

Trends of Vaccine-Preventable Diseases in Montana



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Reportable Conditions Covered

- Pertussis (whooping cough) (*Bordetella pertussis*)
- Varicella (chickenpox) (Varicella zoster virus)
- Mumps
- Invasive pneumococcal disease (IPD) (*Streptococcus pneumoniae*)
- Invasive *Haemophilus influenzae*
- Meningococcal disease (*Neisseria meningitidis*)



What we'll look at

- Incidence of select VPD cases will be described by
 - Age
 - Race
 - County of Residence
 - Vaccination status
 - Vital status (deaths)
 - Outbreaks of disease
 - Time period
 - Pre-COVID (2015-2019)
 - COVID (2020-2022)
 - Post-COVID (2023)



Why are Trends Important?

- Target interventions to populations
 - Vaccination
 - Education
- Evaluating interventions
 - Increase or decrease in cases?
 - Overall changes or certain populations?
- Changing trends
 - COVID-19 impacted disease transmission
 - Competing germs – ebb and flow
 - Seasonality

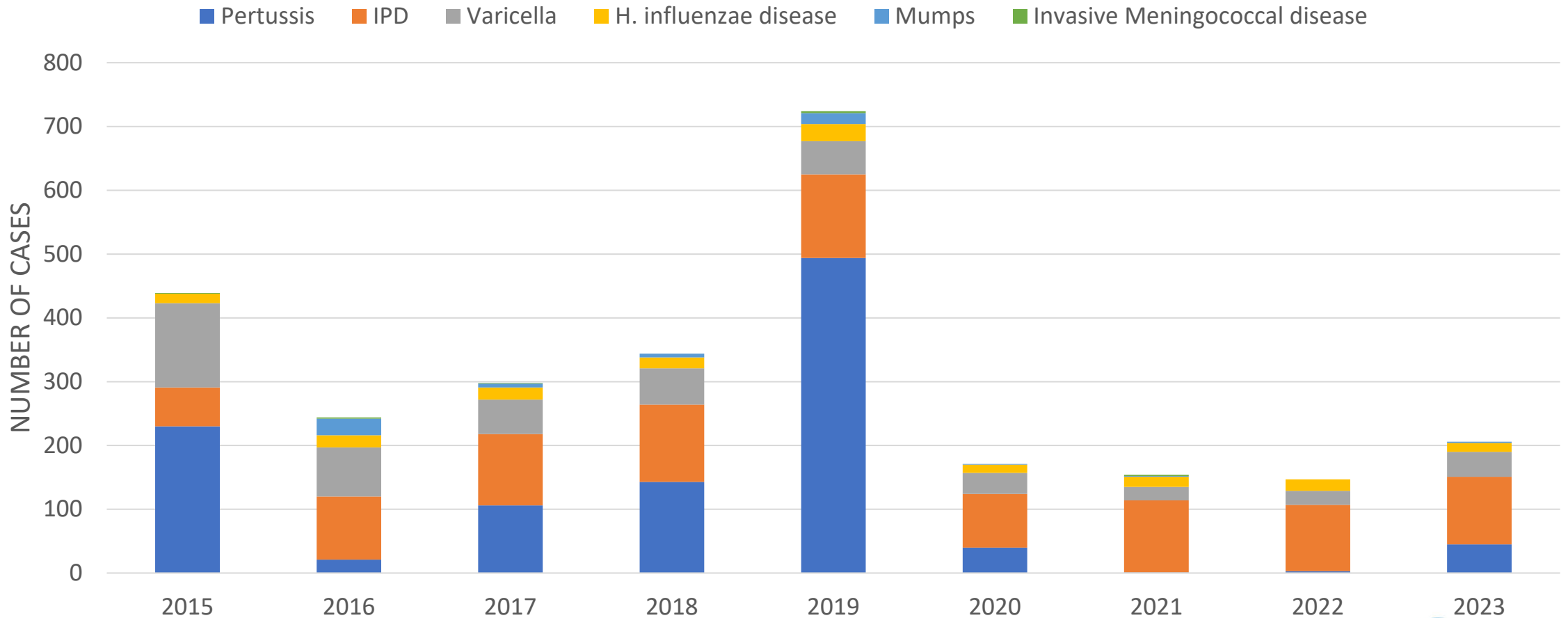


**Disclaimer:
2023 data are preliminary**

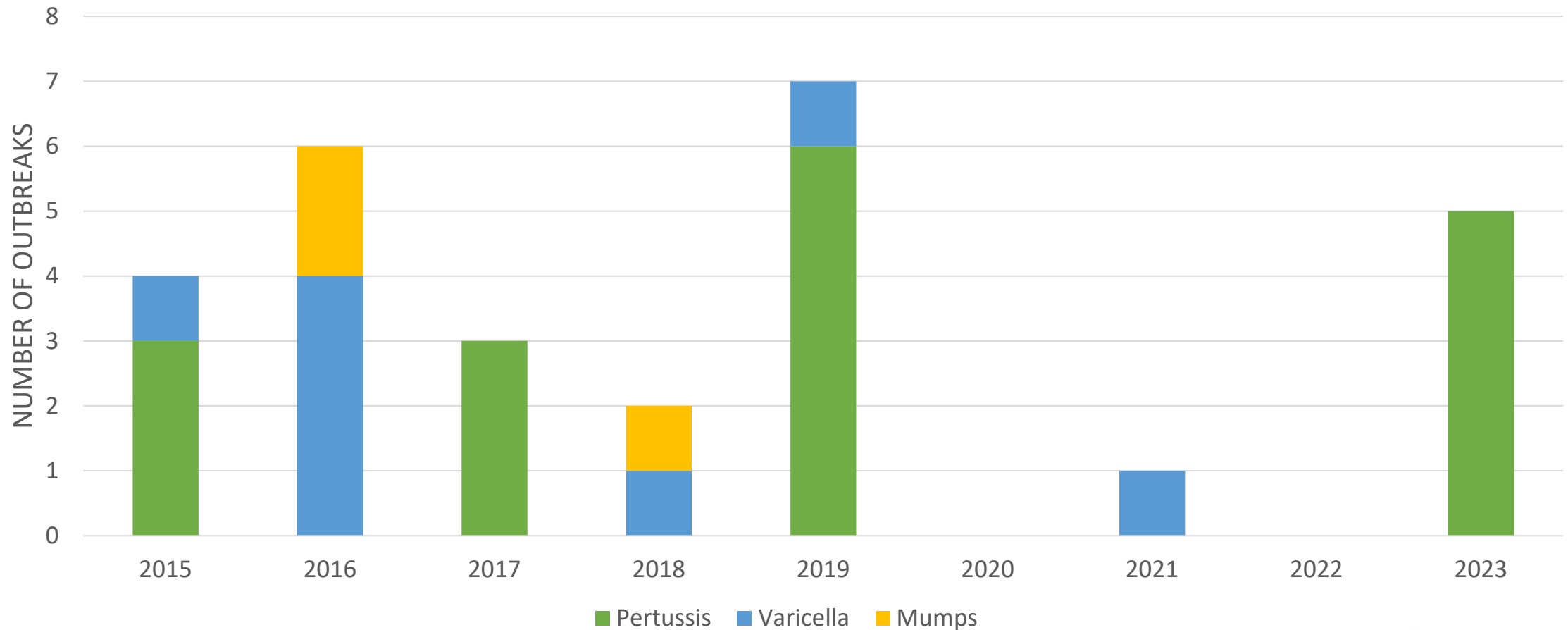


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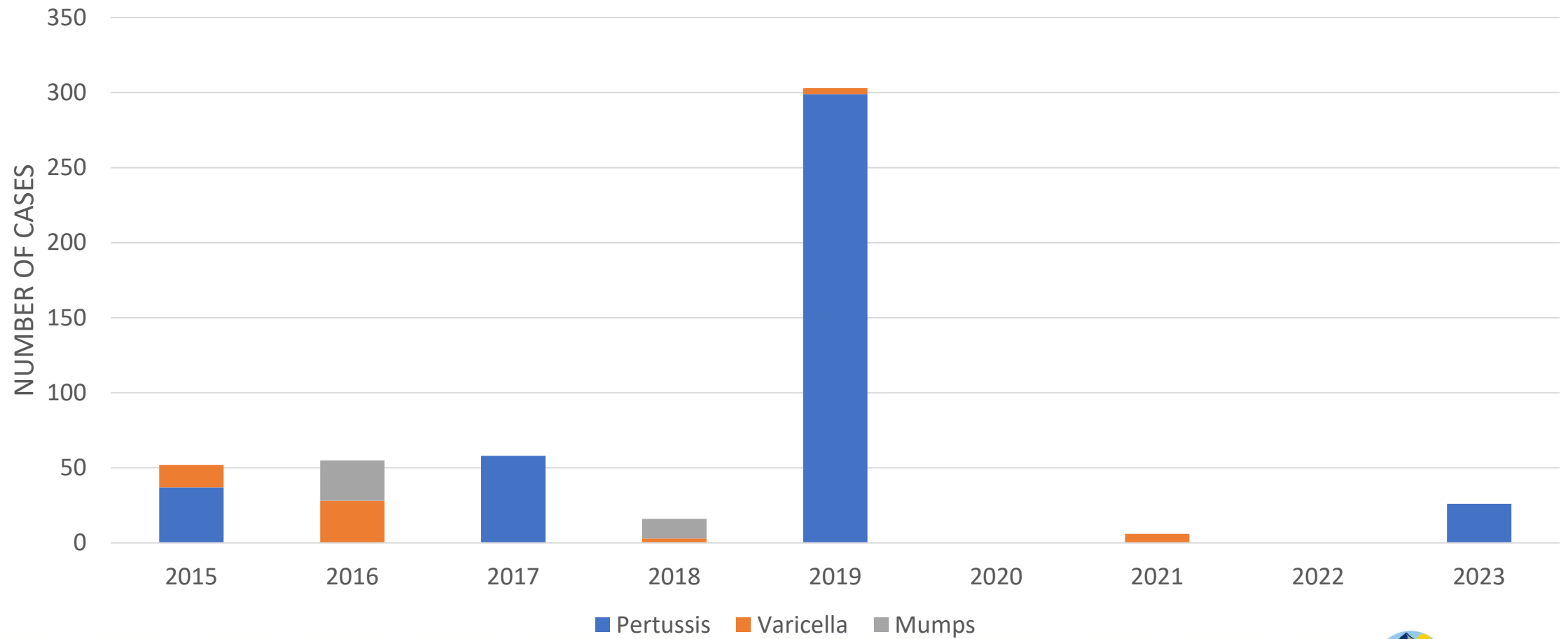
Overall Cases of Disease by Year, Montana, 2015-2023



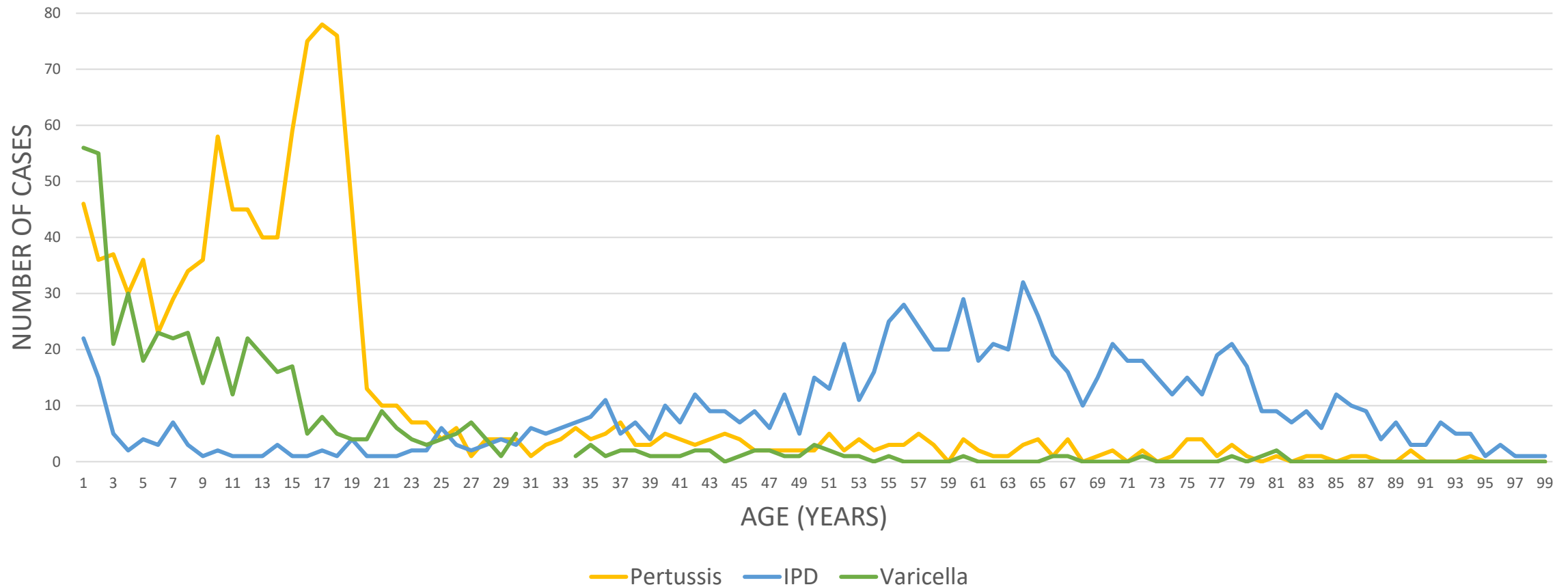
Number of Outbreaks by Year, Montana, 2015-2023



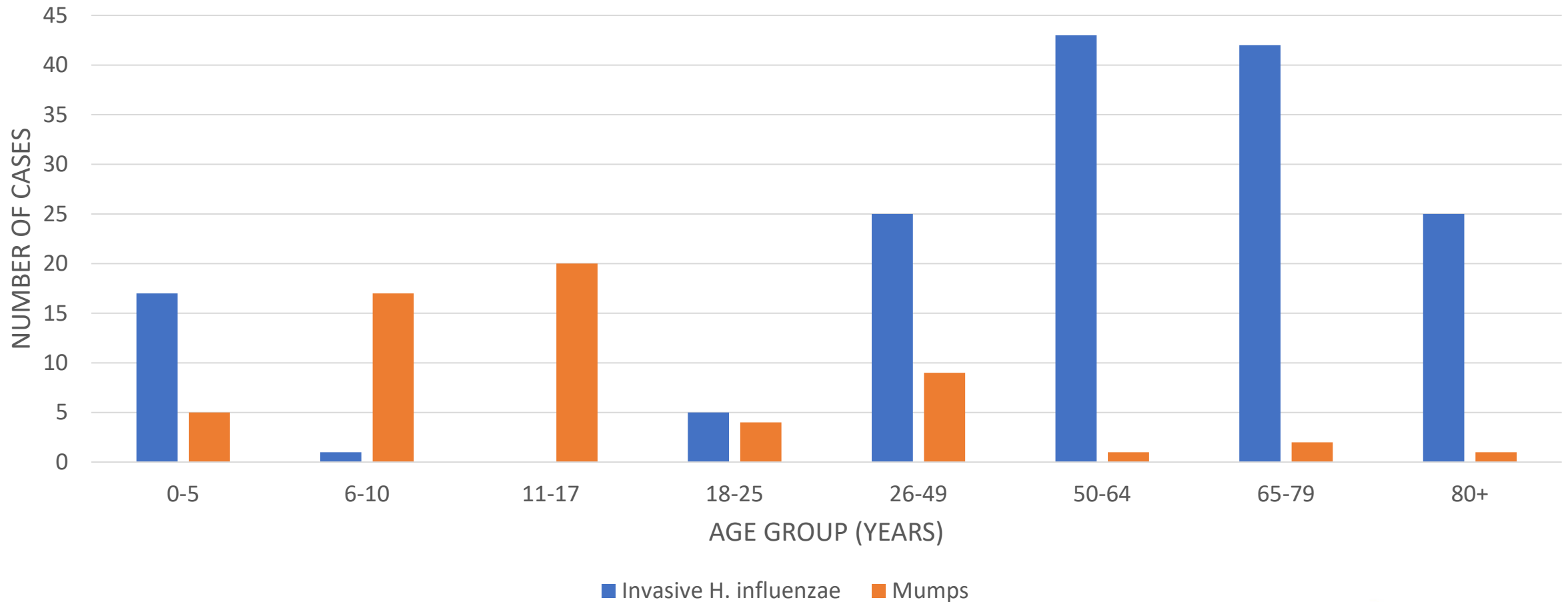
Outbreak-Related Cases by Year, Montana, 2015-2023



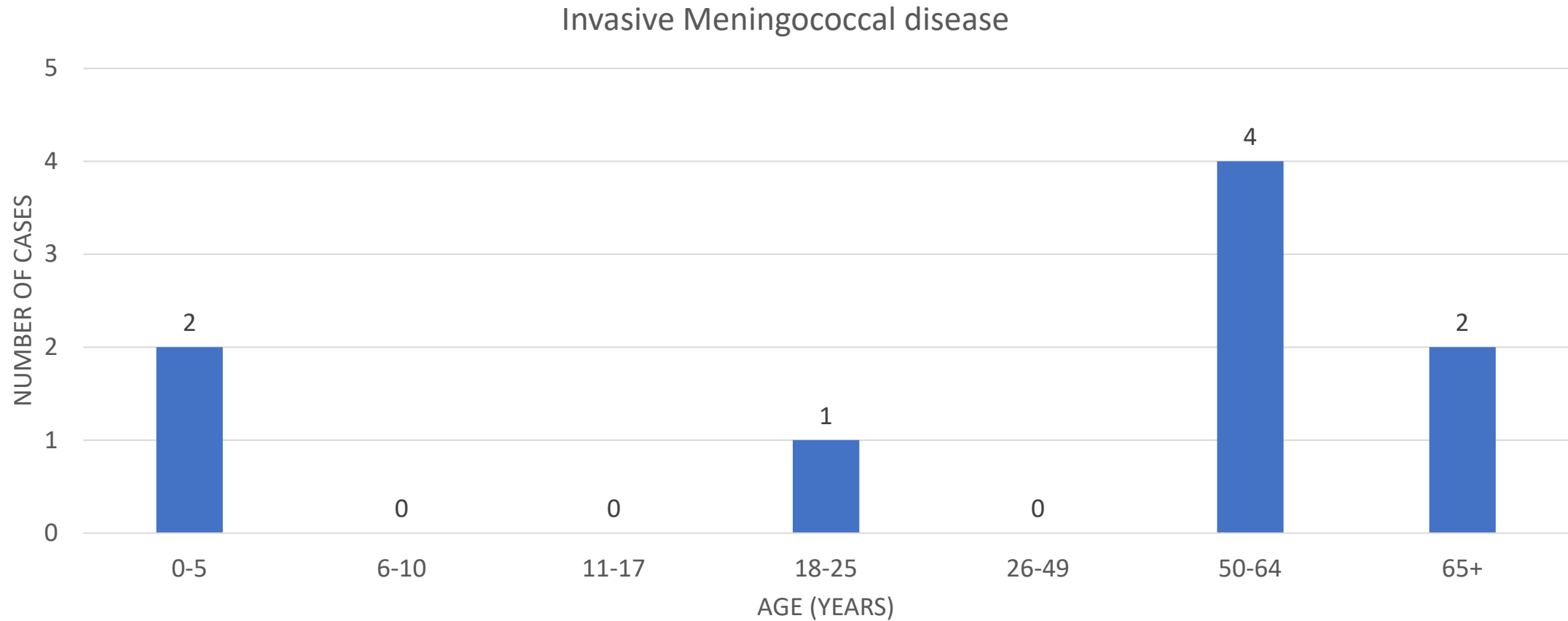
Cases by Age and Disease, Montana, 2015-2023



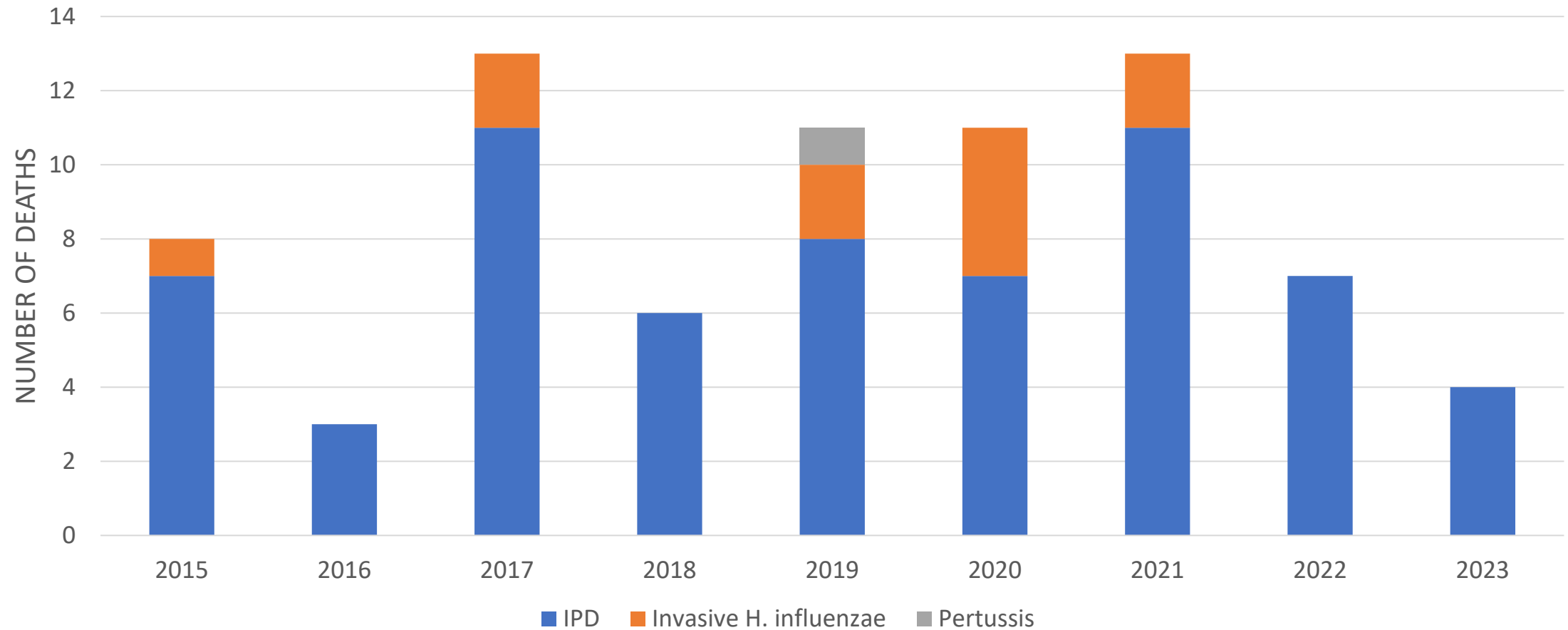
Cases by Age Group, Montana, 2015-2023



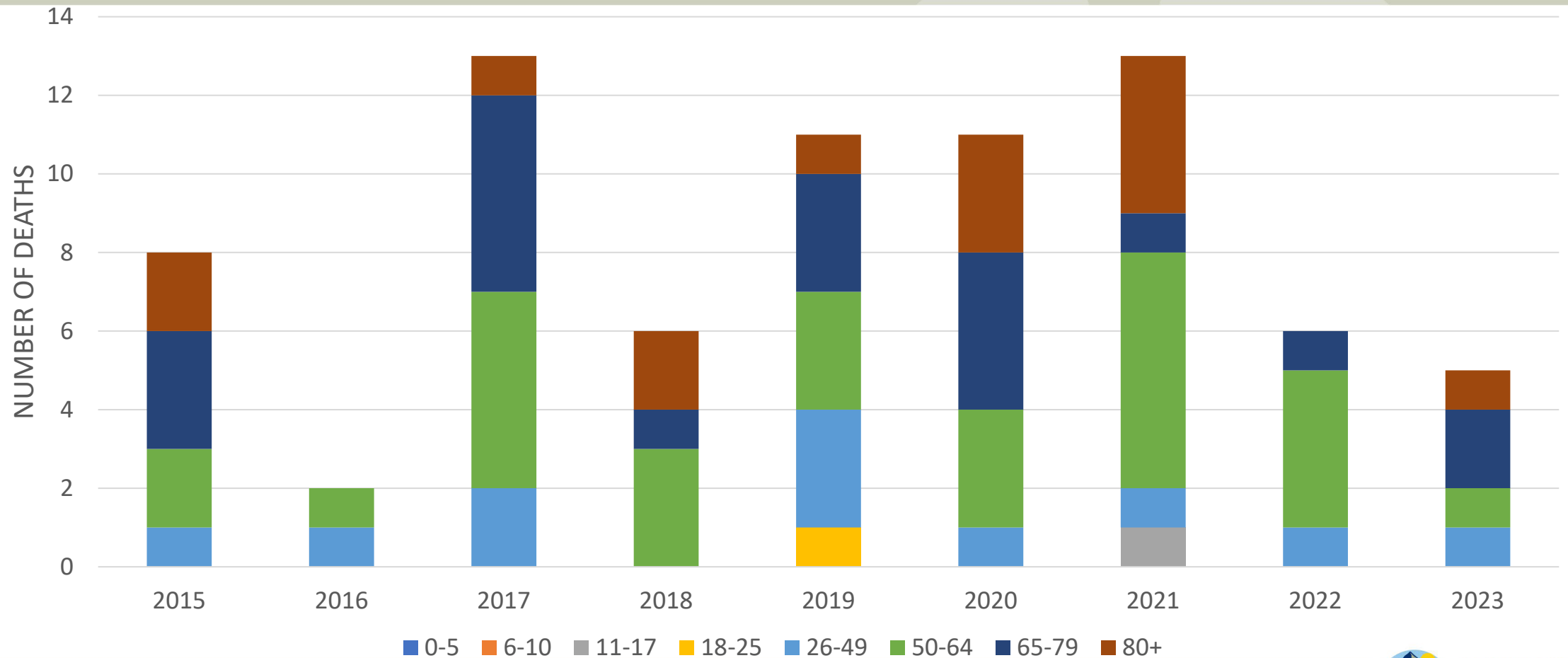
Cases by Age Group, Montana, 2015-2023



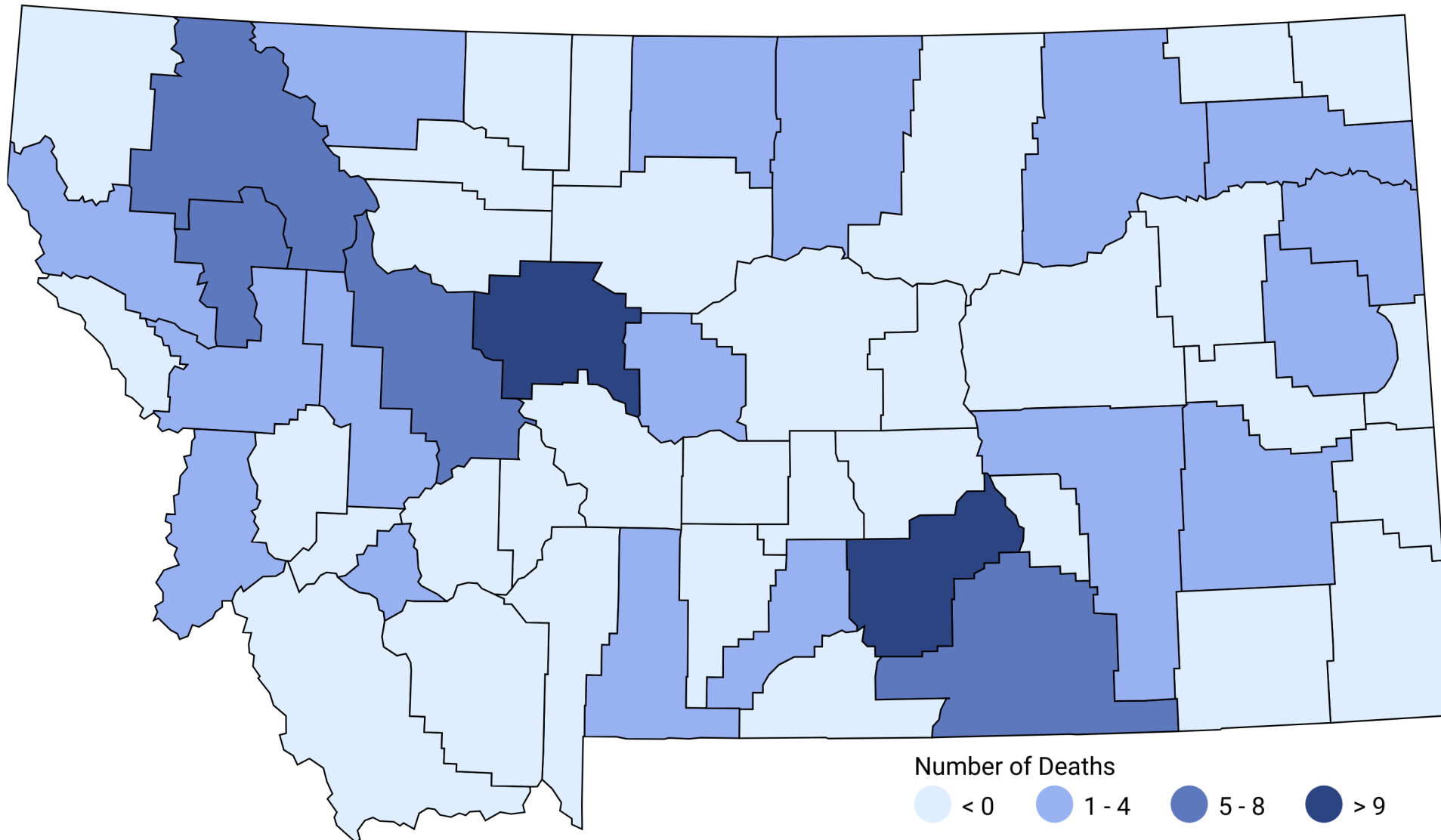
VPD Deaths by Year and Disease, Montana, 2015-2023



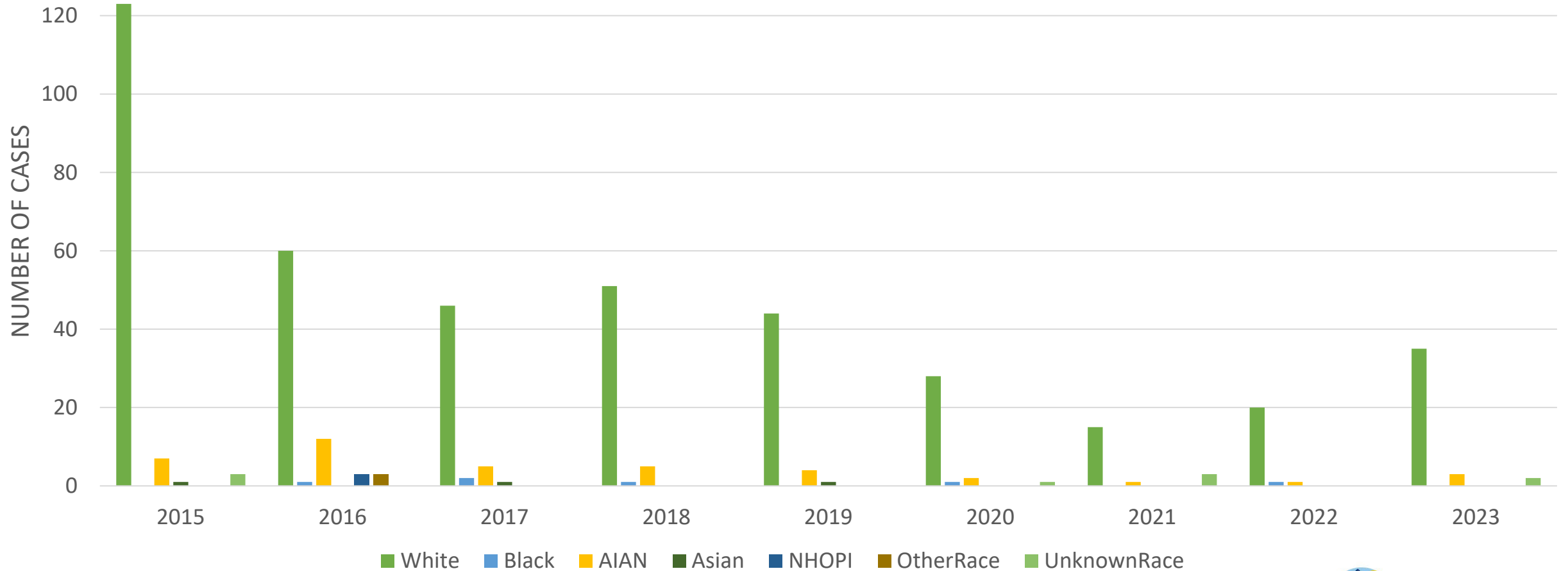
Deaths Caused by IPD, *H. influenzae*, and Pertussis, by Year and Age Group, Montana, 2015-2023



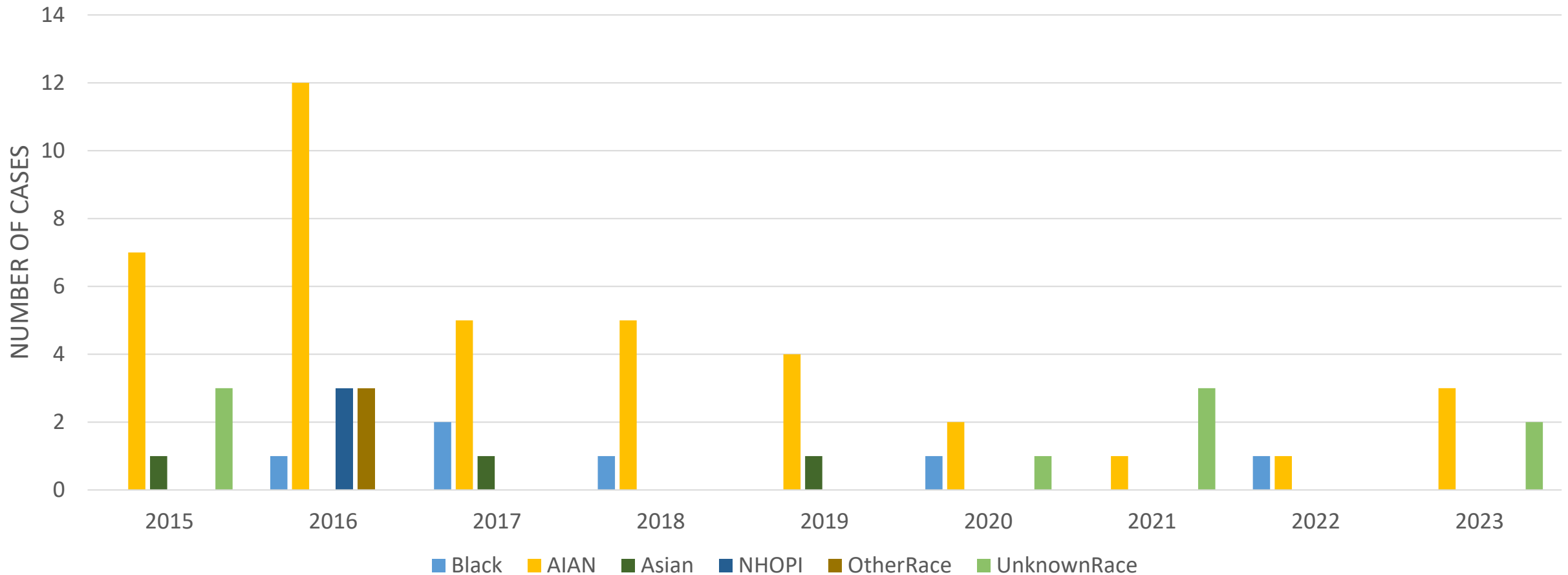
Total VPD Deaths by County, 2015-2023



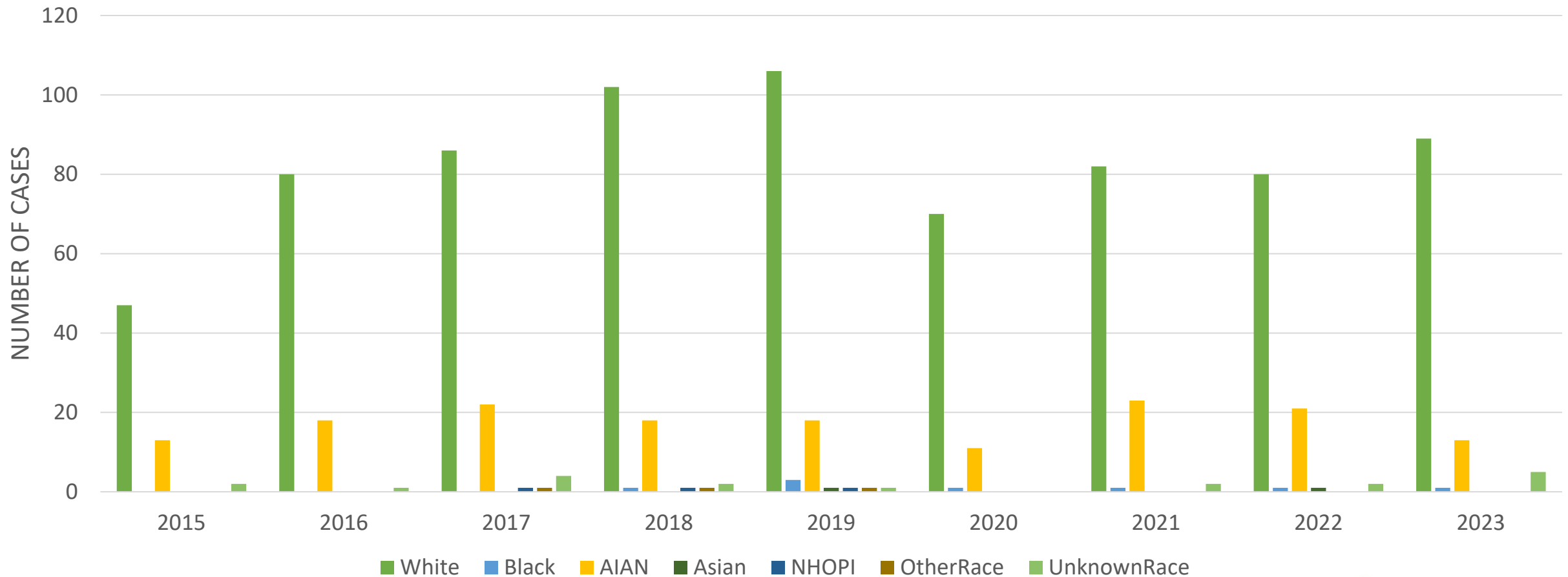
Varicella Cases by Race and Year, Montana, 2015-2023



Non-white Varicella Cases by Race and Year, Montana, 2015-2023

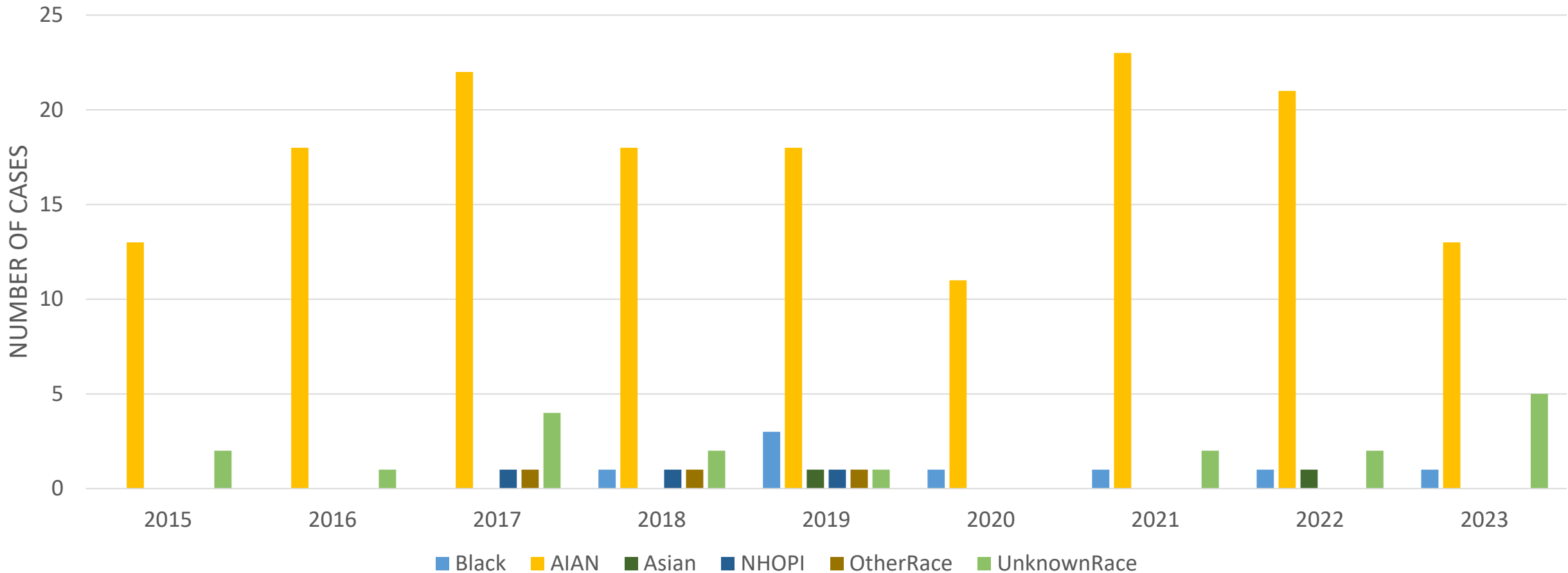


IPD Cases by Race and Year, Montana, 2015-2023

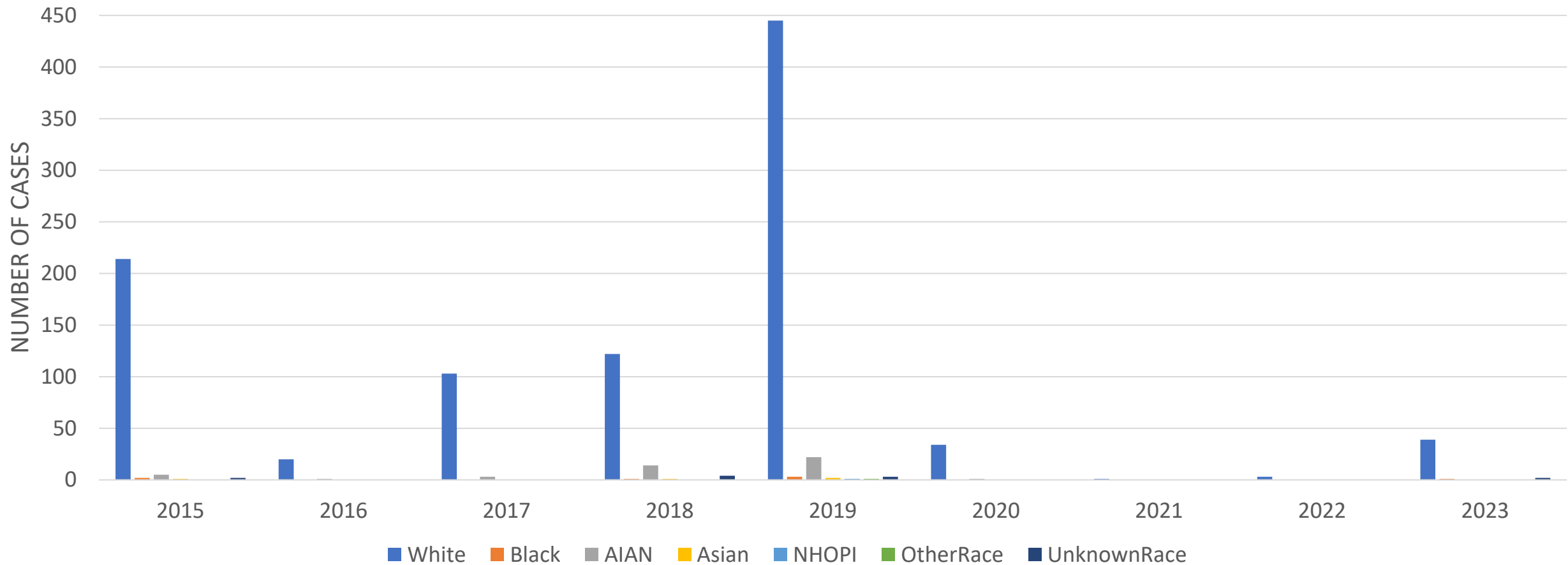


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Non-white IPD Cases by Race and Year, Montana, 2015-2023

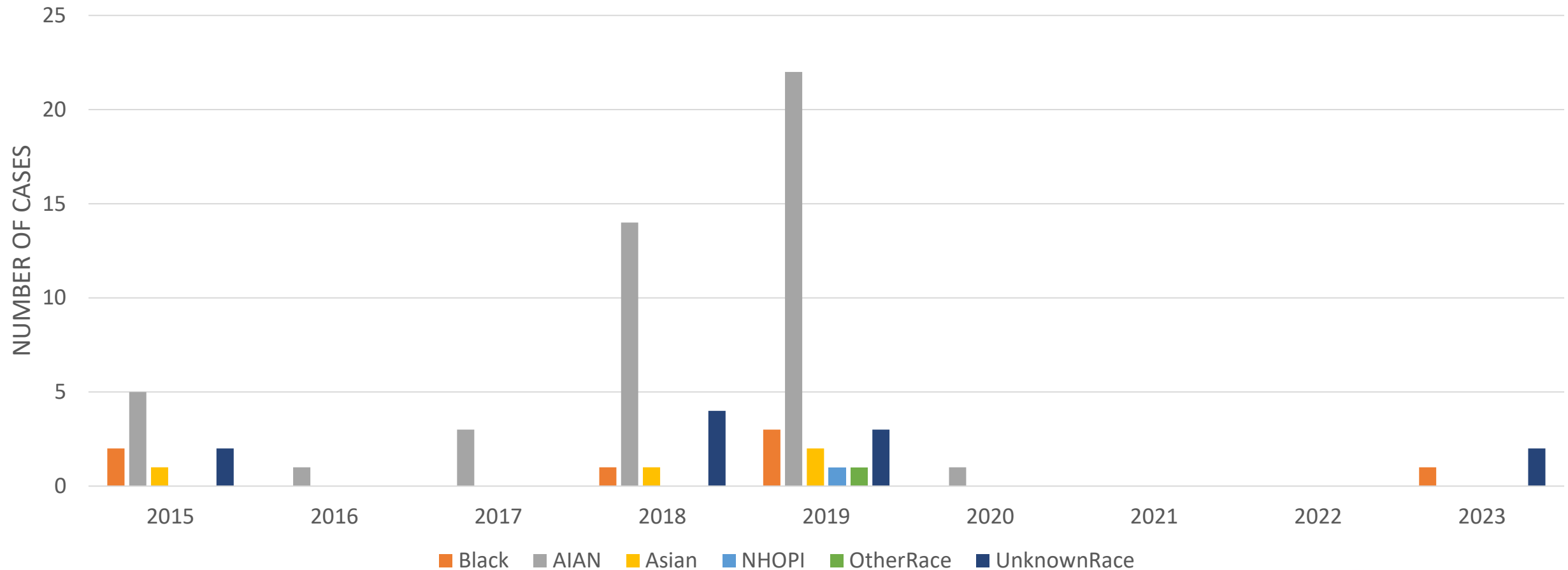


Pertussis Cases by Race and Year, Montana, 2015-2023

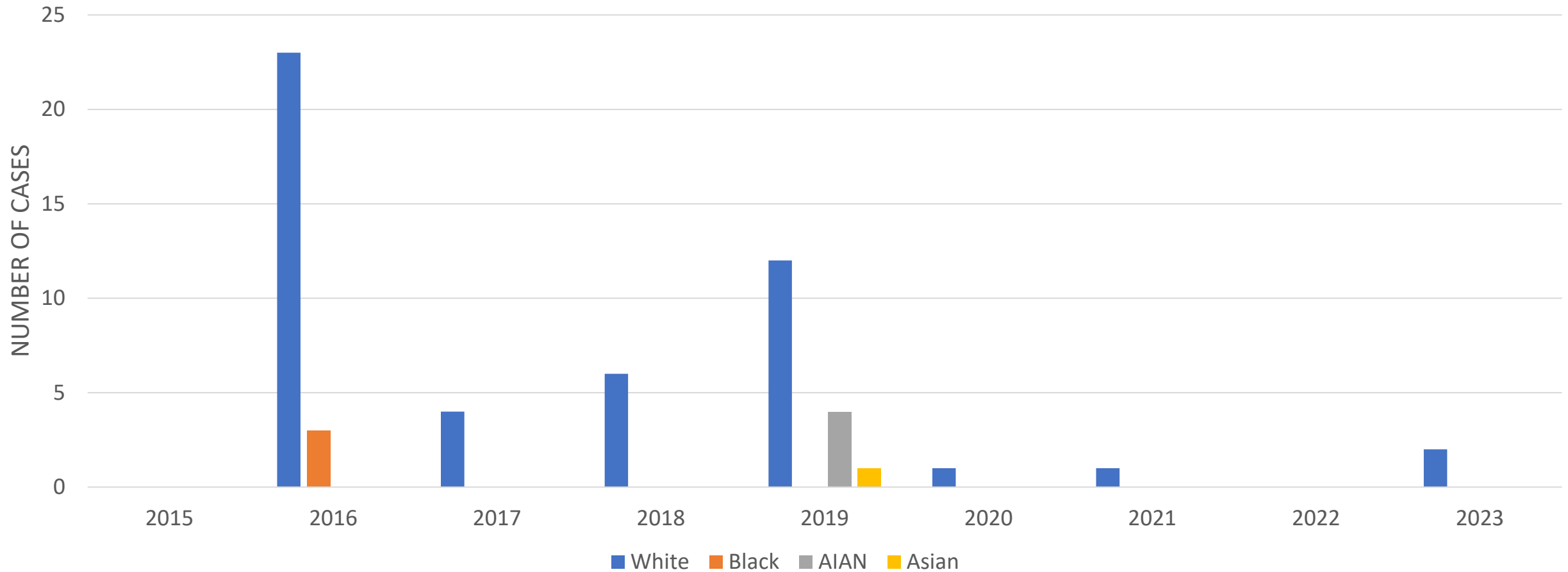


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Non-white Pertussis Cases by Race and Year, Montana, 2015-2023

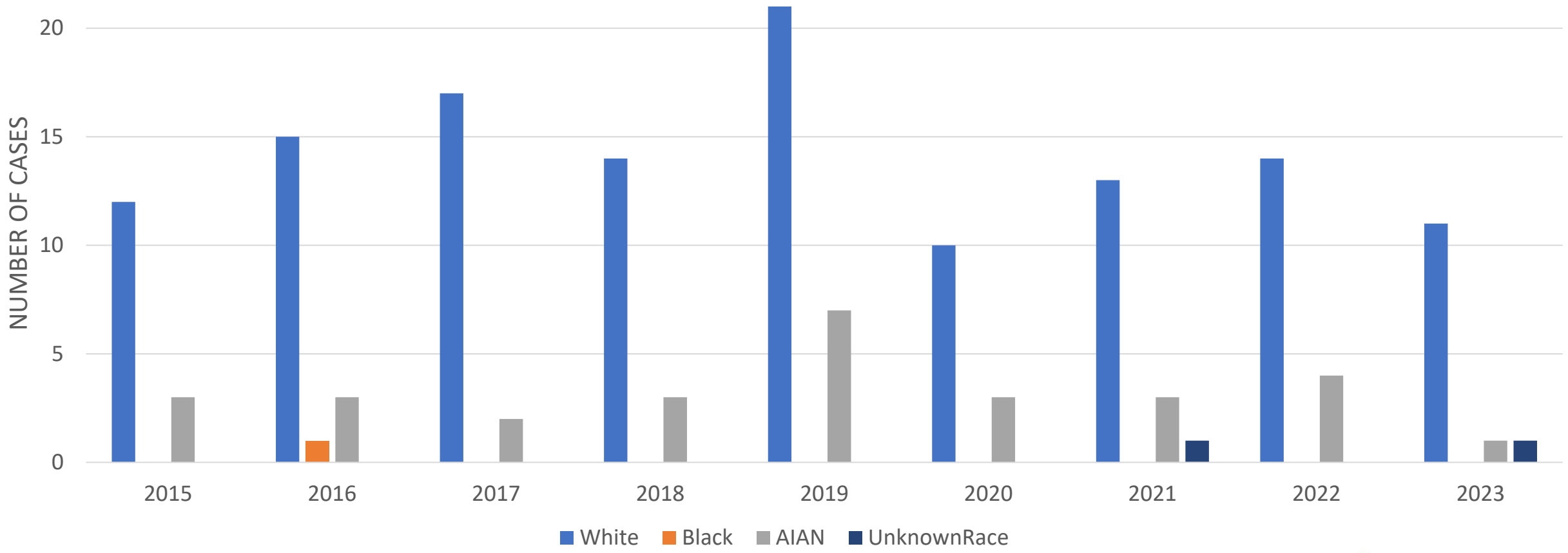


Mumps Cases by Race and Year, Montana, 2015-2023

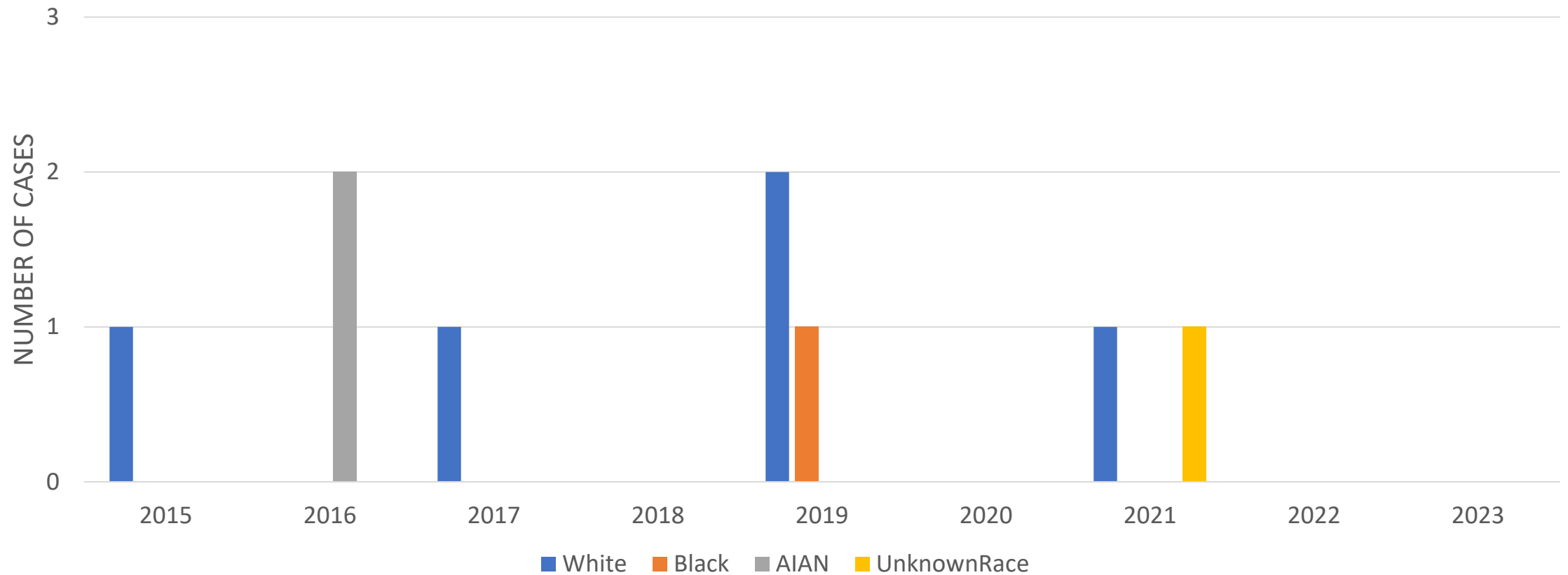


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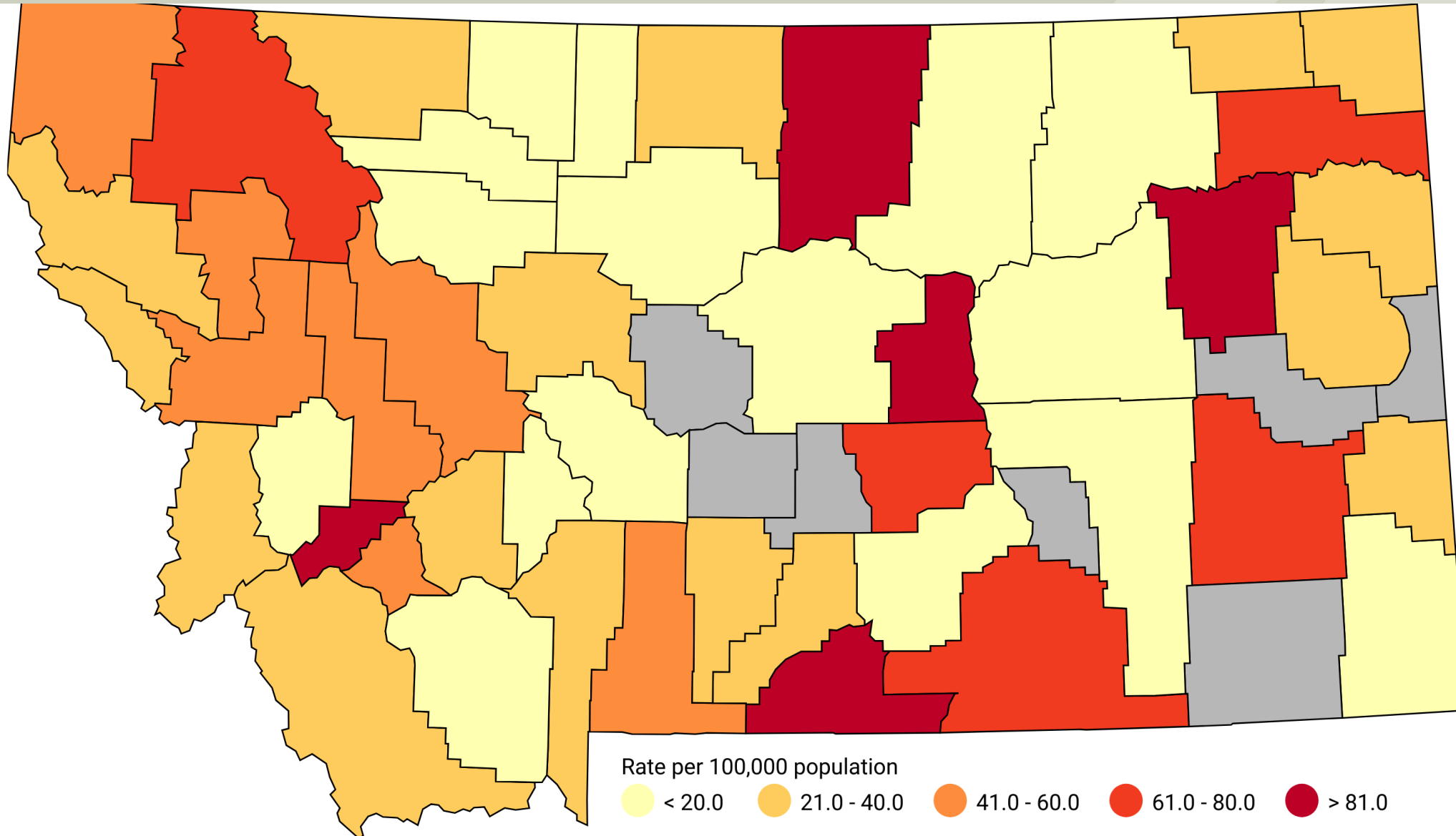
Invasive *H. influenzae* Cases by Race and Year, Montana, 2015-2023



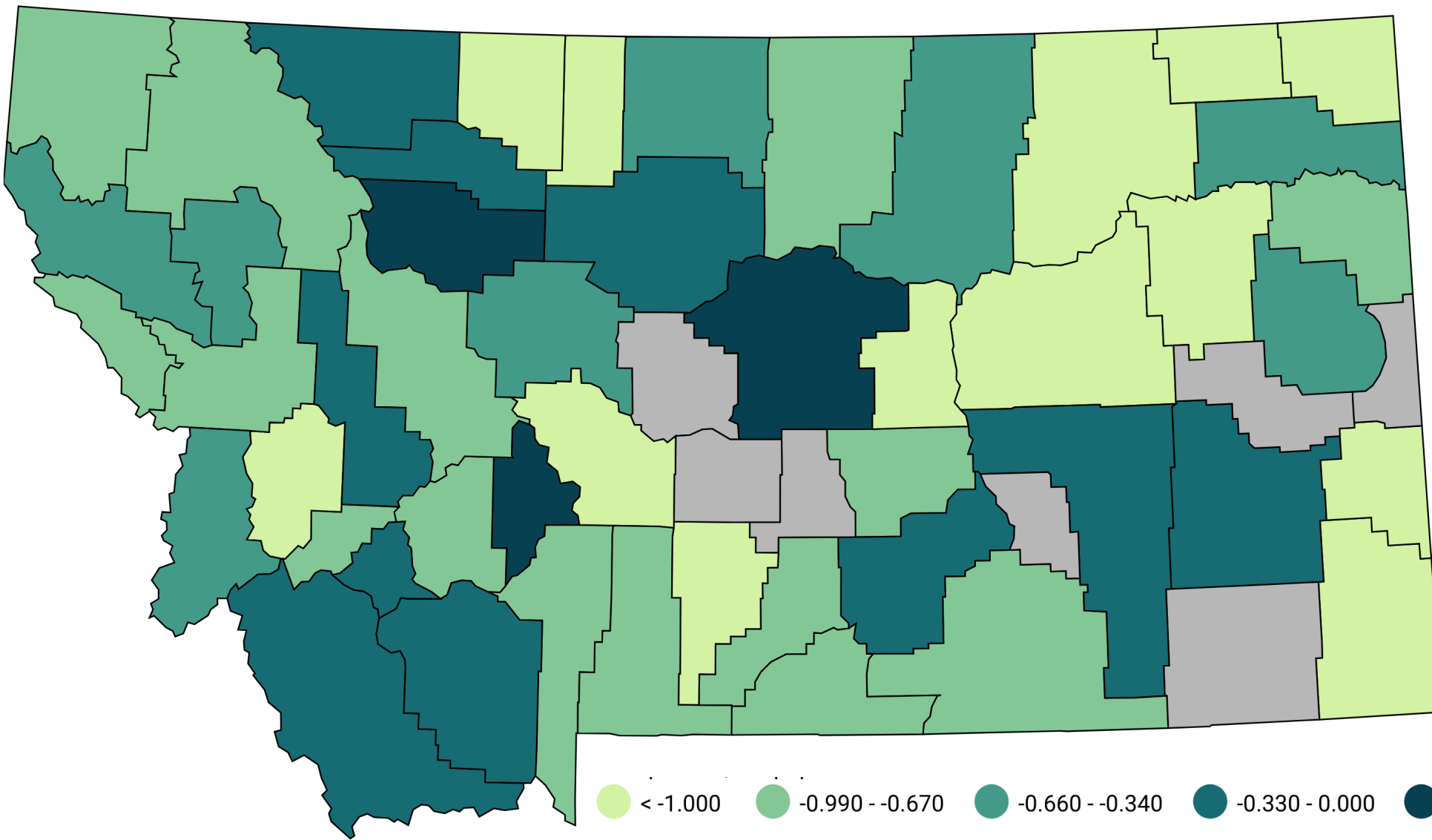
Meningococcal Diseases Cases by Race and Year, Montana, 2015-2023



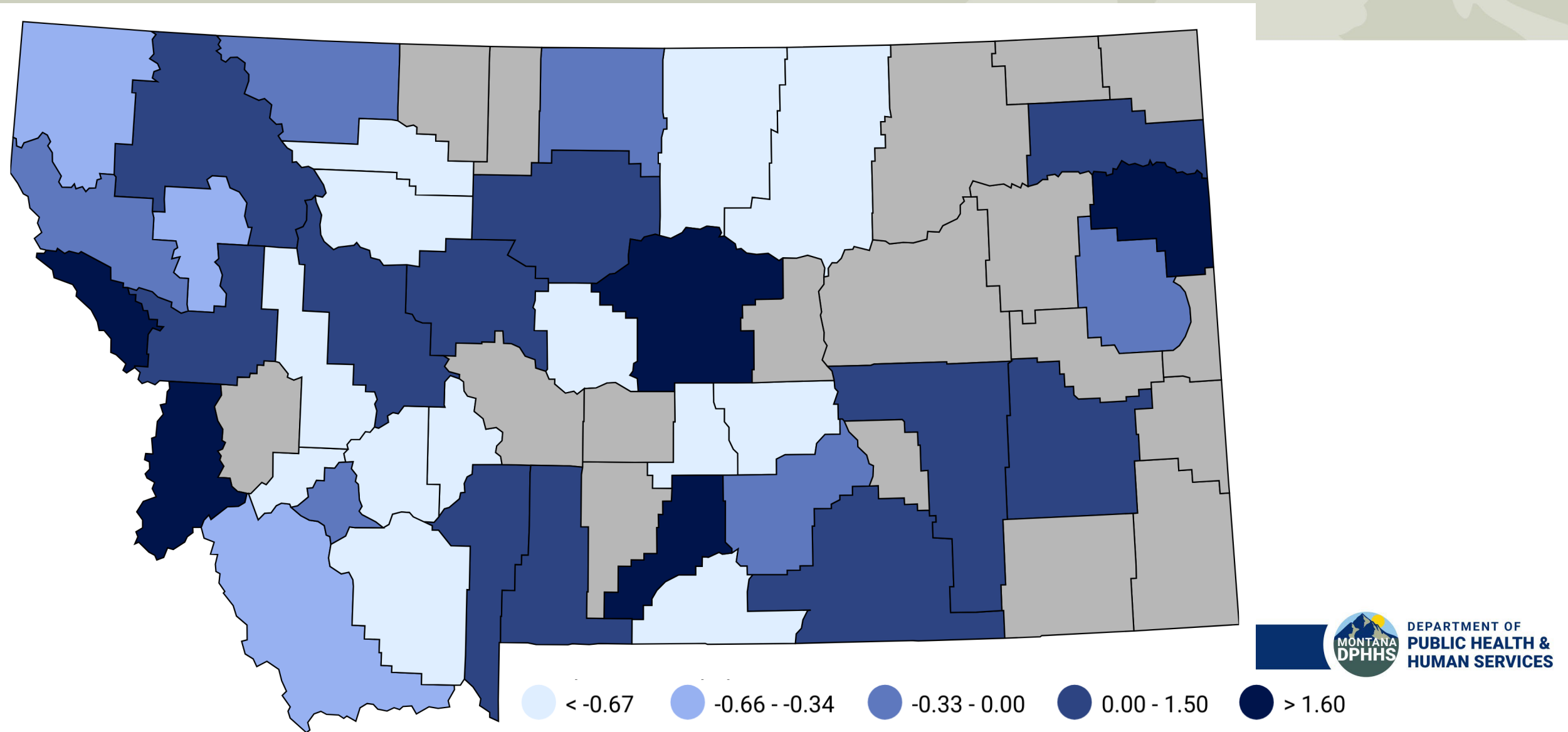
Pre-COVID VPD Average Rate by County, Montana 2015-2019



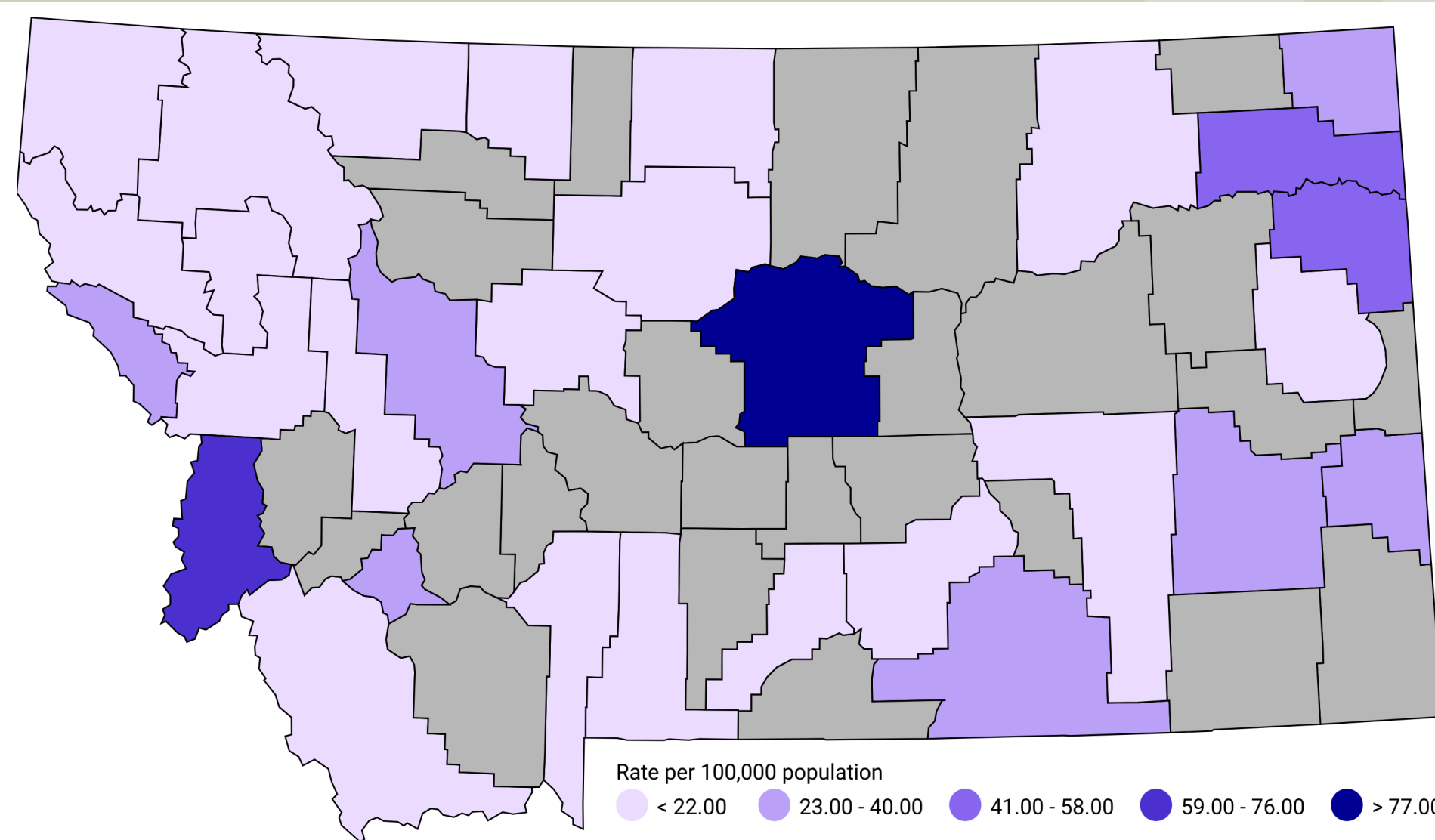
Change in VPD Rates from Pre-COVID to COVID, Montana



Change in VPD Rates from COVID to Post-COVID, Montana, (2020-2022 average – 2023)



VPD Rates by County, Montana, 2023*

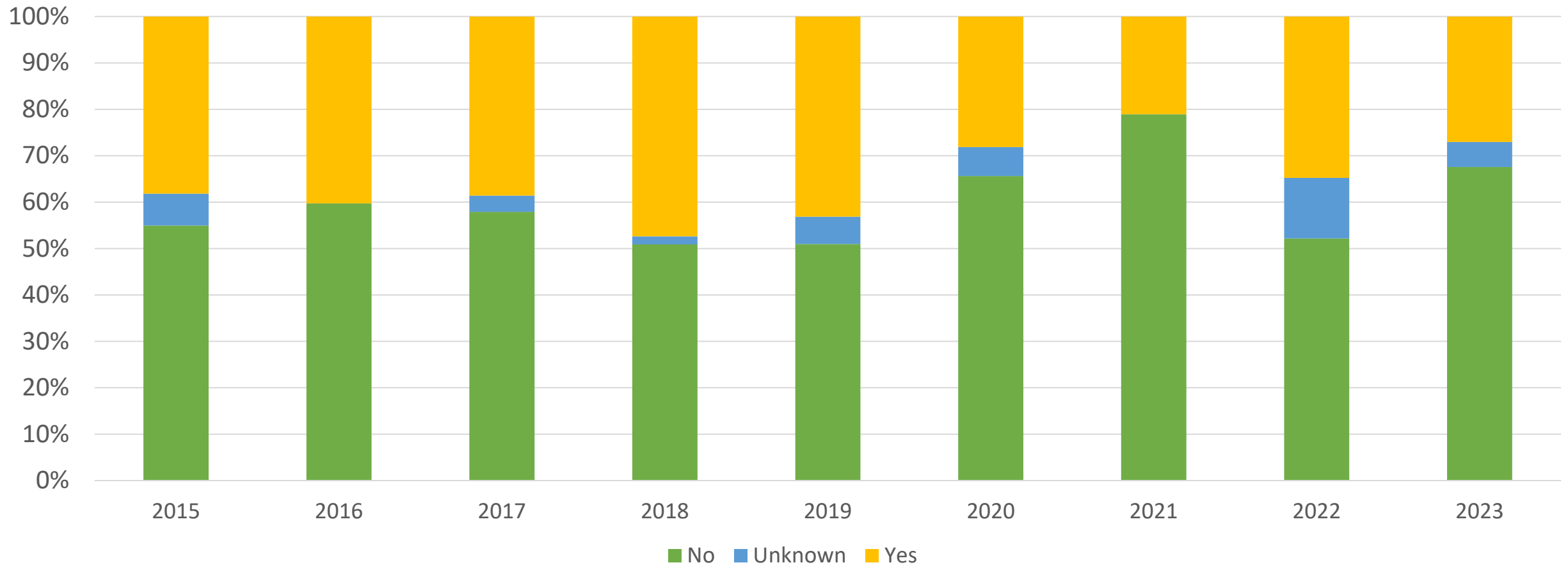


*Data are preliminary



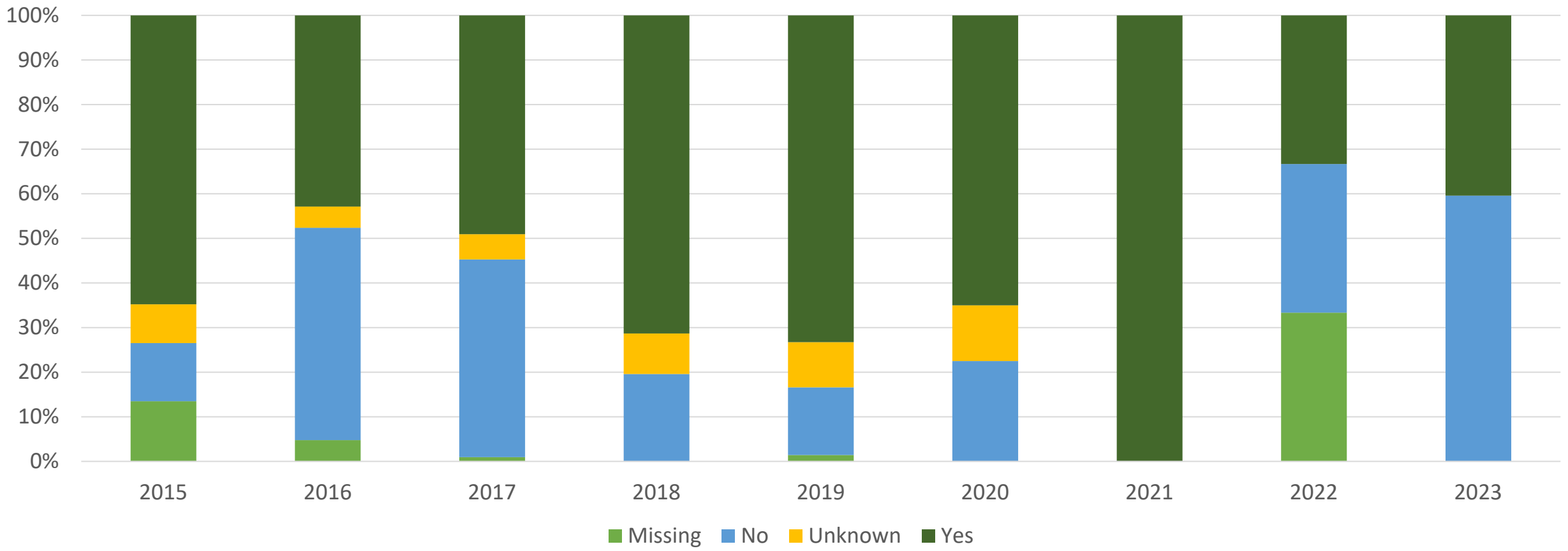
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Vaccination Status of Varicella Cases by Year, Montana, 2015-2023

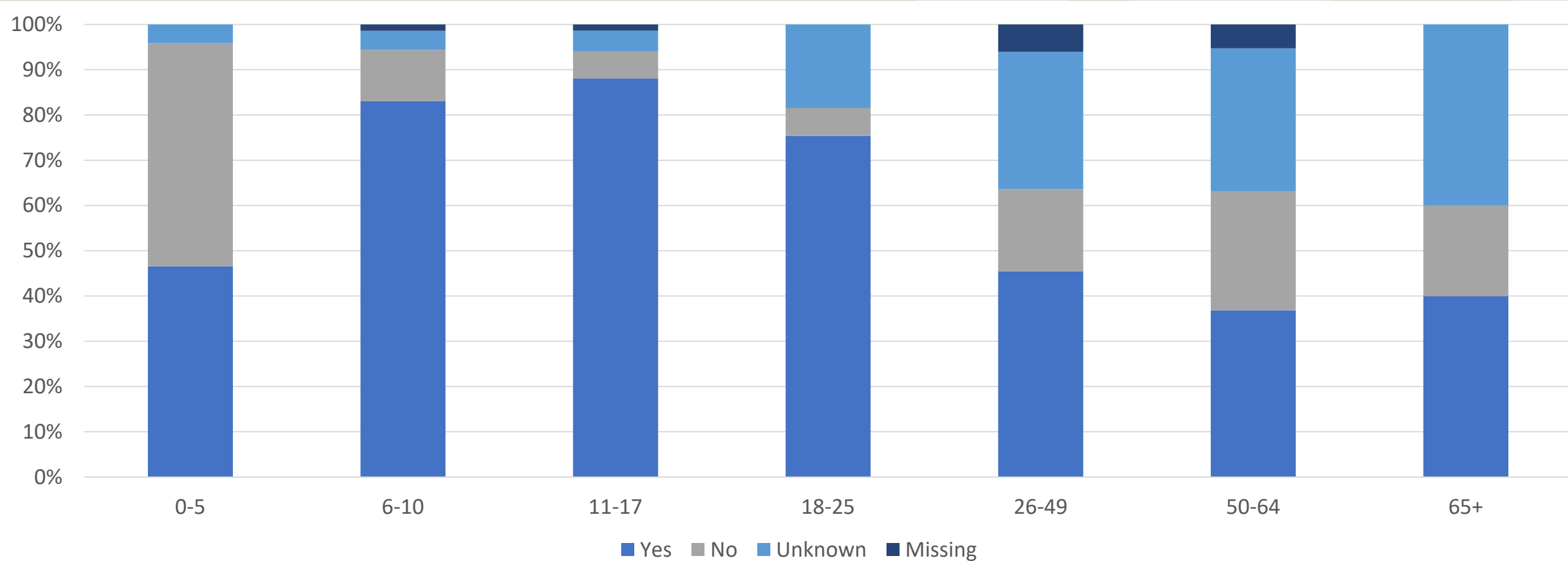




Vaccination Status of Pertussis Cases by Year, Montana, 2015-2023



Vaccination of Pertussis Cases by Age Group, Montana, 2019



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Takeaways

- Data is important
- Were goals attained?
- Where can you target interventions?
- What changes has your local area seen?
- What can you do with this data?



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