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# Infant Mortality

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***Racial and Socioeconomic Disparities in United States Infant Mortality: We are Failing our Women and Children.***

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Despite an overall downward trend in neonatal and post neonatal deaths in recent years, the United States continues to rank poorly among developed nations for infant mortality. According to the Central Intelligence Agency's (CIA) World Factbook, the United States ranked 180 out of 221 countries in 2007 (with the lowest infant mortality rate belonging to the country ranked 221). Cultural factors have combined with continuing racial and socioeconomic disparities among U.S. women to cause this disheartening truth (Lumley, 2003).

Disparate pregnancy outcomes among women of different racial and ethnic backgrounds are significant. The infant mortality rate (IMR) for black women was almost double that for women overall in 2004 (13.60 per 1000 for black women, and 6.78 per 1000 for women overall). When we realize that people who consider their race to be black or African American made up 12.3% of the U.S. population in the 2000 census, an IMR of two times the overall IMR is quite significant (Grieco & Cassidy, 2001). It is not only black women who have a higher than average IMR, but women who are Puerto Rican or Alaskan native / Native American Indian also have higher than average IMRs, at 7.82 and 8.45, respectively (MacDorman, et al, 2007).

One of the most important factors affecting infant mortality is socioeconomic disparity. How could SES affect mortality? Wise gives an excellent example. Three groups were each exposed to a potential life threat, group I, II, and III. Of the 143 people exposed in group I, four died - a 3% mortality rate. Ninety-three people were exposed in group II, with 15 deaths – a 16% mortality rate. Group III had 179 people exposed and 81 deaths – for a 45% mortality rate. The groups had differing mortality rates because they had different access to life-saving interventions. This data was generated from the passenger list of the Titanic, representing first, second, and third class females. Since the life boats were loaded by class and deck, first class passengers fared far better than their second and third class counterparts. Wise theorizes that social interactions are transformed into pathologic states which result in the death of infants and children. Mayer et al. show that infants born in places with more inequality die more frequently than those born in places with less inequality.

The following is a list of factors that increase the risk for infant mortality in the United States in the present day: prior preterm delivery; presence of birth defect; young maternal age; prior pregnancy losses; relative social disadvantage; race; income and housing status; parity; tobacco and cocaine use; presence of sexually transmitted infection (STI) or urinary tract infection (UTI); maternal stress; lack of prenatal care; chronic medical conditions; poor nutrition (Lumley, 2003 & Wise, 2003). Each of these factors is made worse by SES disparity.

The presence of a birth defect creates an increased risk for infant mortality, and there is an increased risk of birth defects associated with lowering SES (Yang et al., 2007). There are several theories relating to the etiology of this problem. Perhaps women with lower SES have less of an opportunity to take folic acid supplementation during their child-bearing years, thus increasing their risk of neural tube defects like spina bifida. Another idea is that lower SES women have fewer opportunities to find out whether their fetus has a birth defect and either treat the condition in utero or opt for termination of the pregnancy. Additionally, women who have a child born with a birth defect and are unaware of the condition until delivery have infants with higher IMRs due to lack of preparation and resources at delivery. There is also the possibility of harm being done to a fetus that is delivered vaginally if a birth defect like spina bifida or an

omphalocele (presence of abdominal internal organs, especially intestines, outside the body) is present.

Women with lower SES sometimes have an inherently higher risk of problems with their pregnancy than women with higher SES. Women with lower SES are more likely to take jobs with possible exposure to toxic substances, which could potentially be teratogenic (Wise, 2003). Due to many factors, women who are disadvantaged are more likely to experience a pregnancy later in life than those with more financial stability. This increases the risk for chromosomal abnormalities like non-disjunction, which causes problems like Down syndrome.

The association of young maternal age with poor pregnancy outcomes is well documented. Similarly, advancing maternal age is associated with poor pregnancy outcomes (Misra & Ananth, 2002). There is a traditional "U" shaped curve when infant mortality is graphed as a function of maternal age (March of Dimes, 2007). Women with low SES are at a greater risk of experiencing both situations than women with high SES. Young women with low SES often have trouble delaying sexual intercourse due to social pressures and lack of agency in their sexual lives. Women who are financially dependent on men are less empowered as sexual decision makers and are thus more likely to bear children they are unprepared for. Older women with low SES face many of the same challenges as younger women, except they must also worry about their children's lives when making decisions. These women must sometimes decide between asserting themselves in their sexual lives and keeping a roof over their children's heads. The outlook is not entirely bleak, however. Important research by DuPlessis et al, showed that the impact of maternal age on IMR did not persist when other variables like birth weight were controlled for. This means that these women, while at a higher risk of having infants with LBW, have no other inherent risk. Their age makes these women susceptible to having infants that weigh less and are younger, but their infants are not dying at a higher rate than other infants with similar birth weights and gestational ages.

Lack of prenatal care is a risk factor that is cited over and over again when talking about infant mortality rates. There are obvious benefits to seeking prenatal care, including early detection and treatment of birth defects, availability of supplements for women whose diets are deficient in certain vitamins or minerals, monitoring of the mother's health, and monitoring of the fetus' health. Interestingly, there are certain types of women who obtain prenatal care, and those women are unlikely to have high rates of infant mortality as a group. In fact, when factors such as maternal age, education and martial status are controlled for, the positive effects of prenatal care are reduced (Matterson et al., 1998). This implies that socioeconomic deprivation is more powerful than previously thought.

Smoking is a risk factor that has been traditionally associated with lowered birth weight. Women with lower educational levels are more likely to smoke during pregnancy than those with higher educational levels. In 1992 women with an educational level less than high school were 7.1 times more likely to smoke during their pregnancies than women with a college education. This disparity has only increased with time. In 2002 the difference was 11.8 times. (Singh & Kogan, 2007).

Risks such as presence of sexually transmitted infections and urinary tract infections, prior pregnancy losses, and chronic medical conditions are related to access to healthcare. Women's health has to be an overall priority in order for women to have healthy infants. A woman who takes care of herself and sees a primary care physician regularly will have less STIs, UTIs, and her chronic medical conditions will be under control. Hopefully she will also be

counseled about the importance of taking folic acid supplementation before she becomes pregnant.

Infant mortality is always a tragedy because it can be prevented. Infant mortality becomes more of a tragedy when it is spurred forth by disparities that are created by a society that does not make the health of all women and children a priority. The United States has seen great reductions in the infant mortality rate since the industrialization of our economy allowed us to see infant mortality as a problem worthy of our attention. Hopefully a new day is dawning when we can examine how to begin to make strides against disparities in our health outcomes.

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