

Virginia Coalition of Housing and Economic Development Researchers

Addressing the Impact of Housing for Virginia's Economy

A REPORT FOR VIRGINIA'S HOUSING POLICY ADVISORY COUNCIL
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Appendix Report 8: Housing, Health, and Economic
Development- a Review of the Literature

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Housing quality and appropriateness influences physical and mental health, and thereby affects children's school performance and behavior, workers' job performance, and family well-being. The effects on residents extend to businesses and the overall community. Negative and positive effects of housing stem from building materials, building design, building performance, and location. Home health hazards include direct threats to physical health and safety, as well as threats to mental health and family well-being. Our health—whether physical, mental, or communal—affects our productivity and our community's economic potential.

Direct Effects on Health and Safety

Individuals and households struggling to afford housing face difficult choices. They may be forced to accept substandard or otherwise inappropriate housing in order to remain within their budget, or they may opt to accept cost burdens that threaten household stability in order to secure adequate quality housing.

Substandard and inappropriate housing also presents direct threats to the well-being of occupants. Academic research documents the manner in which low quality or substandard housing affects the health of occupants. For example, Jordan (2016) found that residents in poor-quality public and assisted housing were more likely to suffer from “multiple and severe health problems.” Moreover, the study showed that quality housing can help prevent the worsening of existing health conditions among low-income individuals.

Internal Environment

Lead poisoning is another common threat associated with substandard housing (Bratt 2002). Elevated Lead Levels (ELL) may induce physical and intellectual impairments that include lower intelligence, impaired hearing, and behavioral problems (Chenoweth et al., 2009; Jones-Rounds et al., 2014). Furthermore, ELL can compromise cognitive and socio-emotional development, and cause visual-motor integration problems. Children with elevated lead levels have attention and behavioral problems, and poorer school performance, especially in reading and math. These children also experience higher rates of juvenile delinquency and are more likely to drop out of high school (U.S. Department of Housing and Urban Development, 2014a).

Children ages 0-6 years old are most vulnerable to developing elevated blood-lead levels due to inhaled or ingested lead. Building codes permitted lead paint through 1978, but an estimated 24 million homes nationwide still contain lead contaminated dust. Nearly 4 million of these lead contaminated homes have at least one child living in them. The Centers for Disease Control (2016) estimates that 500,000 children in the US possess elevated lead levels in their blood. Homes built prior to 1960 contain more lead-based paint than

any other vintage; according to the US Census Bureau, 21.8 percent of Virginia homes were built prior to 1960 (CDC, 2016; Mueller & Tighe, 2007; Rosher & Markowitz, 2016).

Lead-related health threats also arise from water quality in substandard homes, and are particularly endangering to young children (Environmental Protection Agency, 2003; Faber & Krieg, 2002; Schettler, Stein, Reich, Velenti, & Wallinga, 2000). Factors outside of the home and in the community expose urban children to further risk, with disproportionately higher incidences of elevated blood-lead levels among urban children. A study in Baltimore found that 30 percent of the city's play areas contained soil with lead concentrations above 400 ppm, the CDC standard for play areas (Schwarz et al, 2012). Lead exposure is especially problematic in outdoor urban spaces near busy roads, which have absorbed lead emissions from passing cars before lead additives in gasoline were banned in 1996.

Substandard housing poses threats to physical safety within the house as well. These threats are not a part of the building structure or materials, but rather result from hazards such as fire, carbon monoxide, radon, poor lighting, and cluttered floors (Jones-Rounds et al., 2014; U.S. Department of Housing and Urban Development, 2014g). Other threats resulting from excess moisture and inadequate heat can lead to negative health outcomes for occupants as well (Gielen et al., 2012).

Once again, children are particularly at risk in substandard housing. Chenoweth, Estes, and Lee (2009) found that children in poor-quality housing are more susceptible to head injuries, broken bones, and burns from scalding water. Gielen et al. (2012) found that only 62 percent of 146 homes inspected in East Baltimore had safe hot water temperatures. Moreover, these homes often faced a greater threat from fire, as only 42 percent of the inspected homes contained a working smoke alarm on each level. Defective heating systems and electrical wiring that are not up to code present greater fire hazards (Chenoweth et al., 2009).

Rates of childhood asthma and bronchitis are highest for those living in homes with mold, allergens, secondhand tobacco smoke, pest infestations, and poor ventilation (Mueller & Tighe, 2007; U.S. Department of Housing and Urban Development, 2014a). Schuler showed that environmental factors cause 30 percent of all asthma cases (Schuler, 2006). Consequently, substandard housing conditions may contribute to the incidence of asthma, and not just genetic inheritance.

Mental Health and Well-Being

Substandard housing can impact the mental health of residents as well as their physical health. Jones-Rounds et al. (2014) found that psychological well-being correlated with housing quality. People in high-quality housing were less depressed, more energetic, and more peaceful than those living in low-quality housing (Jones-Rounds et al., 2014). Substandard housing represents a potential psychological detriment by causing low self-esteem and hindering family self-sufficiency (Mueller & Tighe, 2007). Housing-related stress or anxiety has been shown to lead to depression and stress-related mental illness (Mueller & Tighe, 2007).

Research increasingly views stress as a social pollutant that inflames biological processes, and disproportionately affects less affluent population segments. Psychological wellness theoretically suffers when stressors exceed coping resources and results in compromised health (Quinn et al., 2010). Renters are more likely to experience poorer mental health than homeowners for a variety of reasons, such as limited control over maintenance and management practices. Homeowners possess more freedom to adapt their homes to their needs and preferences, compared to renters who are dependent upon their landlords for repairs (Maqbool et al., 2015; Mueller & Tighe, 2007).

Housing instability causes mental stress as well. Rollins et al. (2012) found that an eviction notice increased reports of PTSD, depression, hospital use, and other conditions among women age 18-64 in Portland who had been recently abused, with more than 99 percent confidence in the correlation of this effect. Female survivors of intimate partner violence (IPV) also face unique barriers to self-sufficiency, and thereby face housing instability, as they must often move and seek temporary shelter with friends or service providers (Rollins et al., 2012).

Housing instability can introduce negative health impacts to vulnerable groups such as children. For instance, Cohen & Wardrip (2011) found that low-income families occupying substandard homes moved more often than middle and high-income families, often due to problems associated with high housing costs and changes in income. Children under the age of three who have moved two or more times in a year generally have lower bodyweight than those who have not moved homes (Maqbool et al., 2015). Parental stress over housing quality and choice can also potentially be transferred to children through the child's perceptiveness to psychological distress (U.S. Department of Housing and Urban Development, 2014a).

Fowler et al.'s (2011) qualitative study of past foster care beneficiaries in Detroit (age 19-23) demonstrated that housing security most strongly coincided with participants' level of emotional distress, alcohol/marijuana

abuse, and deviancy. They also found that substandard and unstable housing ultimately impacts children throughout their development into adulthood. About 29,500 children and young adults 'age out' of state foster care systems annually, and they are six times more likely to experience homelessness while emerging into adulthood.

Another important issue is the need for housing for newborns. Pre- and post-natal homelessness has been linked to many negative health consequences for children. Hospitalizations account for a large share of the health care costs attributable to pre- and post-natal homeless children, which are often paid by publicly funded health insurance (Sandel et al., 2016). Sandel et al. (2016) states that "children who experienced pre-natal homelessness...but were housed after birth were 20 percent more likely to have been hospitalized since birth". Children who experienced homelessness before and after birth were 41 percent more likely to have been hospitalized since birth (Sandel et al., 2016).

An affordable housing shortage within a community simultaneously displaces low-income families, and removes the financial capacity to purchase items like adequate food and medicine (U.S. Department of Housing and Urban Development, Fall 2014a). The USDA Economic Research Service (2015) estimates that 12.7 percent of U.S. households confront food insecurity, and the inelasticity of housing costs means that occupying the cheapest residence possible frees up only a limited quantity of funds for other needs. Occupying substandard housing displays obvious compromises, but it should be noted that Kirkpatrick & Tarasak (2011) calculated no significant difference in food insecurity between occupants of market rentals and subsidized housing, but two-thirds of their sample experienced food insecurity.

The neighborhood surrounding a home influences physical and mental health as well, by influencing family expenses and exercise. Neighborhood walkability provides exercise essential to avoiding negative health conditions such as heart disease and obesity, and also decreases transportation costs, which can free up more funds for other essentials like food and medicine (Rogers et al., 2010). Most research suggests that neighborhood walkability and access to public recreation resources like parks promote better health. Walkable communities contain physical features including sidewalks and mixed uses, which elevate home values and lessen foreclosures. Increased exercise can come from daily tasks instead of specifically visiting a gym, which also promotes increased social capital and a sense of community (Gilderbloom et al., 2015; Rogers et al., 2010).

Inactivity plagues both urban and rural places, but Kasehagen et al.'s (2012) analysis of the 2007 National Survey of Children's Health found that youth living in rural environments are more likely to exercise for 20 minutes at least 5 times per week. Less advantaged cities typically offer less public recreation resources, according to Dahmann et al. (2010). Access to safe parks leads to higher levels of regular physical activity and decreases inactivity, specifically for urban adolescents. Parks near multifamily residences may represent the only available open space that is accessible without charge (Babey et al., 2008).

Community and Economic Impact

Substandard housing can lead to many negative economic consequences as well. For instance, the health care costs associated with substandard housing equate to billions of dollars annually (U.S. Department of Housing and Urban Development, 2014a). Children in low-income families that receive housing subsidies are more likely to be in the "good" or "excellent" health classification than children in low-income families who are on the waiting list for assistance (Maqbool, Viveiros, & Ault, 2015). Adults who are housing cost-burdened are less likely to fill a prescription, follow health care treatments, or purchase health insurance because of the costs.

Direct medical costs associated with substandard housing conditions include costs for doctor visits, medications, and inpatient medical treatment (including medication, facilities and supplies). Indirect, non-medical costs include lost school days, costs of home and auto modifications (for physical impairments), developmental services (for cognitive impairments), lost parental and lifetime wages, and premature death (Chenoweth et al., 2009). These costs have negative social and economic impacts beyond the given patient, as the burden of some medical bills may fall on taxpayers eventually (Mueller & Tighe, 2007).

Persistent mental and physical health problems present significant employment and productivity problems. Both neighborhood layout and substandard housing can impact the health conditions of workers, which affects their productivity. Health conditions ultimately pose a barrier for those who are currently unemployed, and can lead to temporary or permanent medically-induced unemployment due to an inability to perform job duties (Jordan, 2016).

Poor employee health impacts businesses, which may experience high rates of employee turnover and result in unfilled positions, lower productivity, and lost profits. Employee turnover generates costs related to finding replacement workers, temporarily covering vacancies, training replacements, as well as losing knowledge and

skills. In total, the costs of turnover for lower-level employees can be upwards of 30 percent of the annual salary and up to 250 percent of the annual salary for highly skilled employees (Hester, 2013).

Limited research examines the extent to which employer assisted housing (EAH) might reduce housing-related contributions to poor employee health and worker turnover. Grants to assist with down payments and closing costs, deferred loans, and a monthly rental contribution are the most common forms of EAH, but employers have also offered other options: mortgage guarantees and shared-appreciation mortgages; donated (or sold at a discount) land, buildings, and/or air rights for development or redevelopment; and investments in nonprofit-owned land trusts (Hoffman, 2007). Proactive expenditures are typically available only to workers that affect broader economic implications and the employer's bottom line – like nursing faculty amidst a national nursing shortage, or individuals who create and maintain technology platforms. EAH expenditures would be more prevalent if employers understood the prospective economic benefits more fully, such as employee recruitment, improved employee and community relations, and neighborhood revitalization. EAH strategies have the potential to mutually benefit employers, employees and neighborhoods, and to ease regional spatial mismatches between jobs and housing, thus improving regional economic competitiveness (Pill, 2000). Conditions like living close to the workplace can eliminate congested commutes as a stressor, and opens time for exercise or family (Feintzeig, 2016; Proto & Dzurec, 2009).

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