Green & Healthy Homes Initiative®

Recommendations to Advance Healthy Housing and Address Social Determinants of Health

Health Care Executive Policy Committee Transition Team Memorandum for the Maryland Department of Health (MDH)

Executive Summary

The Green & Healthy Homes Initiative (GHHI) is providing recommendations for actions that can be undertaken by the Governor, the Maryland Department of Health, Maryland Medicaid, as well as partnering departments, agencies and stakeholders, to scale efforts that improve housing quality and reduces housing-related health hazards such as lead paint, asthma triggers, and fall and injury hazards. This Memorandum is organized around current problems observed by GHHI and our partners in Maryland and solutions for those identified problems.

Recommendations

Problem: Policies, programs, and funding streams across multiple departments address and are impacted by housing quality, but those efforts are often siloed and not aligned towards a central strategy. The value from investments in one area, such as housing, often impacts other areas, such as public health, but there is seldom any tracking of the value created and a mechanism to utilize that value.

Solutions:

1. **Governor's Office and MDH establish an Office of Racial Equity, Energy Security, and Environmental Justice (first 100 days)**

Problem: Long-standing inequities in health and housing have made housing a critical factor in reducing health inequities and combatting structural racism. While there has been some progress made, inequities and disparities in the housing realm remain. Health disparities for lead poisoning, asthma and household injury in Maryland remain pervasive in low-income communities and communities of color.

Solution: The Office of Racial Equity, Energy Security and Environmental Justice would work to establish required metrics to show advancement in equity and environmental justice and incorporate that lens throughout MDH and other related departments in the State. This Office will ensure that resources and preventive programs are better allocated to disadvantaged communities that will address the severity of housing conditions that contribute to poor health and social outcomes and higher energy burdens, financial costs and housing instability. The Office will also engage community members around Maryland so that there is increased input into MDH policy from the communities served by MDH programs**.**

This Office should convene top health care providers, scientists, policy makers, economists, programmatic implementers, and best practice leaders across the multiple sectors of health, housing, climate,

and the environment to develop a comprehensive strategy to improve housing conditions in Maryland and seek to achieve goals such as ending childhood lead poisoning as a major public health threat and ensuring that all older adults can age in place safely in their own homes.

Problem: Programs from multiple agencies that a family may need, such as lead hazard control from a HUD grant at DHCD and weatherization from Low Income Heating Assistance Program (LIHEAP), are hindered by differences in eligibility criteria. This not only prevents multiple services from going to families in need, but also puts undue burden on families to show, again and again, that they are low income. It increases administrative waste and slows down the delivery of services.

Solution:

2. **MDH should work with other relevant departments (DHCD, MDE, MEA) to align income eligibility standards and requirements across social services and housing programs, and to streamline eligibility determination processes**

MDH should work interdepartmentally with its various preventive housing services and resident education programs and with other state and local agencies to establish client income eligibility reciprocity. This administrative action could result, for example, in a Medicaid-enrolled family automatically qualifying for resources to holistically address housing health, safety and energy efficiency needs, or a Low-Income Home Energy Assistance Program (LIHEAP)-enrolled household automatically qualifying to receive lead hazard control to eliminate lead-based paint. There has been analogous fast tracking of Medicaid enrollment for SNAP and WIC recipients during ACA rollout[i].

Problem: Investment in remediating lead hazards, injury and fall hazards, environmental asthma triggers, and other housing deficiencies is not at the scale required to address the problem. Lead paint in housing presents one of the largest threats to the health, safety, and future productivity of Maryland's children, with 897,700 having significant lead-based paint hazards.[ii] Approximately 40% of diagnosed asthma among children is believed to be attributable to residential exposures.[iii] The current level of investment in Maryland to address housing-related public health hazards is less than what it will take to effectively meet the scale of the state's lead poisoning and housing-related environmental health problem.

Solutions:

3. **Increase investment in addressing environmental home-based hazards such as lead paint and lead service lines, asthma triggers, and fall and injury hazards**

    - Addressing lead hazards in Maryland's 897,700 housing units with a significant lead hazard most at-risk households: low-income, child-occupied, pre-1978 rental properties requires $1.8 billion per year over the next five years ($9 billion) at an average cost of about $10,000 per home[iv]**:**

- **Replacing lead services lines in our drinking water infrastructure** at an average cost of $6,000[v] per lead service line.

4. **Establish a Lead and Healthy Homes Fund to scale public-private investment**

Similar to recent efforts by the City of Cleveland and the State of Michigan, Maryland should establish a Fund for preventative lead hazard control with capital secured from investors, philanthropy, anchor institutions, and other key stakeholders. The funds could be used for loans, grants, and other activities to scale investment in eliminating lead hazards and other home-based hazards. The fund could spur and leverage financing from banks and CDFIs and tap into monetizable benefits from lead and healthy homes such as reductions in healthcare costs, special education costs, criminal justice costs, and increase earnings potential. Analogous models in the energy efficiency space, such as Michigan Saves, have been able to spur hundreds of millions in financing for energy efficiency improvements.[vi] A Maryland lead and healthy homes fund could spur $750 million in investment in lead safe and healthy housing.

Problem: A lack of public awareness exists that housing quality impacts health, and that hazards in their home pose a threat to their health and safety. There is also a lack of awareness of just how widespread housing deficiencies are, and the number of families living in homes with significant deficiencies. There was a Surgeon General's Call to Action around healthy housing in 2009[vii], but that knowledge has not penetrated public awareness to the level it needs to be.

Solution:

5. **MDH should launch a campaign around healthy homes, and use technology and social media to push information to families and community stakeholders**

In-home checklists, access to registered rental properties that are lead safe, connections to resources to address lead hazards, mold, carbon monoxide, pests, fall hazards, and specific information about probable sources of environmental hazards can all be distributed utilizing technology and apps. Data sets need to be accessible to the public, including possible sources of lead such as pipes and demolition sites, where indoor air quality may be poor due to proximity to highways, and the presence of environmental toxins associated with new development. This will equip people with the information to advocate for change and empower them to improve their living conditions with the resources available. MDH should also look at integrating the campaign with existing touchpoints such as case workers for social services, clinical providers conducting annual health screenings, and the like.

Problem: Climate change increases the challenges associated with energy inefficient homes and their related health hazards like cardiovascular issues related to thermal comfort.[viii] Climate change also increases events such as hurricanes which pose a threat to homes and can lead to displacement of millions of families.

Solution:

6. **MDH should explore the impact of climate change on housing conditions and the threat to the population from decreasing housing quality and displacement. MDH should also look at the population health impact of efforts to increase the resiliency of housing stock and the impact of electrification of residential homes**

Research around the health impacts of climate change and the impact from activity and services that mitigate climate issues like electrification, decarbonization, and weatherization could be conducted with partnering agencies such as DHCD and MEA and universities and community-based organizations.

Problem: Science shows that there is no safe level for lead in the body. CDC estimates **535,000 U.S. children, 2.6% of those aged 1–5 years, have blood lead levels greater than the reference level of 3.5 mg/dL.**[ix] 897,700Maryland homes contain deteriorated lead-based paint have lead service lines that carry water into the homes.[x] Lead is a poison that affects virtually every system in the body. It can cause irreversible damage to the developing brain and nervous system of fetuses and young children. Lead poisoning lowers IQ, limiting the opportunity for children to reach their full potential. Lead poisoning increases learning disabilities, attention deficit disorder, and behavioral disorders. Lead poisoned children are six times more likely to drop out of high school and are more likely to enter the juvenile justice system. Medical and special education expenses alone can equal $5,600 for each child with serious lead poisoning. Lead poisoning results in an average loss of lifetime earnings of $1.02M per child.[xi] In FY2021, the state received $335,937 from the CDC lead poisoning prevention program as pass through to the Baltimore City Health Department to support lead poisoning prevention activities.[xii]

Solution:

7. **Augment funding for lead poisoning prevention activities including surveillance and case management with $1 million annually**

The current CDC funding of $335,9347 goes only to Baltimore City Health Department, although the risk of lead poisoning exists throughout the state. These resources are used for case management, surveillance, education, and prevention activities. Increased funding will allow surveillance in every county across the state and will increase primary prevention strategies and allow for follow-up services to children already exposed to lead, such as risk assessments and home inspections.

Medicaid/Medicare-Specific Recommendations

Problem: Children on Medicaid have a higher prevalence of lead poisoning and are most at risk, exposing them to a myriad of lifelong health impacts. Current point of care blood lead testing, which is required for all Medicaid children, falls far short of requirements. Data reported from state agencies to CMS in 2015 indicate that only 38 percent of children ages one to two years old received a blood lead test.[xiii]

Solutions:

8. **Maryland Medicaid should explore including lead hazard control interventions as a covered service**

The impact of lead poisoning on healthcare cost and the potential benefit of remediation supports Medicaid reimbursement for lead remediation providers that serve Medicaid beneficiaries. CMS has already approved of Maryland's CHIP Health Service Initiative that funds lead hazard control work. Part of treatment is eliminating the toxins or pathogens causing disease. Eliminating lead toxins in lead paint should be allowable through the Early Periodic Screening, Diagnostic and Treatment (EPSDT) benefit that includes preventive health care services, diagnosis, and treatment. Under the EPSDT benefit, any service that is medically necessary to treat a condition identified during an EPSDT screening (including a lead screening) is covered by Medicaid.[xiv] Maryland should explore with CMS adding lead remediation as a treatment under EPSDT authority.

9. **Maryland should prioritize its lead screening requirements for Medicaid/CHIP children**

Maryland should work with the state's legislature to provide strong incentives, including strong financial penalties for Medicaid MCOs and providers, to ensure that the 100% requirement for Medicaid testing come to fruition. Maryland should work with healthcare provider groups, MCOs, and health professional training centers to increase awareness among health professionals of the vital role they play in protecting our children from lead poisoning.

10. **Maryland should modify its current lead poisoning prevention activities under the Health Service Initiative to serve more state residents and address broader home-based health hazards**

In the current Health Service Initiative, a program called Healthy Homes for Healthy Kids is funded through CHIP but the monies are transferred to DHCD. Rather than adhere to HUD guidelines of interim controls to address lead hazards, DHCD has utilized the funds to do complete abatement in most properties, causing the cost per home to be ten times that of HUD-supported lead hazard control units. This means that the money is helping ten times less the number of families it could be serving. MDH and DHCD should modify the Healthy Homes for Healthy Kids Program to ensure that interim controls are utilized and more Maryland families receive these critical lead hazard control resources. Maryland should also allow Healthy Homes for Healthy Kids to cover asthma remediation and injury prevention activities as well. Wisconsin recently expanded their Health Service Initiative to cover not just lead remediation but also remediation of home-based asthma triggers. Maryland should expand Healthy Homes for Healthy Kids program by $6 million, to maximize the amount underneath the CHIP admin cap.[xv]

Problem: Housing is an acknowledged key social determinant of health. In addition to lead-based paint hazards, a whole host of conditions are caused by or harmed by hazards in the home, including pests, mold, injury hazards, allergens, radon, trip and fall hazards, carbon monoxide, extreme heat and cold, and poor indoor air quality. As one example, 40% of asthma episodes are triggered by preventable hazards at home such as smoke, mold, dust mites, pests, combustion products and chemical irritants.[xvi]

More than 30,000 people die annually in the U.S. from unintentional injuries at home, with the trend rising since the year 2000.[xvii] People covered by Medicaid are at a higher risk of home-related injuries and negative health impacts. Despite this, there are not regular assessments of the home environment for risks. We need to remove barriers for fall prevention services. As an example, Medicaid and Medicare will pay the tens of thousands of dollars to widen entrances, put in ramps, or put in grab bars in the bathroom after a senior falls and has a disability. But Medicaid and Medicare do not pay for putting in the grab bar to prevent the major fall in the first place. Forgoing fall prevention improvements does not have healthcare or economic gains. Regulations need to be updated to allow for these cost-effective preventative interventions.

Solutions:

11. **Home environmental assessment as a Medicaid covered service**

Maryland should work with CMS to explore including environmental assessment of homes as a covered benefit for all Medicaid recipients with risk factors such as asthma or other respiratory conditions that could be impacted by the home environment. Environmental Lead Investigation is already a covered service under EPSDT for children on Medicaid/CHIP who have an elevated blood lead level. This should be broadened to an available environmental investigation under any condition where the home environment poses a risk, and available for all ages. Maryland should look to utilize either a State Plan Amendment or include this as part of an 1115 Waiver.

12. **For specific healthy homes services that are part of NIH and/or CDC guidelines, with an evidence base of impacting health outcomes and reducing costs, Maryland should explore working with CMS to allow for direct funding of these services, either through an 1115 waiver, a State Plan Amendment, or through In Lieu of Services authority**

While the statutes that created Medicaid may not have had the social determinants of health in mind, we know from decades of experience that effective public health needs more than Medicaid just acting as a payer. To move the needle on improving population health outcomes and reducing healthcare costs, Medicaid needs to be an actor in the prevention of avoidable adverse health incidents, including funding guidelines-based care services that are not traditionally “medical”. For example, controlling environmental asthma triggers is part of NIH’s guidelines, yet Medicaid does not cover the environmental control as a service. A child who has mold in her bedroom will continue to go to the hospital, with Medicaid paying the bill again and again, without ever addressing the root cause of what is causing her hospitalization. By allowing the healthy homes intervention, Maryland would address the underlying cause, improve her health, and avoid the high costs of hospitalizations. Maryland could explore this utilizing a State Plan Amendment, incorporating this in a 1115 waiver such as what Massachusetts did, or utilizing In Lieu Of Service authority, such as what California did.

13. **Incentivize or require Medicaid MCOs to work with community-based organizations (CBOs - those that are not typically Medicaid certified providers) to address the social determinants of health of their members**

Medicaid MCOs and their networks of healthcare providers are often not best suited to address the social determinants of health for their members. Community trust is also a key barrier to successful implementation of SDOH programs, and it is not uncommon for community members to place greater trust in service providers who are not affiliated with government or the traditional healthcare system. New York Medicaid sets an example of requiring MCOs to enter into value-based arrangements with CBOs address SDOH. MDH could adopt a similar policy or include provisions in MCO contracts.

14. Another barrier that MCOs face in collaborating with CBOs is the administrative and contracting burden required to coordinate with multiple CBOs to address the multiple SDOH needs of their members. One potential solution to addressing this is to set up CBO contracting hubs. These hubs may act as a single point for contracting, payments, and data exchange (e.g., the hub may be HITRUST certified) for the MCOs. The hub also holds the individual contracts with CBO service providers and manages referrals, payments, and data security requirements for the group of CBOs. MDH could provide funding to set up these CBO contracting hubs through competitive grants. **Maryland should utilize Medicaid Waiver authority to implement services to mitigate the impact of climate change.**

Maryland should develop Medicaid initiatives such as Oregon's climate-related health initiative. Under their recently announced program, individuals with a high-risk clinical need and are impacted by extreme weather events can receive services such as housing and nutrition support, and devices and services to maintain healthy temperatures and clean air during climate emergencies.

Problem: A common barrier cited by Medicaid MCOs who are at risk for total cost of care to why there is not more investment in services such as healthy housing even though those preventative services will improve health and greatly reduce long term healthcare costs is that investments are commonly recorded by the states within the 15% administrative budget the MCOs have. Because that 15% cap also covers the core administrative costs of the plan, the MCOs are extremely limited to spend the administrative budget on services to address the social determinants of health (SDOH). For example, a Medicaid MCO with an annual premium of $100 million from a state and a core annual operating budget of $11 million would only have $4 million remaining to potentially spend on SDOH efforts. There is even a disincentive long term for a Medicaid MCO to spend on cost-effective SDOH services because of rate setting. If an MCO funds a service such as healthy homes for asthmatics, that the CDC has shown to have over a $5 to $1 return,[xviii] the success of that service, paid for with administrative dollars but reducing spending classified as medical, would lead to an MCO receiving less premium from the state in future years, as only medical spend is utilized for future rate setting, not spend an MCO makes out of its administrative budget.

Solutions:

15. **Maryland Medicaid should incentivize the use of services that address the social determinants of health through ensuring that its MCO partners can include those payments as "medical" when it comes to the medical loss ratio and for rate setting purposes**

By allowing the MCOs to record those payments based on medical savings as "medical", that barrier would be removed. Services that are not traditionally medical but address the social determinants of health are widely known at this point. Efforts such as the New York Medicaid VBP Roadmap and the North Carolina Medicaid Healthy Opportunities Pilot show the demand and implementation models for incorporating these types of services with traditional medical care.

16. Medicaid should incentivize Medicaid MCOs to shift toward value-based payments to providers that include services that address social determinants of health

By promoting multi-year value-based payments where the providers of services that address social determinants can be reimbursed based on the healthcare savings they are creating for the Medicaid MCOs, more effective comprehensives services will be conducted, and the nature of value-based payments will ensure that Medicaid is only paying for value of the services as indicated by improvements in quality and reductions in total cost of care. GHHI and Health Management Associates have partnered in the development of value-based payment contract template that includes non-medical services.[xix] Maryland could include requirements for Medicaid MCOs to have these kinds of contract arrangements, similar to Michigan, New York, and other states. Louisiana included social determinants of health interventions as value-added benefits that its MCOs had to include as part of their most recent Medicaid MCO bid.

17. Medicaid should explore outcomes-based financing for healthy housing efforts and other services that address the social determinants of health

Outcomes-based financing models would allow philanthropic and private entities to provide capital to scale healthy homes efforts that have specific health outcomes, such as housing services to address mold and pests in the residence of Medicaid members who have asthma. The model also ensures that federal funds are used cost effectively because up-front costs are borne by the private sector and are reimbursed by the Medicaid payers only if agreed upon outcomes are met. The State of New York's CMS-approved value-based payment (VBP) Roadmap encourages Medicaid MCOs to form partnerships with third-party private financing of services that address the social determinants of health, and explicitly states that VPB payments made by an MCO under this kind of model will be treated as a medical expense. This helped spur a $4.75 million asthma healthy homes project that GHHI developed with Affinity by Molina Healthcare and other partners, with funding coming solely from private investment. Maryland should include similar language as part of its MCO contracts that indicates these types of alternative payment models are allowable and treated as a medical payment for medical-loss ratio and for rate setting.[xx]

Problem: Home environmental hazards are thought to contribute between one-third to one-half of all trip and falls.[xxi] According to available data in 2015, in Maryland, there were 13,048 hospitalizations for fall injuries among all ages. Of those, 9,519 were among older adults aged 65 years or older. Falls were the leading cause of injury-related hospitalizations and emergency department visits for this age group in the state of Maryland.[xxii] In 2015, 525 adults 65 years or older died in fall-related incidents in Maryland. An analysis of Medicare claims from 2007–2009 showed that older adults that had experienced

fall-related injuries had a 64% increased risk of persistently high healthcare expenditures when compared to a control group.[xxiii] Falls risk assessments are encouraged through Medicare's Physician Quality Reporting Initiative (PQRI) but are not required, and the Medicare-covered annual preventive care visit does not include a home assessment.

Solutions:

18. Maryland should encourage all Medicare Advantage plans operating in the state to cover home assessments as part of annual preventive care and cover fall prevention services for any at risk individuals

The CHRONIC (Creating High-Quality Results and Outcomes Necessary to Improve Chronic Care) Act creates opportunities for Medicare Advantage (MA) plans. Specifically, this legislation expands the role of the Value-Based Insurance Design model, which allows MA plans to offer supplemental and high-value benefits to individuals with CMS-specified chronic conditions.[xxiv] It is now possible for benefits that are not primarily medical-related to be covered, as long as there is "reasonable expectation of improving or maintaining the health or overall function of the chronically ill enrollee."[xxv] For example, certain interventions such as grab bars and wheelchair ramps that have traditionally been considered non-medical benefits, now have a path towards coverage. MA plans can tailor certain benefits to specific patient populations, which is a major step towards providing specialized healthy homes interventions to at-risk older adults as a way to prevent falls.

19. MDH should implement pilots where at-risk individuals receive fall prevention benefits

Findings from a recent systematic review assessing the efficacy of fall prevention strategies by analyzing 159 randomized control trials with 79,193 participants suggest that a home safety assessment and, subsequently home modification interventions are significantly effective in reducing both the rate of falls (the total number of falls per unit of person time that falls were monitored) and the risk of falls (the chance that an individual falls) among older adults, especially among adults with the highest risk.[xxvi] Medicare requires that any service provided must be a "medical necessity". The concept "medical necessity" is defined as items or services "reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member."[xxvii] For an individual that has a history of falls, implementing home-based fall prevention strategies could be considered a medical necessity since the greatest risk factor for a fall is whether that individual has fallen previously. Studies published over the past three years have shown significant promise. For example, one study on the multifactorial aging-in-place program, CAPABLE, showed an average Medicare savings of over $10,000/year per enrollee and a 1-year return on investment greater than 3x.[xxviii]

20. MDH should provide support to and expand the highly successful Housing Upgrades to Benefit Seniors Model

Baltimore's Housing Upgrades to Benefit Seniors (HUBS) program has been active since 2015 and is a nationally recognized model to provide critical services to our older adults to ensure they can age in place.

The partnership includes GHHI, Civic Works, Rebuilding Together Baltimore, Banner Neighborhoods, NHS Baltimore, St. Ambrose Housing Aid Center, Keswick, CHAI, Meals on Wheels, Baltimore City DHCD, Sinai Hospital, and the Leonard & Helen R. Stulman and the Harry and Jeanette Weinberg Foundation. HUBS has provided over 2,700 upgrades including over 550 roof repairs and replacements and over 300 furnace replacements. HUBS has also provided over 3,200 wrap-around services such as bill-pay assistance, support with acquiring homeowners' insurance, food assistance, and legal services. A 2018 study from Impaq showed that for every HUBS $1 spent, $1.80 in benefits were potentially realized. There was a 36% estimated decrease in falls post HUBS intervention, and reduced risk of nursing home placement, respiratory illnesses, and depressive symptoms. HUBS won the HUD Secretary's Award for public-private partnerships in 2018. Maryland should scale this successful model with state resources to augment the investment made by the Maryland foundations and anchor institutions to meet the growing needs of our older adults in Baltimore.

About the Green & Healthy Homes Initiative (GHHI)

GHHI was founded in 1986 in Baltimore City as Parents Against Lead and is today the nation's leading organization dedicated to healthy housing. GHHI's leadership and voice for creating healthy and energy efficient homes for families living in low income communities has led to changes in federal policy and increased public and private investments in the integration of energy, lead hazard reduction and safety in housing. GHHI has helped lead Maryland's 99% reduction in childhood lead poisoning as well as the nation's reduction in childhood lead poisoning and the expansion of more holistic healthy housing models to improve social determinants of health, economic and social outcomes. In Maryland, GHHI provides direct services that include: in-home resident education, case management, environmental assessments, energy audits and housing inspections, housing interventions (lead and safety hazard remediation, asthma trigger reduction, Aging in Place, energy efficiency and housing rehabilitation), legal services, outreach and training, and advocacy. GHHI works in and provides technical assistance in over 75 cities, counties states and healthcare systems in the US. GHHI is dedicated to addressing the social determinants of health, opportunity and equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors and families to ensure better health, economic and social outcomes in historically disinvested communities - with an emphasis on communities of color.

Ruth Ann Norton serves as President & CEO of the Green & Healthy Homes Initiative and has led its development into one of the nation's most effective organizations and foremost authorities on healthy housing and its impact on the social determinants of health and racial equity. An expert on lead poisoning prevention, healthy homes and the intersection of climate, energy and health, Ruth Ann directs GHHI's national strategy, policy framework and services to integrate climate, healthcare and healthy housing as a platform for improved health, economic, educational and social outcomes for low-income communities.

Among other memberships, Ms. Norton serves as: Chair of the Maryland Lead Poisoning Prevention Commission, a federally appointed liaison to the CDC's Advisory Committee on Childhood Lead Poisoning Prevention, a member of the EPA's Children's Health Protection Advisory Committee, the National Leadership Academy for the Public's Health, the National Council of State Housing Agencies' National Advisory Group, the Ohio Asthma Council, and the Johns Hopkins Bloomberg School of Public Health Center For Population Health Information Technology Advisory Board.

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