Neighborhood-Level Interventions to Improve Childhood Opportunity and Lift Children Out of Poverty

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Conflict of Interest: The authors declare that they have no conflict of interest.

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Abstract

Population health is associated with the socioeconomic characteristics of neighborhoods. There is considerable scientific and policy interest in community-level interventions to alleviate child poverty. Intergenerational poverty is associated with inequitable access to opportunities. Improving opportunity structures within neighborhoods may contribute to improved child health and development. Neighborhood-level efforts to alleviate poverty for all children require alignment of cross-sector efforts, community engagement, and multifactorial approaches that consider the role of people as well as place. We highlight several accessible tools and strategies that health practitioners can engage to improve regional and local systems that influence child opportunity. The Child Opportunity Index is a population-level surveillance tool to describe community-level resources and inequities in US metropolitan areas. The case studies reviewed outline strategies for creating higher opportunity neighborhoods for pediatricians interested in working across sectors to address the impact of neighborhood opportunity on child health and well-being.

Keywords: child poverty; collective efficacy; community engagement; equity; neighborhood; opportunity

Academic Pediatrics 2016;16:S128–S135

Childhood poverty is an enduring social determinant of health over the life course.[1] Research has shown that childhood poverty is associated with poverty in adulthood,[2] and socioeconomic status is a strong and durable predictor of health and well-being.[3]

While poverty's influence on health is well understood on the individual level, the mechanisms by which neighborhoods perpetuate child poverty are less clear. Area deprivation is associated with fewer opportunity structures and adverse health and developmental outcomes for children.[4] A well-established research literature[5] has found that neighborhoods are inequitable in multiple socioeconomic dimensions and health problems therefore cluster geographically. New research links these deprivations and inequities to early life adversities and the biological consequences of toxic stress.[6] Adverse childhood experiences have been correlated with health behaviors in adulthood as well as poor physical and mental health outcomes[7–10] in a dose–response relationship. The cumulative adverse experiences encountered change the allostatic load of physiologic systems and may be a critical pathway to explain the higher morbidity and mortality rates seen in populations of lower socioeconomic status.[11–14]

From Bronfenbrenner's[15] ecological framework, one can see how multiple environmental systems are nested together and work to influence individual human development and allostatic load. The interplay between the micro and meso systems of families and neighbors and the macro systems of concentrated poverty and racism belie the complexity of changing neighborhoods as a way to improve health. While neighborhoods may contain adversities that can perpetuate poverty, they may also have consistent and supportive relationships to help the child cope and mitigate toxic stress.[16] Conversely, children moving to lower concentration of poverty may have higher economic mobility, despite often staying in the same dysfunctional family systems.[17]

Here we aim to describe briefly the role place, defined by both people and geography, can play in health as well as a

tool that can be used to define neighborhood opportunities. We describe the essential components of community engagement in building collective efficacy and provide 3 case studies of multisector, multifaceted interventions.

DEFINING PLACE FOR INTERVENTION

While maximizing opportunities is important in shaping the well-being of families and children,[4] the primary strategies to address this issue emerge from what can feel like dueling ideologies. As Turner has noted, there is a false dichotomy between mobility assistance to move low-income children to higher opportunity neighborhoods and "place-based" neighborhood revitalization to improve opportunity structures within impoverished neighborhoods.[18] Turner argues that to address neighborhood-level poverty and lack of opportunity, both approaches must be used as complementary strategies for "place-conscious" interventions. Here we review evidence for both but will focus on case examples of pediatric involvement in place-based neighborhood level interventions specifically.

The Moving to Opportunity (MTO) study, in which children were moved out of concentrated-poverty, low-opportunity neighborhoods into less-concentrated-poverty, higher-opportunity neighborhoods, was among the largest experimental demonstration studies aimed at alleviating poverty by changing neighborhood environment.[19] Recent analyses of the MTO study[17] revealed that children whose families moved to a higher-opportunity neighborhood when they were age 13 years or younger (about 8 years old on average) had a significant increase in total lifetime earnings and were significantly more likely to attend college; further, female participants were less likely to be single parents. Every year of childhood spent in a higher-opportunity neighborhood was associated with an increased benefit, suggesting both a dose–response and critical-period effect for young children. However, there was no effect seen for adults, and a negative effect was seen for youth older than 13 years of age. Additional research on MTO has also found mixed results, with studies showing that women in households with mobile vouchers to less-concentrated-poverty neighborhoods had lower hemoglobin A1C values and lower rates of morbid obesity,[20] while teenage boys in comparative households had higher rates of mental illness.[21] Despite evidence of mixed effects, most research supports mobility interventions as one important approach to improving place for children in poverty by moving to less-concentrated-poverty neighborhoods with higher opportunities.

DEFINING PLACE BY BOTH PEOPLE AND GEOGRAPHY

When considering how to intervene within a neighborhood, it is essential to define where to do the intervention by people as much as geography. While concentrated poverty influences health through a neighborhood-level effect, the influence of neighborhoods can also be felt through networks of social support or social cohesion. One example of this is neighborhood collective efficacy, which is defined as the linkage of mutual trust and the willingness to intervene for the common good.[22] Examples of collective efficacy include whether neighbors feel like they have someone to borrow $20 from, someone to watch their child in an emergency, or, if they witness a crime, they are willing to call the police. A higher rate of collective efficacy is associated with lower rates of violent crime and appears to mediate the association between neighborhood characteristics, such as concentrated disadvantage, residential instability, and violence. Collective efficacy has also been associated with measurable health outcomes. The MTO study demonstrated that adults who moved to lower-poverty neighborhoods reported higher levels of collective efficacy despite having fewer social connections,[23] and they experienced decreased levels of depression as a result.[24]

Acknowledging the contribution of Bronfenbrenner's social ecology to child well-being, collective efficacy may be a critical determinant of improving neighborhoods to achieve greater levels of supportive relationships and enriched environments for children. Effective neighborhood-level interventions to address concentrated poverty therefore need to tie to increasing the numbers and types of opportunity with improving neighborhood collective efficacy. The evidence for using collective efficacy to improve health outcomes has focused predominantly in single-faceted interventions, such as community gardens,[25] or in targeted populations, such as youth empowerment.[26] Large-scale evaluations of collective efficacy as part of multifaceted, place-based initiatives are underway, as the case studies that follow demonstrate.

OPPORTUNITY MAPPING

In addition to defining place by the people who live there, it is also essential to target interventions geographically. One tool for this is the Child Opportunity Index (COI).[27] Developed by Diversity Data Kids (http://www.diversitydatakids.org/) at Brandeis University and the Kirwan Institute on Race and Ethnicity at Ohio State University, this tool integrates multiple indicators of child-relevant neighborhood opportunity in a composite index by neighborhood in each of the 100 largest metropolitan areas in the United States. Opportunity mapping can be used as a visual depiction of the location of neighborhood opportunity and of inequities in opportunity across neighborhoods. The COI incorporates 19 indicators into the 3 domains of educational, health and environmental, and social and economic in order to map opportunity at the neighborhood level (Fig. 1). Consistent with Bronfenbrenner's framework for understanding the interplay of systems, this index can then be used to consider ways to enhance existing opportunities, create new ones, and explore the ways in which policy in the geographic area can be leveraged to support this endeavor. Successful and sustainable interventions are those that address the multidimensional aspects of communities that influence both absolute and relative measures of poverty. The COI is one tool that can also be useful for tracking change over time and for understanding the impact of social policies