DataMart

North Carolina Housing Finance Agency

Management Innovations: Technology

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Management Innovation: Technology

Writer and computer programmer Daniel Keys Moran famously said, “You can have data without information, but you cannot have information without data.” Over the past few years, the North Carolina Housing Finance Agency has transformed its data collection and reporting system to more efficiently provide accurate, consistent data. This data is critical for internally evaluating our programs, tracking our compliance with state, federal and other contractual requirements and informing constituents and lawmakers about our work. Prior to our system renovation, reports were pieced together from uncoordinated spreadsheets and databases held by different business groups. Our new system is light years ahead: an Agency-built data warehouse fed by the highly automated line-of-business systems used by our various programs.

Window of Opportunity

Historically, the Agency faced a significant management challenge in producing consistent production reports across its diverse range of housing programs. Some programs, such as the Housing Credit, commit funds to projects that will not be completed for two or more years, while others, like the Agency’s single-family rehabilitation programs, finance and complete projects within a one-year window. These differences made it difficult to report consistently on agency-wide metrics like the total number of units produced annually. The Reporting team also relied on piecing together data held by different business groups within the Agency that each used their own methods for recording data and counting units or funds. Reporting staff often took hours or days to reconcile numerous data points and sources, to interview program staff and to decide on a shared definition across programs. Seeing an opportunity to improve our data process and outcomes, the Agency’s leadership team and the IT department took on the challenge to develop and deliver a new state-of-the-art data management system.

Innovative **Business Intelligence** Solution

To address this issue, the Agency hired a data analyst, who became the founding member of the Agency’s Business Intelligence (BI) team, to work with existing IT staff to develop a data warehouse. DataMart, as it is known, pulls information from the Agency’s four main line-of-business systems, which are used by program staff to track funding and activities, as well as finance software used to record servicing transactions and maintain the General Ledger. These data are then cleaned, standardized and formatted within a staging area of DataMart and become available for quick, consistent reporting. The Reporting team also developed several business intelligence online analytical processing (OLAP) cubes that pull from DataMart which can be easily accessed via Microsoft Excel. These cubes are user-friendly interfaces that allow for a more exploratory relationship with the data than standard reporting. By dragging and dropping data dimensions and measures into different columns and rows of a pivot table, cube users can quickly and easily slice and dice the data in a variety of ways, allowing them to answer questions on-the-fly rather than requesting custom reports to be written by the BI team.

The Policy team, which manages funding source compliance and allocation across the Agency and had been responsible for piecing together reports prior to the Business Intelligence team, maintains a close working relationship with Business Intelligence. While Business Intelligence manages DataMart and the cubes, Policy acts as a gateway between these data resources and internal and external stakeholders, fielding most data requests and using DataMart and the cubes to evaluate programs and provide information to the Government and Industry Relations team to demonstrate the Agency’s impact with lawmakers and elected officials. For example, the year-end reporting cube, which was developed to streamline the process of creating our annual Investment and Impact report and other standard annual reports, uses RIMS II economic impact multipliers to quickly translate data on financing provided into broader economic terms, such as jobs supported, state and local tax revenue generated, and property value created. This information is not only used in year-end reporting but in the Agency’s annual budget ask to the Office of State Budget and Management, and by the Public Relations and Marketing team in promotional and educational materials, social media and marketing campaigns and media outreach and response.

The addition of the Business Intelligence team and development of DataMart and the cubes has added immense capacity to the Policy team and allowed staff to dedicate previous reporting time to conducting more in-depth policy research including policy briefs, program impact reports and even working with the nonprofit PolicyMap to develop an interactive map that displays up-to-date data on housing needs, market conditions, and demographic trends on the Agency's website. Business Intelligence staff are an important "hybrid" of data analysts and IT, who help Policy with the technical side of the system (for example, by stepping in when complicated queries are needed to pull the right data from DataMart), as well as helping translate complex analyses into terms easily understandable by staff across the Agency.

Replicability, Measurable Improvement, and Effective Use of Resources

The Agency's DataMart can be replicated by other housing finance agencies interested in enhancing the quality and consistency of their data collection and reporting. Doing so would require upfront IT investments to build the data warehouse and cubes, as well as hiring staff, like the Agency's Business Intelligence team, to maintain the system and write queries for standardized reports, and others, like the Agency's Policy and Research team, to serve as superusers of the cubes and data analysts for program evaluation.

DataMart has led to measurable improvement in Agency operations. Although the staff and resource investments required to build the system were significant, they have vastly enhanced the Agency's ability to produce consistent standard reports, as well as our ability to quickly pull data and perform analyses for ad hoc requests from both internal and external stakeholders. The staff hours saved producing standard reports alone are substantial: gathering data for our annual Investment and Impact report once took six to eight weeks of staff time; now, it can be produced with the push of a button. Over the past few years, the time-saving benefits of DataMart and its much higher capacity for data exploration and analysis has far outweighed the costs invested in getting the system off the ground.

Conclusion

By providing consistent, accurate and up-to-date data on our programs and funding streams and flexible platforms with which to analyze that information, DataMart has elevated the Agency's ability to strategically align our resources to meet the most pressing affordable housing needs of North Carolinians. For example, our system helped us quickly create a document celebrating the North Carolina Housing Trust Fund's 30th anniversary in 2017. DataMart allowed us, on January 1, to pull data on the Trust Fund's cumulative impact from 1987 through 2017—a much faster turnaround than would ever have been possible before. Similarly, DataMart and the cube are used to produce our annual Investment and Impact Report, Program Impact Reports, and policy briefs. These documents are available in print and online and have been distributed to legislators and local officials to help advocate for additional funding and on social media to illustrate the impact of our affordable housing investments for North Carolinians, communities and the state.

Figure 1. Structure of DataMart and the cubes.

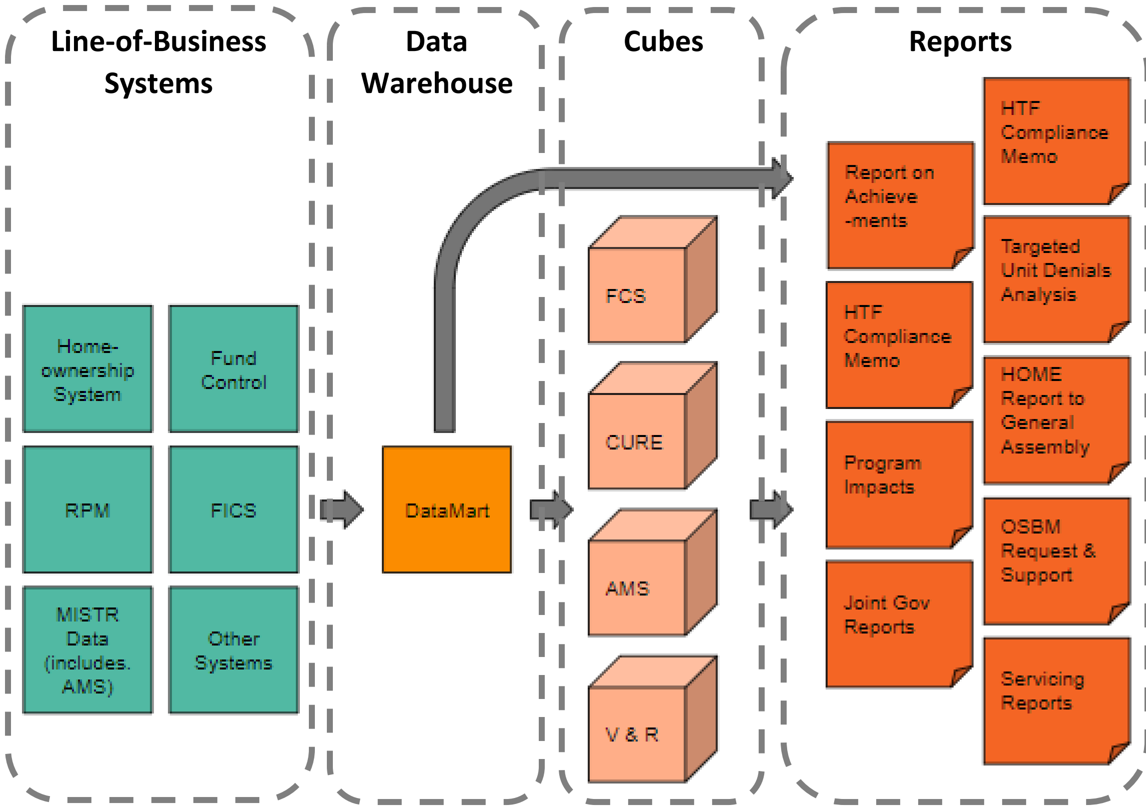
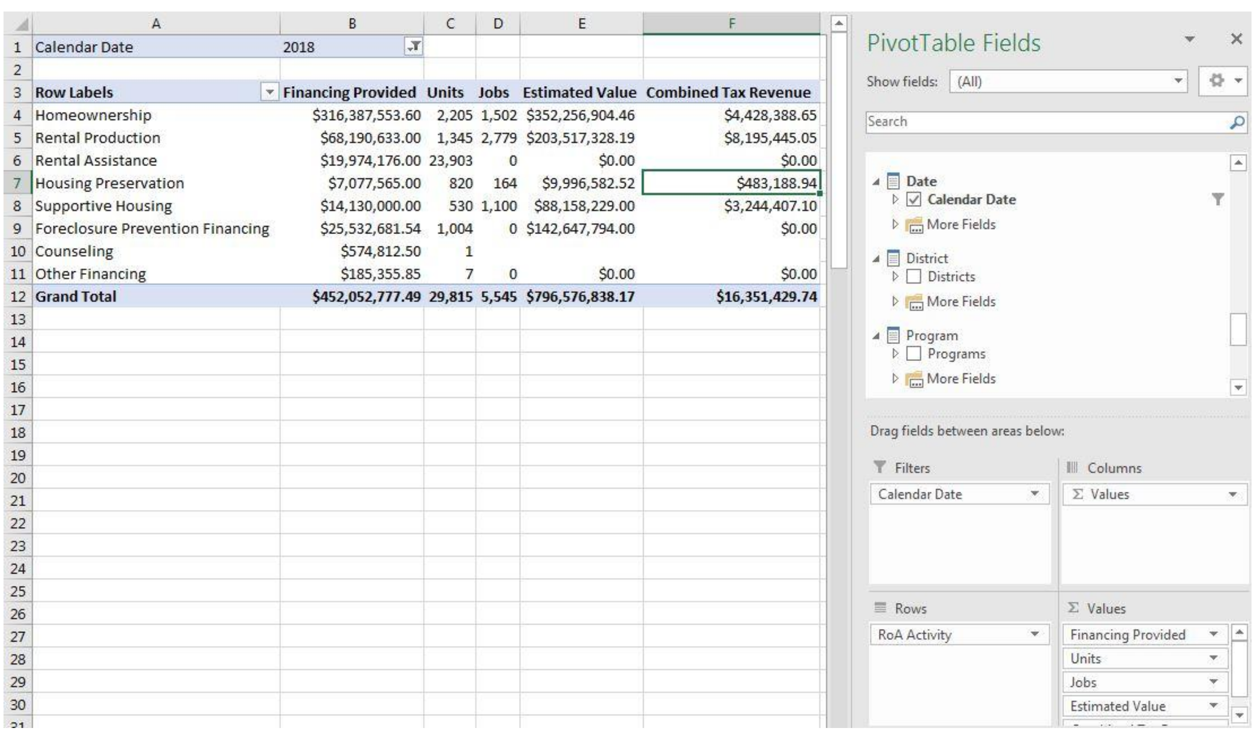
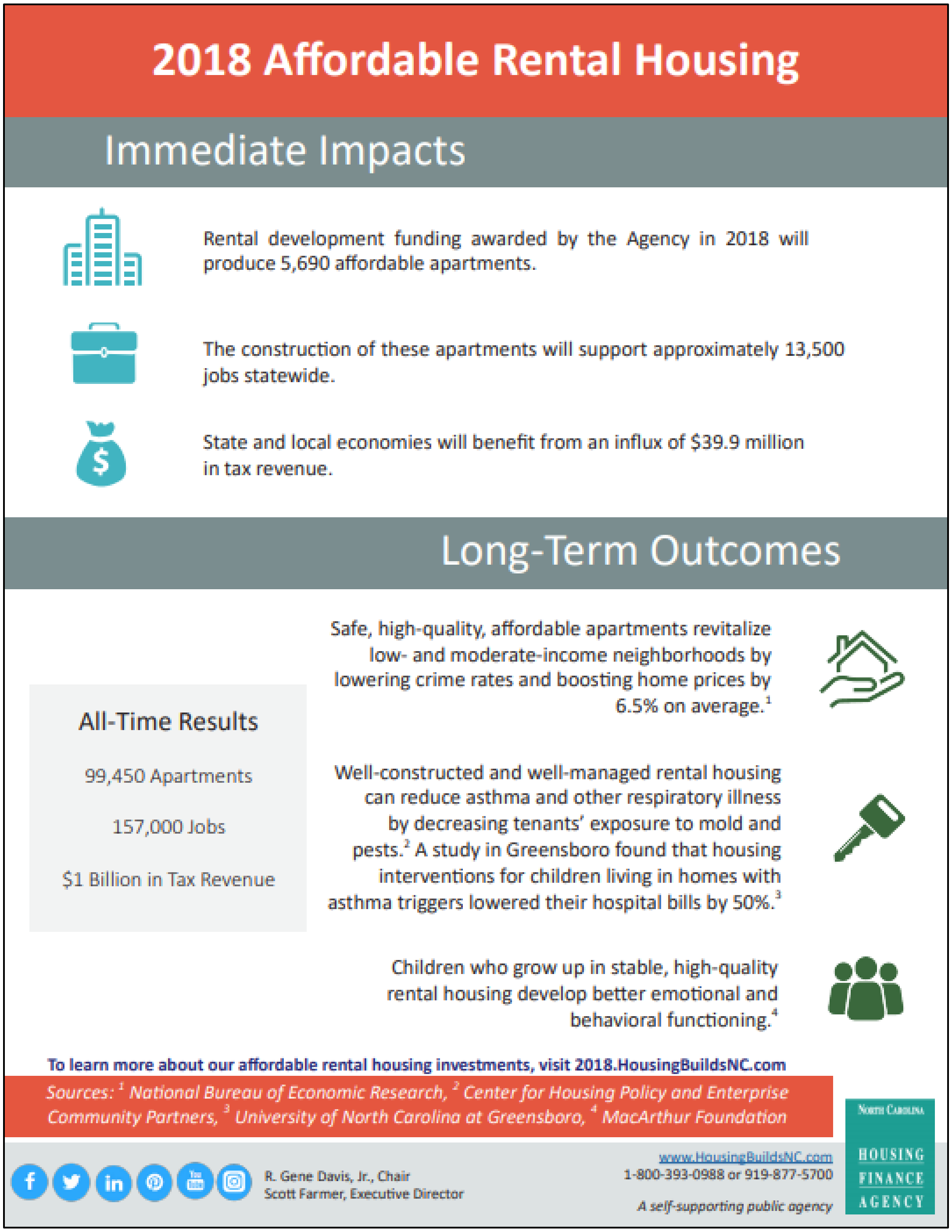


Figure 2. Year-end reporting cube accessed in Microsoft Excel.



Calendar Date	2018				
Row Labels	**Financing Provided**	**Units**	**Jobs**	**Estimated Value**	**Combined Tax Revenue**
Homeownership	$316,387,553.60	2,205	1,502	$352,256,904.46	$4,428,388.65
Rental Production	$68,190,633.00	1,345	2,779	$203,517,328.19	$8,195,445.05
Rental Assistance	$19,974,176.00	23,903	0	$0.00	$0.00
Housing Preservation	$7,077,565.00	820	164	$9,996,582.52	$483,188.94
Supportive Housing	$14,130,000.00	530	1,100	$88,158,229.00	$3,244,407.10
Foreclosure Prevention Financing	$25,532,681.54	1,004	0	$142,647,794.00	$0.00
Counseling	$574,812.50	1			
Other Financing	$185,355.85	7	0	$0.00	$0.00
Grand Total	**$452,052,777.49**	**29,815**	**5,545**	**$796,576,838.17**	**$16,351,429.74**

Figure 3. Example of the Agency's Program Impact Reports (which pull data from DataMart and the cubes) published annually along with the Report on Achievements to detail the outputs and impacts of different housing activity types on health, children's educational outcomes, and the economy.



2018 Affordable Rental Housing

Immediate Impacts

Rental development funding awarded by the Agency in 2018 will produce 5,690 affordable apartments.

The construction of these apartments will support approximately 13,500 jobs statewide.

State and local economies will benefit from an influx of $39.9 million in tax revenue.

Long-Term Outcomes

Safe, high-quality, affordable apartments revitalize low- and moderate-income neighborhoods by lowering crime rates and boosting home prices by 6.5% on average.[1]

Well-constructed and well-managed rental housing can reduce asthma and other respiratory illness by decreasing tenants' exposure to mold and pests.[2] A study in Greensboro found that housing interventions for children living in homes with asthma triggers lowered their hospital bills by 50%.[3]

Children who grow up in stable, high-quality rental housing develop better emotional and behavioral functioning.[4]

All-Time Results

99,450 Apartments

157,000 Jobs

$1 Billion in Tax Revenue

To learn more about our affordable rental housing investments, visit 2018.HousingBuildsNC.com

Sources: [1] National Bureau of Economic Research, [2] Center for Housing Policy and Enterprise Community Partners, [3] University of North Carolina at Greensboro, [4] MacArthur Foundation

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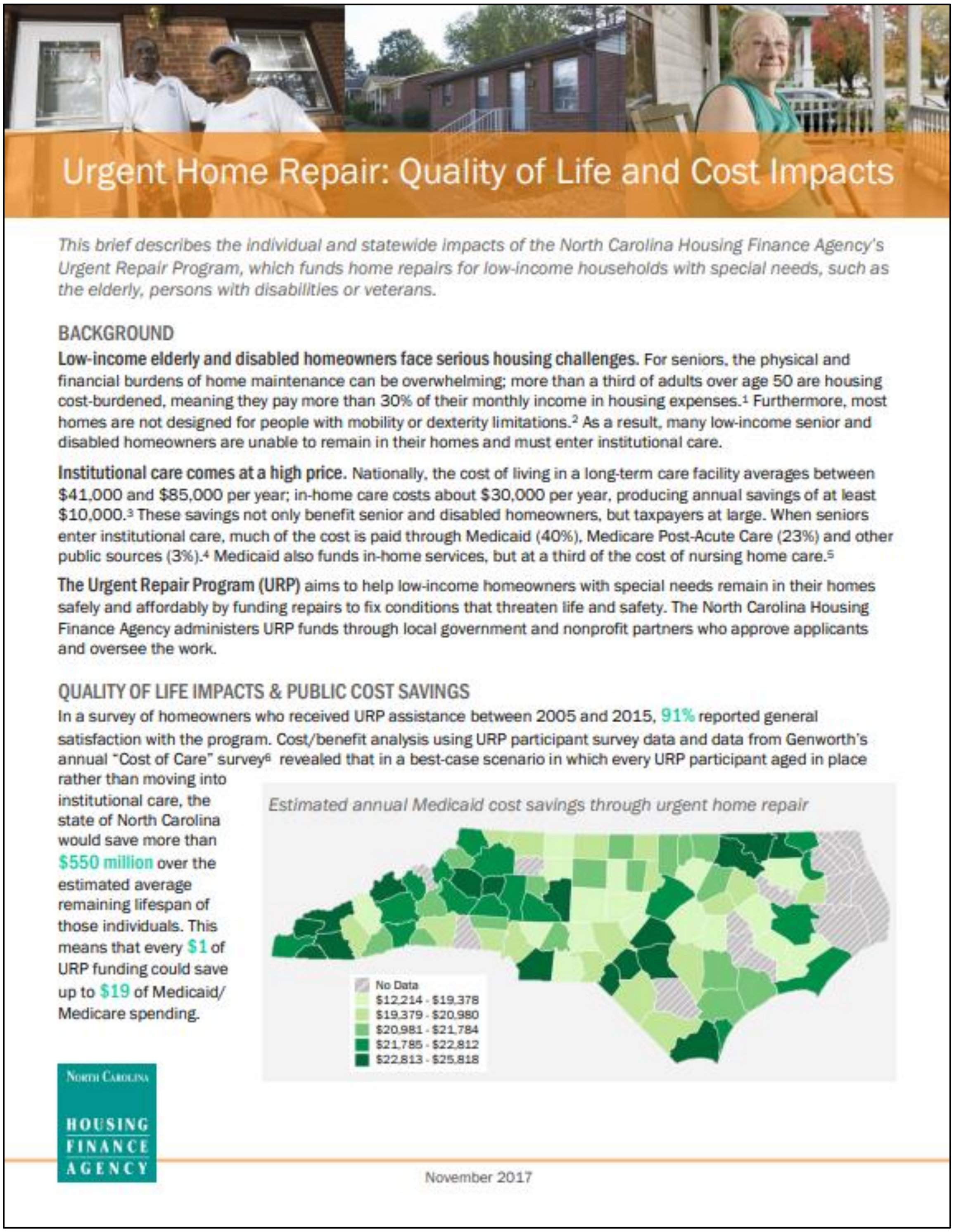
Figure 4. Example of a policy brief produced by the Agency's Policy team, thanks to DataMart enhancing their capacity (and freeing up time) to conduct deeper program analysis.



Urgent Home Repair: Quality of Life and Cost Impacts

This brief describes the individual and statewide impacts of the North Carolina Housing Finance Agency's Urgent Repair Program, which funds home repairs for low-income households with special needs, such as the elderly, persons with disabilities or veterans.

BACKGROUND

Low-income elderly and disabled homeowners face serious housing challenges. For seniors, the physical and financial burdens of home maintenance can be overwhelming; more than a third of adults over age 50 are housing cost-burdened, meaning they pay more than 30% of their monthly income in housing expenses.[1] Furthermore, most homes are not designed for people with mobility or dexterity limitations.[2] As a result, many low-income senior and disabled homeowners are unable to remain in their homes and must enter institutional care.

Institutional care comes at a high price. Nationally, the cost of living in a long-term care facility averages between $41,000 and $85,000 per year; in-home care costs about $30,000 per year, producing annual savings of at least $10,000.[3] These savings not only benefit senior and disabled homeowners, but taxpayers at large. When seniors enter institutional care, much of the cost is paid through Medicaid (40%), Medicare Post-Acute Care (23%) and other public sources (3%).[4] Medicaid also funds in-home services, but at a third of the cost of nursing home care.[5]

The Urgent Repair Program (URP) aims to help low-income homeowners with special needs remain in their homes safely and affordably by funding repairs to fix conditions that threaten life and safety. The North Carolina Housing Finance Agency administers URP funds through local government and nonprofit partners who approve applicants and oversee the work.

QUALITY OF LIFE IMPACTS & PUBLIC COST SAVINGS

In a survey of homeowners who received URP assistance between 2005 and 2015, **91%** reported general satisfaction with the program. Cost/benefit analysis using URP participant survey data and data from Genworth's annual "Cost of Care" survey[6] revealed that in a best-case scenario in which every URP participant aged in place rather than moving into institutional care, the state of North Carolina would save more than **$550 million** over the estimated average remaining lifespan of those individuals. This means that every **$1** of URP funding could save up to **$19** of Medicaid/Medicare spending.

November 2017

The considerable quality of life improvements and Medicaid/Medicare cost savings that can be achieved for relatively low per-unit investment make the Urgent Repair Program one of the most impactful and cost effective models for home repair and rehabilitation.

	Public Cost Savings	
	Institutional Care	
(A)	Average Annual Medicare/Medicaid Cost of Care per Person[6,7,8,9,10]	$24,272*
(B)	Average Life Expectancy[11,12]	4.88
(C)	Cost per Person over Life (Line A x Line B x 0.6% Discount Rate)[13]	$118,878
	Home/Community-Based Care	
(D)	Average Annual Medicare/Medicaid Cost of Care per Person	$8,914
(E)	Cost per Person over Life (Line D x Line B x 0.6% Discount Rate)	$42,764
	Total Public Cost	
(F)	Total Cost per Person over Life (Line C – Line E)	$76,115
(G)	Total Cost of All URP Participants over Life, 2005-2015 (Line F x Line H)	$580.5 M
	URP Investment Data	
(H)	Total Number of Units Repaired, 2005-2015	7,627
(I)	Total URP Program Costs, 2005-2015	$28.7 M
	Total Estimated Cost Savings Over 4.88 Years (Line G – Line I)	**$551.8 M**

**This number is higher during the first year of care ($26,730), as Medicare helps cover institutional care costs for the first 100 days of care.*

"Our back door did not have steps...We were scared if we had a fire, we might not be able to get out...we would have to move in with family because we do not have the money to fix it."
- Homeowner, Madison Co.

"Sanitation improved with repair of sink. My quality of life would be poorer with exposure to mold/mildew and leaks."
- Homeowner, Forsyth Co.

"I would have had to do without other necessary things to pay for the repair."
- Homeowner, Lee Co.

- *To learn more about the North Carolina Housing Finance Agency's Urgent Repair Program and other repair and rehabilitation programs, visit* www.nchfa.com/current-homeowners/repairing-your-home
- *To learn more about NCHFA's policy and research activities, visit* www.nchfa.com/about-us/research-reporting-and-policy

REFERENCES

1. Joint Center for Housing Studies. (2014). Housing America's older adults: Meeting the needs of an aging population. Cambridge, MA: Joint Center for Housing Studies of Harvard University. Available at http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-housing_americas_older_adults_2014.pdf.
2. Badger, E. (2014, September 2). America is rapidly aging in a country built for the young. The Washington Post. Available at https://www.washingtonpost.com/news/wonk/wp/2014/09/02/america-is-rapidly-aging-in-a-country-built-for-the-young/.
3. Reinhard, S. C., Kassner, E. Houser, A., Ujvari, K., Mollica, R., & Hendrickson, L. (2014). Raising expectations: A state scorecard on long-term services and supports for older adults, people with disabilities, and family caregivers. Available at http://www.aarp.org/content/dam/aarp/research/public_policy_institute/ltc/2014/raising-expectations-2014-AARP-ppi-ltc.pdf.
4. Calmus, D. R. (2013, February 6). The long-term care financing crisis. Washington, DC: Heritage Foundation Center for Policy Innovation. Available at http://s3.amazonaws.com/thf_media/2013/pdf/CPI_DP_07.pdf.
5. AARP. (2009, June). Providing more long-term support and services at home: Why it's critical for health reform. Washington, DC: AARP Public Policy Institute. Available at http://assets.aarp.org/rgcenter/health/fs_hcbs_hcr.pdf.
6. Genworth. (2016). Compare long term care costs across the United States [annual data for North Carolina]. Retrieved from https://www.genworth.com/about-us/industry-expertise/cost-of-care.html.
7. Dickey, E. (2017). Medicaid for North Carolina residents needing assisted living or home health care. Available at http://www.nolo.com/legal-encyclopedia/medicaid-north-carolina-residents-needing-assisted-living-home-health-care.html.
8. North Carolina Department of Health and Human Services Division of Medical Assistance. (2017). Nursing facility rates 2017 04 01 [Excel file]. Retrieved from https://dma.ncdhhs.gov/nursing-facility-rates.
9. U.S. Centers for Medicare & Medicaid Services. (2017). Your Medicare coverage: Skilled nursing facility (SNF) care. Medicare.gov. Retrieved from https://www.medicare.gov/coverage/skilled-nursing-facility-care.html.
10. Matula, T. (2009). Older adults in North Carolina: An overview. NC Study Commission on Aging. Available at http://www.ncleg.net/documentsites/committees/NCSCA/2009-10%20Interim%20Commission%20Meetings/1-7-10/Aging%20101.pdf.
11. Institute for Health Metrics and Evaluation. (2010). Life expectancy, obesity, and physical activity [county-level data for North Carolina]. Retrieved from http://www.healthdata.org/us-health/data-download.
12. Arias, E. (2015, September 22). United States Life Tables, 2011. National Vital Statistics Reports, 64(11). Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_11.pdf.
13. U.S. Office of Management and Budget [OMB]. (2015, November). Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs. Available at https://www.wbdg.org/FFC/FED/OMB/OMB-Circular-A94.pdf.

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AFFORDABLE HOUSING BENEFITS COMMUNITIES

Housing is the foundation of strong communities. Families with stable housing maintain their homes, participate in volunteer and civic activities and form stronger ties with their neighbors. The North Carolina Housing Finance Agency's rental, rehabilitation and home ownership programs improve communities across North Carolina, one family at a time.

Revitalizes distressed communities

Research in 2016 showed that Low-Income Housing Tax Credit developments boosted property values in low- and moderate-income neighborhoods by 6.5% and reduced crime rates.[1] Housing Credit developments have enhanced more than 280 urban and rural communities in North Carolina.[2]

Builds neighborhood stability

Home ownership often stabilizes home values and encourages property upkeep in surrounding communities. Moreover, those who own rather than rent their homes are more likely to volunteer in their communities and stay in their homes longer.[3] More than 115,000 North Carolinians have become homeowners thanks to the Agency's affordable mortgage products.[2]

Fosters social cohesion

Safe, well-maintained neighborhoods foster a sense of community and belonging, which promotes positive health outcomes for vulnerable families.[4] Research has shown that low-income families who move to safe, stable neighborhoods expand their social networks and can access greater academic and economic opportunities for their children.[5]

To learn more about how affordable housing benefits communities, visit 2018.HousingBuildsNC.com

Sources: [1] National Bureau of Economic Research, [2] The Affordable Housing Reader, [3] Housing Policy Debate (Journal), [4] MacArthur Foundation, [5] Neighborhood Effects Research: New Perspectives

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AFFORDABLE HOUSING BENEFITS THE ECONOMY

Building affordable housing supports jobs, encourages upward mobility and puts money into local economies, even after construction is done. Access to affordable housing alleviates the costly burden of homelessness on communities and households, which ultimately strengthens the economy. The North Carolina Housing Finance Agency's home ownership, rental housing and supportive housing investments fuel North Carolina's economic potential.

Creates jobs, draws investment

The Low-Income Housing Tax Credit, the nation's leading producer of affordable rental housing, creates about 200 total jobs per 100 housing units, and leverages $1 in additional private and public capital for every $1 invested.[1] In North Carolina, nearly 100,000 affordable apartments valued at $8.7 billion have been built for seniors, families and persons with disabilities.[1]

Encourages upward mobility

Stable, affordable housing or owning a home is seen as one of the most important factors for those with lower incomes to achieve a middle class lifestyle.[2] Moreover, research shows that families who spend 30% or less of their income on housing can invest more in education and enrichment for their children, fostering improved employment opportunities for the next generation.[3]

Returns money to local economies

Affordable housing not only creates jobs during and after construction, it also pumps money into local economies through increased consumer spending. New residents of Housing Credit apartments can add as much as $2 million to the local economy annually for every 100 units.[4] Local and state governments also benefit from increased tax revenues that can be reinvested in public services and amenities.

To learn more about how affordable housing benefits the economy, visit 2018.HousingBuildsNC.com

Sources: [1] North Carolina Housing Finance Agency, [2] MacArthur Foundation, [3] Housing Policy Debate (Journal), [4] The Center for Housing Policy

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AFFORDABLE HOUSING BENEFITS EDUCATION

Children who grow up in housing their families can afford have improved behavioral and cognitive health outcomes, better access to high-quality education and higher achievement in school. The North Carolina Housing Finance Agency's home ownership, rental housing and supportive housing investments set families on a path of lifelong success.

Improves child development

Housing quality has a strong, consistent impact on child development.[1] Children who live in safe, sanitary homes have lower risk of emotional, behavioral and cognitive problems, which influence school performance and access to academic and job opportunities as they age.[2]

Reduces childhood instability

Unstable and unaffordable housing situations can cause frequent moves,[3] harming children's educational outcomes by interfering with instruction and school attendance.[4] The Agency's rental, home buyer and foreclosure prevention investments can help reduce housing instability.

Boosts child achievement

Adolescents living in poor-quality housing have lower math and reading scores, even after adjusting for parenting and other factors.[4] Children whose parents are homeowners also perform better academically, are more engaged in civic and volunteer activities and are less likely to participate in criminal activity.[5]

To learn more about how affordable housing benefits education, visit 2018.HousingBuildsNC.com

Sources: [1] Developmental Psychology (Journal), [2] MacArthur Foundation, [3] Society for Prevention Research, [4] Child Development (Journal),[5] Science (Journal)

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AFFORDABLE HOUSING BENEFITS HEALTH

People in stable housing are more likely to have the financial resources to meet health needs and access primary care. This decreases the cost burden for expensive public health services such as emergency room visits. The North Carolina Housing Finance Agency's home ownership, rental housing and supportive housing investments help save public health dollars throughout the state.

Lowers exposure to health threats

Families lacking affordable housing options often live in unsafe and unhealthy housing conditions.[1] Research shows that well-constructed and well-maintained affordable housing reduces asthma, pestborne illnesses, lead poisoning, accidental injury and other health risks.[2] The Agency's affordable housing investments have improved nearly 34,550 deficient homes and apartments statewide.[3]

Reduces health care spending

A study of more than 1,600 individuals found that after people moved into affordable housing, Medicaid costs decreased by 12% as a result of fewer emergency room visits and lower medical expenditures.[4] In addition, housing and rental assistance for families who are homeless or food insecure improved health outcomes of vulnerable children and lowered health care spending.[5]

Cuts institutional care costs

Home repair and rehabilitation helps owners who are low-income, elderly or have disabilities remain in their homes rather than entering costly institutional care, such as assisted living facilities. An analysis of the Agency's Urgent Repair Program found that every $1 invested in home repairs could save up to $19 in Medicaid costs.[3]

To learn more about how affordable housing benefits health, visit 2018.HousingBuildsNC.com

Sources: [1] Health Affairs, [2] Center for Housing Policy, [3] North Carolina Housing Finance Agency, [4] Center for Outcomes Research and Education, [5] Children's Healthwatch

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Affordable Mortgage Products: Engines of Upward Mobility

The North Carolina Housing Finance Agency's mortgage products help first-time home buyers, working families, and other lower-income North Carolinians purchase affordable homes in quality neighborhoods. This opportunity launches buyers toward long-term financial security, which can pass on to their children.

BACKGROUND

Specialized mortgage products such as the NC Home Advantage Mortgage™ help lower-income families build wealth. Homeownership is a primary vehicle for building assets that pass from one generation to the next—but for many lower-income and minority families, traditional mortgage products are out of reach. The NC Home Advantage Mortgage™ effectively assists underserved buyers, pumping property value, tax revenue, and job support into the state economy in the process. Homeownership benefits buyers' children as well, even after they strike out on their own, as it is linked to improved health outcomes, increased educational attainment, and better job prospects and earnings as adults.[1,2] This brief describes how the NC Home Advantage Mortgage™ puts low-income families and children on a path for success.

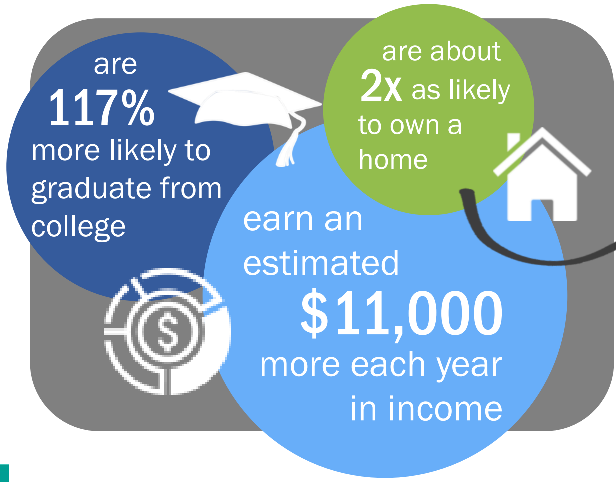
NC Home Advantage Mortgage™'s ECONOMIC IMPACT

18,900 home buyers assisted
$2.8 BILLION in property value
$41 MILLION in tax revenue
9,000 jobs supported

AFFORDABLE MORTGAGE PRODUCTS GIVE FAMILIES GREATER OPPORTUNITY

Investing in homeownership pays off for multiple generations. The home is the largest store of wealth for most Americans—especially those with lower incomes. For families earning less than $50,000 per year, home equity makes up 55-72% of total household assets, and the median wealth of low-income homeowners is 12 times that of renters with comparable incomes.[3] While this wealth can be passed down to future generations, other benefits of homeownership accrue to children as well. Children raised in owned homes tend to have better reading and math scores, achieve higher levels of education, and experience greater upward mobility compared to their peers who grew up in rented homes.[4,5] Children of homeowners earn an average of **$11,000** more per year as adults than children of renters (in 2018 dollars).[6,7] If every low-income renter family in North Carolina became homeowners, their children could add at least $580 million to local economies annually.[8,9] Individuals whose parents were homeowners are also more likely to someday own homes of their own.[10]

Children of homeowners...



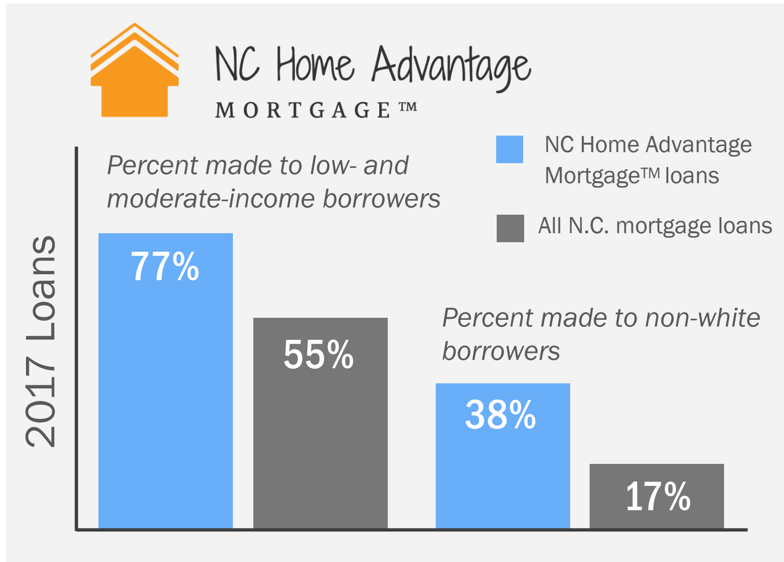
...compared to children of renters

*People with lower and middle incomes ($20,000-$60,000) are between **1.7** and **2.2 times more likely** to own homes by age 40 if their parents owned homes.*

(Chacón, 2016)

NORTH CAROLINA HOUSING FINANCE AGENCY

The NC Home Advantage Mortgage™ bridges the homeownership gap for underserved borrowers, boosting wealth for families and communities. In 2017, **77%** of NC Home Advantage Mortgage™ loans were made to low- and moderate-income families (earning less than 120% of area median income). By comparison, only 55% of overall mortgage loans made in North Carolina went to borrowers in this income bracket. Similarly, about 38% of NC Home Advantage Mortgage™ loans went to minority (non-white) borrowers, versus just 17% of all mortgage loans in the state.[11,12] Achieving homeownership with the NC Home Advantage Mortgage™ gives North Carolinians greater opportunity to build wealth. The value of homes purchased through the mortgage by low-income buyers (earning 50-80% of the area median income) grew by an average of **$9,700** per year (or 8% of the original value).[13] This gain translates to equity for homeowners, which helps working families build financial stability over time. Local communities also benefit from growth in property values and tax revenues.



Affordable homeownership provides more than just shelter. Buyers build financial equity through their home purchase, while also investing in their families' future access to opportunity. At the same time, each dollar invested in a home purchase supports property values, tax revenues, and jobs within local communities.

- *To learn more about the North Carolina Housing Finance Agency's homeownership programs, visit www.nchfa.com/home-buyers/buy-home.*
- *To learn more about our policy and research activities, visit www.nchfa.com/about-us/research-reporting-and-policy.*

REFERENCES & NOTES

1. Hughes, H. K. et al. (2017). Pediatric asthma health disparities: Race, hardship, housing, and asthma in a national survey. *Academics Pediatrics, 17*(2): 127-134. doi: 10.1016/j.acap.2016.11.011.
2. Yun, L. & Evangelou, N. (2016). Social benefits of homeownership and stable housing. National Association of REALTORS®, Research Division. Available at https://realtoru.edu/wp-content/uploads/2014/06/Homeownership-Stable-Housing.pdf?sf53127756=1.
3. U.S. Department of Housing and Urban Development [HUD]. (October 2002). Economic benefits of increasing minority homeownership [White paper]. Available at https://archives.hud.gov/initiatives/blueprint/econreport-101502.pdf.Census 2011-2015 American Community Survey and U.S. Department of Housing and Urban Development [HUD] Area Median Income Data. (2015). *Percent of all rental units that are likely affordable for a 4-person family earning 80% of AMI in 2015* [Data file]. PolicyMap. Retrieved from www.policymap.com/maps?p=129034&i=9942148&btd=18&period=2015&lind=111&cx=-75.11843006873303&cy=39.99599679713974&cz=10.
4. Yun & Evangelou, 2016
5. Kulkarnia, N. & Malmendier, U. (2015). Homeownership and the American Dream: An analysis of intergenerational mobility [White paper]. University of California Berkeley, Haas School of Business. Available at http://faculty.haas.berkeley.edu/nirupama_kulkarni/.
6. Boehm, T. P. & Schlottmann, A. M. (1999). Does home ownership by parents have an economic impact on their children? *Journal of Housing Economics, 8*(3): 217-232. doi: 10.1006/jhec.1999.0248.
7. Boehm & Schlottman's (1999) figure in 1999 dollars ($7,500) was converted to 2018 dollars ($11,000) using Alioth Finance's U.S. Official Inflation Data Inflation Calculator, retrieved from https://www.officialdata.org/1999-dollars-in-2018?.
8. U.S. Department of Housing and Urban Development [HUD]. (2018, June). Comprehensive Housing Affordability Strategy [CHAS] data, 2011-2015 ACS 5-year average, Table 7 [Data file]. HUD. Retrieved from https://www.huduser.gov/portal/datasets/cp.html#2006-2015_data.
9. "Low-income" defined as renter families earning no more than 80% of median family income. Calculation based on 53,018 low-income "large families" (5 or more related members), with the assumption that at least one of these family members is a child.
10. Chacón, F. (2016, August). Family tradition: Kids are more likely to own a home if their parents did [Blog]. Trulia Research. Available at www.trulia.com/research/family-tradition/.
11. Federal Financial Institutions Examination Council [FFIEC]. (2017). *Home Mortgage Disclosure Act* [Data file]. U.S. Consumer Financial Protection Bureau. Retrieved from www.consumerfinance.gov/data-research/hmda/explore.
12. FFIEC Home Mortgage Disclosure Act data were filtered by "Mortgages for first-lien, owner-occupied, 1-4 family homes (including manufactured housing)", for properties located in North Carolina and made for home purchase only (no home improvement or refinancing).
13. The estimated current value for each home in a random sample of 191 homes financed with the NC Home Advantage mortgage™ and sold to low-income borrowers (earning 50-80% of area median income) was obtained from Zillow (www.zillow.com). Appraised values at sale were obtained from the North Carolina Housing Finance Agency's internal data.

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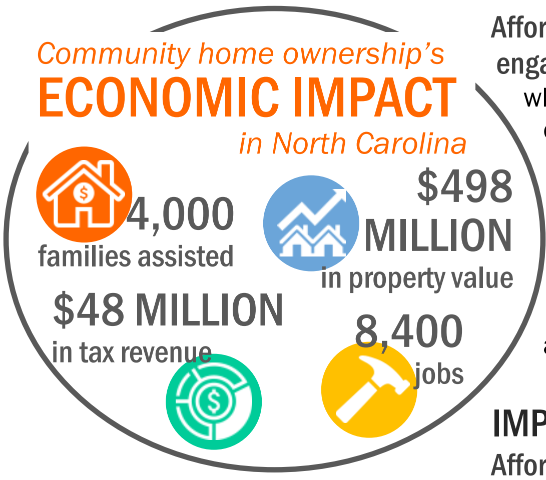
The Impacts of Community-based Affordable Homeownership Programs

Each year, the North Carolina Housing Finance Agency's community-based homeownership programs help more than 300 families become homeowners. The impact of these programs extends well beyond home buyer households by stabilizing neighborhoods and driving investment within local communities.

BACKGROUND

Community homeownership programs provide local economic benefits such as jobs and tax revenues. The North Carolina Housing Finance Agency offers two community-based homeownership programs: the Community Partners Loan Pool (CPLP) and the Self-Help Loan Pool (SHLP). These programs have cumulatively supported 8,400 jobs and generated $48 million in state and local tax revenues. Every $1 invested in CPLP or SHLP leverages $4 of additional public and private funds, totaling $498 million in property value.



Affordable homeownership stabilizes neighborhoods and boosts resident engagement. Research shows that homeownership encourages property upkeep, which leads to higher home values, and that homeowners tend to be more civically engaged, volunteer in their communities, and live in their homes longer.[1]

Homeownership opportunities can revitalize disinvested communities. Several of the Agency's local government and nonprofit partners have strategically used CPLP and SHLP funds to spark broader community development work. Such initiatives bolster the stabilizing effects of homeownership by pulling additional public and private investment into neighborhoods.

IMPACT SNAPSHOT: NEIGHBORHOOD STABILITY

Affordable homeownership creates financial stability for low-income families, which leads to more stable communities. Rental housing costs in North Carolina are rising rapidly—the statewide median rent has increased 14% since 2010. In this market, home ownership is an especially valuable asset-building investment. On average, families who purchase Habitat for Humanity homes funded through SHLP pay **$203 less** per month on their mortgage loans than they did in rent, and every dollar of principal paid goes back into their own pockets. In addition to benefitting home buyers, these savings return directly to the local economy when families use them to cover other household expenses such as groceries, medical appointments, child care, and transportation.

The savings and equity investments that SHLP and CPLP facilitate provide security for families that spans multiple generations. Children with homeowner parents are more likely to have higher math and reading scores, remain in school, and achieve higher levels of education, all of which increases their opportunities and earnings later in life.[2]

Another aspect of the SHLP and CPLP programs that builds financial stability is the requirement that home buyers participate in pre-purchase home ownership classes and counseling. This counseling improves participants' credit and ultimately lowers delinquency rates on mortgage loans; the estimated cost savings attributable to pre-purchase counseling in preventing loan defaults comes to about $1,000 per home buyer.[3]

The education and financial benefits that affordable homeownership provides to families ripples out to create vibrant communities. Compared to renters, homeowners feel their communities are stronger and safer, and they are more likely to know their neighbors.[4] All this builds strong neighborhood networks—which can persist for generations, since homeownership boosts upward mobility for children of homeowners.[5]

North Carolina Housing Finance Agency

IMPACT SNAPSHOT: INVESTING IN COMMUNITIES

Downtown Housing Initiative | Jacksonville, NC

The city of Jacksonville, NC, used CPLP funds to help revitalize an entire neighborhood. Jacksonville's Downtown Housing Initiative worked with local builders to construct 12 homes in a previously disinvested neighborhood, which were sold to lower-income buyers with the help of CPLP down payment assistance. The city acquired decaying homes and vacant lots, which were converted into three- and four-bedroom homes with attractive design and durability features such as metal roofs and brick or fiber cement siding. Homes were built to SystemVision™ construction standards, which provide a guarantee of low monthly heating and cooling bills. The city also invested in nearby parks, walkways and other amenities that continue to attract private builders to the area.

Eddy Place | Mooresville, NC

Our Towns Habitat for Humanity used SHLP funds to build energy efficient, aging-friendly homes in Mooresville, NC. In 2005 and 2006, Our Towns Habitat for Humanity built a neighborhood of 29 homes that featured a combination of Universal Design and green building standards to maximize comfort and affordability. The homes' Universal Design features such as elevated electrical outlets and wide doorways allow home owners to remain in their homes as they age, while energy efficiency features such as tankless water heaters and low-bleed insulation help keep utility costs low. Development of the neighborhood was made possible through several public-private partnerships, including not only through Agency financing but investment from the Town of Mooresville for infrastructure improvements and donations from local businesses, churches and individuals, including land donation by a local couple.

Affordable homeownership opportunities provide significant social and economic benefits, not only to home buyers, but also to their families, neighbors and wider communities. Community-based homeownership programs such as those offered by the North Carolina Housing Finance Agency are particularly effective at stabilizing neighborhoods, both by providing financial security to individual home buyers and by attracting additional public and private investment to communities.

- *To learn more about the North Carolina Housing Finance Agency's community homeownership programs, visit www.nchfa.com/homeownership-partners/community-partners.*
- *To learn more about our policy and research activities, visit www.nchfa.com/about-us/research-reporting-and-policy.*

REFERENCES & NOTES

1. Rohe, W. M., Van Zandt, S., & McCarthy, D. (2013). "The social benefits and costs of homeownership: A critical assessment of the research": From low income homeownership: Examining the unexamined goal (2002). In *The Affordable Housing Reader* (pp. 196-213). Taylor and Francis. doi: 10.4324/9780203722671
2. Yun, L. & Evangelou, N. (2016). Social benefits of homeownership and stable housing. National Association of REALTORS®, Research Division. Available at https://realtoru.edu/wp-content/uploads/2014/06/Homeownership-Stable-Housing.pdf?sf53127756=1.
3. Avila, G., Nguyen, H., & Zorn, P. (2013). The benefits of pre-purchase homeownership counseling. Freddie Mac. Available at www.freddiemac.com/perspectives/pdf/benefits_of_pre_purchase.pdf.
4. National Association of REALTORS®. (2011). American attitudes about homeownership. Available at www.nar.realtor/sites/default/files/migration_files/american-attitudes-about-homeownership-2011-01-19-survey-results.pdf.
5. Kulkarnia, N. & Malmendier, U. (2015). Homeownership and the American Dream: An analysis of intergenerational mobility [White paper]. University of California Berkeley, Haas School of Business . Available at http://faculty.haas.berkeley.edu/nirupama_kulkarni/.

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The Impact of the Low-Income Housing Tax Credit in North Carolina

Low-Income Housing Tax Credits fund affordable rental housing for low-income North Carolinians, including working families, seniors, formerly homeless veterans and persons with disabilities. The Housing Credit has far-reaching impacts. With the help of state-funded programs that support it, the credit saves taxpayer dollars and acts as an economic driver, particularly in rural regions of the state.

BACKGROUND

The Low-Income Housing Tax Credit, a public-private partnership, is the most crucial affordable housing tool in the country. The credit incentivizes private developers and investors to build apartments that low-income residents can afford. In North Carolina, the credit has financed **83,000** apartments that charge rents affordable to low-income tenants, which would not otherwise generate enough cash flow to be financially feasible.[1]

The Housing Credit's All-Time
ECONOMIC IMPACT
in North Carolina

$7.5 BILLION in property value

$923 MILLION in tax revenue

137,000 jobs

2:1 LEVERAGE of additional public and private funds

The credit also promotes success for North Carolina children. Beyond economic benefits, the Housing Credit promotes residents' well-being. When affordable options are unavailable, families may be forced to rent unsafe, overcrowded or otherwise substandard apartments, which can cause illness and developmental delays in children.[2,3] Affordable housing can also prevent frequent moves, which improves children's educational outcomes by supporting school attendance.[4]

In short, every tax dollar invested in the Housing Credit generates value for all North Carolinians.

IMPACT SNAPSHOT: HEALTH CARE SAVINGS

Affordable housing combined with supportive services for tenants can generate significant public health care savings. In North Carolina, Housing Credit properties are required to participate in the Targeting Program by setting aside 10-20% of units for people with disabilities. Local service agencies provide access to supports and services, such as health care or case management, to tenants of Targeted Units. Research has found that living in affordable housing coupled with support services lowers the medical expenses of tenants who are elderly or have disabilities by an average of **$1,000** per year.[5] For tenants with intensive services needs, health care cost savings are even higher, around **$6,000** per year.[6]

Every **$1** in Housing Credit equity

Saves as much as **$3** in taxpayer health care dollars

In North Carolina, the Housing Credit saves up to $3 in health care dollars for every $1 invested over the life of the program.[7] Because Targeted Unit tenants have very low incomes and receive public disability benefits, their health care costs are typically paid by taxpayer dollars. Based on research on comparable programs, the 3,500 households who currently occupy Targeted Units could save taxpayers between **$3.5 and $21 million** in public health care dollars each year.[8]

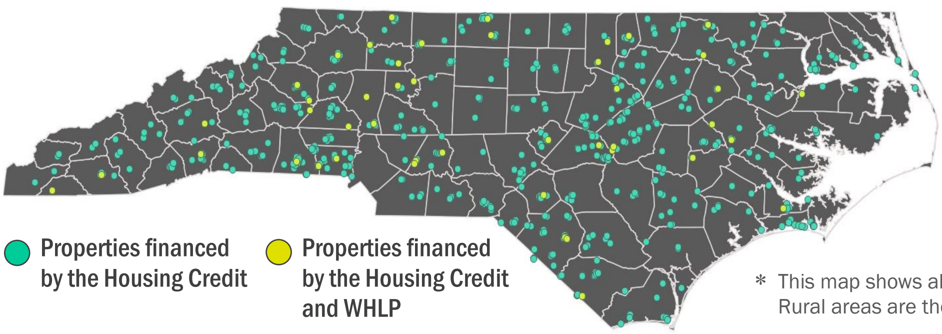
North Carolina Housing Finance Agency

IMPACT SNAPSHOT: STATE FUNDING BOOSTS THE HOUSING CREDIT IN RURAL TOWNS

The Housing Credit drives housing development in rural communities across the state. In some counties, Housing Credit developments have been the only new residential construction in years, driving the building industry in those areas, fueling local property tax revenues and providing much-needed affordable rental housing.

The Housing Credit does not operate on its own—state funding like the Workforce Housing Loan Program (WHLP) maximizes its impact. WHLP makes Housing Credit developments viable in rural communities, where rents are not high enough to cover building costs and repay development loans, leaving a funding gap that renders Housing Credit development infeasible. WHLP fills that gap and helps developers repay their debts. In the few short years since WHLP's creation in 2015, the program has helped finance **45 properties** and created more than **2,700 units of affordable rental housing** in rural communities across the state.

All Housing Credit properties in rural areas*



Properties financed by the Housing Credit

Properties financed by the Housing Credit and WHLP

* This map shows all Housing Credit properties in rural areas of the state. Rural areas are those that are eligible for USDA single-family loans.

RURAL IMPACT

35,600 apartments

56,000 jobs

$380 million in tax revenue

$3.1 billion in property value

While the Housing Credit finances about 4,100 affordable rental units each year in North Carolina, more development is necessary to meet a growing need.[9] More than 526,000 low-income households in the state pay more than they can afford in rent; the average renter in North Carolina earns $14.14 per hour but the average wage needed to afford a two-bedroom apartment is $15.79 per hour.[10,11] Increasing state supports like the Workforce Housing Loan Program would enhance the Housing Credit's ability to provide housing for families and individuals as well as economic benefits for surrounding communities and taxpayers at large.

- *To learn more about the Housing Credit and the North Carolina Housing Finance Agency's other rental development programs, visit www.nchfa.com/rental-housing-partners/rental-developers.*
- *To learn more about our policy and research work, visit www.nchfa.com/about-us/research-reporting-and-policy.*

REFERENCES & NOTES

1. Novogradac & Company, LLP. (2017). About the LIHTC [Webpage]. Available at www.novoco.com/resource-centers/affordable-housing-tax-credits/lihtc-basics/about-lihtc.
2. North Carolina Housing Finance Agency. (2017). Affordable housing benefits health. Available at www.nchfa.com/about-us/research-reporting-and-policy/housing-research.
3. How Housing Matters. (2017, November). Why educators, health professionals, and others focused on economic mobility should care about housing [Blog]. Available at howhousingmatters.org/articles/educators-health-professionals-others-focused-economic-mobility-care-housing/.
4. North Carolina Housing Finance Agency. (2017). Affordable housing benefits education. Available at www.nchfa.com/about-us/research-reporting-and-policy/housing-research.
5. Vartanian, K., Weller, M., & Saul, A. (2015, November). Health in housing: Exploring the intersection between housing and health care. Providence Center for Outcomes Research and Education and Enterprise Community Partners. Available at www.enterprisecommunity.org/download?fid=4489&nid=4243.
6. Basu, A. et al. (2012). Comparative cost analysis of housing and case management program for chronically ill homeless adults compared to usual care. *Health Services Research, 47*(1): 523-543. doi: 10.1111/j.1475-6773.2011.01350.x
7. This calculation assumes $6,000 per year (over 30 years) in healthcare savings per Targeted Unit and $61,000 per unit in financing (one-time cost), which is the average amount of financing provided per unit for all properties that currently have Targeted Units.
8. The calculation for this range was: Number of Targeted Unit households (3,500) x healthcare savings per household ($1,000-6,000)
9. This number is a five-year average of annual units produced from 2013-2017.
10. U.S. Department of Housing and Urban Development. (2017). Comprehensive Housing Affordability Strategy (CHAS) data, 2010-2014. Retrieved from: www.huduser.gov/portal/datasets/cp.html.
11. National Low Income Housing Coalition. (2017). Out of Reach 2017: North Carolina. Available at www.nlihc.org/oor/north-carolina.

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The Low-Income Housing Tax Credit and Neighborhood Property Values in North Carolina

In both urban and rural North Carolina, affordable rental properties funded through the Low-Income Housing Tax Credit have no effect on the median home values of their communities, showing that local homeowner fears about the impact of affordable housing developments on their property values are unfounded.

BACKGROUND

The Low-Income Housing Tax Credit, a public-private partnership, is the most crucial affordable housing tool in the country. The Housing Credit incentivizes private developers and investors to build apartments that low-income residents, including families, people with disabilities, seniors and formerly homeless veterans, can afford. Without the credit, apartments charging rents affordable to low-income tenants would not generate enough cash flow to be financially feasible.[1]

The credit also produces economic and social benefits. In North Carolina, every $1 in development equity raised through the Housing Credit leverages almost twice as much in additional public and private funds and generates state and local tax revenue. The credit also promotes residents' well-being by offering an affordable alternative to unsafe, overcrowded or otherwise substandard apartments that can contribute to physical and mental illness in children and parents.[2,3] In fact, the Housing Credit can save taxpayer dollars by reducing expenses that low-income residents incur to public health systems such as Medicaid. Affordable housing can also prevent frequent moves, which improves children's educational outcomes by supporting school attendance.[4]

NEIGHBORHOOD PROPERTY VALUES AND THE HOUSING CREDIT

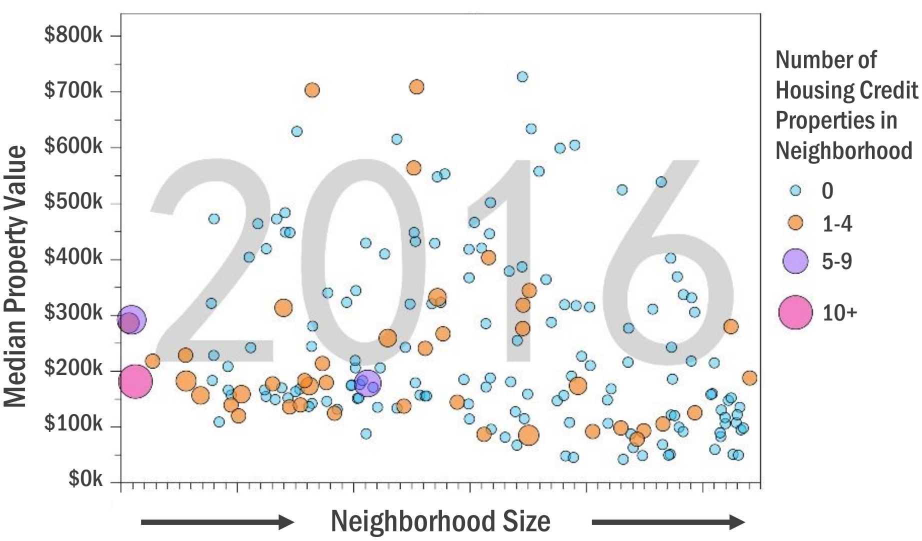
Despite the economic and social benefits of the Housing Credit, some people worry that affordable housing will hurt home values. However, research suggests that this is not the case. One literature review examined 17 research studies and found that 16 of them saw no or mixed positive/negative impacts on neighboring property values from affordable housing.[6] Another recent study found that Housing Credit developments in low-income neighborhoods actually increased surrounding home prices by 6.5 percent.[7]

Unfortunately, very little research exists on the Housing Credit's property value impacts in North Carolina. To fill this gap, we examined monthly median property value data from Zillow, which provided viable data sets for 181 urban neighborhoods and 14 small rural towns across the state to determine whether the presence of Housing Credit apartments has any link to property values of surrounding homes.[8]

Our analysis found no evidence that Housing Credit developments impact neighborhood home values in North Carolina communities. The graph to the right exemplifies this finding. The distribution of median property values for neighborhoods with Housing Credit properties (orange, purple and pink dots) generally matches that of neighborhoods with no Housing Credit properties (blue dots). While this graph only shows median property values for 2016, the trend persists over time.

Property values in metro N.C. neighborhoods, 2016[9]

(Each dot is a neighborhood)



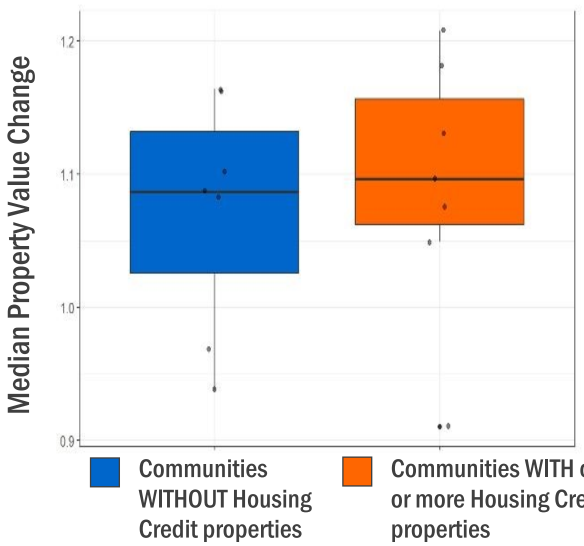
Graph created by Pamela Shultz, PhD, using DataGraph

North Carolina Housing Finance Agency

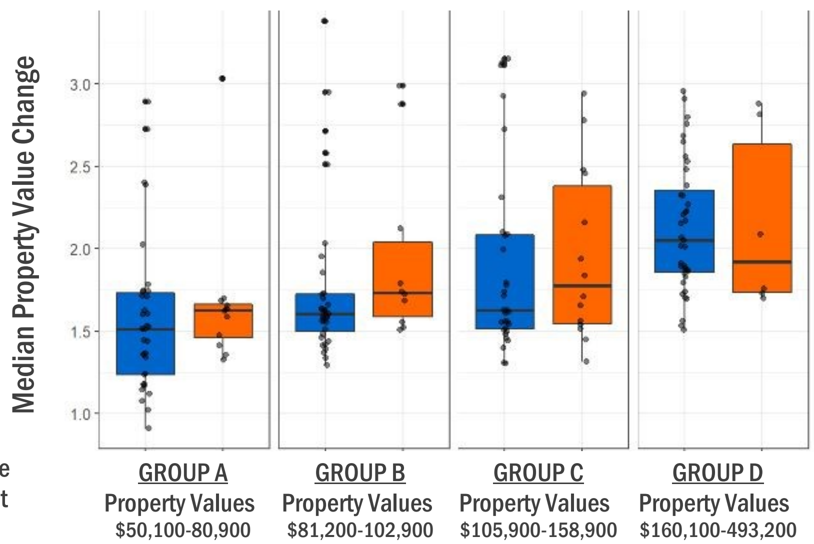
This finding holds true in both rural and urban communities. The graphs below show median changes in property value over several years for rural areas (left) and metro areas (right).[10] The overlapping ranges of communities without Housing Credit developments (blue) and with (orange) illustrate that Housing Credit properties do not significantly link to changes in surrounding home values. For urban neighborhoods, we deepened the analysis to look at neighborhoods of different socioeconomic levels: "Group A" neighborhoods are those with median property values in the bottom 25 percent of the total sample, while "Group D" neighborhoods are in the top 25 percent. In all four groups, no significant difference existed between places with Housing Credit properties and places without.[11]

Changes in property values and the Housing Credit

RURAL AREAS, 2008-2017



METRO AREAS, 1997-2017



The lack of evidence that Housing Credit properties impact home values supports continued development of affordable apartments. Despite some homeowners' fear that affordable rental housing will hurt property values, our analysis shows no link between the presence of Housing Credit apartments and surrounding home values. As such, communities can include Housing Credit apartments as viable housing options that benefit low-income residents and complement surrounding neighborhoods.

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REFERENCES & NOTES

1. Novogradac & Company, LLP. (2017). About the LIHTC [Webpage]. Available at www.novoco.com/resource-centers/affordable-housing-tax-credits/lihtc-basics/about-lihtc.
2. Calculated from N.C. Housing Finance Agency data for all federal Housing Credit investments to date as of January 16, 2018.
3. N.C. Housing Finance Agency. (2017). Affordable housing benefits health. Available at www.nchfa.com/sites/default/files/page_attachments/BOHAffordableHousingBenefitsHealth.pdf.
4. How Housing Matters. (2017, November). Why educators, health professionals, and others focused on economic mobility should care about housing [Blog]. Available at howhousingmatters.org/articles/educators-health-professionals-others-focused-economic-mobility-care-housing/.
5. N.C. Housing Finance Agency. (2017). Affordable housing benefits education. Available at www.nchfa.com/sites/default/files/page_attachments/BOHAffordableHousingBenefitsEducation.pdf.
6. Nguyen, M. T. (2005). Does affordable housing detrimentally affect property values? A review of the literature. *Journal of Planning Literature, 20*(15). Doi 10.1177/0885412205277069. Available at journals.sagepub.com/doi/abs/10.1177/0885412205277069.
7. Diamond, R. & McQuade, T. (2016). Who wants affordable housing in their backyard? An equilibrium analysis of low income property development (Working Paper No. 22204). Retrieved from National Bureau of Economic Research website: www.nber.org/papers/w22204.

8. Data were collected and organized by the North Carolina Housing Finance Agency and statistical analysis was performed by Zeydy Ortiz of DataCrunch Lab. Property value data used for urban areas were monthly median Zillow Home Value Index (ZHVI) data (or median list price for areas where no ZHVI data were available) at the neighborhood geography level, available at www.zillow.com/research/data/. Property value data used for rural areas were monthly ZHVI data (or median list price for areas where no ZHVI data were available) at the town level, and were downloaded by searching each town at www.zillow.com/home-values/. The data for metro areas spans 1987-2017 and the data for rural areas covers 2008-2017 (although not every neighborhood or town had data available for every month or year within those ranges). Data on the presence of Housing Credit properties was obtained from the North Carolina Housing Finance Agency's database. Since property value data were monthly, the month that Housing Credit funding was awarded was used as the month that Housing Credit presence in an area changed from zero to one (or two, three, etc. in the case of places with multiple developments).
9. This graphic was created by Pamela Schultz using DataGraph for the NC Open Pass Affordable Housing Datajam in March 2018.
10. Each dot in the graph represents a town (for rural areas) or a neighborhood (for metro areas). The boxes show the distribution of values for each group and the numbers on the y-axis represent the percent change in median home values for the area over a given time period. For example, the blue box on the left graph shows that 25 percent of the rural communities without Housing Credit properties examined had median property values in 2017 that were between 94% (0.94, the value associated with the bottom of the vertical line) and 103 percent (1.03, the value associated with the bottom of the blue box) of median property values in 2008; another 25 percent of communities had median property values in 2017 between 103 percent and 109 percent (1.09, the value associated with the horizontal line inside the blue box) of 2008 values; etc. The horizontal lines within each box show the median value for all communities within each group; so, for rural communities without Housing Credit properties, the median change in property values for all towns in the sample was 1.09 or 109 percent.
11. Welch's two sample t-test was used to test the true difference in means between areas with Housing Credit properties and areas without for both urban and rural communities. Below are the statistical results of each test: **Urban, Group A:** t = -0.562, df = 25.978, p = 0.579 | **Urban, Group B:** t = -1.342, df = 12.099, p = 0.204 | **Urban, Group C:** t = -0.437, df = 25.904, p = 0.665 | **Urban, Group D:** t = -0.116, df = 5.682, p = 0.912 | **Rural:** t = -0.427, df = 11.848, p = 0.677

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Urgent Home Repair: Quality of Life and Cost Impacts

This brief describes the individual and statewide impacts of the North Carolina Housing Finance Agency's Urgent Repair Program, which funds home repairs for low-income households with special needs, such as the elderly, persons with disabilities or veterans.

BACKGROUND

Low-income elderly and disabled homeowners face serious housing challenges. For seniors, the physical and financial burdens of home maintenance can be overwhelming; more than a third of adults over age 50 are housing cost-burdened, meaning they pay more than 30% of their monthly income in housing expenses.[1] Furthermore, most homes are not designed for people with mobility or dexterity limitations.[2] As a result, many low-income senior and disabled homeowners are unable to remain in their homes and must enter institutional care.

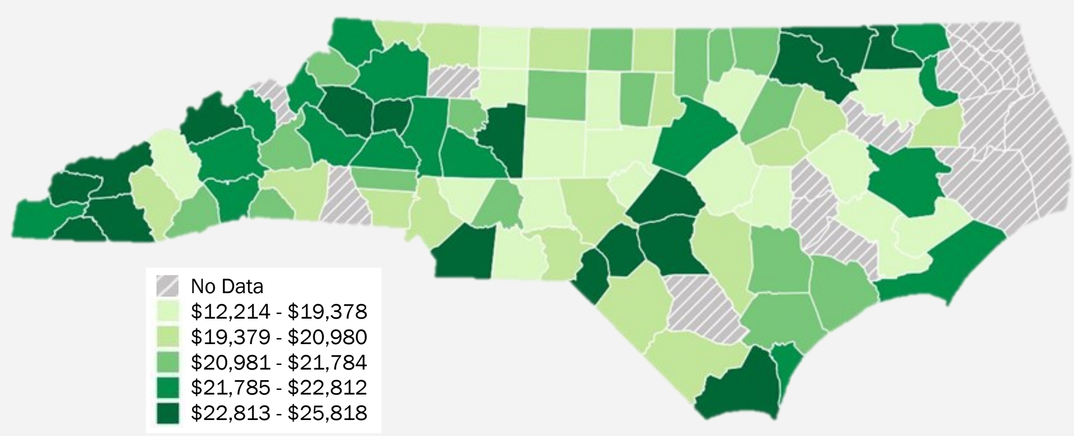
Institutional care comes at a high price. Nationally, the cost of living in a long-term care facility averages between $41,000 and $85,000 per year; in-home care costs about $30,000 per year, producing annual savings of at least $10,000.[3] These savings not only benefit senior and disabled homeowners, but taxpayers at large. When seniors enter institutional care, much of the cost is paid through Medicaid (40%), Medicare Post-Acute Care (23%) and other public sources (3%).[4] Medicaid also funds in-home services, but at a third of the cost of nursing home care.[5]

The Urgent Repair Program (URP) aims to help low-income homeowners with special needs remain in their homes safely and affordably by funding repairs to fix conditions that threaten life and safety. The North Carolina Housing Finance Agency administers URP funds through local government and nonprofit partners who approve applicants and oversee the work.

QUALITY OF LIFE IMPACTS & PUBLIC COST SAVINGS

In a survey of homeowners who received URP assistance between 2005 and 2015, **91%** reported general satisfaction with the program. Cost/benefit analysis using URP participant survey data and data from Genworth's annual "Cost of Care" survey[6] revealed that in a best-case scenario in which every URP participant aged in place rather than moving into institutional care, the state of North Carolina would save more than **$550 million** over the estimated average remaining lifespan of those individuals. This means that every **$1** of URP funding could save up to **$19** of Medicaid/ Medicare spending.

Estimated annual Medicaid cost savings through urgent home repair



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The considerable quality of life improvements and Medicaid/Medicare cost savings that can be achieved for relatively low per-unit investment make the Urgent Repair Program one of the most impactful and cost effective models for home repair and rehabilitation.

	Public Cost Savings	
	Institutional Care	
(A)	Average Annual Medicare/Medicaid Cost of Care per Person[6,7,8,9,10]	$24,272*
(B)	Average Life Expectancy[11,12]	4.88
(C)	Cost per Person over Life (Line A x Line B x 0.6% Discount Rate)[13]	$118,878
	Home/Community-Based Care	
(D)	Average Annual Medicare/Medicaid Cost of Care per Person	$8,914
(E)	Cost per Person over Life (Line D x Line B x 0.6% Discount Rate)	$42,764
	Total Public Cost	
(F)	Total Cost per Person over Life (Line C – Line E)	$76,115
(G)	Total Cost of All URP Participants over Life, 2005-2015 (Line F x Line H)	$580.5 M
	URP Investment Data	
(H)	Total Number of Units Repaired, 2005-2015	7,627
(I)	Total URP Program Costs, 2005-2015	$28.7 M
	Total Estimated Cost Savings Over 4.88 Years (Line G – Line I)	**$551.8 M**

**This number is higher during the first year of care ($26,730), as Medicare helps cover institutional care costs for the first 100 days of care.*

"Our back door did not have steps...We were scared if we had a fire, we might not be able to get out...we would have to move in with family because we do not have the money to fix it."
- Homeowner, Madison Co.

"Sanitation improved with repair of sink. My quality of life would be poorer with exposure to mold/mildew and leaks."
- Homeowner, Forsyth Co.

"I would have had to do without other necessary things to pay for the repair."
- Homeowner, Lee Co.

- *To learn more about the North Carolina Housing Finance Agency's Urgent Repair Program and other repair and rehabilitation programs, visit www.nchfa.com/current-homeowners/repairing-your-home.*
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REFERENCES

1. Joint Center for Housing Studies. (2014). Housing America's older adults: Meeting the needs of an aging population. Cambridge, MA: Joint Center for Housing Studies of Harvard University. Available at http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-housing_americas_older_adults_2014.pdf.
2. Badger, E. (2014, September 2). America is rapidly aging in a country built for the young. The Washington Post. Available at https://www.washingtonpost.com/news/wonk/wp/2014/09/02/america-is-rapidly-aging-in-a-country-built-for-the-young/.
3. Reinhard, S. C., Kassner, E. Houser, A., Ujvari, K., Mollica, R., & Hendrickson, L. (2014). Raising expectations: A state scorecard on long-term services and supports for older adults, people with disabilities, and family caregivers. Available at http://www.aarp.org/content/dam/aarp/research/public_policy_institute/ltc/2014/raising-expectations-2014-AARP-ppi-ltc.pdf.
4. Calmus, D. R. (2013, February 6). The long-term care financing crisis. Washington, DC: Heritage Foundation Center for Policy Innovation. Available at http://s3.amazonaws.com/thf_media/2013/pdf/CPI_DP_07.pdf.
5. AARP. (2009, June). Providing more long-term support and services at home: Why it's critical for health reform. Washington, DC: AARP Public Policy Institute. Available at http://assets.aarp.org/rgcenter/health/fs_hcbs_hcr.pdf.
6. Genworth. (2016). Compare long term care costs across the United States [annual data for North Carolina]. Retrieved from https://www.genworth.com/about-us/industry-expertise/cost-of-care.html.
7. Dickey, E. (2017). Medicaid for North Carolina residents needing assisted living or home health care. Available at http://www.nolo.com/legal-encyclopedia/medicaid-north-carolina-residents-needing-assisted-living-home-health-care.html.
8. North Carolina Department of Health and Human Services Division of Medical Assistance. (2017). Nursing facility rates 2017 04 01 [Excel file]. Retrieved from https://dma.ncdhhs.gov/nursing-facility-rates.
9. U.S. Centers for Medicare & Medicaid Services. (2017). Your Medicare coverage: Skilled nursing facility (SNF) care. Medicare.gov. Retrieved from https://www.medicare.gov/coverage/skilled-nursing-facility-care.html.
10. Matula, T. (2009). Older adults in North Carolina: An overview. NC Study Commission on Aging. Available at http://www.ncleg.net/documentsites/committees/NCSCA/2009-10%20Interim%20Commission%20Meetings/1-7-10/Aging%20101.pdf.
11. Institute for Health Metrics and Evaluation. (2010). Life expectancy, obesity, and physical activity [county-level data for North Carolina]. Retrieved from http://www.healthdata.org/us-health/data-download.
12. Arias, E. (2015, September 22). United States Life Tables, 2011. National Vital Statistics Reports, 64(11). Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_11.pdf.
13. U.S. Office of Management and Budget [OMB]. (2015, November). Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs. Available at https://www.wbdg.org/FFC/FED/OMB/OMB-Circular-A94.pdf.

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