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## *How Housing Affects Child Well-Being*

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This paper was written for the Funders' Network for Smart Growth and Livable Communities by Sharon Vandivere, Elizabeth C. Hair, Christina Theokas, Kevin Cleveland, Michelle McNamara, and Astrid Atienza of Child Trends, a nonprofit, non-partisan, research organization located in Washington, D.C.

This paper is the third in a series of four papers, edited by Stephanie Jennings, that examine the interconnections between housing and other issues of concern to philanthropic organizations and the communities in which they work. This paper addresses the effects of housing conditions on various aspects of child well-being. Other papers in the series address the unique features of the housing market and emerging trends, the relationship between housing and regionalism, and the connection among transportation, energy, and housing issues.

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## How Housing Affects Child Well-Being

### Abstract

Families want to live in homes and neighborhoods that will get their children off to the best possible start. Yet high housing costs in many parts of the country complicate housing decisions, as families must weigh tradeoffs among cost, housing quality, and location. Poor and low-income families likely face the greatest constraints on their housing choices. To make matters worse, poor or low-income children tend to fare worse in other areas such as health or cognitive development. These children, who are already some of the most vulnerable in America, are also the most likely to suffer from housing-related problems.

This paper examines how the characteristics of children's homes affect their health, social, and emotional well-being and offers strategies for funders concerned with improving outcomes for children. Housing characteristics can include the cost of housing, residential mobility, and the surrounding neighborhood. These housing characteristics are also interrelated, as high housing costs may affect the physical condition of the home that a family is able to afford and the income-level of the neighborhood in which that house is located. Further, housing conditions—specifically housing cost—have an effect on parenting, which can in turn affect a child's development.

Children facing one housing problem typically face multiple risky housing circumstances—as well as additional risky circumstances stemming from poverty—that threaten an array of child outcomes. And experiencing multiple unfavorable housing conditions can intensify the negative effects that such conditions have on a child's physical, emotional, and cognitive development. Yet

the situation is not hopeless. Programs that use broad approaches to target a wide range of housing problems can help a child's well-being by using one of the following methods:

- Rehabilitating physical features of dilapidated homes and improving the resources of socio-economically disadvantaged neighborhoods.
- Reducing the burden of housing costs for families.
- Providing support and educational services for parents that will improve their well-being, and thus reduce the negative impacts of parents' psychological distress on their children.
- Providing services that will directly enhance children's physical, cognitive, and social development—such as after-school or mentoring programs—as part of larger housing program.

Further, though there is still a need for rigorous evaluation of existing housing programs, the research that is available on existing large-scale housing programs suggests that children do benefit, as outlined by the following examples:

- Funding for lead control and enforcement of lead abatement policies can reduce children's exposure to lead, which can otherwise permanently impair a child physically, emotionally, and cognitively.
- Children in public housing may live in better housing than their families would otherwise be able to obtain and do better than children in families with similar incomes who do not live in public housing.

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- Children in low-income families may benefit from moving out of socio-economically disadvantaged neighborhoods.

## Introduction

We know today that children’s well-being does not depend only on genetics or their interactions with their parents, but also on their physical environments. And what could be more central to a child’s environment than her home: the place where she eats, sleeps, and plays every day? Housing conditions affect *all* children, regardless of whether the home is rented or owned.

Maslow’s well-known theory on the hierarchy of needs demonstrates just how important adequate housing is for positive children’s development. According to Maslow, one’s physical needs—such as the need for shelter—are the most basic of all, superseding the need for safety, love, or esteem (Maslow 1948). Unfortunately, many children experience problematic housing circumstances and some have no home at all [see Box 1 on page 4].

Much of the information available on housing circumstances is available only for households that may not include children. Yet it is useful to keep in mind how many children are living in poor or low-income families, since these families are the most likely to experience housing problems due to their financial limitations. Furthermore, research has consistently shown that poor or low-income children tend to fare worse on a plethora of outcomes (for example, see Brooks-Gunn 1997a), resulting in a double whammy: some of the most vulnerable children in America are also the most likely to suffer from housing-related problems.

Of the 73.3 million children under age 18 in the United States in 2004, 13 million (or 17.8

percent) were poor.<sup>1,2</sup> Nearly two in five (roughly 29 million, or 39 percent) children lived in low-income families (with incomes below 200 percent of the poverty threshold) (Child Trends 2000). Given the vast number of low-income and poor children, many of whom are likely to suffer from housing problems, great potential exists to change children’s lives for the better through programs targeting housing.

This paper outlines the ways that children’s home environments can affect three primary areas of their well-being. These three areas include:

- Physical health,
- Social and emotional functioning, and
- Cognitive development.

A broad range of features and aspects of housing potentially affect children’s well-being—both directly or indirectly and in ways that are positive or negative. These factors include:

- The cost of available housing;
- The physical quality of the home and homelessness;
- Homeownership and the tenure and mobility of families in their homes; and
- Neighborhood characteristics (the immediate environment surrounding children’s homes).

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<sup>1</sup> U.S. Census Bureau, Population Division, available online at [www.census.gov/popest/national/asrh/](http://www.census.gov/popest/national/asrh/).

<sup>2</sup> In 1994, a family of four (two adults with two children) with an annual income below \$19,157 was considered poor. Income thresholds are adjusted for the number of adults and children in the family; this threshold is for two adults and two related children. See [www.census.gov/hhes/www/poverty/threshld/thresh04.html](http://www.census.gov/hhes/www/poverty/threshld/thresh04.html) for more details.

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Box 1:

**What Is Known about the Housing Conditions of Children?**

Housing affordability. In 2003, 17.2 percent of households experienced a moderate housing cost burden (that is, paid 30 to 50 percent of household income for housing), and an additional 13.2 percent experienced a severe burden (paid more than 50 percent of their income), for a total of nearly 14 million households. About 6.4 million poor households experienced a moderate or severe burden, including 15.5 percent with a moderate burden and an additional 46.1 with a severe burden.<sup>3</sup> Furthermore, 14 percent of all households experienced “critical housing needs”—that is, paid half or more of their income on housing and/or lived in seriously dilapidated homes (Lipman 2005). In 2002, 17.5 percent of all, and 29.5 percent of low-income, children under age 18 lived in households that were unable to pay rent, mortgage, or utilities at some point in the prior year.

Among married-couple families with children, only about one in ten that were renting in 1995 (11 percent) could have afforded to buy a modestly-priced home (that is, a home that costs less than three-quarters of the owner-occupied homes in a family’s geographic area). For female-headed renting households, the rate is even lower, at 2.9 percent (Savage 1999).

Homelessness. As of 1996, about 1 percent of the population experienced a spell of homelessness during the year, including over half a million children.<sup>4</sup> The rising cost of housing and the fact that poverty is often chronic contribute to this high number of homeless children (Burt, Aron and Lee 2001). Reliable data on homelessness are difficult to obtain and the authors are not aware of more recent nationally representative estimates. However, in 2005, the U.S. Conference of Mayors carried out a survey of government and community-based service providers in 24 cities (U.S. Conference of Mayors 2005). In these cities, requests by families with children for emergency shelter increased by 5 percent on average between 2004 and 2005, with increases as high as 20 to 25 percent in four cities. Most cities reported an increase in the length of time families were homeless, with the average spell of homelessness lasting seven months.

Physical quality of homes. As of 2000, 35 percent of owner-occupied homes were built after 1980.<sup>5</sup> Since lead paint was banned in 1978, this means that the potential may exist for lead exposure in up to 65 percent of housing in the United States. Over one in five homes (21 percent) were built prior to 1950. Older homes were subject to less strict building codes and may have more challenging maintenance requirements than newer homes, so they may have worse physical conditions than newer homes.

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<sup>3</sup> Authors’ calculations based on tabulations of data from the American Housing Survey at <http://www.census.gov/hhes/www/housing/ahs/ahs03/tab213.htm>.

<sup>4</sup> Authors’ analyses of data from the 2002 National Survey of America’s Families.

<sup>5</sup> The authors of this study based their annual estimates on information from the 1996 National Survey of Homeless Assistance Providers and Clients regarding one week in October and one week in February (Burt, Aron, and Lee 2001). The October data yielded an estimate of 552,000 children; the February data yielded an estimate of 1,365,000 children. Overall, they estimate that between 24 percent and 39 percent of all homeless people were children (based on October and February data, respectively).

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Crowding also affects the physical condition of the home. It occurs when the physical size of the home is too small for the number of family members. Overall, about one in ten children under 18 (10.2 percent) lived in a crowded home (that is, with more than two people per bedroom) in 2002. Two in ten low-income children (20.8 percent) lived in a crowded home.<sup>6</sup>

Neighborhood quality. In 2000, 20.3 percent of children—over 14.7 million—lived in high-poverty neighborhoods (in which 20 percent or more of the population was poor).<sup>7</sup> In a 2003 survey, half (50 percent) of children under 18 had parents who reported that they “always” (versus never, sometimes, or usually) felt their child was safe in their community or neighborhood, and 88.5 reported that their child was “always” safe at home.<sup>8</sup>

Homeownership and residential mobility. Homeownership and residential mobility are linked, because homeowners tend to be more stable than renters. In 2002-2003, 7.4 percent of owners moved, compared with 30.7 percent of renters (Schachter 2004). Overall in 2002, 39 percent of children under age 18 lived in a home not owned by a family member. Among low-income children, 64.1 percent lived in a home not owned by a family member.<sup>9</sup> Low-income children tend to change residences more often than higher-income children. In 2002, 6.5 percent of all children, and 10.1 percent of low-income children, had been living in their current home for less than six months.

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<sup>6</sup> Authors’ calculations based on 2000 Census data provided at <http://factfinder.census.gov>.

<sup>7</sup> Authors’ analyses of data from the 2002 National Survey of America’s Families.

<sup>8</sup> According to 2000 Census data (KIDS COUNT).

<sup>9</sup> Child Trends’ analyses of data from the 2003 National Survey of Children’s Health. Interestingly, the percentages for low- and higher-income children differ by only a few percentage points both for safety at school and in the neighborhood.

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## Determinants of Child Well-Being and How Housing Plays a Role

What determines how children develop? What determines whether they are physically healthy, functioning well socially and emotionally, and have appropriate cognitive skills?

Characteristics of children's environments affect how they fare. Biology and genetics are important in setting the course for children's development. But children's development also depends on the environments in which they live and interact. Specifically, factors such as environmental quality and the interactions between the child and other people in environment affect a child's development (Bronfenbrenner 1979; Bronfenbrenner and Morris 1998). Of course, children have many environments: they live with their immediate family, spend time with extended family, play in their neighborhoods, and attend schools. Yet, housing quality and associated characteristics can affect each of these environments.

The amount of time spent in specific environments also affects how children fare. The environments in which children spend most of their time have the greatest impact on their subsequent development and this environment varies for children at different stages. For example, infants spend most of their time with their parents, or in non-parental child care, while 5- to 18-year-olds attend school, visit with friends after school, and also possibly attend after school programs. When it comes to housing characteristics, the physical quality of the home would tend to affect infants more strongly than older children, while the characteristics of the broader neighborhood become more important as children get older.

Enduring, consistent experiences with people and places over time also have stronger impacts on children than do environments experienced more briefly. Therefore, although older children and adolescents are more autonomous and have access to more settings, their family and home environment always have a significant role. Indeed, families and their residences consistently regulate children's behavior and access to experiences and opportunities (Gephart 1997).

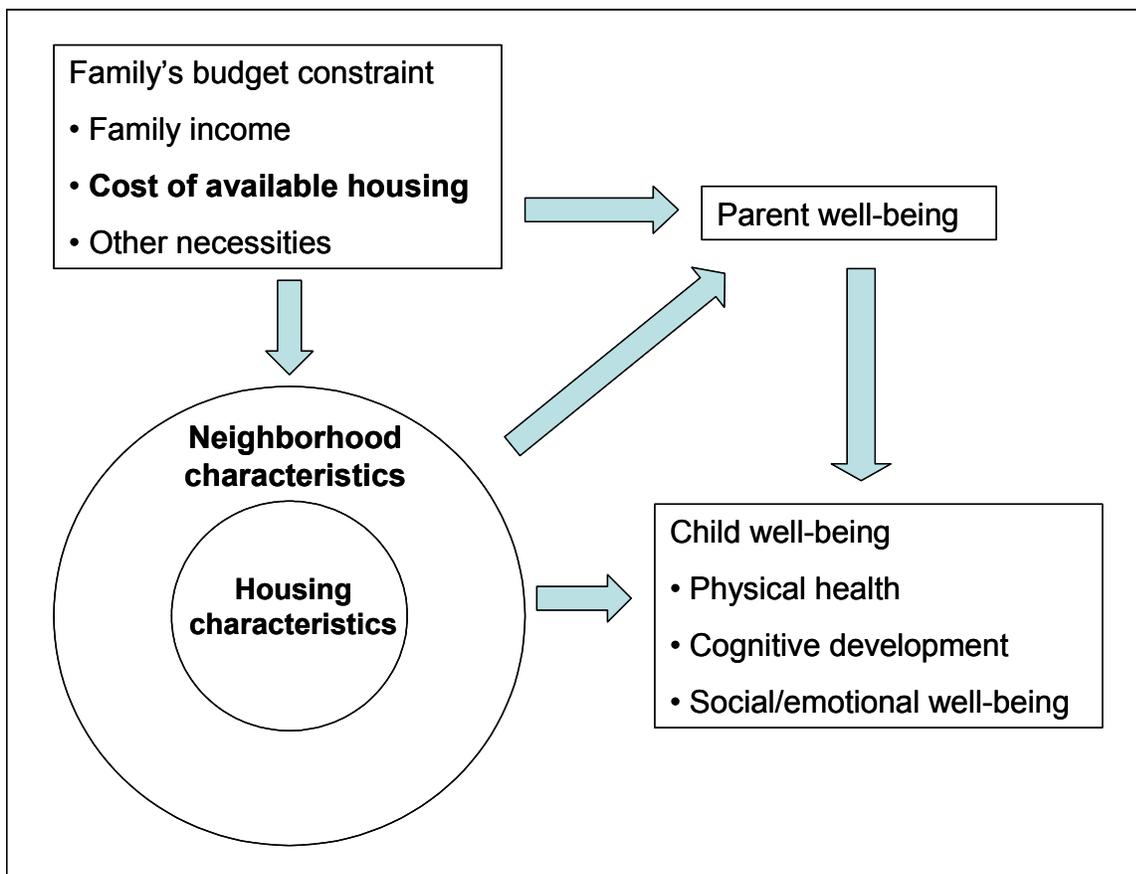
Figure 1 on page 7 shows how housing circumstances might affect children. The arrows indicate that the factors shown in one block directly affect the factors shown in another block.

A number of inter-related concepts are important to keep in mind when examining the relationships and pathways between aspects of children's housing and their well-being:

- *First, housing characteristics affect children both directly and indirectly.* Housing quality can directly affect children's well-being, such as when the paint in an older home causes blood-lead poisoning. In Figure 1, the arrow between neighborhood and housing characteristics and child well-being depicts this causal path.

In contrast, the cost of housing affects children indirectly, not directly. In combination with a family's income and other necessary expenses, the affordability and availability of housing determines the range of housing and neighborhood characteristics to which a family has access and which the child will subsequently experience.

**Figure 1.** How housing can affect children



Another way in which housing can affect children indirectly is through their parents. Just as housing conditions can affect the well-being of children, they can also affect the well-being of adults. Problems for adults with health, emotional well-being, or with cognition can hinder parenting abilities, which in turn can harm children. This indirect pathway is shown in Figure 1 with two arrows: first, the arrow between housing and neighborhood characteristics and parent well-being represents the direct effect on parent well-being; second, the arrow from parent well-being to child well-being shows how the effect on parents translates into an effect on children. Housing costs and availability can also affect children

indirectly by affecting parents' well-being. Such indirect effects of housing on child well-being may be equally as harmful (or beneficial, if housing conditions improve adults' well-being) as the direct effects of housing on children. Furthermore, direct and indirect effects of housing on children can compound each other. If a housing characteristic that negatively affects children also negatively affects adults, the overall negative outcome for children may be multiplied. Conversely, circumstances that benefit both adults and children can yield particularly strong benefits.

Similarly, the fact that the link between the cost of available housing and child well-being is indirect does

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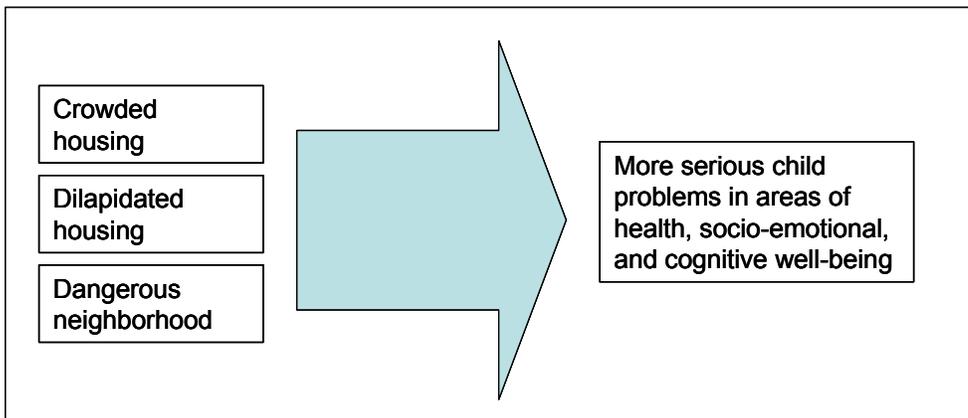
*not* mean that the potential effect on children is small. In fact, housing cost and availability play a role in determining every other aspect of a child's home and neighborhood environment. In the most dire situations, the cost and availability of housing, combined with poverty, are key causes of homelessness (U.S. Conference of Mayors 2005; National Resource 2006) which has very serious consequences for children. Furthermore, not shown in Figure 1 is the fact that among the poorest families, unaffordable housing could limit parents' ability to afford other necessities for their children, such as food and clothing. This indirect effect also has very serious consequences for children.

- *Second, to understand the effects on children, housing cannot be considered in isolation from neighborhoods.* The environments in which children live are “nested” within each other. That is, children live in their family homes, which are situated in certain neighborhoods that offer certain schools for attendance. This is why Figure 1 represents housing characteristics as a small circle nested inside a larger circle representing neighborhood characteristics. Thus, the characteristics of one child's home are related to that of friends' homes, surrounding neighborhood conditions, and

school quality (Jargowsky 1997; Massey and Denton 1993; Wilson 1987). Neighborhoods can be resource-rich or resource-poor and thus can hinder or enhance the well-being of children (Brooks-Gunn, Duncan, and Aber 1997a; Brooks-Gunn, Duncan, and Aber 1997b; Leventhal and Brooks-Gunn 2000; Leventhal and Brooks-Gunn 2003). Families cannot live in a home without also living in a neighborhood or community. Therefore, it is necessary to look at the characteristics of residents, housing units, buildings, blocks, and neighborhoods together in order to understand children's well-being (Saegert and Evans 2003).

- *Third, if families have any housing problems, they typically have problems on multiple fronts rather than in a single isolated area.* For example, a poor family—in order to obtain housing at all—may be forced to spend a large portion of its income in order to rent a dilapidated home with only one—or perhaps no—bedrooms for all family members to share in a dangerous neighborhood. When this occurs, the risks for children multiply (Saegert and Evans 2003), as shown in Figure 2 on page 9, with the large arrow representing a large causal effect.

**Figure 2.** How multiple housing problems can affect children



Conversely, when a family consistently resides in a well-maintained home in a safe neighborhood and has access to high quality schools and safe outdoor play spaces throughout a child's life, the positive effects on children are much stronger than experiencing only one such positive characteristic.

- *Fourth, a particular housing situation or condition might have both good and bad effects on children.* This might happen when a particular circumstance directly benefits children, but negatively affects parents, which might weaken or even cancel-out the overall benefit for children. For example, a poor family might spend a very large portion of its income in order to rent or purchase a home in a decent neighborhood with a good school. This choice contributes positively to the development of the child, but the family has stretched its income to the point that it cannot maintain the physical quality of the home or, perhaps, struggle to afford food and medical insurance—thus, indirectly harming the child (Bratt 2002; Rohe, VanZandt, and McCarthy 2000). In such cases, it is important to consider how to minimize the negatives without sacrificing the positives.

The following sections summarize the existing evidence about the specific ways in which attributes of housing and neighborhoods affect children's physical health, social and emotional functioning, and cognitive development. The paper discusses the indirect effects that occur through parents, as well as effects on children. Also considered are the entire range of housing-related circumstances: housing costs and availability, housing quality, and neighborhood environments. If any of these effects were considered in isolation, an incorrect picture of how housing affects children would be presented. A comprehensive understanding will enhance funders' abilities to gauge how potential housing-related programs might affect children, as well as how housing factors not targeted by a particular program might enhance or detract from the program's overall effectiveness.

### **Children's Well-Being Defined**

Each of the three areas of well-being—physical, social and emotional, and cognitive—are important. Success in all of the areas is necessary in order to say that, overall, a child is faring well. That is, no one would be satisfied if his or her child were merely free from medical diseases and injury; parents also want their children to be happy, confident,

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productive, smart, and engaged with others and society (Child Trends 2000).

Most people understand what **physical health** means. Physically-healthy children are free from diseases, such as asthma or chronic colds, and they are neither overweight nor underweight. They are also safe from accidents, injuries, and poisoning. Adequate nutrition, sleep, exercise, and preventive health care all contribute to a child's healthy physical functioning.

**Social and emotional functioning** refers to children's relationships with others, social skills, and feelings about themselves. Parents, educators, and societies hope to raise children who get along well with others, feel positively about themselves, and demonstrate the good character values and mental health that allow them to work towards their goals and be hopeful about their future.

**Cognitive development** describes children's abilities to mature in ways that allow them to learn in school and solve problems, make good decisions, and acquire essential literacy, mathematical, and technological skills.

### Physical Well-Being and Housing Conditions

A child's physical health depends on the characteristics of the home in which he lives (Breyse et al. 2004). The physical quality of housing may lead to childhood diseases including asthma, lead poisoning, and respiratory distress, as well as accident, injury, or even death. Factors that can lead to such diseases include structural conditions relating to building quality and maintenance, safety hazards, functional systems (for example, ventilation, smoke alarms heating/cooling, plumbing) or environmental toxins including lead, asbestos, and neurotoxins. All of these hazards are preventable and treatable, but if unaddressed they can lead to significant health

care costs and can cause unnecessary strain on the health care system.

General health status. Overall, few parents report that their child is in fair or poor health. In 2002, the figure was 4.7 percent for all children under 18, but being in fair or poor health is more common for low-income children (8.3 percent).<sup>10</sup> High housing cost burdens can hinder families' abilities to meet other basic needs (Bratt 2002), which could lead to health problems. For example, paying the bills necessary to maintain a home may leave less money for food, children's clothing, or medical care. In the extreme circumstance of homelessness, children are likely to experience hunger and poor health (Better Homes Fund 1999). While high housing costs can result in financial hardship, it is also possible that some families choose to pay a large portion of their income in order to obtain good quality housing in good neighborhoods. This tradeoff may be responsible for some of the mixed findings in research about the way that high housing costs affect child well-being. For example, one recent study found that children in families that pay more than half of their income for housing are more likely to be in fair or poor health than other children in other families, but *less* likely to have accidents or injuries that required medical attention (Vandivere et al. 2004).<sup>11</sup>

Conditions in neighborhoods with high poverty rates, such as a lack of access to quality medical care, high crime rates, and access to drugs, can all threaten children's health. Poor neighborhoods also tend to lack restaurants or supermarkets with affordable, healthy choices for meals (Duncan and Brooks-Gunn 1999; Furstenberg et al. 1999;

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<sup>10</sup> Authors' analyses of data from the 2002 National Survey of America's Families.

<sup>11</sup> Child Trends' tabulations of data from the 2002 National Survey of America's Families.

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Tolan et al. 2004). Additionally, due to fear for their children's safety, parents may not allow children who live in unsafe neighborhoods to play outside (Molnar et al. 2004), but the resulting lack of exercise is not good for children's health. Furthermore, because poverty tends to be concentrated in neighborhoods (Jargowsky 1997; Massey and Denton 1993; Wilson 1987), families that experience risky conditions in their own home likely also face risky conditions in their neighborhoods, multiplying the risks to children.

Lead poisoning. Lead poisoning is the most common cause of environmental disease in children (Kim et al. 2002). In 1999-2002, 1.6 percent of children under age 6—or 310,000—had elevated blood lead levels.<sup>12</sup> Lead poisoning results from exposure to paint, lead paint dust, and soil found in older and poorly maintained homes. Symptoms include irritability, stomach-ache, poor appetite, diarrhea, colic, distractibility, and lethargy. Its effects are irreversible and include reduced IQs, impaired growth and neurological development, and behavior problems (Bellinger, Leviton, and Waternaux 1987; Needleman and Gatsonis 1990; Needleman et al. 1990; White et al. 1993). Children under the age of six are especially vulnerable as their brains and central nervous systems are still developing and lead can interfere with this process. Young children are also more likely than older children or adults to be affected by hand-to-mouth contamination when exposed to lead (Federal Interagency Forum on Child and Family Well-Being 2005). Other children who appear to be at a high risk for lead poisoning include those living in poor families, inexpensive housing, or in rented or older homes, or those in communities with high rates of poverty, low ownership rates, and with many older

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<sup>12</sup> The authors also found lower levels of behavioral and emotional problems among children in families with high housing costs.

residences (Kim et al. 2002; Sargent et al. 1995).<sup>13</sup> Such risk factors are common among children living in urban areas with older housing.

Exposure to other toxins. In addition to lead paint exposure, urban home environments are often contaminated with other neurotoxins including some pesticides that are used to kill cockroaches and rodents.<sup>14</sup> Babies exposed to pesticides containing chlorpyrifos<sup>15</sup> before birth had lower birth weights and lengths than babies who were not exposed to the toxin (Whyatt et al. 2005). Another potential source of toxins is contaminated water. In 1999, 8 percent of children in homes receiving public water service had water with any health-based violations, including treatment and filtration problems or contamination by microbes, lead and copper, nitrates/nitrites, or other chemicals and radiation (Environmental Protection Agency 2003). Additionally, some children play in areas that may be contaminated by hazardous waste. In 2000, at least 0.8 percent of children, or 155,000 lived within one mile of an uncontrolled Superfund site (Environmental Protection Agency 2003).

Asthma. Environmental conditions likely play a role in both causing and aggravating the symptoms of asthma, the most common

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<sup>13</sup> Alternate data sources suggest that as many as 3.6 percent of children under age 6 may have elevated blood lead levels (Child Trends Databank 2003).

<sup>14</sup> Specifically, Sargent et al.'s 1995 study of Massachusetts communities found rates of lead poisoning that were seven to ten times higher in communities with lower per-capita income and with larger percentages of older housing, African American residents, and poor households (pre-1950) than among communities without these risk factors (Sargent et al. 1995). Kim et al.'s 2002 study of Kentucky children found higher rates of elevated blood lead levels among children in housing valued less than \$50,000 and those in neighborhoods with a high percentage (at least 60 percent) of non-owner residences than among other children (Kim et al. 2002).

<sup>15</sup> Chlorpyrifos was once a common chemical found in many pesticides that since 2000 has been more heavily regulated by the EPA (Whyatt et al. 2005)

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chronic disease among children (Breysse et al. 2004). In 2003, 5.5 percent of children had asthma; among poor children, the rate was 7.2 percent (Child Trends Databank 2003). In individuals who have asthma, exposure to small amounts of allergens can result in major breathing problems. Although asthma can resolve itself in childhood, it can reoccur in adulthood and lead to abnormal lung functioning later in life. Chronic exposure to indoor allergens including mold, dust mites, mice, rats, and cockroaches is associated with the initiation and continuation of asthma symptoms. Poor ventilation and indoor moisture and dampness sustain mold and bacteria which can help set off asthma attacks (Brunekreef et al. 1989). Some children whose asthma is aggravated by poor housing conditions might experience multiple health risks if they are also exposed to toxic pesticides that were intended to combat rodents or insects.

Other diseases and illness. Poor indoor climate conditions, including lack of plumbing, heating, or cooling can contribute to chronic colds and other health problems. Additionally, overcrowding—or not having enough physical space or rooms in a home given the number of family members—can also increase health problems such as respiratory illnesses or stomach ailments.<sup>16</sup> Children who are frequently sick miss more school, harming their educational progress.

Accidents and injuries. Regardless of the cause, in 2002, 13.2 percent of 6- to 11-year-olds and 20.2 percent of 12- to 17-year-olds had parents report that the child had an accident, injury, or poisoning requiring medical attention in the prior year.<sup>17</sup> Poorly-built or maintained houses, buildings, and apartments can be one cause of such accidents and injury. For example, fires are

common occurrences in homes with poor electrical systems and are particularly common in the southern United States. Functioning smoke alarms can reduce the risk of injury and death due to fires by up to 80 percent (CDC 2002). Burns and scalds are also likely with poorly functioning water heating systems. Structural problems such as poorly-designed windows, roofs, and balconies, as well as poorly lit stairwells, can lead to falls and other unintentional injuries. In contrast, safety devices such as grab bars or window guards can help prevent injuries (Battelle Memorial Institute 2001).

Home maintenance and cleanliness, which can reduce the risk of injury, are often better in homes that are owned rather than rented. Such maintenance can also reduce the risk of poisoning from lead and other toxins. The difference between owned and rented homes may occur because renters tend to move more frequently than do homeowners, so they may be less likely to benefit over the long term personally from maintenance efforts than would homeowners. In contrast, homeowners may be more psychologically invested in their current home and they may be more likely to be in a financial position to make improvements to their home and provide better upkeep on functional systems (like plumbing and heating), as compared to renters (Haurin, Parcel, and Haurin 2002; Rohe, VanZandt, and McCarthy 2000).

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<sup>16</sup> For a review, see Currie and Yelowitz (2000).

<sup>17</sup> Interestingly, reports of such incidents are slightly more common for higher-income children.

**Table 1.** Housing features' effects on child health.

Housing feature	Effect on child health
▪ Lead and other environmental toxins	▪ Unfavorable
▪ Poor indoor climate conditions (lack of heat, indoor plumbing, electricity, etc.)	▪ Unfavorable
▪ Overcrowding	▪ Unfavorable
▪ Poor structural conditions	▪ Unfavorable
▪ Smoke alarms	▪ Favorable
▪ Sufficient lighting and safety devices such as grab bars and window barriers	▪ Favorable
▪ Homeownership	▪ Favorable
▪ Cleanliness and organization	▪ Favorable
▪ High housing costs	▪ Mixed
▪ Poor neighborhood quality	▪ Unfavorable
▪ Homelessness	▪ Unfavorable

### Social and Emotional Well-Being and Housing Conditions

Some of the same features of housing that affect children's physical health also influence their social and emotional functioning.

**Homelessness.** Homelessness—probably the most serious housing problem imaginable—is obviously a source of extreme stress for any child who experiences it. Nearly half have symptoms of anxiety or depression, and many may have difficulties with social or personal development (Hicks-Coolick, Burnside-Eaton, and Peters 2003). Furthermore, when parents are unable to provide adequate housing for their children, child protective services may intervene and place children in foster care, resulting in additional stress for children.

Homelessness is the reason for foster placement for as many as three in ten foster children, yet as few as one in 50 parents of all foster children (regardless of the reason for children's placement) have received any housing assistance (Harburger and White 2004). Furthermore, between 10 and 36 percent of youth experience homelessness

after aging-out of foster care (for a review, see Choca et al. 2004).

**Residential stability.** While most research on the way residential moves affect children has focused on educational outcomes, one study found that adolescents who have moved recently are more likely to engage in premarital sexual intercourse, as compared to youth who have not moved (South, Haynie, and Bose 2005). These adolescents' earlier onset of sexual activity may be partially due to their having peers with weaker academic performance and greater levels of delinquency.

Residential stability may benefit children by facilitating better knowledge of and access to available community resources and social support networks for families with longer tenures (Galster 2003). In contrast, residential moves are often accompanied by declines in social connections, whether assessed by children's social network sizes, popularity, and parents' familiarity with their children's friendship networks (South and Haynie 2004)

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or by children's connections with parents, school, and the community, and parents' connections to the school (Pribesh and Downey 1999). One problem in examining the effect of moving on social ties and support, however, is that household moves are not always problematic (Scanlon and Devine 2001). For example, families often move to improve their housing and neighborhood conditions.

Homeownership. Several studies have found that homeownership benefits social and emotional well-being. School-age children whose parents own their homes are less likely to exhibit behavior problems than those whose parents rent their homes.<sup>18</sup> For young adolescents, living in a rented home has been linked with a greater likelihood of psychological distress (Cairney 2005)<sup>19</sup> and having a child before age 18 (Green and White 1997) than those in owned homes. Homeownership may benefit children by supporting the consistency of their experiences (Haurin, Parcel, and Haurin 2002), since families that own their homes move less frequently than those that rent. While renters stay in their residences for an average of 2.5 years, homeowners stay for about 13 years (Rohe and Stewart 1996).

Because homeowners tend to be less mobile and develop more social ties with neighbors than do renters, homeowners may play a more active role in monitoring the behavior of their

children and that of neighborhood children, which can improve neighborhood quality of life. Additionally, to ensure the value and appreciation of their homes, they may tend not only to maintain their own homes, but also do what they can to maintain the condition of their neighborhoods (such as reporting vandalism or crime in the neighborhood) as well as support community resources such as playgrounds and libraries. Such investment in the community and social ties in the neighborhood can reduce juvenile crime and delinquency, as well as promote children's school engagement and youth civic participation (Brody, Ge, and Conger 2001; Elliot, Wilson, and Huizinga 1996; Sampson, Morenoff, and Gannon-Rowley 2002; Sampson, Raudenbush, and Earls 1997).

Lead poisoning. In addition to its negative effects on physical health, lead poisoning also causes social and emotional problems such as attention deficit disorders and behavioral problems (Bellinger et al. 1994) and, among adolescents, antisocial behaviors like bullying, vandalism, arson and shoplifting (Needleman, Riess, and Tobin 1996; Needleman et al. 1990).

Overcrowding. Overcrowding has been linked with symptoms of psychological problems among elementary school-aged children (Evans, Saegert, and Harris 2001). One possible reason for this link is that children in crowded living spaces have less control over their actions and interactions, which leads to a loss of self-efficacy and a feeling of helplessness.<sup>20</sup>

Neighborhoods. Children living in socio-economically disadvantaged neighborhoods are more likely to experience mental health problems than other children, and some

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<sup>18</sup> Haurin and colleagues (2002) found that 5- to 8-year-old children of adults who own their homes are slightly less likely to have behavior problems, compared with children whose parents rent their homes. Boyle found that homeownership was negatively associated with child problem behavior as assessed by both parents and teachers of school children ages 4 to 16 (Boyle, 2002).

<sup>19</sup> This finding applied to 12- to 14-year olds, and not 15- to 19-year-olds, presumably because younger children are less independent and spend more time at home. Among the older children, homeownership was associated with a *higher* likelihood of major depression, a finding the author believes merits further research (Cairney, 2005).

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<sup>20</sup> For example, research has demonstrated that young children living in crowded conditions are less likely to persist in solving challenging puzzles (Evans et al. 1998; Evans, Saegert, and Harris 2001).

evidence exists indicating that adolescents may be more likely to use drugs, engage in delinquent behavior, and engage in sexual intercourse and become pregnant (for reviews of the literature, see Jencks and Meyer 1990; Leventhal and Brooks-Gunn 2000). The types

of adult role models and peers in the neighborhood, as well as exposure to crime and violence, may be responsible for poorer social and emotional well-being of children in disadvantaged neighborhoods (for a review of the literature, see Ellen and Turner 1997).

**Table 2. Housing features' effects on child social and emotional well-being.**

Housing feature	Effect on social and emotional well-being
<ul style="list-style-type: none"> <li>▪ Lead and other environmental toxins</li> <li>▪ Overcrowding</li> <li>▪ Homeownership</li> <li>▪ Residential mobility</li> <li>▪ Poor neighborhood quality</li> <li>▪ Homelessness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unfavorable</li> <li>▪ Unfavorable</li> <li>▪ Favorable</li> <li>▪ Mixed</li> <li>▪ Unfavorable</li> <li>▪ Unfavorable</li> </ul>

### Cognitive Development and Housing Conditions

Cognitive development is affected by many of the same housing features that affect children's physical health and social and emotional well-being.

Lead poisoning. In addition to its negative consequences for the physical and socio-emotional well-being of children, exposure to lead can harm children's cognitive and academic development by stunting brain and central nervous system development. Early childhood lead exposure is related to subsequent decreases in IQ (Bellinger and Needleman 2003) as well as with lower reading and mathematics scores (Lanphear et al. 2000).

Home organization and cleanliness. Particularly when children are young, the home is a key setting for supporting cognitive development. For example, the absence of noise pollution and having a safe and private space to do homework both contribute to children's learning (Eamon 2000). On a related note, if a home is small and overcrowded, school-age children may not

have their own quiet space to do homework (Evans, Saegert, and Harris 2001).

Home cleanliness has also been linked with children's later educational attainment and earnings, even after accounting for relevant socio-economic and demographic differences among households (Dunifon, Duncan, and Brooks-Gunn 2001). Keeping an organized, clean house may correspond with other parental characteristics such as motivation and efficiency, which may benefit children.

Homeownership. In addition to its apparent benefit to children's behavioral and emotional well-being, homeownership is associated with improved educational achievement. Homeownership has been related to higher math and reading scores among elementary school-age children (Haurin, Parcel, and Haurin, 2002), high school completion (Boyle 2002; Galster et al. 2003; Green and White 1997),<sup>21</sup> and a greater likelihood of future

<sup>21</sup> Galster (2003) found that children whose families never owned their home were less likely to graduate from high school compared with those who spent half of their first 18 years in homes owned by their parents.

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homeownership (Boehm and Schlottmann 1999).

Homeownership can help pave the path to equity and financial stability (Galster 2003), which in turn may help families afford enrichment activities that contribute positively to a child's learning. Parents may also be able to use home equity as a source to pay for higher education for children (FinAid 2005). Additionally, the increased tenure among homeowners reduces the number of school transitions that children and youth experience (Aaronson 2000; Rumberger 2002; Scanlon and Devine 2001).

Residential stability. When children change schools, they must adapt to new teachers, peers, and curricula, which could disrupt their educational progress. However, the way that residential moves affect children may depend partly on the reason for the move, as well as on pre-existing characteristics of families (Pribesh and Downey 1999; Tucker, Marx, and Long 1998; Wood et al. 1993).<sup>22</sup> For example, moving may be more challenging for children in low-income or single-parent families, or those whose parents have relatively low levels of educational attainment themselves, than for children in more

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<sup>22</sup> In one study, differences in socio-economic and demographic characteristics largely explained the negative effects of frequent residential moves on growth or developmental delays and on learning disabilities among 6- to 17-year-olds (Wood et al. 1993). Another study found that pre-existing socio-economic and demographic differences such as parent education, family income, and family structure explained a large portion of the negative effect of moving on reading and math scores in high-school aged children (Pribesh and Downey 1999). Finally, in a study of young children, Tucker and colleagues (1998) found that, excepting children who have moved eight or more times, elementary-school children living with both biological parents who had moved did not perform more poorly in school than children who had moved a few times or never. In contrast, children from other family structures suffered significantly from any mobility. They may not have the family resources to compensate for the loss of routines and relationships.

advantaged families. For many disadvantaged families, a move may be unwanted (for example, it may be necessary following a divorce or a job loss), and they may have limited resources to deal with the stresses that accompany a move. In contrast, moves out of a poor neighborhood can be positive for children, even for disadvantaged families (Rosenbaum et al. 1993). Yet frequent moves may be difficult for children in any family (Tucker, Marx, and Long 1998).

Homelessness. The educational performance of homeless children may suffer not only from the stress of homelessness, but also because of frequent school changes. Up to half of homeless children have developmental delays and some have difficulty with language development (Hicks-Coolick, Burnside-Eaton, and Peters 2003). They tend to score poorly on achievement tests and when compared to children in families receiving housing assistance, are more likely to repeat grades in school and have lower future expectations for secondary educational attainment (Rafferty, Shinn, and Weitzman 2004).

Neighborhoods. In addition to the immediate context of the home, children's neighborhoods have important implications for their educational outcomes. School readiness, high school graduation rates, educational achievement and even later annual earnings tend to be higher in more socio-economically advantaged neighborhoods (Brooks-Gunn et al. 1993; Clark 1992; Connell and Halpern-Felsher 1997; Crane 1991; Ensminger, Lamkin, and Jacobson 1996; Galster et al. 2005).<sup>23</sup> Possible reasons for the benefits of such neighborhoods

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<sup>23</sup> Crane (1991) found that when the rate of residents employed in managerial or professional jobs fell below 5 percent, the incidence of school dropout increased. Similarly, the percentage of affluent neighbors has been positively related to school achievement and completion (Brooks-Gunn et al. 1993; Clark 1992; Connell and Halpern-Felsher 1997; Ensminger, Lamkin, and Jacobson 1996).

include the availability of high-quality schools and role models in the form of neighbors who have attained higher levels of education and work in professional fields, as well as reduced crime rates. Additionally, institutional resources in neighborhoods, such as libraries,

museums, and after-school programs, can facilitate school readiness and can provide educationally-enriching experiences that promote educational achievement (Eccles and Gootman 2002; Leventhal and Brooks-Gunn 2000; Roth and Brooks-Gunn 2000).

**Table 3. Housing features' effects on child cognitive well-being.**

Housing feature	Effect on cognitive well-being
<ul style="list-style-type: none"> <li>▪ Lead and other environmental toxins</li> <li>▪ Home organization and cleanliness</li> <li>▪ Homeownership</li> <li>▪ Residential mobility</li> <li>▪ Poor neighborhood quality</li> <li>▪ Homelessness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unfavorable</li> <li>▪ Favorable</li> <li>▪ Favorable</li> <li>▪ Mixed</li> <li>▪ Unfavorable</li> <li>▪ Unfavorable</li> </ul>

### Parental Well-Being and Housing Conditions

As noted previously, housing can affect children *indirectly* by affecting the way adults parent their children. When parent well-being is compromised, children are most likely to suffer in the areas of their social and emotional development or their cognitive development, as parents may become less supportive or warm with their children and may have less energy to discipline them appropriately or engage in activities to stimulate their intellectual development (Conger et al. 1992; Conger et al. 1994).

Homelessness. Parents who have been or are homeless often have a history of housing instability, economic hardship, and psychological problems that can lead them either to voluntarily place their children with friends or relatives or have their children removed from them involuntarily by child protective services because of abuse or neglect (see Park, Metraux, Brodbar, and Culhane 2004;<sup>24</sup> Culhane, Webb, Grim, Metraux, and Culhane 2003).<sup>25</sup>

Housing cost burden. In general, economic hardship can stress parents, making them more irritable and less able to be nurturing and highly involved in their children's lives (e.g., Conger et al. 1992; Conger et al. 1994; Elder et al. 1995; Elder et al. 1992). In some cases, housing costs may be so high that they prevent some families from providing basic necessities for its children. If they are able, parents may forgo meals or medical care themselves, in order to ensure that the children have food and health care. Yet children may still be affected indirectly if their parents' physical and emotional health suffers, reducing their effectiveness as parents (Vandivere et al. 2004).

Homeownership. Homeownership may be an indicator that adults have set priorities they believe to be in the best interests of their families, and these adults may be particularly likely to be effective parents (Cairney 2005).

<sup>24</sup> In their study of over 8,000 homeless New York City children, one in four had been involved with child

protective services either before or after their stay in a shelter.

<sup>25</sup> In their study of a Philadelphia sample, 37 percent of mothers who had ever experienced homelessness had also been involved with child protective services.

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Yet homeownership may *indirectly* improve child well-being as well, by benefiting adult well-being and adults' parenting skills (Cairney 2005). Relative to renters, adult homeowners tend to experience better physical health (Rohe, VanZandt, and McCarthy 2000) and mental health.<sup>26</sup> Moreover, successful homeowners develop property maintenance and financial planning skills which may transfer to parenting skills that benefit children (Green and White 1997).

Conversely, given that homeowners are likely to be less mobile, when faced with the loss of a job, it becomes more difficult for parents to move in search of better employment (Rohe, VanZandt, and McCarthy 2000). Also, parents may experience stressed due to the bills they have taken on, which may compromise their interactions with their children (Vandivere et al. 2004).

Neighborhood. Living in a neighborhood with high crime rates may make parents feel worried or stressed about their children's safety, which can affect how closely they monitor their children (Kling, Liebman, and Katz 2005). Parents in the Moving to Opportunity program that moved into a low-poverty neighborhood felt much less distress than parents who remained in a poorer neighborhood (Leventhal and Brooks-Gunn 2003b).<sup>27</sup> Parents living in socio-economically disadvantaged neighborhoods are also more

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<sup>26</sup> Homeownership has been linked with adults' satisfaction with their home and with overall life satisfaction, higher self-esteem, and perceived control over life (for reviews of the literature, see Boehm and Schlottmann 1999; Cairney 2005; Rohe, VanZandt, and McCarthy 2000), as well as with lower rates of psychological distress in general (Cairney and Boyle 2004; Ross, Reynolds, and Geis 2000).

<sup>27</sup> Moving to Opportunity for Fair Housing (MTO) is a ten-year federal research demonstration project of the U.S. Department of Housing and Urban Development that combines tenant-based rental assistance with housing counseling to help very low-income families move from poverty-stricken urban areas to low-poverty neighborhoods ([www.hud.gov](http://www.hud.gov)).

likely to perceive that their neighborhood impacts their child negatively (Galster and Santiago 2006).

Physical home quality. While children may be more susceptible to negative physical consequences of poor housing quality due to the fact that their bodies are still developing, poor-quality housing can pose similar health risks to adults. Homes that are old, in disrepair, and of poor quality can psychologically distress parents (Evans et al. 2000),<sup>28</sup> and the stresses of keeping up a dilapidated home reduce parents' patience with their children (Saegert and Evans 2003). Residential density, or overcrowding, is also associated with adult psychological distress (Ross, Reynolds, and Geis 2000), as well as with greater conflict between parents and children (Evans et al. 1998; Saegert 1982).

### **How Housing Programs Can Improve a Child's Well-Being—Opportunities for Funders**

Four general approaches exist to help the most at-risk children, as well as to help children more broadly. Each addresses a different part of the model presented in Figure 1 at the beginning of this paper (page 7). Some approaches may be more feasible politically or practically, in terms of a foundation's mission, than others; some could be done on a large or small scale; and they are not mutually exclusive. These approaches are not specific solutions, although some examples of each are provided. Rather, the authors hope that they will provide a framework for thinking about how funders can protect children and improve their life

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<sup>28</sup> Specifically, when the combined levels of structural quality, privacy, indoor climate conditions, physical hazards, and cleanliness/clutter were poorer, maternal psychological distress was more common than among mothers living in better conditions. Furthermore, improvement in these conditions was linked with improvement in maternal psychological conditions.

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prospects through considering/addressing families' housing circumstances.

1. Target families' budget constraints: Broaden the range of housing choices available to families. In this context, budget constraint refers to the limitations posed on families by the combination of their incomes versus the cost of basic necessities. This could be approached from a variety of angles: increasing the incomes of low-income families through higher wages or indirectly through education and employment training, in-kind transfers such as food stamps, child-care subsidies, housing subsidies, or cash assistance. Providing housing to families also affects families' budget constraints if it offsets the expenses the family otherwise would have paid for rent or mortgage.

2. Target families' housing and neighborhood conditions: Reduce children's exposure to potentially harmful conditions. Programs can rehabilitate housing or help families with maintenance, such as major repairs or lead abatement. Programs can also work toward improving neighborhood conditions by focusing not just on a family's immediate housing unit, but on the community, including the development of playgrounds, attractive street-scaping, retail space, and other neighborhood resources such as libraries and computer centers. Yet funders should also consider that the improved quality can cause area housing prices to rise, as occurs with gentrification. One option is to reserve high-quality housing in new developments for low-income families, to be rented or purchased at rates that are affordable given a family's particular income.

3. Target parents' well-being: Provide services or implement conditions that counteract (that is, mediate) negative effects of housing conditions or constrained budgets on parents; improved parental well-being will in turn benefit children's well-being. For example, if

a family's home is far away from jobs, then enabling telecommuting could reduce parental stress, which could in turn benefit children. This approach would reduce or eliminate one of the difficult "trade-offs"—a long commute—that many families make in order to obtain good quality housing that is affordable. Homeownership education can help low-income families cope with potential challenges and stresses of homeownership (National Housing Coalition 2005). Other possibilities include supportive tenant services such as employment training, counseling, and support groups. Counseling or educational programs could also be implemented to help families experience the full benefits of moving out of a low-income neighborhood. For example, work by Briggs and colleagues (2006) on data from the Moving to Opportunity experiment suggests that families may lack the information necessary to choose high quality schools for their children. See Box 3 on page 27 describing such programs in San Francisco, Seattle, Missouri, and Florida.

4. Target child well-being directly: Provide services or implement conditions that counteract (that is, mediate) negative effects of housing conditions on children. This approach is the broadest, since a multitude of factors can affect child well-being and could counter the negative effects of poor housing conditions or risky neighborhoods. While such services may seem beyond the scope of housing, some innovative housing programs do provide services to families that extend beyond housing and address an array of families needs. For example, projects that involve the rehabilitation of existing housing or the development of new affordable housing may include tenant services such as after-school programs, mentors, extracurricular activities, and teen discussion groups. See Box 3 on page 27 for examples of innovative programs.

**Figure 3.** How housing programs might help children by targeting families’ budget constraints, families’ housing and neighborhood conditions, parental well-being, and child well-being

	<b>1. Target families’ budget constraints</b>	<b>2. Target housing and neighborhood conditions</b>	<b>3. Target parent well-being</b>	<b>4. Target child well-being</b>
<b>Government-owned public housing</b>	By providing shelter	By providing higher-quality housing than is available for the same price on the market	Indirectly, by affecting budget constraints and housing and neighborhood conditions	Indirectly, by affecting housing and neighborhood conditions and parent well-being
<b>Financial assistance and other mobility programs</b>	By providing subsidies	By enabling families to move to better housing and neighborhoods	Indirectly, by affecting budget constraints and housing and neighborhood conditions	Indirectly, by affecting housing and neighborhood conditions and parent well-being
<b>Rehabilitation of housing currently occupied by low-income</b>	By implementing repairs that families could not otherwise afford	By improving the condition of housing	Indirectly, by affecting budget constraints and housing and neighborhood conditions	Indirectly, by affecting housing and neighborhood conditions and parent well-being
<b>Development of new affordable housing by non-profit and private developers</b>	By providing shelter	By providing high-quality homes in high-quality neighborhoods	Indirectly, by affecting budget constraints and housing and neighborhood conditions	Indirectly, by affecting housing and neighborhood conditions and parent well-being
<b>Codes and regulations that govern the safety of housing.</b>	By requiring landlords to make repairs that families could not otherwise afford	By implementing rules for minimum quality standards of housing	Indirectly, by affecting budget constraints and housing conditions	Indirectly, by affecting housing conditions and parent well-being
<b>Tenant-based supportive services and amenities</b>	n/a	n/a	Indirectly, by providing services such as support groups, counseling, or employment or money management training	Indirectly, by affecting parental well-being, or directly, by providing services and amenities such as child care

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## Connecting Research to Practice: Lessons from Evaluations of Intervention Strategies to Improve Child Well-Being

Funders can learn from the existing landscape of housing-related programs and research and evaluation studies that have been conducted to assess their effectiveness. This section highlights important recommendations for shaping housing strategies and reviews intervention strategies that have been evaluated.

Existing housing-related programs generally fall into six categories:

1. Government-owned public housing;
2. Financial assistance and other mobility programs (including vouchers and certificates);
3. Rehabilitation of housing currently occupied by low-income families (including both rented and owned housing);
4. Development of new affordable housing by non-profit and private developers;
5. Codes and regulations that govern the safety of housing; and
6. Tenant-based supportive services and amenities.

The effectiveness of programs depends on how well they target: 1) families' budget constraints, 2) housing and neighborhood conditions, 3) parental well-being, and/or 4) child well-being, as shown in Figure 3 on page 20. This is why the National Resource and Training Center on Homelessness and Mental Illness makes such broad-ranging recommendations when they recommend "what can be done" to help children in homeless families (National Resource 2006). Consider how each of their recommendations, quoted immediately below, targets one or more of the four areas that are delineated in this paper. Furthermore, note

how the recommendations that target child well-being directly span the domains of emotional and behavioral well-being, health, and education:

- Maximize poor families' economic resources and build their assets.
- Develop an adequate supply of decent affordable housing.
- Support education, training, work, and child care for parents.
- Eliminate hunger and food insecurity.
- Protect the health of homeless children.
- Improve mental health surveys for children and parents.
- Ensure access to school and opportunities for success in school.
- Prevent unnecessary separation of families.
- Expand violence prevention, treatment, and follow-up services.

In developing new strategies, funders may want to think about how a proposed strategy would be expected to target each of the four areas. In order to help children, housing programs do not have to address all four areas, but problems in any of the four areas can "trickle down" to dilute positive effects of programs on children. Ideally, expectations and guess-work shouldn't guide the development of new programs; rather, existing evaluation research should inform the process. Yet much research remains to be done to yield such information. See Box 2 on page 24 for a discussion about why such research is so important. Brief reviews of a few specific intervention strategies that have been evaluated follow here.

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Funding for lead control and enforcement of lead abatement policies can reduce children's exposure to lead. Because of the clear causal connection between lead and child well-being, and because the health impacts of lead can be so serious, reducing the potential for exposure to lead is important in any type of housing program. Recent declines in the incidence of elevated blood level levels in children (CDC 2005) may be partially due to the \$700 million in funding provided by the U.S. Department of Housing and Urban Development for the purpose of lead control in private low-income housing, as well as to other public and private funding for housing rehabilitation. Moreover, strict enforcement of lead policies, involving criminal and civil penalties against owners who do not abate lead hazards, as well as reporting the presence of lead to tenants and informing them how to obtain inspections, can reduce children's lead exposure (Brown et al. 2001).

Lead continues to be a major problem, however, as an estimated 24 million housing units are still contaminated (CDC 2005) and lead abatement measures *after* children have already been poisoned show limited benefits (Farfel and Chisholm 1990). Similarly, dust control measures have been disappointing for high-risk children (Charney et al. 1983; Lanphear et al. 1999).

Children in government-owned or government-subsidized housing may live in better housing than their families would otherwise be able to obtain, but they continue to face disadvantages such as high-poverty neighborhoods. Most of the federal government's efforts to ensure a minimal level of quality of housing for poor families have traditionally involved project-based (such as low-rent public housing) and household-based (subsidies provided directly to families) aid.

A common misperception is that public housing harms child well-being. Children who

live in housing projects tend to have an array of other risks in their lives, such as poverty, experiences of homelessness, a single parent, and low parental education or job skills. Some research has tried to untangle the effects of public housing from these other risk factors and suggests that children in housing projects may not fare worse than other children with similar risk levels not in public housing. For example, all else equal, children in public housing projects may be less likely to have been held back than other children (Currie and Yelowitz 2000) and may achieve equivalent levels of education (Newman and Harkness 2000), and their families may experience fewer housing problems, such as overcrowding (Currie and Yelowitz 2000; Devaney, Ellwood, and Love 1997), severe housing cost burden, or low-quality housing (Devaney, Ellwood, and Love 1997). One study found privately-owned assisted housing to be less distressed than public housing units, but this better quality did not translate into increased educational attainment for children (Newman and Harkness 2000).

One problem is that many families do not receive needed housing assistance due to insufficient governmental funding; the average waiting time can be a year-and-a-half or more (Devaney, Ellwood, and Love 1997). Another problem with government-owned or subsidized housing is that it has often been located in low-quality neighborhoods (Devaney, Ellwood, and Love, 1997; Newman and Schnare 1997). These neighborhoods have high concentrations of households with low income, low education, low employment, and high welfare-dependency rates. Parents and children living in such neighborhoods can suffer due to the lack of job opportunities for parents; high crime rates; few community resources such as parks, libraries, and high-quality schools; and a shortage of positive role models for children and youth.

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Children in low-income families may benefit from moving into higher quality neighborhoods. In contrast to those in government-owned public housing projects, families who receive certificates and vouchers may be less likely to live in low-quality neighborhoods, relative to families receiving welfare (Newman and Schnare 1997). Two experimental housing programs—the Gautreaux Housing Project and Moving to Opportunity demonstration project—tested the effects of moving families with children from high-poverty areas to low-poverty areas.<sup>29</sup> These two programs merit special mention, because programs are rarely evaluated in such rigorous ways that allow researchers to make definitive conclusions about programs’ effectiveness [see Box 2 on page 24].<sup>30</sup>

Families that moved to low-poverty areas experiences improved outcomes in health (Katz, Kling, and Liebman 2001; Ludwig, Duncan, and Hirschfield 2001; Rosenbaum et al. 1993) and a reduction in problem behaviors for boys (Katz, Kling, and Liebman 2001; Ludwig, Duncan, and Hirschfield 2001; Rosenbaum et al. 1993). Additionally, the Gautreaux Housing Project benefited children’s educational achievement and later job success.<sup>31</sup>

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<sup>29</sup> The Gautreaux Assisted Housing Program was created as a result of a series of class action lawsuits—alleging that African American families were deliberately segregated through tenant selection and site selection policies—that were filed against the Chicago Housing Authority and HUD, beginning in 1966. The purpose of the program was to remedy past segregation by offering interested members of the plaintiff class an opportunity to find housing in desegregated areas throughout the region. The program ended in 1998 after meeting the target of 7,100 families. A description of the Moving to Opportunity program appears in footnote #27 on page 18.

<sup>30</sup> “Rigorous” evaluation indicates that the program was evaluated experimentally. That is, participants are randomly assigned to participate in the program or not, thus ruling-out the possibility that an individual’s characteristics are responsible for observed outcomes.

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<sup>31</sup> Specifically, in the Gautreaux Housing Project, individuals were less likely to drop out of school and were more likely to be in college, employed, and working in better paying jobs seven to 13 years after moving to the suburbs, relative to those who remained in poor urban settings (Rosenbaum et al. 1993).

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Box 2:

**How Funders Can Identify Housing Programs that Really Help Children**

There is no doubt that children's lives can be changed through programs focused on housing circumstances. But how do we know what programs are effective? Specifically, which outcomes does a program affect and to what degree? And how do we know whether programs are efficient? (That is, what's the bang for the buck?) Surprisingly, definitive answers are rarely available. One way that funders can help improve children's lives is to provide the means necessary to answer these questions, so that effective, efficient programs can be identified, replicated, and sustained. It is particularly important that such analysis be carried out independently by organizations that are not directly invested in the implementation of housing programs (National Housing Coalition 2005).

The studies that come closest to proving that a program caused a certain effect have an experimental design in which children and their families are randomly assigned to participate in a program (or to receive services) or not. This random assignment rules-out the possibility that characteristics that affect whether individuals would choose to participate in a program, rather than a program itself, are in fact responsible for observed differences in outcomes between children who participated in the program and those who did not. Examples of programs that have been evaluated include Moving to Opportunity and the Gautreaux Housing Project, as referenced in this paper.

Sometimes experimental studies are impossible, because randomly assigning children to receive services or not may mean denying services to needy children. In the absence of an experimental evaluation, it is best to try to gather as much information about children's housing circumstances, and their well-being, in addition to other relevant factors (such as social, economic, and demographic characteristics about them and their families) *before*, as well as after, children receive services. Changes over time in children's well-being can indicate (though not absolutely prove) that the program helped or harmed children.

Having information on a variety of housing factors is also important in order to tease-out the effects of each of these intertwined factors on child well-being. To the authors' knowledge, no single study to date has examined the effects of all the housing factors described in this paper on child well-being.

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## Summary and Conclusions

Multiple housing factors, such as quality of housing, residential mobility, and the surrounding neighborhood, all influence well-being. These aspects of housing affect all three major areas of child well-being: physical health, social and emotional well-being, and cognitive development are subject to improvement by programs.

Furthermore, any given housing feature more than likely influences more than one aspect of well-being, such as the pervasive and harmful impacts of lead-based paint exposure on children's physical, social, behavioral, and educational functioning. Housing can enhance or harm children's well-being directly (as with lead-based paint exposure), or indirectly by affecting their parents' well-being (as when high housing costs cause anxiety for parents). In fact, the effect of housing conditions can be compounded when children are both indirectly and directly affected. Effects can also be compounded when children experience risky (or, conversely, beneficial) housing conditions at a variety of levels (such as an unaffordable, dilapidated home in a dangerous neighborhood).

What about expensive or unaffordable housing? High housing costs do not directly affect children as do lead paint or crime-ridden neighborhoods with bad schools. Yet they can require families to make difficult housing decisions, as families must weigh tradeoffs among cost, housing quality, and location. Will a family rent an apartment or small house located near jobs? Will they cut back on their food and clothing budget and face a longer commute to work in order to purchase a home with a yard for kids to play in, in a good school district? Will they forgo home repairs rather than moving to cheaper housing elsewhere, in order to avoid uprooting their children? In most such cases, parents do manage to obtain housing, making

choices that protect their children from the difficult circumstances that might accompany their housing situation. For example, many parents will take on longer commute to work in order to avoid living in places they feel are unsafe for their children. If paying the mortgage or rent is a crunch, most parents will skip meals themselves rather than cut back on their children's diets. Yet the stress of making ends meet can affect their parenting, which can in turn negatively affect a child's development.

For many poor and low-income families, however, high housing costs may translate into difficult housing conditions that can directly affect and harm children. These are families who cannot choose which tradeoffs to make. The combination of housing costs and other necessary expenses with their limited incomes forces them into circumstances that are not safe for their children. To make matters worse, poor or low-income children are generally at greater risk than other children in areas such as health or cognitive development (for example, see Brooks-Gunn, Duncan, and Aber 1997a). These children, who are already some of the most vulnerable children in America, are also the most likely to suffer from housing-related problems.

First and foremost, policymakers, foundations, and others who care about children must ensure that all children have stable and safe homes and neighborhoods. This means focusing on the most economically-disadvantaged children whose parents—many of whom are employed—cannot protect them from risky housing circumstances, no matter what tradeoffs or sacrifices they make. But the well-being of children more broadly can be enhanced if parents are forced to make fewer “tradeoffs” when it comes to housing. Ensuring that

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innovative housing programs are rigorously evaluated when they are implemented can also make a big difference by enabling policymakers and funders to identify and replicate the most effective strategies.

The ways in which different features of housing are interwoven, as well as the variety of ways in which they work together to affect a variety of areas of child well-being, unfortunately means that there is no single “magic bullet” when it comes to a housing program that can improve a particular facet of child well-being. This is why public health experts are currently emphasizing the need to use broad approaches that address an array of physical and social environment problems, in contrast to the majority of past interventions, which have targeted single issues and one-time treatments (Saegert et al. 2003). The challenge can seem overwhelming to

policymakers and to private funders. Yet the fact that housing problems and other risky conditions tend to cluster together, resulting in an array of problems for children, means that smaller-scale programs *can* be implemented effectively by targeting them to the most disadvantaged families. Such work can be facilitated if advocates and practitioners who address children’s well-being from a variety of directions join forces to strengthen low-income families and communities (National Housing Coalition 2005). Furthermore, since the cost and availability of housing, together with families’ incomes, directly and broadly influence children’s housing and neighborhood characteristics, programs that address the larger problem of housing affordability should translate broadly into improved child well-being.

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Box 3:

**Innovative Programs**

**Permanent Supportive Housing for Families in San Francisco**

The purpose of permanent supportive housing for families is to provide a combination of housing and services that will enable formerly homeless parents with disabilities to live successfully with their children (Nolan, et al. 2005). A recent evaluation of single mothers in seven such programs found that the programs enabled most mothers to maintain their residential stability. The Cecil Williams House in San Francisco is an example of one such program. Sponsored by the GLIDE Memorial Foundation, Cecil Williams is a 52-unit building that includes 12 families with children. Families receive rent subsidies and pay no more than 30 percent of their income. Supportive services include food, medical, mental health, and substance use prevention services; community programs such as activities, clubs, and movies; money management training; adult education and employment training; and services for children including tutoring, summer internships, monthly game nights, teen discussion groups, and therapy. Partner nonprofits, including the Homeless Children's Network and Harm Reduction Therapy Center, provide many of the services.

While the evaluation was not experimental and occurred after the program was implemented, evidence suggests that the supportive housing programs are positive for children, especially considering the high risk for children to be removed from parents who have experienced homelessness. Across the seven programs, most children (78 percent) were currently living with their mother; among homeless children nationwide, 54 percent live with their mother. Additionally:

- According to their mothers, 96 percent of children attended school regularly, 81 percent did their homework regularly, and 77 percent cared about doing well in school.
- Seventy-six percent of mothers said their children's health was excellent or very good, although at least one child of half of the mothers was reported to have a health problem.
- Less than one-third of mothers (29 percent) reported having "family time" together with their children at least once a day and most also reported that their child made them angry on a daily basis (63 percent). Yet more than eight of ten reported that they encouraged their children daily (86 percent) and that they enjoyed parenting (81 percent).
- Three out of four (75 percent) reported reading with their children at least several times a week.

**Coupling Affordable Housing and Family Services in Seattle**

NewHolly is a neighborhood of new, affordable, craftsman-style homes available to families of mixed-incomes. Forty-two percent of the 1,390 units will be reserved for very-low-income families, while 38 percent will be sold or rented at market rate. A unique feature is a "neighborhood cluster" consisting of a coordinated group of independent service providers. Services include a learning center, a Seattle Public Library branch,

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classrooms for South Seattle Community College, Head Start, child care, youth, family, and teen programs, community building activities, and employment training programs. NewHolly is taking the place of Holly Park, which was originally built in the 1940s to house World War II veterans that, after being transformed into public housing, became extremely dilapidated. Public and private contributions, in addition to federal grants, have funded the development. Additionally, a “gathering hall” can be used for meetings or even weddings.

### **Improving Family Housing Conditions through Rehabilitation in Missouri and Florida**

In 2002, a nonprofit organization called the Preservation of Affordable Housing (POAH) purchased Hawthorne Place Apartments in Independence, Mo. Built in the early 1970s, Hawthorne Place had declined, experiencing frequent problems with gangs by the 1990s. In addition to persuading HUD to forgive old debt owed on Hawthorne Place, POAH spent about \$19,600 on new kitchens, energy-efficient windows, heating and air systems, flooring, electrical system upgrades, and insulation. New smoke detectors were also added. With a focus on the children of Hawthorne Place, POAH also added a new community center with a gym, Head Start classrooms, computer rooms, and a community policing office. Residents now see Hawthorne Place not as dangerous for children, but as a child-friendly and enriching place (John D. and Catherine T. MacArthur Foundation 2005).

Partnering with the Bank of America helped a non-profit called NHT/Enterprise Preservation Corporation renovate an apartment complex in Kissimmee, Fla. With its proximity to Disney World, Woodside Apartments housed many low-income and immigrant service workers who were in danger of losing their home when a private company nearly purchased Woodside. Instead, NHT/Enterprise bought the complex with a bridge loan from the Bank of America and permanent financing using 501(c)(3) bonds issued by the Osceola County Housing Finance Authority and purchased by Allstate Insurance Company. NHT/Enterprise renovated community rooms and a laundry facility, improved the landscaping, added a swimming pool and a playground, and provided services such as before- and after-school programs, all without raising rents (John D. and Catherine T. MacArthur Foundation 2005).

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