

Historical and spatial relations as fundamental factors of American Indian infant mortality in Michigan

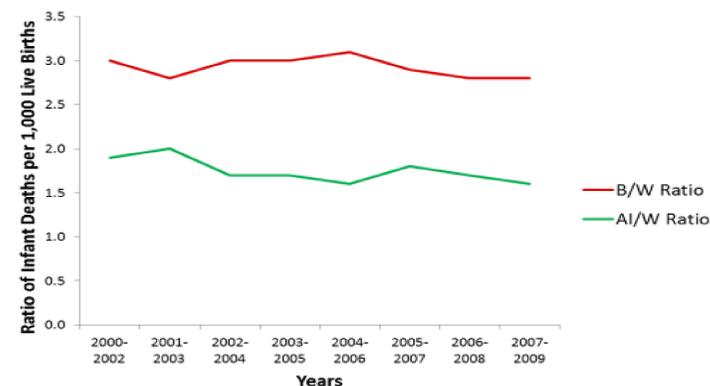
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Research Questions

- How do we train state health department staff to understand social determinants of American Indian infant mortality to reduce these disparities?
- How do we create a replicable model for how to describe social determinants of American Indian infant mortality?

Background

- Despite decreasing rates across the State of Michigan racial and ethnic disparities in infant mortality rates have seen little improvement
- PRIME (Practices to Reduce Infant Mortality through Equity) Goals:
 - Develop a skill building program that can help MDCH more effectively address the racial disparities in infant mortality in Michigan
 - Create health disparity reduction practice model using social determinants of health approach
- Partners
 - MI Department of Community Health
 - University of Michigan/ Vanderbilt University
 - Intertribal Council of Michigan
 - Local Learning Collaborative (Local public health)



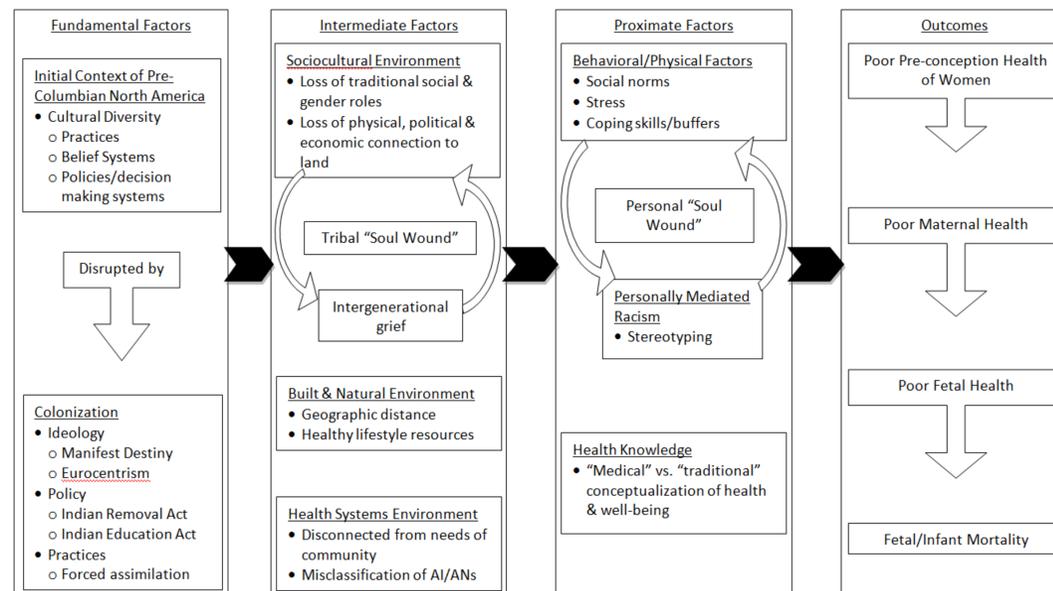
Black/White & American Indian/White Infant Mortality Ratios, 3-Year Moving Averages in Michigan 2000-2009¹

Methods

- Review literature on determinants of American Indian infant mortality
- On-going consultation with American Indian partners

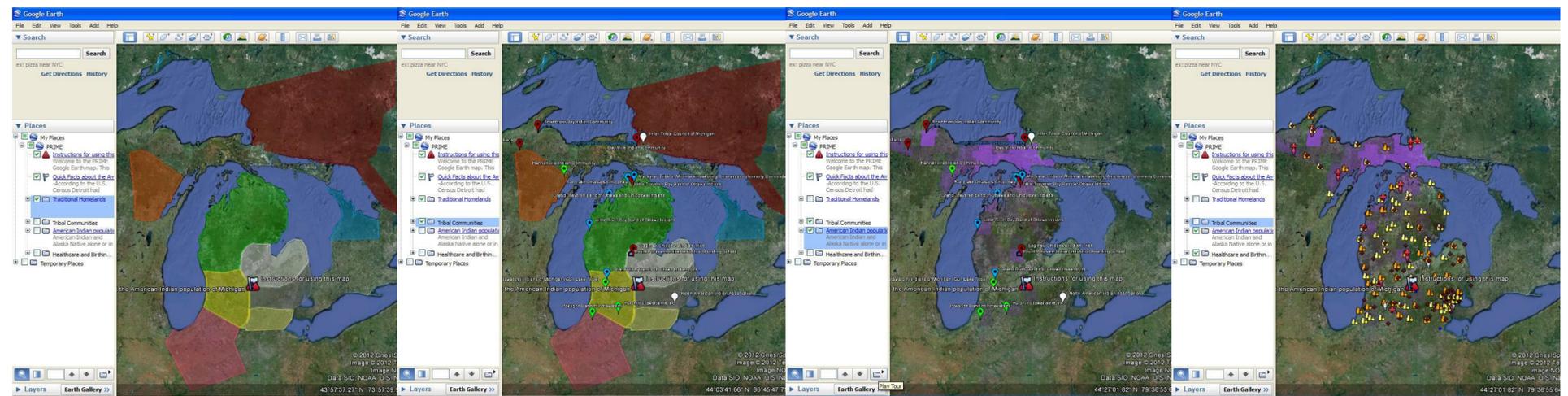
Results:

Conceptual Framework and interactive mapping tool



Implications

- Can be used by community, state, and academic partners to describe dynamic relationships among determinants of American Indian infant mortality
- Able to illustrate multi-level temporal, spatial and cultural factors
- Illustrates the unique ways that social determinants combine to affect American Indian infant mortality
- Highlights the need to develop population-specific models to understand social determinants of health
- Replicable and sustainable map developed with free, user friendly and customizable Google Earth software
- Traditional conceptual map and mapping tool complementary



Screen shots of PRIME map showing various combinations of layers representing the traditional homelands of tribal nations during the 17th century, contemporary tribal locations, American Indian population density by county in Michigan in 2010, and birthing resources in Michigan in 2011.

Acknowledgements

¹Data source: Source: 1970 - 2009 Michigan Resident Birth and Death Files, Division for Vital Records Statistics & Health, Michigan Department of Community Health. This study was supported by grants from the W.K. Kellogg Foundation (#P3016224) and the Michigan Department of Community Health's Bureau of Family, Maternal and Child Health. Its contents are solely the responsibility of the authors and do not necessarily represent the views of the funders or the University of Michigan.