The U.S. Centers for Disease Control and Prevention is considering lowering its threshold for elevated childhood blood lead levels by 30 percent, a shift that could help health practitioners identify more children afflicted by the heavy metal.

Since 2012, the CDC, which sets public health standards for exposure to lead, has used a blood lead threshold of 5 micrograms per deciliter for children under age 6. While no level of lead exposure is safe for children, those who test at or above that level warrant a public health response, the agency says.

Based on new data from a national health survey, the CDC may lower its reference level to 3.5 micrograms per deciliter in the coming months, according to six people briefed by the agency. The measure will come up for discussion at a CDC meeting January 17 in Atlanta.

But the step, which has been under consideration for months, could prove controversial. One concern: Lowering the threshold could drain sparse resources from the public health response to children who need the most help – those with far higher lead levels.

The CDC did not respond to a request for comment.

Exposure to lead – typically in peeling old paint, tainted water or contaminated soil - can cause cognitive impairment and other irreversible health impacts.

The CDC adjusts its threshold periodically as nationwide average levels drop. The threshold value is meant to identify children whose blood lead levels put them among the 2.5 percent of those with the heaviest exposure.

“Lead has no biological function in the body, and so the less there is of it in the body the better,” Bernard M Y Cheung, a University of Hong Kong professor who studies lead data, told Reuters. “The revision in the blood lead reference level is to push local governments to tighten the regulations on lead in the environment.”

The federal agency is talking with state health officials, laboratory operators, medical device makers and public housing authorities about how and when to implement a new threshold.
Since lead was banned in paint and phased out of gasoline nearly 40 years ago, average childhood blood lead levels have fallen more than 90 percent. The average is now around 1 microgram per deciliter.

Yet progress has been uneven, and lead poisoning remains an urgent problem in many U.S. communities. A Reuters investigation published this month found nearly 3,000 areas with recently recorded lead poisoning rates of at least 10 percent, or double those in Flint, Michigan, during that city's water crisis. More than 1,100 of these communities had a rate of elevated blood tests at least four times higher than in Flint.

In the worst-affected urban areas, up to 50 percent of children tested in recent years had elevated lead levels.

The CDC has estimated that as many as 500,000 U.S. children have lead levels at or above the current threshold. The agency encourages “case management” for these children, which is often carried out by state or local health departments and can involve educating families about lead safety, ordering more blood tests, home inspections or remediation.

Any change in the threshold level carries financial implications. The CDC budget for assisting states with lead safety programs this year was just $17 million, and many state or local health departments are understaffed to treat children who test high.

Another concern: Many lead testing devices or labs currently have trouble identifying blood lead levels in the 3 micrograms per deciliter range. Test results can have margins of error.

“You could get false positives and false negatives,” said Rad Cunningham, an epidemiologist with the Washington State Department of Health. “It’s just not very sensitive in that range.”

The CDC doesn’t hold regulatory power, leaving states to make their own decisions on how to proceed. Many have yet to adapt their lead poisoning prevention programs to the last reference change, implemented four years ago, when the level dropped from 10 to 5 micrograms per deciliter. Other states, including Virginia and Maine, made changes this year.

The U.S. Department of Housing and Urban Development is close to adopting a rule requiring an environmental inspection – and lead cleanup if hazards are found – in any public housing units where a young child tests at or above the CDC threshold.

If the CDC urges public health action under a new threshold, HUD said it will follow through. “The only thing that will affect our policy is the CDC recommendation for environmental intervention,” said Dr. Warren Friedman, with HUD’s Office of Lead Hazard Control and Healthy Homes.

To set the reference value, the CDC relies upon data from the National Health and Nutrition Survey. The latest data suggests that a small child with a blood lead level of 3.5 micrograms per deciliter has higher exposure than 97.5 percent of others in the age group, 1 to 5 years.

But in lead-poisoning hotspots, a far greater portion of children have higher lead levels. Wisconsin data, for instance, shows that around 10 percent of children tested in Milwaukee’s most poisoned census tracts had levels double the current CDC standard.

Some worry a lower threshold could produce the opposite effect sought, by diverting money and attention away from children with the worst exposure.

“A lower reference level may actually do harm by masking reality – that significant levels of lead exposure are still a problem throughout the country,” said Amy Winslow, chief executive of Magellan Diagnostics, whose blood lead testing machines are used in thousands of U.S. clinics.

Edited by Ronnie Greene