



The Health Cost Savings of Quality Affordable Housing

A summary of research exploring the monetized impact of improved health outcomes from affordable housing

BACKGROUND

Social determinants of health are non-medical conditions in the environment and society that affect people's health. A strong and growing body of research has shown that affordable, well-constructed and well-maintained housing is a positive **social determinant of health** for its occupants. Conversely, problematic housing can affect health negatively. Low-income families in unstable housing situationsⁱ are more likely to cut back on meals and postpone needed medical care than low-income families in stable housing.ⁱⁱ Even without confronting homelessness, when faced with the threat of eviction, people are more likely to report poor health, high blood pressure, depression, anxiety and psychological distress.^{iii iv}

HEALTH COST SAVINGS

Research from the past few decades shows that **financial savings**—to public institutions and residents themselves—can be obtained by housing interventions for people who lack safe, affordable, secure-tenure housing. The following cost savings come from studies representing some of the strongest current research available on potential and realized health cost savings from housing.

The health care cost savings linked to affordable, quality housing presented in this brief include the more recent and rigorous findings and show connections relevant to the housing activities financed through the NC Housing Finance Agency (the Agency). The housing interventions for affordability, quality and livability mentioned in this brief are found in Agency-financed programs. The Agency provides quality affordable housing opportunities across North Carolina which serve low-income households and persons with disabilities, person experiencing housing instability, veterans, survivors of domestic violence, youth transitioning out of foster care, seniors and families.

Health cost savings from living in affordable housing: Living in affordable housing has been associated with a 12% decrease in health care expenses for Medicaid recipients as well as an 18% decrease in emergency department visits.^v The impacts were most dramatic in housing for seniors and people with disabilities and in permanent supportive housing for people coming from homelessness or who have behavioral health or substance use issues. Impacts were also seen in affordable general family housing.

Cost savings from housing the most vulnerable: Permanent supportive housing for people experiencing homelessness who have complex medical and behavioral issues has been shown to result in cost savings of 60% in public services and **net cost savings of 20%** when taking into account permanent supportive housing costs.^{vi}

Permanent supportive housing has also been connected to decreases in costs for hospitalization among people experiencing homelessness living with mental illness. A pre- and post-housing study of people who had experienced at least one in-patient hospitalization before receiving permanent supportive housing showed **in-patient hospital costs**^{vii} **decrease \$825 per year**, from an average of \$1,088 in the year before being housed to \$263 in the year after.^{viii ix}

Other research has shown people experiencing homelessness who received housing and case management services went to the emergency department 24% less than a randomized control group over an 18-month period. The intervention group had 29% fewer hospital admissions and hospital days than the control group.^x Additional studies have shown a 27% reduction in hospital admissions and inpatient days^{xi} and median health care costs^{xii} (per person per month) after 12 months of permanent housing that were approximately one-fourth of those in the year prior to having housing.^{xiii}

Cost savings from housing that prevents institutionalization: Research in North Carolina found that **every \$1 of investment** by the Agency in essential housing repairs to enable elderly people and people with disabilities to remain in their homes rather than having to move into institutional settings, could **save up to \$19 in Medicaid spending**.^{xiv}

Every **\$1** of essential repairs could prevent up to **\$19** in Medicaid spending.

Source: NC Housing Finance Agency whitepaper
Urgent Home Repair:
Quality of Life and Cost Impacts

Cost savings from upgrading the indoor environmental quality of housing: A national study of the health-related cost savings from improvements to indoor housing environmental quality in the U.S. (e.g., through enhanced insulation or ventilation) showed that lower-income households^{xv} in single-family and mobile homes would save \$352 (in 2013 dollars) over ten years. Of this, \$157 was asthma-related and the rest was from missed work days for health reasons and thermal stress from it being too hot or cold. The same research showed an additional **\$6,639 per household in benefit to society** through decreases in expenses to public and private medical insurance plans from those same health-related benefits.^{xvi} The Department of Energy reports that every \$1 invested in its weatherization program results in a return of \$2.78 in nonenergy benefits, such as fewer sick days and decreased medical expenses.^{xvii}

Respiratory illness-related cost savings of housing: A national 2020 study found that among children with asthma attacks, those whose families received federal rental assistance were **25%-30% less likely to visit the emergency department for asthma** than children for households on a waiting list for housing assistance.^{xviii} On average, asthma-related emergency department visits among children cost \$433 per visit (in 2011 dollars).^{xix}

A cost-benefit study of an asthma-related home-based environmental program in New York state estimated **a return of \$2.03-\$3.58 to Medicaid for every \$1 spent.**^{xx} In this pre-to-post-intervention study of adults and children in both urban and rural settings, the cost savings were from medication use, visits to doctors, education visits and hospitalizations over the ensuing twelve months.

Cost savings of lead-free housing: A cost-benefit analysis of reducing lead exposure among newborns by replacing service lines that deliver water to homes shows a return on investment of **\$2.44 for every \$1 invested.**^{xxi} Keeping a single birth-year of children from having lead in their blood would result in \$1.7 billion in health savings and \$77.2 billion in increased lifetime earnings for those individuals.^{xxii xxiii}

Cost savings from preventing falls among seniors: Total direct medical costs for fatal and non-fatal fall injuries in hospital, emergency department and outpatient settings among seniors have been found to exceed costs of home improvements to prevent falls. Average costs (in 2015 dollars) for a non-fatal fall were \$9,463 and for a fatal fall were \$25,487. These include costs for transport, emergency departments, hospitalization, nursing homes, hospice and a coroner or medical examiner.^{xxiv} A pilot program in Connecticut provided injury-prevention services and modifications for households with seniors 70 and older who had recently reported a fall. At a median cost of \$2,058 for 6.5 modifications, falls declined from 94% of the households in the prior six months to 9% in the following six months.^{xxv} These modifications included improvements such as installing grab bars and raising toilet height.

Place-based cost savings: Moving to a lower-poverty neighborhood from a higher-poverty neighborhood for at least one year has shown health-related benefits, including a substantial reduction in the prevalence of diabetes and extreme obesity among adults.^{xxvi} Research studying the cost savings from moving to healthier and better-resourced neighborhoods have shown that housing mobility activities could pay for themselves based on medical cost savings from impacts on adult extreme obesity and diabetes alone.^{xxvii} For example, a study from 2019 found that a 10 percentage point improvement in census tract poverty rate was associated with **\$133 less in yearly hospital spending for children** in low-income households (in 2015 dollars).^{xxviii}

Other health benefits of housing: Additional research has demonstrated housing results in decreased psychiatric hospital admissions,^{xxix} improved physical and mental health,^{xxx} reduced substance abuse,^{xxxi} and reduced alcohol use,^{xxxii} all of which will have health-related economic benefits to individuals, families and society in general.





NC HOUSING FINANCE AGENCY'S ACTIVITY

Since 1974, the Agency has invested in high-quality, affordable housing that supports health.

Agency-financed rental housing must meet specific design standards which protect the health and safety of all residents and ensure accessibility for all ages and ranges of ability.

Developments and rent assistance for persons experiencing homelessness and persons with disabilities relieve short-and long-term stress and are coupled with services to further support the health of the residents.

The Agency has homeowner rehabilitation programs specifically to improve housing quality for seniors and persons with disabilities, so they are able to safely remain in their own homes. Its largest homeowner rehabilitation program also addresses the needs of the whole house, including health-related issues like lead, mold, roof and floor safety, ramp access, and indoor environmental quality (including temperature, ventilation, and removal of possible respiratory illness triggers).

All of its affordable rental and home ownership programs provide tenure stability for the occupants; this positively impacts both physical and mental health.



To learn more about the Agency's policy and research activities, visit the website at <https://www.nchfa.com/about-us/policy-research/housing-research>

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