

Pregnancy risk factors and birth outcomes within Oregon's American Indian/Alaska Native population, 2008-2010

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Outline

- Background
 - MCH data
 - IDEA-NW Project (linkage)
 - Race coding on birth certificates
 - Oregon's AI/AN population
- Methods
- Results
- Conclusions
- Next steps & recommendations





Background

- American Indians/Alaska Natives (AI/AN) at higher risk for many health conditions and indicators, including obesity, diabetes, preterm birth, smoking, domestic violence, injury
- Infant mortality rates (IMR) for AI/AN in Pacific Northwest lower than for AI/AN people in rest of U.S.; however, the IMR remains twice that for white infants
- Limited MCH data available to tribes and Indian health programs; race-specific data rarely published due to small numbers



IDEA-NW Project

- Racial misclassification a well-documented problem for AI/AN in surveillance systems
- Our Northwest Tribal Registry (NTR) consists largely of the Portland Area Indian Health Service registration file
 - All AI/AN registered at an IHS or tribal clinic (RPMS) in Idaho, Oregon, or Washington; documentation of tribal enrollment status required for eligibility
 - Demographic data only, no health status or diagnostic info
- Comparing this list of known AI/ANs to other health data sources can improve ascertainment of AI/AN records and therefore increase accuracy of health status data
- Linkages routinely completed with cancer, death certificates, communicable disease/STI, and other registries to identify and correct racial misclassification
 - **This is the first linkage between NTR and birth certificates**



Race coding on birth certificates

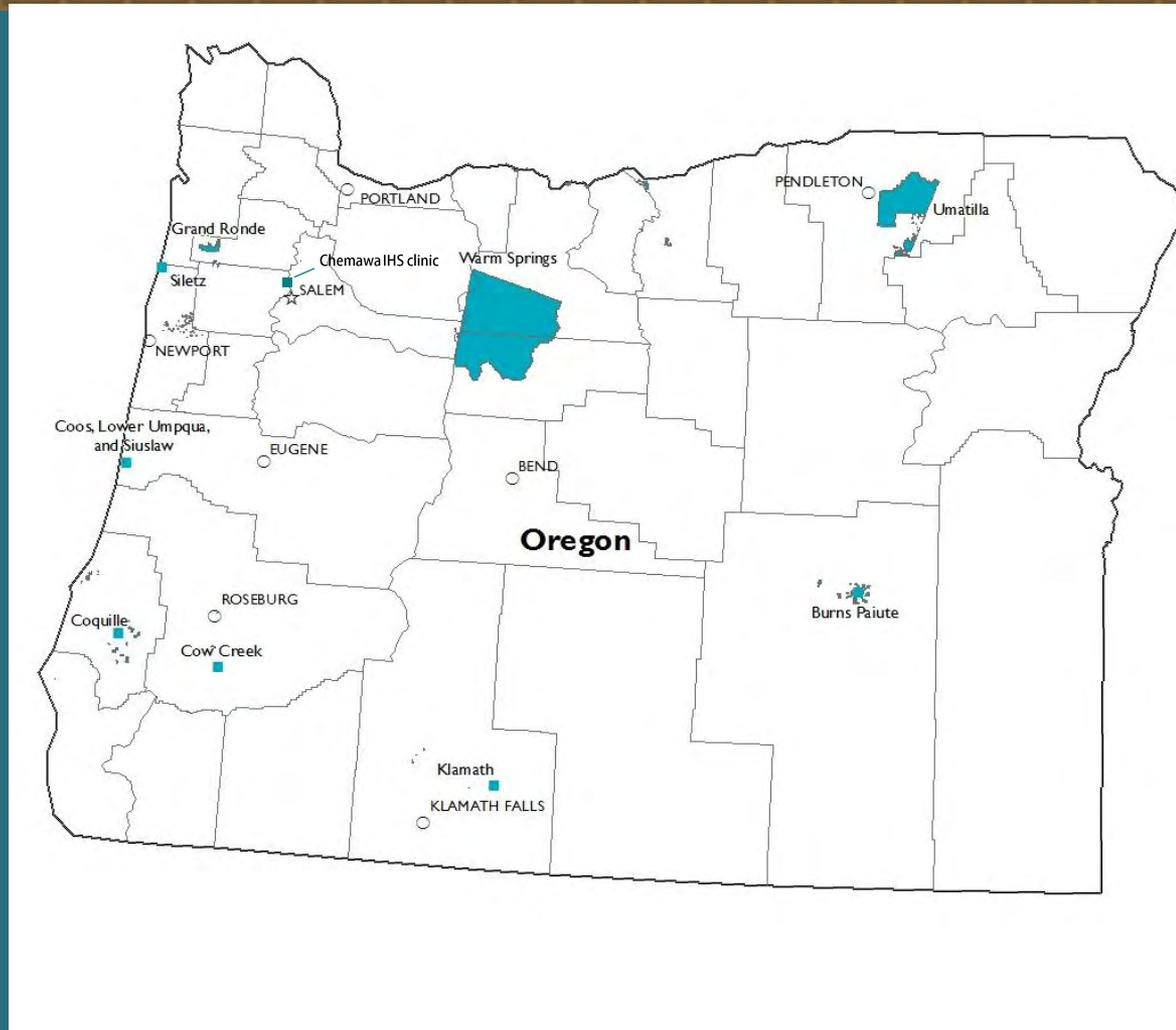


- Race of baby assigned by maternal race
 - Self-reported (always?)
 - Collected by...
 - Multiple race responses allowed
 - Tribal affiliation write-in
 - Father's race also collected
- Does racial “misclassification” happen on birth certificates?
- From a service standpoint, baby with AI/AN mother *or* father who uses IHS/tribal clinical services is likely to become an IHS/tribal patient



Oregon AI/AN population

- 9 federally-recognized Tribes
- Census estimate: 81,786
 - Includes 18,209 women ages 15-44
- 8 of 9 tribes have clinics, plus Chemawa IHS clinic
- Limited prenatal & OB services
- Some tribal WIC programs





Methods – linkage & analysis

- Probabilistic linkage on mothers' identifiers (name, DOB, address, etc.)
 - CDC's Link Plus software
 - Examined race & tribal affiliation fields in combination with match results
 - De-identified data retained for analysis
- AI/AN births: those with...
 - Any mention of AI/AN race for mother, *and/or*
 - Any mention of AI/AN race for father, *and/or*
 - Match of mother to the Tribal Registry
- Comparison population: birth records for Non-Hispanic white mothers (single race)
- Rate calculations: AI/AN mothers or Tribal Registry match (numerator), NCHS bridged-race pop estimates (denominator)



Results – race classification

2008-2010 births

- Pre-linkage (mother and/or father race): **6,654** AI/ANs
- Linkage
 - **1,837 matches** between Tribal Registry and mothers' identifiers
 - **402 (22%)** were coded on birth certificate as non-AI/AN mothers
- Post-linkage: **7,035** AI/AN in analysis
 - Including matches: **9.7%** increase above mother's race on birth certificate alone
 - Overall, AI/AN births comprised **4.9%** of file, as compared to Non-Hispanic white mothers, single race (**66.0%**)



Demographics

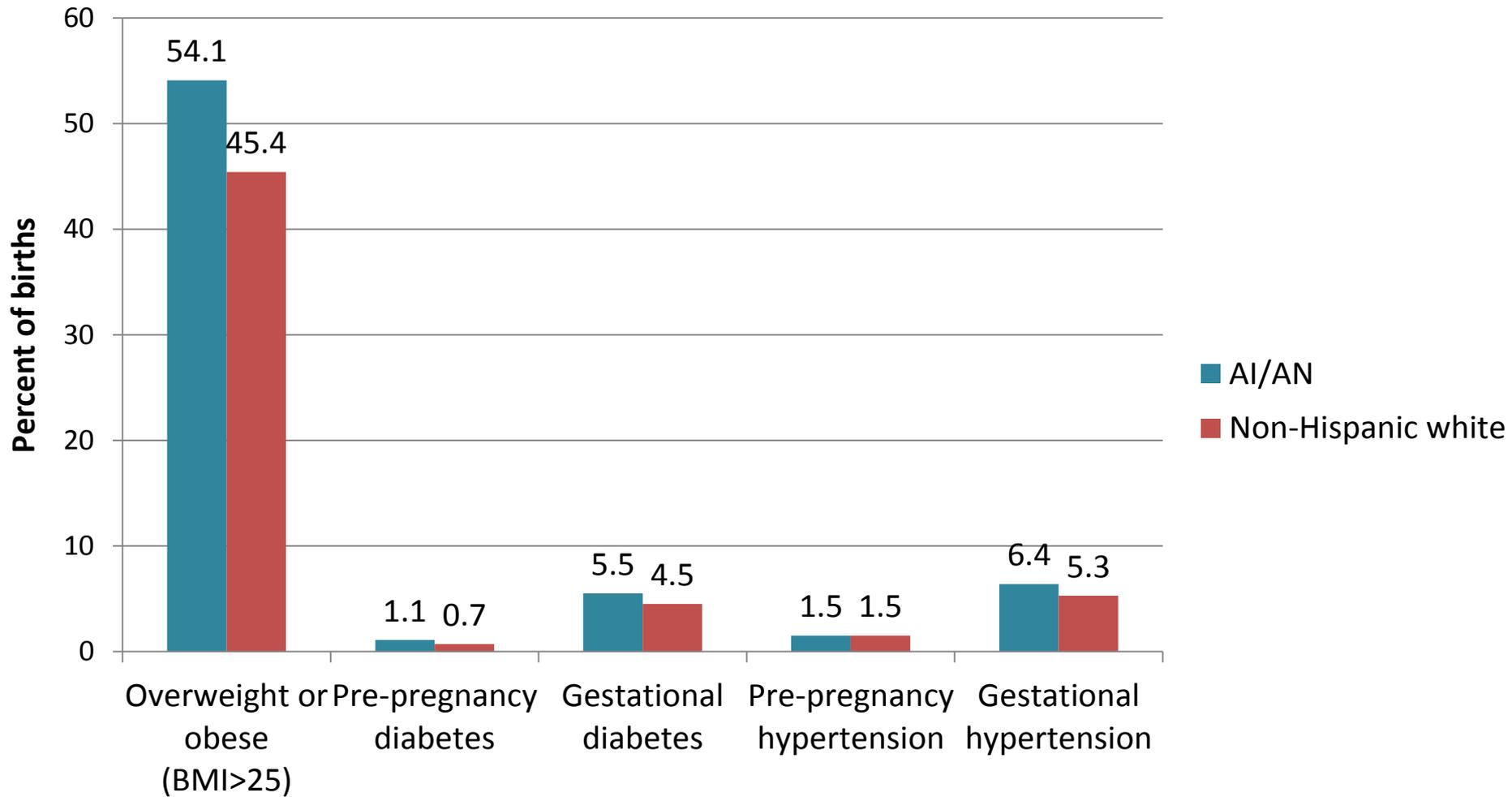
AI/AN births

- Mean maternal age = 25.8
- 55% unmarried
- 22% less than 12th grade education
- 57% Medicaid/OHP
- 58% WIC use
- 1.1% pre-pregnancy diabetes



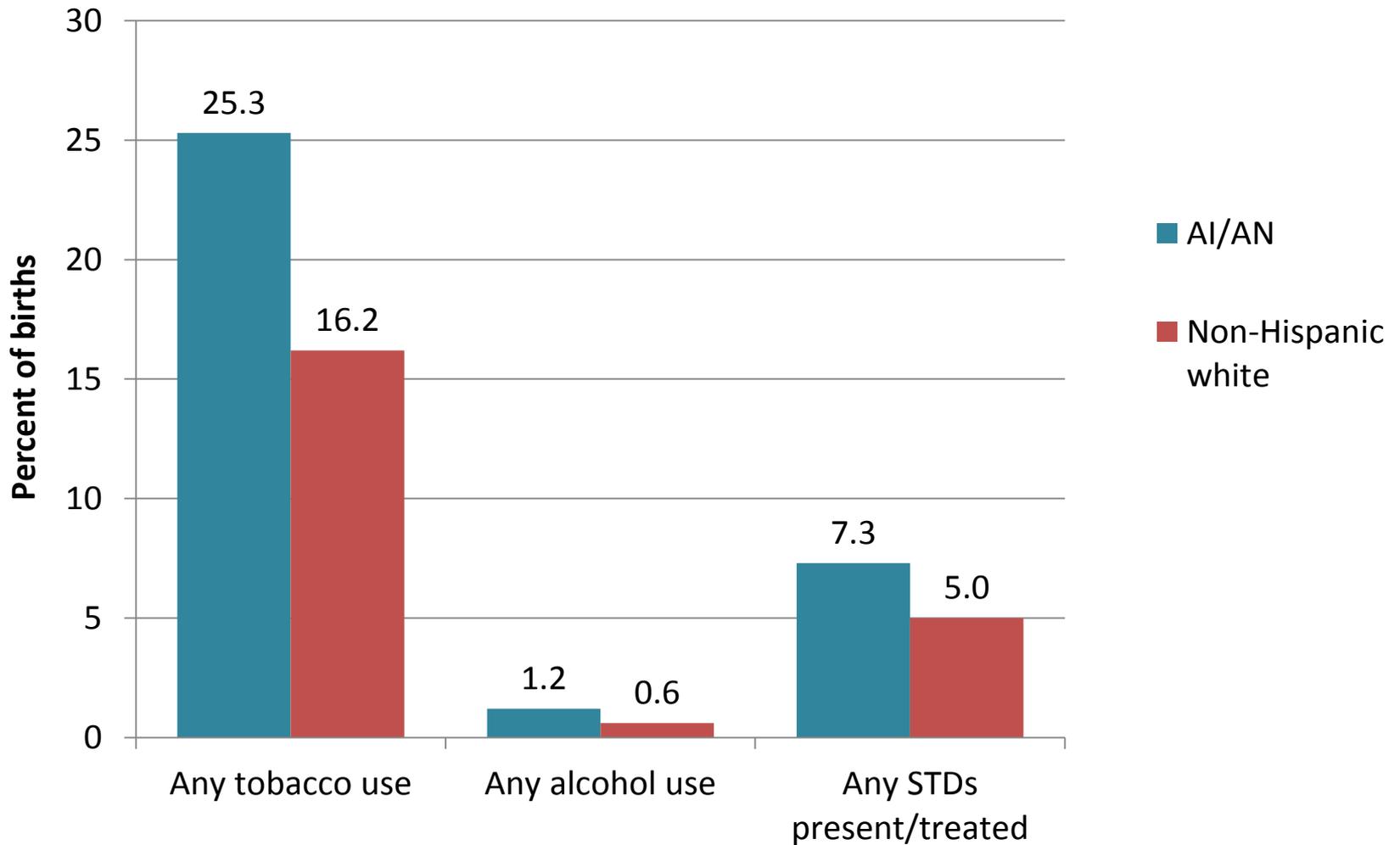


Maternal risk factors





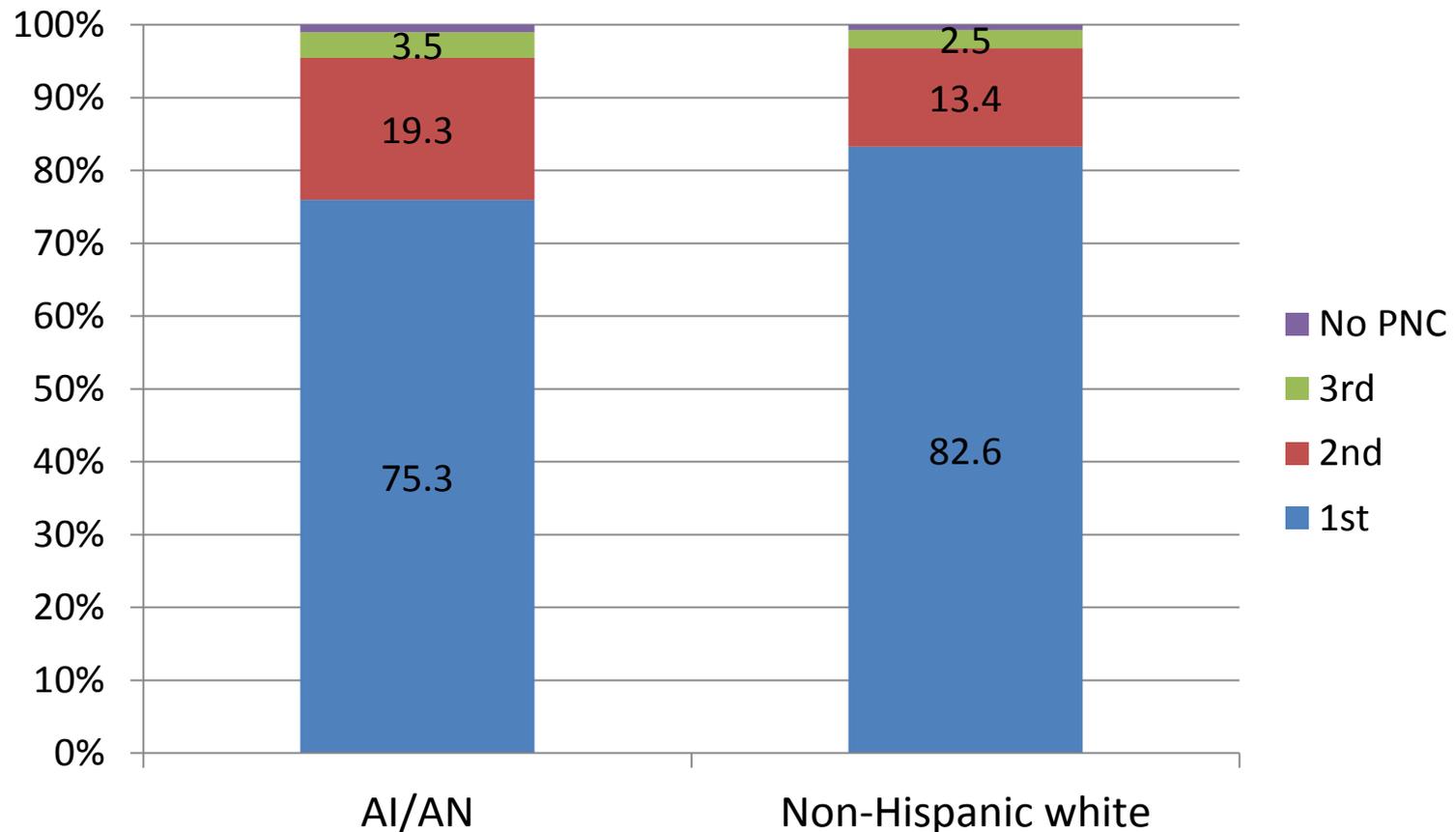
Maternal risk factors





Pregnancy care

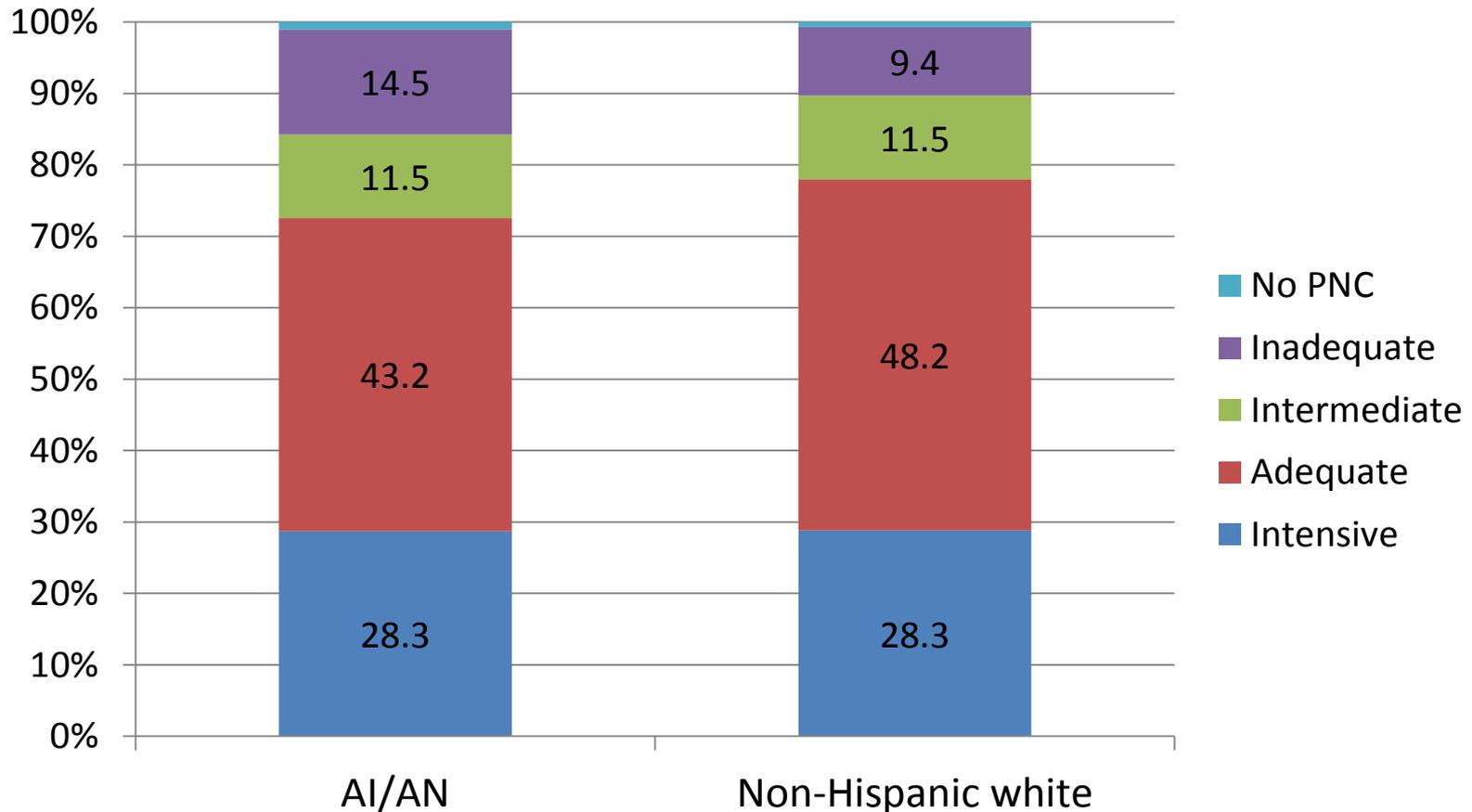
Trimester entered prenatal care





Pregnancy care

Kotelchuck PNC index





Pregnancy care

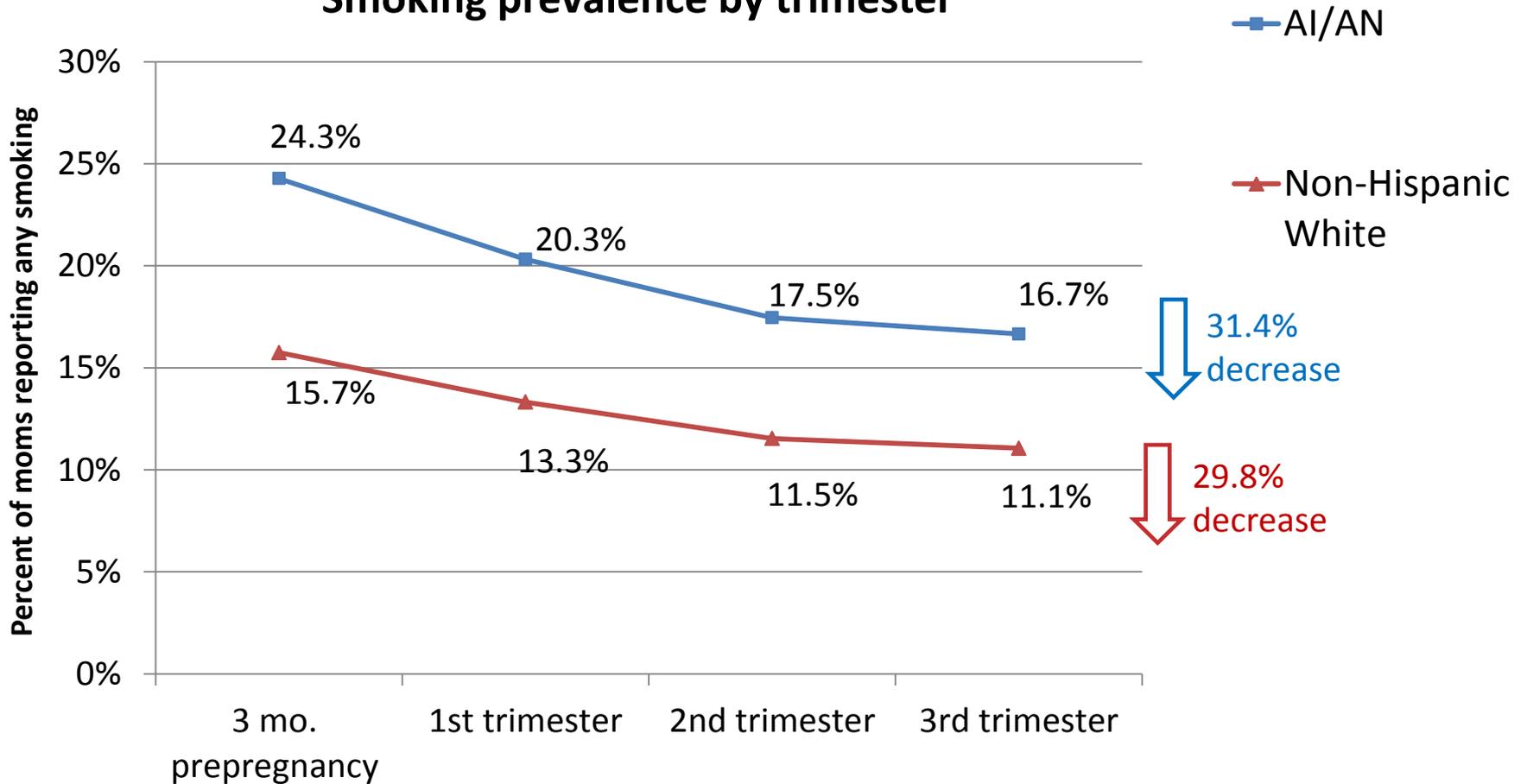
- Tested for HIV
 - AI/AN: 83.0%
 - NHW: 80.7%





Pregnancy care

Smoking prevalence by trimester





Birth outcomes



	AI/AN	NHW
Gestational age		
Early preterm (<34 wks)	2.6%	2.0%
Preterm (34 to <37 wks)	6.9%	5.8%
Term (\geq 37 wks)	90.4%	92.1%
Method of delivery		
Vaginal	69.6%	70.9%
Cesarean	30.4%	29.1%
Birth weight		
Very low (<1500 g)	1.3%	1.0%
Low (1500 - <2500 g)	5.9%	5.1%
Normal (2500 - <4500g)	91.2%	92.3%
High (>4500 g)	1.7%	1.6%



Birth outcomes

- **NICU admission**
 - AI/AN: 8.5%
 - NHW: 6.9%
- **Breastfeeding at discharge**
(>12% unknown/missing data)
 - AI/AN: 77.7%
 - NHW: 77.7%





Highlights/ Conclusions



- Birth/fertility rates 2-3 times higher
 - Greatest disparity among 15-17 year olds: fertility rate almost 5x higher than NHW
- AI/ANs have elevated prevalence of pregnancy risk factors
- Birth outcomes (those that we looked at) not vastly different than NHW
- AI/ANs doing somewhat better than NHW on HIV screening and smoking reduction
 - IHS/Tribal initiatives, GPRA
- PRAMS comparison?



Next steps & Recommendations



- Future planned analyses
- MCH strategic plan
- Focus on teen moms
 - Prenatal care
 - Prevention efforts: WeRNative, PRT, etc.
- Consider using dads' race data for service-based analyses



Limitations

- Our selection of AI/AN cases not standard (including linked records and dads' race info) - not comparable with other data
- NTR doesn't cover entire Oregon AI/AN population
 - Urban population represented





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