The Effect of Recession on Child Well-Being:

A Synthesis of the Evidence by PolicyLab, The Children's Hospital of Philadelphia

Katherine Sell, MSSP,
Sarah Zlotnik, MSW, MSPH,
Kathleen Noonan, JD, and
David Rubin, MD, MSCE

First Focus
MAKING CHILDREN & FAMILIES THE PRIORITY

The Children's Hospital of Philadelphia® RESEARCH INSTITUTE
PolicyLab

FOUNDATIONFORCHILDDEVELOPMENT

• • •

PolicyLab is a Center of Emphasis within the Research Institute at the Children's Hospital of Philadelphia. PolicyLab undertook this synthesis at the request of First Focus, a bipartisan advocacy organization dedicated to making children and families a priority in federal policy and budget decisions.

• •

THE AUTHORS

Katherine Sell *is a Research Associate with PolicyLab at the Children's Hospital of Philadelphia.*

Sarah Zlotnik *is Senior Strategist with PolicyLab at the Children's Hospital of Philadelphia.*

Kathleen Noonan *is former Co-Director and now Senior Advisor with PolicyLab at the Children's Hospital of Philadelphia, and Clinical Associate Professor, University of Wisconsin School of Law.*

David Rubin *is Director of PolicyLab at the Children's Hospital of Philadelphia, and Associate Professor, University of Pennsylvania School of Medicine.*

The authors thank Gail Nayowith, Executive Director of the Laurie M. Tisch Illumination Fund, as well as PolicyLab colleagues Susmita Pati, MD, MPH, Chris Feudtner, MD, PhD, MPH, and Cynthia Johnson Mollen, MD, MSCE, for their overall assistance.

• • •

This report was mad possible by the generous support and encoragement of the Foundation for Child Developent.

Executive Summary

Since 2007, the United States has suffered its most serious economic contraction since the Great Depression. While experts debate whether it is a "depression" or a "recession" - and indeed whether it is even over - it is clear that we are experiencing the worst economic downturn in several generations. At 13.3 million in 2007, the number of children living in poverty was already high,[1] but by 2009 the number rose dramatically to 15.5 million children (or one in five children in the United States).[2]

This paper synthesizes evidence of the effects of recession on child well-being. It examines four domains – health, food security, housing stability, and maltreatment – and reviews the relationship of each to the well-being of children during recessions. While the paper presents research and trend data over time, it has – at its core – a more practical aspiration: to steer policymakers to lessons learned from prior recessions, as well those that emerge from the recent economic downturn, to foster more informed policymaking related to child well-being.

In reviewing evidence from prior recessions, two primary patterns emerge with respect to effects on child well-being. First, it takes several years post-recession for employment to rebound and families to return to pre-recession income levels,[3-5] with low-income families generally taking longer to rebound than those with higher pre-recession incomes.[6] Second, public benefits and government-sponsored programs that support children and families play a pivotal role in blunting the negative impacts of a recession.

With regard to each domain of child well-being, our synthesis revealed the challenges that children have faced during times of recession. Key points included:

- With regard to health status, we found significant evidence establishing a link between poverty and poor child health status, as well as research indicating that even temporary spells of poverty may have lifelong health implications for children. These findings highlight the urgency around the rising number of children now living in poverty. Although record-high enrollment in public health insurance programs has helped to buffer the negative impact of lost employer-based insurance for families, barriers to obtaining or maintaining public insurance remain as states struggle with budget deficits. Further, access to health insurance is not synonymous with receipt of health care, and it is not known whether increases in enrollment have expanded health care visits or improved health outcomes.

- With regard to food security, there has been a dramatic increase in the number of households classified as "food insecure." In 2008, 21 percent of all households with children fell into this category, the highest percentage since 1995 when United States Department of Agriculture yearly measurement started, and a nearly 25 percent increase from 2007. While enrollment in federal food and nutrition assistance programs is up since the start of the recent recession (e.g., Supplement Nutrition Assistance Program participation increased by 17.5 percent between July 2009 and July 2010),[7] it is not known whether increased enrollment is providing families with access to sufficient nutritious food for children. Particularly given increasing public health concerns about childhood obesity, the implications of limited affordability on access to healthier foods merits further inquiry.

- With regard to housing, the recent recession will be remembered for the unprecedented rates of foreclosures building upon a pre-recession trend towards housing unaffordability (for both renters and buyers). Approximately 43 percent of families with children now report that they are struggling to afford stable housing.[8] In 2008, nearly two out of every five renters spent 35 percent or more of their income on housing.[9] Homeowners have also faced serious housing affordability issues, as evidenced by declining property values and the dramatic surge in foreclosures, particularly among families with subprime mortgages. Federal efforts aimed at stemming the number of foreclosures, and emergency homelessness prevention aid included in the American Recovery and Reinvestment Act of 2009 (ARRA)[10] provide families with limited assistance. However, many supports are temporary and ARRA funds are slated to expire within the year.

- With regard to child maltreatment (i.e., abuse and neglect), recent national child welfare data suggests that maltreatment rates continue to fall despite the recession. However, these data are current only as of 2008, and the trends they show may be confounded by several factors, including the downsizing of some child welfare systems due to state fiscal constraints. Worrisome are noticeable spikes in neglect following both the 1990-1991 and 2001 recessions, which are consistent with findings that neglect continues to rise even as the economy begins to recover. Also concerning are recent reports of increasing cases of serious physical abuse being detected at children's hospitals around the country.

Overall, our review detected important limitations in what we can know from the data available currently, and highlighted critical challenges ahead as our nation determines how to respond to the difficulties of the recession. Perhaps the most important lesson from the recent recession is that federal – and to some degree state and city – governments will need to provide better oversight of how access to safety net programs is facilitated in order to minimize negative long-term effects of economic downturn on the well-being of children and families. This will require these stakeholders to better appraise the variations across systems in how programs are accessed, how systems work collaboratively to leverage resources, and whether the programs in place provide the continuity in services required to assist families through difficult times.

Introduction

In December 2007, the United States entered an economic recession. A recession, according to the National Bureau of Economic Research, is "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real gross domestic product (GDP), real income, employment, industrial production, and wholesale-retail sales."[11] This most recent recession has been characterized by high unemployment and unprecedented rates of housing foreclosures, as well as overall housing instability. Between 2007 and 2009, approximately 2.2 million children entered the ranks of the poor, representing a sizeable increase in the number of children vulnerable to a host of negative, social, health, and developmental outcomes.[1] While at the most basic level, recessions increase poverty and the poor are worse-off than the non-poor, the specific features of and context within which a given recession occurs play a major role in determining who will be most affected, and how.

The backdrop to any analysis of the effect of recession on child well-being is what is already known about the association between poverty and child well-being. While the precise mechanisms by which poverty leads to adverse outcomes for children are multidimensional, existing research reveals a strong and enduring relationship between children's access to certain goods and services and their current and future welfare. A safe living environment, an adequate food supply, and access to health care services are necessary for children to survive and thrive.

Evidence from prior recessions reveals two patterns with respect to child well-being. First, studies have shown that it takes several years post-recession for employment to rebound and families to return to pre-recession income levels.[3, 4] Low-income families have historically taken longer to rebound than families with higher pre-recession incomes.[6] Family economic well-being, as measured by household income, declines during periods of recession – largely due to increased unemployment.[12] Further, there is a lag between the end of a recession and the time it takes for families to recover. As late as 2007, even prior to the onset of the recent recession, the median income for non-elderly middle and lower income households had not yet rebounded from the 2001 recession.[13] Given this trend, it is not surprising that the National Bureau of Economic Research's determination that the most recent recession ended in June 2009 does not yet appear to have translated to concrete improvements in the lives of children affected by the economic crisis. Even when a family does return to its pre-recession income level, the effects of the hardships experienced by children are not always easily erased. The direct and indirect consequences of recessions influence children's future economic opportunities, health, and general welfare.[12, 14]

The second key pattern is that public programs play a pivotal role in blunting the negative impacts of a recession. According to some health economists, one of the most important issues to consider in understanding the effect of a recession on children is how the nation spent money prior to the recession.[15, 16] Thus, the central question is whether wealth created during periods of economic growth is invested in strengthening the social safety net for vulnerable children and families, or distributed in another way. Particularly in the areas of health and social services, children's vulnerability to fluctuations in economic cycles depends on the strength of social safety net programs in place prior to a recession, as well as how such programs are maintained during the downturn.

This paper examines economic recessions with a specific focus on child well-being and the recent recession. The

paper is organized into two parts: Part I describes how children fare across key dimensions of well-being during past and the recent recession, including health, food security, housing stability, and maltreatment; and Part II discuses the findings and identifies next steps and strategies to improve health outcomes for children.

It is our hope that the research synthesized in this paper can help policymakers identify lessons learned from prior recessions – as well as the recent one to the extent data is available – to support more informed decision-making and resource allocation in the difficult times ahead.

Methods

A review and synthesis of existing research serves as the basis of this paper. We began by conducting a thorough search of online databases, including PubMed, Medline, psycINFO, and Sociological Abstracts to identify articles pertaining to the effects of economic conditions, particularly recessions, on child health and well-being. We also searched EBSCO Megafile, JSTOR, and Proquest PolicyFile to uncover relevant material not included in the journals from which discipline-specific databases tend to draw. We kept our search intentionally broad, using key words such as: infant, child, adolescent, economy, recession, socioeconomic, poverty, health, and well-being. Although we did not set temporal or geographic parameters, our focus was on research conducted during the past three decades on children in the United States.

Our initial search identified a core group of articles related to children and poverty, and to a lesser extent, children's welfare during periods of economic recession. However, it also revealed an apparent gap in existing literature; we found few peer-reviewed publications focused on the relationship between economic recessions and child outcomes in the United States. This finding held true throughout subsequent stages of our literature search, in which we sought information on specific indicators of child well-being. After searching the databases for child-specific studies, we widened our parameters to capture research pertaining to the impact of recessions on adult well-being indicators. The information yielded from this search served as useful background, and often directed us to other relevant material via reference sections.

In addition to our search of academic research, we visited federal government websites to look for relevant publications and program and policy announcements. The federal websites from which we gathered significant information included the United States Department of Health and Human Services, the Department of Agriculture, and the Department of Housing and Urban Development. We also conducted a thorough search for publications from think tanks such as the Brookings Institution and the Urban Institute, and visited the websites of multiple child advocacy groups. Material obtained from these sources was then used to identify additional resources by locating the citations listed in the publications.

Finally, while our purpose was to review and synthesize secondary literature, we also examined multiple primary data related to several national indicators of child well-being. Specifically, we extracted data from the National Vital Statistics Registry, the Center for Disease Control's Web-based Injury Statistics and Query Reporting System (WISQARS) and from data sources housed in the National Center for Health Statistics. Data derived from these sources provided us with a general sense of the magnitude and scope of some of the child outcomes associated with poverty and socioeconomic inequality in general, and recession in particular.

PART I:
Recession & Key Dimensions of Child Well-Being

In this section, evidence related to the effect of recession on child well-being – health, food security, housing stability, and maltreatment – is synthesized based on historical research and current data (to the extent it is available). Together, these four domains comprise a comprehensive picture of overall child well-being. For each domain, we examine the factors that have affected child well-being in prior recessions, and present evidence about how children are faring in the context of the recent recession.

The Recession and Child Health

Overview

While the precise mechanisms by which poverty is associated with adverse health outcomes are complex, research consistently finds that individuals in poverty are more likely to suffer from poor health than their wealthier counterparts.[17, 18] This finding holds true for people of all ages; however, the strongest associations between poverty and health status occur among children.[19-21] In addition to the direct effects of material deprivation, such as developmental delays due to inadequate nutrition, children born into poverty are more likely than non-poor children to be exposed to a variety of hazards, including abuse and neglect, substandard housing, parental psychological distress, and inadequate child care arrangements.[19, 20, 22, 23] Exposure to these types of stressors early in life has been shown to affect children's intellectual, physiological, and emotional development. These stressors also leave children vulnerable to lifelong behavioral health and developmental challenges.[21, 22, 24, 25] The adverse health outcomes associated with stressful childhood experiences do not dissipate with age; poor health in childhood is highly predictive of poor health in adulthood.[17, 23]

The link between child poverty and poor health is well established; however, the relationship between recession and child health is considerably more complicated. A number of factors, including a family's pre-recession circumstances, individual responses to the onset of financial hardship, and government reactions to economic downturns, have been shown to impact the health and well-being of individuals of all ages during recessions.[15] Along similar lines, there is a relationship between the sector(s) of the economy affected by a recession and the specific health and well-being outcomes impacted. For instance, a recession characterized by high housing foreclosure rates may result in greater numbers of children exposed to health risks associated with inadequate housing.

Prior Recessions

The timing and duration of poverty are factors in determining how children's health is impacted by recession.[26] While persistent poverty has generally been shown to be more harmful than transitory poverty, even temporary poverty may put children at a disadvantage relative to their never-poor counterparts.[3, 21, 27] This disparity is particularly apparent when it comes to health outcomes. A recent analysis of the

First Focus
Making Children & Families the Priority
The Children's Hospital of Philadelphia Research Institute
PolicyLab
Foundation for Child Development

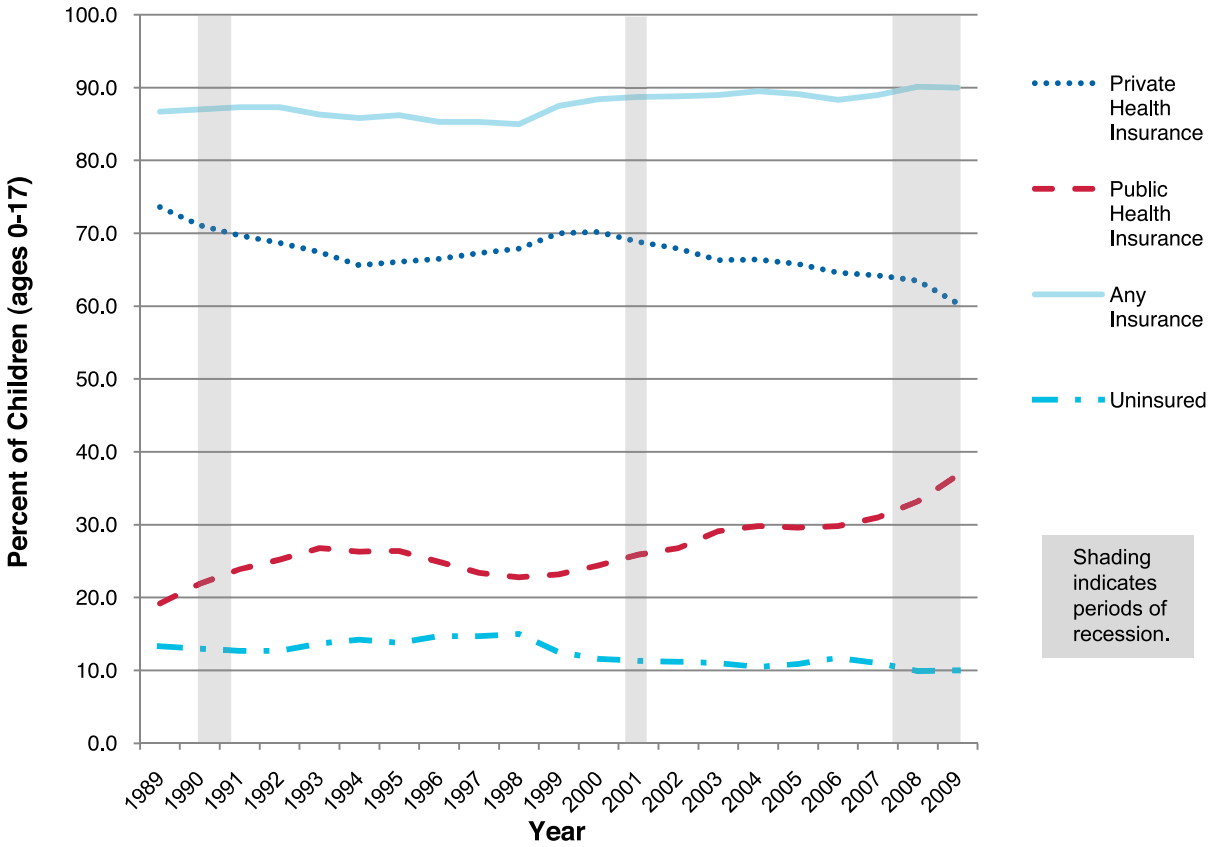
Panel Study of Income Dynamics, which followed children between the ages of 5 and 14 during two separate recessions (1973-1975 and 1980-1982), found that while young and middle-age adults who experienced chronic childhood poverty had lower median incomes and higher poverty rates than those who had fallen into poverty during a recession, there was little difference between the two groups in terms of self-reported health status over a ten-year period. The study found that children who were in poverty prior to a recession and children who fell into poverty during a recession had significantly poorer health outcomes than children who never experienced poverty. This finding was consistent across multiple cohorts during both recessions included in the analysis.[28]

Trends in Children's Health Insurance

Greater income inequality and socioeconomic disparity are associated with wider health disparities and poorer overall population health.[15, 29, 30] The degree to which economic fluctuations affect health is in part associated with how a nation distributes its resources during periods of economic growth, as well as the magnitude of economic inequality within a society.[15, 29] Pre-recession investments in social safety net programs have the potential to lessen the health consequences of economic fluctuations.[31] As framed by one economist, "poorer people will always do worse in any given economic situation, whether it be boom or bust and whether they are employed or not. But…in nations with greater social safety nets, the health impacts of economic cycles are less pronounced."[15]

FIGURE 1:

Children's Health Insurance Coverage Rates, 1989-2009



Source: Based on data from the U.S. Census Bureau's annual publication, *Income, poverty, and health insurance coverage in the United States*, and U.S. Census Bureau Historical Health Insurance Table HI-3 (Health Insurance Coverage Status and Type of Coverage—Children Under 18 by Age: 1987 to 2005).

While the United States may not have as extensive of a social safety net as other developed nations,[16] public health insurance plays a critical role in blunting the effects of economic downturns. Evidence from prior recessions has found that unemployment and the resulting loss of private health insurance lead to a substantial increase in the number of adults and children covered by public health insurance. On average, over the past 14 years, each percentage point rise in national unemployment was associated with an approximately one million person increase in Medicaid and Children's Health Insurance Program (CHIP) enrollment; children comprised 60 percent of that increase. The increase in public health insurance enrollment among adults has not been sufficient to offset the loss of private insurance. A one percent increase in unemployment was also associated with an estimated 1.1 million person rise in the number of uninsured adults.[32]

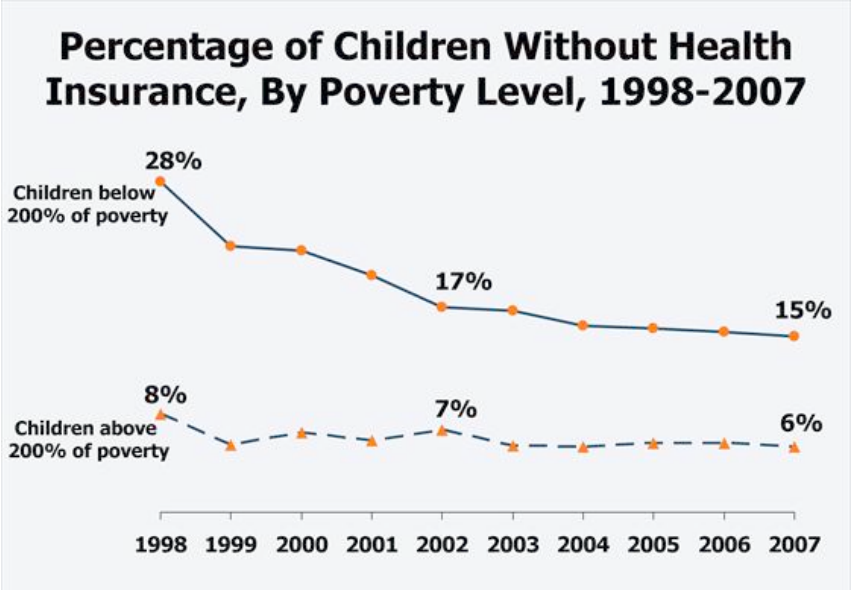
Conversely, for children, a one percent rise in unemployment was not associated with any statistically significant change in overall health coverage rates (although as with adults, public health coverage increased and private coverage declined).[33] In fact, census data reveals that the number of children with any type of insurance increased during the past three recessions as a result of expansions in the number of children covered by government health insurance [See Figure 1].[1, 34] While increases in children's public health insurance enrollment during recessions appear to offset declines in private coverage, there is limited information about whether and to what degree this translated into improved health care access or improved health outcomes.

Child Mortality

When looking at children's health during recessions, it is also necessary to examine child mortality. Given what we know about the association between poor health and poverty, the relationship between economic expansions and mortality is somewhat counterintuitive. Beginning with the Great Depression, recessions have been associated with decreases in child and adult mortality.[35-37] These decreases have been largely attributable to drops in unintentional injury deaths such as traffic accidents (especially among older adolescents and young adults), particularly in more recent recessions.[36, 37] A discussion of the dynamics that inform mortality trends is beyond the scope of this paper; however, this counterintuitive finding has been broadly linked to conditions that tend to accompany unemployment, such as declines in traffic congestion, industrial activity, and hours worked. While this trend should not be interpreted to mean that recessions are beneficial, population-level information can inform how we think about the factors that promote and detract from health, and ultimately impact mortality.

Most of the research on mortality and recession has focused on adults and on high-level population effects. This focus on population-level trends and the relatively scant attention given to child mortality during recessions hinder our ability to draw conclusions about the relationship between child mortality and the economy. Yet, national mortality figures and the limited studies that have examined children suggest that the pattern seen among adults holds largely true for children as well. One study found that children conceived during periods of high unemployment were less likely to have low or very low birth weight, had a lower incidence of congenital malformations, and a lower rate of postneonatal mortality.[38, 39] This is not to say that recessions are somehow "good for children." Rather, mortality trends are an example of how population-level findings may obscure the lived experience of individuals and specific communities.

FIGURE 2:



Source: "Percentage of Children without Health Insurance, By Poverty Level, 1998-2007", Kaiser Slides, The Henry J. Kaiser Family Foundation, October 2009. This information was reprinted with permission from the Henry J. Kaiser Family Foundation.

Recent Recession

Trends in Children's Health Insurance Coverage

The impact of the economic recession that began in December 2007 on children's health has been most salient with regard to children's health insurance coverage. Trends in enrollment in Medicaid and CHIP prior to and during the recent recession show how expanding access to health-promoting resources to broader segments of the population can cushion the blow of an economic downturn.[34] Between July 2006 and January 2008, almost two-thirds of all states expanded access to Medicaid and CHIP through measures such as eligibility increases, enrollment procedure simplification, and reduced children's premiums.[40] If this had not occurred, more children would likely have entered the recession without health insurance.[34] These investments in Medicaid and CHIP appear to have made children's health insurance less vulnerable to macroeconomic conditions.

Patterns in health insurance coverage observed in the recent recession mirror those of prior recessions. Enrollment in public health insurance programs has increased as enrollment in private health plans has declined. As in previous recessions, the increase in public health insurance enrollment among adults has not been sufficient to offset the loss of private insurance. Despite a 5.8 million person increase in public health insurance enrollment, 4.4 million people under the age of 65 became uninsured between 2008 and 2009. This decline was driven by a sharp drop in employer-based coverage; the percentage of people with employer-sponsored health benefits was 55.8 percent in 2009 – the lowest rate since 1987.[2]

While health insurance coverage among adults has declined dramatically during the recent recession, the number of children with health insurance increased by approximately 800,000 between 2007 and 2008 and remained essentially unchanged in 2009.[1,2] The enactment of CHIP in 1997 and increases in Medicaid support to states, which enabled many states to expand

eligibility criteria, have significantly bolstered the health insurance safety net for lower-income children relative to earlier recessionary periods [See Figure 2].[41] In 2009, the passage of the CHIP Reauthorization Act and the American Recovery and Reinvestment Act (ARRA), the latter of which dedicated $87 billion additional Medicaid dollars to states, further served to protect children's health insurance during the recent recession.[42]

Access to Care and Health Outcomes

Investing in children's health insurance programs during the period of economic growth preceding the recent recession appears to have made such programs less vulnerable to macroeconomic volatility. At the same time, vulnerabilities still exist. Although approximately 90 percent of all children are insured, the ten percent who are not represent 7.3 million children – 65 percent of whom are eligible for but not enrolled in public health insurance programs.[43] For these and other children, it is uncertain to what degree increased pressure on state budgets has led to new barriers to enrolling or maintaining enrollment in health insurance programs (e.g., through caps on enrollment, or more lengthy or frequent re-enrollment processes).

Gaps in health insurance coverage hinder the basic health needs of children being met. For example, one study found that children who spend between one and four months in a given year without health insurance are less likely than children with continuous coverage to have a usual source of health care, and more likely to delay getting needed care. The study also found that children who remain uninsured for 5 to 11 months are less likely to receive preventative health care than children with continuous health insurance (public or private).[44] As the length of time uninsured increases, so do the potential adverse health consequences.[44, 45]

Critical in understanding the impact of increases in health insurance coverage is the extent to which expanded coverage will lead to improved health care access and better children's health outcomes. This question is of particular resonance in areas where there is limited access to health providers who accept public insurance. Access to health insurance is not synonymous with access to health care, and does not automatically translate to the receipt of quality health care services. Although children with health insurance receive more consistent care and have better health outcomes than children who lack coverage, health insurance is only one of many determinants of children's health outcomes.[46] Thus, while the increase in the number of insured children despite the recent recession is undoubtedly positive, it is uncertain how much this trend will help counteract the general adverse health outcomes associated with childhood poverty. Further, experts have expressed concern about the sustainability of the health insurance safety net for children.[32] The substantial rise in the number of children enrolling in public health insurance programs has increased the strain on states already struggling with budget deficits.[43, 47]

Expanded Federal Support

Federal legislation has sought to alleviate the burden of rising public health insurance costs on states. On August 10, 2010, Congress voted to extend the enhanced Federal Medicaid Assistance Program (FMAP) funding provided through ARRA until June 2011.[48] As a condition of accepting ARRA money, states were required to maintain certain Medicaid eligibility standards.[10] Additionally, the Patient Protection and Affordable Care Act extends CHIP funding through 2015;[42] requires states to design coordinated systems to facilitate enrollment in Medicaid and CHIP;[49] and offers grant money to states to improve outreach to eligible but uninsured children.[49,50]

Despite this, widespread declines in state revenues associated with the recent recession,[51, 52] combined with the increasing burden being placed on safety net programs, has forced many states to seek alternative means of reducing costs – including cuts to Medicaid, CHIP, and other public health programs. At least 39 states have already reduced or frozen Medicaid reimbursements to some types of providers.[54,158] Additionally, some states have cut Medicaid staff or are considering premium increases for public health insurance programs.[53,54]

While the full effect of state fiscal crises on public health insurance for children remains to be seen, recent actions and proposals by some states suggest that programs serving children are not exempt from cuts. In fact, because CHIP is not required under ARRA to maintain eligibility levels, as is the case with Medicaid, it is possible that CHIP will become a target as states seek to cope with budget deficits.[54] The fact that such measures – which would effectively limit children's access to health care – are being considered is evidence of the seriousness of state budget crises. Although all 50 states have requested a share of the $16 billion in enhanced FMAP funds available until June 2011,[55] it is uncertain whether the funding will be sufficient to keep up with the increased need in states hit hard by the recent recession.

Limitations in Health Outcome Data

Unfortunately, much of the data necessary to assess the impact of the recent recession on child health is not yet available. In particular, measures of demand for and utilization of health care services – data that are critical to measuring trends in health care needs, access, and outcomes often lag months or years behind. Without this type of information, it is difficult to draw conclusions about the recession's effects on health. However, analyses of prior recessions and the limited information that is available for the recent recession can help inform our understanding of and responses to the needs of children. As additional information becomes available, researchers and policymakers should be prepared to translate data into meaningful assessments of the health and well-being of children.

Key Points:

The Recession and Child Health

- A strong link between poverty and poorer child health status provides a context of urgency as the number of children living in poverty has grown dramatically since the start of the recent recession.
- Pre-recession investments in public health insurance programs appear to have blunted the potential negative impacts of the recent economic downturn on children's health insurance coverage.
- While the number of children covered by health insurance increased by 800,000 during the first year of the recession and held steady at approximately 90 percent of all children in 2009, it is too soon to determine how this trend has affected children's access to health care services and children's health outcomes.

The Recession and Food Security

Overview

The United States Department of Agriculture (USDA) defines household food security as access by all household members at all times to enough food for an active, healthy life. At minimum, food security entails the ability to obtain nutritionally adequate and safe food in socially acceptable ways (as opposed to stealing food, for instance).[56] Conversely, food insecurity occurs when a household or any of its members have limited or uncertain access to enough nutritionally adequate and safe food to meet essential dietary needs.[56] Notably, in recognition of the importance that quality nutrition plays in overall well-being, these definitions hinge on consistent access to healthy foods rather than on hunger.[57]

Controlling for income, employment, and other confounding variables, food insecurity is strongly related to adverse outcomes for children of all ages. Poor nutrition resulting from food insecurity has been linked with behavioral problems in preschoolers;[58, 59] lower educational performance among kindergarteners;[60] generally poorer cognitive and psychosocial development among children of various ages;[61, 62] and adverse health outcomes such as more frequent hospitalizations, particularly among young children.[63, 64] Studies have also found strong associations between maternal nutrition and infant and child health,[65] suggesting that food insecurity can begin to affect children even prenatally.

While sustained or frequent periods of food insecurity increase the likelihood that a child may experience lasting impact, research shows that even temporary household food insecurity can have a long-term impact on children.[60, 66, 67] Given the rapid pace of brain development during childhood, even brief periods of food insecurity – such as those resulting from the sudden job loss of a family member or other conditions associated with economic recessions – may have lifelong implications. For children who experience food insecurity at both the individual and household level, the potential adverse effects are intensified.[64]

One facet of food insecurity that demands greater attention is its potential contribution to childhood obesity. Food insecurity is heavily concentrated among low-income families[68] who may experience economic barriers to obtaining healthy, nutrient-dense foods due to the comparatively high cost of these items.[69] It is

thus plausible that increasing rates of food insecurity and advancing rates of obesity are not entirely distinct phenomena.

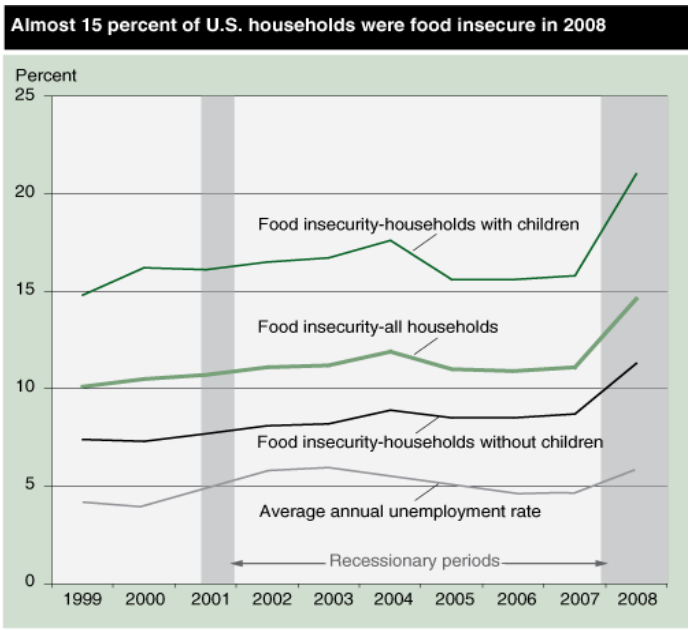
Prior Recessions

In 1995, the USDA began monitoring food security using a *Household Food Security Scale* developed in conjunction with the United States Department of Health and Human Services (HHS). The measure assesses the relationship between households' economic conditions, hunger, and food access as part of the United States Census Bureau's annual *Current Population Survey* (CPS), and includes questions about both adult and child nutrition.[57] Food security status is determined by the number of food-related problems experienced during a twelve-month period. Examples of hardships include: difficulty obtaining enough food; anxiety about whether or not there will be enough money for food; reductions in food intake; and reductions in the quality of diet.

In 2000, a specific *Child Food Security Scale* was added to the survey. This additional measure was created to reflect the fact that while child food security is related to household food security, the nature of that relationship may vary depending upon a number of factors, most notably age.[70] For one, school-age children living in food insecure households may have access to school-based food and nutrition programs that adults and younger children do not.[71] Second, particularly when it comes to younger children, parents may sacrifice their own nutritional needs to ensure that their children's are met. Thus, living in a food insecure household does not necessarily mean that a child does not receive sufficient food.[70, 72] The inclusion of the *Child Food Security Scale* allows the USDA to obtain a more nuanced understanding of the effect of food insecurity on children.

Given the relative newness of the *Household* and *Child Food Security Scales*, it is difficult to draw comparisons between the recent economic recession and earlier

FIGURE 3:



Source: Andrews M, Nord M. U.S. Department of Agriculture, Economic Research Service, *Food insecurity up in recessionary times*, 2009.

economic crises with respect to the issue of food security. In fact, the 2001 recession is the only recession for which comparison data are available.

As might be expected, the level of food insecurity among all households and households with children trends similar to unemployment levels. From 1995 to 1999, as the national economy expanded, the percentage of food insecure households with children decreased from 17.4 percent to a low of 14.8. However, with the onset of the 2001 recession, the percentage of food insecure households with children rose to 16.1 percent [See Figure 3].[72, 73]

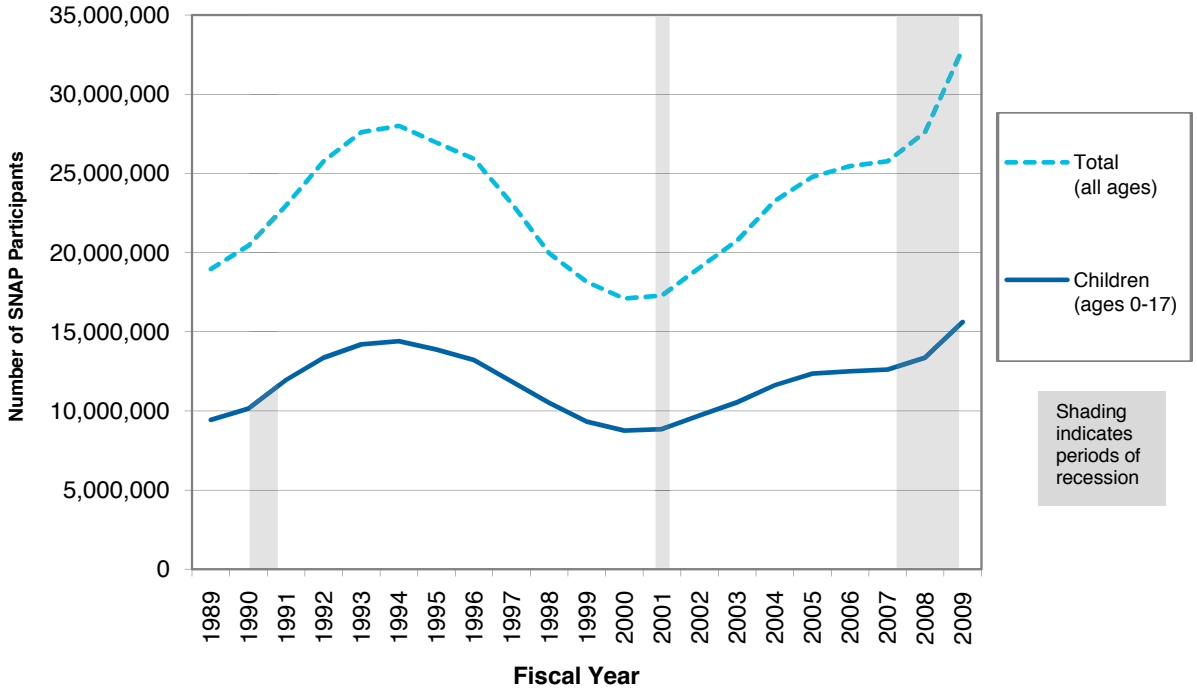
What is perhaps less intuitive is that the number of food insecure households continued to increase even as the economy recovered. Food insecurity among households with children rose sharply in the years immediately after the recession, peaking at 17.6 percent in 2004.[74] This lag between the end of the recession and improvements in food security is generally thought to reflect the slow pace of the recovery with respect to unemployment.[73, 75] While employment does not guarantee food security, unemployment is a known contributor to food insecurity. As is reflected in Figure 3, the unemployment rate did not improve until well after the end of the 2001 recession.

Trends in the Supplemental Nutrition Assistance Program (SNAP)

In addition to fluctuating unemployment rates, food insecurity levels are also influenced by changes in food and nutrition assistance programs available to families.[76] Participation in programs such as the Supplemental Nutrition Assistance Program (SNAP) can improve nutritional outcomes among children,[77] and these programs often function as a lifeline for

FIGURE 4:

Supplemental Nutrition Assistance Program (SNAP) Participation, 1989-2009



Source: Based on data from *Characteristics of Supplemental Nutrition Assistance Program households: Fiscal Year 2009*. U.S. Department of Agriculture, 2010.

low-income families dealing with food insecurity.[75, 78] SNAP, which until October 2008 was known as the Food Stamp Program, is intended to "permit low-income households to obtain a more nutritious diet" by providing an EBT card (similar to a debit card) that can be used to purchase food.[76] Although growth in SNAP participation rates may result from increased enrollment among eligible households as a result of outreach efforts and state administrative policies, large shifts in participation often reflect households that are newly eligible by virtue of reduced income and assets. In this respect, SNAP serves as a useful barometer of economic need, particularly for children, who make up approximately 50 percent of all recipients.[79]

During the 2001 recession, growth in food stamp participation occurred both because more people became eligible for SNAP and because more eligible individuals enrolled in the program. [4,76,78] In 2000, the participation rate among eligible households was approximately 50 percent. Over the next several years, the number of eligible households increased from 14 million to 18 million while the economy recovered.[74] During that same period, states and the federal government made active efforts to encourage participation, and by 2005, the number of eligible households participating in SNAP had increased to over 60 percent. Notably, the pattern of children's enrollment in SNAP has historically mirrored the household participation trends. Figure 4 shows the percentage of child SNAP recipients increasing substantially between 2001 and 2004 before beginning to stabilize somewhat between Fiscal Years 2005 and 2007.[80]

The trend in SNAP caseload growth after the 2001 recession is also evident in prior recessions dating back to the early 1990s. In each instance, enrollment increased during and in the aftermath of recession. Although the particular features of each recession as well as policy and program changes over time undoubtedly impacted participation,[81] the general pattern of recession-associated increases in the number of eligible and enrolled individuals has remained consistent.

Recent Recession

While it is not yet possible to assess post-recession trends in food security for the recession that began in December 2007, the basic patterns appear similar to previous economic downturns. As economic indicators such as unemployment levels have worsened, food security has declined and enrollment in SNAP and other USDA food and nutrition assistance programs has increased. However, there is a critical difference between earlier recessions and the recent economic crisis: magnitude. The number of children living in food insecure households went from 16 percent in 2007 to 21 percent in 2008, making it the most dramatic single-year spike in food insecurity since the USDA began measuring it in 1995.[73]

The Supplemental Nutrition Assistance Program (SNAP)

A similarly unprecedented year-to-year increase can be seen in SNAP enrollment. The number of people receiving SNAP benefits grew by 24 percent – approximately 7 million people – between August 2008 and August 2009.[79] Given that roughly half of all SNAP recipients are children, this means that in August 2009, approximately 3.4 million more children were receiving nutritional assistance than only one year earlier.[79, 80] Further, the data suggest that this particular spike in enrollment is primarily driven by increases in the number of low-income eligible households, rather than increases in the number of eligible households participating.[75, 76, 79] Such analyses are underscored by data showing that the states and regions hardest hit by the recession in terms of unemployment and increases

in child poverty rates are, for the most part, the states in which SNAP enrollment has increased the most.[79] In 19 states, 25 percent or more of all children were enrolled in SNAP at some point during 2009.[82] In June 2009, there were over 100 counties across the United States in which between 50 and 74 percent of all children received SNAP benefits.[83]

The National School Lunch Program (NSLP)

While SNAP provides the vast majority of nutritional assistance in the United States, school-based nutritional programs play a critical role in the food security of school-aged children. Participation in the USDA National School Lunch Program (NSLP), which like SNAP is an entitlement program that expands in response to need, has also increased during the recent recession. Enrollment in free lunch programs rose by 6.3 percent to 16.5 million children – an all time high – between February 2008 and February 2009.[84] Recent changes in USDA policy are likely to further increase enrollment in NSLP. As of the start of the 2009-2010 school year, if anyone in a household receives benefits through SNAP, Temporary Assistance for Needy Families (TANF), or the Food Distribution Program on Indian Reservations (FDPIR), all children in that household will be categorically eligible for free school lunches.[80, 85]

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

For children who are not yet of school age, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutritional education and support to low-income pregnant and postpartum women and their children.[86] Because WIC is not an entitlement program, participation does not necessarily expand and contract with demand as SNAP and NSLP do; however, enrollment figures suggest that the program provided increasing nutritional assistance to low-income women and children during and in the aftermath of the recent recession. Between Fiscal Year 2008 and Fiscal Year 2009, average annual participation in WIC rose from 8.7 to 9.1 million, and estimates for Fiscal Year 2010 to-date put the number at 9.3 million.[87]

Expanded Federal Support

Food and nutrition assistance programs appear to have been relatively responsive to dramatically expanding needs.[75, 78] The American Recovery and Reinvestment Act of 2009 (ARRA) enhanced benefits for SNAP recipients; as of April 2009, SNAP households saw a 13.6 percent increase in their monthly benefits.[88] For a family of four, this translated into an $80 per month maximum increase in their SNAP allotment.[89] ARRA also included approximately $300 million over two years to help states cope with the administrative demands associated with rising caseloads.[10] However, recent reports suggest that even with the additional administrative funds, some states have had to cut back on staff, a potential hindrance to the program's effectiveness.[4]

What these numbers do not necessarily tell us is whether and to what degree the expansion of crucial food and nutrition programs such as SNAP translates into improved well-being for children. Although there is evidence that higher household food expenditures are associated with higher quality diets in general,[69, 90] the full effects of enhanced benefits on child nutrition are not yet known. In the past, food stamp programs have been shown to reduce, but not alleviate, the adverse health outcomes associated with food insecurity, but again, research specific to children is limited.[77, 91] USDA programs aimed at providing families with better access to nutritional foods – for instance by licensing local farmers' markets to accept SNAP benefits[92] – are promising, but there is not yet sufficient research to determine how this has affected child health. In general and particularly as it relates to obesity, it is important to

know whether or not increased expenditures on and participation in food and nutrition assistance programs, such as SNAP and the school lunch program, translate into better nutritional and overall health outcomes for children.

Key Points:

The Recession & Children's Food Security

- In 2008, one year into the recent recession, 21 percent of all households with children were estimated to be food insecure, the highest percentage since 1995.
- While participation in the Supplemental Nutrition Assistance Program (SNAP) and National School Lunch Program (NSLP) is up since the start of the recent recession, whether these programs have sufficiently met the increased needs of families remains unknown.
- Limited affordability of and access to nutritious foods as a result of food insecurity has important implications with respect to children's health, particularly as it relates to the growing childhood obesity epidemic, and demands increased focus.

The Recession and Housing Stability

Overview

Safe and stable housing is critical to the healthy growth and development of children. There is an abundance of research associating inadequate or insecure housing with negative outcomes across multiple domains of child well-being. Housing instability can manifest itself both directly and indirectly in children's lives. Inadequate housing may be characterized by substandard or unsafe living conditions including homelessness. Children may also be indirectly affected by housing instability, as their parent's struggle to keep their family in their home can increase household stress.

Low-income families are more likely than families with higher incomes to have difficulty obtaining and retaining adequate housing,[93] and are more likely to move frequently.[94] For children in these families, frequent moves may mean frequent changes in school, which have been linked with poorer academic performance and lower educational attainment.[95] Children who experience numerous moves are less likely to graduate from high school than children who move less frequently.[96, 97] Housing instability may also correlate with adverse health outcomes including higher asthma rates and more pervasive developmental delays, as well as with behavioral problems in children and adolescents.[22, 98-100]

Homelessness is perhaps the clearest marker of housing instability. Each year, as many as 1.5 million children experience homelessness at some point.[101] The characteristics of and hardships faced by such children differ very little from those of poor children in general.[98, 102, 103] Children need safe and stable housing in order to thrive,[93] and while children who become homeless may face some unique challenges, the evidence suggests that housing instability is detrimental even if it does not lead to actual homelessness.

Prior Recessions

The scope and severity of the housing market collapse during the recent recession has drawn national attention to the plight of families and children who have become or are struggling to avoid homelessness. Yet while the current housing slump may be the worst in 50 years, high levels of residential instability pre-dated the recession that began in December of 2007.

In fact, each of the past six recessions was preceded by a housing downturn.[104]

Unfortunately, the consistency of this pattern does not translate into the ability to draw strong comparisons between recessions. Although data from the early 1990s and early 2000s do show that many states experienced an increase in the number of sheltered homeless individuals coinciding with periods of recession, there is not a large body of evidence on the dynamics of child and family housing instability, broadly defined, during prior recessions.[105] Further complicating efforts to draw parallels between recessions with respect to child well-being is the different social, economic, and political context in which prior recessions occurred. For example, while foreclosure rates increased in previous recessions, the types of mortgages people had were more traditional, and in some periods, regulations on lenders were stricter. As a result, there was far less volatility than is seen with the subprime mortgages that bear so much responsibility for the recent spike in foreclosures.[104, 106]

Finally, because accounts from prior recessions tend to rely on shelter utilization data, it is difficult to get a broad sense of outcomes for children experiencing various forms of housing instability. Research dating back several decades documents the adverse educational, cognitive, and social outcomes associated with children living in overcrowded environments.[107, 108] However, there is little available information on the magnitude of the problem or the long-term impacts of living in temporary accommodations, living doubled up with other families, or experiencing foreclosure, especially as many families who lose their homes tend to disappear from the radar screen.[104, 109]

This is not to say that earlier recessions cannot help us understand the effects of the recent recession on housing stability for families. Research on previous recessions demonstrated that family homelessness was more sensitive to economic cycles than individual homelessness,[110] and that government responses to housing crises faced by low-income families can alleviate some of the hardship and put families on a path to housing stability.[101, 102, 111, 112] These data substantiate the need for federal, state, and local governments to identify how they best can meet the needs of residentially unstable children.

Recent Recession

For the past several decades, home ownership has been seen as an indicator and creator of wealth in the United States. During the recession that began in December 2007, the nation's household net worth dropped by $10 trillion – the largest loss since the federal government began tracking this indicator 50 years ago.[113] As property values have declined over the past several years, many families have found that the amount they owe on their mortgage exceeds the actual value of the house.[114] As a result, homeowners are finding it difficult to refinance or sell their homes, which many can no longer afford, and increasing numbers have entered foreclosure. Families in areas that are predominantly urban and comprised largely of racial/ethnic minorities and individuals of low-income status have experienced disproportionately high rates of foreclosures. Further, certain states, including California, Arizona, Nevada, and Florida have experienced more dramatic housing price downturns.[115] Children in states that have been more severely affected by the foreclosure crisis are at particular risk of facing housing instability.

Housing Affordability

Understanding the impact of the recent recession on children requires a very general understanding of the conditions leading up the deterioration of the housing market beginning in 2006-2007. The number of families reporting housing problems has been on the rise since the early 2000s.[116] Despite the rapid surge in

housing prices, demand, and new home construction that took place between 2003 and 2005, over 40 percent of all households with children reported that they were struggling to afford housing or were living in overcrowded and/or physically inadequate dwellings in 2007.[8] In 2008, approximately 12.7 million children lived in households in which 50 percent or more of the family's income was spent on housing;[104] to put this in perspective, the United States Department of Housing and Urban Development (HUD) considers housing unaffordable if it comprises more than 30 percent of a household's annual pre-tax income.[117] To cope with burdensome housing costs, it is likely that low-income families decreased expenditures in other areas, such as food purchases or energy bills, leading to other downstream effects on child well-being.[104]

Housing affordability problems affect both homeowners and renters. Between 2008 and 2009, real median household income fell by 2.9 percent.[118] At the same time, property values declined by 5.8 percent[119] and the median cost of rental housing increased from $824 per month to $842 per month.[9, 120] Data from the United States Census Bureau's *2009 American Community Survey* shows that nearly two out of every five renters spent 35 percent or more of their income on housing.[9] This discrepancy between housing costs and families' incomes is brought to the forefront by the fact that in 2009, there is no state in the United States in which a family with one full-time, minimum-wage worker could afford a two-bedroom apartment without spending more than 30 percent of its income on housing.[121]

While low-income households may be eligible for housing subsidies to help make up the difference in rent costs, there is significant gap between the supply of housing vouchers for low-income renters and the demand for assistance among low-income households. The federal Housing Choice Voucher Program (commonly referred to as Section 8), which provides approximately two million low-income families with vouchers to help offset the cost of private market housing, has not kept pace with need in recent years.[122, 123] Between 2003 and 2007, Congress failed to fund new vouchers, despite significant increases in the number of households spending 50 percent or more of their income on housing.[82] In short, the gap between wages and housing costs is not unique to the recent economic downturn, and the housing affordability crisis cannot be entirely attributed to either foreclosure increases or any other single facet of the recent recession.

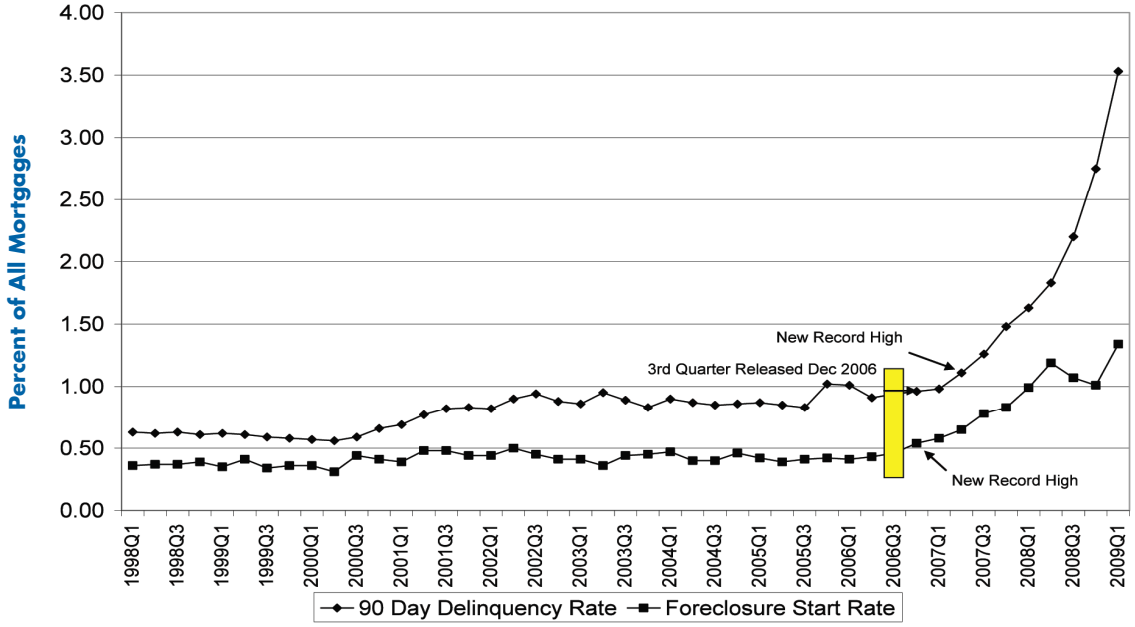
The Foreclosure Crisis

At the same time, it is clear that we are in the midst of a severe housing downturn, the onset of which coincided roughly with the start of the recent recession. Of particular concern is the high rate of foreclosures and other housing problems among families with children. Figure 5 shows the severity of the housing crisis, particularly when compared with the recession of 2001.

While research on the effects, particularly the health effects, of the foreclosure crisis has primarily focused on adults, the literature provides glimpses into the experiences of children living in households undergoing foreclosure.[95, 109, 114, 124, 125] One study, which looked at the health status of people experiencing foreclosure in the Philadelphia region, found that foreclosures tend to affect already-vulnerable groups, including the poor and families with children.[124] People in poorer health were heavily represented among those experiencing foreclosure. For instance, 23 percent of homeowners experiencing foreclosures reported being in poor or fair health, compared to 9.2 percent of homeowners with no housing strain, and 14.4 percent of homeowners with moderate housing strain.[125] Compared to homeowners and renters of similar socioeconomic status, homeowners in foreclosure experienced higher

FIGURE 5:

90 Day Delinquency and Foreclosure Start Rates, 1998-2009



Source: National Delinquency Survery, reprinted by permission of the Mortgage Bankers Association. Taken from: Report to Congress on the root causes of the foreclosure crisis, U.S. Department of Housing and Urban Development, 2010.

rates of hypertension, heart disease, and depression and/or anxiety – and were less likely to have health insurance.[124] While the study design did not allow for the establishment of causality, it did reveal a strong association between foreclosure and adverse health outcomes in vulnerable populations.

The effects of foreclosures extend beyond the families who lose their homes. When foreclosures are concentrated in densely populated neighborhoods, as has been the case in the recent recession, area conditions may deteriorate in ways that affect children's health and well-being. Concentrated foreclosures, particularly in inner-city areas, have also been found to lower property values and decrease local services for residents.[126] As a result of these factors, neighborhood cohesion may deteriorate.[111, 127] The impact of foreclosures is a particular issue in communities – especially predominantly African American and Latino communities – that were targeted by lenders offering subprime or other kinds of mortgages associated with a higher likelihood of default relative to other types of mortgages.[95, 106, 113, 127]

Homelessness

Many states have reported double-digit increases in the homeless shelter population, with a particular surge among families with children.[128] Although the number of homeless individuals who spent any time in a homeless shelter decreased between 2007 and 2009, the number of sheltered homeless families increased substantially. In 2009, 170,129 families were homeless and spent time in a shelter; this represents a 30 percent increase since 2007. There was also a 20 percent increase in the average number of days families spent in shelters (from 30 days in 2008 to 36 days in 2009).[112]

In addition to increases in the number of homeless families with children, there has been a shift in the types of shelter accommodations these families utilize. Increases in family use of homeless shelters between 2007 and 2008 were comprised of both increases in the

use of emergency shelters and transitional housing.[112] Between 2008 and 2009, the increase in sheltered homeless families was almost solely attributable to increased use of emergency shelters, which tend to be more crisis-driven and less oriented towards getting a family into an affordable housing situation. Some states have been able to use funds from a $5 billion Temporary Assistance for Needy Families (TANF) Emergency Fund to address homelessness.[129] However, restrictions on the use of these funds (e.g., they must be for short-term, non-recurrent benefits) may dampen their effectiveness as a tool for creating housing stability for families in a broader sense.

Expanded Federal Support

As with health, food, and other domains of well-being, the response of federal, state, and local government can have a strong effect on how the recession affects children with regard to housing. HUD received $13.54 billion in American Recovery and Reinvestment Act (ARRA) funding. These funds included $1.5 billion for a Homelessness Prevention and Rapid Re-Housing Program,[10] created to provide families with housing search assistance, temporary rental assistance, and funds to cover security deposits and other one-time or short-term costs associated with securing housing.[82] ARRA also allocated housing-specific funds for capital improvements to public housing, low-income housing tax credit programs, community development block grants, and neighborhood stabilization efforts.[130] The effects of these investments, which are funneled through states, localities, and community organizations, are not yet known; however, compared to the expansions in benefits to individuals and aid to states in the areas of food security and health, ARRA included little in the way of immediate housing assistance to low-income families and children.

ARRA is not the only source of housing assistance developed in response to the recent recession. In February 2010, the federal Administration launched a $1.5 billion Innovation Fund for the Hardest Hit Housing Markets (to which an additional $2 billion has since been added).[131] Under this initiative, Housing Finance Agencies in states with significant declines in home prices can apply to the Federal Housing Finance Agency for money to help prevent foreclosures. More recently, the Wall Street Reform and Consumer Protection Act, signed into law as P.L. 111-203 in July 2010, provided HUD with $1 billion to implement an Emergency Homeowners Loan Program (EHLP). This program will work in conjunction with the Hardest Hit Initiative by providing foreclosure prevention resources to states and localities with unemployment higher than the national average.[132]

While the effect of ARRA, the Hardest Hit Initiative, and EHLP remains unknown, the one-time nature of many of these resources is a potential cause for concern. Housing instability among families with children was high going into the recession, and efforts to counter the worst effects of the downturn may not address underlying affordability issues. Contrary to what has occurred in the realm of health insurance, where pre-recession investments in Medicaid and CHIP blunted the impact of the economic downturn on health insurance coverage for children, the absence of federal support for rental assistance in the years preceding the recession appears to have left low-income families particularly vulnerable to housing problems. For many children and families, a return to pre-recession status will not equate to housing stability.

Key Points:

The Recession and Children's Housing

- The dramatic increase in foreclosures in the recent recession has left families particularly vulnerable to housing instability in comparison to prior recessions. Approximately 43 percent of families with children report that they are struggling to afford stable housing.[8]
- The recent increase in housing instability may have been exacerbated by a decline in housing affordability that predated the recent recession.
- While federal funds have been dedicated to emergency housing assistance and programs to help families avoid foreclosure during the recent recession, it is not yet clear whether this will be sufficient to meet the needs of low-income families in particular.

The Recession and Child Maltreatment

Overview

Examining child maltreatment trends over time is a difficult task due to the challenge of detection and the inconsistency across states and cities of how child maltreatment is defined. The 2003 reauthorization of the federal Child Abuse Prevention and Treatment Act (CAPTA), (P.L. 108-36), defines child maltreatment as: "1) Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or 2) An act or failure to act which presents an imminent risk of serious harm."[133] This legislation sets the minimum standards for states' child abuse and neglect definitions, with most states recognizing four forms of maltreatment: physical abuse, sexual abuse, emotional abuse, and neglect. While any of these types of maltreatment may occur independently, they often occur in combination.

Child maltreatment data is reported from a variety of sources, from annual statistics of child welfare systems, to periodic surveys. According to the 2005-2006 *National Incidence Study of Child Abuse and Neglect* (NIS-4), a comprehensive federal survey of child maltreatment, 2.9 million children were harmed or endangered by abuse and neglect in the study year.[134] Seventy-seven percent of maltreated children were neglected, and 29 percent were abused. For abused children, most experienced physical abuse (57 percent), while approximately one-third were emotionally abused (36 percent) and one-quarter were sexually abused (22 percent). Less than half of these instances were reported to child protective services (CPS).[135] In the majority of cases where CPS is involved, the child remains in the home and the family receives preventive services; however, a subset of approximately 300,000 children enter foster care each year.[136]

There is no single factor, but rather the combination of individual, familial, and community risk factors that increase the risk for maltreatment within families.[137] [138] Risk factors at the family level include caregiver stress, depression, a caregiver's history of maltreatment, limited social supports, and the experience of stressful life events.[139] Parental substance abuse is estimated to be a contributing factor in one-third to two-thirds of all maltreatment cases,[140] and both neighborhood and familial poverty are two of the strongest predictors of abuse and neglect.[134] Protective factors, which reduce the likelihood of maltreatment, include social supports, nurturing parenting skills, stable familial relations,

adequate housing, and parental employment.[141]

Maltreatment can have long-standing impacts beyond the immediate acute injuries to children. Long-term consequences of abuse and neglect may include mental health disorders, low educational attainment, welfare receipt, and drug and alcohol problems.[142-145] In a national study of children in foster care, 50 percent of children were identified as having a special health care need,[146] and 48 percent reported signs of an emotional or behavioral problem.[147] Children who are maltreated are also more likely to have greater physical health problems, functional disabilities, and health risk behaviors as adults.[145, 148] A social safety net for families to moderate the risks for maltreatment at the familial and community levels is critical.

Prior Recessions

Risk Factors for Child Maltreatment

Our limited understanding of the relationship between recession and child maltreatment is gleaned mostly from data that examines the impact of parental economic status and child well-being. Prior studies have found a link between changing parenting styles and changing economic conditions.[20, 149] Sociologist Glen Elder's longitudinal study of the Great Depression provides the basis for much of this work. Studying a cohort of children from before the Great Depression into adulthood, Elder found no direct correlation between parental job loss and child maltreatment. In contrast, children's outcomes were mediated by increases in caregiver distress and punitive and inconsistent parenting.[149] Later research continues to tease apart the finding that the cumulative stresses associated with economic hardship - and not poverty per se - bears greatest responsibility for a child's risk of maltreatment.[19, 20]

The onset of job loss, housing instability, and more limited access to goods and services that characterize recessions can hinder a parent's ability to provide sufficient material and psychological support to their child. Caregivers in poverty are more likely to struggle with substance abuse and mental health problems, experience greater cumulative negative life events, and live in substandard housing, factors all associated with increased maltreatment.[150] The 2005-2006 NIS-4 data highlights how poverty is predictive of child abuse and neglect, as children in lower socioeconomic households were three times more likely to be abused and seven times more likely to be neglected.[134]

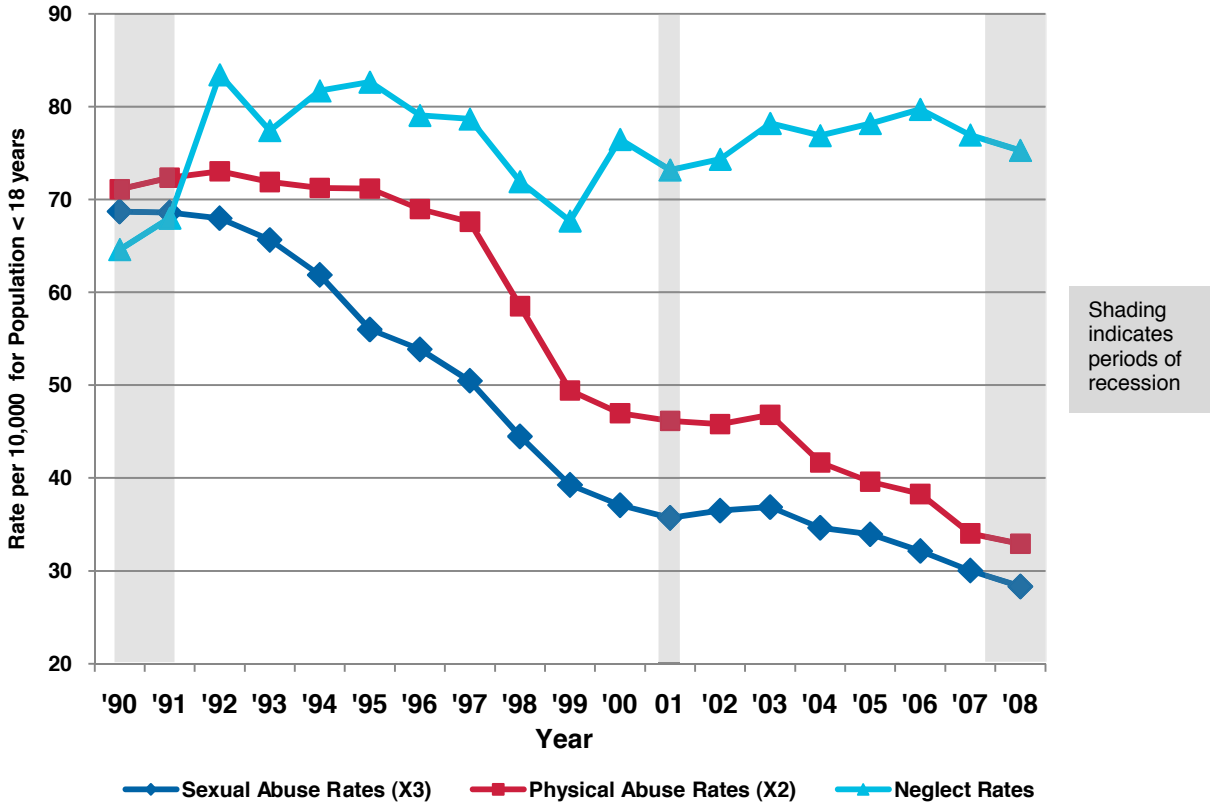
The Economy and Maltreatment Trends

Population-level research on how changing economic conditions relate to maltreatment is more equivocal. Economic status of families tracks most closely with neglect rates, which appear to be more sensitive to economic cycles than other reported forms of maltreatment.[151, 152] Over the last twenty years, the annual reporting of national maltreatment data, which began in 1990, documents a sharp decline in abuse rates, but not neglect [see Figure 6].[153] Since 1992, child physical and sexual abuse rates have steadily declined, decreasing 55 percent and 58 percent respectively. For both the 1990-1991 and 2001 recession periods, physical abuse and sexual abuse continued to decline at a pace similar to pre-recession. In contrast, neglect rates have stayed relatively stable during the same period with noticeable spikes upward following both the 1990-1991 and 2001 recessions.

Interpreting these disparate findings has been the subject of wide debate. Hypothesized reasons for declines in abuse are attributed to the general economic expansion of the 1990s, increased training of mandated reporters, and more prevention services.[153, 154] The fact that neglect trends have not followed suit is more poorly understood. In part, there is more ambiguity and inconsistency in how neglect is defined across jurisdictions. In addition, during this same period

FIGURE 6:

U.S. Maltreatment Trends, 1990 - 2008



Source: National Child Abuse and Neglect Data System (NCANDS), U.S. Maltreatment Trends, 1990-2008, 2010. This chart was reprinted with permission from Finkelhor, D., Jones, L, and Shattuck, A. of the Crimes Against Children Research Center, University of New Hampshire.

many jurisdictions have broadened case definitions for neglect (e.g., adding subcategories like "educational neglect" or "newborns exposed to drugs"), which may have led to greater detection of this form of maltreatment. Neglect may also be more sensitive to changing economic conditions, as it encompasses a parent's ability to materially provide for their child.

Recent Recession

The recession that began in December 2007 appears little different from prior recessions in that the rates of reported neglect have remained steady, despite falling rates for other forms of maltreatment.

The recent release of the 2008 *National Child Abuse and Neglect Data System* (NCANDS) data capturing substantiated child maltreatment reports a year into the recession enables a beginning comparison with pre-recession numbers. In 2008, the overall maltreatment rate was 10.3 substantiated maltreatment cases per 1000 children, a three percent decline from the year before; this is the lowest overall rate since the tracking began in 1990. Broken down, there was a six percent decline in sexual abuse, a three percent decline in physical abuse, and two percent decline in neglect from the year before.

Another indicator useful in examining the impact of the recession on child well-being is the number of children in out-of-home care. According to the 2009 *Adoption and Foster Care Analysis and Reporting System* (AFCARS) data, the number of children in foster care is declining. In 2009, there were 423,993 children in out-of-home placements, a decline from the high point of 511,000 children in 2005. Beginning in 2007, the number of

exits from foster care has exceeded the number of entries, and the size of this gap has increased each year since. In 2007, 2,000 more children exited foster care than entered, in 2008 this difference grew to 14,000 children, and in 2009 there were 21,000 more entries than exits into the system. Additionally, there were fewer overall families served, meaning the rate of reporting and the rate of removal both declined. These rates, in conjunction with NCANDS data, are suggestive of a general reduction in maltreatment at the population level.

The Challenge of Interpreting Maltreatment Data

A challenge in drawing inferences on maltreatment data from the recent or prior recessions is concerns about data quality and challenges in data interpretation. A macroscopic view of the data reveals persistent concerns about child neglect during recession, but potentially falling rates of other types of abuse in recent years, despite worsening economic conditions. However, data such as NCANDS, for example, rely on substantiated reports of maltreatment, which are very sensitive to how systems screen in calls to state hotlines for subsequent investigation and triage. Faced with significant budget shortfalls in recent years, state child welfare systems have faced increasing pressure to reduce the size of their child welfare systems, diverting cases to alternative community response mechanisms. Such shifts could explain the falling rates of reported maltreatment, even if the true underlying incidence is unchanged or worsening.

Yet dismissing the falling maltreatment rates out of hand does not seem appropriate either. A chorus of data coming from multiple sources beyond NCANDS, including NIS, AFCARS, and law enforcement numbers all demonstrate similar trends in the reduction of abuse levels. The congressionally mandated NIS has collected four cycles of data between 1979 and 2006 to measure incidence of child abuse and neglect, and captures cases not reported to CPS by surveying professionals working with children. Although the lack of annual data collection precludes inferences with respect to recessions, NIS data indicate similar reductions in physical and sexual abuse, and no decline in neglect rates. Since these data include both substantiated and unreported instances of abuse and neglect, it is possible that true underlying rates may be changing as well.

However, if maltreatment rates have not declined as much as reported data would suggest, then it is possible that some children may be slipping through the cracks. A recent study, for example, of four geographically disparate pediatric hospitals, detected a nearly two-fold increase in abusive head trauma (from 4.8 cases per month to 9.3 cases per month) since the start of the recent recession.[155] Another recent study documented a correlation between rising unemployment and rising rates of reported maltreatment. Using state-level unemployment statistics and NCANDS child abuse data from the past 18 years, researchers found that each percentage point increase in state-level unemployment was associated with an increase in child abuse reports of approximately .50 per 1000 children.[156] The study also noted a lag in reporting; child abuse reports increased the year after the state unemployment rate rose. Further, representatives of child welfare agencies and hospitals across the country are reporting considerable increases in cases of child maltreatment. Although anecdotal, these reports hint at potential gaps between the occurrence of maltreatment and reporting, and underscore the challenges of interpreting system-derived data for a problem that is under-detected historically. Further study will certainly be needed to better understand population-level data trends and whether they are reflecting the true nature of the problem on the ground.

Key Points:

The Recession and Child Maltreatment

- Child neglect rose during prior recessions and remained high in their aftermath, indicating that child neglect tracks closely with economic hardship.
- While child maltreatment rates have decreased over the last decade, this decline may be confounded by several factors, including the downsizing of some child welfare systems due to state fiscal constraints.
- A recent report of rising serious physical abuse cases being seen in pediatric hospitals and research suggesting a link between unemployment and maltreatment in the years after recession require further study as they may tell that serious abuse and neglect are on the rise.

PART II:
Discussion and Next Steps

While the negative relationship between poverty and child well-being is well-documented, the influence of economic recession on well-being outcomes is both understudied and difficult to disentangle. A variety of factors, including pre-recession circumstances, the sectors of the economy most impacted by recession, and government responses to recession, have a considerable impact on the welfare of children and families during an economic downturn.

Teasing apart the relationship between recession and child well-being is highly complex. First, it is important to avoid being overly broad when examining national economic and social trends. The recession has not impacted all states or localities equally – and there is considerable variation when it comes to the severity and specific consequences of the recent recession in a given location. Second, each recession is unique, emphasizing the need to examine each one individually with respect to the social, economic, and political context in which the economic downturn occurred. The level and nature of hardship induced by a recession depends in large measure upon the economic decisions made during non-recessionary periods.[15] Finally, on a practical note, our ability to identify trends related to child well-being during the recent economic recession is seriously constrained by the limited availability of data. For instance, the most recent mortality figures from the *National Vital Statistics System* are from 2007. Federal government data frequently lags a year or more behind – well before many families felt the full effects of the recent recession. In addition, most studies are done using aggregate data, leaving very little information available about the individual impact of the recession on family and child well-being.

As a result of the data challenges, much of the literature pertaining to the recent recession's effect on children relies on projections. While we do not question the quality of these projections, they would not supersede individual-level data that directly examined the recession's impact on families. The United States Government Accountability Office, in particular, could commission a report to survey families. Such a report would provide valuable information on the impact recessions may have on families, and may enhance our framework for understanding the relationship between macroeconomic conditions and child well-being.

Nevertheless, while the individual-level impact on children during a recession is difficult to discern, it is clear that the relative strength of the safety net available from the government during recessions can blunt the negative impact of a recession on children and families. The recent recession in particular saw large increases in the number of children covered by public health insurance, whether through Medicaid or the Children's Health Insurance Program (CHIP). The 2009 reauthorization of CHIP was particularly timely in relationship to the recession, allowing families with job insecurity to find alternative methods of maintaining health insurance for their children. Similarly, in the area of food security, the availability of benefits through the Supplemental Nutrition Assistance Program (SNAP) and the National School Lunch Program (NSLP) appear to have been highly responsive to the dramatic increase in demand. If SNAP benefits were counted as income, 3.6 million fewer people would have been classified as poor in 2009.[157]

At the same time, while the numbers of families seeking assistance through public means swelled during the recent recession, it is not fully known how states managed this increasing pressure on their budgets – particularly as their revenues declined. The American Recovery and Reinvestment Act (ARRA) helped narrow state budget gaps, but did not fully close them. Without these federal funds states may not have been able to meet increased demand in areas such as unemployment insurance, food and nutrition assistance, and the Medicaid and CHIP programs. On average, the additional federal funds provided through ARRA allowed states to cover 30 to 40 percent of their deficits. Still, since the start of the recent recession, critical social services have been cut in at least 46 states.[158] As stimulus funding expires, further reductions in state spending are projected, including cuts to education, medical, and child welfare services.[159, 160]

States have been put in increasingly difficult positions as they struggle to balance their budgets. Some have created new barriers (e.g., caps on enrollment, or more frequent and complicated re-enrollment processes) to slow the growth in public services and others have reduced the staff positions devoted to these programs.[161] Therefore, while enrollment in public health insurance programs was certainly up, so too might have been barriers to enrollment, an area that will require increasing state and federal attention to ensure that children and families are able to obtain and retain access to programs for which they are eligible. For SNAP as well, while enrollment numbers increased, it remains less certain what types of food families had access to or could readily afford. This uncertainty is not purely a function of recession. The relationship between income and diet quality – as well as the role of safety net programs such as SNAP in that relationship – warrants sustained attention in all macroeconomic climates.

The existence of safety net programs is not, in and of itself, a guarantee of improved child well-being; effective program implementation is crucial. This is especially important in relation to the recent passage of the Patient Protection and Affordable Care Act, which aims to expand children's access to essential health care services. As these measures move forward, careful attention should be paid to how they are rolled out at the state level, and how successful they are in improving health care access and health outcomes for children.

The challenge of understanding the long-term effects of government program participation on families using population-based data is one that has received little attention to date. Indeed, perhaps the most important lesson from this synthesis is that federal – and to some degree state and city – governments will need to provide better oversight into how access to programs is facilitated, so as to minimize downstream effects as much as possible. Doing this will require policymakers to better appraise the variation across systems in how programs are accessed, how systems collaboratively share resources across programs, and whether the programs provide the continuity in services required to assist families through difficult times. If nothing else, the recent recession provides an opportunity to identify lessons learned and a responsibility - given that more than one in five children are living in poverty - to be more planful about child well-being for the future.

References

1. DeNavas-Walt C, Proctor B, Smith J. *Income, poverty, and health insurance coverage in the United States, 2008*. Washington, DC: U.S. Government Printing Office;2009.

2. DeNavas-Walt C, Proctor B, Smith J. *Income, poverty, and health insurance coverage in the United States, 2009*. Washington, DC: U.S. Government Printing Office;2010.

3. Acs G, Nichols A. *America insecure: Changes in the economic security of American families*. Washington, DC: The Urban Institute;2010.

4. Rosenbaum D. *The food stamp program is efficient and effective*. Washington, DC: Center on Budget and Policy Priorities; 2010.

5. Feaster SW. Long road ahead to regaining lost jobs. *New York Times*. 2010. http://www.nytimes.com/interactive/2010/10/13/business/economy/economy_graphic.html?ref=economy.

6. Acs G. *Unemployment and income in a recession*. Washington, DC: The Urban Institute;2008.

7. The Henry J. Kaiser Family Foundation. Measures of state economic distress: Housing foreclosures and changes in unemployment and food stamp participation. *State Health Facts*. Washington, DC: The Henry J. Kaiser Family Foundation, http://www.statehealthfacts.org/comparetable.jsp?cat=1&ind=649; 2009.

8. Federal Interagency Forum on Child and Family Statistics. *America's children in brief: Key national indicators of well-being*. Washington, DC: U.S. Government Printing Office.;2010.

9. Kresin M, Schwartz M. *Rental housing market condition measures: 2009*. Washington, DC: U.S. Department of Commerce, Census Bureau;2010.

10. American Recovery and Reinvestment Act of 2009.

11. National Bureau of Economic Research. *U.S. business cycle expansions and contractions*. 2010; http://www.nber.org/cycles/recessions.html.

12. Irons J. *Economic scarring: The long term impacts of the recession*. Washington, DC: Economic Policy Institute;2009.

13. Greenstein R, Parrott S, Sherman A. *Poverty and share of Americans without health insurance were higher in 2007 - and median income for working age households was lower - than at bottom of last recession*. Washington, DC: Center on Budget and Policy Priorities;2008.

14. Holzer H, Schanzenback D, Duncan G, Ludwig J. The economic costs of childhood poverty in the United States. *Journal of Children and Poverty*. 2008;14(1):41-61.

15. Bezruchka S. The effect of economic recession on population health. *Canadian Medical Association Journal*. 2009;185(5):281.

16. Gerdtham U, Ruhm C. Deaths rise in good economic times: Evidence from the OECD. *Economics & Human Biology*. 2006;4(3):298-316.

17. Case A, Lubotsky, D, Paxson, C. Economic status and health in childhood: The origins of the gradient. *American Economic Review*. 2002;92(5):1308-1334.

18. U.S. Government Accountability Office. *Poverty in America: Economic research shows adverse impacts on health and other social conditions as well as the economic growth rate*. Washington, DC2007. GAO 07-344.

19. Frank D, Casey P, Black M, et al. Cumulative hardship and wellness of low-income, young children: Multisite surveil-

lance study. *Pediatrics.* 2010;125(5):1053-1054.

20. McLoyd V. Socioeconomic disadvantage and child development. *American Psychologist.* 1998;53(2):185-204.

21. Duncan G, Ziol-Guest. K, Kalil. A. Early-childhood poverty and adult attainment, behavior, and health. *Child Development.* 2010;81(1):306-325.

22. Center on the Developing Child. *The foundations of lifelong health are built in early childhood.* Cambridge, MA: Harvard University; 2010.

23. Middlebrooks JS, Audage NC. *The effects of childhood stress on health across the lifespan.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2008.

24. Kishiyama M, Boyce W, Jimenez A, Perry L, Knight R. Socioeconomic disparities affect prefrontal function in children. *Journal of Cognitive Neuroscience.* 2009;21(6):1106-1115.

25. Wood D. Effect of child and family poverty on child health in the United States. *Pediatrics.* 2003;112(3):707-711.

26. National Institute of Child Health, Human Development Early Child Care Research Network. Duration and developmental timing of poverty and children's cognitive and social development from birth through third grade. *Child Development.* 2005;76(4):795-810.

27. Wagmiller R, Lennon MC, Kuang L, Alberti P, Aber JL. The dynamics of economic disadvantage and children's life chances. *American Sociological Review.* 2006;71(5):847-866.

28. First Focus. *Turning point: The long-term effects of recession-induced child poverty.* Washington, DC: First Focus; 2009.

29. Emerson E. Relative child poverty, income inequality, wealth, and health. *Journal of American Medical Association.* 2009;301(4):425-426.

30. Braveman P, Cubbin C, Egerter S, Williams D, Pamuk E. Socioeconomic disparities in health in the United States: What the patterns tell us. *American Journal of Public Health.* 2010;100(S1):S186-196.

31. Catalano R. The health effects of economic insecurity. *American Journal of Public Health.* 1991;81(9):1148-1152.

32. Dorn S. *Health coverage in a recession.* Washington, DC: Urban Institute;2008.

33. Dorn S, Garrett B, Holahan J, Williams A. *Medicaid, SCHIP and economic downturn: Policy challenges and policy responses.* Washington, DC: Brookings Institution;2008.

34. Kaiser Commission on Medicaid and the Uninsured. *Medicaid enrollment: December 2009 data snapshot.* Washington, DC: The Henry J. Kaiser Family Foundation;2010.

35. Xu J, Kochanek K, Murphy S, Tejada-Vera B. *Deaths: Final data for 2007.* Washington, DC: National Center for Health Statistics;2010.

36. Tapia Granados J, Diez Roux A. Life and death during the Great Depression. *Proceedings of the National Academy of Sciences.* 2009;106(41):17290-17295.

37. Ruhm C. Are recessions good for your health? *The Quarterly Journal of Economics.* 2000;115(2):617-650.

38. Ferreira FHG, Schady N. Aggregate economic shocks, child schooling and child health. *The World Bank Research Observer.* 2009;24(2):147-181.

39. Dehejia R, Lleras-Muney A. Boom, busts, and babies' health. *The Quarterly Journal of Economics.* 2004;119(3):1091-1130.

40. The Henry J. Kaiser Family Foundation. Nearly two-thirds of states expanded access to Medicaid and SCHIP, July 06 - January 08. *Kaiser Fast Facts*. Washington, DC: The Henry J. Kaiser Family Foundation, http://facts.kff.org/chart.aspx?ch=265; 2008.

41. Kaiser Fast Facts. Chart: Percentage of children without health insurance, by poverty level, 1998-2007. Washington, DC: The Henry J. Kaiser Family Foundation; 2009.

42. Kaiser Commission on Medicaid and the Uninsured. *Health coverage of children: The role of Medicaid and CHIP*. Washington, DC: The Henry J. Kaiser Family Foundation;2010.

43. Kenney GM, Lynch V, Cook A, Phong S. Who and where are the children yet to enroll in Medicaid and the Children's Health Insurance Program? *Health Affairs*. 2010;29(10):1920-1929.

44. Cummings J, Lavarreda S, Rice T, Brown E. The effects of varying periods of uninsurance on children's access to health care. *Pediatrics*. 2009;123(3):e411-418.

45. Olson L, Tang S, Newacheck P. Children in the United States with discontinuous health insurance coverage. *New England Journal of Medicine*. 2005;353(4):382-391.

46. Currie J. Child health and mortality. In: Blume L, Durlauf S, eds. *The New Palgrave Dictionary of Economics, 2nd Edition*. London: Macmillan; forthcoming.

47. McNichol E, Oliff P, Johnson N. *Recession continues to batter state budgets; state responses could slow recovery*. Washington, DC: Center on Budget and Policy Priorities;2010.

48. Education, Jobs and Medicaid Assistance Act of 2010. *Pub. L. No. 111-148*.

49. Kaiser Commission on Medicaid and the Uninsured. *Explaining health reform: Eligibility and enrollment processes for Medicaid, CHIP, and subsidies in the exchanges*. Washington, DC: The Henry J. Kaiser Family Foundation;2010.

50. Kenney GM, Pelletiere JE. *How will the Patient Protection and Affordable Care Act of 2010 affect children?* Washington, DC: Urban Institute and Robert Wood Johnson Foundation;2010.

51. Dadayan L, Boyd DJ. *Revenue now growing in most states; sales tax gains 5.7 percent in 2nd quarter*. Albany, NY: The Nelson A. Rockefeller Institute of Government;2010.

52. U.S. Government Accountability Office. *State and local governments' fiscal outlook: March 2010 update*. Washington, DC2010. GAO 10-358.

53. Trapp D. HHS calls for more insured children clashes with state budget troubles. *American Medical News*. 2010;53(18).

54. Angeles J, Solomon J. *Recession threatens state health care programs: Extension of recovery act relief needed to avert more drastic cuts that would swell the ranks of the uninsured and weaken the economy*. Washington, DC: Center on Budget and Policy Priorities;2010.

55. National Association of Public Hospitals and Health Systems. All states have requested extended FMAP funding, HHS Says - October 5, 2010. 2010. http://www.naph.org/Homepage-Sections/News/Latest-From-Newsline/Extended-FMAP.aspx.

56. U.S. Department of Agriculture. Food Security in the United States: Measuring Household Food Security. http://www.ers.usda.gov/Briefing/FoodSecurity.measurement.htm.

57. Nord M. *Food insecurity in households with children: Prevalence, severity, and household characteristics*. Washington, DC,: U.S. Department of Agriculture, Economic Research Service;2009. EIB-56.

58. Slopen N, Fitzmaurice G, Williams D, Gilman S. Poverty, food insecurity, and the behavior for childhood internalizing

and externalizing disorders. *Journal of American Academy of Child and Adolescent Psychiatry.* 2010;49(5):444-452.

59. Whitaker R, Phillips S, Orzol S. Food insecurity and the risks of depression and anxiety in mothers and behavior problems in their preschool-aged children. *Pediatrics.* 2006;118(3):e859-868.

60. Winicki J, Jemison K. Food insecurity and hunger in the kindergarten classroom: Its effect on learning and growth. *Contemporary Economic Policy.* 2003;21(2):145-157.

61. Rose-Jacobs R, Black M, Casey P, et al. Household food insecurity: Associations with at-risk infant and toddler development. *Pediatrics.* 2008;121(1):65-72.

62. Alaimo K, Olson, C, Frongillo, E. Food insufficiency and American school-aged children's cognitive, academic, and psychosocial development. *Pediatrics.* 2001;108(1):44-53.

63. Skalicky A, Meyers A, Adams W, Yang Z, Cook J, Frank D. Child food insecurity and iron deficiency anemia in low-income infants and toddlers in the United States. *Maternal & Child Health Journal.* 2006;10(2):177-185.

64. Cook J, Frank D, Levenson S, et al. Child food insecurity increases risks posed by household food insecurity to young children's health. *Journal of Nutrition.* 2006;136(4):1073-1076.

65. Boney CM, Verma A, Tucker R, Vohr BR. Metabolic syndrome in childhood: Association with birth weight, maternal obesity, and gestational diabetes mellitus. *Pediatrics.* 2005;115(3):e290-296.

66. Wight VR, Thampi K, Briggs J. *Who are America's poor children? Examining food insecurity among children in the United States.* New York: National Center for Children in Poverty;2010.

67. Leingerger-Jabari A, Parker D, Oberg C. Child labor, gender, and health. *Public Health Reports.* 2005;120(6):642-648.

68. Ver Ploeg M. *WIC and the battle against childhood overweight.* Washington, DC: U.S. Department of Agriculture, Economic Research Service;2009.

69. Drewnowski A, Darmon N. The economics of obesity: Dietary energy density and energy cost. *American Society for Clinical Nutrition.* 2005;80(1 Suppl):265S-273S.

70. Nord M, Hopwood H. Recent advances provide improved tools for measuring children's food security. *The Journal of Nutrition.* 2007;137(3):533-536.

71. Bhattacharya J, Currie J, Haider S. Poverty, food insecurity, and nutritional outcomes in children and adults. *Journal of Health Economics.* 2004;23(4):839-862.

72. Nord M. *Food insecurity in households with children: Food assistance research brief.* Washington, DC: U.S. Department of Agriculture, Economic Research Service;2003. 34-13.

73. Andrews M, Nord M. *Food insecurity up in recessionary times.* Washington, DC: U.S. Department of Agriculture;2009.

74. Nord M, Andrews M, Carlson. *Household food insecurity in the United States, 2004.* Washington, DC: U.S. Department of Agriculture, Economic Research Service;2005.

75. Pavetti L, Rosenbaum D. *Creating a safety net that works when the economy doesn't: The role of the food stamp and TANF programs.* Washington, DC: Center on Budget and Policy Priorities;2010.

76. Leftin J. *Trends in Supplemental Nutrition Assistance Program participation rates: 2001 to 2008.* Washington, DC: Prepared by Mathematic Policy Research, Inc. for the U.S. Department of Agriculture, Food and Nutrition Service;2010.

77. Cook J, Frank D, Berkowitz C, et al. Food insecurity is associated with adverse health outcomes among human infants and toddlers. *American Society for Nutritional Sciences.* 2004;134(6).

78. Zedlewski S, Mon E. *Many low-income working families turn to the supplemental nutrition assistance program for help.* Washington, DC: The Urban Institute;2009.

79. Isaacs J. *The effects of the recession on child poverty.* Washington, DC: Brookings Institution & First Focus; 2009.

80. Leftin J, Gothro A, Eslami E. *Characteristics of Supplemental Nutrition Assistance Program households: Fiscal Year 2009*: Prepared by Mathematic Policy Research, Inc. for the U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis;2010.

81. Hanson K, Gundersen C. *How unemployment affects the food stamp program.* Washington, DC: U.S. Department of Agriculture, Economic Research Service; 2002.

82. Rice D. *Additional housing vouchers needed to stem increase in homelessness.* Washington, DC: Center on Budget and Policy Priorities; 2009.

83. Bloch M, DeParle J, Ericson M, Gebeloff R. Food stamp usage across the country 2009.

84. Eisler P, Weise E. More students on free lunch programs. *USA Today* 2009.

85. Neuberger Z, Namian TF. *Enrolling all children in a household for free school meals.* Washington, DC: Center on Budget and Policy Priorities; 2010.

86. U.S. Department of Agriculture. WIC Fact Sheet. *Nutrition Program Facts, Food and Nutrition Service* 2009; www.fns.usda.gov/wic/factsheets.htm.

87. U.S. Department of Agriculture. Nutrition program facts: WIC (Monthly data, FY08-FY10). http://www.fns.usda.gov/pd/wicmain.htm.

88. Aber L, Chaudry A. Low-income children, their families and the great recession: What's next in policy? Paper presented at: The Georgetown University and Urban Institute Conference on Reducing Poverty and Economic Distress after ARRA2010.

89. United States Department of Agriculture. http://www.fns.usda.gov/fns/recovery/recovery-snap.htm.

90. Mabli J, Castner L, Ohls J, Fox M, Crepinsek M, Condon E. *Food expenditures and diet quality among low-income households and individuals.* Washington, DC: Prepared by Mathematica Policy Research, Inc. for the U.S. Department of Agriculture, Food and Nutrition Service; 2010.

91. Rose D, Habicht J, Devaney B. Household participation in the Food Stamp and WIC programs increases the nutrient intakes of preschool children. *The Journal of Nutrition.* 1998;128(3):548-555.

92. U.S. Department of Agriculture. SNAP Farmers' Market Program website - Learn how you can accept SNAP Benefits at Farmers' Markets. http://www.fns.usda.gov/snap/ebt/fm.htm.

93. Office of the Surgeon General of the United States. *The Surgeon General's call to action to promote healthy homes*: Office of the Surgeon General; 2009.

94. The Institute for Children and Poverty. *Examination of residential instability and homelessness among young children.* New York: Institute for Children, Poverty & Homelessness; 2009.

95. Kingsley G, Smith R, Price D. *The impact of foreclosures on families and communities.* Washington, DC: Urban Institute;2009.

96. Rog J, Maynard M, Weiss E. *The hidden costs of the housing crisis: The long-term impact of housing affordability and quality on young children's odds of success.* Washington, DC: Economic Policy Institute, The Partnership for America's Economic Success; 2008.

97. Rumberger R, Larson K. Student mobility and the increased risk of high school dropout. *American Journal of Education.* 1998;107(1):1-35.

98. Buckner J. Understanding the impact of homelessness on children: Challenges and future research directions. *American Behavioral Scientist.* 2008;51(6):721-736.

99. Grant R, Shapiro A, Joseph S, Goldsmith S, Rigual-Lynch L, Redlener I. The health of homeless children revisited. *Advances in Pediatrics.* 2007;54(1):173-187.

100. Jellyman T, Spencer N. Residential mobility in childhood and health outcomes: a systemic review. *Journal of Epidemiology and Community Health.* 2008;62(7):584-592.

101. U.S. Department of Health and Human Services. *Current statistics on the prevalence and characteristics of people experiencing homelessness in the United States.* Washington, DC: U.S. Department of Health and Human Services;2010.

102. Culhane D, Metraux S. Rearranging the deck chairs or reallocating the lifeboats? Homelessness assistance and its alternatives. *Journal of the American Planning Association.* 2008;74(1):111-121.

103. Rog DJ, Buckner JC. Homeless families and children (discussion draft). *2007 National Symposium on Homelessness Research* 2007.

104. Joint Center for Housing Studies. *The state of the nation's housing.* Cambridge, MA: Harvard University;2008.

105. Center for Responsible Lending. *Updated projections of subprime foreclosures in the United States and their impact on home values and communities.* Washington, DC: Center for Responsible Lending;2008.

106. U.S. Department of Housing and Urban Development. *Report to Congress on the root causes of the foreclosure crisis.* Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research;2010.

107. Evans G. The environment of childhood poverty. *American Psychologist.* 2004;59(2):77-92.

108. Samuels J, Shinn M, Buckner JC. Homeless children: Update on research, policy, programs, and opportunities. In: U.S. Department of Health and Human Services, ed: Policy Research Associates; 2010.

109. Been V, Ellen IG, Schwartz AE, Stiefel L, Weinstein M. *Kids and foreclosures, New York City.* New York: Institute for Education and Social Policy, New York University; 2010.

110. Culhane JF, Webb D, Grim S, Metraux S, Culhane DP. Prevalence of child welfare services involvement among homeless and low-income mothers: A five-year birth cohort study. *Journal of Sociology & Social Welfare.* 2003;30(3):79-95.

111. Maxwell CD, Stone RJG. The nexus between economic and family violence: The expected impact of recent economic declines on the rates and patterns of intimate, child and elder abuse: Submitted for publication to the U.S. Department of Justice; 2010.

112. Cortes A, Khadduri J, Buron L, Culhane D. *The 2009 annual homeless assessment report to Congress.* Washington, DC: U.S. Department of Housing and Urban Development, Office of Community Planning and Development; 2010.

113. Jacobsen LA, Mather M. U.S. economic and social trends since 2000. *Population Bulletin.* 2010;65(1).

114. Bennett GG, Scharoun-Lee M, Tucker-Seeley R. Will the public's health fall victim to the home foreclosure epidemic? *PLoS Medicine.* 2009;6(6):1-5.

115. Painter G. *What happens to household formation in a recession?* Washington, DC: Mortgage Bankers Association; 2010.

116. Land KC. *Child and Youth Well-Being Index.* New York: The Foundation for Child Development;2010.

117. U.S. Department of Housing and Urban Development. Community Development and Planning Website - Affordable Housing. http://www.hud.gov/offices/cpd/affordablehousing/index.cfm.

118. Noss A. *Household income for states: 2008 and 2009*. Washington, DC: U.S. Department of Commerce, Census Bureau;2010.

119. Mazur C. *Property value: 2008 and 2009*. Washington, DC: U.S. Department of Commerce, Census Bureau;2010.

120. U.S. Census Bureau. Financial Characteristics (S2503). In: Data Set: 2008 American Community Survey 1-Year Estimates Survey: American Community Survey, ed. Washington, DC 2009.

121. DeCrappeo M, Pelletiere D, Crowley S, Teater E. *Out of reach 2010: Renters in the Great Recession, the crisis continues*. Washington, DC: National Low Income Housing Coalition; 2010.

122. Rice D, Sard B. *Decade of neglect has weakened federal low-income housing programs*. Washington, DC: Center on Budget and Policy Priorities; 2009.

123. U.S. Department of Housing and Urban Development. Worst case housing needs: A report to Congress. 2007.

124. Pollack C, Lynch J. Health status of people undergoing foreclosure in the Philadelphia region. *American Journal of Public Health*. 2009;99(10):1833-1839.

125. Pollack C, Lynch J, Alley D, Cannuscio C. *Foreclosure and health status*. Philadelphia, PA: Leonard Davis Institute of Health Economics;2010.

126. Lin Z, Rosenblatt E, Yao W. Spillover effects of foreclosures on neighborhood property values. *Journal of Real Estate Finance and Economics*. 2009;38(4):387-407.

127. Immergluck D, Smith G. Measuring the effect of subprime lending on neighborhood foreclosures. *Urban Affairs Review*. 2005;40(3):362-389.

128. Sard B. *Number of homeless families climbing due to recession*. Washington, DC: Center on Budget and Policy Priorities;2009.

129. Schott L. *Using TANF emergency funds to help prevent and address family homelessness*. Washington, DC: Center on Budget and Policy Priorities;2010.

130. National Housing Trust. *Housing and Related Provisions in the American Recovery and Reinvestment Act of 2009 (Pub. L. No. 111-5)*. Washington, DC2009.

131. Treasury Public Affairs, U.S. Department of Housing and Urban Development. Obama administration announces additional support for targeted foreclosure-prevention programs to help homeowners struggling with unemployment 2010; http://portal.hud.gov/portal/page/portal/HUD/press/press_releases_media_advisories/2010/HUD-No.10-176.

132. U.S. Department of Housing and Urban Development. *Summary of the Emergency Homeowner Loan Program*. Washington, DC; 2010.

133. Keeping Children and Families Safe Act of 2003. *Pub. L. No. 108-36*.

134. Sedlak AJ, Mettenburg J, Basena M, et al. Fourth National Incidence Study of Child Abuse and Neglect (NIS–4): Report to Congress. In: U.S. Department of Health and Human Services AfCaF, ed. Washington, DC2010.

135. Gilbert R, Kemp A, Thoburn J, et al. Recognising and responding to child maltreatment. *Lancet*. 2009;373:167-180.

136. U.S. Department of Health and Human Services. *Preliminary Estimates for FY 2009 as of July 2010*. Washington, DC: Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau;2010.

137. Belsky J. Etiology of child maltreatment: A developmental-ecological analysis. *Psychological Bulletin.* 1993;114(3):413-434.

138. Gil DG. Physical abuse of children: Findings and implications of a nationwide survey. *Pediatrics.* 1969;44(5):857-864.

139. Kotch J, Browne D, Dufort V, Winsor J, Catellier D. Predicting child maltreatment in the first 4 years of life from characteristics assessed in the neonatal period. *Child Abuse & Neglect.* 1999;23(4):305-319.

140. U.S. Department of Health and Human Services. *Blending perspectives and building common ground: A report to Congress on substance abuse and child protection.* Washington, DC: U.S. Department of Health and Human Services;1999.

141. U.S. Department of Health and Human Services. *Emerging practices in the prevention of child abuse and neglect.* Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families;2003.

142. Dube S, Felitti V, Dong M, Chapman D, Giles W, Anda R. Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The Adverse Childhood Experiences Study. *Pediatrics.* 2003;111(3):564-572.

143. De Bellis M, Thomas L. Biologic findings of post-traumatic stress disorder and child maltreatment. *Current Psychiatry Reports.* 2003;5(2):108-117.

144. Teicher MD. Wounds that time won't heal: The neurobiology of child abuse. *Cerebrum: The Dana Forum on Brain Science.* 2000;2(4):50-67.

145. Springer KW, Sheridan J, Kuo D, Carnes M. Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect.* 2007;31(5):517-530.

146. Ringeisen H, Casanueva C, Urato M, Cross T. Special health care needs among children in the child welfare system. *Pediatrics.* 2008;122(1):e232-241.

147. Burns B, Phillips S, Wagner HR, et al. Mental health needs and access to mental health services by youths involved in child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry.* 2004;43(8):960-970.

148. Walker E, Gelfand A, Katon W, et al. Adult health status of women with histories of childhood abuse and neglect. *The American Journal of Medicine.* 1999;107(4):332-339.

149. Elder G. *Children of the Great Depression: Social change in life experience.* Chicago, IL: University of Chicago Press; 1974.

150. Whipple E, Webster-Stratton C. The role of parental stress in physically abusive families. *Child Abuse & Neglect.* 1991;15(3):279-291.

151. Schumacher J, Slep A, Heyman R. Risk factors for child neglect. *Aggression and Violent Behavior.* 2001;6(2-3):231-254.

152. Drake B, Pandey S. Understanding the relationship between neighborhood poverty and specific types of child maltreatment. *Child Abuse & Neglect.* 1996;20(11):1003-1018.

153. Finkelhor D, Jones L, Shattuck A. *Updated trends in child maltreatment, 2008.* Durham, NH: Crimes Against Children Research Center;2010.

154. Finkelhor D, Jones L. Why have child maltreatment and child victimization declined? *Journal of Social Issues.* 2006;62(4):685-716.

155. Berger R. An increase in abusive head trauma during the current recession: A multi-center analysis. Paper presented at: The Pediatric Academic Societies' Annual Conference 2010; Van Couver, British Columbia, Canada.

156. Zagorsky J, Schlesinger M, Sege R. What happens to child maltreatment when unemployment goes up? Paper pre-

sented at: American Academy of Pediatrics 2010 National Conference and Exhibition; 3 October 2010, 2010; San Francisco, CA.

157. Nichols A. *Poverty in the United States*. Washington, DC: Urban Institute;2010.

158. Johnson N, Oliff P, Williams E. *An update on state budget cuts: At least 46 states have imposed cuts that hurt vulnerable residents and the economy*. Washington, DC: Center on Budget and Policy Priorities;2010.

159. McNichol E, Oliff P, Johnson N. *States continue to feel recession's impact*. Washington, DC: Center on Budget and Policy Priorities;2010.

160. Edelman P, Golden O, Holzer H. *Reducing poverty and economic distress after ARRA: Next steps for short-term recovery and long-term economic security*. Washington, DC: The Urban Institute;2010.

161. Smith VK, Gifford K, Ellis E. *Hoping for economic recovery, preparing for health reform: A look at Medicaid spending, coverage and policy trends*. Washington, DC: Prepared by Health Management Associates and the Kaiser Commission on Medicaid and the Uninsured for The Henry J. Kaiser Family Foundation; 2010.