

Infant Mortality: Task Force Strategies & Educational Initiatives

Introduction

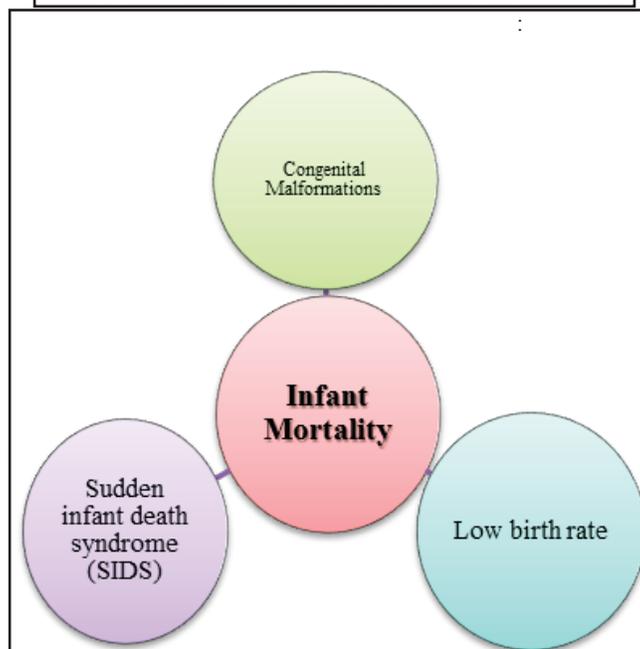
This issue of Facts on KIDS in South Dakota was written by Anya Point. It was an Independent Study project for a Health Services Administration class at the University of South Dakota. The paper focused on infant mortality along epidemiologic dimensions of time, place, and person. The paper analyzed South Dakota's infant mortality rates and the six specific strategies aimed at lowering the rate

Introduction

The number of deaths occurring in the first year of life per 1,000 live births is called the infant mortality rate (IMR). The IMR indicates the level of health in a country¹. The rate is an important measurement used to compare countries around the world and to determine specific populations that require more intervention. The United State's IMR is 6.6 deaths per 1,000 live births, compared to the Organization for Economic Cooperation and Development (OECD) average of 4.6².

The health care system is gradually shifting to a new paradigm with a focus on individual needs and preventative health. This paradigm is important for population health. If society can learn how to utilize preventative medicine, then we can minimize the costs associated with reactive medicine and the resources required to treat chronic conditions. The paradigm shift is important to the infant mortality rate because providing education for mothers-to-be and enhancing their understanding of risk factors before, during, and after pregnancies may be significant components in reducing the IMR. The three major causes of infant mortality include: congenital malformations, low birth rate, and sudden infant death syndrome (SIDS)³.

Three Main Causes of U.S. Infant Death:



The state of South Dakota has an IMR that is higher than the national average, identified as 7.0 infant deaths per 1,000 live births. Governor Dennis Daugaard has taken action and organized a Task Force to study infant mortality and develop strategies to reduce the IMR. The ultimate goal is to improve birth outcomes and the health of infants⁴. The following are the recommendations designed by the Task Force to reduce the IMR:

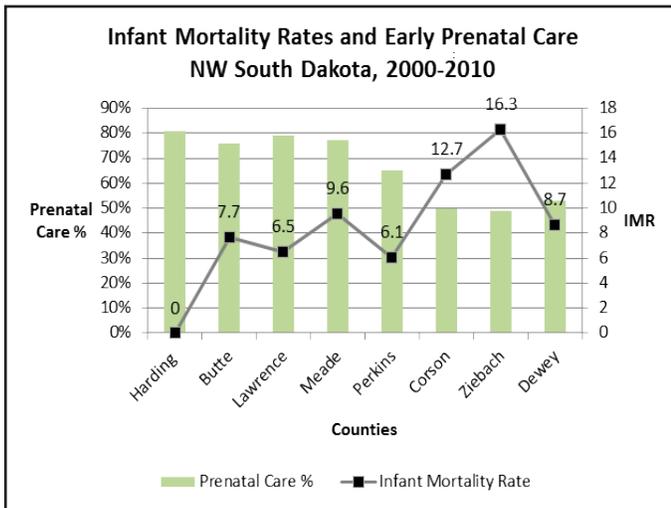
- Improve access to early, comprehensive prenatal care
- Promote awareness and implementation of safe sleep practices
- Develop community-based systems of support for families
- Conduct statewide education campaigns to reduce infant mortality
- Develop resources for health professionals specific to infant mortality prevention
- Improve data collection and analysis

Improve access to early, comprehensive prenatal care

For purposes here, the state of South Dakota was divided into four regions (Northwest, Southwest, Northeast, and Southeast) and shows the correlation between IMR and the percent of early prenatal care. The goal of this visual representation was to identify whether a correlation does exist between women who received early prenatal care in the specific county and the infant mortality rate reported in that county. The decision to utilize prenatal care early in the pregnancy is a behavioral choice and could be based on the level of education a woman received and/or the level of income. Therefore, it is important to understand which counties have a reduced level of early prenatal care to establish an intervention to alter the

modifiable factor⁵.

Northwest South Dakota



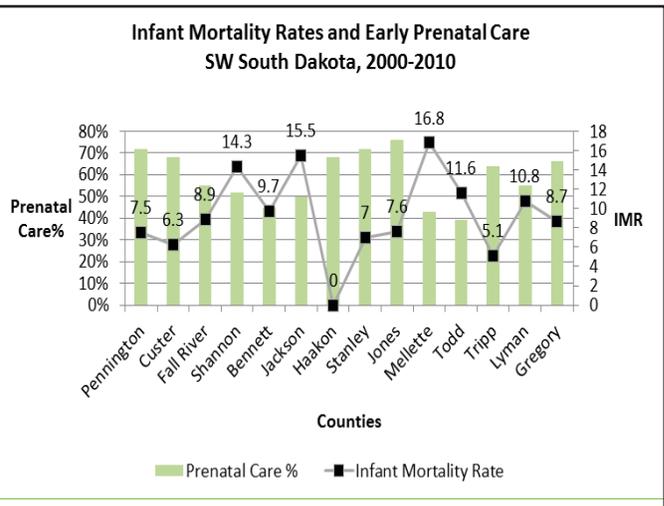
In the Northwest region, Ziebach County has the highest infant mortality of 16.3 and the lowest prenatal care of 49%. Furthermore, based on 2011 data acquired from the United States Census Bureau, 73.1% Ziebach County’s population consists of American Indian and Alaska Native persons⁶. Based on research, the American Indian population in South Dakota has an IMR that is twice as high as the white population’s IMR⁷.

Also, Ziebach County has been reported as the poorest county in America because 60% of the population lives below or at the poverty line⁸. The following challenges exist for Ziebach County: lack of resources and health care personnel, incomplete access to health care services, and limited job opportunities. For example, one of the resources lacking in Ziebach County is a maternal ward in the clinic⁹. A needs assessment needs to be conducted to address other critical and necessary factors before moving forward in improving birth outcomes in Ziebach County.

Southwest South Dakota

When examining the Southwest region of South Dakota, the county that stands out is Haakon County because it has an infant mortality rate of 0 and a 68% use of prenatal care. Based on the information from the United States Census Bureau, Haakon County is reported as having a 94.4% white population in 2011¹⁰. In addition, the county has 11.3% of persons who are below the poverty level and access to Philip Health Services. Philip Health Service has a group of providers that offer health care services.

Haakon County’s infant mortality rate of 0 presents opportunities for discussion and further research. Haakon County is reported as having a 68% use of prenatal care and access to health care services. These two factors can be the contributing causes to the infant mortality rate of 0. Research has shown that a mother should receive prenatal care during her pregnancy because it directly makes an impact on the baby¹¹. A baby without prenatal care is 8 times more likely to die than a baby that was exposed to prenatal care during the mother’s pregnancy; this is a significant outcome providing the value of prenatal care¹². Furthermore, a mother who has access to health care services has the opportunity to consult a doctor and build a relationship with the doctor during her pregnancy. The doctor will then be able to ensure infant’s safety at the designated check-up times. Prenatal care and the proactive interaction with a provider are examples of the paradigm shift to preventative medicine.

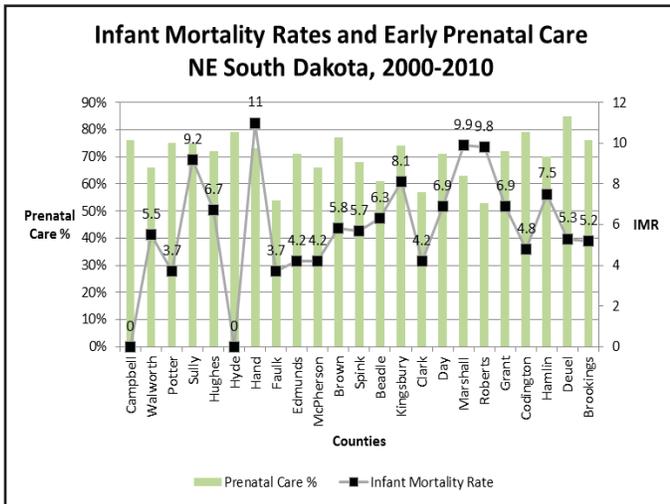


Northeast South Dakota

Hand County located in the Northeast region of South Dakota has an interesting correlation between an IMR of 11 and a 73% use of prenatal care. This specific county demonstrates that other factors, besides the use of prenatal care, are important when analyzing the infant mortality rate. The following are factors that contribute to the infant mortality rate¹³:

- Access to health care services
- Availability of educational resources and awareness campaigns
- Presence of health disparities
- Support from the community

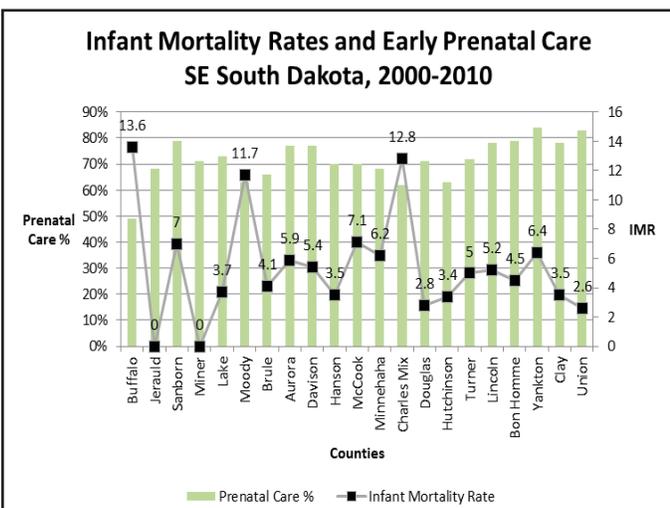
Avera Hand County Memorial Hospital, located in Miller, South Dakota, offers a variety of health care services to Hand County’s population. Hand



County's population includes 98.5% white persons and 14.0% of all persons below the poverty level in 2011¹⁴. Hand County has access to health care services and a reduced level of poverty and health disparities compared to other counties based on the data presented. Therefore, further research is necessary before identifying why a disconnection exists between a higher than average IMR and the use of prenatal care.

Southeast South Dakota

Union County is one of the counties in the Southeast region of South Dakota that has a high use of prenatal care and an infant mortality rate of 2.6. The Union County population has access to health care services through Sanford Vermillion Hospital and consists of



96.2% white persons. In addition, only 4.9% of all persons in Union County are below the poverty level¹⁵. The correlation between an IMR of 2.6 and an 83%

use of prenatal care is evident in this particular case; however, understanding the comprehensive process in achieving this outcome is crucial.

A beneficial analysis would be to explore Union County's practices and identify "essential elements" that contribute to the county's reduced infant mortality rate¹⁶. "Essential elements" are those that directly impact the overall outcome according to Eugene Bardach¹⁷. By performing the analysis, Union County would be able to conclude whether the use of prenatal care is an "essential element" in its reduced IMR. The benefit from this analysis would be to potentially discover "smart practices" that Union County is utilizing and apply the specific "smart practices" in other counties to decrease their infant mortality rate¹⁸.

Conclusion

Based on former observations, the following conclusion has surfaced: an important and helpful task to increase the percentage of women who utilize prenatal care is to develop a case study of every county before developing an intervention. The development of a case study for each county would be a useful tool to understand the circumstance of every county. The case study of each county should be standardized to enhance comparing and contrasting methods. A Fishbone Diagram can be helpful in determining an overview of a problem, focusing on the causes, and generating ideas to design solutions.

The overall objective of this independent study was to learn about infant mortality and to gain an understanding of infant mortality along the epidemiological dimensions of time, place, and person. Time, place, and person are useful dimensions to study to determine how to reach out to a specific population. Once a specific population is identified, developing resources for health professionals becomes focused. When health care providers understand individual needs then the services offered become more meaningful.





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