Obesity Issues in American Indian and Alaska Native People

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Disclosure/Disclaimer Statement

- I have nothing to disclose.
- The views expressed are my own and do not necessarily represent those of the Indian Health Service.
- I received permission from the American Journal of Public Health to use images of graphs from our childhood obesity article.

Indian Health Service (IHS)

- Agency within the Dept. of Health and Human Services
- Serves members of 573 federally-recognized Tribes in 36 states
  - 2.3 million American Indians and Alaska Natives (AI/AN)

- IHS/Tribal/Urban (I/T/U) Health System
  - **IHS** provides direct health care services
    - 26 Hospitals, 55 Health Centers, 21 Health Stations
  - **Tribes** have the right to assume control and management of programs—over 60% of the IHS appropriation is administered by Tribes
    - 19 Hospitals, 280 Health Centers, 62 Health Stations, and 134 Alaska Village Clinics
  - 43 **Urban** Indian Organizations provide various levels of clinical and resource services

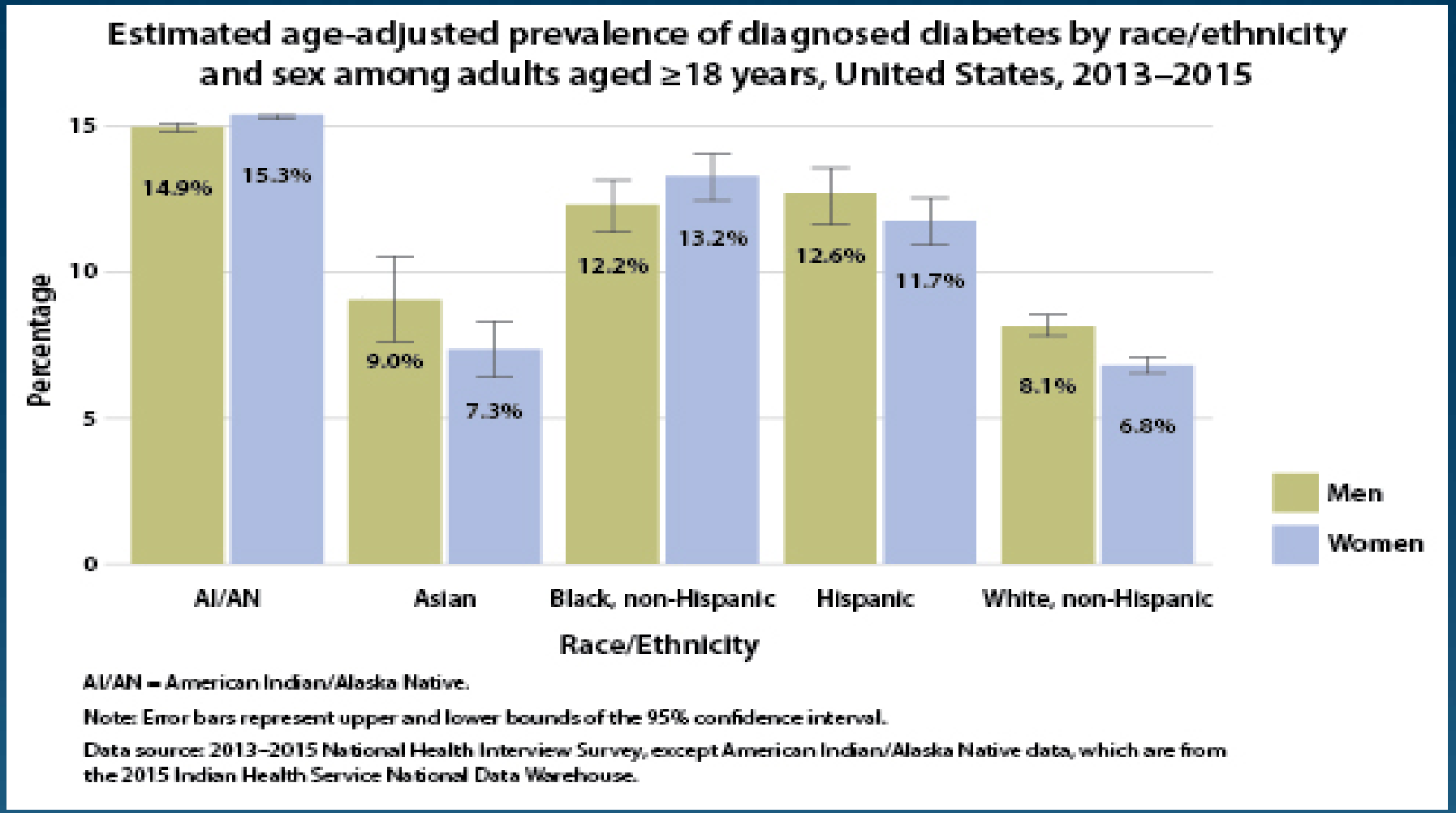
Data Sources for AI/AN People

- AI/AN people are not sufficiently included in national surveys due to small population size

  CDC National Diabetes Statistics Report, 2017

  - So AI/AN-specific estimates often cannot be obtained from the same data sources as for other racial/ethnic groups.
- IHS Database
  - Health-related data is submitted to the IHS National Data Warehouse by I/T/U facilities across the country
- Note that race/ethnicity are self-reported in national surveys, whereas AI/AN people must meet eligibility requirements (e.g., membership in a federally-recognized tribe) to receive care at an I/T/U facility (and thus be included in IHS data).

CDC National Diabetes Statistics Report, 2017



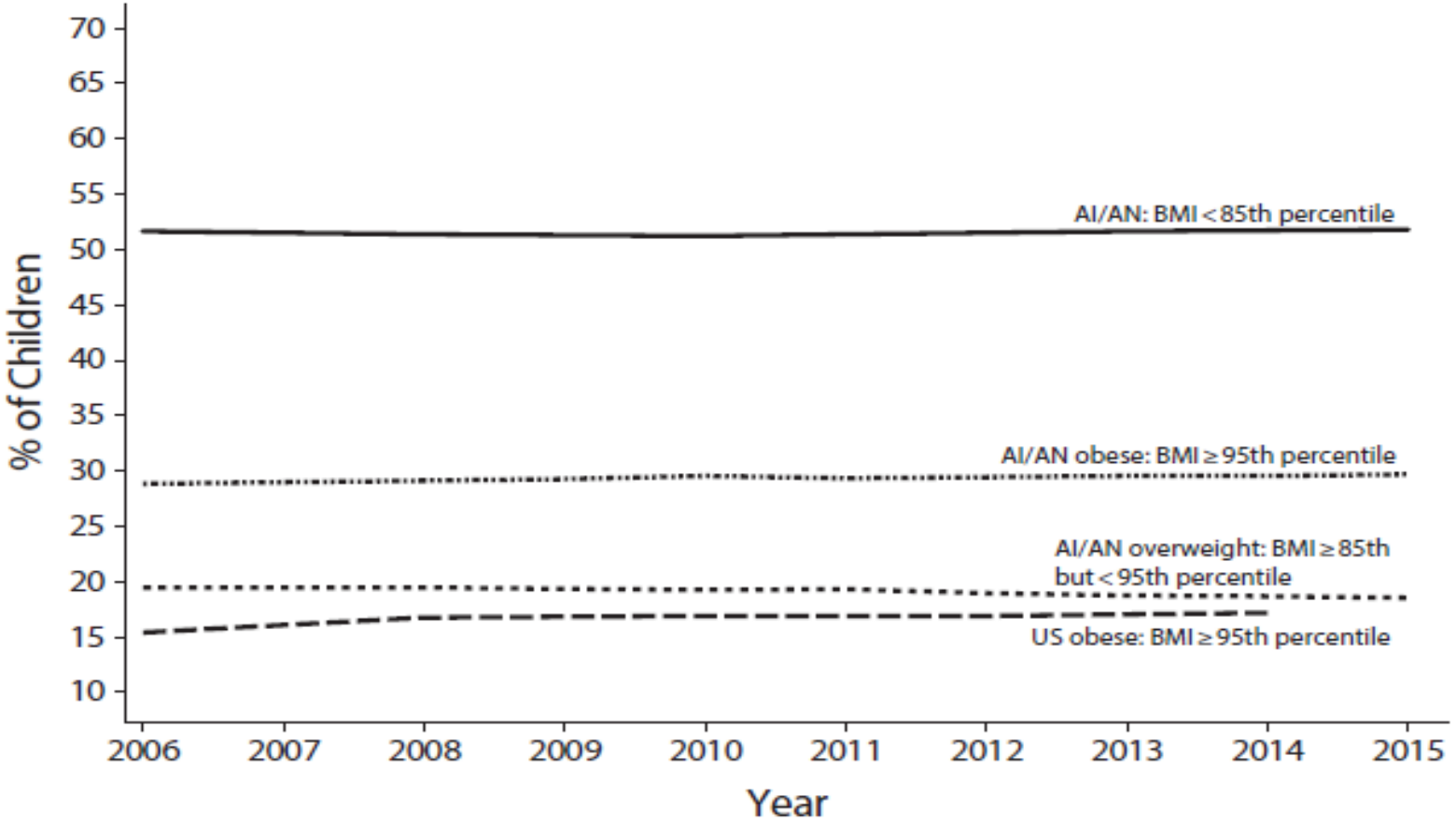
Obesity in AI/AN Youth

- "Obesity and Overweight in American Indian and Alaska Native Children, 2006–2015"

Am J Public Health 2017;107:1502-1507

Key findings:

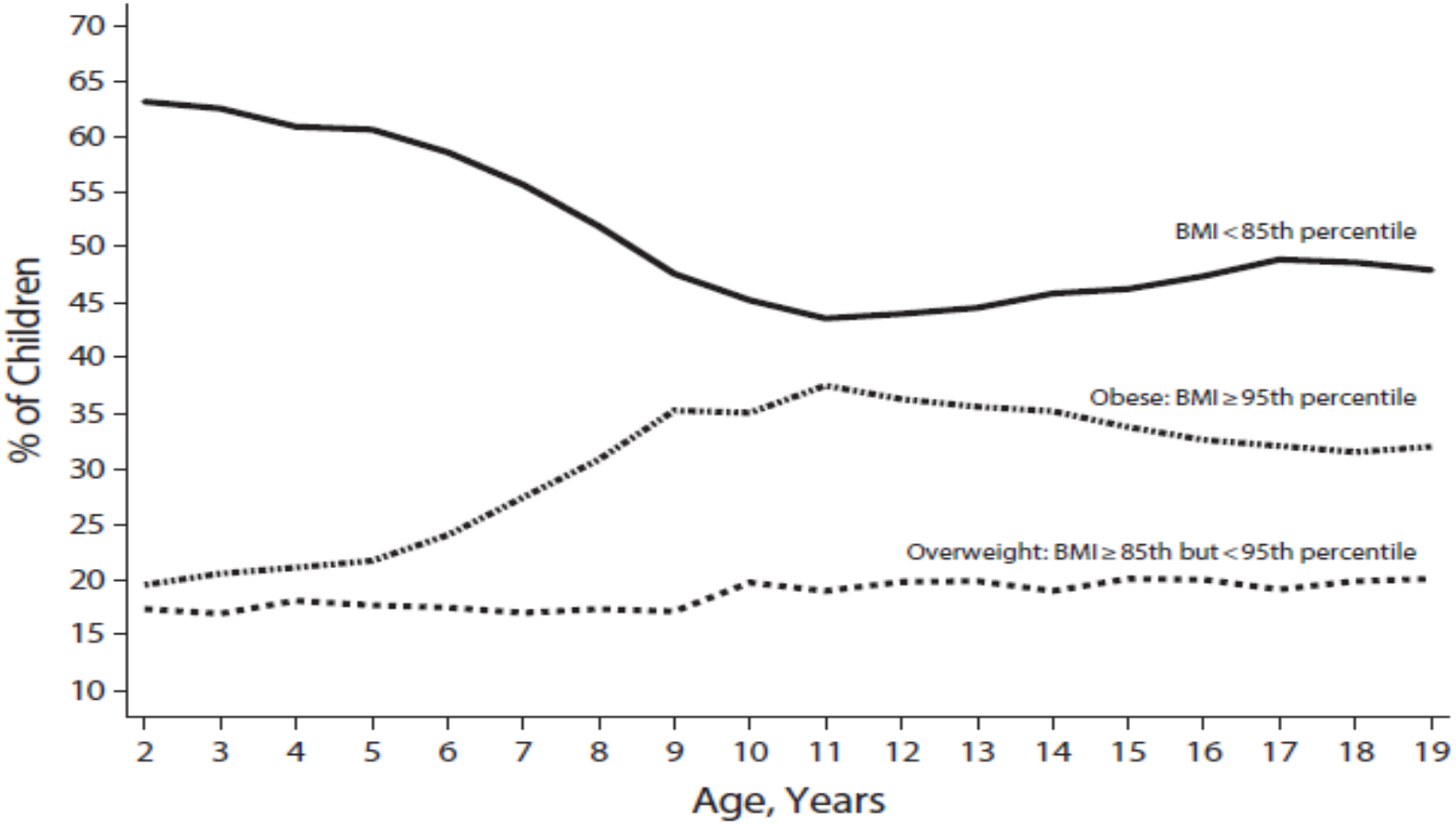
- While significantly higher than U.S. youth overall, obesity in AI/AN youth ages 2-19 years did not increase over the decade studied
  - Small increase in class 3 obesity
- Children ages 2 to 5 years had the lowest prevalence of obesity
  - And a consistent decrease from 23.2% in 2010 to 20.7% in 2015



Notes. AI/AN = American Indian and Alaska Native; BMI = body mass index (kg/m^2).

FIGURE 2—Body Mass Index Categories Among American Indian and Alaska Native Children Aged 2 to 19 Years and US Obesity: 2006–2015

Am J Public Health 2017;107:1502-1507



Note. BMI = body mass index (defined as weight in kilograms divided by the square of height in meters).

FIGURE 1—Body Mass Index Category for American Indian and Alaska Native Children by Year of Age for Fiscal Year 2015, United States

Am J Public Health 2017;107:1502-1507

Social Determinants of Health

- Socioeconomic status has been linked to health and obesity disparities across populations.

- According to the US Census, AI/AN people had the highest poverty rate of all racial/ethnic groups, 21.9% in 2017.

United States Census Bureau, Table S0201

- AI/AN people also have high rates of food insecurity

BMC Public Health 2017;17:611

  - which is linked to diabetes incidence

PLoS One 2018;13:e0195962

Adverse Childhood Experiences (ACEs)

National Survey of Children's Health

- 1,453 AI/AN children aged 0-17 yrs compared with 61,381 white children from the 2011-2012 Survey
- AI/AN children were more likely to have experienced:
  - 2+ ACEs (40.3% vs. 21%)
  - 3+ ACEs (26.8% vs. 11.5%)
  - 4+ ACEs (16.8% vs. 6.2%)
  - 5+ ACEs (9.9% vs. 3.3%)
- AI/AN kids with 3+ ACEs compared with AI/AN with < 2 ACEs
  - Prevalence of depression, anxiety, ADHD 14.4%, 7.7%, 12.5% vs. 0.4%, 1.8%, 5.5%
  - School problems, grade failures, need for medication and counseling were 2-3x higher

Scientifica 2016; Article ID 7424239

- In the original ACE study, ACE scores ≥ 4 increased risk:
  - 4-12x for alcoholism, drug abuse, depression, suicide attempt
  - 2-4x for smoking, poor self-rated health, sexually transmitted infections
  - 1.4-1.6x for physical inactivity and severe obesity

Am J Prev Med 1998;14:245-258

Special Diabetes Program for Indians (SDPI)

- In response to rising rates of diabetes in AI/AN people, Congress established SDPI in 1997
  - Initially at $30 million/year, increased to current $150 million/year in FY 2004
- Today SDPI provides funds to 301 I/T/U grant programs in 35 states for diabetes prevention and treatment
  - 78% of SDPI grantees are working with youth
- Promotes comprehensive, community-based approaches
  - Public Health
  - Population Management
  - Team-Based Care

Percent of SDPI Programs Reporting Diabetes Services

Intervention	1997	2013
Diabetes clinical teams	30%	96%
Diabetes patient registries	34%	98%
Nutrition services for adults	39%	93%
Access to registered dietitians	37%	79%
Access to physical activity specialists	8%	74%
Access to culturally tailored diabetes education materials	36%	97%
Adult weight management programs	19%	78%
Nutrition services for children and youth	65%	84%
Community-based physical activity programs for children and youth	13%	80%
Physical activity programs for school-age youth	9%	80%

Source: Evaluation of the SDPI Community-Directed Diabetes Programs

MY NATIVE PLATE

Fruit

Water

Grain/
Starch

Vegetables

Protein

Use your plate as a guide to help you eat in a healthy way!

1. Fill half of your plate with vegetables.
2. Fill the other half of your plate with a grain/starch and a protein.
3. Add a side of fruit.

Pictured here:

- Mixed berries
- Cooked spinach
- Baked squash with peppers and herbs
- Steamed wild rice
- Baked deer meat with sage
- Water

Take a picture with your cell phone. Look at the picture later as a reminder!

Produced by:
Indian Health Service, Division of Diabetes Treatment and Prevention. 04/2018

Remember:

- Stay active
- Drink water
- Use a 9-inch plate

Notes:

Where to Get Food Assistance in This Community

Community Name: _____ Date: _____

Not having enough food for yourself and your family is stressful. Lack of good food makes it difficult to provide nutritious meals that help children grow and adults stay healthy. The thought of not having enough food can make you worry.

There are resources to help. If you need food assistance, please don't wait to contact the programs on this list. They can help you get the food you need for yourself and your family.*

Program Name	Contact Name	Contact Number	Other Important Information (Location, Who Can Qualify, Hours, etc.)
SNAP - Supplemental Nutrition Assistance (Food Stamps)			
Food Distribution (Commodities)			
Women, Infants, and Children (WIC)			
School Lunch and Breakfast Program			
Summer Food Service Program for Children			
Senior Center			
Meals on Wheels			
Tribal Food Program			
Farmers Markets			
Community Gardens			
Food Bank / Food Pantry			
"Mobile Grocery Store" Truck			
Church / Place of Worship			
Social Services			

*Check with the program to see if you qualify to get food.

Produced by the IHS Division of Diabetes Treatment and Prevention, 2015. To print this, go to www.ihs.gov/diabetes and search **Food Insecurity** using 'exact match' on the Education Materials and Resources (Online Catalog) webpage.

Improving Trends in AI/AN People

- Diabetes prevalence
  - Adults: the years of increasing diabetes prevalence stopped in 2011
  - Youth: the rise in diabetes prevalence stopped at least as early as 2006

IHS National Data Warehouse

Diabetes-related Kidney Failure

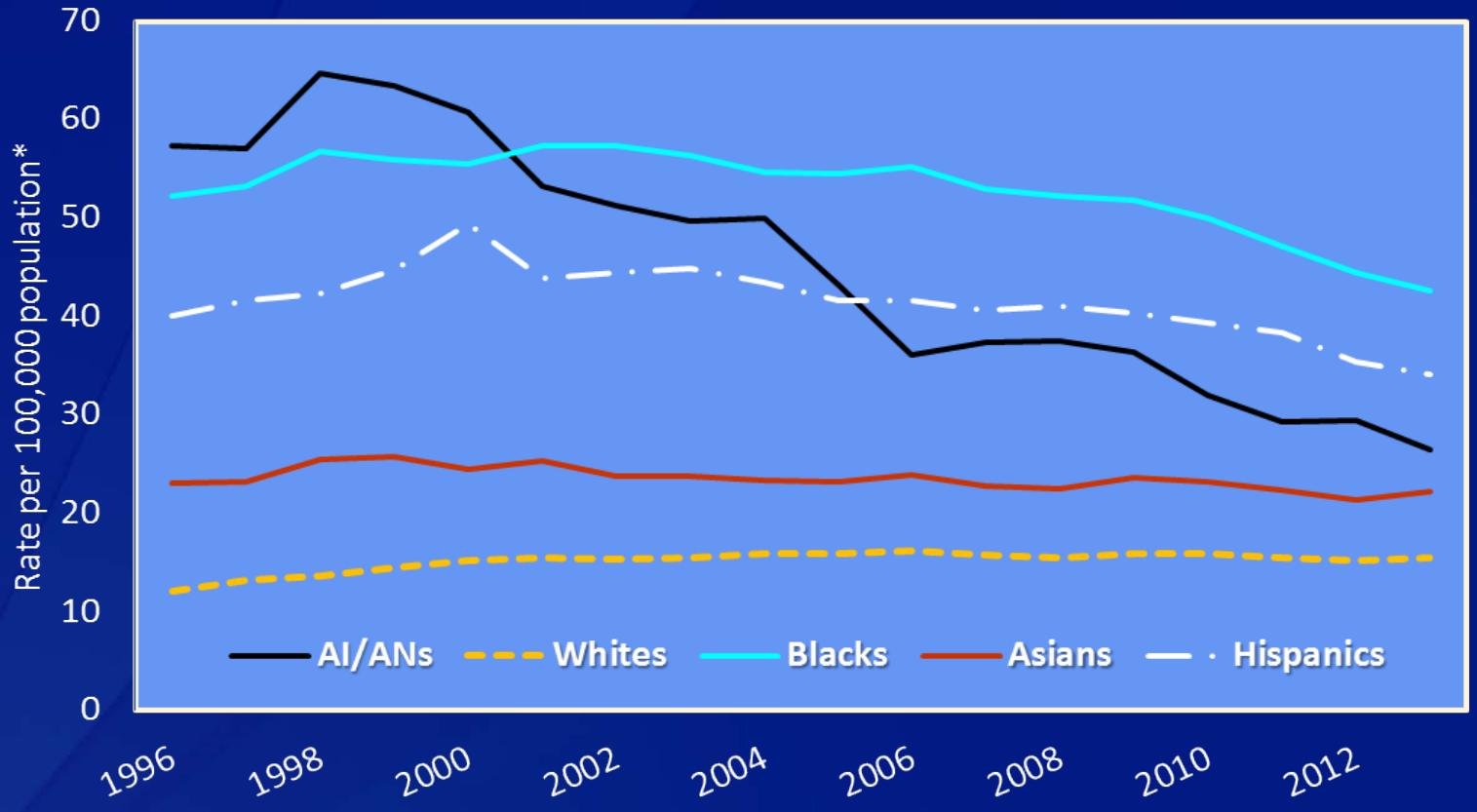
CDC Vital Signs

- **"Native Americans with Diabetes: Better diabetes care can reduce kidney failure"**

  MMWR, January 10, 2017

- Used data from the U.S. Renal Data System, U.S. Census, and IHS Diabetes Audit

Kidney failure from diabetes among AI/AN adults decreased by *54%* (1996-2013)



*Rate per 100,000 population and age-adjusted based on the 2000 US standard population.
AI/AN=American Indians and Alaska Natives. Racial groups include persons of Hispanic and non-Hispanic origin; Hispanics may be of any race.
Source: Data from the US Renal Data System and the US Census.

Diabetic Retinopathy

- IHS Joslin Vision Network Tele-ophthalmology Program (JVN)
  - –Telemedicine program, established in 2000
- Retrospective data analysis of 54,000 AI/AN people with diabetes who participated in the JVN program 11/2011 through 10/2016
- Compared with studies done in the 1980s and 1990s, the prevalence of diabetic retinopathy and macular edema decreased by over 50%

PLoS ONE 2018;13(6):e0198551

Uncontrolled Diabetes

- AHRQ Data Spotlight:

"Hospital Admissions for Uncontrolled Diabetes Improving Among American Indians and Alaska Natives"

  - Decreased 84% from 2000 to 2015

Agency for Healthcare Research and Quality (AHRQ)
AHRQ Publication No. 18(19)-0033-7-EF, December 2018

Key Points

- Significant progress has been achieved in reducing diabetes complications and leveling off of rates of diabetes prevalence and childhood obesity in AI/AN people.
  - SDPI resources and community self-determination have been crucial to this progress
- AI/AN people have some of the highest rates of poverty, food insecurity, and trauma—all of which are strongly associated with obesity and chronic disease
- Social determinants of health must be meaningfully addressed

Thank you