



# State Levers to Promote Lead Screening and Treatment: Rhode Island's Strategies

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## Introduction

Childhood lead exposure is associated with lower cognitive function,<sup>1</sup> which leads to children's underperformance in school and later in the workplace. Yet, children in an estimated 4 million households are currently exposed to high levels of lead.<sup>2</sup> Due to lead's adverse long-term consequences, addressing lead hazards today can yield future economic benefits and improved health outcomes. Remediating lead paint hazards in homes of children from low-income families built before 1960 is estimated to generate \$3.5 billion in future benefits—which include earnings, health and education savings, and quality-adjusted life years—for 311,000 low-income children.<sup>3</sup> Because Medicaid covers many low-income children who may be at high risk of lead exposure,<sup>4</sup> failing to address lead hazards and exposure can generate significant long-term costs for Medicaid and a lost opportunity to promote children's healthy development.

The National Academy for State Health Policy (NASHP) recently released a [50-State Scan of State Health Care Delivery Policies Promoting Lead Screening and Treatment](#) that highlights various Medicaid and non-Medicaid strategies that states use to improve lead screening rates and reduce lead hazards. This case study explores several Medicaid and Children's Health Insurance Program (CHIP) levers and highlights Rhode Island's strategies, including a managed care organization performance metric, data sharing, coverage of lead abatement, and an additional provider guideline for screening.



## What is the long-term value of lead remediation?

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## Background

The most common source of lead exposure in Rhode Island, as in other states including [Indiana](#), is lead-based paint used in 80 percent of the state's housing stock built before 1978, when it was finally banned in housing.<sup>5</sup> In 2004, the Rhode Island Department of Health drafted a strategic plan to reduce the incidence of childhood lead poisoning,<sup>6</sup> and the state's strategies have been effective. The incidence of children under age 6 with blood lead levels of 5 micrograms of lead per deciliter of blood ( $\mu\text{g}/\text{dL}$ ) and higher has decreased from roughly 19 percent in 2004 to about 3 percent in 2017.<sup>7</sup> However, disparities persist. While the lead poisoning rate has declined across the state, exposure rates in cities with child poverty level greater than 25 percent is twice that of the rest of the state.<sup>8</sup> In 2015, 70 percent of children with blood lead levels equal to or greater than 10  $\mu\text{g}/\text{dL}$  were covered by Medicaid—despite the fact that only 49 percent of Rhode Island children tested for lead were enrolled in Medicaid.<sup>9</sup> Rhode Island's Medicaid agency clearly has a high stake in promoting lead screening and treatment.

## Rhode Island's Strategies

Rhode Island has employed several statewide strategies to identify and treat children with elevated blood lead levels.<sup>10</sup>

**Metrics and incentives:** In 2015, Rhode Island received a Round Two [State Innovation Model](#) (SIM) Test Grant from the Centers for Medicare & Medicaid Services (CMS). To facilitate value-based contracting, Rhode Island's SIM Steering Committee created a workgroup to develop a measure set that would be used by all payers in the state.<sup>11</sup> The workgroup included lead screening for children within the menu of measures that accountable care organizations and primary care providers would use.<sup>12</sup> The Rhode Island Office of the Health Insurance Commissioner mandated the use of these measure sets in commercial contracts that have a financial incentive tied to quality. In addition, the state Medicaid agency allows for the menu of measures to be adopted as part of the [Accountable Entities](#) (Rhode Island's Medicaid accountable care organizations) quality framework.

Rhode Island Medicaid also uses the measure sets in managed care contracting and has a performance-based incentive program in which Medicaid managed care organizations (MCOs) can earn incentive payments for achieving the 90th percentile benchmark for the Healthcare Effectiveness Data and Information Set's (HEDIS)<sup>13</sup> [lead screening in children measure](#).<sup>14</sup> MCOs that achieve the 75th percentile benchmark earn a partial award.<sup>15</sup>

**Medicaid reimbursement for follow-up services:** Rhode Island Medicaid covers non-medical case management in the form of an educational home visit, which includes a visual assessment of the home; education about lead hazards, nutrition, and cleaning techniques. It also covers temporary lead hazard control measures to mitigate exposure to lead hazards for children with blood lead levels of 5  $\mu\text{g}/\text{dL}$  and higher.<sup>16</sup> Following a home assessment, Certified Lead Centers can provide up to six months of intensive case management and another four months of less intense maintenance case management.<sup>17</sup> In 2017, case management services were offered to 393 Medicaid-eligible children and 247 of them accepted services. Medicaid also reimburses for comprehensive environmental lead inspections, which include analysis of paint, dust, water, and soil in homes of children with blood lead levels of 10  $\mu\text{g}/\text{dL}$  or higher.<sup>18</sup> In 2017, environmental inspections were offered to 94 Medicaid-eligible families, and 57 families accepted services.

Case management and environmental inspections are reimbursed as medical expenditures. There is no limit on the number of home visits and inspections that Medicaid can reimburse for.

In addition, Rhode Island Medicaid can cover the cost of replacing windows in residences housing lead-poisoned children under the authority of the state's [Section 1115 demonstration waiver](#). This benefit is currently only available to children enrolled in Rhode Island's Medicaid managed care program ([Rlte Care](#)) and premium assistance program ([Rlte Share](#)).

**Provider guidelines:** In addition to the federal requirement that all Medicaid-enrolled children should receive blood lead tests at their 12- and 24-month well-child visits, Rhode Island requires all children in the state—regardless of risk level and health insurance coverage—receive at least two blood lead tests by age 3.<sup>19</sup> Between ages 3 and 6, children whose test results are equal to or greater than 5 µg/dL must continue to be tested annually through age 6.<sup>20</sup> Children who have been screened in compliance with guidelines and have never had a blood lead level exceeding 5 µg/dL should be screened annually until the age of 6 using the risk assessment questionnaire.

**Mandatory reporting and data sharing:** Providers are required to report all blood lead test results to the Rhode Island Department of Health. Test results are then imported into KIDSNET, a population-based integrated child health information system that links data from 10 different public health programs.<sup>21</sup> KIDSNET allows providers to identify children in their practices who are due for lead screening.<sup>22</sup> Rhode Island is using SIM funding to integrate person-level data across health and human services agencies, including linking KIDSNET data with Medicaid and other data sources.<sup>23</sup> CMS has approved Rhode Island's request to use the Medicaid Electronic Health Record incentive program's [enhanced federal match](#) to connect KIDSNET to the statewide health information exchange, and the state is working on implementation.<sup>24</sup> Successful linkage of KIDSNET and Medicaid data could alert Medicaid Accountable Entities of attributed members with elevated blood lead levels who are in need of referral to medical and social services.

**Requirements for schools, child care facilities, and foster homes:** The Rhode Island Department of Health requires public and private kindergartens, day care centers, preschools, early childhood education programs, and other child care facilities to obtain a statement from the child's health care provider at enrollment indicating compliance with state lead screening requirements.<sup>25</sup> However, providers are not required to report lead screening test results and schools are not required to exclude children who do not meet the lead screening requirement from enrollment.<sup>26</sup>

In addition, the state's [Lead Poisoning Prevention Act](#) requires all preschools, kindergartens, child care facilities, and foster care homes serving children under the age of 6 to provide documentation that these facilities are lead-safe or lead-free and have passed comprehensive environmental lead inspections, which are conditions for licensure of foster care homes.<sup>27</sup>

**Lead monitoring of school and day care facility drinking water:** Since 2016, the Rhode Island Department of Health has tested drinking water supplies for lead at state-licensed day care facilities and public schools serving students from pre-K to grade 12.<sup>28</sup>

## Takeaways

Rhode Island's success provides examples of how it has used various levers to reduce the rate of childhood lead poisoning. States can use managed care performance metrics tied to incentive payments, establish a universal screening requirement, and mandate providers to report blood lead test results to encourage screening. States can also require schools, child care facilities, and foster care homes to be lead-free and use Medicaid dollars to cover case management and home inspections to prevent future exposure. States seeking to promote lead screening and treatment can explore these strategies to determine what fits their needs and goals.

## Endnotes

1. Aaron Reuben, Avshalom Caspi, and Daniel W. Belsky, "Association of Childhood Blood Lead Levels With Cognitive Function and Socioeconomic Status at Age 38 Years and With IQ Change and Socioeconomic Mobility Between Childhood and Adulthood," *JAMA* 317, 12 (2017): 1244-1251, <https://doi.org/10.1001/jama.2017.1712>.
2. "Lead," Centers for Disease Control and Prevention, last updated July 18, 2018, <https://www.cdc.gov/nceh/lead/>.
3. Pew Charitable Trusts and Robert Wood Johnson Foundation, *Ten Policies to Prevent and Respond to Childhood Lead Exposure*, August 2017, [http://www.pewtrusts.org/~media/assets/2017/08/hip\\_childhood\\_lead\\_poisoning\\_report.pdf](http://www.pewtrusts.org/~media/assets/2017/08/hip_childhood_lead_poisoning_report.pdf).
4. William Wheeler and Mary Jean Brown, "Blood Lead Levels in Children Aged 1-5 Years – United States, 1999-2010," *Morbidity and Mortality Weekly Report* (April 5, 2013 / 62(13)): 245-248, Centers for Disease Control and Prevention, <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm>.
5. "Childhood Lead Poisoning," Rhode Island Department of Health, accessed August 22, 2018, <http://www.health.ri.gov/data/childhoodleadpoisoning/>.
6. Rhode Island Department of Health, *A Healthier Rhode Island by 2010: A Plan for Action*, May 2004, <http://www.health.state.ri.us/publications/actionplans/2004HealthyPeople2010.pdf>.
7. "Childhood Lead Poisoning," RIDOH. A full description of childhood lead poisoning can be found in the SIM Health Assessment Report, starting on page 72.
8. "Childhood Lead Poisoning," RIDOH.
9. Ana P. Novais, "Lead in RI – A Public Health Response" (PowerPoint presentation, 29th Annual State Health Policy Conference, Pittsburgh, PA, October 18, 2016, <https://custom.cvent.com/024D0492CF3C4ED1AEDC89C0490ECDEE/files/event/02A978D2532C47828E117BD62C4A8468/d0b1d4c11ba94df39c12122e280035fctmp.pdf>).
10. To learn about other Medicaid and CHIP strategies available to states, please see NASHP's 50-State Scan of State Health Care Delivery Policies Promoting Lead Screening and Treatment and State Strategies to Improve Childhood Lead Screening and Treatment Services under Medicaid and CHIP.
11. State of Rhode Island, *Rhode Island State Innovation Model (SIM) Test Grant Operational Plan*, May 2016, <http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/State%20Innovation%20Model/RISIMOperationalandIPHPlan.pdf>.
12. For a list of the measure sets, please see <http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/SIM/BailitFinalMeasureSetsCompiled.pdf>.
13. HEDIS is a set of health care performance measures developed and maintained by the National Committee for Quality Assurance (NCQA). HEDIS is widely used by health plans in the United States. For more information, please see <http://www.ncqa.org/hedis-quality-measurement>.
14. Please see Rhode Island's Section 1115 demonstration waiver.
15. *Ibid.*
16. Novais, "Lead in RI."
17. State of Rhode Island Department of Human Services, *Comprehensive Lead Centers Certification Standards*, November 2006, [http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/Lead\\_Center\\_cert\\_stds.pdf](http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/Lead_Center_cert_stds.pdf).
18. *Ibid.*
19. "Healthy Homes and Lead Poisoning Information for Healthcare Providers," Rhode Island Department of Health, accessed August 22, 2018, <http://www.health.ri.gov/healthrisks/poisoning/lead/for/providers/>.
20. For more information on Rhode Island's lead screening and referral intervention process, please see <http://www.health.ri.gov/publications/brochures/provider/LeadScreeningAndReferralInterventionProcess.pdf>.
21. Other public health programs linked on KIDSNET are newborn bloodspot, hearing and developmental screening, vital records, home visiting, immunization, lead screening, WIC, Early Intervention, and asthma.
22. "Lead Poisoning Information for Healthcare Providers," RIDOH.
23. State of Rhode Island, *SIM Operational Plan*.
24. *Ibid.*
25. "Lead Poisoning Information for Schools & Child Care Centers," Rhode Island Department of Health, accessed August 22, 2018, <http://www.health.ri.gov/healthrisks/poisoning/lead/for/schoolsanddaycarecenters/>.
26. *Ibid.*
27. Novais, "Lead in RI." See also § 23-24.6-14 of Rhode Island's Lead Poisoning Prevention Act (<http://webserver.rilin.state.ri.us/Statutes/TITLE23/23-24.6/23-24.6-14.HTM>) and *Foster Care and Adoption Regulations for Licensure* (<https://rules.sos.ri.gov/regulations/part/214-40-00-3>).
28. "Lead in School and Daycare Facility Drinking Water," Rhode Island Department of Health, accessed August 22, 2018, <http://www.health.ri.gov/data/schools/water/>; Novais, "Lead in RI." See also Rhode Island's Lead and Copper Drinking Water Protection Act (<http://webserver.rilin.state.ri.us/BillText/BillText16/HouseText16/H8127A.pdf>).

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