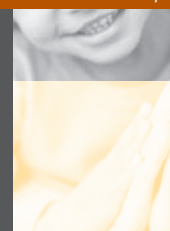


Infants of Depressed Mothers Living in Poverty: Opportunities to Identify and Serve



THE URBAN INSTITUTE 

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Depression in parents poses serious risks to millions of children in the United States each day, yet very often goes undetected and untreated. The risk can be very great for babies and toddlers, who are completely dependent on their parents for nurturing, stimulation, and care—and for poor families that do not have the resources to cope with depression. But depression is treatable and opportunities to reach these families and connect them to help already exist within multiple systems.

In this brief, we take a first-time national look at the characteristics, access to services, and parenting approaches for infants living in poverty whose mothers are depressed (we focus on mothers as they are often the primary caregivers). We also identify current service systems that could intervene and help depressed mothers find support.

Effects of Parental Depression

Recent estimates suggest 15 million children (or one out of five) live with an adult who had major depression in the past year (National Research Council and Institute of Medicine 2009). Depression can hurt an adult's educational attainment, income, and employment (Coryell, Endicott, and Keller 1990; National Research Council and Institute of Medicine 2009). And depression often occurs along with substance abuse, other mental health problems, chronic medical conditions, and social disadvantage (National Research Council and Institute of Medicine 2009).

We know less, however, about how depression affects parenting and, in turn, children's development. Depression can compromise a parent's ability to provide consistent care in a safe environment. Evidence suggests that depression can interfere with parenting, leading to poor social development and problems with physical, psychological, behavioral, and mental health in children (National Research Council and Institute of Medicine 2009).

In particular, maternal depression during infancy is a serious concern. Depression during the prenatal period is linked to complications during pregnancy or delivery and adverse pregnancy outcomes. Just as concerning, prenatal depression is associated with newborn crying, fussiness, and inconsolability, factors that in turn, may make it difficult for a parent to provide nurturing care (National Research Council and Institute of Medicine 2009).

What makes the harm to children and their parents so distressing is that depression is usually treatable—and thus, the damage to children is preventable. The Institute of Medicine notes that a variety of safe and effective treatments are available for depression, including antidepressants, psychotherapies, behav-

Summary of Key Findings

- Eleven percent of infants living in poverty have a mother suffering from severe depression.
- Evidence suggests that depression can interfere with parenting, potentially leading to poor child development—setbacks that are particularly devastating during infancy.
- Compared with their peers with nondepressed mothers, infants living in poverty with severely depressed mothers are more likely to have mothers who also struggle with domestic violence and substance abuse, and who report being only in fair health.
- Infants living in poverty with depressed mothers receive similar prenatal care as their peers whose mothers are not depressed, but they are breastfed for shorter periods of time.
- Even though depression is treatable, many severely depressed mothers do not receive care.
- Many depressed mothers living in poverty are already connected to services, such as WIC, health care services, food stamps, and TANF. Every contact is an opportunity to identify depression and help parents seek treatment.

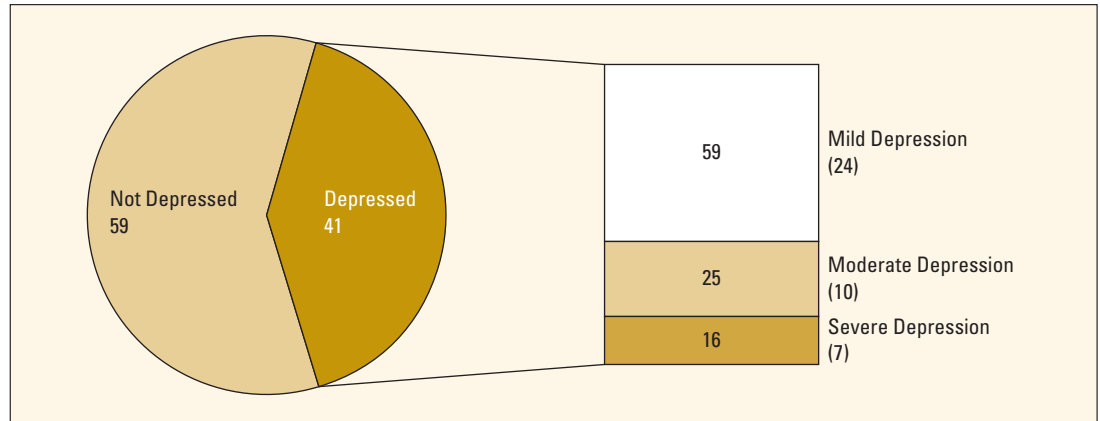
ioral therapies, and alternative medicines. However, the effect of these treatments has not yet been rigorously studied in vulnerable populations (National Research Council and Institute of Medicine 2009). Two recent evaluations of interventions for depressed minority and low-income mothers do offer promise that evidence-based therapies can be effective when they are culturally and linguistically appropriate (Miranda et al. 2006; Grote et al. 2009).

Prevalence

Seven percent of 9-month-old infants has a mother who suffers from severe depression (figure 1). A broader look that also counts mild and moderate depression suggests that two in five 9-month-old infants (41 percent) live with a mother who suffers from some form of depression. For infants living in families with incomes below the federal poverty line, the picture is even bleaker. A striking one in nine of these infants (11 percent) lives with a mother suffering from severe depression; more than half (55 percent) of



FIGURE 1. Nine-Month-Old Infants: Prevalence of Maternal Depression by Severity (percent)



Source: Authors' tabulations of the 2001 Early Childhood Longitudinal Study, Birth Cohort, 9- and 24-Month Longitudinal Data.
 Notes: Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50. Sample size: n = 8,550. Maternal depression at the nine-month interview is based on the mother's responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). Cut points provided by Nord et al. (2005) are used to indicate severity of depressive symptoms. Eleven percent (1,050) of cases had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for non-poor infants and white infants. Data are weighted using parent 9- and 24- month longitudinal survey weights to account for loss in sample between surveys and the complex survey design.

all infants living in poverty are being raised by mothers with some form of depression, including mild and moderate.

Given the importance of children's early years to their development and the damaging effects of poverty and a mother's depression during this period, the rest of this brief focuses on this very vulnerable group—infants living with severely depressed mothers in poverty. We compare this group with other infants in poverty whose mothers are not depressed. We also focus on this thinner slice of the population to provide the most conservative view of the seriousness of the problem. Note that observed differences between infants of depressed and nondepressed mothers may suggest associations between maternal depression and the indicator being observed but do not imply causality.

Infants of Severely Depressed Mothers Living in Poverty

Characteristics: Race, Age, and Family Structure

Infants living in poverty with severely depressed mothers are more likely to have white mothers (44 percent), and less likely to have Hispanic mothers (21 percent) compared with infants living in poverty with nondepressed mothers (table 1).¹ These infants' severely depressed mothers are about the same age as the nondepressed mothers. However, notably, all infants in poverty have relatively young mothers. More than half of both groups have mothers who are 24 years old or younger. Five percent of both groups have teenage mothers.² Compared with infants living

in poverty with nondepressed mothers, infants living in poverty with severely depressed mothers are less likely to live with their biological father (59 versus 40 percent).

Coexisting Risks: Domestic Violence, Substance Abuse, Health Problems

Infants living in poverty whose mothers suffer from severe depression are more often exposed to additional serious risks. These infants are more likely to have mothers who also struggle with domestic violence and substance abuse (table 1 and figure 2). For 16 percent of infants living in poverty with severely depressed mothers, their mothers report having been physically abused between the 9- and 24-month interviews—eight times the share of their peers with nondepressed mothers.³ Further, for 14 percent of infants living in poverty with severely depressed mothers, their mothers report binge drinking in the last month, compared with 6 percent of infants living in poverty whose mothers are not depressed.

About a quarter (24 percent) of infants in poverty with severely depressed mothers have mothers who also report being in fair health—a significantly higher rate than among infants living in poverty whose mothers did not report depressive symptoms (11 percent) (table 1). Poor infants' mothers with severe depression report being in excellent health at half the rate (17 percent) of poor infants' mothers without depressive symptoms (32 percent).

For about a third (30 percent) of poor infants with severely depressed mothers, their mothers spoke with a psychiatrist, psychologist, doctor, or counselor in the



TABLE 1. *Nine-Month-Old Infants of Severely Depressed Mothers Living in Poverty (percent)*

Characteristics	Severely depressed	Not depressed	
	n = 250	n = 800	
Characteristics			
Mother's race			
White	44	28	***
Black	30	23	
Hispanic	21	43	***
Other race	5	5	
Mother's age			
15–17	5	5	
18–24	48	46	
25–29	20	24	
30–39	25	23	
40 and older	2	2	
Two biological parents present in household	40	59	***
Coexisting Conditions			
Mother's health status			
Excellent	17	32	***
Very good	27	27	
Good	29	30	
Fair	24	11	***
Poor	3	1	
Mother talked with psychiatrist, psychologist, doctor, or counselor for any emotional or psychological problem in the past 12 months	30	5	***
Mother physically abused between 9-month and 24-month interviews	16	2	***
Mother had four or more drinks in one sitting in past month	14	6	**
Health Care and Feeding Practices			
Trimester first sought prenatal care			
1st trimester	72	74	
2nd trimester	22	20	
3rd trimester	6	6	
Number of well-baby checkups since birth	6	5	
Infant received Medicaid or State Health Insurance Program	90	82	**
Number of months infant was breastfed			
0 months	45	40	
1–4 months	42	35	
5–8 months	7	8	
9–12 months or more	6	16	***
Month introduced solid foods to infant			
1 to 3 months	31	26	
4 to 5 months	45	42	
6 months or later	23	32	
Introduced cow's milk before 1st birthday	28	23	

Source: Authors tabulations of the 2001 Early Childhood Longitudinal Study, Birth Cohort, 9-Month Data

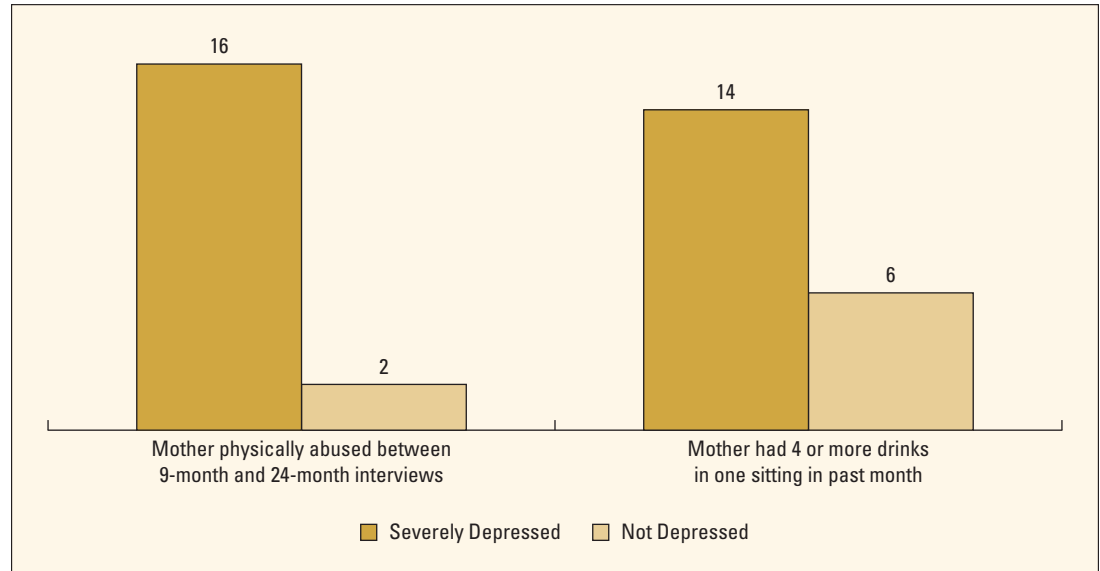
Notes: Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50. Maternal depression at the nine-month interview is based on the mother's responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). Eleven percent (1,050) of cases had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for nonpoor infants and white infants. Cut points provided by Nord et al. (2005) are used to indicate severity of depressive symptoms. Fifteen percent of severely depressed (150) cases did not have information on whether the mother was physically abused between the 9-month and 24-month interviews; there were not statistically significant differences in the characteristics between those who responded and those who did not. Data are weighted using parent 9- and 24- month longitudinal survey weights to account for loss in sample between surveys and the complex survey design. Also note, fewer than one percent of all poor mothers had not yet introduced solid foods at the 9-month interview and fewer than two percent of all poor mothers had no prenatal care.

*** indicates significantly different from severely depressed at the 99 percent confidence level or above.

** indicates significantly different from severely depressed at the 95 percent confidence level or above.



FIGURE 2. Percent of Nine-Month-Old Infants of Severely Depressed Mothers Living in Poverty with Coexisting Risks



Source: Authors' tabulations of the 2001 Early Childhood Longitudinal Study, Birth Cohort, 9- and 24-Month Longitudinal Data.

Notes: Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50. Sample size: $n = 250$. Differences between infants living in poverty with severely depressed mothers and nondepressed mothers are significant at the 95 percent confidence level or above. Maternal depression at the nine-month interview is based on the mother's responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). Eleven percent (1,050) of cases had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for nonpoor infants and white infants. Cut points provided by Nord et al. (2005) are used to indicate severity of depressive symptoms. Fifteen percent of the full sample of severely depressed (150) cases did not have information on whether the mother was physically abused between the 9-month and 24-month interviews; there were not statistically significant differences in the characteristics of those who responded and those who did not. Data are weighted using parent 9- and 24- month longitudinal survey weights to account for loss in sample between surveys and the complex survey design.

last year about an emotional or psychological problem, compared with only 5 percent of their peers with nondepressed mothers (table 1). While it is encouraging that some severely depressed mothers are seeking treatment, many are not. For over two-thirds of poor 9-month-olds with severely depressed mothers, their mothers did not speak with a mental health practitioner. These mothers may be seeking other forms of treatment, but this information is not available in these data.

Prenatal Care and Feeding Practices


Infants growing up in poverty with severely depressed mothers receive similar prenatal care as their peers whose mothers are not depressed.⁴ It is encouraging that nearly all infants in poverty, including those with severely depressed mothers, receive prenatal care at some point during their mothers' pregnancies (data not shown). The timing of care was about the same for infants of severely depressed mothers and those of nondepressed mothers. Nearly three-quarters of infants in poverty have mothers who received prenatal care during their first trimester, about a fifth received care in the second trimester, and 6 percent received care in the last trimester (table 1).

Among infants living in poverty, those with severely depressed mothers are just as likely to be breastfed as those with nondepressed mothers, but they

are breastfed for shorter periods of time. More than half of infants in poverty with severely depressed mothers (55 percent) and 60 percent of infants in poverty with nondepressed mothers are breastfed. While it is good news that infants of severely depressed mothers are not breastfed less, it is still troubling that nearly half are not breastfed at all.

The American Academy of Pediatrics (AAP) (2005) notes the positive, evidence-based benefits of breastfeeding—from protecting infants against infection to lowering the risk of certain forms of breast and ovarian cancers. Further, the academy recommends that breastfeeding should continue at least through the first year of life, yet most babies living in poverty are breastfed less than four months (87 percent for infants growing up in poverty with severely depressed mothers and 75 percent for infants growing up in poverty with nondepressed mothers) (table 1). Of note, children of severely depressed mothers were less likely to be breastfed for at least nine months compared with infants whose mothers were not depressed.

The AAP also recommends that mothers should wait to introduce solid foods to infants until they are at least four to six months old. Estimates suggest that many infants in poverty are fed solid foods. Before four months of age, nearly a third (31 percent) of infants with severely depressed mothers are given solid foods and 26 percent of infants of nondepressed mothers



receive solid foods (table 1). The AAP (2005) also recommends not introducing cows' milk in the first year. However, many infants in poverty received cows' milk prior to age one—28 percent of infants of severely depressed mothers and 23 percent of infants of nondepressed mothers.

Mother–Infant Interactions

Observations of interactions between infants living in poverty and their mothers suggested potentially less positive interactions when the mother is severely depressed than when the mother is not depressed. These differences move in the expected direction but were not statistically significant at the 95 percent confidence level. For example, mothers' interference with the infants' actions was more frequently observed for infants with severely depressed mothers; correspondingly, positive observations were less frequent, including being spoken to by their mothers (spontaneously and not including scolding), and having a safe play environment. These patterns raise possible concerns that infants living with severely depressed mothers may receive less maternal stimulation and support—crucial factors in a child's early cognitive and social development.

Child Well-Being

A basic analysis of the relationship between maternal depression and some measures of infant well-being at 9 and 24 months did not reveal notable differences for infants of depressed and nondepressed mothers, including when we looked at varying levels of severity of depression and at infants of both ages. As this was not in our original scope of work, we could not do the extensive and careful analysis of the measures and the relationships that would be needed to fully verify these findings. Hence, understanding the role of depression in a child's outcomes, separate from the role of poverty or other factors, is an important area for future exploration.

Potential Intervention Points

These findings suggest many infants living in poverty are exposed to the potentially damaging effects of a mother's depression during a critical developmental period in their lives. These infants also are more likely to live with a mother experiencing domestic violence and substance abuse. Yet while some severely depressed mothers seek help, many more would likely benefit from treatment and support.

One potential role for the public sector is to identify these struggling mothers and help them obtain the mental health services they need. Later this year, forthcoming publications under this project will draw on site

visits in three cities to provide more specific suggestions for improvements in services. However, the data suggest early insights about policy and practice opportunities.

Many severely depressed mothers of infants living in poverty are already involved in public service systems that could act as first identification points. For instance, the vast majority of infants with severely depressed mothers (96 percent) live with someone who received benefits from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (figure 3). WIC is an especially promising first intervention point to reach severely depressed mothers, as the program targets low-income mothers with infants and children age 1 to 4. The program provides nutritional education, referrals to other services, and vouchers for infant formula and other foods rich in nutrients commonly lacking in the diets of low-income mothers and their young children.

Health care providers, especially those who see patients covered by Medicaid or the state Child Health Insurance Program (CHIP), could be another intervention point. The majority of infants in poverty with severely depressed mothers (82 percent) live in a household where someone received Medicaid benefits in the past year (figure 3). Further, 90 percent of the infants themselves receive Medicaid or CHIP benefits (table 1). Severely depressed mothers in poverty have many opportunities to meet with health care providers as their infants on average receive six well-baby visits after birth, primarily at doctors' offices or health clinics (table 1 and figure 4).

The Supplemental Nutrition Assistance Program (SNAP), formerly known as Food Stamps, is another large program that reaches 70 percent of infants living in poverty with severely depressed mothers (figure 3). While this program does not necessarily build relationships with participants, as health care providers might, it may be worth considering ways the program could be helpful to severely depressed mothers given its extended reach into this population (for example, providing information on screening or on opportunities for education on maternal depression).

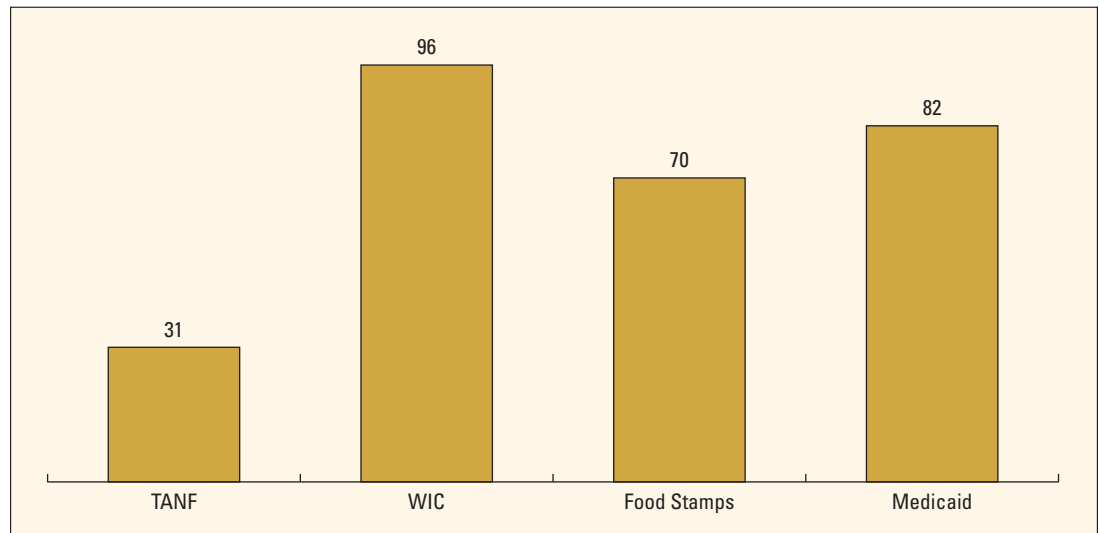
Temporary Assistance for Needy Families (TANF) serves about a third (31 percent) of infants living in poverty with severely depressed mothers (figure 3). Possibly, it could offer opportunities to inform or identify severely depressed mothers in need.

Discussion

Depression is usually treatable. While maternal depression can damage children's development and greatly impair parenting, there are potential opportunities to intervene. Many severely depressed parents living in poverty access services, such as WIC, SNAP,



FIGURE 3. *Nine-Month-Old Infants of Severely Depressed Mothers Living in Poverty: Access to Public Benefits and Services by Someone in the Household (percent)*



Source: Authors' tabulations of the Early Childhood Longitudinal Study, Birth Cohort, 9- and 24-Month Longitudinal Data.

Notes: Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50. Sample size: n=250. Maternal depression at the nine-month interview is based on the mother's responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). Eleven percent (1,050) of cases had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for nonpoor infants and white infants. Cut points provided by Nord et al. (2005) are used to indicate severity of depressive symptoms. Data are weighted using parent 9- and 24- month longitudinal survey weights to account for loss in sample between surveys and the complex survey design.

and health care services for their children. We can try to reach vulnerable families through these systems and help parents get the mental health treatment they need.

Current policy initiatives provide more opportunities to help depressed mothers. The recent passage of health care reform will open up coverage to many low-income depressed mothers who did not have insurance before. Covering treatments for depression could potentially improve the mental health of parents and enhance the well-being and healthy development of a substantial portion of vulnerable infants.

Also, recent health reform legislation includes \$1.5 billion in grants to states over the next five years to improve home visiting programs, which provide new and expectant parents with services to strengthen the parent-child relationship and help parents enhance the healthy growth and development of their children. Given the extent of maternal depression in disadvantaged families, home visiting services "as usual" may not be as effective in these cases. Program managers may need to adapt services to meet the special needs of depressed parents and adequately address needs their infants may have as a result of the depression.

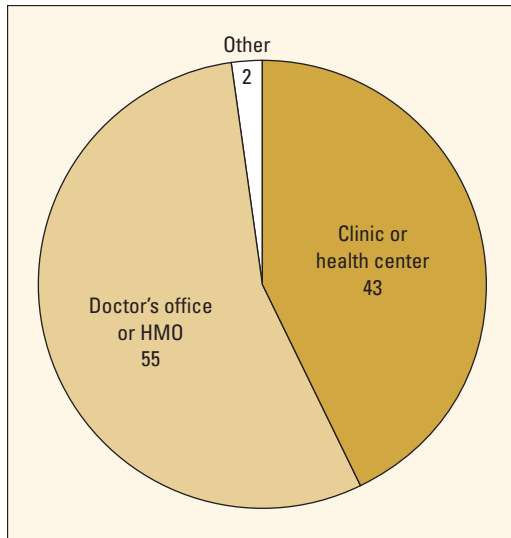
Our findings also have implications for infant feeding. Low-income mothers participate in WIC and make use of well-baby visits, yet few adhere to AAP recommendations for breastfeeding and other infant feeding practices. This suggests that important messages are not being received or that mothers face obsta-

cles to breastfeeding, which may be even more likely if the mother is depressed. The Center for Disease Control and Prevention recently launched "Text4Baby," which sends health tips for babies to pregnant women and new moms through free text messages. This program can teach mothers ideal breastfeeding practices and may encourage them to seek help if depressed.

While we recognize that public programs offer opportunities to intervene and help depressed parents, how those interventions are put into practice raises new questions. Evaluations of effective programs to treat depression among low-income and minority women show that strong outreach and engagement as well as quality improvement efforts to make sure they get appropriate care are necessary to success; without such added improvements, these women may get no help or inappropriate help even after they are screened and identified (Miranda et al. 2003a, b).

Therefore, it will be important to think strategically about the process by which health, social service, and early childhood professionals can recognize and treat parental depression, and whether doing so requires broadening the charge and scope of some agencies and linking practitioners in new ways. If so, administrators and policymakers will need to figure out what types of restructuring, retraining, and additional financial resources this might require. The healthy growth and development of infants living in poverty with depressed

FIGURE 4. Nine-Month-Old Infants of Severely Depressed Mothers Living in Poverty: Regular Place of Well-Baby Visit



Source: Authors' tabulations of the Early Childhood Longitudinal Study, Birth Cohort, 9- and 24-Month Longitudinal Data.
Notes: Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50. Sample size: n = 250. Maternal depression at the 9-month interview is based on the mother's responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). Eleven percent (1,050) of cases had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for nonpoor infants and white infants. Cut points provided by Nord et al. (2005) are used to indicate severity of depressive symptoms. All infants of severely depressed mothers living in poverty received at least one well-baby visit. Data are weighted using parent 9- and 24- month longitudinal survey weights to account for loss in sample between surveys and the complex survey design.

mothers is at great risk. But the good news is that these infants come in contact with a variety of professionals and public programs. Every contact presents an opportunity to reach families with depressed parents and offer treatment and help.

Data and Methods

This brief is part of an Urban Institute study to identify ways mainstream service systems can reach depressed mothers of young children and link them to services, with an ultimate goal of preventing child abuse and neglect.

For this report, we analyzed the 2001 Early Childhood Longitudinal Survey–Birth Cohort (ECLS-B), a nationally representative survey of infants that includes rich information about their development, characteristics, and the parenting practices of their mothers. The ECLS-B contains a nationally representative sample of 14,000 children who were born in 2001. The sample excludes children of mothers who were less than 15 years old, children who were adopted at birth, and children who did not live to 9 months of

age. The ECLS-B provides detailed information about children's early life experiences, following children from birth to kindergarten. Information was collected from parents, child care providers, and teachers as well as from direct assessments of children and home observations conducted by interviewers when children were 9 months old, 24 months old, 4 years old, and when children entered kindergarten. This study uses data from the 9- and 24-month interviews. Not all children in the sample were 9 months old at the first interview date. The average age of infants at the first interview date was 9.7 months. The National Center for Education Statistics, within the U.S. Department of Education and the Institute of Education Sciences, conducts the ECLS-B. The ECLS-B is primarily funded by the Department of Education and other agencies contribute as well.

The ECLS-B is a complex survey design, where children were sampled from both primary and secondary sampling units. To account for this complex survey design, all analyses conducted included sampling weights to account for clustering. T-tests were conducted to detect statistically significant differences among populations of interest. Statistically significant results are presented at the 95 and 99 percent confidence levels. Per disclosure requirements of the National Center for Education Statistics, sample sizes have been rounded to the nearest 50.

Our measure of maternal depression comes from the 9-month interviews and is based on mothers' responses to a modified version of the Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D is a commonly used scale that measures the frequency of depressive symptoms during the prior week. Because it does not measure a full range of depressive symptoms and only examines symptoms that occurred in the prior week, it is not a proxy for clinical depression. Cut points used to identify severity of depressive symptoms (i.e., not depressed, mild depression, moderate depression, and severe depression) are provided by the *9-Month User's Manual* for the ECLS-B. In this brief, we focus primarily on infants with the most severely depressed mothers (mothers reporting a high number and/or frequency of depressive symptoms), to provide a conservative view of the seriousness of this problem. We recognize that moods can go up and down in a week's time, and therefore seek to capture those reporting the most symptoms. About 11 percent, or 1,050 cases, had missing values on the CES-D. Nonresponse was more prevalent for Hispanic infants and poor infants and less prevalent for nonpoor infants and white infants.

Notes

1. It is important to note, however, that Hispanic infants represented a greater portion (40 percent)



of the nonresponse cases than they did of the response cases (21 percent).

2. The ECLS-B sample excludes children of mothers who were less than 15 years old.
3. Fifteen percent of cases in the sample did not have information on whether the mother was physically abused between the 9-month and 24-month interviews. There were not statistically significant differences in the characteristics of those who responded and those who did not respond.
4. Recall depression is measured when the child is 9 months old, not during the prenatal period.

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