Housing as a Platform for Health and Equity: Evidence and Future Directions

The links between housing and health are now known to be strong and multifaceted and to generally span across 4 key pillars: stability, affordability, quality and safety, and neighborhood opportunity. Housing disparities in the United States are tenaciously patterned along axes of social inequality and contribute to the burden related to persistently adverse health outcomes in affected groups. Appreciating the multidimensional relationship between housing and health is critical in moving the housing and health agenda forward to inspire greater equity.

We assessed the current state of research on housing and health disparities, and we share recommendations for achieving opportunities for health equity centered on a comprehensive framing of housing.

Despite the vastness of existing research, we must contextualize the housing and health disparities nexus in a broader web of interrelated variables emerging from the same roots of structural inequalities. There is more we can do to maximize the extent to which existing research furthers our understanding of housing's relationship to health and potential related interventions; however, there are also several areas where new research is warranted. (*Am J Public Health.* 2019;109: 1363–1366. doi:10.2105/AJPH.2019.305210)

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The relationship between where people live and their health has received significant and growing attention in public health research in recent years in the United States.[1–3] This attention is well merited considering the mounting burden that housing constitutes for many households in the United States, particularly so among disadvantaged groups. For instance, approximately half of renters overall, and 90% among those below the poverty line, spend more than 30% of their income on rent and are considered rent burdened.[4,5] Homelessness remains at unacceptable levels. More than 550 000 Americans are homeless on any given day and 1.42 million US residents relied on an emergency shelter or transitional housing at some point in 2017.[6] Displacement by evictions are increasingly commonplace, this following the foreclosure crisis of the late 2000s, which dispossessed millions of Americans from their homes.[4]

Public housing, intended as a primary bastion of affordability, faces an uncertain future because of decades of underfunding, deferred maintenance, and waning political support. Today, millions of public housing residents encounter poor physical conditions that compromise their health and safety and further limit access to affordable housing.[7] In addition, a mere 25% of all eligible households receive any housing assistance, with years-long waiting lists in many areas.[8] Furthermore, housing vouchers alone do not ensure housing placements, as many voucher recipients face discrimination and are priced out of high-rent markets and low-poverty neighborhoods.[9] Mobile homes, although an affordable option particularly in rural areas, are insecure because of burdensome land rental and financing schemes, a short life cycle that lead to high turnover rates and degraded conditions stemming from low-quality materials.[10] As the landscape of housing issues evolve and become increasingly complex, examinations of the links to health must be equally nuanced and comprehensive.

From a public health perspective, today's pervasive housing problems are of particular concern because the links between housing and health are now known to be strong and multifaceted. The adverse health links encompass a wide variety of outcomes, including mental and physical, infectious and chronic disease, reproductive conditions, and injury. Moreover, housing insecurity is tenaciously patterned along lines of social inequality and related health disparities that are ubiquitous and historically rooted.[11,12] For example, a higher proportion of low-income, Black, Native American, and Latino households are rent burdened and live in homes with inadequate conditions compared with higher-income and White Americans.[13] This unequal distribution of housing disparities is not surprising when historical processes of discriminatory restrictions on housing availability (e.g., redlining) and involuntary displacement (e.g., urban renewal) are considered.[14,15] The health disparities that stem from such housing adversities are well established and negatively affect physical and mental health and premature mortality risk, especially affecting low-income and minoritized groups.[1–3,16]

Although housing and health disparities seem inextricably linked, researchers have faced numerous challenges in creating a clear, comprehensive, and historically grounded model of their relationship. A number of reviews and models provide useful insight into understanding groupings of housing exposures, none to date encompass sufficiently comprehensive operationalization of housing insecurity with attention to inequalities and their historical production.[2,3] We offer an

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expansive definition of housing insecurity to mean inadequate access to core housing characteristics known to support health. These housing risk factors span 4 key areas:

1. instability, which refers to transient housing arrangements such as homelessness including residence in shelter settings, forced displacement from homes and communities, overcrowding or doubling up, and frequent moves;
2. lack of affordability, encompassing difficulty paying rent, mortgage, and related costs such as property taxes, water, and utility services;
3. housing quality defects and safety hazards, pertaining to the physical conditions of the residential dwelling, in multiunit housing, this includes the building at large and the individual units; and
4. neighborhood opportunity, including features of the environment surrounding one's home that affect health such as the built environment, availability of health-related resources, environmental burdens, and social characteristics.[1–3]

There are many factors that have precluded a more robust appreciation for the links between housing and health from an equity perspective. The vastness and diversity of the topic itself presents a barrier. Furthermore, existing research has mostly focused on a singular pillar of housing in isolation of the others and has equally taken a narrow approach to assessing related health outcomes (see Hernandez[17] for an exception). Public health researchers have often conflated the concepts of housing and neighborhoods, or they have failed to appreciate their interdependence. The symbiotic relationship between housing and neighborhoods is key to understanding proximal and distal aspects of housing disparities, first, because housing is embedded in the broader neighborhood context and, most consequentially, because neighborhoods have historically served as the main point of departure for unequal processes that link health and place.

Empirical results from a vast and growing field of research point to historically rooted and systemic inequalities that negatively affect known marginalized groups. Although research on specific associations is certainly needed, maintaining a limited view negates the reality of the cumulative and aggregate effects of persistent housing and neighborhood factors propagated from perniciously biased roots. In addition to the consolidation of existing knowledge, we propose several specific areas where additional research is needed to expand our knowledge or update findings on the basis of changing social conditions. We also offer suggestions for moving the field of research and practice forward to advance equity in housing and health simultaneously.

MOVING RESEARCH AND PRACTICE FORWARD

What follows are recommendations for achieving opportunities for health equity that are centered on a more comprehensive framing of housing and health. This framing is premised on the recognition that housing can act as a critical vector to achieving an individual's highest potentials of health and productivity. It further recognizes the need to go beyond individual assistance and adopt a systemic approach that addresses root causes of housing insecurity.[17]

First, as a starting proposition, researchers must create a more unified understanding of the relationship between housing and health that brings together the diverse insights that already exist across different fields and subtopics and brings them into conversation with each other. Research must empirically assess whether exposure to multiple associated housing factors has an additive or multiplying effect on health outcomes. Because marginalized populations are at higher risk for adverse impacts across the four pillars of housing, individuals from these groups may well be affected by multiple housing factors at the same time, and the pillars may interact with one another to exacerbate the level of exposure or degree of impact in a syndemic process.

Although some literature examines this cumulative impact of multiple factors on asthma,[18] many other conditions, including birth, mental health, and cardiovascular outcomes, are also affected by multiple factors that are rarely examined in conjunction. Furthermore, social factors that stem from the same roots of structural inequality and covary with housing exposures may increase vulnerability to their effects. This is demonstrated by findings that chronic stress modifies hypertension vulnerability following lead exposure, contributing to racial disparities such that an association between lead exposure and hypertension exists for Blacks but not for Whites.[19] Exploring this connectivity may help uncover the totality of evidence on adverse housing exposures faced by a specific population and how they may interact together over the life course.

Second, a holistic approach to intervention design should be adopted to improve effectiveness and minimize risk of harm. Because housing disparities have a common origin in structural inequalities, the same marginalized groups that experience these inequalities are likely to be burdened with or vulnerable to multiple adverse housing exposures. Thus, when designing interventions and conducting housing research, we must consider the potential impact across each of the four pillars—stability, quality and safety, affordability and neighborhood context—not just one. These pillars are relevant to any individual's health, that is, they do not exist in isolation from each other but together form a web of housing-related factors that affect individuals, families, and communities. Broader interventions that operate across multiple pillars and factors, then, are likely to have a greater effect than are narrower ones. Furthermore, there is a risk of unintended consequences that can adversely affect residents' health and counteract the purpose of the intervention, which must be identified and prevented or addressed in the intervention design.

Third, the integration of scholarship from different fields is necessary for critical historical analysis of sociopolitical processes that shape unequal burdens of adverse exposures, to enable us to understand true causes and solutions that can impact multiple exposures simultaneously. Much of the scholarship on the topic of housing disparities exists in urban planning and related fields such as sociology, law, and public policy and has not fully been integrated into public health scholarship and practice. The fields of public

health and urban planning have long diverged despite their common origins in the early 1900s intended to improve urban housing and neighborhood conditions that led to infectious disease.[20]

Urban renewal programs of the mid-1900s offer a useful historical lesson: the mitigation of housing conditions was prioritized at the expense of housing stability, with the result of mass displacement of Blacks and corresponding harms.[21,22] One particularly salient contemporary concern is that improving the health-promoting features of housing and neighborhoods could also serve to contribute to lack of affordability. For example, when environmental hazards in marginalized neighborhoods are redeveloped, wealthier residents move in, housing costs increase, and long-term residents can be displaced. Anguelovski even argues for reconceptualizing such greening initiatives as new locally unwanted land uses, "green LULUs," because their impact on community stability and resilience is even greater than that of the previous toxic waste sites.[23] Thus, such an environmental intervention would also need to control increasing housing costs for low-income residents to avoid displacement and related concerns. Including such analysis in public health research helps to expand beyond understanding simply that an association exists to why it exists for some specific groups (e.g., Fullilove's work on the health effects of Black displacement during urban renewal).[21]

Finally, there is a need to rigorously evaluate housing interventions and establish a robust evidence base that is premised on a more pluralistic view of housing rather than the singular focus that has dominated research to date. A strong evidence base exists for a select group of interventions, including Housing First and supportive housing models, green housing, and energy efficiency upgrades and housing policies that promote residence in socioeconomically diverse and high opportunity neighborhoods. The latter examples have primarily been evaluated on a relatively widespread basis for only some populations, such as households with children or formerly homeless individuals facing comorbid conditions. Those that address the needs of many others have not received extensive evaluation, limiting the ability to successfully design and scale interventions to assist their particular needs. For example, pilot programs providing stable housing for formerly incarcerated individuals have shown promise.[24]

However, there is broadly a dearth of evidence regarding housing interventions relative to what we know about associations between health outcomes and exposures. Beyond the practical need to identify effective strategies, proven success is important for greater legitimacy in making the case for political and financial support to the public and policymakers. There are 2 specific areas where evidence from evaluations is sorely needed. First, health- and equity-specific evaluations of housing policies are merited. Many housing policy interventions—such as the Rental Assistance Demonstration and Low-Income Housing Tax Credit programs and the implementation of smoke-free mandates in public housing—are proceeding with limited evidence or ongoing evaluation with respect to health, despite their large scale and the potential risks such as housing displacement evidenced in other housing models such as HOPE VI.[25]

The mixed outcomes from HOPE VI serve as a warning that housing interventions may have adverse effects that detract from their intended benefits; without sufficient evidence, such interventions may proceed and even serve as templates for future interventions without a full understanding of their consequences. Second, housing interventions may be designed to support one of the many specific populations with particular drivers of their housing needs. Evaluations premised on achieving key metrics of health and equity are critical to better understanding such attempts to improve conditions and anticipate and avoid the unintended consequences of such pillory measures.

CONCLUSIONS

Appreciating the multidimensional relationship between housing and health, including where disparities exist and why, is critical for moving the housing and health agenda forward to inspire greater equity. Such synthesis should span the 4 pillars of housing that affect health[1–3] along with their origins, ranging across disciplines from environmental sciences to urban planning to the history of social inequality. As a comprehensive framing is established and a corresponding evidence base created, public health must translate it into practice by establishing and advancing a vision for health equity in housing. Decent housing is an important launching point for achieving equity, and there is more we can do to maximize the extent to which existing research furthers our understanding of housing's relationship to health and to inform potential interventions; however, there are also several areas where new research and approaches are warranted.

The literature on housing, health, and the disparities in each is a prime example of the whole being greater than the sum of the parts. We have assessed the current disjointed state of research and the potential for improved knowledge and praxis that could result from both better connecting existing research and from filling in the gaps. Although existing research is already impressive and we are well-positioned to mine it for intervention recommendations that can significantly affect health, we must view each piece of information in the broader context of a web of interrelated variables emerging from the same roots of structural inequalities. We must understand other health conditions associated with a specific housing factor, how changing that factor might affect others and their associated health outcomes in turn, and whether there is any disproportionate impact on marginalized groups. This would allow us to design targeted interventions that address upstream causes of housing and health disparities and thus address multiple adverse housing and health factors simultaneously.

Albeit our assessment focuses on the United States, the overall guidance for a holistic approach as well as specific insights such as the possibility of cumulative exposure may be applicable to other countries, especially ones where similar social practices affecting housing (e.g., urban displacement and marginalization of particular groups) are also the norm. Problems with housing

quality, affordability, and stability and with lack of neighborhood opportunity in the United States and around the world are grave, but fortunately many of the tools to understand and address them are already in hand if we can connect seemingly far-flung pieces of evidence.

Although the importance of housing cannot be overstated, true health and social equity can only be realized through the synergistic elevation of opportunity across all social and economic realms, for example, education, employment, wealth acquisition, criminal justice, safety, and recreation. We must break down the barriers that deny members of our society the unequivocal privileges conferred by a sturdy foundation of decent, affordable, safe, and stable housing and communities. AJPH

CONTRIBUTORS

D. Hernández helped conceptualize the essay and led the drafting of the essay. C. E. Swope assisted in the conceptualization, writing, and editing of the final draft.

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D. Hernández has no conflicts of interest to report. After conducting research for this essay, C. B. Swope began employment at Delos, whose work is related to healthy housing. Specifically, Delos is a wellness real estate and technology company whose work and offerings include the design of indoor spaces to improve the health and wellness of occupants of the space. Her work at Delos did not inform this essay, and she did not receive financial support from Delos for work on this essay. The only changes made during her employment there involved revision and formatting.

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