**Oral Presentation**  
**Assessing Vaccination Coverage Using an Immunization Information System (IIS)**  
Rebecca Coyle, Beth Parilla

**Background:**  
IIS can be a valuable tool in assessing vaccination coverage at the population level. However, there are many questions to consider before using your IIS to conduct population-based coverage assessments. To address this need, the American Immunization Registry Association (AIRA) developed the Analytic Guide for Assessing Vaccination Coverage Using an IIS. This guide describes practical considerations and key decision points in designing a population-based immunization coverage assessment using an IIS.

**Setting:**  
This presentation is relevant to anyone working in a public health setting.

**Population:**  
IIS assessments estimate coverage for many populations.

**Project Description:**  
This session will describe the key considerations for designing a coverage assessment using IIS data. For example, the purpose of the assessment drives many of the decisions in designing the assessment. Two of the most common purposes are to determine the protection level of the population, or to determine the percentage of the population that has been vaccinated. After determining the purpose of the assessment, other key decisions must be made including:

- Defining the cohort: who will be excluded from the analysis
- Determining the vaccination criteria: such as which vaccines will be assessed
- Selecting the denominator source: IIS-based, non-IIS-based (e.g., census, school data, etc.)
- Data quality considerations that can significantly affect the assessment

**Results/Lessons Learned:**  
This session will help participants understand the key considerations in designing a coverage assessment. It will highlight real-life examples of coverage assessments to help participants see the practical application of using the guide to design IIS-based assessments. These examples will also provide explanations of key decision points IIS considered in designing their coverage assessments and the rationales for many of these decisions.

Participants will develop a greater understanding of the framework that exists for developing coverage assessments using an IIS, and will become familiar with practical examples of IIS-based coverage assessments.
Oral Presentation
Immunization Information Systems and Special Assessments
Maureen Leeds

Background:
The Minnesota Immunization Information Connection (MIIC) is Minnesota’s immunization information system (IIS). MIIC stores immunization information for Minnesota residents. This information comes from participating Minnesota health care providers and the Wisconsin and North Dakota IISs.

MIIC can run assessments of vaccination status at the ZIP code and county levels. MIIC can also be used in concert with demographic information from the Minnesota Department of Health (MDH) Office of Vital Records to examine the vaccination status of certain populations. These special assessments can highlight opportunities for improvement and inform public health programming.

Setting:
n/a

Population:
n/a

Project Description:
MDH staff have used MIIC to assess vaccination status for various geographic and demographic populations. In 2017, staff completed a ZIP code-based project that used data from MIIC and the American Community Survey to identify ZIP codes at risk for lower vaccination rates. Staff then used MIIC to create vaccination reminder mailings targeting these populations.

Staff completed two projects using data from MIIC and Vital Records in 2016. One used Vital Records data to identify women who were pregnant in 2013-2014, and MIIC data to assess whether these women received Tdap and influenza vaccines during pregnancy. The other used Vital Records data to identify maternal country of origin for children born in 2011-2012, and MIIC data to assess the timeliness of their early childhood vaccinations. These assessments helped MDH identify under-vaccinated populations in need of targeted outreach and support.

Results/Lessons Learned:
The ability to combine comprehensive immunization information from MIIC with detailed demographic and geographic information from other sources is very powerful. These assessments can help examine immunization behaviors in different populations and identify opportunities for improvement.
Oral Presentation
Geographic Distribution of HPV Immunization Coverage in North Dakota
Dominick Fitzsimmons

Background:
The National Immunization Survey (NIS-Teen) has shown potential disparities in HPV vaccination coverage in the United States. Higher coverage estimates are seen among adolescents living below the poverty level and among females in metropolitan statistical area (MSA) central cities, versus those living at or above the poverty level and in rural areas. Disparities are also reported among American Indian females versus other races/ethnicities. However, due to the small sample size for North Dakota, NIS disparities data is unavailable. The North Dakota Immunization Information System (NDIIS) collects demographic and dose information on individuals receiving HPV immunizations and is a potential source for this information.

Objectives:
To assess the geographic distribution of HPV vaccination coverage among adolescents at the county, MSA, zip code and American Indian Reservation level to identify variation in immunization rates.

Methods:
HPV doses recorded in the NDIIS for teens ages 13-17 years from 2006 to 2014 were analyzed. Using Statistical Analysis Software, records were assessed for completion of the three-dose vaccine series. Address data was used to map coverage rates, based on gender, county and zip code using Geographic Information Software. Coverage within reservation boundaries was assessed using intersecting zip codes.

Results:
Coverage distribution showed distinct variability, also many counties shared similar rates. Rural counties in the west, southwest and southern areas showed lower coverage, and MSAs were close to state average. Zip code analysis revealed localized variability, including areas overlapping tribal lands. Coverage within reservations tended to be higher than surrounding areas, state average, and MSA rates.

Conclusion:
This study showed the usefulness of the NDIIS in identifying variable distribution of HPV immunization coverage within North Dakota and highlighted potential areas of demographic and geographic disparity.