The Pump Handle

"I had an interview with the Board of Guardians of St. James's parish, on the evening of Thursday, 7th September, and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."

John Snow, 1855

January 2016 Topics

- HIV/STD/TB/Viral Hepatitis Provider Services Survey – Gordana Cokrlic
- Avian Influenza Update – Jill Baber
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- Zika Virus Update – Michelle Feist
- Foodborne Illness Outbreak Investigation at County Jail in North Dakota – Laura Cronquist

HIV/STD/TB/ Viral Hepatitis Provider Services Survey

The North Dakota Department of Health (NDDoH) is conducting a provider services assessment of all the medical and support service providers in North Dakota. This assessment aims to determine the needs, gaps, and barriers to HIV, STD, TB, and viral hepatitis testing; as well as access to medical care, treatment, and essential support services such as immunizations, substance abuse, mental health, dental care, and housing assistance. The NDDoH HIV/STD/TB/Viral Hepatitis Program and the HIV/Viral Hepatitis Community Planning Group will use this information in the development of the 2017-2021 HIV/HCV Prevention and Care Integrated Plan.

The NDDoH HIV/STD/TB/Viral Hepatitis Program also plans to include this information in a service locator tool that is be published on our newly designed website later this year. The service locator will display agencies, their addresses, HIV, STD, TB, and viral hepatitis screening locations, treatment and related services, hours of operation, and contact information. The survey deadline has been extended until February 29th, 2016, to allow for additional participation. Please urge your clinic or facility manager to fill out the provider services assessment if you have not already done so. The survey can be accessed at: www.ndhealth.gov/hiv.

Avian Influenza Update

After multiple outbreaks across the United States last summer, avian influenza returned to the state of Indiana in January of 2016, with flocks of commercial turkeys and layer hens testing positive for avian influenza. A mix of high pathogenic and low pathogenic avian influenza A H7N8 was identified, and all affected birds were euthanized ("depopulated"). The strains circulating this month in Indiana were different than those reported across United States in 2015, when influenza A H5N2, H5N1, and H5N8 circulated. For large-scale outbreaks such as these, contract workers are brought in from across the country to help with the depopulation and waste disposal activities.

No human cases of avian influenza related to these outbreaks has been identified. However, as a precaution, all farm and agricultural workers that come in contact with sick or dead birds are being monitored by state and local health officials for the development of fever or other symptoms. Monitoring occurs during depopulation activities and for 10 days after the most recent exposure. The NDDoH is monitoring several contract workers that have returned from helping with the depopulation activities.

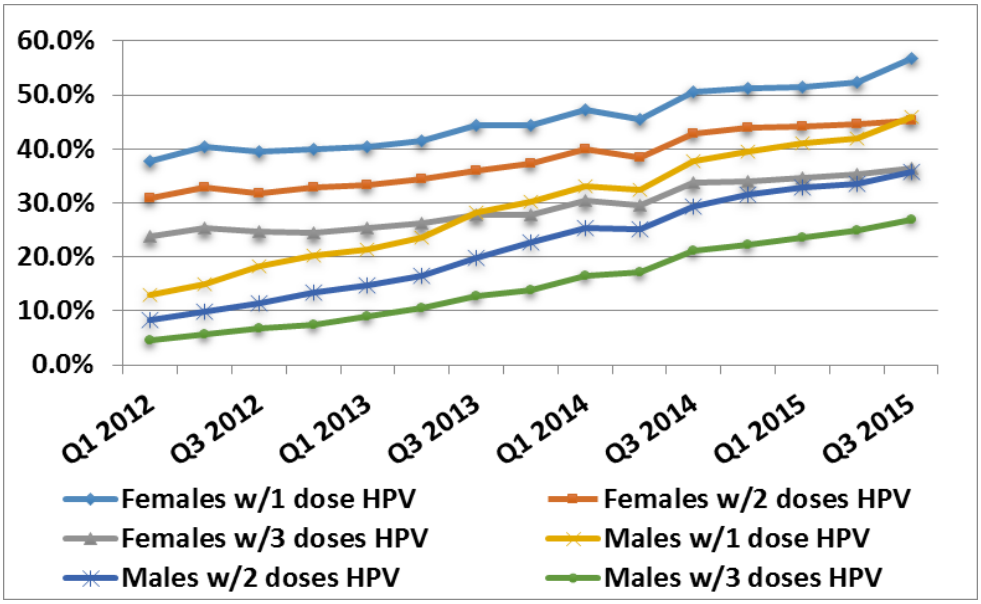
Human Papillomavirus (HPV) Vaccination Rates in North Dakota Increasing

Rates amongst American Indians Higher than Non-American Indian Adolescents

Every 20 minutes in the United States, someone is diagnosed with an HPV-related cancer. Although there is a vaccine available to prevent these cancers, HPV immunization rates in North Dakota and the United States are below rates for other adolescent vaccines and below the Healthy People 2020 goal of 80 percent, meaning many adolescents are not protected against certain cancers.

HPV vaccination rates in North Dakota are slowly increasing. According to the North Dakota Immunization Information System (NDIIS), rates for both initiating and completing the HPV series are on the rise (Figure 1).

Figure 1: Percent of adolescents (13 – 15 years) in North Dakota who have received the specified number of doses of HPV vaccine by the last day of the quarter (NDIIS)



According to the 2014 United States Census estimate, 5.4% of North Dakota's population is American Indian (AI), representing the second highest race in the state after White. The NDIIS shows that HPV vaccination rates for starting and completing the three-dose series are higher amongst AI female adolescents than non-AI adolescents in North Dakota (Figure 2). NDIIS also shows AI males having a higher rate of HPV vaccination than non-AI males (Figure 3).

Figure 2: HPV vaccination rates for American Indian vs. Non-American Indian adolescent females (13-17 Year Olds) in North Dakota for quarter 3, 2015 (NDIIS)

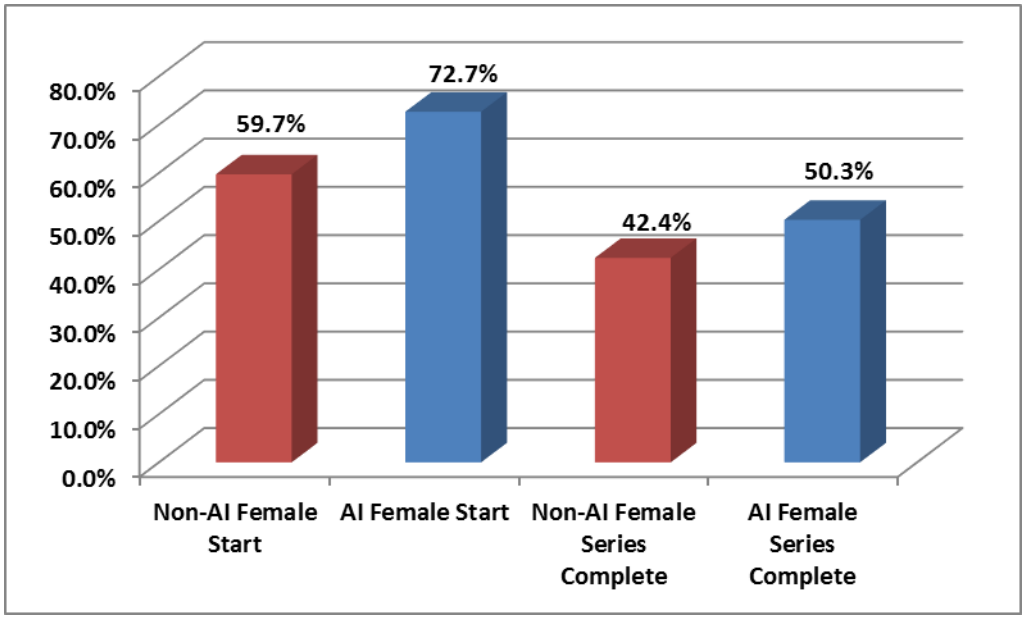
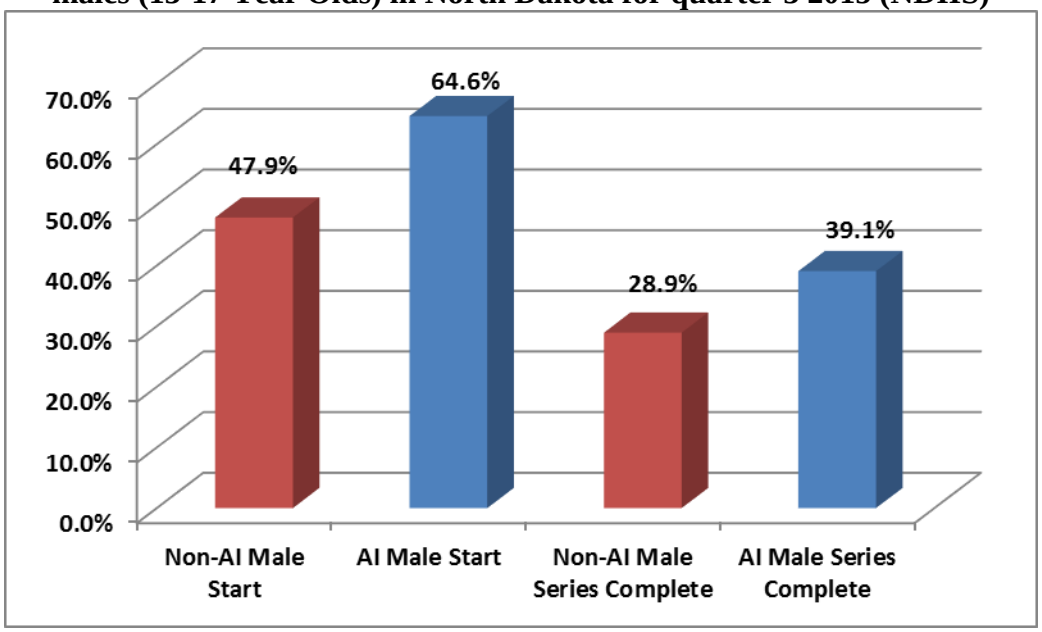


Figure 3: HPV vaccination rates for American Indian vs. Non-American Indian adolescent males (13-17 Year Olds) in North Dakota for quarter 3 2015 (NDIIS)



North Dakota's HPV series initiation rates amongst the AI population are consistent with other findings nationally showing that according to the National Immunization Survey (NIS), minority and below-poverty adolescents consistently had higher HPV series initiation than White and above-poverty adolescents.[1] Although HPV vaccination rates are higher in AI adolescents, rates still do not meet the Healthy People 2020 goal, and additional efforts need to be made to ensure HPV vaccination of this population

HPV vaccination is recommended for all adolescents at age 11 – 12. Catch-up vaccination is recommended at age 13 – 26 for females and 13 – 21 for males. This vaccine *may* be given to men 22 through 26 years of age who have not completed the three-dose series. It is *recommended* for men through age 26 who have sex with men or whose immune system is weakened because of HIV infection, other illness, or medications. The HPV vaccine is recommended to be administered as a three-dose series at 0, 2, and 6 months. For more information about HPV vaccine, visit www.cdc.gov/hpv/index.html.

Zika Virus Update

Zika virus is transmitted to people primarily through the bite of an infected *Aedes* mosquito. *Aedes aegypti* and *Aedes albopictus* are the mosquito species currently known to transmit Zika virus. These two species of mosquitoes are not found in North Dakota. Other possible modes of transmission include the virus being passed from a mother to her baby during pregnancy, through blood transfusion, and through sexual transmission. There have been no travel-associated cases of Zika virus identified in North Dakota.
The Centers for Disease Control and Prevention (CDC) has issued specific guidance for travelers, pregnant women (including women of child-bearing age), infants with possible congenital Zika virus infection, and the prevention of sexual transmission of Zika virus.

- Traveler information
- Pregnant women
- Evaluating infants
- Sexual transmission

The North Dakota Department of Health (NDDoH) is coordinating Zika virus testing with the CDC, visit https://healthalert.nd.gov/public/Email/2123-2016-02-05 Zika%20HAN%20Update.pdf for more information on submitting specimens for Zika virus testing. Current information and what is known about Zika virus is rapidly evolving. Please visit the North Dakota Department of Health's website for the most current and updated information at www.ndhealth.gov/disease/zika/.

Foodborne Illness Outbreak Investigation at County Jail in North Dakota

On December 15, 2015, the North Dakota Department of Health (NDDoH) received notification of a possible foodborne illness at a county jail. The NDDoH worked with nursing staff at the jail to coordinate stool specimen collection from three ill individuals. A detailed menu of all food

[1] Bednarczyk RA, Curran EA, Orenstein WA, et al. Health disparities in human papillomavirus vaccine coverage: trends analysis from the National Immunization Survey-Teen, 2008–2011. Clin Infect Dis 2014;58:238–41.

items served at the jail was obtained, and a questionnaire was developed by NDDoH epidemiologists to collect data on exposure history and symptoms, if applicable. Questionnaires were completed by 170 of the 282 inmates, however, only 132 inmates supplied adequate information to be used in data analysis. Forty-eight jail employees also completed questionnaires, but only nine employees consumed food at the jail from December 12, 2015, to December 14, 2015. One hundred forty-one questionnaires were used in the analysis.

A case was defined as any person who had eaten at the county jail and developed diarrhea and/or abdominal cramping on or after Saturday, December 12, 2015. One hundred fourteen cases were identified among inmates and one case was identified among jail employees. Frequently reported symptoms among cases included diarrhea (93%), abdominal cramping (87%), nausea (59%), headache (41%), chills (31%), and muscle aches (29%).

Three stool specimens were submitted to the NDDoH's Division of Laboratory Services for enteric pathogen testing. The specimens were negative for norovirus, Shiga toxin, *Salmonella*, *Shigella*, *Campylobacter*, *Vibrio*, *Aeromonas*, *Pseudomonas*, and *E. coli*. The specimens were then sent to the Centers for Disease Control and Prevention (CDC) for further testing. On December 31, 2015, the CDC reported that C. *perfringens* isolates were recovered from all three specimens, with two of the specimens testing positive for *C. perfringens* enterotoxin (CPE) and the enterotoxin gene (cpe).

Data analysis revealed the food item with the greatest statistical significance was tator tot casserole that was served at the evening meal on Monday, December 14, 2015. The tator tot casserole had an odds ratio of 43.57, a 95% confidence interval of 8.76—338.96, and a P-value of less than 0.05. Unfortunately, samples of the food items were unavailable for testing.

To report a possible foodborne illness outbreak, please contact the NDDoH at 701.328.2378.

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