

KIDS COUNT Indicator Brief

Reducing Infant Mortality

The Annie E. Casey Foundation

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Reducing the Infant Mortality Rate

The decline in infant mortality in the United States represents a public health triumph, the accrued benefit of decades of progress in sanitation, antibiotics, neonatology and health care access for families living in poverty. The last decade alone saw a 20 percent decrease in infant mortality due primarily to advances in prenatal diagnosis of severe central nervous system defects, improved surgical treatment of many congenital anomalies, and significant progress in preventing Sudden Infant Death Syndrome (STDS) (Centers for Disease Control, 1997).

This good news must be placed in context, however. After dropping to a low of 6.8 percent in 2001, the infant mortality rate climbed to 7.0 in 2002—the first increase in more than four decades (CDC, 2005). While the rise can be attributed to several factors, including an increase in multiple births, the two major causes are low birth weight, particularly births at less than 1 lb. 10 oz. or 750 grams, and preterm (prior to the 37th week of gestation) births. Recent studies show that premature birth is the foremost health risk for newborns in the U.S. and the chief cause of death in the first month of life (March of Dimes, 2005). Congenital malformations and sudden infant death syndrome (SIDS) continue to be significant causes of infant mortality (CDC, 2004).

Although the U.S. spends more on health care than any other country, our infant mortality rate remains higher than that of most other industrialized nations and all of the G7 nations (France, Germany, Italy, the United Kingdom, Canada, Japan and the United States) (Yazbak, 2005; U.S. Department of Health and Human Services, 2001b). Moreover, even as the infant mortality rate was on the decline in the United States, the decline was slower than that of other countries (Yazbak, 2005).

Despite the wide range of expertise that has been brought to bear on reducing infant mortality across the nation, the first weeks of life remain a time of high risk for many babies. Most of the progress in preventing infant mortality has come about in what physicians call the “postneonatal period”—from 28 days after birth to 1 year old.

This *KIDS COUNT Indicator* Brief describes six strategies that are essential to any plan aimed at further reducing the infant mortality rate:

- **Address Disparities in Infant Mortality**
- **Provide Pre-Pregnancy Education and Counseling to All Women and Men**
- **Ensure Timely Prenatal Care for All Women**
- **Expand Access to Medical Care for Infants in the First Month of Life**
- **Expand Access to Well-Baby Care and Parenting Education**
- **Expand Programs for the Prevention of Child Abuse and Neglect**

1. Address Disparities in Infant Mortality

There are widespread geographic, racial, and ethnic discrepancies in the incidence of infant mortality. More than 300 communities in the U.S. have rates at least one and one-half times the national average, with some as high as three times the overall rate (HHS/CDC 2005). In particular, there is a persistent black/white differential. At any age, and at any income, education or socioeconomic level, an African American mother is twice as likely to lose her infant as a white woman (HHS/CDC 2005). While the rise in infant mortality from 2001-2002 affected all ethnic groups with the exception of Native Americans, the greatest increase was among African Americans. The demographic changes that are anticipated over the next decade, when groups currently experiencing poor birth outcomes are expected to grow as a proportion of the total U.S. population, magnify the importance of addressing disparities in health status. (USHHD 2001a).

- **Support research on the medical, socioeconomic, and behavior factors that affect infant mortality.** As a report by the National Academy of Sciences recently asserted, research is needed to provide a more subtle understanding of pathways to infant mortality. In particular, studies are needed that take multiple factors into account, linking community characteristics with individual histories (Singer & Ryff, 2001). Research on the causes of low birth weight (LBW) is especially important. In 2002, more than two-thirds of infant deaths from all causes involved LBW babies, many of whom are also born too early (CDC, 2005). The most severely afflicted populations are African Americans and Puerto Ricans, for whom LBW and preterm delivery are the leading causes of infant death. During the past few decades, medical technology has been able to increase the survival rate for these high-risk infants, but there has been no reduction in the incidence of LBW. At present, then, any substantial decline in infant

mortality will require effective strategies to prevent preterm and LBW births (March of Dimes, 2005; Aber and Bennett 1997; CDCP, 1999). Unfortunately, the causes of preterm births, and the reasons for their concentration in certain racial and ethnic communities, have been very hard to pin down. Much more research is needed to shed light on the complicated medical, socioeconomic, and behavior factors that contribute to this problem.

- **Promote breastfeeding, with an emphasis on African American mothers.** A 2004 study published in *Pediatrics* showed that in the U.S., African American women are only 40 percent as likely to breastfeed as other new mothers. Another study reports that the prevalence of breastfeeding, along with low birth weight, contribute to higher infant mortality among African Americans (Forste, Weiss & Lippincott, 2001). A sustained campaign to promote breastfeeding is therefore a key strategy for narrowing the infant mortality gap, but the success of such an effort hinges on a better understanding of why so many African Americans opt to bottle feed their infants (Forsie, Weiss & Lippincott. 2001). This research should look at a variety of factors including quality of prenatal health education received and workplace policies that impede women's ability to choose breastfeeding.

2. Provide Pre-Pregnancy Education and Counseling to All Women and Men

There is growing consensus that efforts to reduce infant mortality need to begin before conception, with information and counseling for young women and men.

- **Provide health education and preconception counseling.** Health education may occur as part of school health curricula or as part of regular medical checkups. Because crucial aspects of development occur during the early weeks of pregnancy, before many women realize that they are pregnant, expectant mothers need information about behaviors that can affect their babies even before they conceive. Contraception counseling should also be part of a responsible health education program. Some studies have concluded that as many as 50 percent of all pregnancies, and 75 percent of pregnancies among women under the age of 20, are unintended (Glendening, 2001). Because such pregnancies may not be noticed for several months, or may be denied even when they are noticed, women in this situation often delay seeking prenatal care or end up having no prenatal care at all.

- **Increase awareness among prospective parents that good decision-making begins before their babies are born.** They need to understand how alcohol, nicotine, illicit drugs, and some medicines can compromise their babies' well-being. They also need to know about positive behaviors that can promote their babies' health, including good nutrition. For example, some birth defects involving the brain and central nervous system, including anencephaly and spina bifida, may be prevented when the mother takes a vitamin that includes folic acid prior to and early in her pregnancy (March of Dimes, 2004).
- **Provide effective monitoring and treatment of chronic diseases in women.** Chronic diseases in the mother, including hypertension, diabetes, renal disease, and urogenital infections, have been associated with poor birth outcomes. The time before conception is the optimal point at which these conditions can be identified and managed in order to improve a woman's chances of giving birth to a healthy child. Such measures might also lessen black/white discrepancies in infant mortality, since African American women are more prone to suffer from some conditions that affect birth outcomes, such as high blood pressure (Samadi & Mayberry, 1998).

3. Ensure Timely Prenatal Care for all Women

The Centers for Disease Control estimate that infant mortality is 50 percent higher for children born into families with incomes below the poverty threshold (Aber and Bennett, 1997). Much of this disparity reflects decreased access to prenatal care among the low-income women, in segregated urban areas, and among racial and ethnic minorities. Infants of mothers who begin receiving prenatal care in the first trimester have much better life chances than those whose mothers begin later or receive no prenatal care at all. Moreover, prenatal care is valuable as a link to other services, such as WIC. African American and Hispanic women are less likely to receive timely prenatal care than other expectant mothers (Annie E. Casey Foundation, 1999b). Very young women are also less likely to receive timely prenatal care: one in three teen mothers (ages 15-19) receives no prenatal care during the first trimester of pregnancy (National Center for Health Statistics, 2003).

- **Address the barriers to prenatal care.** One key to reducing infant mortality is to address the barriers that stand between low-income women and adequate prenatal care. Inevitably, some aspects of this problem will be more easily solved than others. Racial and ethnic minorities tend to live in medically underserved areas, and many African American and Hispanic families lack a regular source of care, making do with outpatient clinics or hospital

emergency rooms in times of crisis (USHHS, 2001a). Nevertheless, according to a study by the Agency for Health Care Policy and Research, low-income pregnant women are more likely to seek and be satisfied with prenatal care if they can avoid long waiting time, see providers who explain procedures, and have access to ancillary services, especially substance abuse services and childbirth education. Increasingly, health professionals have also begun to understand the need for “culturally competent providers”—for instance, medical personnel who speak the patient’s primary language (NCEMH, 2000).

- **Ensure that all eligible individuals receive Medicaid and State Child Health Insurance Program (SCHIP) services.** In 2000, 32.0 percent of Hispanics, 18.4 percent of African Americans, and 9.7 percent of Non-Hispanic Whites lacked health insurance coverage. According to one study, uninsured women are twice as likely as the national average to delay prenatal care, and four times more likely to get none at all (USHHS, 2000). Both Medicaid and SCHIP offer excellent coverage for preventive and primary health care, but experts say that neither currently works for families as well as it should, and many eligible people, particularly minority families, are not enrolled (Rosenbaum & Johnson, 2000). Adding to this long-standing problem, many states recently have been scaling back SCHIP eligibility for low-income children and pregnant women.
- **Focus on timing and content.** Research shows that it is not just the number of prenatal visits that counts, but also the timing and content of those visits. For example, the Los Angeles Preterm Birth Prevention Program has been credited with a 19-percent reduction in the preterm birth rate among program participants at a time when rates were increasing in Los Angeles and nationwide. Geared to expectant mothers at high risk of poor pregnancy outcomes, the program focused on behavior modification (i.e., smoking cessation, nutrition, and appropriate weight gain), stress reduction, and recognition of the signs and symptoms of preterm labor (Hobel 1996).
- **Help women make behavioral changes.** Cigarette smoking during pregnancy is the most important preventable cause of low birth weight. Programs that discourage teens and young women from starting to smoke, smoking cessation programs for pregnant women, and insurance coverage for smoking cessation treatments for pregnant women can help to reduce the number of low birth weight infants. Promising prevention strategies include education, restriction of advertising to young people, reduced access, increased cigarette taxes, and

restricted smoking in public places (Ringel & Evans, 2001; Blumenthal, 1999; March of Dimes, 1990).

4. Expand Access to Medical Care for Infants in the First Month of Life

Increasingly, the infant mortality rate represents “neonatal” deaths—babies who die before they are one month old.

- **Expand access to neonatal intensive care.** Most infant deaths occur in the first 28 days after birth (CDC, 2005; Healthy Start National Resource Center, 1999). However, advances in medical technology have significantly improved infants’ chances of surviving the first month of life. Infants have better survival rates in communities where neonatal intensive care is available (Annie E. Casey Foundation. 1999a).
- **Ensure timely, appropriate treatment for congenital anomalies.** Birth defects cause one in five infant deaths in the United States. Heart defects cause nearly one out of three of deaths in this category. Because of improvements in surgical treatment of these defects, many more affected babies survive and do well than ever before (March of Dimes, 2004). Ensuring that all infants, including those in low-income and rural communities, have access to state-of-the-art treatment can save lives.
- **Reduce the incidence of respiratory distress syndrome.** Premature babies, particularly those who weigh less than $3 \frac{1}{3}$ pounds and are born at less than 32 weeks, may develop respiratory distress syndrome (RDS). Of the 40,000 babies who develop RDS, about 1,400 die each year of (March of Dimes, 2001). Access to treatment is crucial. Since 1990, widespread use of surfactant treatment has greatly reduced the number of babies who die from RDS. Reducing the incidence of low birth weight would further reduce the number of infants with RDS.

5. Expand Access to Well-Baby Care and Parenting Education

After the first month, babies continue to need prompt, appropriate care. Illness and SIDS continue to claim the lives of babies throughout the first year.

- **Ensure access to well-baby and sick-baby care.** Well-baby check-ups can provide early detection and treatment of influenza and pneumonia, which can be fatal for infants (CDCP.

1999a). Efforts are needed to see that all uninsured children receive the health coverage to which they are entitled through the State Child Health Insurance Program (SCHIP) or Medicaid and that recent cut-backs do not erode access.

- **Intensify SIDS public education campaigns.** According to the American Academy of Pediatrics, the single most effective strategy for preventing SIDS is to persuade parents and other caregivers to put healthy babies to sleep on their backs or sides (American Academy of Pediatrics, 1992). In 1994, a national “Back to Sleep” education campaign was launched. The number of SIDS deaths in the first year of *life* dropped by 42 percent between 1992 and 1997 (CDCP, 1999b). However, changing parental practices takes time. The public information campaign that was launched in 1998 by the Department of Health and Human Services needs to be continued and intensified, particularly in certain rural and minority communities. Among American Indians, for example, the incidence of SIDS is much higher than it is in the general population and almost 2 1/2 times higher than it is among white babies in particular. African American babies are also more likely to die of SIDS than white babies.

6. Expand Programs for the Prevention of Child Abuse and Neglect

Child abuse and neglect kill hundreds of children every year—and not all cases are reported (Child Welfare League of America, 2001). As the occurrence of cases of true SIDS has decreased, the proportion of unexplained infant deaths attributable to fatal child abuse may be increasing. Estimates of the incidence of infanticide among cases designated as SIDS range from 1 to 5 percent (American Academy of Pediatrics, 2001).

- **Provide services to parents at risk for child abuse and neglect.** Preventing child abuse requires intensive efforts to address domestic violence, provide help and emergency care for distraught parents, and educate teen parents and single mothers on babies’ needs and vulnerabilities (CWLA, 2001).
- **Offer legal alternatives to desperate parents.** Among the most tragic cases of infant mortality involve babies who are abandoned by desperate new parents. Across the country, lawmakers and prosecutors are weighing changes in laws that they hope will reduce these cases of infant mortality. Laws vary, but are generally designed to allow parents to avoid prosecution for child abandonment by leaving their babies in safe places such as hospital emergency rooms (Whitaker, 2000).

Reducing the infant mortality rate should be high on the national agenda. Indeed, social scientists often use infant mortality—the rate at which babies die before their first birthday—as an overall indicator of a nation’s quality of life. In part, they see infant mortality is a good yardstick for gauging large trends in children’s and women’s health, the quality and availability of medical care, public health practices, and the overall economy (Glendening, 2001; NCEMH, 1998). At the same time, by using infant survival as their standard, researchers also reflect what most people feel intuitively: that a population’s well-being has to be judged in terms of the welfare of its youngest and most vulnerable members.

For more information:

Healthy Start Resource Center

(703) 524-7802

www.healthystart.net

March of Dimes Birth Defects Foundation

888-MODIMES (888-663-4637)

www.rnodimes.org

Back to Sleep Campaign to Prevent SIDS

National Institute of Child Health and Human Development

www.nih.gov/nichd

National Center for Health Statistics

(301) 458-4636

www.cdc.gov/nchs

National Healthy Mothers, Healthy Babies Coalition

(703) 836-6110

www.hmhb.org

National Sudden Infant Death Syndrome Resource Center, Health Resources and Services Administration

(866) 866-7437

www.sidscenter.org

Office of Minority Health Resource Center

(800)444-6472

www.omhrc.gov/omhrc

Zero to Three: National Center for Infants, Toddlers and Families

(202) 638-1144

www.zerotothree.org

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