

# The Impacts of Affordable Housing on Health: A Research Summary

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Housing is well understood to be an important social determinant of physical and mental health and well-being. In the context of ongoing national and state efforts to reform health care, it is important for policymakers to understand the various pathways through which housing affects health. Affordable housing alleviates crowding and makes more household

resources available to pay for health care and healthy food, which leads to better health outcomes. High-quality housing limits exposure to environmental toxins that impact health. Stable and affordable housing also supports mental health by limiting stressors related to financial burden or frequent moves, or by offering an escape from an abusive home environment. Affordable homeownership can have mental health benefits by offering homeowners control over their environment. Affordable housing can also serve as a platform for providing supportive services to improve the health of vulnerable populations, including the elderly, people with disabilities, and homeless individuals and families. Safe, decent, and affordable housing in neighborhoods of opportunity can also offer health benefits to low-income households.

As an update to earlier reviews on the relationship between housing and health, the authors examined recent research on the various ways in which the production, rehabilitation, or other provision of affordable housing may affect health outcomes for children, adults, and older adults.<sup>1</sup> This report is organized around ten hypotheses on the contribution of affordable housing to supporting positive health outcomes. **Overall, the research supports the critical link between stable, decent, and affordable housing and positive health outcomes.**



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## 1. Affordable Housing Can Improve Health Outcomes by Freeing Up Family Resources for Nutritious Food and Health Care Expenditures

Families paying excessive amounts of their income for housing often have insufficient resources remaining for other essential needs, including food, medical insurance, and health care. These tradeoffs can threaten the health of all family members, particularly children. An analysis of 2012 household expenditures found that low-income households that spent more than half their income on housing costs, and are therefore severely housing cost burdened, spent less on food and health care compared to similar households spending 30 percent or less of their income on housing. These differences in health care and nutrition spending were particularly large in rural areas.<sup>2</sup> Another study found that increases in statewide average rents are correlated with increased rates of food insecurity among families with children.<sup>3</sup>

Utility costs are also an important part of total housing costs. Programs that lower home utility and energy costs to reduce overall housing costs have been shown to impact the ability of households to purchase sufficient amounts of food. One study found that participation in the Low Income Home Energy Assistance Program (LIHEAP), a federal home

weatherization and energy assistance program that can reduce overall housing costs, decreases the likelihood of food insecurity and unstable housing situations.<sup>4</sup>

Access to affordable housing, therefore, can enable families to spend more on food and health care, which can improve health outcomes. Researchers have found that children in low-income families that receive housing subsidies are more likely to have access to an adequate amount of nutritious food and to meet “well child” criteria—including the absence of developmental concerns, maintenance of a healthy weight, and classification as being in good or excellent health—than children in similar families on the waiting list for housing assistance.<sup>5</sup>

The connection between unaffordable housing, strained budgets, and health outcomes is not limited to children. For example, adults living in unaffordable housing are more likely to describe themselves as being in fair or poor health compared to similar individuals living in affordable housing. Cost burdened adults are also more likely to report failure to fill a prescription or adhere to health care treatments as a result of cost.<sup>6</sup> Similarly, adults undergoing a foreclosure have a significantly higher likelihood of failing to fill a prescription due to cost and are less likely to have health insurance coverage compared to the general population.<sup>7</sup>





## Green and Healthy Homes Initiative: A Comprehensive Approach to Health and Housing

When affordable housing options are limited, households often end up living in substandard or poorly maintained housing, which can pose a variety of health risks. Improving the safety and condition of homes to eliminate harmful environmental toxins, such as mold, excessive dust, and rodents, leads to better health. The Coalition to End Childhood Lead Poisoning leads the Green and Healthy Homes Initiative (GHHI), which functions as a single intake point for low-income households seeking assistance grants from a variety of government and philanthropic sources to address household remediation needs, such as lead removal or weatherization. GHHI completes a comprehensive health, energy, and safety assessment of homes, coordinates funding for the home remediation work, and educates households on how to sustain the structural investments it helps them make in their homes. GHHI measures the outcomes of its work and found significant reductions in visits to the emergency room for asthma treatment and fewer missed school days as a result of asthma after the remediation projects were completed. Currently operating at fourteen locations across the United States, GHHI helps low-income households improve their homes to reduce environmental toxins and lead healthier lives. For more information, visit <http://www.greenandhealthyhomes.org>.

## 2. By Providing Families with Greater Residential Stability, Affordable Housing Can Reduce Stress and Related Adverse Health Outcomes

At the extreme, there is little question that residential instability has adverse health impacts. For example, studies continually show that homeless children are more vulnerable to mental health problems, developmental delays, poor cognitive outcomes, and depression than children who are stably housed, and that stable housing is strongly associated with improved mental health outcomes and a reduction in the number of days hospitalized among formerly homeless adults.<sup>8</sup> Less extreme housing instability, including frequent moves, living in doubled-up housing, eviction, and foreclosure, is also related to elevated stress levels, depression, and hopelessness. Among both adolescents and seniors, researchers have found evidence of a connection between the length of tenure in a residential building and the likelihood that residents report behavioral and mental issues. Longer tenures are associated with lower levels of depression among seniors and fewer internalizing and externalizing behavioral issues such as anxiety and aggression among adolescents.<sup>9</sup>

Residential instability and multiple moves among adolescents and children have a compounding negative effect upon behavior and mental well-being, particularly among families without strong social bonds or other mediating factors.<sup>10</sup> Youth transitioning out of the foster care system are particularly at risk of housing instability and negative health outcomes, including difficulty maintaining access to and continuity of care.<sup>11</sup> Children without stable housing were more likely to use emergency department services as a result of a lack of a regular health care provider.<sup>12</sup> Children under three years who had moved two or more times in the previous year were found to have lower weight for their age when compared to children who were in stable housing, and they were at greater risk of developmental problems.<sup>13</sup> Among adolescents, a significant association was found between early use of illicit drugs and moving four or more times before the age of sixteen years.<sup>14</sup>

An emerging body of evidence also suggests that even less severe manifestations of housing instability, such as difficulty keeping up with utility bills, mortgage payments, or home repairs, may be linked to lower levels of psychological well-being and more intensive use of medical services, particularly among men.<sup>15</sup>

### 3. Affordable Homeownership May Positively Impact Mental Health; However, Unsustainable Forms of Homeownership May Negatively Impact Health

Many studies have shown that homeowners generally have better physical and mental health outcomes than renters.<sup>16</sup> Researchers have put forth a variety of possible explanations for this phenomenon, suggesting that homeowners experience higher levels of self-esteem and an increased sense of control, which may be related to improved health. Homeowners are more likely to live in higher-quality housing and have more freedom to adapt their surroundings to their needs, reducing stress and leading to greater levels of satisfaction.<sup>17</sup> The research lacks consensus on whether homeowners spending more than 30 percent of their income on housing receive all the health benefits of homeownership, though more recent research supports this idea that even unaffordable homeownership may have more positive impacts on health than renting. One study found that unlike renters, homeowners' mental health scores remain the same regardless of whether or not they spend more than 30 percent of their income on their housing.<sup>18</sup> Another study found owners who had missed a mortgage payment or spent more than 30 percent of their income on housing still reported better health than renters.<sup>19</sup>

Recent research does not reveal strong evidence of a similar positive relationship between homeownership and children's health, although there was also no indication of a negative association. A recent study comparing the children of low-income homeowners and renters found no difference in health or behavioral problems as rated by the child's primary caregiver.<sup>24</sup> Earlier research found slightly lower levels of behavioral problems among children in families that own their homes as compared to renters. However, researchers have typically been unable to discern whether homeownership has a significant impact on children's health due to the many variables related to homeownership that also affect child well-being.<sup>25</sup> For example, individuals who choose to become homeowners may share a common set of characteristics that, regardless of tenure, influence parenting and health and at least partially explain different outcomes among renters and owners.<sup>26</sup> To the extent that homeownership benefits are related to increased stability or housing quality, affordable rental programs that promote longer-term residential stability and higher housing quality may offer benefits similar to homeownership.

An unsustainable mortgage, however, can offset many health benefits that are associated with homeownership. Recent research points to linkages between home foreclosures and an array of negative physical and psychological health problems, including hypertension, heart disease, anxiety,

and depression.<sup>20</sup> These problems may be exacerbated by the tendency of many individuals to turn to unhealthy coping behaviors when faced with stressful life events.<sup>21</sup> In a survey of American homeowners and renters in the four states with the highest 2008 foreclosure rates, homeowners in foreclosure reported worse health status than renters, regardless of whether renters spent more than 30 percent of their income on their housing costs.<sup>22</sup> Additionally, homeowners in foreclosure were thirteen times more likely to experience serious psychological distress than homeowners who were current on their mortgages and could afford their monthly payments.<sup>23</sup>

### 4. Well-Constructed and Well-Maintained Affordable Housing Can Reduce Health Problems Associated with Poor-Quality Housing

When families have few affordable housing options, they may be forced to live in substandard housing that puts residents at risk of lead poisoning, asthma, and accidental injury.<sup>27</sup> Unsafe conditions in the home can threaten resident well-being and increase the risk of accidental burns and injuries.<sup>28</sup> Evidence suggests that simple measures such as the installation of smoke detectors and window guards can have a major impact on resident safety and health.<sup>29</sup> Code enforcement can also be an effective tool for remediating indoor residential health hazards such as mold.<sup>30</sup>

Despite a major public health effort, low-income families are more likely to live in homes that have lead-based paint hazards than higher-income families.<sup>31</sup> Overall, there have been improvements in reducing children's exposure to lead. Data collected from 1999 through 2004 revealed that the number of children with lead levels of 10 micrograms per deciliter of blood decreased from 63 children per 1,000 to 20 children per 1,000 nationwide. Primary household sources of lead are windowsill dust, soil, and paint, with an





estimated 35 percent of 106 million housing units with lead-based paint in the building, and with 22 percent of homes containing one or more lead-based paint hazards.<sup>32</sup>

Asthma is triggered by a number of environmental factors, particularly air quality affected by residential heating sources and indoor allergens. Poor quality or poorly maintained housing may be overrun with mold, dust mites, cockroaches, or rodents—all of which are sources of allergens that cause asthma and other respiratory illnesses, as well as fatigue, headache, and difficulty concentrating.<sup>33</sup>

Lead paint removal and allergen relief may require intense interventions such as window and carpet replacement and integrated pest management. While these measures may carry a higher upfront price tag, research has shown them to be both effective and more cost-effective than conventional maintenance over time.<sup>34</sup> Both in simulated models and in implementation, asthma housing interventions such as ventilation fans and integrated pest management, lead to dramatic declines in the incidence of serious asthma events. Additionally, projects that have implemented healthy housing renovations like ventilation, heating, insulation, and accessibility modifications have decreased rates of acute hospitalizations among children and adults.<sup>35</sup> The improvements in clinical outcomes and corresponding health care costs are greater than the costs of the housing improvements.<sup>36</sup>

## **5. Stable, Affordable Housing May Improve Health Outcomes for Individuals With Chronic Illnesses by Providing an Efficient Platform for Health Care Delivery**

A growing body of research suggests that stable and affordable housing may help individuals living with chronic diseases such as HIV/AIDS, diabetes, and hypertension increase their rates of medical care, maintain their treatment regimens, and achieve better health outcomes.<sup>37</sup> Homeless patients in particular may have difficulty properly storing medication and syringes, maintaining a recommended diet, and going to follow-up appointments when faced with urgent competing demands, such as finding a place to stay for the night. The challenges posed by homelessness also may increase the likelihood that individuals who struggle with drug abuse and addiction will engage in risky behavior, such as sharing needles or exchanging sexual favors for shelter, further jeopardizing their health.<sup>38</sup>

It is easier to access social services in stable housing since an address is often required to seek employment and maintain continuity of medical care. Women experiencing housing instability are less likely to utilize social services because of the belief that they need to hide their housing situation in order to keep custody of their children.<sup>39</sup>

## 6. Access to Neighborhoods of Opportunity Can Reduce Stress, Increase Access to Amenities, and Lead to Important Health Benefits

Families that can only find affordable housing in areas with very high poverty levels may be prone to greater psychological distress and exposure to violent or traumatic events. The clustering of concentrated social disadvantage, including residential disorder and limited neighborhood resources, exacerbates stress, which can have an effect on residents' physical health.<sup>40</sup>

Residents who feel unsafe in their neighborhoods may also be less likely to walk and engage in other physical activity, although findings in this area are mixed.<sup>41</sup> The Moving to Opportunity program, which targeted residents of distressed public and assisted housing in high-poverty neighborhoods, provides the strongest evidence of health improvements related to neighborhood-level housing interventions. Among participants who received housing vouchers that could be used only in low-poverty areas (the “experimental” group), adult obesity fell by 11 percent. Adult women and adolescent girls in the experimental group also experienced significant reductions in mental health problems, including psychological distress, depression, and generalized anxiety disorder, and had lower rates of smoking and marijuana use than other participants in the study.<sup>42</sup>

The federally funded HOPE VI program provides another opportunity to assess neighborhood-level housing interventions and their impact on health. HOPE VI supports the redevelopment of large, troubled public housing developments as lower-density,

mixed-income communities. Some original residents return to the redeveloped properties, while others relocate to other public housing developments or use vouchers to move to privately owned units. Based on a rigorous panel study of residents affected by revitalization activities at two Chicago HOPE VI sites (those who moved to other public or privately owned housing as well as those who stayed in what became a mixed-income development), researchers found that eight years after baseline data were collected both respondents who returned to the redeveloped housing and those who used vouchers to move to new neighborhoods lived in safer neighborhoods and higher-quality homes. While most health problems had not improved and, in many cases, continued to deteriorate from already-poor ratings, panel study participants did report significant reductions in anxiety levels.<sup>43</sup> HOPE VI residents also reported an improved sense of safety and decreased fear of crime in their new neighborhoods, both of which can cause stress and social isolation.<sup>44</sup> As other researchers have also found, neighborhood conditions and housing location may have a stronger impact on anxiety and depression than the quality of the individual housing unit.<sup>45</sup>

Social cohesion in neighborhoods has been shown to be strongly correlated with mental well-being.<sup>46</sup> Adults who live in neighborhoods that they perceive to have strong cohesion are buffered from daily stresses and report better physical health.<sup>47</sup> Studies show that social cohesion of a community is dependent on the quality of a neighborhood, which can promote social interactions through public spaces and facilities.<sup>48</sup> Communities with perceived social disorder have been correlated with higher rates of anxiety and depression among residents.<sup>49</sup>



**Community development strategies that improve neighborhood amenities and opportunities can contribute to increased physical activity and healthier eating.**

Community development strategies that improve neighborhood amenities and opportunities, including creating walking trails and bike paths to facilitate exercise<sup>50</sup> and attracting retail establishments, including grocery stores and farmers' markets, can contribute to increased physical activity and healthier eating.<sup>51</sup> Areas near current or planned public transit stations represent a particularly favorable opportunity to integrate these features as demand for transit-oriented development rises. New or redeveloping communities in these areas can be designed to provide access to an array of retail outlets, schools, and other services within walking distance, which may reduce residents' reliance on personal vehicles and promote the many health benefits associated with walking, including lower cholesterol and blood pressure levels, improved mental health, strengthened social ties, and reduced risk of obesity, cardiovascular events, and type 2 diabetes.<sup>52</sup>

**Affordable housing, coupled with enforcement of fair housing laws, can help survivors of domestic violence escape the physical and mental health trauma caused by abuse and avoid the health risks associated with homelessness.**



## **7. By Alleviating Crowding, Affordable Housing Can Reduce Exposure to Stressors and Infectious Disease**

When housing is not affordable, families may be forced to double up with others or to otherwise live in overcrowded conditions. Individuals who live in a crowded setting may have limited ability to manage daily stressors and successfully maintain supportive relationships, which can lead to increased levels of psychological distress, feelings of helplessness, and even higher blood pressure.<sup>53</sup> Studies have also demonstrated that crowding can negatively impact physical health through increased exposure to infectious diseases.<sup>54</sup> Health and behavioral problems for children also increase with the level of crowding in home environments.<sup>55</sup> Affordable housing programs positively impact health outcomes by providing alternatives to overcrowding. For example, a randomized study found that receipt of a housing voucher to subsidize rent costs greatly reduced the likelihood of crowding.<sup>56</sup>

## **8. Access to Affordable Housing Allows Survivors of Domestic Violence to Escape Abusive Homes, Which Can Improve Mental Health and Physical Safety**

Domestic violence is one of the leading causes of homelessness for women and children in the United States. Incidence of domestic abuse appears to worsen during periods of economic downturn. Unable to find affordable alternative housing arrangements, many women choose to stay in or return to an abusive situation rather than become homeless. A recent study has shown that the rate of women

returning to their abusers increases during times of reduced affordable housing availability.<sup>57</sup> Continuing to live with an abuser puts both the woman and her children at risk. While some children display high levels of resilience, many children exposed to violence manifest symptoms of physical and psychological distress and trauma. Domestic violence commonly co-occurs with child abuse, meaning that children, along with their mothers, may be at risk of physical injury.<sup>58</sup>

Simply moving out of a domestic abuse situation may not be sufficient if a woman cannot find affordable and stable housing. Women who moved multiple times due to domestic violence were more likely to report housing and financial strain than women exposed to domestic violence who did not move.<sup>59</sup> Domestic violence can impair women's abilities to find alternative housing by limiting their access to financial resources, and causing erratic employment histories and poor landlord references related to disturbances and property damage. In fact, researchers have found that some landlords are reluctant to rent to women fleeing domestic violence—despite laws that prohibit such discrimination—as they question the prospective renter's ability to pay rent and fear the potential for danger posed by the abusive partner.<sup>60</sup> Women seeking housing often do not meet federal definitions of homelessness, despite reporting risk factors for housing instability, making them ineligible for some services and left out of estimates of the size of the homeless population. The need for housing solutions for women is broader than just short-term shelters; permanent, safe, and affordable housing should be made accessible to women experiencing intimate partner violence.<sup>61</sup> Affordable housing, coupled with enforcement of fair housing laws, can help survivors of domestic violence escape the physical and mental health trauma caused by abuse and avoid the health risks associated with homelessness.



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## 9. Green Building Strategies and Location-Efficient Housing Reduce Environmental Pollutants, Lower Monthly Energy Costs, and Improve Home Comfort and Indoor Environmental Quality

The energy used by the buildings in which families live accounts for nearly 40 percent of the nation's total energy consumption.<sup>62</sup> By using green building techniques to increase the energy efficiency and environmental sustainability of new or renovated affordable housing and improving the location efficiency of housing in ways that reduce the number and duration of necessary car trips, the community at large can benefit. For example, exposure to emissions associated with burning fossil fuels and the negative health impacts linked to smog, acid rain, and air pollution may be reduced through such approaches.

Energy-saving measures can yield direct health benefits to residents within the home. Housing retrofits to improve energy efficiency have been shown to improve general, respiratory, and mental health. Energy-efficient homes are also associated with decreased exposure to nicotine.<sup>63</sup> A range of other green measures may also yield health benefits. For example, green building techniques create tighter building envelopes that prevent moisture, airborne pollutants, and pests from entering the home and limit exposure to toxins.<sup>64</sup>

## 10. Affordable and Accessible Housing Linked to Supportive Services Enables Older Adults and Others with Mobility Limitations to Remain in Their Homes

As individuals age, they often develop mobility impairments that make it difficult for them to safely live in their homes. The ability of older adults and people with a disability to stay in their own homes depends in large part on the presence of residential accessibility features. Being able to age in place is associated with better physical and mental well-being.<sup>65</sup>

Features that make a home accessible include wider doorways, lower countertops, and curbless showers. Researchers have documented that the current housing stock is ill-equipped to accommodate the growing share of older and impaired households, indicating an increasing need for home modifications that allow for maximum residential mobility as homeowners age.<sup>66</sup>

Many older adults also experience a growing need for supportive health-related services that can be provided through programs linking affordable housing with access to care and supportive services. Findings from one aging-in-place pilot program for low-income, disabled older adults showed that offering a series of home visits focused on carrying out home modifications, securing assistive devices, and training on safety strategies resulted in increased ease in activities of daily living, fewer falls, and improved quality of life.<sup>67</sup> An evaluation of an aging-in-place program for low-income older adults that offered onsite health education, medical care coordination, health monitoring, and discharge planning found that receiving the onsite services made the residents feel safer and confident they could stay in their homes as they aged.<sup>68</sup> Affordable home modifications and service-enriched housing allow low-income elderly individuals with disabilities to access a residential environment that truly and effectively addresses their needs and preferences to age in place.

## Conclusion

The research summarized in this report explores ten pathways through which affordable housing influences the health of people of all ages. This report shows that providing affordable housing is a valuable strategy to support and improve well-being. It is important for policymakers to understand that safe, adequate, and affordable housing is not just shelter but also an investment in good health for low-income households.



## Endnotes

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