator of iron deficiency and only 40% of children with anemia are iron deficient.
- Lead exposed children (3 5 mcg/dL) are at risk for iron deficiency and should be screened using CBC, Ferritin, and CRP. Alternatively, reticulocyte hemoglobin can be used, if available.
- Children with iron deficiency, with or without anemia, should be treated with iron supplementation.

Resources		
Pediatric Environmental Health Specialty Unit (PEHSU) Network	• <u>www.pehsu.net</u> or 888-347-2632	
Poison Control Center (PCC)	• <u>www.aapcc.org/</u> or 800-222-1222	
Centers for Disease Control and Prevention	• <u>www.cdc.gov/nceh/lead/</u> or 800-232-4636	
U.S. Environmental Protection Agency	• <u>www.epa.gov/lead/</u> or 800-424-5323	

Suggested Reading and References:

Pediatric Environmental Health, 3rd edition. American Academy of Pediatrics, 2012. Woolf A, Goldman R, Bellinger D. Pediatric Clinics of North America 2007;54(2):271-294. Levin R, et al. Environmental Health Perspectives 2008; 116(10):1285-1293. Baker RD, Greer FR. Pediatrics 2010;126(5):1040-50. Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women. CDC, 2010. CDC Response to Advisory Committee on Childhood Lead Poisoning

Helping Foster & Adoptive Families Cope with Trauma: A Guide for Pediatricians

In partnership with the Dave Thomas Foundation for Adoption and sultation with medical providers. The use of these materials by Jockey Being Family, the American Academy of Pediatrics (AAP) pediatricians would be very helpful to foster children. Providing a

Helping Foster and

Adoptive Families

Cope With Trauma

developed materials for pediatricians on how to support adoptive and foster families by strengthening the ability of pediatricians to identify traumatized children, educate families about toxic stress, and empower families to respond to their child's behavior in a manner that acknowledges past trauma, Helping Foster and Adoptive Families Cope with Trauma: A Guide for Pediatricians.

The guide is accompanied by a coding tip sheet, a visit discharge and referral form which allows for addressing a child's trauma history, and an educational handout for families, "Parenting After Trauma: Understanding Your Child's Needs". The Iowa De-

partment of Human Services (IDHS) is responsible for monitoring the health care of foster children and screening for trauma in concopy of the foster child visit discharge and referral

form to the foster care provider would assist IDHS in meeting their responsibility for monitoring the health care of foster children. The materials can be downloaded from the Healthy Foster Care America website.

www.aap.org/traumaguide

Heather Davidson Iowa Family Foster Care Program Manager HDAVIDS@dhs.state.ia.us 515-281-3012

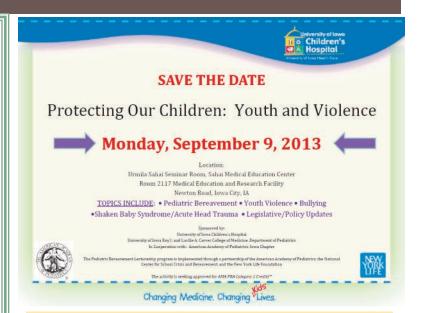


The Iowa Association for Infant / Early Childhood Mental Health Invites IA AAP to its Inaugural Event

Please join us for a celebration reception







Iowa AAP 2013—2014 Election Results Congratulations to your new Board members!

Kathleen Foster-Wendel, Treasurer (2013—2014) Jane Braumbaugh, Trustee (2013—2014)

American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN™



2012-2013 **Board of Directors**



Iowa Chapter

Debra Waldron, MD, MPH, FAAP















Miranka Pille, MD, FAAP









