



In this issue

- ▶ 2012 STD and Viral Hepatitis Summary.... 1
- ▶ HIV Biannual Update6
- ▶ Reportable Conditions Summary.....7

Epidemiology *report*

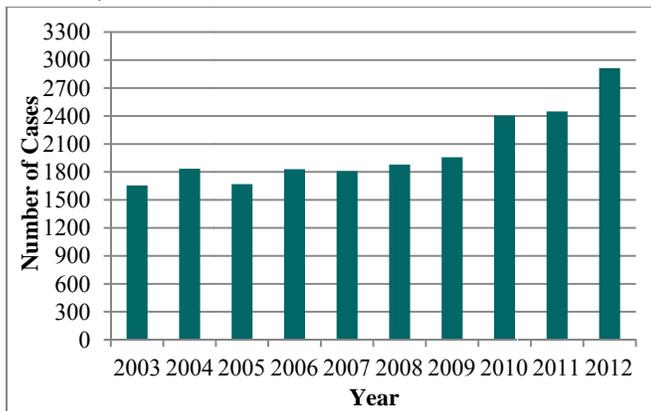
2012 STD and Viral Hepatitis Summary

By Sarah Weninger, STD and Viral Hepatitis Surveillance Epidemiologist

Chlamydia

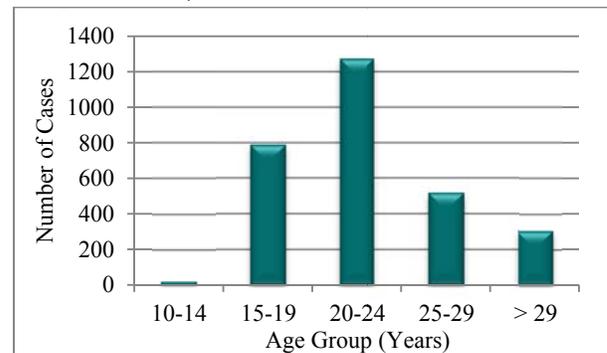
In 2012, 2,914 cases of chlamydia were reported to the North Dakota Department of Health (NDDoH), a 18.9 percent increase from the 2,450 cases reported in 2011 (Figure 1).

Figure 1. Reported Chlamydia Cases by Year, North Dakota, 2003-2012



Of the cases reported, 1,902 (65%) were females. People ages 20 to 24 had the most reported cases with 1,274 (44%). The next highest number of cases were reported among 15- to 19-year-olds with 791 (27%) and 25- to 29-year-olds with 518 (18%) (Figure 2). From 2011 to 2012, there was an increase of 33 percent increase in the number of cases (388 and 518, respectively) reported among 25- to 29-year-olds.

Figure 2. Reported Chlamydia Cases by Age Group, North Dakota, 2012



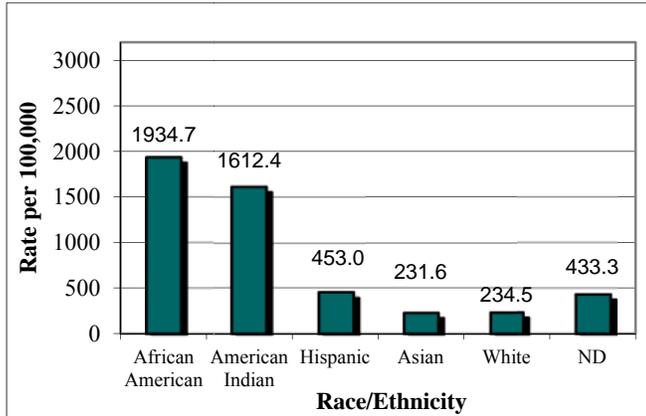
In 2012, 23 percent of chlamydia cases were reported with an unknown race. Of cases with known race, 1,420 (49%) cases were reported among whites followed by American Indians with 590 (20%), African Americans with 154 (5%), Hispanics with 61 (2%) and Asians with 16 (0.6%). Although there was a 28 percent increase in the number of cases reported among whites in 2012 (1,420 cases in 2012 compared to 1,107 cases in 2011), minority populations continue to be disproportionately affected by STDs in North Dakota.

The chlamydia rate for African Americans for 2012 was 1,934.7 per 100,000 (Figure 3). Among American Indians, North Dakota's largest minority population,



the rate was 1,612.4 per 100,000. In contrast, the rate among whites in 2012 was 234.5 per 100,000. The rate for all of North Dakota in 2012 was 433.3 per 100,000, compared to 364.3 per 100,000 in 2011.

Figure 3. Reported Chlamydia Rates by Race/Ethnicity, North Dakota, 2012

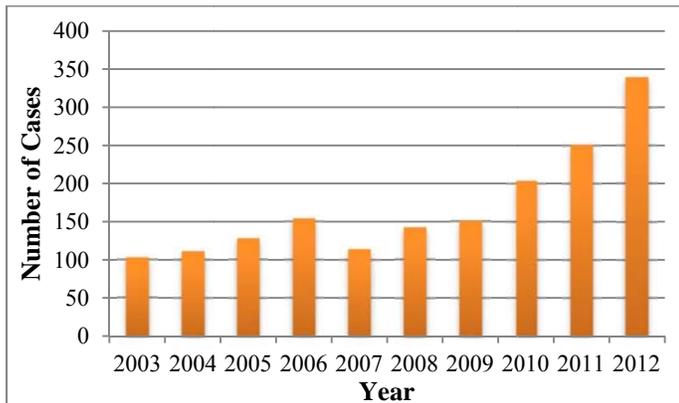


Counties most often reporting the highest chlamydia rates in North Dakota are those where American Indian reservations are located: Rolette, Sioux, Benson and Mountrail counties reported the highest incidence rates of 1,542; 1,324; 1,231; and 782 per 100,000 population, respectively. These rates are higher than the rate of 433 per 100,000 for all of North Dakota.

Gonorrhea

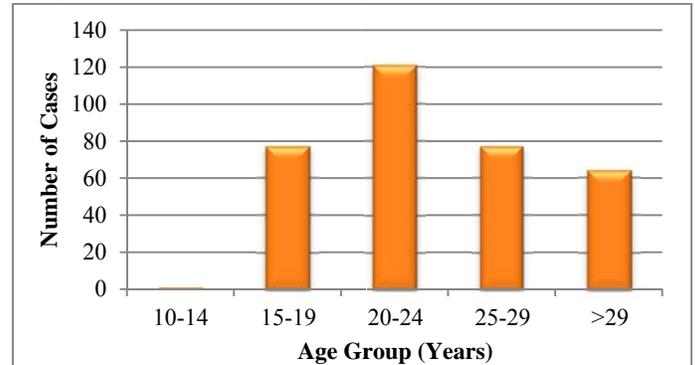
In 2012, 340 cases of gonorrhea were reported to the NDDoH, a 36 percent increase from the 251 cases reported during 2011 (Figure 4).

Figure 4. Reported Gonorrhea Cases by Year, North Dakota, 2003-2012



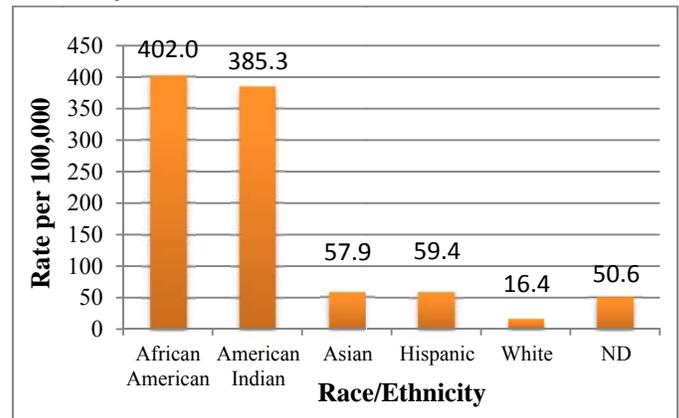
Of the cases, 211 (62%) occurred among females and 129 cases occurred among males. The age groups that continue to report the highest number of cases of gonorrhea infections continue to be among 15- to 29-year-olds; accounting for 80.9 percent of gonorrhea cases reported in 2012 (Figure 5).

Figure 5. Reported Gonorrhea Cases by Age Group, North Dakota, 2012



The majority of gonorrhea cases were reported among American Indians (141 cases), followed by whites (99 cases) and African Americans (32 cases). Eighteen percent of gonorrhea cases were reported with unknown race. Gonorrhea rates continue to reflect disparity among North Dakota racial and ethnic groups. The gonorrhea rate for African Americans in 2012 was 402.0 per 100,000, and 385.3 per 100,000 for American Indians. In contrast, the rate among whites in 2012 was 16.4 per 100,000, and the rate for all of North Dakota was 50.6 per 100,000. (Figure 6).

Figure 6. Reported Gonorrhea Rates by Race Ethnicity, North Dakota, 2012





In 2012, gonorrhea cases were reported from 30 counties compared to 26 counties in 2011. Sioux County reported the highest gonorrhea rate, followed by Rolette, Benson and Mountrail counties with rates of 722, 330, 150 and 143 per 100,000 populations, respectively. These rates are higher than the rate of 50.6 per 100,000 for all of North Dakota. Rolette County had an 188 percent increase in cases in 2012 with 46 cases, compared to 16 cases being reported in 2011.

Syphilis

In 2012, four cases of primary or secondary (P/S) syphilis were reported to the NDDoH, a rate of 0.6 per 100,000 population compared to two cases reported in 2011. Thirteen P/S syphilis cases were reported between 2008 and 2012. All cases were reported among males in 2012 and were men who have sex with men. Three of the cases had anonymous sex partners. Their ages were in the range of 20 to 41 years of age.

Ten additional cases of syphilis were reported to the NDDoH in 2012. Seven cases were diagnosed as latent syphilis of unknown duration and three cases were diagnosed with neurosyphilis. Eight (80%) were reported among males. Ages ranged from 16 to 45 with a median of 36 years. Of these ten cases, two were also HIV positive. Four cases were reported to be MSM. Risk factors reported among these cases included anonymous sex partners and sex while high or intoxicated.

Viral Hepatitis Program Update

Activities of the viral hepatitis program include testing at-risk individuals for hepatitis C (HCV), vaccinating at-risk individuals for hepatitis A (HAV)/hepatitis B (HBV), providing educational materials for the general public and for health-care providers, organizing and hosting an HIV/hepatitis conference for health-care providers, developing and implementing a statewide media campaign to increase awareness about viral hepatitis; and contracting with local public health units (LPHUs) to provide the above-mentioned viral hepatitis services. Currently the NDDoH has contracted with 13 HIV counseling, testing and referral (CTR) sites to

implement HCV testing and HBV/HAV vaccination using state funds. CTR sites offering HCV testing and HBV/HAV vaccination are included in Box 1.

**Box 1. Hepatitis C Testing Sites,
North Dakota**

Bismarck/Burleigh Public Health
Central Valley Health Unit
Community Action - Dickinson
Custer Family Planning
Custer Health
Fargo Cass Public Health
First District Health Unit
Grand Forks Public Health Dept.
Minne Tohe Health Center
Richland County Health Dept.
Southwestern District Health Unit
Valley Health – Grand Forks
Upper Missouri District Health

Due to the availability of rapid hepatitis C CTR sites in 2013, there was a significant increase in the number of individuals tested at CTRs in 2013. Between Jan. 1 and December 31, 2013, 532 individuals were screened and 43 (8%) were positive, compared to 315 individuals screened and 36 (11.4%) testing positive during the same time period last year. From 2012 to 2013, there was a 69 percent increase in the number of individuals screened for hepatitis C at CTR sites.

Between Jan. 1 and Dec. 31, 2013, a total of 74 doses were administered at the CTRs, compared to 105 doses administered during the same time period in 2012.

Hepatitis A Virus (HAV)

Historically, North Dakota has had relatively low rates of HAV infection. From 2008 to 2012, 10 cases of acute HAV infection were reported to the NDDoH.

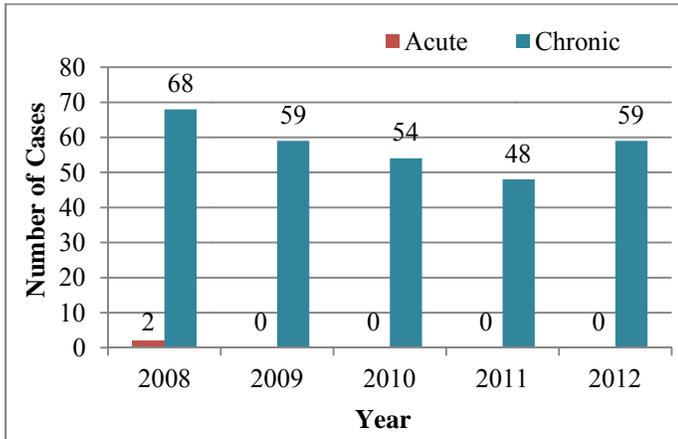
Hepatitis B Virus (HBV)

In 2012, 59 cases of chronic HBV infection and no cases of acute infection were reported to the NDDoH, a 23 percent increase from the 48 cases reported in 2011 (**Figure 7**). Morbidity is based on reported positive



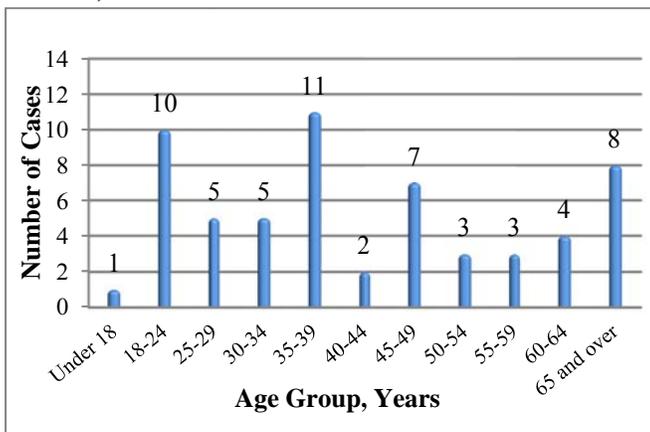
laboratory results meeting the Centers for Disease Control and Prevention (CDC) case definition of “hepatitis B virus infection, chronic.” Numbers include both confirmed and probable cases.

Figure 7. Reported HBV Cases by Year, North Dakota, 2008-2012.



Of the 59 HBV-positive people reported to the NDDoH, 61 percent were male. Fifty-four percent of reported cases occurred among people between the ages of 17 and 39, and the median age was 38 (range: 17 to 86 years) (Figure 8). Race information was reported for only 40 percent of cases. Among those reporting race, 46 percent were black, 25 percent were white and 17 percent were Asian.

Figure 8. Reported HBV Cases by Age Group, North Dakota, 2012



Perinatal Hepatitis B

Perinatal hepatitis B surveillance and reporting are vital to the health of North Dakota infants. Screening all pregnant women for the presence of hepatitis B surface antigen (HBsAg) is a crucial step in controlling and preventing the spread of hepatitis B from mother to infant. However, documented HBsAg-positive mothers often are not screened, especially during later pregnancies, and are therefore not reported to the NDDoH. As a result, many at-risk infants may be missed. Prior to birth, the NDDoH ensures that the delivery hospital has both vaccine and hepatitis B immune globulin (HBIG) on hand, as both should be administered within 12 hours of birth. Infants born to HBsAg-positive mothers are provided both vaccine and HBIG at no charge. In 2008, the North Dakota Department of Health added pregnancy in women with HBV infection to the mandatory reportable conditions list in order to ensure that all HBV-positive pregnant women are reported to the NDDoH regardless if they were tested during current pregnancy.

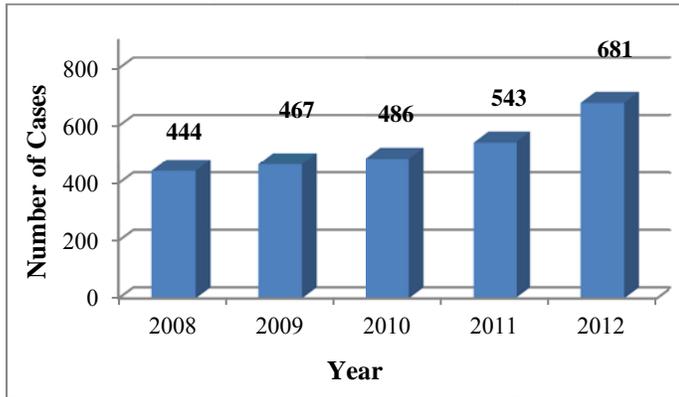
Follow-up of HBsAg-positive mothers, infants and other susceptible sexual or household contacts is done to ensure that the infant and contacts receive three doses of the vaccine, that the vaccine is administered appropriately and that the infant receives follow-up testing for hepatitis B antibody levels. Susceptible contacts are screened and offered vaccine at no charge. Between Jan.1 and Sept. 30, 2013, 14 births to HBsAg-positive pregnant women were reported to the NDDoH; seven births were reported during the same time frame last year.

Hepatitis C Virus (HCV)

In 2012, the NDDoH received 681 reports of people newly identified as having a positive laboratory result that indicates past or present hepatitis C virus (HCV) infection, a 25.4 percent increase from the 543 cases reported in 2011 (Figure 9).



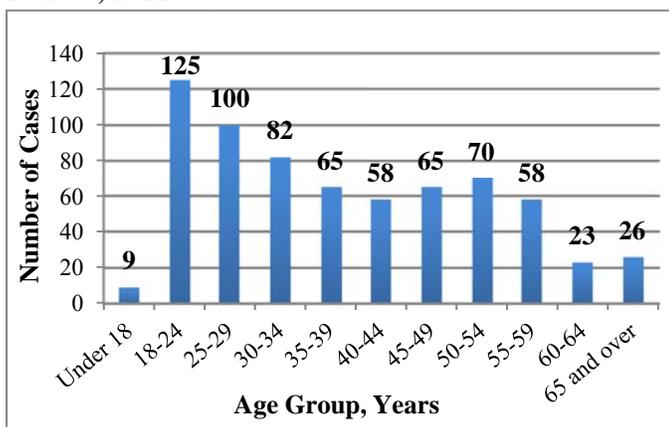
Figure 9. Reported HCV Cases by Year, North Dakota, 2008-2012



HCV morbidity primarily is based on positive lab results received from laboratories that meet the CDC case definition of “hepatitis C virus infection, past or present.” Numbers do not distinguish between resolved versus active infections.

Of the 681 HCV-positive reports, 55.7 percent were male. The percentage of cases being reported from age 18 to 24 has been increasing since 2009. As in 2010 and 2011, the most frequently reported age in 2012 was 18- to 24-year olds (**Figure 10**). In North Dakota, only 29 percent of hepatitis C cases reported in 2012 were reported among individuals born between 1965 and 1945. In 2012, 33 percent of cases were reported with a known race. Among those reporting race, 64 percent were white and 31 percent were American Indian.

Figure 10. Reported HCV by Age Group, North Dakota, 2012



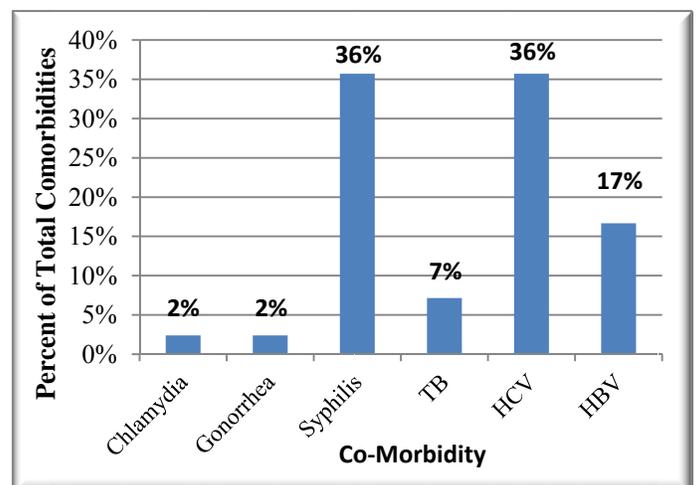
Hepatitis B, Hepatitis C, STD, TB and HIV/AIDS Co Infection

An estimated one-quarter of HIV-infected people in the U.S. also are infected with HCV. HIV-infected injection drug users are commonly (50% to 90%) co-infected with HCV. HCV causes a rapid progression to liver damage in an HIV-infected person. Hepatitis B also is a common co-infection with HIV since transmission is primarily through sexual contact and injection drug use. As with HCV, people who are co-infected with HIV and HBV have an increased risk for liver-related morbidity and mortality.

An HIV-infected individual who also is infected with another STD is more likely to transmit HIV through sexual contact than other HIV-infected people. Co-infection of HIV and STDs increases the concentration of HIV in genital secretions, causing increased infectiousness. If exposed to HIV infection through sexual contact, individuals who are infected with STDs are at least two to five times more likely than uninfected individuals to acquire HIV infection.

Figure 11 demonstrates that the most common co-morbidities in North Dakota with HIV are hepatitis C and syphilis. It is very important to know the health implications and risk behaviors associated with co-infections.

Figure 11. Percentage of HIV Cases with Comorbidities Reported, 2007-2012





HIV Biannual Update

By Dee Pritchet, Surveillance Epidemiologist

Table 1 summarizes newly diagnosed HIV/AIDS cases reported from Jan. 1 through June 30, 2013, and compares the data to the same period in 2012.

The table also provides a summary about residents of North Dakota diagnosed with HIV or AIDS and known to be living as of October 31, 2013.

Table 1. New HIV/AIDS Diagnoses and Total HIV/AIDS Cases Living in North Dakota

	New HIV/AIDS cases ¹				Total HIV/AIDS Cases Living in N.D. ²	
	Jan.- June 2013		Jan. - June 2012		Number	Percent*
	Number	Percent*	Number	Percent*		
Diagnosis						
AIDS	7	44%	1	20%	141	50%
HIV	9	56%	4	80%	144	50%
Race/Ethnicity						
American Indian	1	6%	0	0%	20	8%
Black	7	44%	3	60%	59	19%
Hispanic (all races)	1	6%	0	0%	12	5%
Asian/Pacific Islander	2	13%	0	0%	2	1%
White	5	31%	2	40%	190	67%
More than one	0	0%	0	0%	2	1%
Gender						
Male	12	75%	2	40%	218	78%
Female	4	25%	3	60%	67	22%
Risk						
Heterosexual contact	6	38%	4	80%	100	35%
Injecting drug use (IDU)	0	0%	0	0%	21	7%
Male-to-male sexual contact (MSM)	7	44%	1	20%	130	46%
MSM/IDU	1	6%	0	0%	16	6%
Perinatal transmission	0	0%	0	0%	5	2%
Adult Hemophilia/coagulation disorder	0	0%	0	0%	1	0%
Receipt of blood or tissue	0	0%	0	0%	1	0%
Risk not specified	2	13%	0	0%	11	4%
Age Group						
≤15	1	6%	0	0%	8	3%
15-24	4	25%	1	20%	45	16%
25-34	7	44%	0	0%	101	35%
35-44	4	25%	2	40%	89	31%
45-54	0	0%	1	20%	29	10%
55-64	0	0%	1	20%	13	5%
65+	0	0%	0	0%	0	0%
Total	16		5		285	

*Due to rounding, totals may not equal 100%.

¹New HIV/AIDS cases reflects HIV cases that were newly diagnosed in North Dakota during the listed time period. These cases include those which are classified as AIDS cases at initial diagnosis.

²Total HIV/AIDS cases living in ND reflect HIV/AIDS cases which were alive and residing in North Dakota as of October 31, 2013.



Summary of Selected Reportable Conditions				
North Dakota, 2012-2013				
Reportable Condition	July– Sept 2013*	January – Sept 2013*	July– Sept 2012	January – Sept 2012
Campylobacteriosis	39	108	30	76
Chickenpox	8	24	8	25
Chlamydia	805	2190	788	2187
Cryptosporidiosis	39	61	12	31
E. coli, shiga toxin-producing (non-O157)	12	25	6	16
E. coli O157:H7	5	11	6	10
Enterococcus, Vancomycin-resistant (VRE)	37	207	106	366
Giardiasis	19	35	31	49
Gonorrhea	137	362	88	226
Haemophilus influenza (invasive)	2	7	4	12
Acute Hepatitis A	4	6	1	2
Acute Hepatitis B	0	0	0	0
Acute Hepatitis C	0	2	0	0
HIV/AIDS ¹	15	41	13	33
Influenza	1	3200	3	1485
Legionellosis	2	2	0	2
Listeria	0	0	0	0
Lyme Disease	24	27	9	14
Malaria	1	3	1	1
Meningococcal disease ²	1	3	1	1
Mumps	0	1	0	0
Pertussis	29	67	89	173
Q fever	0	0	0	0
Rabies (animal)	9	34	10	65
Rocky Mountain spotted fever	0	2	0	1
Salmonellosis	36	88	26	51
Shigellosis	4	13	4	6
Staphylococcus aureas, Methicillin-resistant (MRSA)	30	82	32	84
Streptococcal pneumoniae ³ , (invasive, children < 5 years of age)	15	83	16	64
Syphilis, Primary and Secondary	1	7	1	3
Trichinosis	0	0	0	0
Tuberculosis	3	11	6	12
Tularemia	0	0	0	0
Typhoid fever	0	0	0	0
West Nile Virus Infection	125	125	88	88

*Provisional data

¹Includes newly diagnosed cases and cases diagnosed previously in other states that moved to North Dakota.

²Includes confirmed, probable and suspect meningococcal meningitis cases.

³Includes invasive infections caused by streptococcal disease not including those classified as meningitis.

Terry Dwelle, MD, MPHTM
State Health Officer

Kirby Kruger
Director, Disease Control

Tracy Miller, MPH
State Epidemiologist

Published by the North Dakota Department of Health, Division of Disease Control, 2635 E. Main Ave., Bismarck, N.D. 58506-5520,
Phone 701.328.2378 or in N.D. 1.800.472.2180

Publication also appears on the department's home page at www.ndhealth.gov