

**HEALTH NOTE: Housing Element, Comprehensive Plan Amendment Act of 2020
Bill 24-0001
Council of the District of Columbia, Council Period 24**

Introduced by:

Chairman Mendelson at the request of the Mayor

Bill Summary:^a

The Housing Element of the Comprehensive Plan describes the importance of housing to neighborhood quality in Washington, D.C. and the importance of providing housing opportunities for all segments of the population throughout Washington, D.C.

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What is the goal of this health note?

Decisions made in sectors outside of public health and health care, such as in education, housing, and employment, can affect health and well-being. Health notes are intended to provide objective, nonpartisan information to help legislators understand the connections between these various sectors and health. This document provides summaries of evidence analyzed by the Health Impact Project at The Pew Charitable Trusts while creating a health note for Council of the District of Columbia Bill 24-0001. Health notes are not intended to make definitive or causal predictions about how a proposed bill will affect health and well-being of constituents. Rather, legislators can use a health note as one additional source of information to consider during policymaking. The analysis does not consider the fiscal impacts of this bill.

How and why was this bill selected?

With the help of the Council of the District of Columbia's Office of the Budget Director, the Health Impact Project identified this bill as one of several important policy issues being considered by the Council of the District of Columbia during Council Period 24 (2021–2022). The health note screening criteria were used to confirm the bill was appropriate for analysis (See Methodology on page 12). The project selected Bill 24-0001 for analysis because of its potential to affect residents' access to affordable housing and the distribution of affordable housing across the city. Research has consistently demonstrated a strong link between housing and health, with housing quality, affordability, location, and attributes of the surrounding community tied to specific health outcomes.¹ For example, affordable housing means that families can pay for necessities such as utilities, food, and medical care that are critical to their health. Housing located near public transit, parks, quality schools, jobs, healthy food sources, and medical care can reduce the incidence of chronic disease, injury, respiratory illness, and poor mental health.²

SUMMARY OF HEALTH NOTE FINDINGS

B24-0001 updates the Comprehensive Plan for the National Capital. This health note reviews the available evidence regarding potential health effects of several components of the plan's Housing Element (Chapter 5) that aim to promote housing affordability and further fair housing opportunities, especially in high-cost areas of the city. Specifically, the health note examined the following new or updated components:

- Encourage development of market rate and affordable housing in high-cost areas of the city.
- Focus investment strategies and affordable housing programs to distribute mixed-income housing more equitably across the entire city.
- Provide zoning incentives to developers proposing to build a substantial amount of affordable housing above and beyond any underlying requirement.
- Support mixed-income housing by encouraging affordable housing in high-cost areas as well as encouraging market rate housing in low-income areas.

^a Summary as described by the Council of the District of Columbia, <https://lims.dccouncil.us/Legislation/B24-0001>. The Health Impact Project conducted this health note based on the bill as introduced.

^b The Health Impact Project is committed to conducting non-partisan research and analysis.

- Examine and propose greater Inclusionary Zoning requirements when zoning actions permit greater density or change in use.
- Research land use tools and techniques, including development standards, to encourage the development of residential units that meet the needs of larger families, with a focus on financing of affordable units in high-cost areas.
- Conduct a review of and maximize any opportunities to co-locate affordable mixed-income multi-family housing when there is a proposal for a new or substantially upgraded local public facility, particularly in high-cost areas.
- Undertake programs to preserve the supply of subsidized rental units and low-cost market rate units with an emphasis on preserving affordable units in high-cost or rapidly changing neighborhoods.
- Develop strategies to overcome impediments and obstacles to the delivery of affordable housing in high-cost areas.

Below is a summary of key findings:^c

- There is **strong evidence** that housing insecurity and unaffordability can harm physical and mental health. Frequent moves due to rising area housing costs are linked to stress and poor health, while displacement is associated with increased hospital or emergency room visits.³ Conversely, housing security can help facilitate effective management of chronic health conditions such as diabetes.⁴
- High-cost D.C. neighborhoods lack affordable housing and other neighborhoods are experiencing concentrated poverty. To the extent that updates to the Comprehensive Plan address these issues, low-income residents could experience health benefits. **Strong evidence** demonstrates that neighborhood conditions can influence residents' health, including documented effects on mortality, depression, mental health, and birth outcomes.⁵ For example, there is **strong evidence** that living in socioeconomically disadvantaged and racially segregated neighborhoods is associated with negative health effects such as cardiovascular illness, pre-term birth, and low birthweight, especially for Black Americans.⁶

Methods Summary: To complete this health note, Health Impact Project staff conducted an expedited literature review using a systematic approach to minimize bias and identify recently published studies to answer each of the identified research questions. In this note, “health impacts” refer to effects on determinants of health, such as education, employment, and housing, as well as effects on health outcomes, such as injury, asthma, chronic disease, and mental health. The strength of the evidence is qualitatively described and categorized as: not well researched, mixed evidence, a fair amount of evidence, strong evidence, or very strong evidence. It was beyond the scope of analysis to consider the fiscal impacts of this bill or the effects any funds dedicated to implementing the bill may have on other programs or initiatives in the District. To the extent that this bill requires funds to be shifted away from other purposes or would result in other initiatives not being funded, policymakers may want to consider additional research to understand the relative effect of devoting funds for this bill relative to another purpose. A detailed description of the methods is provided in Methodology Appendix on page 12.

^c See page 14 for definitions of the strength of evidence categories.

- There is **mixed evidence** regarding the effects of relocating from areas of concentrated poverty to lower-poverty neighborhoods on health outcomes and factors that shape health.⁷ While much of the research on mobility has focused on effects for adolescents and adults, recent research suggests that relocating to higher-income neighborhoods could have the greatest potential benefits for young children.⁸ Some studies show that housing assistance that allows recipients to move to higher quality housing or high-opportunity neighborhoods can mitigate the negative health effects for adults and children associated with housing insecurity and unaffordability.⁹ There is **some evidence** that counseling and other supports can help low-income families sustain benefits of moving to high-opportunity communities.¹⁰ The extent to which the Comprehensive Plan updates would result in low-income families relocating to higher-income neighborhoods is unclear.

WHY DO THESE FINDINGS MATTER FOR THE DISTRICT OF COLUMBIA?

There is a shortage of affordable housing in D.C., particularly for low-income households. The comprehensive plan’s Housing Element estimates that more than 20% of all D.C. households faced severe housing cost burdens in 2017, meaning that they spent more than half of their income on housing, and another 16% spent more than 30% to 50% of their income on housing.¹¹ The available affordable housing resources do not meet the city’s housing needs. For example, nearly 40,000 households are waiting for housing vouchers.¹² Approximately 40,000 D.C. households need housing that costs them less than \$750 per month to avoid being rent-burdened—or spending more than 30% of their household income on rent—but fewer than 800 rental units in the city fall at or below this price point.¹³

The wealthiest area of the District, Ward 3, contains less than 1% of the city’s approximately 50,870 income-restricted affordable housing units.¹⁴ Fifty percent of income-restricted affordable units are located in Wards 7 and 8, where approximately 35% of households’ annual incomes were less than \$25,000.¹⁵ Those wards contain the highest percentage of White (81%) and Black (92%) residents, respectively.¹⁶ Wards 7 and 8 not only have areas of concentrated poverty and the highest rates of residential instability, but also poor health outcomes including some of the highest infant mortality rates and lowest life expectancy in the District.¹⁷

WHAT ARE THE POTENTIAL HEALTH EFFECTS OF B24-0001?

Potential health effects of access to affordable housing

- To the extent that updates to the Comprehensive Plan result in increases in the availability of affordable housing in D.C., there could be positive effects on residents’ health associated with housing stability and affordability.
- Housing insecurity has been proven to contribute to a variety of adverse physical and mental health effects, including reproductive health, injury, and chronic disease, which disproportionately affect low-income people and people of color.¹⁸ One national study found that low-income adults living in public housing were less likely to experience psychological distress, and to report fair or poor health than those who were not receiving assistance at the time but would enter assisted housing within two years.¹⁹ Research also suggests that improved housing access and affordability through subsidized public housing units is

associated with less psychological distress and improved self-managed health, though findings on these outcomes among housing voucher recipients are mixed.²⁰

- Homes also provide a setting for routines that are important to self-management of chronic illness such as diabetes, particularly as it relates to establishing a foundation to pursue health goals, and medication adherence.²¹ In interviews of individuals with diabetes experiencing housing issues, housing costs were reported to compete with diabetes-related expenses and pose barriers to self-management. Respondents described how the costs of a diabetic diet presented financial challenges for those already paying high rents on limited budgets, even when their medication was fully covered by insurance. Research suggests that rental subsidies can help households avoid having to make trade-offs between housing and health maintenance costs and can help to improve the self-management of chronic conditions, which can decrease the use of emergency rooms and lower health care costs.²²
- Unaffordable housing is associated with poorer self-rated physical and mental health and can force households to divert finances away from health-related expenses like food, health care, or prescriptions. Utility costs can also have negative health impacts ranging from stress associated with bills to physical effects of extreme heat or cold or respiratory illness caused by dampness.²³ Additionally, the high cost of housing relative to income can lead to overcrowding when multiple households or family units pool resources to afford small dwellings. Overcrowding adds psychological strain and increases the risk of exposure to infectious illnesses, raising particular concern in the context of the COVID-19 pandemic.²⁴
- The inability to pay for rising housing costs can cause frequent moves, which is associated with worse health, even after considering sociodemographic characteristics that could explain the relationship.²⁵ One study found that individuals who were displaced as a result of gentrification, or an influx of wealthier residents driving up housing costs, experienced adverse mental health effects as well as increased emergency department visits and hospitalizations.²⁶
- To the extent that updates to the Comprehensive Plan result in the development of new, high-quality affordable housing, low-income D.C. residents, especially children, could benefit from reduced exposure to hazards associated with substandard older housing.
 - Children five years old and younger are the most vulnerable to negative health outcomes caused by poor housing quality because they spend most of their time at home and frequently exhibit hand-to-mouth behavior. Although the evidence regarding health outcomes for children in households that receive housing assistance is mixed, one critical review found that rental assistance mobility programs, when coupled with housing counseling, could provide better outcomes for children and families through improved housing quality, compared to public housing developments which can offer greater housing stability, but sometimes poorer living conditions.²⁷ Another study found that children ages one to five from low-income families who were living in U.S. Department of Housing and Urban Development (HUD)-assisted housing had lower blood lead levels than children that had the same socioeconomic, demographic, and family characteristics but did not receive housing assistance.²⁸

The relationship between neighborhood context and health

- A growing body of research explores the independent effect that people's neighborhood context has on their health. Collectively, these studies have documented evidence of neighborhood effects on numerous health outcomes, including mortality, depression, mental health, and birth outcomes.²⁹ To the extent that the Comprehensive Plan updates improve neighborhood conditions for D.C. residents by increasing opportunities in areas of concentrated poverty or facilitating new affordable housing opportunities for low-income households in high-opportunity areas, residents with low incomes could experience associated improvements in the health determinants and outcomes described below.
- Research indicates a causal relationship at all income levels between growing up in low-poverty neighborhoods and long-term effects including higher college attendance, higher earnings, and lower rates of single parenthood.³⁰ One study found that each year of exposure to a low-poverty neighborhood during childhood contributes to higher income in adulthood, so moving from a high-poverty neighborhood to a low-poverty neighborhood would have the greatest benefits for young children.³¹ Education and income are well-documented predictors of health outcomes.³² One recent study found that upward mobility from the lowest to highest quintile in the national income distribution was associated with a 16.7% decrease in mortality, even after controlling for factors such as race or access to medical care.³³ Research also supports an association between increasing economic opportunity and lower rates of smoking, inactivity, obesity, hypertension, and diabetes.
- Studies have also documented associations between better neighborhood opportunity and improved health outcomes for children, including reduced cortisol levels (a marker of stress that has been linked to negative physical and mental health outcomes), hospitalizations for asthma, and pediatric acute care visits.³⁴ Living in a higher-income neighborhood has been associated with a lower risk of preterm birth, a leading cause of infant mortality, for Black women.³⁵ Additionally, there is evidence of increased self-esteem and motivation among lower income residents of mixed-income developments.³⁶
- There is strong evidence that living in socioeconomically disadvantaged neighborhoods, where affordable housing units are disproportionately located, can negatively affect people's health.
 - For example, living in disadvantaged neighborhoods has been associated with higher rates of illness and death from cardiovascular disease (CVD).³⁷ Neighborhood factors such as high rates of crime and violence have been shown to induce stress, elevate blood pressure, and prevent healthy behaviors that affect CVD, and limited access to healthy, affordable food has been associated with risk factors for CVD such as diet and physical activity. One study among African Americans in Jackson, Mississippi found that women living in neighborhoods with higher levels of disadvantage and violence were at greater risk for CVD, even after adjusting for biomedical and behavioral risk factors for CVD and socio-demographic characteristics.³⁸
 - A study of statewide data from Texas found that neighborhoods with high levels of poverty, income inequality, or changing poverty levels over time (either increasing or decreasing, a potential indicator of gentrification) were associated with higher odds of poor infant health outcomes including preterm birth, low birthweight, and being small for gestational age, but neighborhood conditions did not explain the inequities in birth outcomes between Black and White women.³⁹

- A systematic review and meta-analysis of 60 studies found that mothers living in the most disadvantaged neighborhoods—defined by characteristics such as poverty, racial residential segregation, and crime—had a 27% higher risk of preterm birth and 11% higher risk of low birthweight compared to those living in the least disadvantaged neighborhoods.⁴⁰ The meta-analysis, which adjusted for race, did not find an association between neighborhood disadvantage and birth outcomes; however, the authors argue that this is a result of race being a well-documented predictor of where people live.⁴¹
- One study found that living in a socioeconomically disadvantaged neighborhood was associated with higher mortality for low-income individuals.⁴²
- Research also shows that low-income communities in the United States are disproportionately exposed to higher concentrations of air pollutants.⁴³
- There is also some evidence that residents' perceived safety is associated with their allostatic load (a marker of chronic stress) and that people reporting greater levels of violence in their neighborhoods report more severe stressors in their lives.⁴⁴
- There is strong evidence that living in racially segregated neighborhoods can negatively affect health, particularly for Black Americans.
 - Racial segregation within metropolitan areas has been linked to numerous poor health outcomes for Black Americans, including self-rated health, low birthweight, prematurity, hypertension, and obesity.⁴⁵ For example, one study examining data from U.S. metropolitan areas with a population of more than 100,000 found that, on average, higher levels of racial segregation were associated with poorer self-rated health for Black people living in high-poverty neighborhoods.⁴⁶ The research also found that as the level of segregation within an area increased, so did the likelihood that Black residents would live in high-poverty neighborhoods, even after controlling for socioeconomic factors.
 - A systematic review found that racial residential segregation significantly contributed to cancer disparities by race in 70% of the 17 studies examined, even after controlling for socio-economic and health insurance status.⁴⁷ The systematic review found that residing in racially segregated areas was associated with higher odds of later-stage diagnosis of breast and lung cancers, increased risk of death and lower survival rates from breast and lung cancers, and greater cancer risks associated with exposure to airborne toxins among Black Americans.⁴⁸
 - Another systematic review and meta-analysis of 42 studies found that, among Black mothers, greater racial residential segregation was associated with increased risk of preterm birth and low birthweight.⁴⁹ The study found that research on effects of segregation on White mothers was scant, but where available, the findings generally did not demonstrate associations between segregation and poor health outcomes among White mothers.⁵⁰
 - Research has also documented health benefits among Black and Hispanic youth who were exposed to environments that were less racially and ethnically segregated than the neighborhoods where they lived.⁵¹ The researchers documented benefits in cardiovascular health outcomes such as body mass index among youth who attended physical activity programs in less segregated areas, even after adjusting for factors such as sex and age.

- Research on the effects of residential racial and ethnic concentration on adult and adolescents' mental and behavioral health is mixed, with studies documenting both protective and detrimental effects.
 - A systematic review and meta-analysis of 17 studies found substantial diversity in the size and direction of effects of neighborhood racial and ethnic concentration on adolescents' behavioral problems, such as depression, anxiety, violence, and substance use.⁵² The findings signaled that neighborhoods with high concentrations of youth of color have some characteristics that may simultaneously hinder and promote youth behavioral health.⁵³
 - Another study, which included a systematic review of 41 studies and meta-analysis of 12 studies from around the world found that residential racial and ethnic concentration has protective associations for the mental health of ethnic minority individuals ages 16 and above, particularly suicidal ideation and psychotic experiences.⁵⁴ However, six of the U.S.-based studies included in the research documented detrimental effects of residential racial and ethnic concentration on mental health issues such as depression and anxiety for African American and Latino populations.⁵⁵ For African American populations, the negative association between racial residential concentration and mental health was only observed at concentrations of 85% or higher within a neighborhood, whereas this association was protective at lower levels.⁵⁶

Potential health effects of relocating to high-opportunity neighborhoods through housing assistance programs

- To the extent that the Comprehensive Plan update results in new affordable housing opportunities in high opportunity areas, it may create opportunities for low-income households to relocate to these neighborhoods. There is mixed evidence regarding the effects on health and factors that shape people's health of relocating households from areas of concentrated poverty to lower-poverty neighborhoods.
 - A study examining the mental health effects of Moving to Opportunity for Fair Housing (MTO), a voucher program that allowed low-income families to relocate to higher opportunity neighborhoods, found that female adolescents participating in the program in four of the five U.S. cities examined reported lower levels of psychological distress than those who remained in their original neighborhoods, whereas male adolescents were more likely to experience the opposite effect. The study also found that relocating through the MTO program resulted in higher levels of psychological distress for girls who were born to adolescent parents, although having an adolescent parent did not have the same effect in replicated analyses. Relocating also resulted in behavioral problems for children who were older than 10, did not have learning problems, whose household had a history of being victim of a crime, and who originally lived in unsafe neighborhoods.⁵⁷
 - Studies that examined the effects of different mobility programs on changes in neighborhood conditions for participating households yielded varied results. One MTO-focused study found that, overall, the mobility program was associated with

positive changes in participants' housing and neighborhood conditions, including housing quality, neighborhood economic conditions, perceived safety, and violent crime.⁵⁸ However, the study also found that most families that moved into higher opportunity areas still lived in racially segregated environments, and that the program did not have any effect on residents' social integration, suggesting families may have faced challenges integrating into their new communities.⁵⁹ Conversely, a study that examined the Baltimore Housing Mobility Program found that, when combined with counseling and programmatic supports, targeted housing vouchers helped poor Black families move to more diverse, low-poverty neighborhoods with higher quality schools. Furthermore, households remained in their new neighborhoods beyond the households' initial lease-up periods.⁶⁰

- Another MTO study found that young boys and girls in families that used a voucher to move to lower-poverty neighborhoods were significantly more likely to attend college and earned 31% more — nearly \$3,500 a year — as young adults than their counterparts in the MTO control group, whose families did not receive an MTO voucher. Girls in families that moved to lower-poverty neighborhoods were also less likely to be single parents as adults.⁶¹
- One analysis posited that neighborhood choice plays a significant, positive role in perceptions of neighborhood social cohesion, which can have protective effects against potential negative consequences of living in a low-income neighborhood by enforcing positive social norms, providing a supportive environment, and advocating for better resources. This study found that individuals moving from non-public housing to a public housing development or voucher-assisted housing reported a decrease in perceived social cohesion. Conversely, non-public and public housing residents alike reported improved perceptions of neighborhood social cohesion after relocating to a new neighborhood.⁶²
- A study that examined the experiences of residents who used a voucher to relocate from distressed public housing developments found that stress associated with moving, coupled with adjusting to a new neighborhood and the private market and increased financial hardship, could adversely affect physical and mental health. On the other hand, improvements in housing and neighborhood quality were found to favorably affect mental health by reducing stress and anxiety as voucher holders showed a statistically significant decrease (from 30% to 21%) in anxiety episodes over the previous 12 months.⁶³
- One qualitative study that examined outcomes for Low-Income Housing Tax Credit (LIHTC) housing residents across California found that, although participants had agency in selecting housing, neighborhoods, jobs, and schools, they still encountered barriers to economic mobility, suggesting that appropriate labor, education, and transportation policies may matter more for economic mobility than neighborhood opportunity alone.⁶⁴ Another study that surveyed heads of households of Housing Choice Voucher recipients in Charlotte, North Carolina found that individual perceptions of neighborhood safety, social cohesion, and disorder and household composition factors, such as presence of children, predicted housing voucher recipients' ratings of their neighborhood satisfaction more than neighborhood opportunity characteristics.⁶⁵ These results suggest that mobility to high-

opportunity neighborhoods may not correspond to increases in neighborhood satisfaction.

- Evidence on the effects of affordable housing developments in high-opportunity neighborhood using LIHTC funding suggests that these properties may contribute to increasing income diversity within communities. The systematic review also found that LIHTC developments do not change crime rates in surrounding neighborhoods, and that there is some evidence they can contribute to small increases in neighborhood safety, which researchers hypothesize can happen because of increased density and having more “eyes on the street.”⁶⁶

Potential effects on transportation access and cost and subsequent health effects

- To the extent that the Comprehensive Plan update encourages the creation of affordable housing near public transit, low-income D.C. residents could benefit from increased opportunities for physical activity and access to jobs and increased neighborhood satisfaction.
- There is some evidence that transportation options, in particular as a means to access jobs, factor into neighborhood choice and satisfaction. One study that surveyed heads of households of Housing Choice Voucher recipients in Charlotte, North Carolina found a small but significant positive association between transportation costs and transit accessibility and participants’ ratings of their neighborhood satisfaction.⁶⁷ Another study found that low-income households that do not have access to a car and that have at least one employed member or job-seeker are more likely to live in neighborhoods that have access to jobs via transit. This trend did not hold true for socioeconomically similar households without a workforce participant.⁶⁸
- Some researchers recommend factoring transportation cost burden into calculations of housing affordability.⁶⁹ Evidence suggests that when low-income households live in regions highly dependent on motor vehicle transportation, they have a rising likelihood of experiencing housing instability, regardless of whether they have a vehicle or not. This highlights the role that transportation plays in tandem with housing cost burdens, in that owning a vehicle still requires maintenance and fuel costs and this may eventually become a burden for low-income renter households who live in areas that are highly dependent on vehicle transportation, potentially forcing them to move to where other commuting options are more accessible.⁷⁰ Furthermore, low-income households that relocate to high-opportunity areas do not necessarily experience an increase in transportation cost-burden.⁷¹ Experts suggest that expanding public transportation coverage and developing more walkable communities in areas with households of varied income levels may reduce the risk of housing instability.⁷² Researchers have also highlighted the importance of ensuring the benefits of transit-oriented development are equitably distributed, and preventing and addressing the risk of displacement surrounding transit-oriented developments, which can negatively affect health.⁷³
- Research demonstrates that aspects of neighborhoods’ physical environments can affect people’s physical activity. A systematic review of 51 studies found that better transit availability (in terms of the number of transit stops and distance to stops) was associated with increased transportation-related walking, and better perceived access to destinations such as shops or restaurants was associated with increased physical activity.⁷⁴ The same

review also found a relationship between perceived neighborhood safety and levels of physical activity.⁷⁵

Implementation considerations

- Research from several prominent, federal efforts to help low-income households move to higher opportunity neighborhoods highlights substantial barriers to the success of housing mobility strategies. Overall, studies have found that many households that participated in housing mobility programs stayed in or moved to another disadvantaged neighborhood, and that it was difficult for families who moved to higher opportunity areas to stay in those communities over time.⁷⁶ One study found that housing choice voucher recipients live in more economically segregated neighborhoods and in lower-performing school districts than unassisted low-income households.⁷⁷
- Low-income households may face significant constraints and barriers to moving into higher opportunity neighborhoods, including racial and income housing discrimination, perceived lack of choices, transportation constraints, and desire to be close to critical social supports and networks.⁷⁸ Households may also face constraints imposed by the requirements of housing assistance programs. For example, research on the Housing Choice Voucher Program suggests that factors such as the time allocated to find a housing unit, lack of funding for security deposits, and the unpredictable timing of when a voucher will become available may affect use of vouchers and households' ability to move to higher opportunity areas.⁷⁹ Furthermore, rental markets with low vacancies can inhibit voucher recipients from moving to lower-crime neighborhoods, while looser rental markets result in greater dispersion of voucher households. In tight markets like Washington, D.C., non-voucher low-income households are more likely to report improved neighborhood conditions after relocating than voucher recipients, despite their relative disadvantage in purchasing power.⁸⁰ Therefore, dispersion of designated affordable housing units in high-resource areas could address housing assistance recipients' barriers to accessing high-resource neighborhoods in tight rental markets.
- While it may seem logical to presume that households would prefer to relocate from low-resource neighborhoods to high-resource ones, residents of high-poverty neighborhoods interviewed for two qualitative studies stated that they would prefer to remain in their communities because of personal relationships and familiarity.⁸¹ Social relationships have important benefits for people's physical and mental health.⁸² Study participants from across California revealed a strong attachment to place and an aversion to relocating, despite respondents' recognition of problems such as pollution and violence. Immigrant respondents expressed a particularly strong attachment to place as their communities provided a connection to cultural heritage.⁸³ Furthermore, a study of Housing Choice Voucher recipients in the Chicago area found that neither \$500 grants, free mobility counseling, nor a combination of the two successfully incentivized them to move to opportunity neighborhoods.⁸⁴ Although residents' relocation preferences are not well studied, the long-term success of housing programs that relocate residents to new neighborhoods could depend on verifying that households are interested in moving out of their current neighborhoods or preserving their access to existing communities, as well as simultaneously exploring how to invest in and create additional opportunities in lower-resourced neighborhoods.

WHICH POPULATIONS ARE MOST LIKELY TO BE AFFECTED BY THIS BILL?

Approximately 90% of U.S. households below the federal poverty line (\$26,500 for a family of four in D.C. in 2021) are considered rent-burdened, meaning that they spend more than 30% of their income on rent. Approximately 67% of extremely low-income D.C. households—whose incomes fall below 30% of the area’s median family income (D.C.’s median family income was \$126,000 for a family of four in 2020)—are severely housing cost-burdened, meaning that they spend more than 50% of their income on housing.⁸⁵ Across the U.S., even low-income families living in low-opportunity neighborhoods exceed the recommended maximum cost burdens for housing and transportation (30% and 15%, respectively).⁸⁶ This trend is especially acute for Black and Latino children, whose families’ housing and transportation cost burdens are more likely to surpass their neighborhood opportunity levels than those of White or Asian children.⁸⁷ Fourteen percent of Black D.C. residents surveyed in 2019 reported having last moved due to inability to pay a bank or landlord.⁸⁸

As a result of historical discrimination and systemic racism, people of color are more likely to reside in communities that are racially segregated, economically disadvantaged, and that have limited access to resources important for health and well-being such as educational or employment opportunities, health care, or social services.⁸⁹ Black households are more highly dependent on the rental market to secure adequate and affordable housing, and the prevalence of rental cost burden among Black households is 18% higher than for White households.⁹⁰ Additionally, there is an approximately 20% difference in the homeownership rate between White and Black households in D.C.⁹¹

Inequities in children’s neighborhood opportunity, meaning neighborhood conditions and resources that support healthy development and outcomes over the life course, are larger in metropolitan areas of the U.S. compared with the rest of the country.⁹² An analysis of the 100 largest metropolitan areas in the U.S. using the Child Opportunity Index 2.0 found that Hispanic and Black children are disproportionately concentrated in very low opportunity neighborhoods.⁹³ These racial inequities persist even when comparing children living in poverty: the same study found that “66% of poor Black children and 50% of poor Hispanic children live in very low opportunity neighborhoods, compared with 20% of poor White children.”

HOW LARGE MIGHT THE IMPACT BE?

Where possible, the Health Impact Project describes how large the impact may be based on the bill language and literature, such as describing the size, extent, and population distribution of an effect. To the extent the updates to the Comprehensive Plan encourage an increase in the stock of affordable housing in D.C., many households stand to benefit. Nearly 40,000 households are currently on the wait list for housing vouchers.⁹⁴ Another estimate indicated that approximately 40,000 D.C. households need housing that costs them less than \$750 per month to avoid being rent-burdened—or spending more than 30% of their household income on rent—but fewer than 800 rental units in the city fall at or below this price point.⁹⁵

It was beyond the scope of this analysis to consider the fiscal impacts of this bill or the effects any funds dedicated to implementing the bill may have on other programs or initiatives in the District. In addition, this note did not consider the costs of developing affordable housing units in high-income areas of the city or the effects of development costs on the number of D.C. residents that would be affected by the bill. To the extent that this bill requires funds to be shifted away from other purposes or would result in other initiatives not being funded, policymakers may want to consider additional research to understand the relative effect of devoting funds for this policy relative to another purpose.

APPENDIX: METHODOLOGY

Once the bill was selected for analysis, a research team from the Health Impact Project hypothesized connections, or pathways, between the bill, health determinants, and health outcomes. These hypothesized pathways were developed using research team expertise and a preliminary review of the literature. The selected bill components were mapped to steps on these pathways and the team developed research questions and a list of keywords to search. The research team reached consensus on the final conceptual model, research questions, contextual background questions, keywords, and keyword combinations. The conceptual model, research questions, search terms, list of literature sources, and draft health note were peer-reviewed by two external subject matter experts. The experts also reviewed a draft of the health note. A copy of the conceptual model is available upon request.

The Health Impact Project developed and prioritized 4 research questions related to the bill components examined:

- To what extent does locating affordable housing for individuals and families in high-cost neighborhoods affect:
 - Financial stress or income?
 - Educational attainment?
 - Food security?
 - Exposure to crime and violence?
 - Employment opportunities?
 - Housing instability and homelessness?
 - Physical activity?
 - Transportation costs?
 - Physical and mental health?
- To what extent does use of housing vouchers for individuals and families in high-cost neighborhoods affect:
 - Financial stress?
 - Educational attainment?
 - Food security?
 - Exposure to crime and violence?
 - Employment opportunities?
 - Housing instability and homelessness?
 - Physical activity?
 - Transportation costs?
 - Physical and mental health?

- To what extent does racial and economic segregation affect:
 - Financial stress?
 - Educational attainment?
 - Food security?
 - Exposure to crime and violence?
 - Employment opportunities?
 - Housing instability and homelessness?
 - Physical activity?
 - Transportation costs?
 - Physical and mental health?
- To what extent does mixed income housing affect:
 - Financial stress?
 - Educational attainment?
 - Food security?
 - Exposure to crime and violence?
 - Employment opportunities?
 - Housing instability and homelessness?
 - Physical activity?
 - Transportation costs?
 - Physical and mental health?

The research team next conducted an expedited literature review using a systematic approach to minimize bias and answer each of the identified research questions.^d The team limited the search to systematic reviews and meta-analyses of studies first, since they provide analyses of multiple studies or address multiple research questions. If no appropriate systematic reviews or meta-analyses were found for a specific question, the team searched for nonsystematic research reviews, original articles, and research reports from U.S. agencies and nonpartisan organizations. The team limited the search to electronically available sources published between January 2016 and January 2021.

The research team searched PubMed and EBSCO databases along with the following leading journals in public health, as well as sector-specific journals suggested by subject matter experts for this analysis (e.g., affordable housing and residential segregation) to explore each research question: *American Journal of Public Health*, *Social Science & Medicine*, *Health Affairs*, *Housing Policy Debate*, *Journal of Housing and Community Development*, and *Housing Studies*.^e For all searches, the team used the following search terms: affordable housing, affordable housing

^d Expedited reviews streamline traditional literature review methods to synthesize evidence within a shortened timeframe. Prior research has demonstrated that conclusions of a rapid review versus a full systematic review did not vary greatly. M.M. Haby et al., “What Are the Best Methodologies for Rapid Reviews of the Research Evidence for Evidence-Informed Decision Making in Health Policy and Practice: A Rapid Review,” *Health Research Policy and Systems* 14, no. 1 (2016): 83, <https://doi.org/10.1186/s12961-016-0155-7>.

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dispersion OR concentration, mixed income housing, housing vouchers, high-cost area, high opportunity area, racial and economic segregation, transit oriented development, and health. The team also searched Cityscape (HUD USER), Urban Institute, Center on Budget and Policy Priorities, and National Center for Healthy Housing for additional research and resources outside of the peer-reviewed literature.

After following the above protocol, the team screened 1310 titles and abstracts,^f identified 60 abstracts for potential inclusion, and reviewed the full text corresponding to each of these abstracts. After applying the inclusion criteria, 17 articles were excluded. Four additional sources were identified upon review of the included articles. A final sample of 47 articles, including 4 systematic reviews and 4 systematic reviews with meta-analyses, was used to create the health note. In addition, the team used 20 references to provide contextual information. In summarizing the literature, the team retained the demographic categories that were used in the original articles. For example, evidence is included from studies of “Black” and “African American” populations.

Of the studies included, the Health Impact Project qualitatively described and categorized the strength of the evidence as: not well researched, mixed evidence, a fair amount of evidence, strong evidence, or very strong evidence. The evidence categories were adapted from a similar approach from Washington state.⁹⁶

Very strong evidence: the literature review yielded robust evidence supporting a causal relationship with few if any contradictory findings. The evidence indicates that the scientific community largely accepts the existence of the relationship.

Strong evidence: the literature review yielded a large body of evidence on the association, but the body of evidence contained some contradictory findings or studies that did not incorporate the most robust study designs or execution or had a higher than average risk of bias; or some combination of those factors.

A fair amount of evidence: the literature review yielded several studies supporting the association, but a large body of evidence was not established; or the review yielded a large body of evidence but findings were inconsistent with only a slightly larger percent of the studies supporting the association; or the research did not incorporate the most robust study designs or execution or had a higher than average risk of bias.

Mixed evidence: the literature review yielded several studies with contradictory findings regarding the association.

Not well researched: the literature review yielded few if any studies, or yielded studies that were poorly designed or executed or had high risk of bias.

EXPERT REVIEWERS

This document benefited from the insights and expertise of Anna Ricklin, Health in All Policies Manager at the Fairfax County Health Department, and Mayu Takeda, Senior Planner at Asakura

^f Many of the searches produced duplicate articles. The number of sources screened does not account for duplication across searches in different databases.

Robinson. Although they reviewed the note and found the approach to be sound, neither they nor their organizations necessarily endorse its findings or conclusions.

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