CHIP Health Service Initiatives: How States Have Leveraged Federal Dollars to Fund Pediatric Social Determinant Initiatives

by

Michelle Nguyen

Bachelor of Science, University of Pittsburgh, 2020

Submitted to the Graduate Faculty of the

Department of Health Policy and Management

Graduate School of Public Health in partial fulfillment

of the requirements for the degree of

Master of Public Health

University of Pittsburgh

2022

UNIVERSITY OF PITTSBURGH

Graduate School of Public Health

This essay is submitted

by

Michelle Nguyen

on

April 19, 2022

and approved by

Essay Advisor:

Lindsay M. Sabik, PhD
Associate Professor and Vice Chair for Research
Health Policy and Management
Graduate School of Public Health
University of Pittsburgh

Essay Reader:

Elizabeth M. Felter, DrPH
Assistant Professor
Behavioral and Community Health Sciences
Graduate School of Public Health
University of Pittsburgh

CHIP Health Service Initiatives: How States Have Leveraged Federal Dollars to Fund Pediatric Social Determinant Initiatives

Michelle Nguyen, MPH

University of Pittsburgh, 2022

ABSTRACT

Under Title XXI, Children's Health Insurance Program (CHIP), states can use part of their CHIP administrative budget to implement Health Service Initiatives (HSIs). In return, they will receive the federal CHIP matching rate for HSI expenditures. These HSIs fund activities that promote public health, specifically targeting low-income children.

If states have sufficient financial capacity, they can implement multiple HSIs to fund a large range of activities. As of 2019, over 24 states have implemented over 70 total HSIs. These HSIs have funded activities that tackle issues of public health significance, including poison control, parenting education, and family planning.

This essay will examine some previously implemented HSIs that specifically address lead prevention and opioid use disorder services, as these two activities pertain specifically to Pennsylvania's public health priorities. Additionally, the essay will address the opportunities, challenges, and overall feasibility of CHIP HSI implementation in Pennsylvania and explore which additional measures can support the state in pursuing the HSI option.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

My first introduction to CHIP health service initiatives (HSIs) was through my residency experience at UPMC Health Plan. As part of the CHIP team, I had the opportunity to support Reach Out and Read (ROR), a national pediatric literacy model endorsed by the American Academy of Pediatrics. Using this model, pediatric providers use books as developmental tools at well-child visits. At the end of the visit, the child can bring home the book to start their at-home library. Because the framework is implemented at pediatric health offices, it encourages families to adhere to their well-child visit appointments where children can receive their age-appropriate developmental screenings and vaccinations. Well-child visit attendance, developmental screening rates, and vaccination rates are all clinical measures UPMC's CHIP team is evaluated on as a managed care organization. Consequently, this sparked my team's interest in exploring opportunities with ROR.

In exploring funding mechanisms to support this collaborative initiative, I stumbled upon CHIP HSIs and presented the idea to my team. I was surprised to find that though my colleagues had extensive experience and understanding of CHIP, they had never heard of the option. This was how I first learned that CHIP HSIs, despite their far-reaching benefits, are not currently being utilized in the state of Pennsylvania and are an underutilized option nationally. This eventually sparked the idea to write this master's essay, which hopes to address the opportunities and challenges related to CHIP HSIs from the state perspective.

I would like to thank so many at UPMC Health Plan who have supported my work and research on ROR and CHIP HSIs: Dr. Deborah Moss, Sarah Morrow, Lisa Macesich, and my wonderful preceptor, Patrick Tracy. I have also learned so much from the ROR of Greater

Philadelphia team: Katie Lane, Dr. Trude Haecker, Dr. Danielle Erkoboni, and Donna Cohen Ross. Lastly, I am so grateful to Dr. Lindsay Sabik and Dr. Elizabeth Felter, my primary and secondary readers for this essay. Their feedback has been tremendously helpful.

1.0 INTRODUCTION

Medicaid and the Children's Health Insurance Program (CHIP) are two large government insurance programs initially designed to bridge the health insurance gap for individuals with low to moderate income (Alker & Dwyer, 2021). In recent years, however, there have been ongoing conversations about how these programs can support broader public health activities.

One such option for CHIP is through the utilization of health service initiatives (HSIs). CHIP HSIs are activities that "protect public health, promote a state's capacity to deliver public health services, or accomplish public health goals related to improving the health of children" (MACPAC, 2019). These activities are required to serve mainly low-income children but are open to all kids. Furthermore, they target mainly Medicaid and CHIP-eligible children, but again, are not limited to this population. In short, HSIs are loosely defined and can be catered to fit a variety of activities and populations.

Many of these HSIs focus on improving the "social determinants of health" (SDOH), a general term that encompasses the social and economic conditions in which people are born, grow, live, work, and age. Studies have shown that improving these determinants is, in fact, more effective in improving life expectancy than improving health care technology, as SDOH can drive as much as 80 percent of health outcomes (Manatt & Phelps & Phillips, LLP, 2019). HSIs that aim to improve SDOH may tackle issues like housing safety, school-based health services, and financial assistance for health services.

CHIP HSIs are implemented at the state level. States can implement them by using their limited CHIP funding, and in return, they receive matching federal funds to further finance these initiatives. This federal matching is an attractive option that many states have already used. As of

February 2019, 24 states had 71 HSIs approved in their CHIP state plans (MACPAC, 2019). Despite the increasing popularity of HSIs, however, many large states still have not utilized the option. Pennsylvania is one such state.

This essay will examine potential reasons for this fact, evaluate the strengths and weaknesses of the HSI option overall, and in the case that the state is ready to explore the option, provide recommendations for how Pennsylvania can use the option to address its acute public health priorities. Two such priorities for the state include lead poisoning and the opioid crisis—issues that other states have already addressed through the implementation of their own HSIs. These other states' example HSIs may provide an array of lessons that Pennsylvania can benefit from and learn from.

2.0 BACKGROUND

2.1 Overview of the Children's Health Insurance Program

CHIP was created as part of the Balanced Budget Act of 1997 to help bridge the health insurance gap for children from modest-income families that did not qualify for Medicaid (Alker & Dwyer, 2021). As a federal-state partnership like Medicaid, it is joint-funded by states and the federal government but administered at the state level.

At the time of CHIP's creation, the federal government was unsure of how states would respond to this new opportunity. In the next three years, however, every state, territory, and the District of Columbia had children enrolled in CHIP (MACPAC, n.d.).

Because CHIP is administered by the state, its eligibility criteria vary by state as well. In Pennsylvania, there is no upper income threshold for eligibility. This means that all children and teens who are under 19 years of age, ineligible for Medicaid, and both U.S. citizens and residents of Pennsylvania may qualify for Pennsylvania CHIP. Depending on income, they may qualify for one of three tiers of CHIP: free, low-cost, or full-cost (PA Department of Human Services, n.d.).

There are many benefits to having CHIP coverage. For one, CHIP offers quality, comprehensive health insurance coverage in the same way that Medicaid does, paying for routine doctor visits, prescriptions, dental, eye care, and more.

On top of that, there has been a greater demand for CHIP and Medicaid managed care organizations to add extra services outside of covered contract services, known as value-added services (Mahajan, 2021). These value-added services are meant to ameliorate health-related social needs, which may be greater and more urgent for CHIP's target population: "low-income children who are ineligible for Medicaid, typically from families with income up to 200 percent of

the federal poverty level" (Centre for Public Impact, 2016). These value-added services may include benefits like online social services resource directories, nurse hotlines, and over-the-counter allowances (Aetna, n.d.; Highmark, 2020).

Lastly, another benefit that targets vulnerable populations covered under CHIP—and the primary topic of this essay—is the CHIP HSI option, which states are allowed to implement as part of their state plan amendment (PA Department of Human Services, n.d.).

2.2 History of Health Service Initiatives

When the Balanced Budget Act of 1997 established the CHIP program, it dictated that all states must cap administrative responsibilities under 10 percent of their total budget. There was little guidance, however, on which activities could be included under that cap. Shortly after, the Centers for Medicare and Medicaid Services (CMS)—then known as the Health Care Financing Administration—further elaborated on what those activities under the cap could include. That is, "administrative expenditures, outreach, health service initiatives, and certain other child health assistance" could all be qualifying expenses (HCFA, 1997).

Due to the original lack of specificity on what the term "health service initiatives" could mean, CMS issued sub-regulatory guidance on HSIs in 2017 to specify what kind of activities and populations are allowable. This said, however, CMS's guidance is still relatively vague and open to interpretation (MACPAC, 2019). They define HSIs as activities that "protect the public health, promote a state's capacity to deliver public health services, or accomplish public health goals relating to improving the health of children, including children in Medicaid and CHIP" (Brooks,

2019). Though all HSIs must address the health of low-income children, they can still serve other children as well.

Each state is allowed to create one or more HSIs using a portion of CHIP funding, and in return, receive the federal CHIP matching rate for HSI expenditures. This federal matching rate, called the Enhanced Federal Medical Assistance Percentage (eFMAP), varies by state. It is considered "enhanced" because it is higher than that of a state's Medicaid program. In Pennsylvania for fiscal year 2022, the eFMAP is 71.22 percent (Kaiser Family Foundation, n.d.).[1] In other words, for every dollar reflected in the total state plan amendment change, the federal government will contribute 71.22 cents of that dollar while the state will contribute 28.88 cents. For some states, this enhanced matching rate makes CHIP HSIs an enticing option. For others, there may be further considerations.

Some states are not capable of utilizing the option if their administrative cap is mainly taken up by other expenses, such as expenses for translation services and outreach efforts. However, even states that have the budget for HSIs may still choose not to use them. While states may have different reasons for not utilizing the option, one issue may be the very concept of investing in public health. Because the outcomes for these investments are often not in tangible dollars, it can be difficult to calculate the return and value of these programs.

The Pennsylvania Department of Human Services, Office of CHIP, does not publicly disclose its reasoning for not participating in the CHIP HSI option. A team member at Pennsylvania Partnerships for Children, an independent, non-partisan, research-based child advocacy organization based in Harrisburg, suggests that Pennsylvania has found it challenging to

[1] This rate may be skewed to reflect higher federal matching funding made available through the Families First Coronavirus Response Act.

fund additional activities due to the extent of its administrative expenses.[2] With administrative expenses taking up nearly all the 10 percent administrative cap, it has been difficult to stretch the budget further to allow for further investments into public health from the CHIP budget. Other conversations with organizations that have previously advocated for Pennsylvania's utilization of HSIs have suggested otherwise, as they cite Pennsylvania's politics and priorities as the state's reasoning for not participating.[3]

However, in the case that it is due to a lack of funds under the administrative cap, there are ways to free up funding. In a brief from the Georgetown University Health Policy Institute, Joan Alker and Anne Dwyer make the case for "modernizing CHIP" by increasing and permanently extending outreach and enrollment funding, such as the grant funding established by The Children's Health Insurance Program Reauthorization Act of 2009. These grants gave funding to community-based organizations to "conduct outreach and enrollment efforts to reduce the number of children eligible but not enrolled in Medicaid and CHIP" (Alker & Dwyer, 2021). While this grant funding was extended in following CHIP extensions, the amount of outreach and enrollment funding has been reduced. Alker and Dwyer, in their brief, suggest increasing this funding again.

Consequently, if more outreach and enrollment grants were made available, this could potentially mean states rely less on their 10 percent administrative cap for these services, which would thus open room to fund needed activities through HSIs.

[2] Based on the author's verbal interactions with a PA Partnerships for Children team member and a Reach Out and Read of Greater Philadelphia team member.

2.3 Implementing HSIs

States seeking to implement an HSI must submit a state plan amendment to CMS explaining the initiative in detail. Components that must be included are a) the populations served, b) how the initiative will improve children's health, c) an updated CHIP program budget, and d) assurances that the state will not supplant or match CHIP federal funds with other federal funds.

After the HSI has been approved, states must include HSI outcomes as part of their CHIP annual reporting. These reports must identify the population served by the HSI, the number of children served, the percent of children served with income below the state's CHIP eligibility threshold, and explain the metrics used to assess the effects of the HSI on the health of low-income children. Reporting metrics will vary depending on the specific HSI objective and are stated in the original state plan amendment submitted (MACPAC, n.d.).

2.4 Pennsylvania's Public Health Priorities

While state public health priorities often shift and change—with COVID-19 as an obvious example of a priority that took precedence in recent months—two priorities that have stayed relatively constant for Pennsylvania in the last five years are child lead poisoning and the opioid crisis.

2.4.1 Lead Poisoning

Since 2017, the advocacy group, Pennsylvania Partnerships for Children, has identified lead exposure as an area of concern every year in their annual "State of Children's Health Care" reports. In 2019, the Pennsylvania Department of Health declared that the entire commonwealth

is at risk for lead exposure, tying the prevalence of lead in Pennsylvania to the age of the state's housing and infrastructure (Joint State Government Commission, 2019). There are many potential sources of lead such as lead-contaminated plumbing and soil. The most common, however, is lead paint. Given that many of Pennsylvania's homes, schools, and childcare facilities were built decades before the lead paint ban in 1978, lead can still exist on building walls, sometimes under layers of paint (Joint State Government Commission, 2019).

There is no safe blood lead level in children, but lead poisoning is defined by the Centers for Disease Control and Prevention (CDC) as having a reference blood lead level of 5 µg/dL or above (CDC, 2022). According to a report from the Council for a Strong America, nearly 9,000 children in Pennsylvania have a blood lead level above this threshold each year. Because children's bodies absorb more lead and their brains and nervous systems are more susceptible to damage from toxic chemicals, lead exposure is especially dangerous for young children. Lead exposure in young children can have lasting impacts such as learning disabilities, poor school performance, behavior issues, and impulse control problems (Preventing Childhood Lead Exposure in Pennsylvania, 2021).

In 2019, Pennsylvania ranked second in states with the highest number of children testing positive for lead poisoning. Furthermore, despite the high number of lead poisoning cases, out of the ten states with the highest rates of lead poisoning, Pennsylvania ranked second-worst for testing children (Public Citizens for Children and Youth, 2019).

Though children who receive Medicaid coverage are required by federal regulations to be tested for lead at 12 months and again at 24 months and are required to be tested at least once under the age of six, many children receiving Medicaid still do not get tested. Philadelphia's

Childhood Lead Poisoning Prevention Advisory Group found that "in practice, lead testing for children is often delayed" (Joint State Government Commission, 2019).

Other policy interventions that can help promote lead testing include a universal screening provision in state public health regulations. As of 2019, 11 other states and Washington, D.C. have some form of a universal screening requirement for all children in their state (Joint State Government Commission, 2019). Additionally, some localities require universal blood lead testing for children within their jurisdiction, such as Allegheny County's health department rule that requires all county children to receive a test between 9 and 12 months and again at 24 months, and at least once before 72 months or kindergarten entry.

Lead testing is a form of secondary prevention, meaning that it identifies disease in the earliest stages (CDC, n.d.). Given the prevalence of aged buildings and infrastructure in Pennsylvania, lead testing should of course remain an essential safety net for children who may already be exposed to lead. However, primary prevention—that is, prevention strategies that aim to prevent disease before it ever occurs—is also important. One method of primary prevention of lead poisoning is lead remediation, an umbrella term for strategies designed to eliminate lead hazards to prevent future exposure. Often, remediation will include lead abatement, which is the removal of lead from a site or encapsulating it in a way that it no longer poses a risk. One abatement strategy would be, for example, stripping old lead paint from buildings. These strategies can be very cost-effective; the Robert Wood Johnson Foundation estimates that every dollar spent on removing lead-paint-based hazards results in a return of three dollars in the form of avoided health care costs and loss of lifetime earnings (Preventing Childhood Lead Exposure in Pennsylvania, 2021). Unfortunately, "cost-effective" does not always mean minimal initial cost. Many inherent financial challenges exist with lead remediation efforts. The removal of lead paint and replacement

of lead-contaminated pipes and soil may require a large investment of money from the entity responsible for lead remediation. Though the federal government may provide grants for lead remediation efforts, these funds are competitive. A perhaps more impactful and sustainable method of addressing lead exposure in Pennsylvania is a non-competitive funding stream to sustain lead remediation efforts. A CHIP HSI could be one example of such.

2.4.2 The Opioid Crisis

The Pennsylvania Office of Attorney General states that "the heroin and opioid epidemic is the number one public health and public safety challenge facing Pennsylvania" (Office of Attorney General, n.d.). From 2015 to 2016, there was a 37 percent increase in overdose deaths in Pennsylvania. To put the issue into perspective, 14 Pennsylvanians die every day from overdose on average, and the death toll is still rising (Office of Attorney General, n.d.).

In the U.S. overall, since 1999, the number of drug overdose deaths has quadrupled. This is largely attributed to the increased prescription of opioid medications leading to misuse of both prescription and non-prescription opioids. Pennsylvania ranks among states where the rate of overdose death rates is "statistically higher" than the national rate. As of 2015, the state's rate was 26.3 deaths per 100,000 people as compared to the national rate of 16.3 deaths per 100,000 people (Hedegaard, Warner, & Minino, 2017).

Due to the prevalence of drug overdose in Pennsylvania, Governor Wolf has made fighting the opioid crisis a top priority of his administration. In January 2018, he signed the opioid disaster declaration. The declaration was renewed a total of 15 times before officially ending on August 25th, 2021, after the Republican-controlled General Assembly declined to extend it. Despite this, Governor Wolf stated in a speech that same day that Pennsylvania's "fight is not over," especially

with overdose deaths at a three-year high (PA Opioid Command Center, 2020; Open Data PA, n.d.).

Governor Wolf and his Administration have made additional efforts in stopping the opioid crisis—namely through Pennsylvania's strengthened Prescription Drug Monitoring Program (PDMP). PDMP has been effective in driving Pennsylvania's decline in drug overdose deaths and addiction in recent years, but even Governor Wolf's Administration admits that there is still room for growth (PA Department of Health, Office of Drug Surveillance and Misuse Prevention).

PDMP, while effective in educating and enabling health care providers to safely prescribe controlled substances to their patients, does not necessarily address one of the most vulnerable populations to the opioid epidemic: adolescents and young adults (AYA).

Two in three adults treated for opioid use disorder (OUD) first used opioids when they were younger than age 25 (Utchitel, Hadland, Raman, McClellan, & Wong, 2019). It is well-known that AYAs are often prone to high-risk and substance-seeking behaviors. There is an added layer thrown in when they have parents who have access to opioids (The Center for Children's Justice, 2017).

Despite these troubling statistics, few OUD prevention strategies focus on this population. There are many barriers to accessing needed services for AYAs: limited screening for opioid use in primary care visits, hard-to-navigate services to support AYAs with OUD, and stigma from peers and society. Additionally, OUD also often co-occurs with mental health problems such as depression, anxiety, and attention-deficit/hyperactivity disorder, which only further stigmatizes OUD and discourages AYAs from seeking help (Utchitel, Hadland, Raman, McClellan, & Wong, 2019). Because the challenges AYAs face are drastically different than those faced by adults, it is

important to implement youth-centered opioid prevention programs, such as those other states have previously funded through CHIP HSIs.

3.0 ADDRESSING LEAD POISONING

3.1 Background

When thinking about lead poisoning, many recall the water crisis in Flint, Michigan that began in 2014 when the city decided to switch its drinking water supply from Detroit's system to the cheaper option through the Flint River. As a result, the contaminated water from the Flint River contributed to a doubling—and in some cases, tripling—of the incidence of elevated blood lead levels in the city's children (Denchak, 2018).

The Flint water crisis was a wake-up call that lead poisoning still exists in 21st century America. Before the event, lead poisoning evoked a certain image for many: perhaps a black and white portrait of the 1960s when pediatric lead poisoning was—as described by Manfred Bowditch, the director of Health and Safety for the Lead Industries Association—"a disease inevitable to slum dwelling" (Bliss, 2016). After lead-based paints were banned for residential use in 1978, the topic eventually fell off the public's agenda (Bliss, 2016).

But lead poisoning continues to be a serious hazard for children in the U.S. despite being completely preventable. It is especially dangerous in children under six years of age, whose bodies absorb lead more easily than those of older children and adults. Children are especially at risk if they live in homes built before 1978 and/or live in low-income households.

Lead poisoning also disproportionately affects black families. There is a multitude of structural racism issues that may contribute to this. One of these issues is redlining, which refers to the federally sanctioned lending practice that denied home loans to all Black families regardless of their qualifications. As a result, neighborhoods with predominantly Black families were coded

as red on city maps and deemed unfit for investment—investment, of course, that could be used for lead remediation and abatement (Abdi & Andrews, 2018).

Lead abatement programs are the most effective interventions for lead poisoning because lead paint, usually found in homes built before 1978, is the primary cause of lead poisoning in the U.S (Manatt Health, 2017). This paper will be exploring two states that have had large lead abatement interventions: Michigan and Maryland. Michigan, of course, has a unique and high-profile context due to its history with the Flint water crisis. Maryland's intervention is similar to Michigan's but adds an in-home case management component. The additional component also addresses both lead education and asthma education. Both states' interventions are funded by CHIP HSIs.

3.2 Michigan

In November 2016, months after President Obama's emergency declaration that ordered federal aid to supplement state and local efforts in redressing the crisis, Michigan secured a CHIP HSI from CMS to abate and ameliorate all lead hazards in the impacted areas of Flint and other targeted areas throughout the state (Green and Healthy Homes Initiative, 2019).

Under this HSI, Michigan led coordinated lead abatement activities in eligible homes inhabited or visited regularly by Medicaid or CHIP-eligible children or Medicaid or CHIP-eligible pregnant women. Eligible homes had to be owner-occupied or rentals.

While the initiative prioritized Flint's impacted areas, Michigan also identified other high-risk communities to be targeted for HSI-approved abatement activities. These areas either a) had a high percentage of the population with elevated blood lead levels or b) were considered "old

housing stock" (CMS, 2016). Additionally, any Medicaid or CHIP beneficiaries with a blood lead level greater than or equal to 5 μg/dL[3] in non-targeted areas could also be eligible for lead abatement activities (CMS, 2016).

The metrics used to reflect the progress of the abatement activities were the number of eligible homes identified with high levels of lead hazards, the number of homes in which lead abatement had occurred, records of actual services provided in each home, and the percentage of children with elevated blood lead levels statewide and in the areas served by this HSI. In addition, the state tracked the results of clearance testing to determine if all identified lead hazards had been abated and maintained a publicly available registry of all ameliorated homes (CMS, 2016).

To fund the HSI, Michigan spent the full amount remaining under its 10 percent administrative cap: $24 million per year over five years, a total of $120 million for the full five-year project. Those funds covered the following lead abatement activities: 1) removing lead-based paint and lead dust hazards; 2) removing and replacing surfaces or fixtures within the eligible home; 3) removing or covering soil lead hazards on the eligible home's property; 4) testing activities associated with pre and post-abatement paint, dust, soil or water activities; and 5) providing training to build a qualified workforce to complete the lead abatement activities (CMS, 2016).

Though Michigan is required to state the impacts of its HSI program in its annual CHIP reports, the state was vague in its findings. If further elaboration was ever made, that evidence is not accessible via CMS's website. Therefore, it is unclear what the exact impacts of the HSI are. It is worth noting, however, Michigan's overall success in decreasing pediatric lead poisoning

[3] This threshold is used by the Centers for Disease Control and Prevention for identifying children with high blood lead levels.

since the Flint crisis and after the HSI was approved. In 2019, the Flint water crisis officially ended. In 2020, Michigan reported a record low of 2,302 children tested with elevated blood lead levels (MiTracking, n.d.).

3.3 Maryland

A month after CMS's approval of Michigan's HSI, Maryland submitted its HSI state plan amendment to CMS for approval. It was approved in June 2017. Maryland's approach to lead exposure was a little different, as it advanced a two-prong initiative to target low-income children in the state.

The first component was called Healthy Homes for Healthy Kids, which sought to expand Maryland's lead identification and abatement programs for low-income children. The programs were delivered by the Maryland Department of Housing and Community Development.

The second component, named Childhood Lead Poisoning Prevention & Environmental Case Management, sought to expand its existing county-level case management programs. These programs involved environmental assessment and in-home education methods to reduce the impact of lead and other environmental toxins on low-income children (State of Maryland, 2017).

This case management component had several unique aspects. First, the initiative addressed multiple health hazards: lead and asthma. Its targeted population included kids with either a) blood lead levels of over 5 μg/dL or b) persistent moderate to severe asthma. Additionally, this component involved extensive interagency collaboration. Maryland's Department of Health and Department of the Environment partnered to distribute data from the Childhood Lead Registry—the state's mechanism for childhood blood lead surveillance—to managed care

organizations monthly. Additionally, because the case management was delivered by local health departments, the state's Department of Health shared its data quarterly with the local health departments (ASTHO, 2021).

Maryland's CHIP Annual Report from 2018 and 2019 showed some substantial impact, though the reported numbers were rough estimates. In both years, the first part of the initiative—Healthy Homes for Healthy Kids—had served a maximum[4] of 200 properties abated. The second component had served a maximum[5] of 2,000 children (State of Maryland, 2017). Overall, Maryland's HSIs demonstrate how interagency collaboration and a multi-pronged policy strategy can advance lead poisoning prevention and treatment.

[4] The actual number is anywhere from 0-200 properties abated.

[5] The actual number is anywhere from 0-2,000 children.

4.0 ADDRESSING OPIOID USAGE AND PREVENTION

4.1 Background

According to the National Institute on Drug Abuse, the economic burden of substance abuse and addiction (i.e., tobacco, alcohol, and illicit drugs) on the United States exceeds $740 billion annually in costs related to crime, lost work productivity, and health care.

Traditionally, substance abuse interventions are not tailored by age. They also tend to focus more on treatment than prevention (Miller, 2022). However, given nine out of 10 individuals with addiction disorder began using substances before the age of 18, there may be reason to start these interventions at an early age and focus more on prevention than treatment. Age-tailored interventions at an earlier stage may prevent those who become addicted to opioid painkillers early on from moving on to more dangerous drugs and lifestyles (Utchitel, Hadland, Raman, McClellan, & Wong, 2019).

Schools, at their best, can serve as sanctuaries for children and young adults in providing prevention and early intervention services. Teachers' knowledge of their students can help shape and tailor these services to best fit the students' needs. This essay will review a school-based program for drug addiction and opioid overdose prevention in New York State, funded through a CHIP HSI (State of New York, 2017).

4.2 New York

Naloxone is a cost-effective intervention to prevent overdose deaths and save lives. According to a study in The Annals of Internal Medicine, for every 164 naloxone kits given out,

one life can be saved. Furthermore, naloxone distribution costs about $400 for every quality-adjusted year of life gained—which is well under the accepted $50,000 cutoff for medical interventions (Young, 2012).

This said, prior to 2006, the only registered entities in New York State to administer naloxone were opioid prescribers (physicians, physician assistants, and nurse practitioners), drug treatment programs, health care facilities, local health departments, and community-based organizations that have the services of a clinical director. Then, on April 1st, 2006, a New York State law went into effect which allowed for non-medical community members to administer Naloxone.

Following this law, New York State allowed agencies to register with the state's Department of Health as having an opioid overdose prevention program (OOPP). Some agencies that were encouraged to register were schools, school districts, and Board of Cooperative Educational Services districts, especially those found in areas with high community risk (New York State, n.d.). In return for registering as OOPPs, these schools and districts would receive free naloxone and training on opioid overdose prevention.

In 2016, the provision of a New York State HSI funded additional training for naloxone administration—specifically, for the staff of school districts registered as OOPPs (MACPAC, 2019). Though the HSI did include elementary schools in its statutory language, its focus was on middle and high schools. To administer this HSI-funded program, the NYS Department of Health partnered with The Foundation for AIDS Research, which conducted trainings and purchased overdose prevention kits. The trainings followed a curriculum for learning overdose recognition and response. The rescue kits were distributed to school personnel in the case of an emergency and comprised of two mucosal atomizers, two syringes pre-filled with naloxone for use with atomizers,

a breathing mask, nitro gloves, and a zipper bag for containing the supplies (State of New York, 2017).

The reporting metrics selected for the HSI were a) the number of school districts and schools with opioid overdose response capacity, and b) the number of school-based personnel trained in opioid overdose recognition and response. Within a year of implementation, 3,726 school personnel were trained. 91 school districts registered OOPPs, which covered 399 distinct schools and 118,959 children (25% of which were low-income).

In New York's 2018 CHIP Annual Report, the state officially reported 293,510 children served by their program, 45% of whom were low-income. The numbers increased the following year in the state's 2019 CHIP Annual Report, which stated that the program had served 307,396 children. Again, 45% of them were considered low-income. There are no reports available yet for fiscal years 2020 and 2021. However, the increased number of children served year-to-year from 2018 to 2019 is a positive indicator that the program's reach was expanding (CMS, 2022). Additionally, the program was relatively successful in hitting its target demographic: low-income children.

One potential explanation for the success of this HSI overall is that this program existed prior to getting HSI funding. The guidance document for implementing opioid overdose prevention measures in schools came out in August 2015 (State of New York, 2019), eight months before the HSI became effective. This gave some time for the program to build and for schools to register as an OOPP. Additionally, the partnership between the state and The Foundation for AIDS Research was paramount because the foundation has previously trained people on how to administer naloxone and therefore has experience in that field.

This is important to consider in any HSI opportunities Pennsylvania wishes to pursue down the line. Instead of creating new interventions through the provision of HSIs, the state may wish to simply add funding to existing programs that have strong evidence of success. Additionally, it may be worth examining possible partnerships with foundations and organizations that can better speak to the issue the HSI is addressing.

5.0 DISCUSSION

Due to the enhanced federal matching rate, HSIs can be a financially attractive option for the state to put money toward public health priorities. The dollars invested through these initiatives can also have tremendous reach, potentially impacting the lives of thousands of children state-wide. In the case that the state is interested in the option, there are many teachable lessons from examining other already-implemented HSIs.

Michigan's HSI was the first to tackle lead prevention and they had a strong case given their experience during the Flint crisis. After their HSI was approved, CMS issued an FAQ stating that lead abatement was an approved activity for CHIP HSIs (ASTHO, 2021). This goes to show that CMS is flexible enough in its definition of approved activities and populations for CHIP HSIs that states can seek HSI funding for their unique priorities. Additionally, states have been able to use "approved activities," like lead abatement, to address other health hazards in the state. Maryland is a great example of this in using their HSI to address both lead exposure and pediatric asthma. Lastly, Michigan, Maryland, and New York all used interagency collaboration and CHIP administrative funds to advance their projects. CHIP HSIs do not necessarily have to be entirely new projects to pursue. It might even be more useful to use the additional funding to add to pre-existing initiatives and/or contribute to a partnership between the state and community organizations that already invest in that public health activity.

One potential partnership worth considering is between the state and managed care organizations, similar to how the state of Michigan shared its data with managed care organizations. In thinking of HSI possibilities for Pennsylvania, it might be an interesting strategy

to utilize Medicaid's program structure and relationships with managed care providers to achieve broader public health goals.

It is important to note, of course, that there are some challenges to the CHIP HSI option and some limitations when looking at the effectiveness of these HSIs. For one, despite the requirement to report the HSI's outcomes in the state's annual CHIP report, the amount of detail given on meeting evaluation metrics varies state-to-state. For example, Michigan did not thoroughly evaluate its lead abatement program in its annual 2017, 2018, and 2019 CHIP reports. However, evidence from Michigan's 2021 Child Lead Exposure Elimination Commission Annual Report suggests that the percentage of children tested with an elevated blood lead level in Michigan has gone down from years 2017 to 2020 by 0.3% (Michigan Department of Health and Human Services, 2021).

Additionally, there is data from the Michigan Department of Health and Human Services that shows a decrease in the number of children tested with elevated blood levels as well. In 2016 when the HSI was implemented in Michigan, there were 5,643 children tested with elevated blood lead levels. In 2017, that number had reduced significantly to 4,699. In 2018, it was down to 4,072; in 2019, 3,907; in 2020, 2,302. While the state's success in reducing these numbers cannot be wholly attributed to the CHIP HSI, this data is still indicative of some change being made (MiTracking, n.d.).

For all three states—Michigan, Maryland, and New York—there are no CHIP annual reports available at the current moment for the years 2020 and 2021, making it difficult to gauge the effectiveness of these programs, especially those that have been implemented recently.

However, overall, the examples of state HSIs reviewed in this essay are strong examples for Pennsylvania to consider and have shown favorable success in meeting their objectives. They

align well with Pennsylvania's health priorities. Also, none of the interventions are entirely new. Michigan's HSI and Maryland's HSI build on many similar lead abatement and education programs. Even within Pennsylvania, there are similar programs already implemented, such as UPMC's Lead Poisoning Prevention and Education Program, which offers prevention education and environmental home inspections to families of affected children. An HSI from Pennsylvania CHIP could potentially add to these programs, expand them, and tailor them to serve low-income populations.

The case of New York's HSI also shows that HSIs can help fund existing programs as well. Naloxone kit distribution has been proven to help reduce opioid-related overdose and death. New York State simply took that one step further by providing this in a school setting, which helps address opioid misuse among children and young adults.

6.0 CONCLUSION

As Pennsylvania continues its efforts in addressing public health issues such as childhood lead exposure and the opioid crisis, the CHIP HSI option may be one opportunity the state can utilize. Of course, the option has strengths and weaknesses that are important to consider as the state has limited resources and a variety of interventions and opportunities to choose from.

Through the utilization of HSIs, states can implement a wide array of interventions that cannot be financed with Medicaid funds alone (Ross & Guyer, 2019). The enhanced federal matching rate for HSI expenditures may also be an attractive financial option for the state to invest in the public health of its residents. However, funding for HSIs comes from the state's 10 percent administrative cap for its CHIP budget, which may be limited as is. Additionally, there is potential resistance to the idea of using CHIP to fund these initiatives, which is outside the scope of its traditional role in providing health insurance coverage for kids. This section will attempt to point out any challenges, considerations, and opportunities that CHIP HSIs may pose.

6.1 Challenges for Pennsylvania

In 2019, Pennsylvania CHIP became part of the Office of Medical Assistance Programs (OMAP), which also oversees Medicaid. Since then, OMAP has continued to align CHIP and Medicaid. Most recently, they announced their plans to integrate the CHIP application process system with Medicaid's. This change will be implemented in early 2023 (PA DHS, Office of CHIP, 2021).

This change—called the IT Transition—is meant to align policies and procedures between the two programs and automate business practices. It also establishes a single point of contact, the County Assistance Offices, for families to access resources. This makes the transition for families from Medicaid to CHIP, or vice versa, streamlined (PA DHS, Office of CHIP, 2021).

While in theory, this change is beneficial for so many families moving in and out of CHIP and Medicaid, it is hard to predict how that will affect administrative costs. Administrative costs for Pennsylvania CHIP may already be high, nearing the full 10 percent administrative cap. This is a potential challenge for Pennsylvania to implement HSIs if the state simply does not have the budget for it despite having many worthwhile activities to fund.

This is not to say, however, that the Pennsylvania Department of Human Services is not aware of these worthwhile activities. In 2019, before the COVID-19 pandemic took priority, Governor Wolf had proposed a total budget for the Department of Human Services that included a $4.4 million lead remediation HSI to "expand lead remediation services and increase the number of EPA-certified providers" (Gov. Wolf: Lead-Free PA Initiative Seeking Input on Local Needs, 2019). This funding would be used for "building infrastructure in 1-2 new areas to increase the regions in Pennsylvania ready and able to assist in lead remediation efforts moving forward. Funding [would] also be made available for training and certification to increase the number of individuals who are EPA-certified to complete lead remediation in areas where there are shortages of individuals to do this work" (Gov. Wolf: Lead-Free PA Initiative Seeking Input on Local Needs, 2019). The governor's plans were announced in October 2019 during a press release. In January 2020, another press release suggested that the plan was to have the HSI-funded program operational by the next fiscal year (Gov. Wolf Announces Billion-Dollar Plan to Fix Toxic

Schools, Address Lead Across Pennsylvania, 2020). As of April 2022, however, there have been no further details about the progress of this HSI.

The delay in seeking the Pennsylvania lead remediation HSI is, unfortunately, unclear. Different sources have cited different reasons: contradicting priorities, politics, a lack of budget, and general apathy. If the reasoning is, however, limited room under the state's administrative cap, it is important to understand how the state can re-budget to allow for HSI funding.

6.2 Considerations

The HSI option also begs the question of how much governmental insurance programs should focus on supporting public health outcomes. Reaching roughly 40 million kids, Medicaid and CHIP cover nearly half of the nation's children (Alker & Brooks, 2022). Many have argued that these programs, therefore, have the unique ability to influence public health outcomes for some of the most high-need children. However, it is worth noting that when these programs are focused on improving the social determinants of health, it is more challenging to quantify the success of the program by making a case for cost-effectiveness. When there is not a dollar amount attached to the evaluation of a policy, policymakers may have a harder time justifying it. Because these governmental insurance programs are supported through taxpayer dollars, taxpayers themselves become integral stakeholders. Further, these taxpayers may object to spending on social programs through Medicaid and CHIP and instead advocate for Medicaid and CHIP to focus on their core objective: healthcare delivery.

Another possible challenge to the HSI option is how poorly defined HSIs are. Though CMS has put out an official list of approved activities for HSIs, CMS states explicitly in their FAQ

document on CHIP HSIs that they will consider other types of activities as well (CMS, 2017). This looseness in defining HSIs may pose challenges to the construction and evaluation of these activities.

From looking at Michigan and Maryland's annual CHIP reports describing their lead HSIs' outcomes, it appears that CMS is lenient on its requirements for HSI reporting. Michigan does not report exact numbers for children served by their lead HSI and Maryland uses broad estimates. Poor evaluation reporting on the states' part can make measuring the impact of these programs difficult.

There are also issues related to equity. The fact that many states have multiple HSIs implemented and some that have none raises questions about the size of the state's administrative budget that allows for HSI implementation. The ability to fund multiple HSIs or high-cost HSIs may suggest that these states are already well-positioned to support public health initiatives, with or without the assistance of federal matching.

Additionally, many policy briefs that advocate for CHIP HSIs, like that released by the Green and Healthy Homes Initiative, focus on the option's underutilization (Green and Healthy Homes Initiative, 2019). However, CHIP HSIs are now implemented in roughly half of US states and many states even have multiple HSIs (MACPAC, 2019).

So, what differentiates a state that has an HSI, or even many HSIs, from a state that does not? For one, apart from Wisconsin and Florida, states that have not adopted Medicaid expansion do not have HSI implementation as of 2019 (see appendix). On top of this, comparing the map of states that have previously implemented HSIs and a list of states with high percentages of childhood poverty further highlights those gaps in HSI funding for vulnerable states (see appendix). The four states with the highest percentages of childhood poverty—Mississippi,

Louisiana, New Mexico, and Alabama—do not have CHIP HSIs implemented. In brief, the lack of HSI implementation in non-expansion states and states with high percentages of child poverty indicates that HSI federal funding may ignore a subset of states that have a greater need for HSI-supportable services.

6.3 Opportunities and Recommendations

Though CHIP HSIs come with their own set of challenges, their growing popularity nationally suggests that looking into the option is perhaps worthwhile for the state.

In recent years, Pennsylvania has been placing a greater emphasis on health equity and SDOH. In 2020, the Pennsylvania Department of Human Services (DHS) established regional accountable health councils (RAHCs)—forums of payors, providers, and community-based organizations—that "provide regional strategic community-wide efforts to improve health outcomes across the state." RAHCs strive to "promote health equity, address regional… SDOH needs, reduce health care costs, and improve the quality of health care" (Pennsylvania DHS, 2020). Pennsylvania DHS also created the Equity Incentive Program in 2020 which incentivizes physical health managed care organizations to achieve national benchmarks for Black members. In 2020, these benchmarks included Healthcare Effectiveness Data and Information Set (HEDIS) measures like timeliness of prenatal care and well-child visits, and DHS has expressed interest in growing these measures for disparities in chronic condition management in 2021. In addition, DHS has required all Medicaid managed care organizations to work toward the National Committee for Quality Assurance Distinction in Multicultural Health Care—a distinction that recognizes market

leaders in providing culturally and linguistically appropriate services and working to reduce health care disparities (Pennsylvania DHS, n.d.).

Pennsylvania has also recently incorporated value-based purchasing requirements in its contracts with Medicaid managed care organizations. These requirements include a mandatory partnership with a community-based organization to address SDOH. Under this, DHS also created a new Maternity Care Bundled Payment, which rewards providers for closing racial disparities in maternal mortality (Pennsylvania DHS, n.d.).

These actions evidence that the state is taking health equity seriously, and this priority aligns closely with the purpose of CHIP HSIs. There is evidence to suggest that these HSI-funded initiatives have an impact, especially on vulnerable populations. As shown through the three examples of HSIs highlighted in this essay, the state would not have to create new initiatives with HSI funding. Instead, they can contribute to the existing organizations, initiatives, and spaces that Pennsylvania already has.

The state also has the flexibility to leverage and tailor the option to further advance its unique priorities. Two examples of those priorities have been highlighted in this essay. Given the health, educational, and societal risks associated with lead poisoning among low-income children and the dangerous increase in opioid misuse, notably among AYA, HSI funding presents a unique opportunity for Pennsylvania to stabilize and supplement existing funding for lead prevention and opioid reversal programs or any other programs as they see fit.

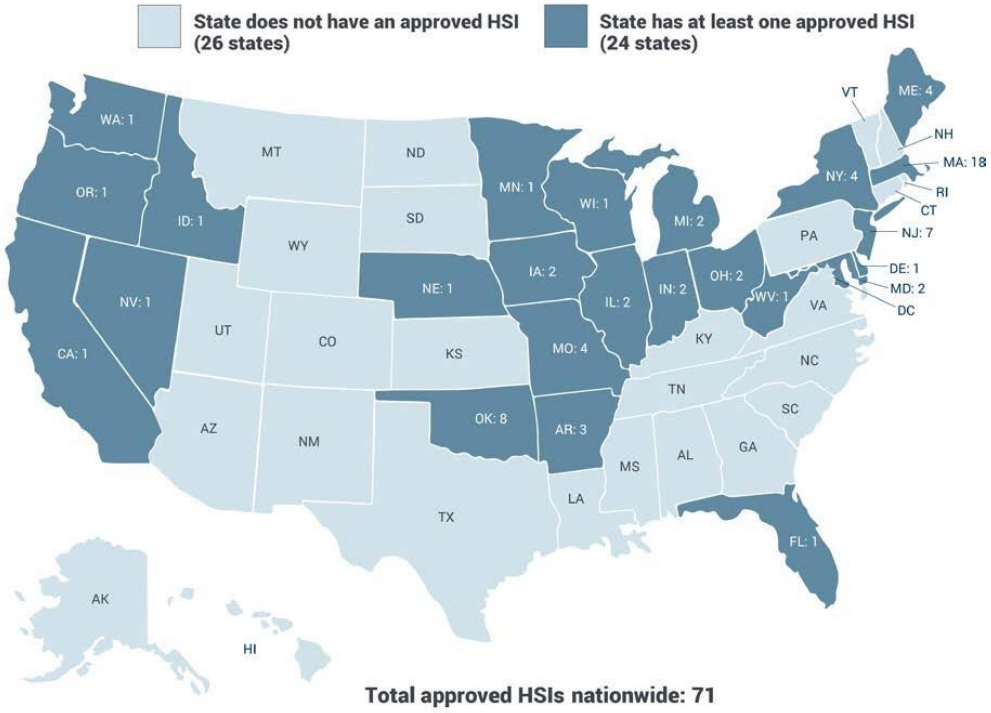
From a broader perspective, clarifying changes to CMS's definition of CHIP HSIs can strengthen the concept overall. In keeping the definition broad, CMS opens the HSI option to a variety of interventions, and in theory, this is beneficial in supporting new public health initiatives that emerge. From a state perspective, however, the ambiguity in CMS's guidelines for HSIs can

reflect a lack of oversight. Additionally, there is a disconnect between the intended impact of CHIP HSIs and the actual impact. Poorly reported HSI outcomes make measuring impact difficult. Further, states that are in dire need of public health support—i.e., non-expansion states and states with high childhood poverty—do not utilize the option, which poses questions about the HSI's effectiveness in reaching high-need populations.

It is unclear why certain states have not implemented HSIs, but it is also CMS's responsibility to make sure that states know they have the option and also to target states that may have a higher need for them. Making the guidelines for HSIs clearer can improve transparency between the state and federal governments in collaborating on these initiatives, and potentially encourage Pennsylvania and other states to pursue the option if they have not already.

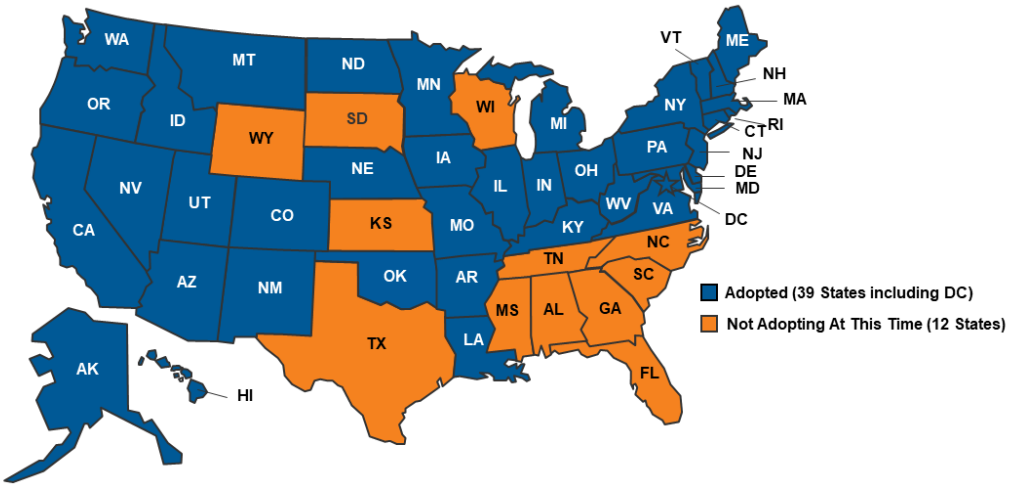
APPENDIX

Figure 1. States with Approved Health Services Initiatives and Number of Initiatives, 2019



Note. From MACPAC. (2019). *CHIP Health Services Initiatives: What They Are and How States Use Them.* Washington, DC: MACPAC.

Figure 2. Status of State Medicaid Expansion Decisions



Note. From Kaiser Family Foundation. (2022, February 24). *Status of State Medicaid Expansion Decisions: Interactive Map* . Retrieved from https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/

Table 1. Summary of Types of Health Service Initiatives Approved, by State, 2019

Activity	Number approved	States with approved HSI (number)
Poison control center services	12	Arkansas, California, Indiana, Iowa, Maryland, Michigan, Nebraska, New Jersey, New York, Oregon, Washington, Wisconsin
Parenting education services and supports	8	Arkansas, Massachusetts (3), Missouri, Oklahoma (2), Maine
School-based health services and supports	7	Florida, Idaho, Massachusetts, Maine, Missouri, New Jersey, Nevada
Behavioral health and substance use disorder services	6	Arkansas, New Jersey, New York, Oklahoma (3)
Lead testing, prevention, or abatement services and related programs	6	Indiana, Maryland,[1] Michigan, Missouri, Ohio (2)
Family planning services	5	Massachusetts, Oklahoma (3), Maine
Preventive services	5	Massachusetts (2), Missouri, Maine, West Virginia
Services related to children with special health care needs	5	Massachusetts (3), New Jersey (2)
Violence prevention and treatment	5	Massachusetts (5)
Coverage and financial assistance for health care services	5	Illinois (2), Iowa, Minnesota, New Jersey
Nutrition services	3	Massachusetts (2), New York
Other condition-specific services	3	Delaware (vision services and supports) New York (sickle cell screening) Massachusetts (smoking cessation)
Maternal health care	1	New Jersey (expired) [2]

Notes: HSI is health services initiative. Some approved health services initiatives may not be active. Activity is a general category. Some states have multiple HSIs addressing different topics but that fall within a single category.
[1] Maryland has a two-part initiative on lead testing, prevention, or abatement.
[2] New Jersey's maternal health care initiative on prenatal care was approved for time-limited use for one year from the date of approval (effective beginning July 1, 2016).
Source: MACPAC analysis of CHIP state plan amendments, state CHIP Annual Reports FY 2017, and communication with state officials.

Note. From MACPAC. (2019). *CHIP Health Services Initiatives: What They Are and How States Use Them.* Washington, DC: MACPAC.

Table 2. Percentage of Children Ages 0-17 in Poverty, by State

State	% Children ages 0-17 in poverty (2019)
Mississippi	27.6
Louisiana	26.4
New Mexico	23.5
Alabama	21.9
Arkansas	21.7
Kentucky	20.9
District of Columbia	20.8
West Virginia	20.8
South Carolina	19.9
Oklahoma	19.7
Georgia	19.5
Tennessee	19.4
North Carolina	19.3
Arizona	19.2
Texas	19.2
Florida	18.2
New York	18.2
Ohio	18.1
Nevada	17.6
Michigan	17.5
Missouri	17
National	16.8
Pennsylvania	16.5
Rhode Island	16.5
Delaware	16.3
California	15.6
Illinois	15.6
Montana	15.4
Indiana	15.1
South Dakota	14.9
Kansas	14.3
Maine	13.8
Oregon	13.6
Connecticut	13.5
Wisconsin	13.5
Virginia	13.3
Alaska	13.2
Iowa	12.8
Idaho	12.7
Maryland	12.3
New Jersey	12.2
Massachusetts	12
Washington	12
Wyoming	11.7
Nebraska	11.5
Colorado	11.2
Hawaii	11.2
Minnesota	11
North Dakota	10.9
Vermont	10.8
Utah	9.6
New Hampshire	8.1

Note. Adapted from USDA. (2021, January 5). *Country-Level Data Sets - Poverty*. Retrieved from Economic Research Service: https://data.ers.usda.gov/reports.aspx?ID=17826#P1c25e5b42bda4cc383ea2d6860db2c81_3_241iT3

BIBLIOGRAPHY

Abdi, F. M., & Andrews, K. (2018). *Redlining has left many communities of color exposed to lead.* Bethesda: Child Trends.

Aetna. (n.d.). *Children's Health Insurance Program (CHIP)*. Retrieved from https://www.aetnabetterhealth.com/pennsylvania/members/chip

Alker, J., & Brooks, T. (2022, February 17). *Millions of Children May Lose Medicaid: What Can Be Done to Help Prevent Them From Becoming Uninsured?* Retrieved from Georgetown Institute Health Policy Institute: Center for Children and Families: https://ccf.georgetown.edu/2022/02/17/millions-of-children-may-lose-medicaid-what-can-be-done-to-help-prevent-them-from-becoming-uninsured/#easy-footnote-bottom-29-43646

Alker, J., & Dwyer, A. (2021). *Next Steps for the Children's Health Insurance Program.* Georgetown University Health Policy Institute: Center for Children and Families.

Artiga, S., & Hinton, E. (2018, May 10). *Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity*. Retrieved from Kaiser Family Foundation: https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

ASTHO. (2021). *Braiding and Layering Funding to Address Housing: Environmental Health and Safety.* Retrieved from Association of State and Territorial Officials: https://www.astho.org/globalassets/pdf/sdoh-braiding-and-layering-housing-environmental-health-safety.pdf

Bliss, L. (2016, February 9). *The Long, Ugly History of the Politics of Lead Poisoning*. Retrieved from Bloomberg CityLab: https://www.bloomberg.com/news/articles/2016-02-09/the-politics-of-lead-poisoning-a-long-ugly-history

Brooks, T. (2019, July 22). *MACPAC Releases FactSheet on CHIP Health Services Initiatives*. Retrieved from Georgetown University Health Policy Institute: Center for Children and Families: https://ccf.georgetown.edu/2019/07/22/macpac-releases-factsheet-on-chip-health-services-initiatives/

CDC. (2022, January 28). *Childhood Lead Poisoning Prevention.* Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/nceh/lead/prevention/sources/paint.htm

CDC. (n.d.). *Prevention.* Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/pictureofamerica/pdfs/picture_of_america_prevention.pdf

Centers for Disease Control and Prevention. (2019, December 19). *NCHHSTP Social Determinants of Health*. Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/nchhstp/socialdeterminants/index.html

Centers for Disease Control and Prevention. (2021, March 17). *Understanding the Epidemic*. Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/opioids/basics/epidemic.html

Centre for Public Impact. (2016, April 12). *CHIP: Children's Health Insurance Program*. Retrieved from https://www.centreforpublicimpact.org/case-study/chip-childrens-health-insurance-program

CMS. (1998, August 6). *Variance of the 10 Percent Cap.* Retrieved from Centers for Medicare and Medicaid Services: https://www.medicaid.gov/Federal-Policy-Guidance/downloads/sho080698.pdf

CMS. (2016). *Michigan Health Services Initiative.* Centers for Medicare and Medicaid Services.

CMS. (2017, January 12). *Frequently Asked Questions Health Services Initiative.* Retrieved from Centers for Medicare and Medicaid Services: https://www.medicaid.gov/federal-policy-guidance/downloads/faq11217.pdf

CMS. (2022). *Reports and Evaluations*. Retrieved from Centers for Medicare and Medicaid Services: https://www.medicaid.gov/chip/reports-evaluations/index.html

Denchak, M. (2018, November 8). *Flint Water Crisis: Everything You Need to Know*. Retrieved from Natural Resources Defense Council, Inc.: https://www.nrdc.org/stories/flint-water-crisis-everything-you-need-know

Gov. Wolf Announces Billion-Dollar Plan to Fix Toxic Schools, Address Lead Across Pennsylvania. (2020, January 29). Retrieved from Governor Tom Wolf: https://www.governor.pa.gov/newsroom/gov-wolf-announces-billion-dollar-plan-to-fix-toxic-schools-address-lead-across-pennsylvania/

Gov. Wolf Announces Billion-Dollar Plan to Fix Toxic Schools, Address Lead Across Pennsylvania. (2020, January 29). Retrieved from Governor Tom Wolf: https://www.governor.pa.gov/newsroom/gov-wolf-announces-billion-dollar-plan-to-fix-toxic-schools-address-lead-across-pennsylvania/

Gov. Wolf: Lead-Free PA Initiative Seeking Input on Local Needs. (2019, October 31). Retrieved from https://www.governor.pa.gov/newsroom/gov-wolf-lead-free-pa-initiative-seeking-input-on-local-needs/

Governor's Proposed Medicaid Budget for FY 2020-2021. (2020, February 28). Retrieved from Pennsylvania Health Law Project: https://www.phlp.org/en/news/governors-proposed-medicaid-budget-for-fy-2020-2021

Green and Healthy Homes Initiative. (2019). *CHIP Health Service Initiative and Healthy Homes.* Green and Healthy Homes Initiative.

Health Care Financing Administration (HCFA), U.S. Department of Health and Human Services. (1997). *Letter from Sally K. Richardson to state officials regarding "the Children's Health Insurance Program (CHIP)".* CMS.

Hedegaard, H., Warner, M., & Minino, A. (2017, February). *Drug Overdose Deaths in the United States, 1999–2015.* Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/nchs/data/databriefs/db273.pdf

Highmark. (2020, April 13). *Highmark Launches Online Tool to Meet Critical Needs during COVID-19 Pandemic*. Retrieved from https://www.highmark.com/newsroom/press-releases/highmark-launches-online-tool-to-meet-critical-needs-during-covid-19-pandemic.html

Jaensch, P. M. (2009). *Testimony of Peter M. Jaensch, Esq.* The National Center on Addiction and Substance Abuse at Columbia University.

Joint State Government Commission. (2019, April). *Lead Exposure Risks and Responses in Pennsylvania report* . Retrieved from http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2019-04-29%20Final%20LEAD%20Report%20updated%20staff.pdf

Kaiser Family Foundation. (2022, February 24). *Status of State Medicaid Expansion Decisions: Interactive Map* . Retrieved from https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/

Kaiser Family Foundation. (n.d.). *Enhanced Federal Medical Assistance Percentage (FMAP) for CHIP* . Retrieved from Kaiser Family Foundation: https://www.kff.org/other/state-indicator/enhanced-federal-matching-rate-chip/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

MACPAC. (2019). *CHIP Health Services Initiatives: What They Are and How States Use Them.* Washington, DC: MACPAC.

MACPAC. (2021). *Report to Congress on Medicaid and CHIP.* MACPAC.

MACPAC. (n.d.). *History and Impact of CHIP*. Retrieved from MACPAC: https://www.macpac.gov/subtopic/history-and-impact-of-chip/

Mahajan, A. (2021, December 16). *Value In Medicaid, Part 2: Challenges Concerning Health-Related Social Needs*. Retrieved from Health Affairs: https://www.healthaffairs.org/do/10.1377/forefront.20211214.703281/full/

Manatt & Phelps & Phillips, LLP. (2019, February 1). *Medicaid's Role in Addressing Social Determinants of Health*. Retrieved from Robert Wood Johnson Foundation: https://www.rwjf.org/en/library/research/2019/02/medicaid-s-role-in-addressing-social-determinants-of-health.html

Manatt Health. (2017, January 31). *Leveraging CHIP to Protect Low-Income Children From Lead.* Retrieved from State Health and Value Strategies: https://www.shvs.org/wp-content/uploads/2017/01/SHVS-Webinar-Manatt-Leveraging-CHIP-to-Protect-Low-Income-Children-from-Lead-January-2017.pdf

Maxey, H., Clash, B., & Bishop, S. (2021). *Preventing Childhood Lead Exposure in Pennsylvania*. Retrieved from Pennsylvania Partnerships for Children: https://www.papartnerships.org/wp-content/uploads/2021/07/Preventing-Childhood-Lead-Exposure-in-Pennsylvania-.pdf

Michigan Department of Health and Human Services. (2021). *2021 Child Lead Exposure Elimination Commission Annual Report*. Retrieved from https://www.michigan.gov/documents/mdhhs/2021_Child_Lead_Exposure_Elimination_Commissino_Annual_Report_743095_7.pdf

Miller, L. (2022, February 21). *Substance Abuse Treatment Types & Therapy Programs Near Me*. Retrieved from American Addiction Centers: https://americanaddictioncenters.org/therapy-treatment

MiTracking. (n.d.). Retrieved from Michigan Department of Health and Human Services: Michigan Department of Health and Human Services

New York State Education Department. (2016). *Health Education Standards Modernization Supplemental Guidance Document: Instructional Resource Packet For Heroin & Opioids.* Retrieved from New York State Education Department: http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/nysed-heroin-opioids-instructional-resource-packet6.17.pdf

New York State. (n.d.). *New York State's Opioid Overdose Prevention Program*. Retrieved from https://www.health.ny.gov/diseases/aids/general/opioid_overdose_prevention/

Office of Attorney General. (n.d.). *Opioid Battle*. Retrieved from https://www.attorneygeneral.gov/protect-yourself/opioid-battle/

Open Data PA. (n.d.). *Stem The Tide of the Opioid Epidemic*. Retrieved from Open Data PA: https://data.pa.gov/stories/s/Health-and-Human-Services/4wfb-af7k

PA Department of Health, Office of Drug Surveillance and Misuse Prevention. (n.d.). *Pennsylvania Prescription Drug Monitoring Program System.* Retrieved from Pennsylvania Department of Health:

https://www.health.pa.gov/topics/Documents/Programs/PDMP/PDMP%20System%201-Pager.pdf

PA Department of Human Services. (n.d.). *Eligibility and Benefits*. Retrieved from PA Department of Human Services: https://www.dhs.pa.gov/CHIP/Eligibility-and-Benefits/Pages/Eligibility-and-Benefits.aspx

PA Department of Human Services. (n.d.). *CHIP Enrollment by County*. Retrieved from PA Department of Human Services: https://www.dhs.pa.gov/CHIP/About-CHIP/Pages/CHIP-Enrollment.aspx

PA Department of Human Services. (n.d.). *DHS Priorities.* PA Department of Human Services.

PA DHS, Office of CHIP. (2021, April 14). *CHIP Advisory Council Meeting*. Retrieved from https://www.dhs.pa.gov/CHIP/CHIP-Resources/Documents/CHIP%20Advisory%20Council%2004%2014%2021%20Presentation%20FINAL.pdf

PA Opioid Command Center. (2020). *Strategic Plan 2020-2023.* Harrisburg: PA Opioid Command Center.

Pennsylvania Department of Health. (2022, January). *2020 Childhood Lead Surveillance Annual Report.* Retrieved from Pennsylvania Department of Health: https://www.health.pa.gov/topics/Documents/Environmental%20Health/2020%20Childhood%20Lead%20Surveillance%20Annual%20Report.pdf

Pennsylvania DHS. (2020, December 15). *Regional Accountable Health Councils (RAHCs).* Retrieved from https://www.dhs.pa.gov/HealthInnovation/Documents/RAHC%20Program%20Overview%201.11.2021.pdf

Pennsylvania DHS. (n.d.). *Health Equity*. Retrieved from Pennsylvania Department of Human Services: https://www.dhs.pa.gov/HealthInnovation/Pages/HealthEquity.aspx

Pennsylvania Partnerships for Children. (n.d.). *State of Children's Health Care in Pennsylvania Reports.* 2017, 2018, 2019, 2020, 2021.

Preventing Childhood Lead Exposure in Pennsylvania. (2021, May 27). Retrieved from Council for a Strong America: https://www.strongnation.org/articles/1560-preventing-childhood-lead-exposure-in-pennsylvania

Public Citizens for Children and Youth. (2019). *Getting the Reporting Right: Improving PA's Lead Poisoning Surveillance Data Sharing.* Philadelphia: Public Citizens for Children and Youth.

Ross, D. C., & Guyer, J. (2019, June). *Fostering Social and Emotional Health through Pediatric Primary Care: A Blueprint for Leveraging Medicaid and CHIP to Finance Change.* Retrieved from Manatt Health: https://www.manatt.com/getmedia/4e26309d-1cc7-4289-92a6-c8f67b27e217/CSSP-Medicaid-Blueprint

State of Maryland. (2017). *Child Health Plan for the Children's Health Insurance Program.*

State of Maryland. (2018). *CHIP Annual Report.* Retrieved from https://www.medicaid.gov/sites/default/files/2019-12/md-2018chipannualreport.pdf

State of New York. (2017). *Child Health Plan for the Children's Health Insurance Program.*

State of New York. (2019, March). *New York State Education Guidance on Implementing Opioid Overdose Prevention in Schools*. Retrieved from https://www.schoolhealthny.com/cms/lib/NY01832015/Centricity/Domain/85/NYSED_%20OpioidGuidance_3.2019.pdf

The Center for Children's Justice. (2017, March 15). *Children and the Opioid Epidemic in Pennsylvania.* Retrieved from Montgomery County Maternal and Early Childhood Consortium: https://www.montcopa.org/DocumentCenter/View/16893/Cathy-Palm-Montco-Slides?bidId=

USDA. (2021, January 5). *Country-Level Data Sets - Poverty*. Retrieved from Economic Research Service: https://data.ers.usda.gov/reports.aspx?ID=17826#P1c25e5b42bda4cc383ea2d6860db2c81_3_241iT3

Utchitel, J., Hadland, S. E., Raman, S. R., McClellan, M. B., & Wong, C. A. (2019). The Opioid Epidemic: A Needed Focus On Adolescents And Young Adults. *Health Affairs*.

Young, M. (2012, December 31). *Study shows naloxone kits cost-effective in preventing overdose deaths*. Retrieved from University of Washington Newspaper: https://www.washington.edu/news/2012/12/31/study-shows-naloxone-kits-cost-effective-in-preventing-overdose-deaths/