That was then…This is now

The Problem Today: Examining the Risk Factors

Infant morbidity and mortality rates are indicators used to characterize the overall maternal and infant health within communities and states. Long-term consequences of adverse outcomes of pregnancy include emotional and financial stress to families in addition to the enormous costs of special education and ongoing healthcare needs of both children and adults with disabilities. The true determinants of a child's chances of survival lie within the joint efforts of the parent(s), community, and healthcare professionals. One way to better understand infant mortality is to examine its causes. Historically, the majority of infant deaths have been among infants born weighing less than 2,500 grams (or 5.5 pounds). Recent declines in infant mortality have been attributed primarily to improvements in obstetric and neonatal care such as pulmonary surfactants for preterm infants, placing infants on their backs when sleeping, and improved access to early prenatal care.

A report released in 2002 by the U.S. Department of Health and Human Services showed an increase in the number of women receiving early prenatal care, especially among Hispanic and non-Hispanic black women. The teenage pregnancy rate continues to decline, and the rate of cigarette smoking by pregnant women also continues to fall. Despite these successes, problems remain. Health disparities remain significant among racial and ethnic groups in several areas, and the mortality rate among black infants is more than double that of white infants.[14]

Advances in neonatal technology during the past two decades have significantly improved the survival chances of low and very low birth weight infants (1,500 grams or 3.3 pounds or less). Continued emphasis on public policies aimed at improving birth outcomes, particularly those initiated throughout the course of the Southern Regional Project on Infant Mortality, also have proved to be very cost-effective. Maternal interventions such as prenatal care can potentially save the family upwards of $60,000 of medical expenses in the first year if birth to a normal weight infant occurs. When developing programs or care plans, ideally, the needs of the mother and infant are determined and assessed during the beginning stages of family planning. This generally is not the case since half of all pregnancies in the United States are unplanned. Factors of barrier, such as culture, income, level of education, number of pregnancies, age, and race all play critical roles when determining maternal and infant health risks. Continuous involvement of the family and the interdisciplinary team is crucial because technology and medical procedures alone cannot save lives.

Despite the overall decline of infant mortality rates, the problem continues to be significant in the South. The average IMR among the SLC member states in 2001 (the rate for which all uniform data for the 16 SLC member states is available) was 8.0, higher than the national average of 6.8. Mississippi had the highest IMR (10.4) among the SLC states in 2001. Infant mortality statistics normally are presented using the linked birth/infant death data set by a variety of maternal and infant characteristics (Table 3).

Infant Mortality Rate Per 1,000 Live Births for the 16 Southern States 1980-2002										
State	1980-1984	1985-1989	1990-1994	1995-1996	1997	1998	1999	2000	2001	2002
Alabama	15.1	12.6	10.8	9.8	9.5	10.2	9.8	9.4	9.4	9.1
Arkansas	12.7	11.6	9.2	8.8	8.7	8.9	8.8	8.4	8.3	8.3
Florida	14.6	11.3	9.6	7.5	7.1	7.2	7.3	7.0	7.3	7.5
Georgia	14.5	12.7	12.4	9.4	8.6	8.5	8.2	8.5	8.5	8.9
Kentucky	12.9	11.2	8.5	7.6	7.3	7.5	7.1	6.7	5.9	7.2
Louisiana	14.3	11.9	11.1	9.8	9.5	9.1	9.2	8.9	9.8	10.3
Maryland	14.0	11.9	9.5	8.9	8.8	8.6	8.3	7.4	7.9	7.5
Mississippi	17.0	13.7	12.1	10.5	10.6	10.1	10.2	10.6	10.4	10.3
Missouri	12.4	10.2	9.4	7.4	7.6	7.6	7.7	7.2	7.4	8.5
North Carolina	14.5	11.8	10.6	9.2	9.2	9.3	9.1	8.6	8.5	8.2
Oklahoma	12.7	10.9	9.2	8.3	7.5	8.5	8.4	8.3	8.0	8.1
South Carolina	15.6	14.2	11.7	9.6	9.5	9.5	10.3	8.7	8.9	9.3
Tennessee	13.5	11.4	10.3	9.3	8.6	8.2	7.7	7.4	8.1	9.4
Texas	12.2	9.8	8.1	6.5	6.4	6.4	6.2	5.7	6.0	6.4
Virginia	13.6	11.5	10.2	7.8	7.8	7.7	7.2	6.8	7.4	7.4
West Virginia	11.8	10.7	9.9	7.9	9.6	8.0	7.6	7.6	7.3	9.1
United States	**12.6**	**10.6**	**9.2**	**7.6**	**7.2**	**7.2**	**7.1**	**6.9**	**6.8**	**7.0**

Source: U.S. National Center for Health Statistics, Statistical Abstract of the United States, *http://www.cdc.gov/nchs/about/major/natality/sites.htm.*

There are several risk factors that contribute to infant mortality. Infant mortality rates are higher for mothers who began prenatal care late or received none at all, are adolescents, have had less than 12 years of education, are unmarried, and/or smoke during pregnancy. These rates also are higher for male infants, multiple births, and infants born preterm or at low birth weight. These predisposing factors may not have direct effects on the states' ranking, but they do largely contribute to the variability of infant death rates.

Maternal Age

Infant mortality rates are highest for infants of teenage mothers and mothers aged 40 and older, and lowest for mothers in their late twenties and early thirties. In 2001, the national birth rate (live births per 1,000 women in specified group) for mothers between 15-19 years of age was 45.3, compared to 51.0 in 1985. Also in 2001, infants of the youngest adolescents (under 15 years) had the highest infant mortality rate of 16.1. For infants of mothers between 15-19 years of age, the rate was 10.0.[15] Studies suggest that the higher mortality risk for infants of younger mothers may be related to socioeconomic factors; maternal age under 16 may be a marker for poverty.[16] Teenage pregnancies also produce multifaceted consequences that impact both families and society since teenage mothers are less prepared physically, mentally, emotionally, and financially to be parents. Fourteen of the 16 SLC states had higher rates of births to teenage mothers than the national average in 2001. Mississippi remains the state with the highest teenage birth rate (66.8 in 2001) for the past 16 years (Table 4).

Birth Rates per 1,000 Teenagers 15-19 Years by State 1991-2001								
State	*1985	1990	1992	1994	1996	1998	2000	2001
Alabama	64.0	71.0	72.0	70.6	67.1	63.9	62.9	57.8
Arkansas	73.0	80.1	74.8	74.8	73.5	68.7	68.5	64.2
Florida	58.0	69.1	65.2	63.0	57.2	53.9	52.6	49.3
Georgia	68.0	75.5	74.2	70.6	66.8	64.0	64.2	60.9
Kentucky	63.0	67.6	64.8	64.2	61.2	57.2	55.3	51.4
Louisiana	72.0	74.2	76.1	74.5	66.8	65.6	62.1	57.8
Maryland	46.0	53.2	50.6	49.3	45.7	42.6	41.6	38.2
Mississippi	76.0	81.0	83.6	81.7	74.0	71.4	72.0	66.7
Missouri	54.0	62.8	63.1	58.6	53.2	51.0	48.8	46.1
North Carolina	57.0	67.6	69.2	65.3	62.3	59.8	59.9	55.2
Oklahoma	69.0	66.8	69.8	65.6	63.1	61.4	60.1	58.0
South Carolina	63.0	71.3	69.7	64.7	60.2	58.3	60.6	57.4
Tennessee	61.0	72.3	70.9	69.7	64.5	62.5	61.5	58.4
Texas	72.0	75.3	78.2	77.2	73.1	70.5	69.2	66.5
Virginia	46.0	52.9	51.7	50.5	45.4	43.4	40.8	39.4
West Virginia	54.0	57.3	56.3	54.3	50.5	49.6	46.4	45.5
United States	**51.0**	**59.9**	**60.3**	**58.2**	**53.5**	**50.3**	**48.5**	**45.3**

*Birth rates for 1985 have been rounded to the nearest whole number and are calculated by Child Trends, Inc., *http://www.childtrendsdatabank.org/indicators/13TeenBirth.cfm#estimates* .

Source: U.S. National Center for Health Statistics, *National Vital Statistics Report, Vol. 51, No. 2, December 18, 2002*

Marital Status

Marital status has been associated with health effects for both the mother and infant, and is seen as a proxy measure of the availability of social and economic support. Such support may have a positive effect on fetal growth through fostering healthy maternal behaviors. Births of infants to mothers who are not married have been shown to be at higher risk for poor outcomes. It is safe to assume that the majority of teenage mothers are unmarried, but no direct assumption can be made that most unmarried mothers are teenagers. The infant mortality rate for infants of married mothers between the ages 15-44 was 5.4 per 1,000 in 2001, as compared to 9.7 for infants of unmarried mothers in the same age group, almost 80 percent higher. This finding may be related to the unmarried mothers' lack of family support, financial instability, and emotional hardship.[17] Overall, birth rates to unmarried women have been steadily increasing since the significant drop that occurred between 1990 and 1995. The average rate of births to unmarried women among the SLC states was 39.0, higher than the national average of 33.8 in 2002. Mississippi continues to have the highest rates among the SLC states for more than a decade (Table 5).

Birth Rates per 1,000 Unmarried Women Ages 15-44 by State 1990-2002									
State	1990	1995	1996	1997	1998	1999	2000	2001	2002
Alabama	45.6	34.5	33.7	33.9	34.1	33.3	34.3	34.4	34.8
Arkansas	50.2	32.9	33.9	34.2	35.0	35.2	35.7	36.1	37.1
Florida	48.8	35.8	35.9	36.0	36.6	37.5	38.2	39.0	39.3
Georgia	50.2	35.2	35.0	35.4	36.2	36.6	37.0	37.3	37.8
Kentucky	35.8	28.5	29.8	29.5	30.1	30.4	31.0	31.7	33.0
Louisiana	56.7	42.4	43.4	43.9	44.9	44.8	45.6	46.3	47.0
Maryland	41.8	33.3	33.5	33.5	34.4	34.9	34.6	34.4	34.8
Mississippi	62.0	45.3	45.0	45.5	45.4	45.9	46.0	46.3	47.1
Missouri	43.6	32.1	33.2	33.1	34.1	34.1	34.6	34.8	35.2
North Carolina	44.5	31.4	32.0	32.2	32.8	33.2	33.3	34.3	34.5
Oklahoma	41.2	30.5	30.9	32.3	33.2	33.2	34.3	35.2	36.2
South Carolina	50.6	37.4	37.3	38.0	38.8	39.0	39.8	40.1	40.4
Tennessee	44.8	33.1	33.4	34.1	34.9	34.7	34.5	35.7	36.2
Texas	31.4	30.0	30.4	30.7	31.5	31.3	30.5	31.0	32.0
Virginia	38.3	29.3	28.8	29.3	29.8	29.7	29.9	30.3	30.3
West Virginia	34.2	30.5	31.3	31.3	32.4	31.7	31.7	32.5	32.9
United States	**43.8**	**32.2**	**32.4**	**32.4**	**32.8**	**33.0**	**33.2**	**33.5**	**33.8**

Source: U.S. National Center for Health Statistics, *Vital Statistics of the United States, Annual and National Vital Statistics Reports (NVSR), http://www.cdc.gov/nchs/births.htm.*

Gender of Infant

In 2001, the overall infant mortality for male infants was 7.5 per 1,000, 23 percent higher than the rate for female infants of 6.1.[18] The difference is due to the genetic make up of the infants (X-linked and Y-linked genes). The effects of the male hormones also may contribute to a lower level of immune components–resulting in slower lung development. The X chromosome carries immunity factors, and the female infants' chances of survival are increased by having two X chromosomes. Very early in embryonic development, females compensate for the double X chromosomes by randomly switching off one of the X chromosomes in each cell. The inactivation of one X chromosome gives females only one working copy of the genes located on the X chromosome. Fortunately for females, this random inactivation means they usually will be left with enough healthy copies of the X chromosome in operation. Since males have one Y chromosome and only one X chromosome and do not go through this process of random inactivation, male infants, as a result, are more vulnerable to respiratory distress, infectious diseases, prematurity, intrauterine hypoxia, and birth asphyxia.[19]

Infant mortality rates are higher for male than female infants in each racial and Hispanic origin group for all states. Differences are not statistically significant for infants of American Indian, Cuban, and Asian or Pacific Islander mothers.

Multiple Births

For plural births, the infant mortality rate was 32.4, more than five times the rate of 6.0 for single births in 2001.[20] Infant mortality rates for plural births were higher than rates for single births for all race and Hispanic-origin groups in each of the Southern states. The risk of infant death increases with the increasing number of infants in the pregnancy, such as twin or triple births. The number of multiple births has skyrocketed in recent years, up nearly one-third in the decade since 1989. Factors associated with the rapid increase in multiple births include an increase in births to older women (older women are more likely to have a multiple birth even without the use of fertility therapy), and the more widespread use of fertility-enhancing therapies such as fertility drugs and in-vitro fertilization.[21]

Birth Weight and Period of Gestation

Birth weight and period of gestation are the two most important predictors of an infant's subsequent health and survival. Infants born too small or too soon have a much greater risk of death and both short-term and long-term disabilities than those born at full term (37 to 41 weeks of gestation) or with birth weights of 2,500 grams (or 5.5 pounds) or more. Infant mortality rates were much higher for low birth weight infants than for infants with birth weights of 2,500 grams or more for all race and ethnic groups studied within all states. Eighty-six percent of infants weighing less than 500 grams (1.1 pounds) died within the first year of life–most within the first few days of life. An infant's chances of survival increase rapidly with increasing birth weight. At birth weights of 1,250-1,499 grams (2.75 – 3.3 pounds), about 95 out of 1,000 infants survive the first year of life. Infant mortality rates are lowest for infants born weighing between 3,500-4,999 grams (7.7 – 11 pounds). In 2002, the percentage of infants born prematurely (less than 37 weeks of gestation) was 12.1, the highest level seen in the last two decades. For this same year, the rate of low birth weight was 7.8, a 12 percent increase from 7.0 in 1990. The increases of the rates for low birth weight and preterm birth may be attributed to the rise in multiple births and changes in obstetrical practice such as greater reliance on induced labor. The use of induction of labor and cesarean delivery among births delivered preterm has risen substantially in recent years.[22]

Preterm labor and delivery can happen to any pregnant woman, but it happens more often to some women than to others. Behavioral risk factors for premature delivery include women who are pregnant with twins, triplets, or greater multiple births; women who have had a previous preterm birth; women who are African American; women younger than 17 or older than 35; women who are physically and mentally abused; women who work long hours with long periods of standing; women who smoke or use illicit drugs or alcohol; and women who received no prenatal care. Medical risk factors for preterm labor and delivery include urinary tract infections; vaginal infections; STD infections; high blood pressure; diabetes; obesity; clotting disorders (thrombophilia); underweight before pregnancy; and short time period between pregnancies (less than 6-9 months between birth and the beginning of the next pregnancy).

It is especially important for a woman to know these risk factors, the signs and symptoms of preterm labor, and what to do if they occur. This key knowledge may help save a baby's life.

Changes in the management of labor and delivery influenced at least in part by the increased use of medical technologies (e.g., ultrasound), and more aggressive management of premature rupture of the membranes (PROM), also may be related to the trends in premature and low birth weight infants. The increased use of assisted reproductive therapies (ART), such as in-vitro fertilization, has been strongly associated with the growth in multiple gestation pregnancies and also may be associated with an increased risk of low birth weight among single births. One percent of all births in 2001 were the result of ART procedures.[23]

The definitive cause(s) of premature births is unknown. One measure that can be taken to help reduce premature births is the prevention of unintended pregnancies in women who have had preterm infants. The probability of preterm birth increases by 30 percent to 70 percent for a woman who has had at least one previous premature infant.[24]

For the past decade, no significant improvements have been seen in the South in the reduction of infants born with a low birth weight. Alarmingly, the rate for this risk indicator is on a steady rise within all states in the Southern region (Table 6).

Percent of Low Birth Weight Infants of All Live Births 1991-2001											
State	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Alabama	8.7	8.5	8.7	9.0	9.0	9.3	9.2	9.3	9.3	9.7	9.6
Arkansas	8.2	8.2	8.2	8.2	8.2	8.5	8.4	8.9	8.6	8.6	8.8
Florida	7.4	7.4	7.5	7.7	7.7	7.9	8.0	8.1	8.2	8.0	8.2
Georgia	8.6	8.5	8.7	8.6	8.8	8.5	8.8	8.5	8.7	8.6	8.8
Kentucky	7.2	6.8	7.1	7.7	7.6	7.9	7.8	8.1	8.2	8.2	8.3
Louisiana	9.4	9.4	9.3	9.6	9.7	9.9	10.2	10.1	10.0	10.3	10.4
Maryland	8.1	8.3	8.5	8.5	8.5	8.6	8.8	8.7	9.0	8.6	9.0
Mississippi	9.7	9.9	10.1	9.9	9.8	9.9	10.1	10.1	10.3	10.7	10.7
Missouri	7.5	7.3	7.5	7.6	7.6	7.5	7.7	7.8	7.7	7.6	7.6
North Carolina	8.4	8.4	8.6	8.7	8.7	8.7	8.8	8.8	8.9	8.8	8.9
Oklahoma	6.6	6.7	6.7	7.0	7.0	7.4	7.3	7.2	7.4	7.5	7.8
South Carolina	9.2	9.0	9.3	9.2	9.3	9.2	9.2	9.5	9.8	9.7	9.6
Tennessee	8.8	8.5	8.8	8.8	8.7	8.8	8.8	9.1	9.2	9.2	9.2
Texas	7.1	7.0	7.1	7.0	7.1	7.2	7.3	7.4	7.4	7.4	7.6
Virginia	7.2	7.4	7.3	7.5	7.7	7.7	7.7	7.9	7.8	7.9	7.9
West Virginia	6.8	7.2	7.2	7.5	7.9	8.0	8.3	8.0	8.0	8.3	8.5
United States	**7.1**	**7.1**	**7.2**	**7.3**	**7.3**	**7.4**	**7.5**	**7.6**	**7.6**	**7.6**	**7.7**

table 6

Source: March of Dimes, Peristats*, http://peristats.modimes.org/printState.cfm* .

Prenatal Care

Improvements in the timing and quality of prenatal care often are the focus of efforts to decrease infant mortality, especially among women with high medical and demographic risk factors. Prenatal care includes patient education and early recognition of symptoms and risk factors that may require monitoring or intervention. In 2001, 83 percent of women received prenatal care within the first trimester compared to 76 percent in 1990. Also in 2001, infants of mothers who began prenatal care after the first trimester of pregnancy or not at all had an infant mortality rate of 8.5, which was 37 percent higher than the rate of those whose care began within the first trimester.[25] The infant mortality rate for infants whose mothers began care in the third trimester was lower than for those who began care in the second trimester.[26] This is because women who began prenatal care in the third trimester had to have a period of gestation of at least seven months, thus reducing the probability that the infant would be born preterm or of low birth weight. The relationship between month of initiation of prenatal care and length of gestation still remains complex; therefore, prenatal care data often are grouped into two categories: mothers who began care in the first trimester and those who began care after the first trimester or not at all (Table 7).

Percent of Mothers Beginning Prenatal Care in the First Trimester 1999-2002				
State	1999	2000	2001	2002
Alabama	83.2	82.8	84.4	82.9
Arkansas	79.0	79.7	79.8	79.6
Florida	83.9	83.7	84.1	85.4
Georgia	87.3	86.9	86.2	84.7
Kentucky	86.6	86.8	86.7	87.0
Louisiana	82.9	83.3	83.2	83.8
Maryland	87.0	86.4	83.7	84.1
Mississippi	81.5	81.3	82.7	83.9
Missouri	87.1	87.8	87.7	87.8
North Carolina	85.0	84.6	84.4	84.4
Oklahoma	80.5	79.1	77.4	76.8
South Carolina	80.7	79.4	79.2	78.4
Tennessee	84.3	83.1	82.8	82.8
Texas	79.3	78.8	80.3	80.6
Virginia	85.3	85.2	85.1	85.2
West Virginia	85.1	86.1	86.3	85.9
United States	**83.2**	**83.2**	**83.4**	**83.8**

table 7

Source: U.S. National Center for Health Statistics, *National Vital Statistics Reports,* Volumes 49 and 50.

Maternal Education

Infant mortality rates generally decreased with increasing maternal educational levels. This pattern may reflect not only the education itself but also socioeconomic differences because women with more education tend to have higher family income levels. In 2001, the highest infant mortality rates occurred among infants of mothers with less than 12 years of education.[27]

Maternal Smoking

A 1997 study reported in *The Archives of Pediatrics and Adolescent Medicine* of The Journal of the American Medical Association claims that 6,200 children die each year from lung infections, low birth weight, Sudden Infant Death Syndrome (SIDS), and burns caused by their parents' smoking. Those children who survive suffer other secondary ailments with treatment costs estimated at $4.6 billion annually (Table 8). Tobacco use during pregnancy causes substances such as nicotine, hydrogen cyanide, and carbon monoxide to pass through the placenta into the fetal blood supply. These substances restrict the growing infant's access to oxygen and can lead to adverse pregnancy and birth outcomes, such as low birth weight, preterm delivery, intrauterine growth retardation and, ultimately, infant mortality. The overall mortality rate for infants of smoking mothers

Maternal Smoking Rate for All Age Groups and Related Data in the South 2002

State	Smoking Rate	Affected Births Each Year	Smoking-Related Healthcare Costs Each Year (Millions)	Decline Rate Within the Past Five Years
Alabama	12.6%	7,600	$8.7	11.1%
Arkansas	18.6%	6,800	$7.8	9.9%
Florida	9.1%	18,700	$21.4	11.1%
Georgia	8.3%	11,000	$12.6	10.7%
Kentucky	24.0%	13,100	$15.0	12.8%
Louisiana	10.1%	6,600	$7.5	11.4%
Maryland	8.8%	6,400	$7.3	9.3%
Mississippi	12.6%	5,300	$6.1	11.9%
Missouri	18.3%	13,800	$15.8	11.9%
North Carolina	14.0%	16,500	$18.8	12.4%
Oklahoma	17.9%	8,900	$10.2	11.8%
South Carolina	12.6%	7,000	$8.0	12.3%
Tennessee	17.2%	13,400	$15.3	11.6%
Texas	6.5%	23,700	$27.1	10.7%
Virginia	8.0%	7,900	$9.0	12.4%
West Virginia	26.7%	5,400	$6.2	11.0%

table 8

Source: The National Center for Tobacco-Free Kids, *www.tobaccofreekids.org.*

among the SLC states was 10.5 in 2001, 62 percent higher than the rate of 6.5 for nonsmoking mothers. Data reveals the percentage of women who smoked during pregnancy was lowest for Chinese mothers and highest for Native American mothers.[28]

Folic Acid Intake

Neural tube defects (NTDs) are among the most serious types of birth defects, and the identification of the effectiveness of adequate folic acid intake in preventing NTDs is one of the most promising public health developments in recent years. The neural tube is an early embryonic structure that develops into the brain, spinal cord, and supporting bone structures. Neural tube defects occur when the neural tube fails to develop properly. These defects occur very early in pregnancy, between the 17th and 30th day after conception, usually before most women know they have become pregnant.[29]

The two major NTDs are anencephaly and spina bifida. Anencephaly is a fatal condition in which the brain is absent or fails to develop completely. Anencephalic pregnancies often result in fetal death, and live-born anencephalic infants die soon after birth. Spina bifida occurs when the lower end of the neural tube fails to close, resulting in improper development of the spinal cord and vertebrae. A sac containing spinal fluid or a portion of the spinal cord may protrude from the back. A large percentage of babies born with spina bifida survive infancy but may face varying degrees of morbidity and disability including paralysis of the legs, hydrocephalus, bladder and bowel incontinence, and learning disabilities.[30]

In 1992, the CDC concluded that between 50 percent and 70 percent of NTDs could be prevented by a daily consumption of 400 micrograms (0.4 mg) of folic acid before and during early pregnancy. Folate is one of the B vitamins and occurs naturally in many foods, including eggs, beans and peas, oranges, and many green leaf vegetables, but it is difficult for women to consume the recommended amount through diet alone. Most multi-vitamins contain the recommended amount of folic acid. The U.S. Food and Drug Administration (FDA) authorized optional folic acid fortification of enriched grain products that began in March 1996 and mandatory fortification that began in January 1998. Fortification was expected to add 100 micrograms of folic acid to the average daily diet.

A Glance at Public Health

For more than a decade, the Southern Regional Project on Infant Mortality dedicated its time and resources advocating for pregnant women and children in the South. The Project examined the causes for the growing disparity between black and white infant mortality rates, identified the more prevalent social and physical contributors to infant mortality and offered many effective policy and program interventions to reduce infant mortality. Most importantly, it encouraged many states to develop initiatives which have had tremendous impacts on healthcare services utilization today, particularly among poor and low-income families in the South. Many of the programs and/or initiatives that were a joint endeavor of the Southern states and the Project either are continuing to thrive today or became the foundation for the development of various current programs.

An important contributor to the health of pregnant women, children, and families is the public health system. Public health caseloads have decreased since expansion of the Medicaid program that permitted low-income individuals to receive care from private medical practices.[31] However, public prenatal clinics continue to be the largest and the most important provider of prenatal care services for low-income women and infants in the South.

Maternal and child health plays an important role in society. By ensuring that mothers and their infants get the best healthcare possible, much of the pain, suffering, and medical expenses can be alleviated for both the family and society as a whole. With this knowledge about infant mortality, many states have developed high-quality resources that analyze data, established public health campaigns and community prevention programs, and developed tools for staying abreast of new developments and intervention strategies.