

#### WHO WE ARE

The Nevada Childhood Lead Poisoning Prevention Program (NvCLPPP), partnered with the Nevada Public Health Foundation, is dedicated to protecting the health and well-being of children by educating families and medical and service providers on the effects of lead poisoning from older homes or items we bring into our homes.

NvCLPPP aims to:

- Increase blood lead testing in Nevada
- · Link children exposed to lead to services
- Improve methods of surveillance
- Provide education about lead to families, medical providers, and community partners

We are committed to working with health districts across the state and our community partners to increase the health and safety of Nevada's children, but we need your help! By learning about the pathways of lead exposure, the importance of testing, how to maintain a safe and healthy home, and how we can work together to keep kids safe, we can ensure a better Nevada for everyone. For a list of available educational classes and continuing education credits, visit our website <a href="nvclppp.org">nvclppp.org</a> for more information. Classes can be made available using remote learning.

### **COMMUNITY PARTNER HIGHLIGHT**

An Interview with Dr. Simangan from UNLV School of Medicine,
Department of Pediatrics





Dr. Dodds Simangan, DO, MPH, FAAP

We at NvCLPPP are grateful to have numerous partnerships with key entities that work to reduce the incidence childhood lead poisoning and provide care and support to children who

have been exposed to lead. In this issue, we would like to highlight our partnership with Dr. Dodds Simangan, Assistant Professor and Pediatrician from at the UNLV School of Medicine, Department of Pediatrics.

## NvCLPPP: What do you think about the fact that Nevada has one of the lowest lead testing rates in the nation?

Dr. Simangan: I think that what contributes to Nevada having one of the lowest levels of lead testing rates is a lack of education on sources of lead, a lack of priority and initiative, and the perception that only cities with older homes and plumbing are at risk.

Additionally, testing rates are low because Nevada is rated very poorly with access to healthcare with the lowest percentages of child health insurance, children in a medical home, and a very poor provider to patient ratio; all of which have been worsening.

If we were able to improve children's access to healthcare this should in turn also increase the rates of lead testing and other important health screenings that are time dependent on the maximum benefit for intervention.

#### NvCLPPP: Why do you think it's important to test children for lead?

Dr. Simangan: It is important to test children for lead because there is a proven correlation between lead exposure/poisoning to cognitive, behavioral and educational outcomes. There is no safe level of lead in the blood and screening for lead poisoning is simple, cost-effective, and can be life changing.

Since no therapeutic interventions currently exist for low blood lead concentrations, prevention of exposure is paramount, especially since there are irreversible effects of low-level lead toxicity.

The earlier we know, the earlier something can be done both for that individual or for that community. Preventative care is the cornerstone of Pediatrics and it is our duty to make sure all children live healthy and safe lives.

## NvCLPPP: Why do you think it's important for pediatric residents to learn about lead poisoning and lead testing?

Dr. Simangan: Pediatric residents must learn about lead poisoning and testing as this directly impacts the populations we treat. It is important for our residents to be taught with a systems-based approach to healthcare, and being exposed to this approach now is important as it will benefit them in treating their patients holistically in their future practice.

In the immediate setting (for example in our pediatrics clinic) we automatically screen for lead poisoning at one and two years of age, and for any time we suspect that a child may need testing (such as with behavior concerns, school failure, and known or high-risk exposure). From the training, our residents are better equipped on how to gather further information on sources of lead exposure, and how to intervene from both medical and public health approaches.

Click here to view the full interview

### **RECALL NOTIFICATIONS**

The Consumer Product Safety Commission (CPSC) recalls products such as toys and furniture when they are found to have unsafe levels of lead. Lead exposure can lead to cognitive and behavioral problems, especially for children under 6 years old. Consumers should immediately discontinue use of the recalled product and contact the manufacturer for a refund, when applicable.

Recalled Ron Jon Surf Shop Sippy Cup

On October 28, 2020 CPSC recalled about 9,700 units of the Ron Jon Surf



Shop Sippy Cup. The plastic characters on the cup contained excessive levels of lead that violate the federal lead content ban.

CPSC Recall Website

### IN THE MEDIA

#### NvCLPPP Delivers Presentation at CDC National Conference

On December 10, Dr. Erika Marquez delivered a presentation titled "Shaping physicians' perspectives on childhood lead poisoning: Outcomes from academic detailing sessions with medical providers" at the CDC's 2020 Childhood Lead Poisoning Prevention Program Annual Recipients' Meeting.

NvCLPPP uses academic detailing to share information with pediatricians about sources of lead exposure, the importance of lead testing children, reporting requirements, and ways to mitigate lead exposure. Academic detailing is an interactive approach that briefly provides the best evidence-based recommendations tailored to specific health care professionals.



The presentation was well-received—several state entities requested additional technical expertise on our academic detailing methodology in order to develop similar efforts.

Click here to view the presentation

#### Time's Kid of The Year Who Invented Portable Lead Testing Device

Inspired by the Flint, Michigan water crisis, 10-year-old Rao, created a new method to detect lead in drinking water with a device that is



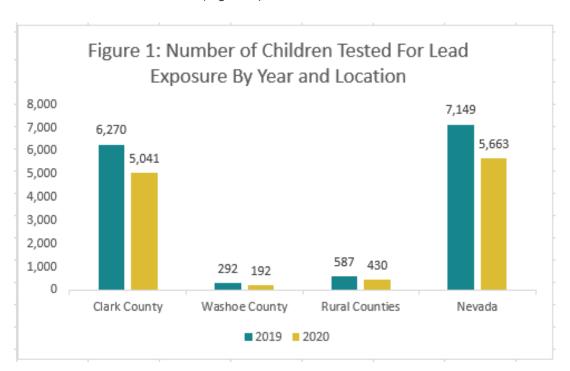
Time Magazine has chosen its firstever "Kid of the Year." 15-year-old Gitanjali Rao was chosen due to her innovative solution to address an ongoing issue-- lead-contaminated drinking water.

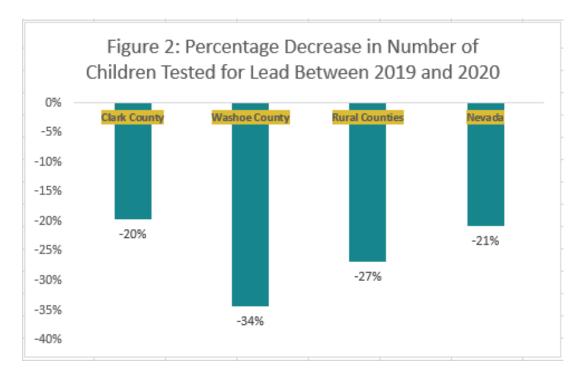
easy to use, inexpensive, and provides instant results on a smartphone. 1 The device, "Tethys", uses carbon nanotube technology to detect lead as opposed to the current testing method, Optical Emission spectroscopy (OES). She worked with her mentor, Dr. Kathleen Shafer, to bring her innovation to life. Rao is working to turn her Tethys prototype into a device that can be mass-produced to test water faster than current techniques. "[Tethys] is for people who don't really know what's in their water from the pipes leading to their house. My target market right now is people in their homes as well as schools,"<sup>1</sup> Rao said. (NPR, 2019)

#### LEAD IN NEVADA

#### Decline in Lead Testing In NV, Why It's Still Important to Test

COVID-19 has drastically affected our lives in many ways. In particular, the pandemic has resulted in a decline in seeking healthcare services. Consequently, Nevada reported 21% (or 1,486) fewer children tested for lead in 2020 compared to 2019 (Figures 1-2). More specifically, 20% fewer children were tested in Clark County, 34% fewer in Washoe County, and 27% fewer in Rural Counties (Figure 2).





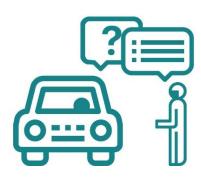
Note: Children ages 6 years old and under

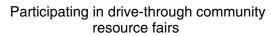
Children spend up to 85% of their time at home. While COVID safety protocols such as stay at home orders have proven effective in slowing the spread of COVID, it may inadvertently increase risk for lead exposure for children living in older homes. If a child's home contains lead hazards and they increase their time spent in that home, they may be more likely to be exposed to lead.

The only way to know if a child has been exposed to lead is by getting a blood lead test. Though many of us have postponed doctor's visits to reduce potential exposure to the virus, it is still important for young children to get their well-child visits, including their blood lead tests. Doctors offices have taken steps to reduce the spread of COVID-19 such as holding "sick visits" in the morning and "well visits" in the afternoon, having patients wait in their car until they are called to the exam room, enforcing mask requirements, separating chairs in the waiting room to maintain social distancing, and increased cleaning.

#### Outreach and Education Through the Pandemic

During the pandemic, the Nevada Childhood Lead Poisoning Prevention Program has shifted our communication approach to continue outreach and education efforts with our community partners, health care providers, and the general public. Some of the strategies we have employed during the pandemic include:







Providing virtual presentations to service providers



Mailing Lead Risk Checklists to 23,000 families in Nevada (19,000 in Southern NV, 4,000 in Northern NV)



Creating and disseminating lead poisoning prevention advertisements via Facebook



Sharing resources on social media during National Lead Poisoning Prevention Week

We thank our community partners who helped share our resources about ways to prevent childhood lead poisoning during National Lead Poisoning Prevention Week:

- Southern Nevada Health District
- Nevada Minority Health and Equity Coalition
- Maternal and Child Health Coalition
- Las Vegas Urban League
- UNLV School of Public Health

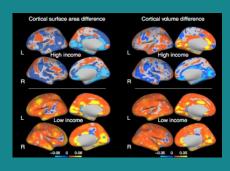
## LEAD EXPOSURE AND HEALTH

#### Lead's Impact on the Brain

Social factors like low levels of education and poverty constrain housing choices. As a result, families with lower socioeconomic status are more likely to live in older neighborhoods with greater exposure to environmental and household hazards like lead. Lead poisoning is known to negatively impact the structure of the brain resulting in lower cognitive abilities.

Marshall and colleagues (2020) examined differences in brain structure and function in children from low- and high-income families living in the same geographic area with a high lead risk (i.e., pre-1978 housing). They found that children from lower income families experienced even worse cognitive impacts than children from higher income families in the same neighborhoods. Specifically, the children from low income families experienced smaller brain volume and surface area, as well as lower cognitive test scores. 2

Disparate outcomes are likely a result of the availability of financial resources to maintain and/or remediate lead-based paint hazards in their homes. Reducing household lead exposure may confer the greatest benefits to the lowest income families living in older neighborhoods.



Click here to read the full peerreviewed article



# New Factsheet NvcLPPP



#### The Lifestages of Lead Poisoning factsheet is now available for download!

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The negative effects of lead poisoning don't stop at childhood, they can continue to impact health and wellness at every life stage. Click here to learn more. 3

> Click here to view the full factsheet

- 1. Chappell, B. (2020, December 03). 'Time' Names Its Kid Of The Year: Water-Testing Scientist Gitanjali Rao. Retrieved https://www.npr.org/2020/12/03/942034617/time-names-its-kid-of-the-year-water-testing-scientist-gitanjali-rao? fbclid=lwAR358lzwFYZBMOtGqfTPE4Pck293YhlGhqmKsLeZ0tiHbqLYqvB4FinZeDE
- 2. Marshall, A. T., Betts, S., Kan, E. C., McConnell, R., Lanphear, B. P., & Sowell, E. R. (2020). Association of lead-exposure risk and family income with childhood brain outcomes. Nature Medicine, 26(1), 91-97.
- 3. Osterholt, A., López, E., Marquez, E. (2020). Life Stages of Lead Poisoning. Nevada Childhood Lead Poisoning Prevention Program. Las Vegas, NV

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Prevention or the Department of Health and Human Services.