### A Snapshot of Early Childhood Development in American Indian Communities

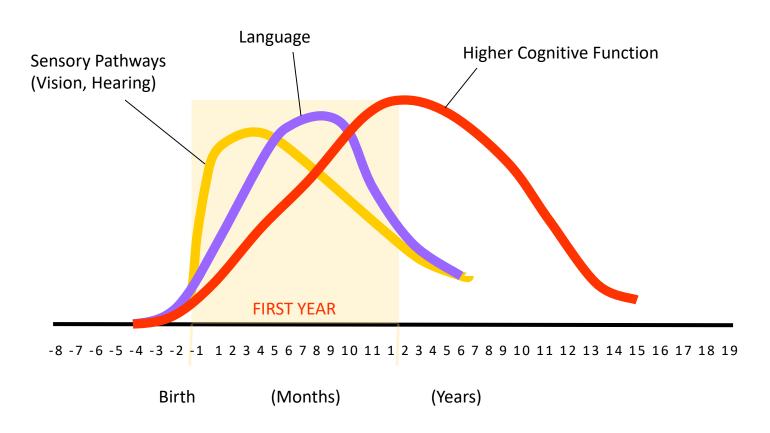
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<sup>\*</sup>The views expressed here are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.



#### **Human Brain Development**

Synapse Formation Dependent on Early Experiences



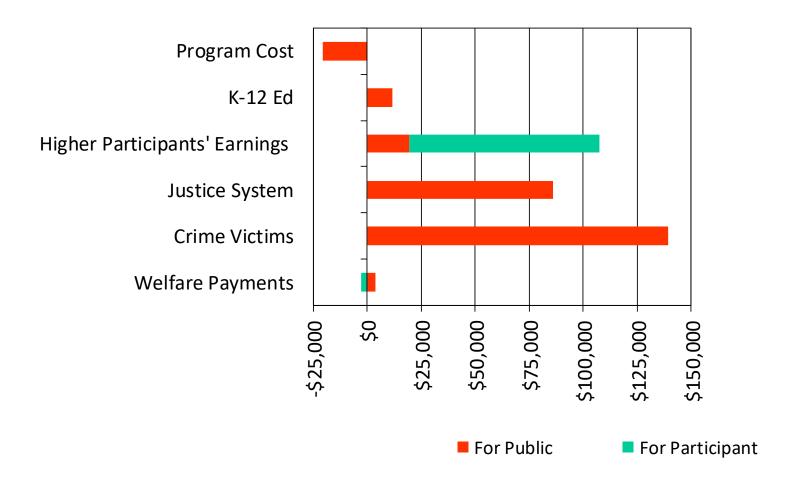
Source: C. Nelson (2000)

#### Human Brain...

At Birth At **6** Years Old At **14** Years Old

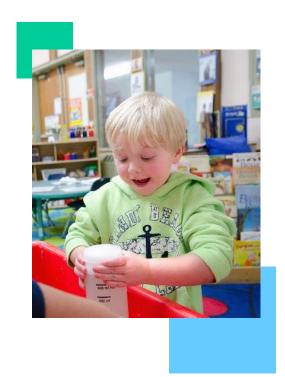
Source: Chugani, Phelps & Mazziotta (1987)

#### Perry Preschool—Costs and Benefits Over 62 Years



Source: Schweinhart, et al. (2005)

## Benefit-Cost Ratios of Early Childhood Longitudinal Studies



- Perry Preschool
  - \$16 to \$1
- Abecedarian Educational Child Care
  - \$7 to \$1
- Chicago-Child Parent
  - \$10 to \$1
- Elmira Prenatal/Early Infancy Project
  - \$5 to \$1

Sources: : Schweinhart, et al. (2005); Garcia, Heckman, Leaf, & Prados (2016); Reynolds, Temple, White, Ou, & Robertson (2011); Karoly, et al (1998)

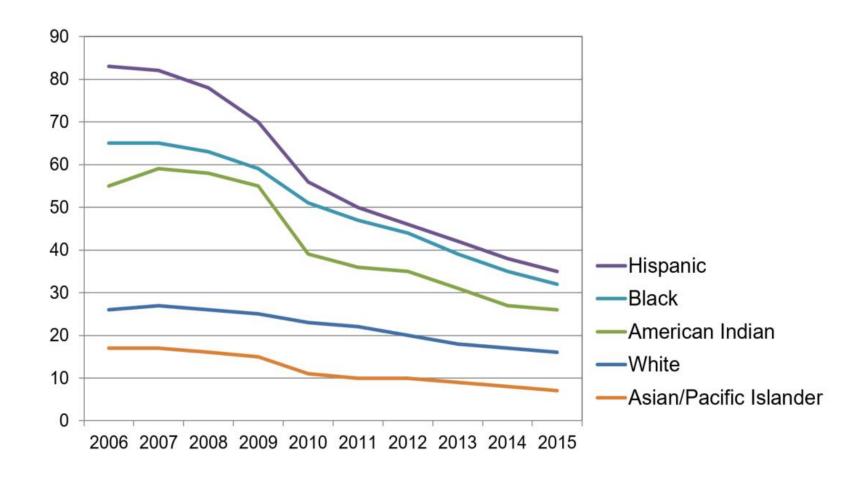
#### **American Indian population**

- About 225,000 Native American/Alaska Native children under age 6 live in the U.S.
- About 40 percent live below poverty

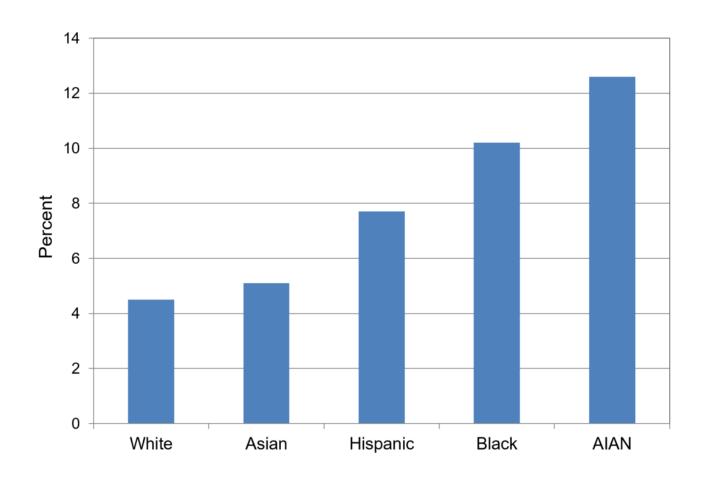
### **Maternal and Child Health**

#### Births to teen mothers

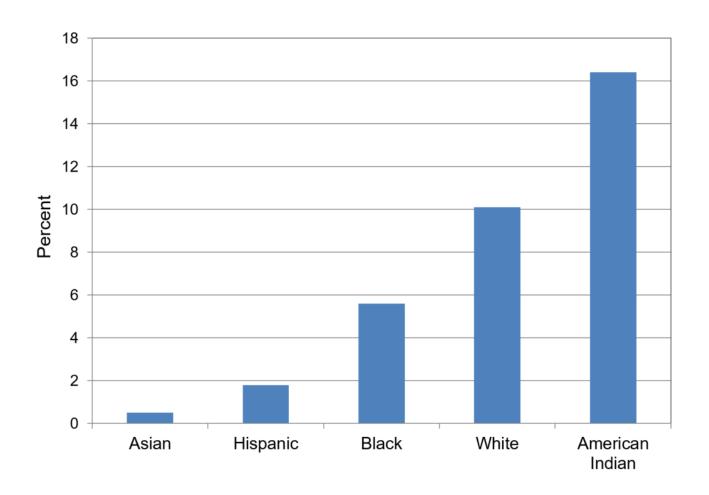
Per 1,000 population (age 15-19)



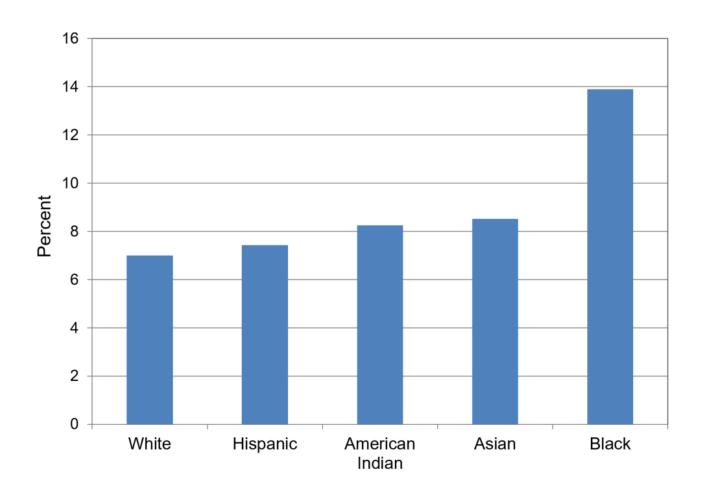
## Late or no prenatal care 2017



### Smoked during pregnancy 2017



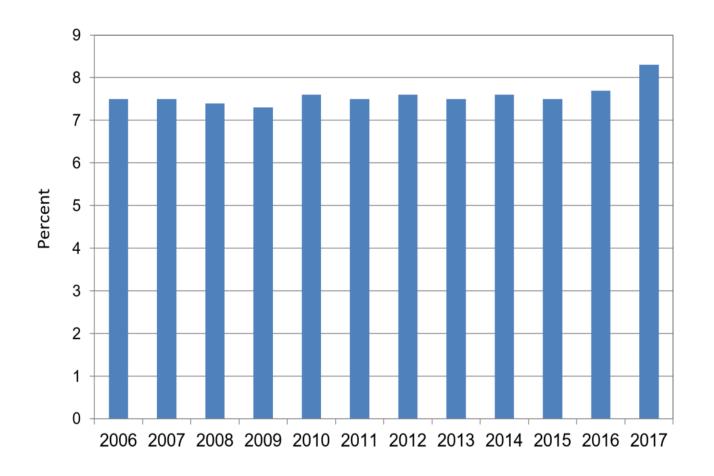
## Low birthweight\* 2017



Source: National Center for Health Statistics, National Vital Statistics System

<sup>\*</sup>Less than 2,500 grams (5 lb 8 oz)

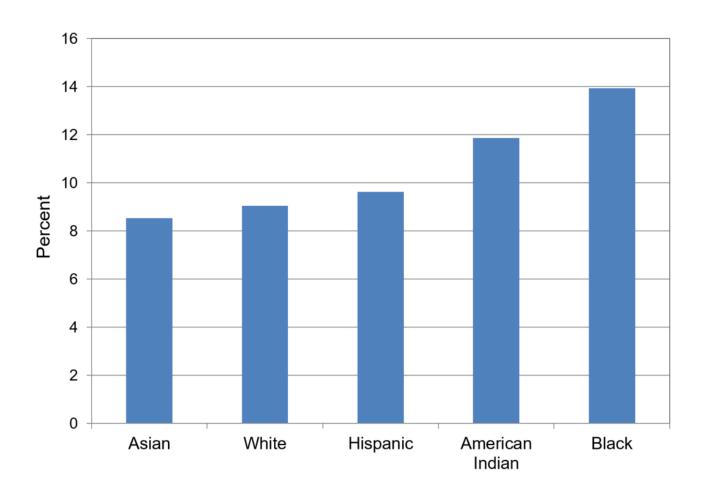
## Low birthweight\* American Indian



Source: National Center for Health Statistics, National Vital Statistics System, provided by National KIDS COUNT

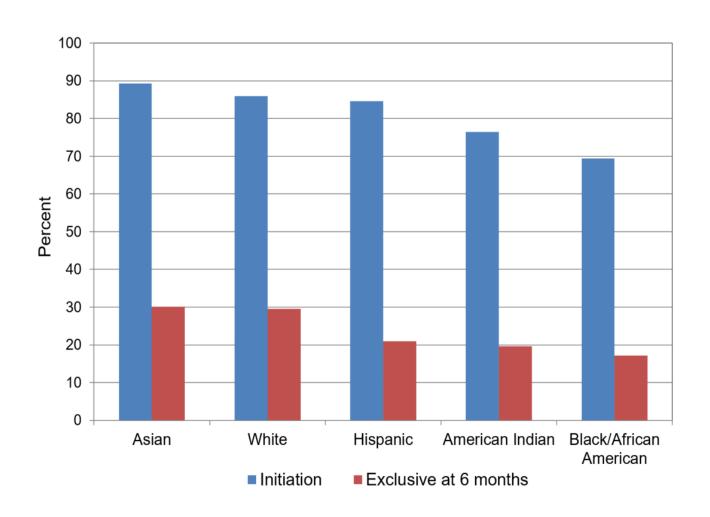
<sup>\*</sup>Less than 2,500 grams (5 lb 8 oz)

## Preterm births\* 2017



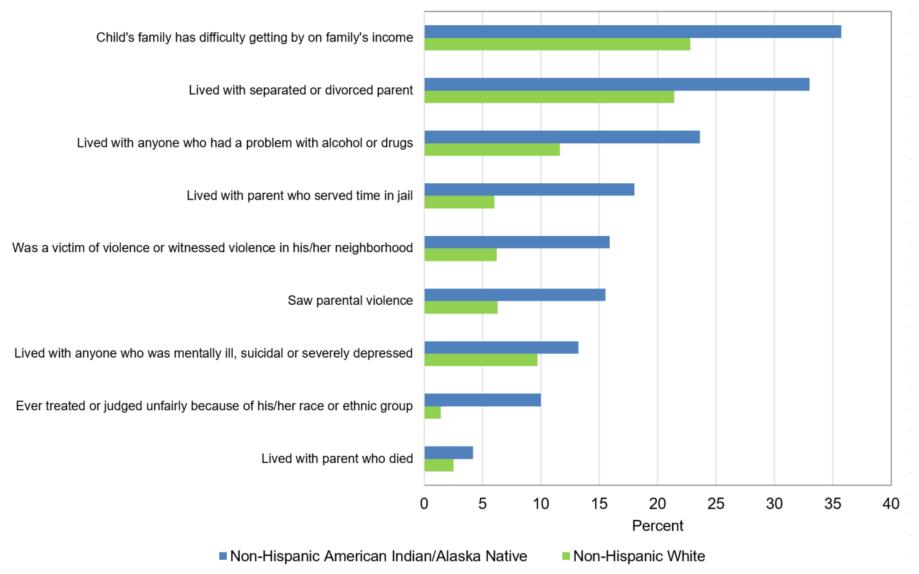
<sup>\*</sup>Born prior to 37 completed weeks of gestation based on the obstetric estimate Source: National Center for Health Statistics, National Vital Statistics System

## Breastfeeding 2015



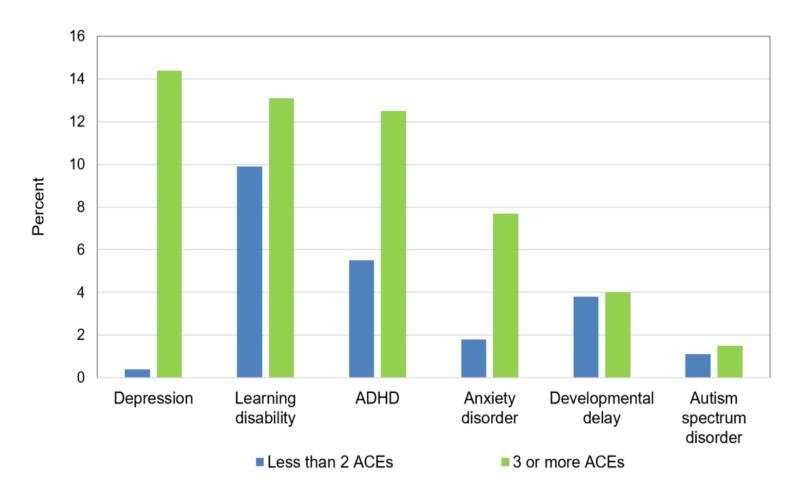
### **Adverse Childhood Experiences**

#### Rates of parent-reported ACEs (2011-2012)



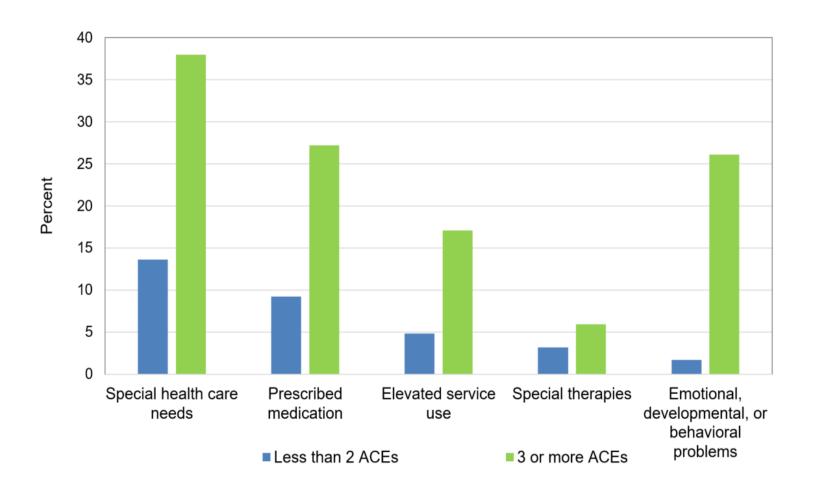
Source: Mary Kay Kenney and Gopal K. Singh. "Adverse Childhood Experiences among American Indian/Alaska Native Children: The 2011-2012 National Survey of Children's Health," *Scientifica*, vol. 2016, Article ID 7424239, 2016. https://doi.org/10.1155/2016/7424239.

#### Developmental and behavioral outcomes Provider-diagnosed conditions



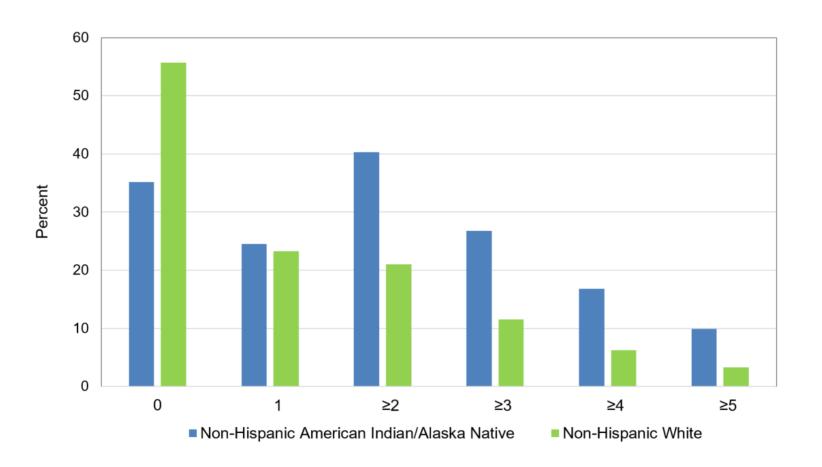
Source: Kenney and Singh (2016)

# Developmental and behavioral outcomes Other parent-reported health conditions/needs



Source: Kenney and Singh (2016)

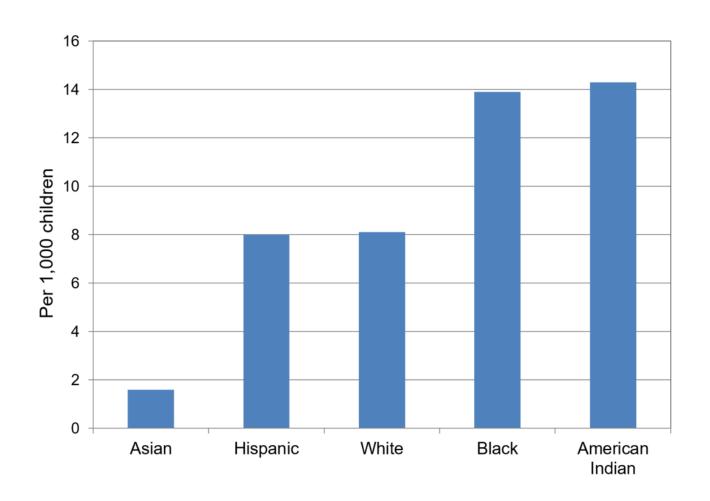
# Number of ACEs among participating children (9 asked about)



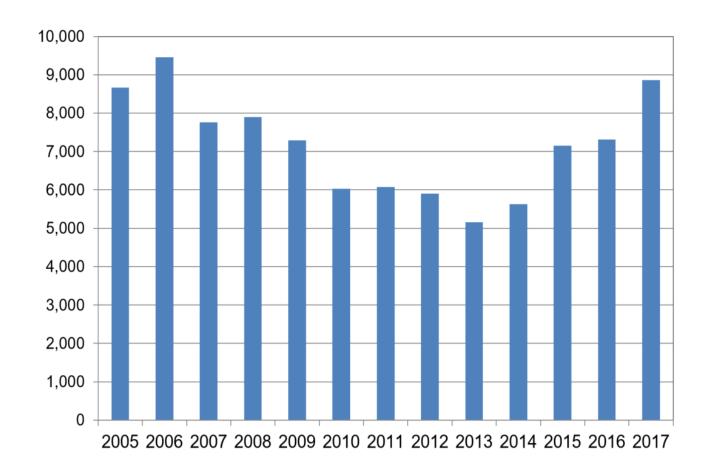
Source: Kenney and Singh (2016)

#### **Child Maltreatment and Foster Care**

## Child maltreatment victim rate 2017

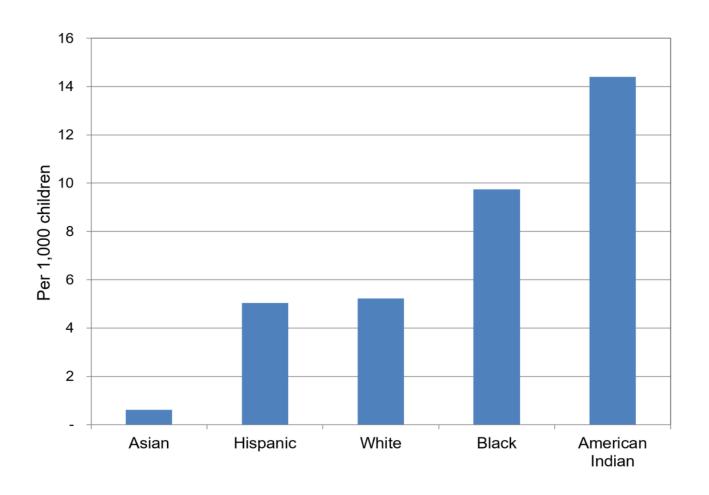


### Child maltreatment victims American Indian



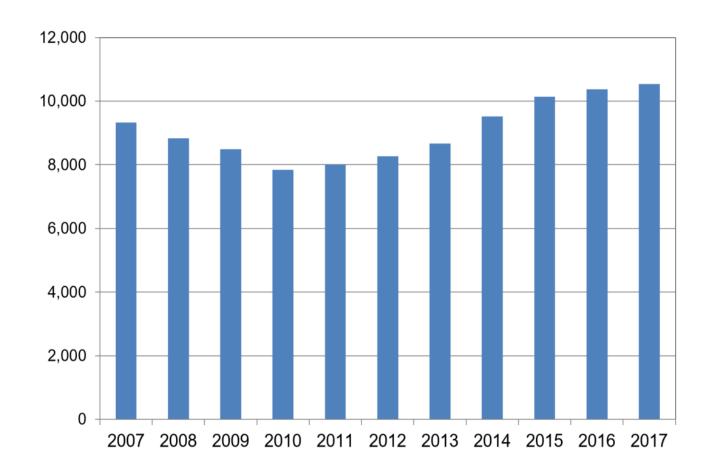
#### Foster care placement rate

Total children in foster care, 2017



Source: Children's Bureau, U.S. Department of Health & Human Services

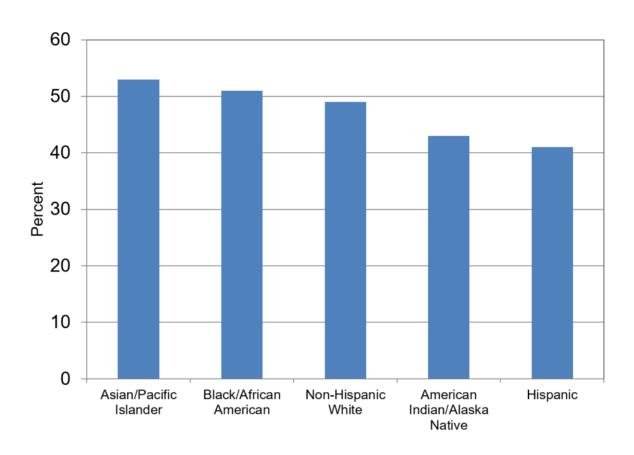
### Children in foster care American Indian



Source: Children's Bureau, U.S. Department of Health & Human Services, provided by National KIDS COUNT

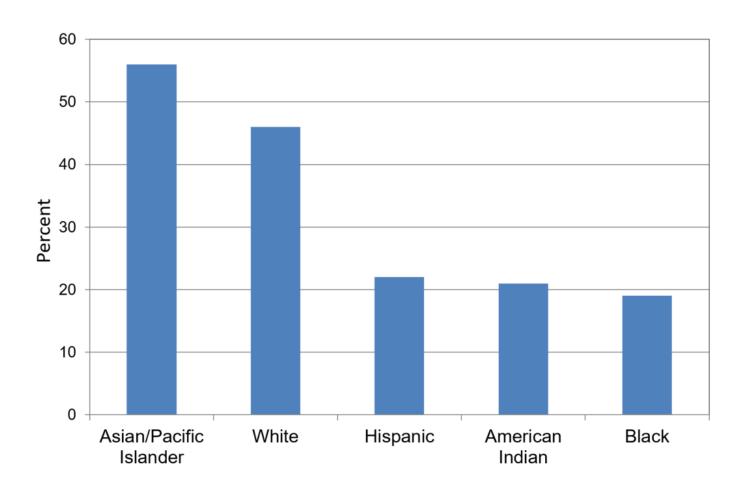
### **Education**

# Percent of children age 3 and 4 in preschool 2017



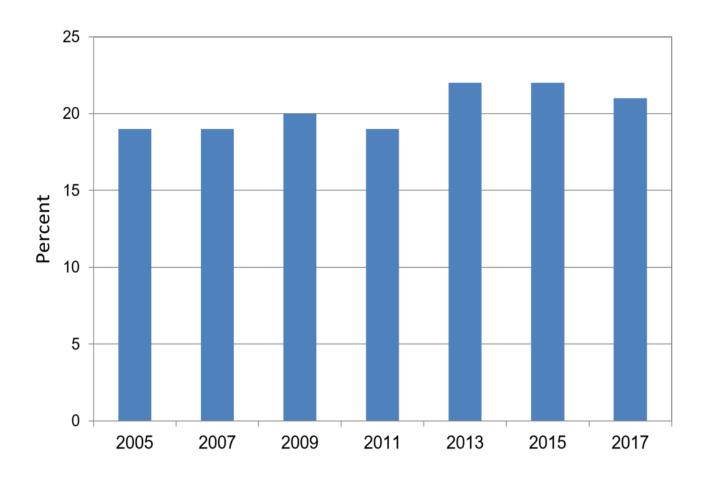
Source: The Annie E. Case Foundation. 2018 Kids Count Data Book: State Trends in Child Well-being.

### Percent of fourth grade children proficient in reading 2017



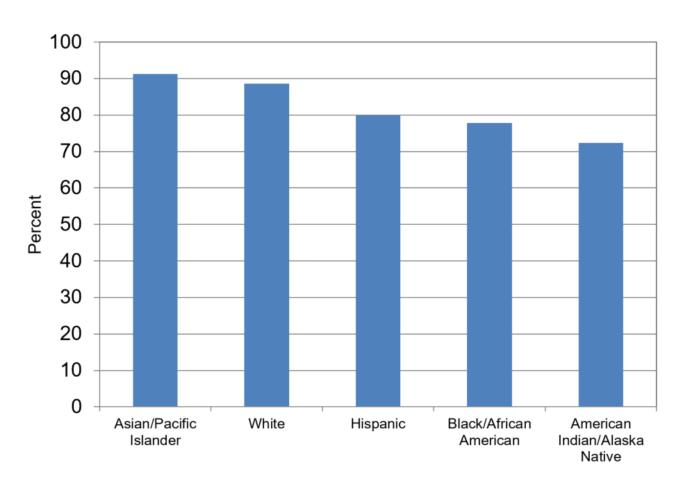
Source: U.S. Department of Education, National Center for Education Statistics, 2017 National Assessment of Educational Progress

### Percent of fourth grade children proficient in reading American Indian



Source: U.S. Department of Education, National Center for Education Statistics, 2017 National Assessment of Educational Progress

### U.S. public high school 4-year graduation rates 2016-2017



Source: National Center for Education Statistics