MDAAP/AAP Lead Testing ECHO

March 1, 2023

Session 6: Counseling Patients and Caregivers

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ACKNOWLEDGMENTS

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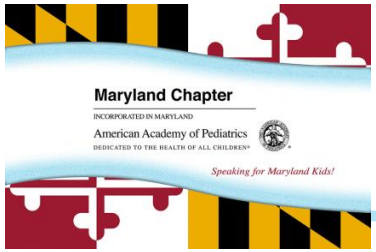


HOUSEKEEPING

- For educational and quality improvement purposes, this teleECHO session will be recorded
  - By participating in this session, you are consenting to be recorded – we appreciate and value your participation
- To protect patient privacy, please do not provide any protected health information (PHI)
- Please mute your microphone when not speaking
- Please enable your video if possible
- Chat with Loretta I. Hoepfner in Chatbox if you need technical assistance

Agenda

- Welcome – Loretta I. Hoepfner
- Lecture Presentation – Mike Ichniowski, MD, FAAP, and Paul Rogers, MD, FAAP
- QI Data Review – Troy Jacobs, MD, FAAP
- Case Presentation – Paul Rogers, MD, FAAP
  - *with special guest*: Rena Boss-Victoria, DrPH, MPH, MSRN, CNS (Section Head, Lead Surveillance, Nursing Consultant; Lead Poisoning Prevention Program; Maryland Department of the Environment)
- Case Discussion – All
- Follow Up and Next Steps – Loretta I. Hoepfner

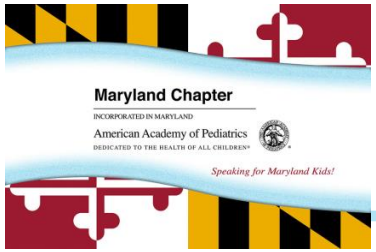
TODAY'S LECTURE

Counseling Patients and Caregivers

Paul T. Rogers MD MBA FAAP

Michael Ichniowski MD FAAP

March 1, 2023



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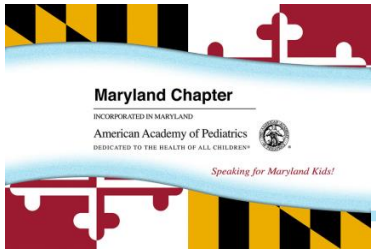
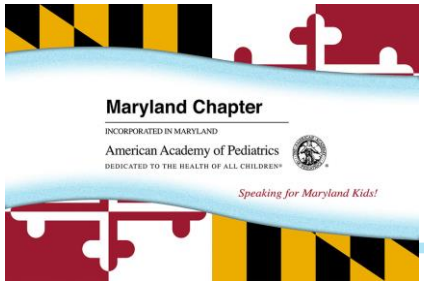
- The views presented in this didactic do not necessarily represent the views and opinions of the AAP.



Learning Objectives

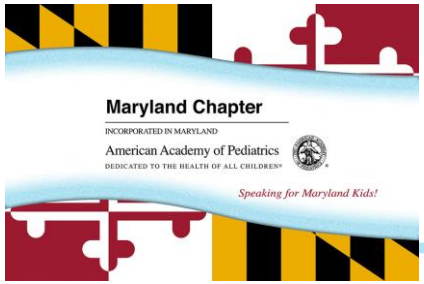
By the end of this ECHO session, participants will:

- Understand the pediatrician's role in counseling parents of children affected by lead poisoning.
- Discuss counseling and education for parents of children affected by lead poisoning.
- Review resources that may be utilized by practices when educating and counseling parents of children affected by lead poisoning.



Pediatricians Role in Counseling Parents

- Develop with the family the plan for management of the child with an elevated blood lead level
- Discuss interventions to prevent additional lead exposure
- Discuss dietary measures to reduce lead absorption
- Describe the plan for ongoing blood lead monitoring
- Discuss potential cognitive deficits; monitor development and behavior
- Referral to services to help minimize damage done by the lead poisoning
- Provide families with educational resources



The Plan to Manage the Child

Environmental History

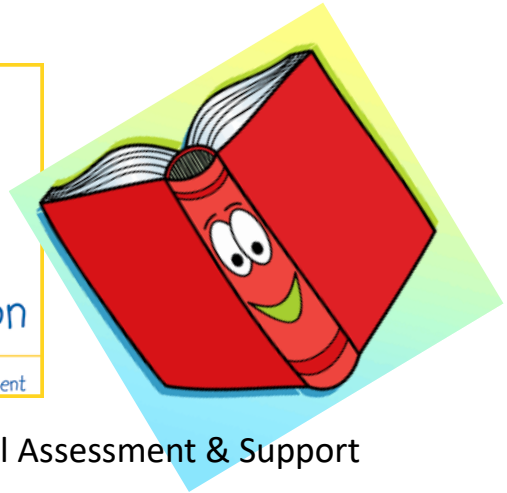
+

Home Inspection

Lead Hazard Prevention & Remediation

early intervention

supporting families and child development



Developmental Assessment & Support

Nutrition & Iron Supplementation

Images from Clip Art with exception of early intervention image; sourced from content created by Marissa Hauptman

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The Plan to Manage the Child: Environmental History & Home Inspection

Environmental History

Completed by the Lead Poisoning Prevention staff at local health department

Home Inspection

Completed by the Environmental Investigators at the MDE

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The Plan to Manage the Child: Lead Hazard Reduction

1. Reduce continued lead exposure in the home
2. Nutritional interventions to minimize further absorption of lead
3. Minimize exposure to lead in house dust
4. Minimize exposure to lead in soil
5. Eliminate any other sources of lead exposure

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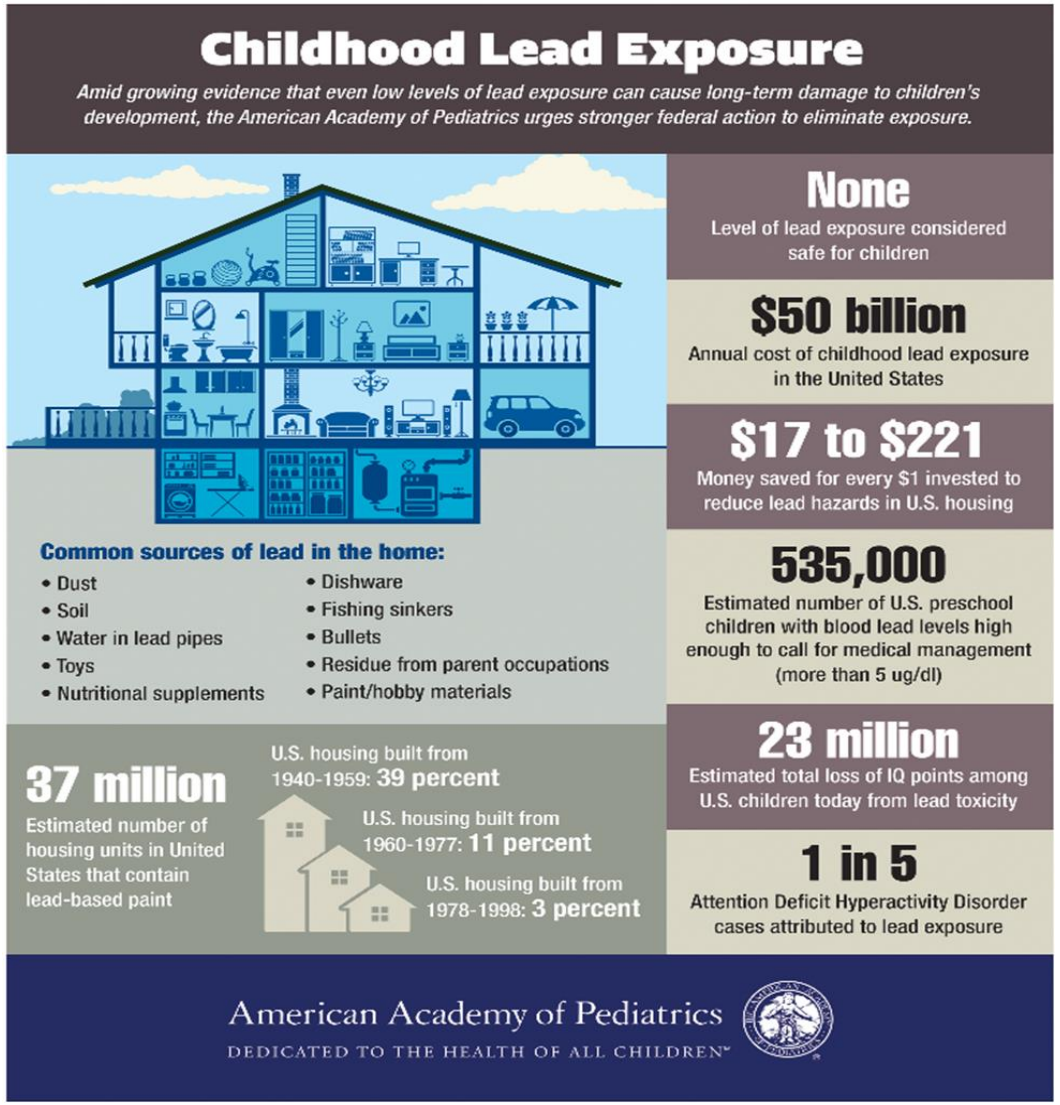
Lead Hazard Reduction in the Home



- https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/default.aspx

Risk Reduction Guidance for Families

Beware:
Unsafe repairs can make the problem worse!

- Flush 1st draw tap water ≥ 3 minutes
- Shoes off at threshold
- Keep windows closed to avoid paint abrasion
- Frequent wet mopping of doors/windowsills/ baseboards
- Frequent damp-dusting/HEPA-filtered vacuum
- Frequent hand washing
- Duct tape/contact paper on chipping paint
- Wash toys, bottles, pacifiers often
- Consider filter to reduce lead in drinking water
- Contact local water department: home's service line; test municipal/home water supply
- Test private well water annually

http://www.hud.gov/sites/documents/PROTECT_FAMILY_LEAD_2012.PDF

Nutritional Guidance

Calcium: Milk, orange juice, yogurt, cheese

Vitamin D & C: Sunlight, dairy, tuna, salmon, cod, mushrooms, orange juice, grapefruit juice

Iron: Meats, Fe-fortified cereals, shellfish, lentils, spinach

Magnesium: Cereal, soy milk, peanuts, almonds

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See EPA Fight Lead Poisoning With a Healthy Diet: https://www.epa.gov/sites/default/files/2014-02/documents/fight_lead_poisoning_with_a_healthy_diet.pdf

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Nutrition Handouts for Families

WHAT YOU SHOULD KNOW ABOUT LEAD AND NUTRITION...

LEAD FACTS

There is **no safe level** of lead in your body. Lead isn't good for anyone's health and is especially bad for small children. Children can absorb 4 to 5 times more lead than adults. And, lead is absorbed faster on an empty stomach. Keep your family lead-safe by avoiding contact with it. Remember that you and your children can be exposed to lead from a variety of sources such as paint, dust, dirt, reloading or casting bullets, folk medicines, home remedies, fishing sinkers, water, jewelry making, plumbing, make-up and toys.

NUTRITION FACTS

You May be Able to Prevent Lead from Getting into Your Child's Body *(Absorption)* by Following the Healthy Nutrition Guidelines Listed Below...

Foods prepared and served to young children may prevent lead absorption. **Following the 3 steps listed below may make a difference!**

1. When preparing food, be sure to wash and cook it with filtered water.
2. Serve your children small, healthy snacks between meals.
3. Serve foods that are high in iron, calcium and Vitamin C.

IRON

Iron may help reduce the absorption of lead in the body.

Food sources of iron include:

- Lean red meats, fish and chicken
- Spinach, kale and collard greens
- Iron-fortified cereal, bread and pasta
- Dried fruit, such as raisins and prunes
- Beans

**Anemia may develop with lead poisoning, so ask your pediatrician if your child needs to be screened for anemia.*

CALCIUM

Calcium keeps bones strong and may help reduce the absorption of lead in the body.

Food sources of calcium include:

- Milk and milk products like cheese and yogurt
- Spinach, kale and collard greens
- Tofu

VITAMIN C

Vitamin C works with iron and may help reduce the absorption of lead in the body.

Food sources of vitamin C include:

- Citrus fruits like oranges and grapefruit
- Tomatoes and tomato juice
- Peppers
- Other fruits like kiwi, strawberries and melons

Source: Utah Lead Coalition: https://utahleadcoalition.org/wp-content/uploads/Nutritional-Guidelines-English.pdf

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Blood Lead Level (BLL) Monitoring

Venous blood lead	Early F/U testing	Later F/U testing**
3.5-9 ug/dL	3 months*	6-9 months
10-19 ug/dL	1-3 months*	3-6 months
20-44 ug/dL	2-4 weeks	1-3 months
≥45 ug/dL	repeat ASAP (consider admission for chelation)	

*initial F/U test can be done within one month to check for rising BLL

**after 2-4 tests show steady decline

https://www.cdc.gov/nceh/lead/advisory/acclpp/actions-blls.html

Discuss and Manage Cognitive Deficits

early intervention

supporting families and child development

Loss of IQ points

Learning disabilities

ADHD

Neurobehavior Disorders

EPA ISA 2013: https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=255721

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Referral to Resources and Services

Maryland Early Childhood Education (ECE): Large scale, short-term public preschool programs have positive impacts on children's academic readiness and mixed impacts on their socioemotional readiness

https://earlychildhood.marylandpublicschools.org/

Maryland Head Start: Shown to have modest cognitive improvement among enrolled children (Differentiated from the general ECE programs in that it focuses on children's health, nutrition, mental health, and social service needs

Contacts by County
https://health.maryland.gov/mmcp/epsdt/healthykids/Section%208/Maryland-Head-Start.pdf

Source: CDC: Educational Interventions for Children Affected by Lead (2015)

Resources for Providers

Item	Website	QR Code
AAP: Identifying Infants and Young Children With Developmental Disorders	https://publications.aap.org/pediatrics/article/145/1/e20193449/36971/Promoting-Optimal-Development-Identifying-Infants?autologincheck=redirected	
MDE, Lead Poisoning Prevention Program	https://mde.maryland.gov/programs/land/leadpoisoningprevention/pages/index.aspx	

Resources for Providers - Continued

Item	Website	QR Code
MDH Lead Program	https://phpa.health.maryland.gov/OEHFP/EH/Pages/Lead.aspx	
New MDH programs for children with lead exposure who are enrolled in or eligible for Medicaid/MCHIP	https://phpa.health.maryland.gov/OEHFP/EH/Pages/CHIPEnvCaseMgmt.aspx	

National PEHSU Network

Support need for ***specific*** **clinical information on environmental toxins**

Facilitate ***early*** response to public health issues

Engage in public educational outreach activities

Participate in clinical assessments and referrals

Partner with local and state health departments and regional poison control centers

Give ***advice*** to residents and community leaders

Provide health care provider ***education*** and training opportunities

PEHSU Pediatric Environmental Health Specialty Units

Source: www.pehsu.net

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Additional Provider Resources

- State-level comprehensive lead poisoning prevention program (CLPPP) websites:
  - PEHSU: www.pehsu.net/lead_resources.html
  - EPA: https://www.epa.gov/lead
  - CDC: https://www.cdc.gov/nceh/lead/default.htm

PEHSU

EPA

CDC

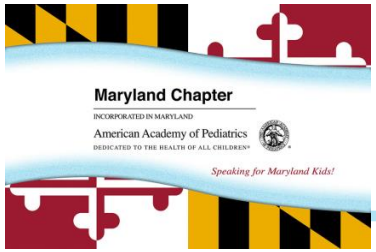
- AAP Childhood Lead Exposure Infographic
- AAP Policy Statement: Prevention of Childhood Lead Toxicity. Pediatrics June 2020, 145 (6) e20201014; DOI: https://doi.org/10.1542/peds.2020-1014
- Hauptman M, Bruccoleri R, Woolf AD. Update on childhood lead poisoning. Clin Pediatr Emerg Med 2017

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5645046/

- Woolf AD, Pingali H, Hauptman M. The COVID-19 pandemic and children's environmental health. Pediatr Annals 2020; 49 (12): e536-e542

https://pubmed.ncbi.nlm.nih.gov/33290572/

QUESTIONS?



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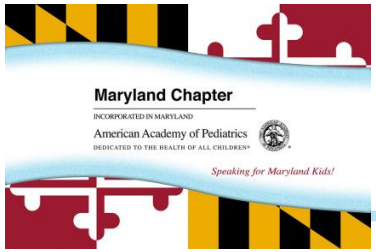
QI Data Review

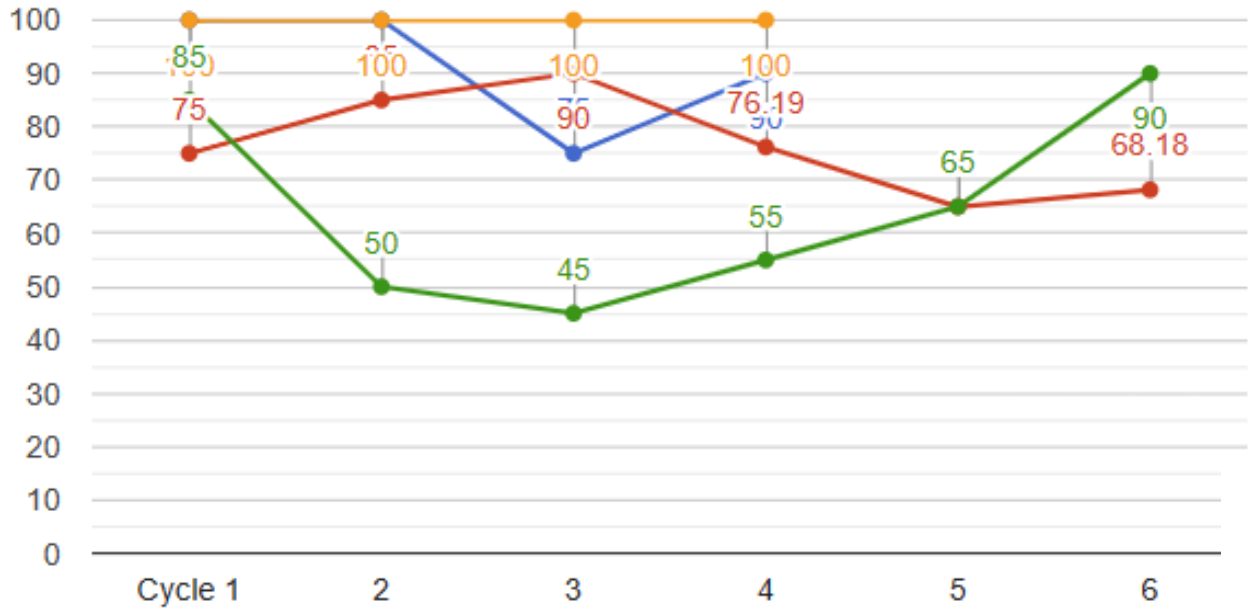
Troy A. Jacobs, MD, MPH, FAAP



Data Collection

Data Cycle #	Month of Visit (pull charts from time period listed below)	Date Entry in QIDA
1 (baseline)	August 1-31, 2022	September 28, 2022
2	September 1-30, 2022	October 14, 2022
3	October 1-31, 2022	November 11, 2022
4	November 1-30, 2022	December 9, 2022
5	December 1-31, 2022	January 13, 2023
6	January 1-31, 2023	February 10, 2023
7	February 1-28, 2023	March 10, 2023

Risk Assessment



Greenspring Pediatric Associates

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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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University of Maryland Shore Medical Group-Pediatrics

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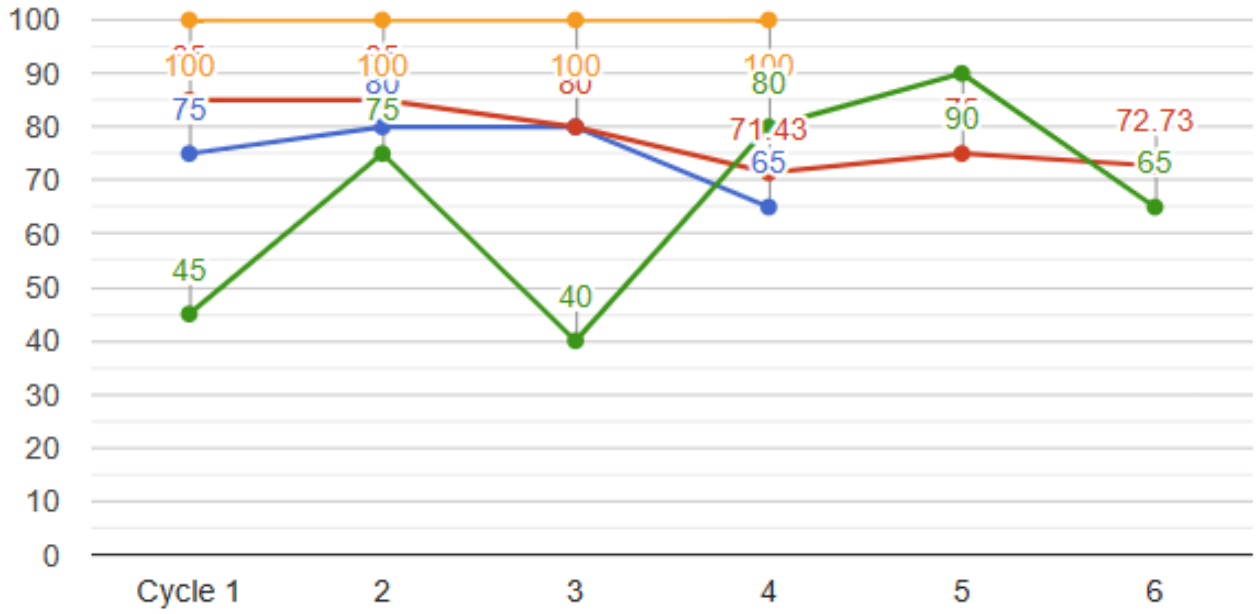
Documented Initial Blood Lead Test



Greenspring Pediatric Associates

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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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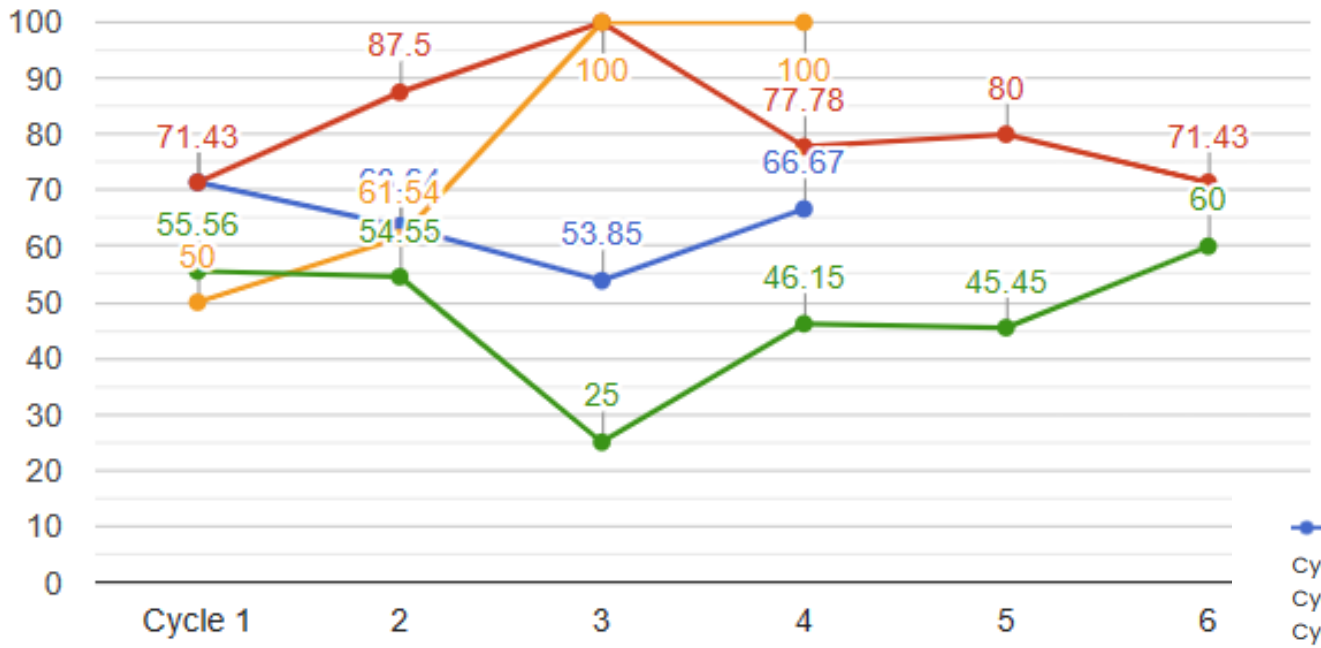
Blood Lead Testing



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Sanchez Pediatrics
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University of Maryland Shore Medical Group-Pediatric
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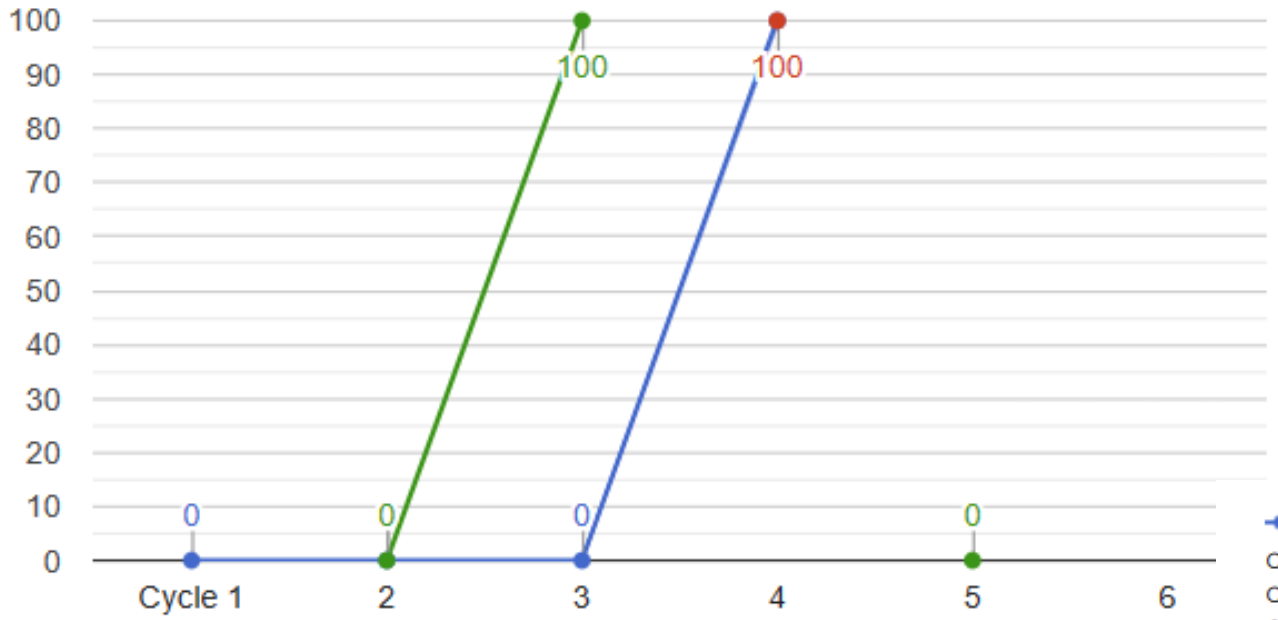
Blood Lead Results Interpretation (Follow Up Testing)



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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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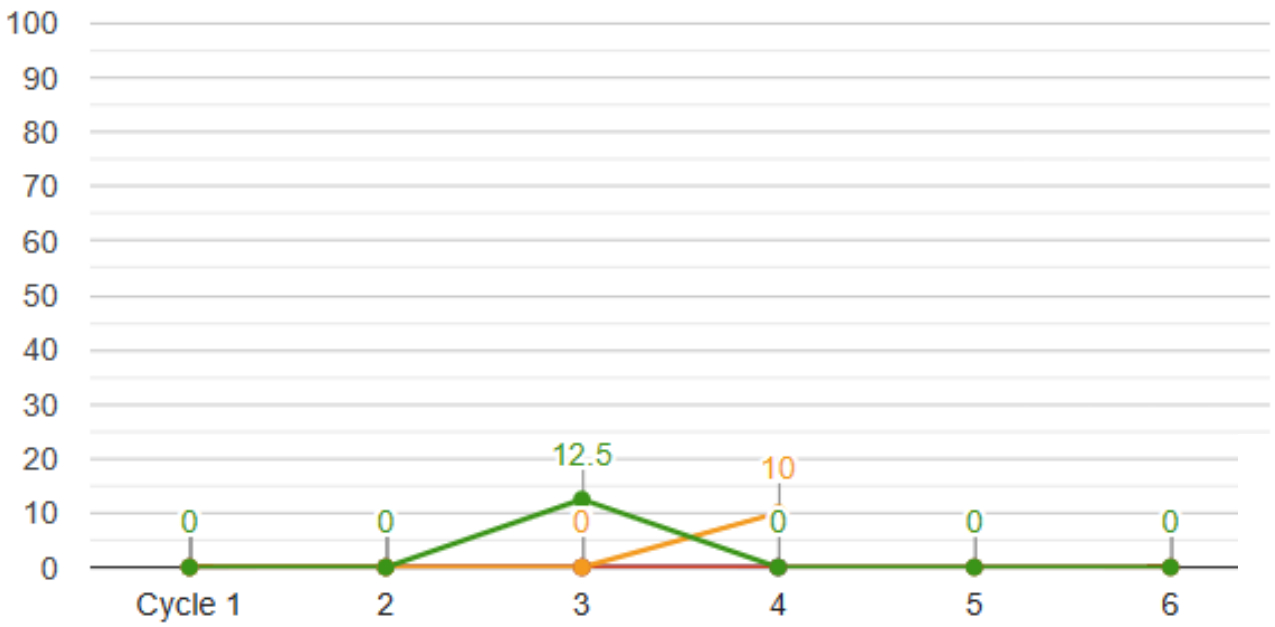
Care Management



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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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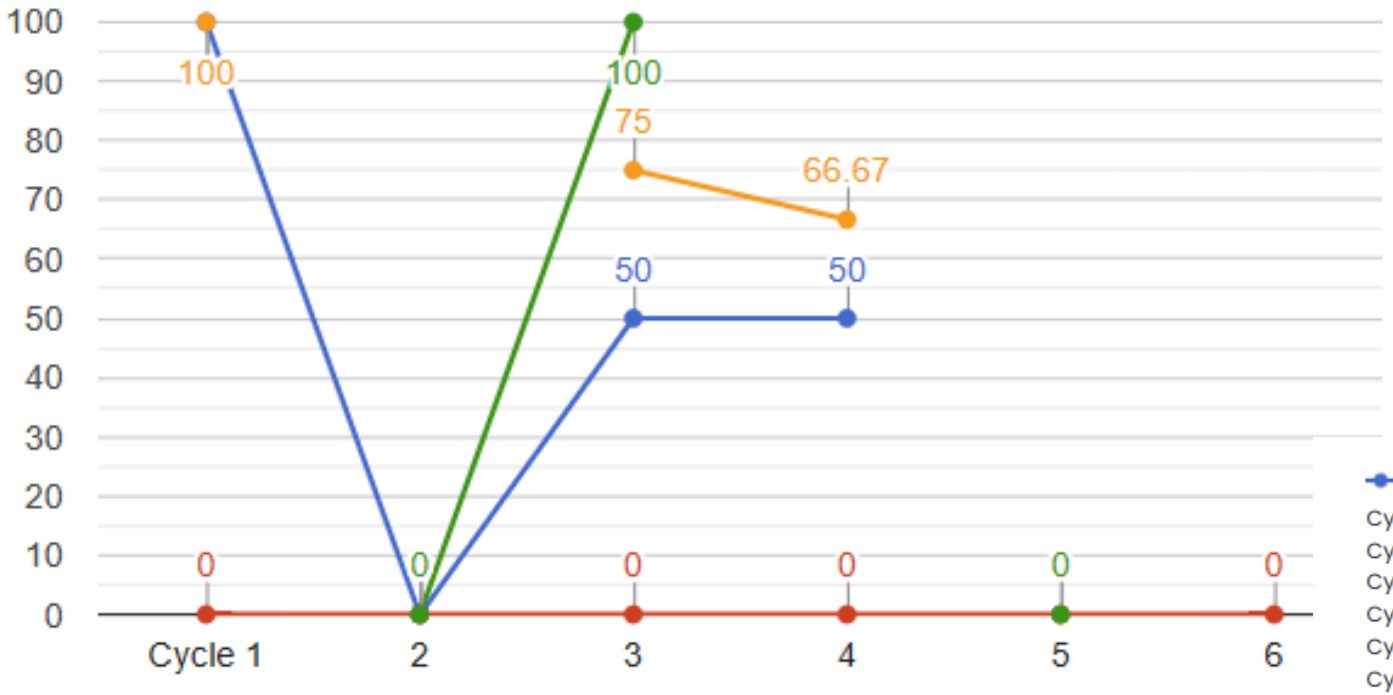
Counseling Parents



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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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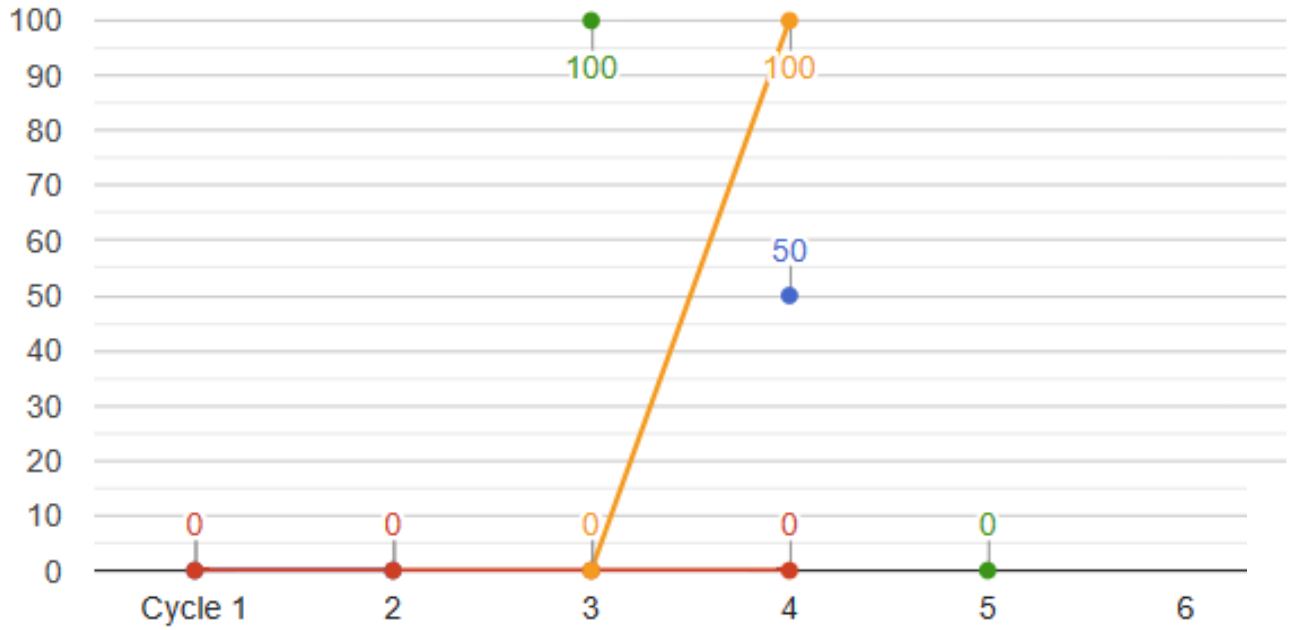
Referral to Academic programming



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MENCHAVEZ Pediatrics

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Sanchez Pediatrics

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University of Maryland Shore Medical Group-Pediatrics

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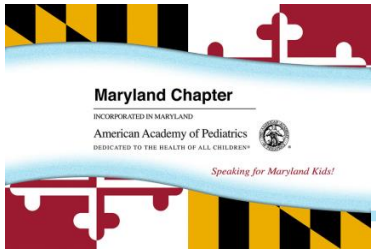
QUESTIONS?



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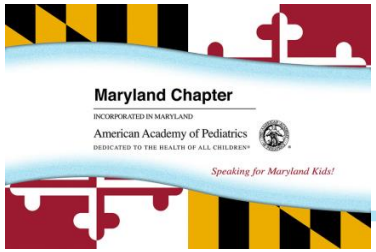
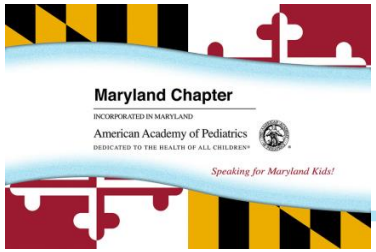
Case Presentation

Paul Rogers, MD, FAAP

Rena Boss-Victoria, DrPH, MPH, MSRN, CNS



QUESTIONS?



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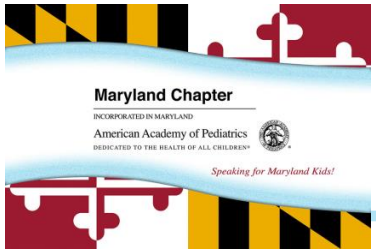
Follow up and Next Steps

- You will receive a follow-up email from MDAAP with:
  - PPT slides from today and a recording of the session
  - Link to the post-session SurveyMonkey

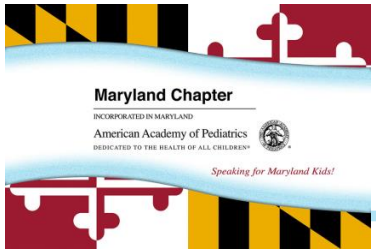
- Next Steps:
  - Complete your PDSA form and return to troy_a_jacobs@hotmail.com and loretta@mdaap.org
  - Enter your data into QIDA
  - Complete your Case Presentation form and return to michich23@hotmail.com, mdpaul5381@aol.com, and loretta@mdaap.org
  - Next – *and FINAL!* – webinar/Didactic & QI Session #8 on Wednesday, April 5, 2023, at 12-1p ET – Register at https://us02web.zoom.us/meeting/register/tZIpcO2spz0sGdDar3-uP7boJAgWBse4HWwe.



THANKS

FOR TAKING CARE OF

OUR MARYLAND KIDS!



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