American Indian Social Determinants of Health

Native American Nutrition Conference
Shakopee Mdewakanton Sioux Community
September 26, 2016

Donald Warne, MD, MPH
Oglala Lakota
Chair, Department of Public Health
Mary J. Berg Distinguished Professor of Women’s Health
Traditional View of Public Health
Pine Ridge Reservation
Kyle, S.D.
AI Health Disparities

Average age at death in ND (2010 – 2014):

77.4 Years in the White Population

56.6 Years in the AI Population

Diabetes Death Rates
(Rate/Per 100,000 Population)
2.5 times as many AI/ANs as whites live below poverty level

Adults ≥18 years who live below federal poverty level

- White: 8% (2005) vs. 8% (2009)
- Black: 21% (2005) vs. 21% (2009)
- Asian/Pacific Islander: 10% (2005) vs. 11% (2009)
- AI/AN: 23% (2005) vs. 20% (2009)
- Hispanic: 18% (2005) vs. 19% (2009)

Source: CDC Health Disparities and Inequalities Report 2011, MMWR, Vo. 60
American Indians and Alaska Natives as a Share of the Total Population, by State, 2009-2011

Total: 2.5 million = 1% of U.S. Population

Less than 1% (36 states)
1-3% (8 states)
More than 3% (7 states)

American Indian and Alaska Native includes people of Hispanic origin.
SOURCE: KCMU analysis of 2009 - 2011 ACS.
Historical Context
Historical Context

Map showing the expansion of the United States in 1830.
Historical Context
AI/AN Population by County

Source: U.S. Census Bureau, 2010 Census Redistricting Data (Public Law 94-171) Summary File, Table P1.
AI/AN Population Decline and Recovery, 1492 – 2010
Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives

© Warne & Lajimodiere 2012
Epigenetics refers to the study of changes in the regulation of gene activity and expression that are not dependent on DNA sequence.
Historical Trauma

Genocide

Boarding School Experiences
• Abuse (physical, sexual)
• Neglect
• Abandonment
• Forced Removal
• Loss of culture & language
• Forced Christianity
• Lost traditional parenting & family structure

Gestational Stressors

Birth

Chronic Disease Disparities
Historical trauma is the collective emotional wounding across generations that results from massive cataclysmic events – Historically Traumatic Events (HTE)*

- The trauma is held personally and transmitted over generations. Thus, even family members who have not directly experienced the trauma can feel the effects of the event generations later.
Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives

Historical Trauma

Boarding School Experiences
• Abuse (physical, sexual)
• Neglect
• Abandonment
• Forced Removal
• Loss of culture & language
• Forced Christianity
• Lost traditional parenting & family structure

Gestational Stressors

Birth

Childhood Stressors

WIC

FDPIR

Chronic Disease Disparities

© Warne & Lajimodiere 2012
Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives

Historical Trauma

• Boarding School Experiences
  • Abuse (physical, sexual)
  • Neglect
  • Abandonment
  • Forced Removal
  • Loss of culture & language
  • Forced Christianity
  • Lost traditional parenting & family structure

• Adverse Childhood Experiences
  • Abuse (physical, sexual)
  • Neglect
  • Substance Abuse in home
  • Mental Health Dx in home
  • Witnessing violence
  • Divorce
  • Food insecurity
  • Family member in prison

Gestational Stressors

• Birth

Childhood Stressors

WIC

FDPIR

Genocide

Chronic Disease Disparities

© Warne & Lajimodiere 2012
Impact of ACEs on Health

ACES can have lasting effects on:

- **Health** (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)
- **Behaviors** (smoking, alcoholism, drug use)
- **Life Potential** (graduation rates, academic achievement, lost time from work)

ACEs have been found to have a graded dose-response relationship with 40+ outcomes to date.

*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.*
Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives

Historical Trauma
- Boarding School Experiences
  - Abuse (physical, sexual)
  - Neglect
  - Abandonment
  - Forced Removal
  - Loss of culture & language
  - Forced Christianity
  - Lost traditional parenting & family structure

Gestational Stressors
- Birth

Childhood Stressors
- WIC
- FDPIR

Adulthood Stressors
- Chronic Disease Disparities

Adverse Childhood Experiences
- Abuse (physical, sexual)
- Neglect
- Substance Abuse in home
- Mental Health Dx in home
- Witnessing violence
- Divorce
- Food insecurity
- Family member in prison

Adverse Adulthood Experiences
- Alcoholism & SA
- Suicide rates / death rates
- Poverty / Poor nutrition
- Racism / Toxic Stress
- Role models
  - Few positive
  - Many negative
  - Parenting

© Warne & Lajimodiere 2012
Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives

Historical Trauma

Gestational Stressors

Childhood Stressors

Adulthood Stressors

Chronic Disease Disparities

Boarding School Experiences
- Abuse (physical, sexual)
- Neglect
- Abandonment
- Forced Removal
- Loss of culture & language
- Forced Christianity
- Lost traditional parenting & family structure

Adverse Childhood Experiences
- Abuse (physical, sexual)
- Neglect
- Substance Abuse in home
- Mental Health Dx in home
- Witnessing violence
- Divorce
- Food insecurity
- Family member in prison

Adverse Adulthood Experiences
- Alcoholism & SA
- Suicide rates / death rates
- Poverty / Poor nutrition
- Racism / Toxic Stress
- Role models
  - Few positive
  - Many negative
  - Parenting

Genocide

WIC

FDPIR

© Warne & Lajimodiere 2012

Next generation
### Significant Challenges

#### Social Determinants
- Poverty
- Trauma
- Politics
- Inattention/Neglect
- Racism
- Inequity

#### Outcomes
- Health Disparities
- Education Inequality
- Generational Poverty
- Ongoing Racism
- Worsening Inequity
- Suffering and Death
## Significant Challenges

### Social Determinants
- Poverty
- Trauma
- Politics
- Inattention/Neglect
- Racism
- Inequity

### Outcomes
- Health Disparities
- Education Inequality
- Generational Poverty
- Ongoing Racism
- Worsening Inequity
- Suffering and Death

Need to address issues in a comprehensive manner—medical, behavioral, public health…
Donald Warne
donald.warne@ndsu.edu