Mississippi State Department of Health

Mississippi Morbidity Report

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Reducing Infant Mortality in Mississippi

The infant mortality rate (IMR), the number of deaths occurring in the first year of life per 1,000 live births, is a widely used proxy for the health status of a nation. In 2011 the U.S. infant mortality rate reached a new low of 6.05 deaths per 1000 births. While this reflects a 12% improvement since 2005, the US still ranks poorly compared to other industrialized nations. State and Federal health partners, as well as the March of Dimes and other non-profit organizations, are working together towards the goal of decreasing the national IMR to 5.5 by 2015, and 4.5 by 2020.

The major causes of infant mortality in the United States have remained fairly stable over the past decade (Table). The most common cause of infant death is congenital malformations (birth defects), accounting for 20% of all infant mortality. The second most common cause is disorders related to short gestation (less than 37 weeks gestation) and low birth weight (<2500gms) which account for almost 17% of infant mortality. The third greatest contributor to the national IMR is Sudden Infant Death Syndrome (SIDS)/Sudden Unexpected Infant Death (SUID) accounting for almost 10% of infant deaths. In Mississippi in 2011, the leading causes of infant mortality included birth defects, low birth weight and prematurity, SIDS, maternal complications during pregnancy and accidents. Although as a cause of death listed on the death certificate prematurity is the second leading cause of infant mortality, 6 of the top 10 causes may be considered complications of prematurity, and in 2011, in Mississippi, the 11.8% of infants born at less than 2500 grams account for 68% of the infant mortality. The Mississippi State Department of Health (MSDH) 2012 Infant Mortality Report may be accessed at http://msdh.ms.gov/msdhsite/_static/resources/5184.pdf

Table: Ten Leading Causes of Infant Mortality, US 2010

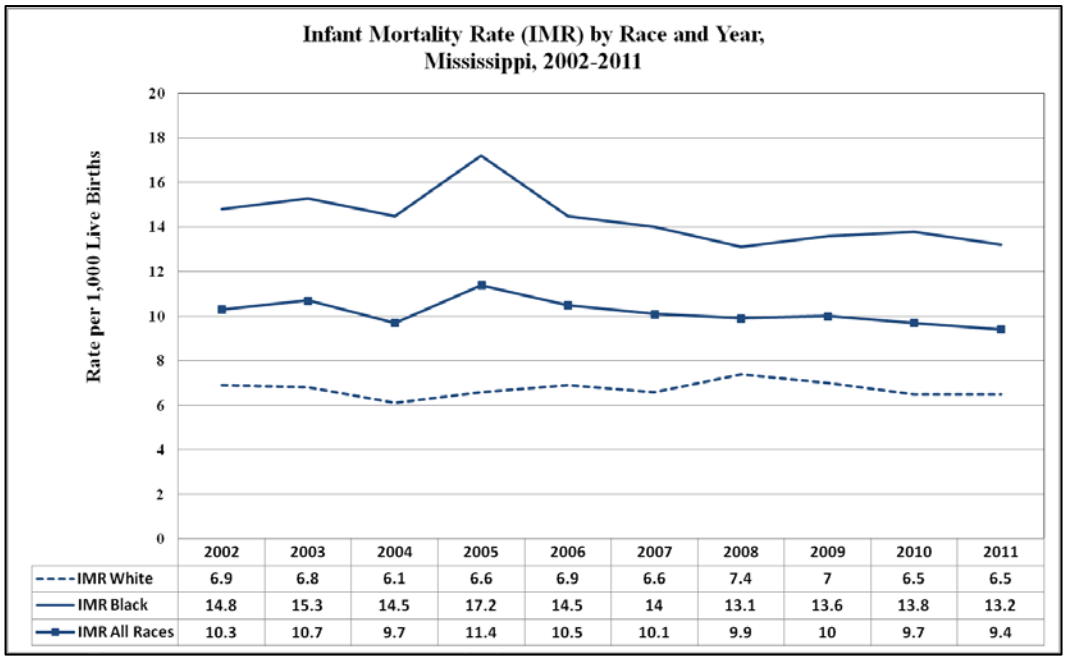
1. Congenital malformations, deformations and chromosomal abnormalities
2. Disorders related to short gestation and low birth weight, not elsewhere classified
3. Sudden infant death syndrome
4. Newborn affected by maternal complications of pregnancy
5. Accidents (unintentional injuries)
6. Newborn affected by complications of placenta, cord and membranes
7. Bacterial sepsis of newborn
8. Diseases of circulatory system
9. Respiratory distress of newborn
10. Necrotizing enterocolitis of newborn

Mississippi has the highest infant mortality rate among the fifty states. In 2011 the IMR for the state was 9.4 deaths per 1,000 live births. This high IMR is in part driven by a higher than average rate of preterm births in Mississippi at 17.6% compared to the 12.0% national average in 2010. In Mississippi, as is observed across the US, there are considerable disparities in infant mortality by racial and ethnic background with the IMR among Blacks reaching 13.2, compared to that of Whites at 6.5 (Figure). Infant deaths are also more common among teen mothers and lower-income women insured by Medicaid.

Strategies for Reducing the Infant Mortality Rate: Infant mortality is influenced by the health of the mother before and during pregnancy, the care received during delivery and the newborn period and the health, and the safety and well-being of the infant during the first year of life. Given these various influences across the life-course, reducing infant mortality requires multiple approaches. The strategies set forth by a collaboration between many Federal and state partners to include the March of Dimes have the capacity to produce a considerable decline in Mississippi's IMR if implemented consistently throughout the state. Two strategies will be discussed in this issue, with the remaining to be discussed in a following issue.

1. Reducing elective deliveries before 39 weeks: It is recommended that non-medically indicated deliveries not occur prior to 39 weeks gestation. Babies delivered prior to 39 weeks without a medical indication (elective)

Figure



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IMR White	6.9	6.8	6.1	6.6	6.9	6.6	7.4	7	6.5	6.5
IMR Black	14.8	15.3	14.5	17.2	14.5	14	13.1	13.6	13.8	13.2
IMR All Races	10.3	10.7	9.7	11.4	10.5	10.1	9.9	10	9.7	9.4

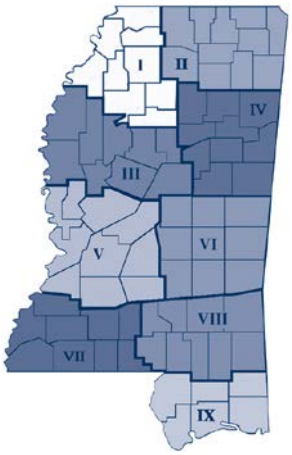
have increased rates of adverse outcomes and death. In Mississippi in 2011, the IMR for children born at 37 through 38 weeks was 4.4 per 1000 live births, while the infant mortality for those born at 39 weeks plus was 3.6. Other complications include increased respiratory complications, mechanical ventilation, NICU admissions, sepsis, and hypoglycemia. Careful consideration should be given to elective deliveries performed at any gestational age, as both induction and cesarean delivery present additional risks to the mother and fetus when compared with spontaneous labor. In the presence of a medical or obstetrical indication, the benefits of delivery may outweigh the risks of extending pregnancy, and delivery may be indicated.

The number and rate of infants born at 37 through 38 weeks of gestation has increased over the past 10 years from 28.1% to 32.5%. In closer examination of this phenomenon, using birth certificate data, the increase of the rate of delivery at 37 through 38 weeks is among infants with no documented medical problem. There has been no increase in the percent of deliveries prior to 37 weeks. In addition the rate of infants born by C-section in Mississippi has increased markedly in the past ten years from 29.9% in 2001 to 38.4% in 2012.

Health care professionals interested in decreasing non-medically indicated early deliveries, and improving birth outcomes may find more information at the March of Dimes prematurity prevention website at https://www.prematurityprevention.org/portal/server.pt . This website contains articles regarding the evidence for risk associated with early elective delivery, educational materials, hospital policy toolkits (both a free download and a purchasable document) and other materials.

2. Expanding preconception care: Preconception care (including interconception care) has been recognized as the "most important prenatal visit"; however, only 20%-50% of physicians routinely offer preconception care—specifically addressing pregnancy health issues prior to conception—and low-income women or women on Medicaid may be less likely to receive this care.

Preconception care focuses upon maximizing a woman's health status before pregnancy by promoting preventive practices, such as taking folic acid and addressing high risk medical and social conditions that are known to contribute to poor obstetric outcomes. Furthermore, preconception care includes providing family planning counseling and services to prevent unintended pregnancies. Pregnancies that are unintended are at higher risk of resulting in miscarriage, preterm birth and with low birth weight infants. Medical visits with women of reproductive age should include establishing a 'Reproductive Life Plan' to help women plan the timing of their pregnancies and establish health goals before pregnancy. Information about preconception health and reproductive life planning is available through the Centers for Disease Control at http://www.cdc.gov/preconception/reproductiveplan.html.



Mississippi
Provisional Reportable Disease Statistics
June 2013

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	June 2013	June 2012	YTD 2013	YTD 2012
Sexually Transmitted Diseases	**Primary & Secondary Syphilis**	2	0	0	2	3	0	1	1	0	**9**	20	40	92
	Early Latent Syphilis	0	2	1	1	2	2	1	1	1	**11**	19	93	127
	Gonorrhea	-	-	-	-	-	-	-	-	-	†	537	†	3,349
	Chlamydia	-	-	-	-	-	-	-	-	-	†	1,781	†	12,230
	HIV Disease	4	2	2	4	17	3	3	4	3	**42**	45	275	289
Myco-bacterial Diseases	**Pulmonary Tuberculosis (TB)**	1	0	2	0	0	0	2	0	1	**6**	5	37	35
	Extrapulmonary TB	0	0	0	0	0	0	0	1	0	**1**	0	1	6
	Mycobacteria Other Than TB	4	2	2	1	4	3	2	3	8	**29**	33	193	146
Vaccine Preventable Diseases	**Diphtheria**	0	0	0	0	0	0	0	0	0	**0**	0	0	0
	Pertussis	0	0	0	0	2	0	0	0	0	**2**	4	26	45
	Tetanus	0	0	0	0	0	0	0	0	0	**0**	0	0	1
	Poliomyelitis	0	0	0	0	0	0	0	0	0	**0**	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	**0**	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	**0**	0	0	0
	Hepatitis B (acute)	0	0	1	0	0	0	0	1	1	**3**	5	22	38
	Invasive *H. influenzae* disease	2	0	0	0	0	1	0	0	0	**3**	1	16	16
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	0	**0**	1	2	4
Enteric Diseases	**Hepatitis A (acute)**	0	0	0	0	0	0	0	0	0	**0**	0	1	2
	Salmonellosis	11	15	6	10	22	6	4	5	12	**91**	149	270	397
	Shigellosis	2	1	3	0	7	1	0	3	3	**20**	20	77	132
	Campylobacteriosis	1	1	1	0	0	0	1	2	1	**7**	11	49	41
	E. coli O157:H7/STEC/HUS	0	0	0	0	0	1	0	1	0	**2**	3	11	10
Zoonotic Diseases	**Animal Rabies (bats)**	0	0	0	0	0	0	0	0	0	**0**	0	1	1
	Lyme disease	0	0	0	0	0	0	0	0	0	**0**	0	0	1
	Rocky Mountain spotted fever	0	0	0	0	0	0	0	0	0	**0**	5	2	10
	West Nile virus	0	0	1	1	0	0	1	2	0	**5**	4	7	4

*Totals include reports from Department of Corrections and those not reported from a specific District.
†Data not available.

Interconception care offers an ideal opportunity to target women who have had a previous pregnancy with an adverse birth outcome or are at risk for adverse outcomes in future pregnancies, including women who have had: stillbirths or miscarriages, preterm births, infants that are low birth-weight or with congenital abnormalities; women with chronic disease, and women who smoke, drink alcohol or use illicit drugs. Post-partum visits should be used to review and address these high-risk conditions. The Mississippi State Department of Health offers the The Perinatal High Risk Management/Infant Services System (PHRM/ISS) to provide enhanced services to Medicaid-eligible pregnant/postpartum women and infants with high-risk pregnancies, including case management, psychosocial and nutritional counseling, home visits, and health education. Ultimately, improving the health of mothers will lead to improved pregnancy outcomes, healthier babies and reduced rates of preterm birth and infant death in Mississippi.

Strategies that will be described in an upcoming MMR issue are: Reducing Sudden Infant Death Syndrome/Sudden Unexplained Infant Death (SIDS/SUID), Increasing Smoking Cessation in pregnant women, enhancing regional perinatal care, and the use of 17-hydroxyprogesterone to decrease the likelihood of preterm delivery.

References available on request

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Poisoning Reports

In Mississippi poisonings are a class 2 reportable condition, reportable within 1 week of diagnosis. To report poisonings, including potential poison exposures, drug overdoses and adverse reactions, and exposures to venomous animals and insects, please call the **Mississippi Poison Control Center at 1-800-222-1222.**

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