

January-February-March 2013

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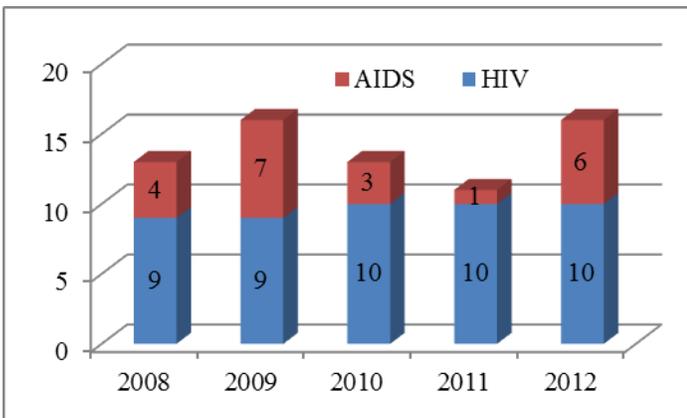
2012 HIV/AIDS Summary

North Dakota ranks near the bottom for incidence of HIV/AIDS in the United States. North Dakota had a case rate of 2.3 per 100,000 people in 2012.

A total of 46 HIV/AIDS cases were reported to the North Dakota Department of Health (NDDoH) in 2012, which includes newly diagnosed cases and cases previously diagnosed in other states who moved to North Dakota during 2012.

In 2012, 16 North Dakota residents were diagnosed with HIV/AIDS and reported to the NDDoH. Six of the newly diagnosed HIV cases were advanced enough to meet the case definition for AIDS at the time of diagnosis.

Figure 1. HIV/AIDS cases diagnosed in North Dakota 2008-2012 (Excludes cases who moved to N.D.)



Cumulative (1984-2010) HIV/AIDS Cases, North Dakota

HIV and AIDS have been reportable conditions in North Dakota since 1984. The cumulative reported infections include cases newly diagnosed in the state, as well as cases diagnosed elsewhere who moved to

North Dakota. As of Dec. 31, 2012, a cumulative total of 580 HIV/AIDS cases had been reported in North Dakota; 330 of which are AIDS cases and 250 are HIV (non-AIDS) cases. Of the cumulative total HIV/AIDS cases, 254 are known to still be living in North Dakota.

Of the 254 HIV/AIDS cases still living in North Dakota:

- 76 percent were male; 24 percent female.
- 76 percent were between the ages of 25 and 54 at diagnosis.
- 66 percent were white, 8 percent were American Indian, 20 percent were black and 5 percent were Hispanic (all races).
- The most frequently indicated risk factors were male-to-male sexual contact, 46 percent; heterosexual contact, 17 percent; and injection drug use, 7 percent.

Figure 2. HIV/AIDS diagnosed in North Dakota and HIV/AIDS previously diagnosed in other states

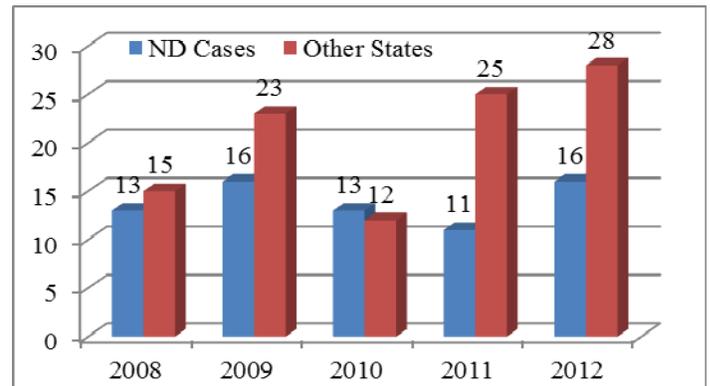


Table 1 summarizes the cumulative HIV/AIDS cases still living in North Dakota.

Table 1. New HIV and AIDS Diagnoses by Race/Ethnicity, Gender, Exposure Risk, and Age at Diagnosis, North Dakota 2011-2012

	New HIV/AIDS cases ¹				Total HIV/AIDS Cases Living in ND ²	
	2012		2011		Number	Percent*
	Number	Percent*	Number	Percent*		
Diagnosis						
HIV	10	63%	10	91%	135	53%
AIDS	6	37%	1	9%	119	47%
Race/Ethnicity						
American Indian	1	6%	0	0%	20	8%
Black	7	44%	1	9%	51	20%
Hispanic (all races)	1	6%	1	9%	12	5%
Asian/Pacific Islander	0	0%	0	0%	2	1%
White	7	44%	9	82%	168	66%
Multi-race (non-Hispanic)	0	0%	0	0%	1	0%
Gender						
Male	9	56%	10	91%	194	76%
Female	7	44%	1	9%	60	24%
Risk						
Heterosexual contact	8	50%	1	9%	43	17%
Injecting drug use (IDU)	0	0%	0	0%	19	7%
Male-to-male sexual contact (MSM)	6	38%	10	91%	118	46%
MSM/IDU	1	6%	0	0%	10	4%
Perinatal transmission	0	0%	0	0%	0	0%
Other	1	6%	0	0%	3	1%
Risk not specified/not reported	0	0%	0	0%	61	24%
Age Group						
≤15	0	0%	0	0%	2	1%
15-24	4	25%	4	13%	19	7%
25-34	3	19%	4	25%	34	13%
35-44	5	31%	1	38%	82	32%
45-54	3	19%	1	19%	77	30%
55-64	1	6%	1	6%	33	13%
65+	0	0%	0	0%	7	3%
Total	16		11		254	

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

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

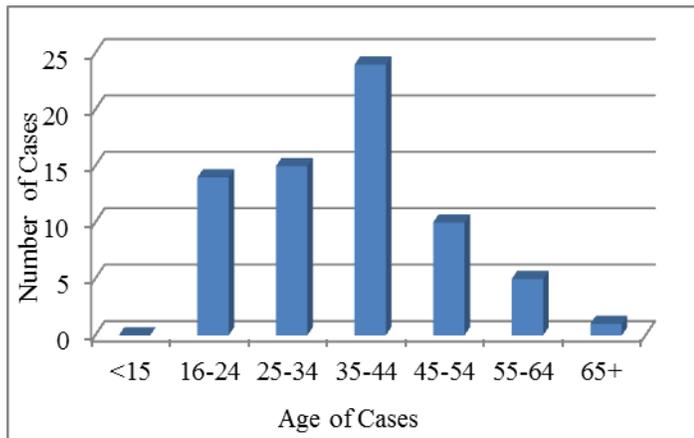
²Total HIV/AIDS cases living in N.D. reflect HIV/AIDS cases that were alive and residing in North Dakota as of December 31, 2012.

HIV/AIDS Incidence 2008-2012

HIV/AIDS incidence refers to cases that were diagnosed in North Dakota within a given time frame. The AIDS cases reported in this section met the criteria for AIDS at HIV diagnosis. From 2008 to 2012, 69 HIV/AIDS cases were diagnosed in North Dakota. Thirty percent met the criteria for AIDS at time of diagnosis, while 70 percent were diagnosed as HIV (non-AIDS). Eighty percent were male and 20 percent were female.

Figure 3 shows the age groups of HIV/AIDS cases diagnosed in North Dakota between 2008 and 2012. HIV/AIDS seems to infect young adults more frequently than other age groups; however, infections among older adults are increasing. The 35- to 44-year-old age group made up the largest proportion of the HIV/AIDS cases diagnosed during that time period. Seventy-six percent of the cases were between the ages of 25 and 54.

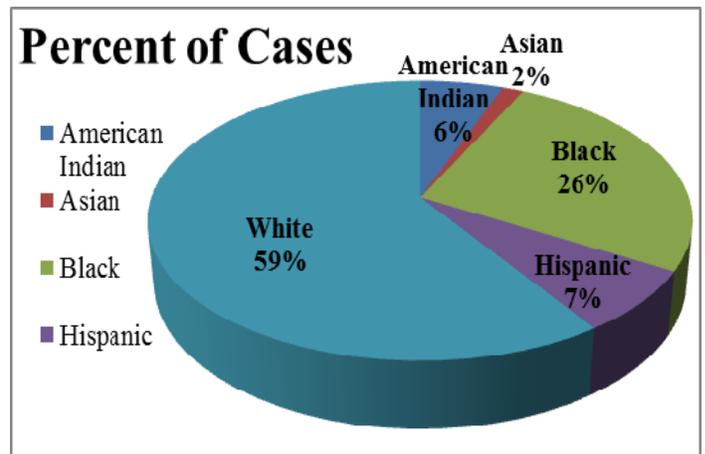
Figure 3. Age of HIV/AIDS cases diagnosed in N.D. 2008 – 2012



Race/Ethnicity of HIV/AIDS Cases Diagnosed in North Dakota 2008-2012

Racial and ethnic minorities disproportionately continue to be affected by HIV in the United States. Twenty-six percent of HIV/AIDS cases diagnosed in North Dakota between 2008 and 2012 were black. Six percent of HIV/AIDS cases diagnosed in North Dakota between 2008 and 2012 were American Indian and 59 percent were white. **Figure 4** shows the race/ethnicity for cases diagnosed in 2008-2012.

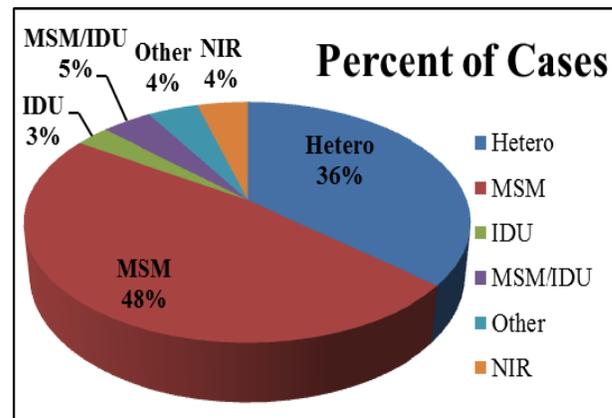
Figure 4. Race/Ethnicity of HIV/AIDS cases diagnosed in N.D. 2008-2012



Risk Factors of HIV/AIDS Cases Diagnosed in North Dakota 2008-2012

Male-to-male sex continues to be the most frequently reported risk factor among HIV/AIDS cases diagnosed in North Dakota. Forty-eight percent of the cases diagnosed between 2008 and 2012 claimed to have male-to-male sexual relations. Thirty-six percent of the cases diagnosed during this time period reported having heterosexual relations. Three percent of the cases claimed to have used intravenous drugs, and five percent claimed to have used intravenous drugs and had male-to-male sexual relations. **Figure 5** shows risk factors of HIV/AIDS cases diagnosed in N.D. for 2008-2012.

Figure 5. Risk factors of HIV/AIDS cases diagnosed in N.D. 2008–2012

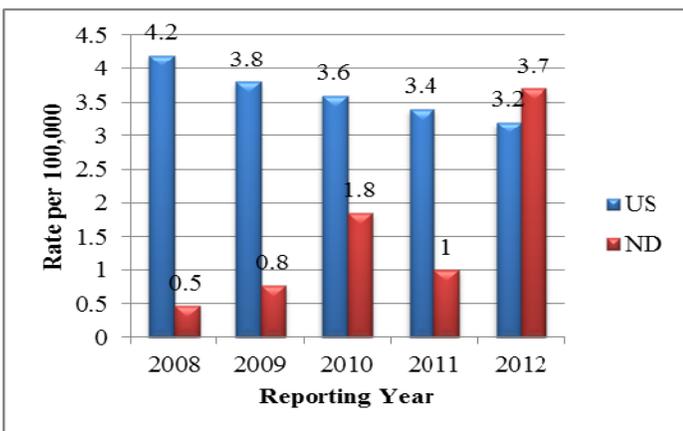


Tuberculosis in North Dakota - 2012

In 2012, a total of 9,951 new tuberculosis (TB) cases were reported in the United States, an incidence of 3.2 cases per 100,000 population. This is 6.1 percent lower than the case rate of 3.4 in 2011.

North Dakota’s incidence rate historically has been lower than the national rate, but an outbreak in Grand Forks county caused the incidence rate to be greater than the target rate of 3.2 cases per 100,000 population. (Figure 6).

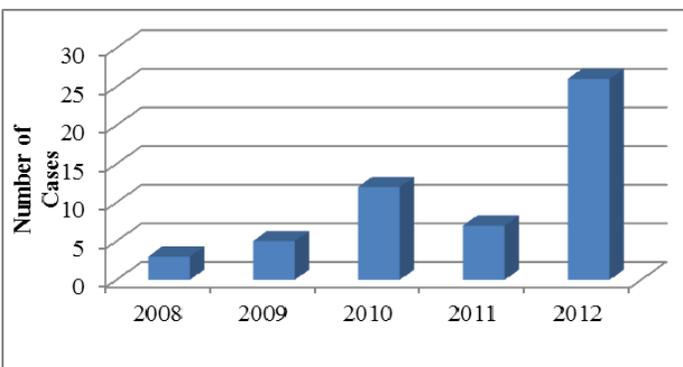
Figure 6. United States and North Dakota Tuberculosis Disease Rates, 2008–2012



Tuberculosis in North Dakota: 2008-2012

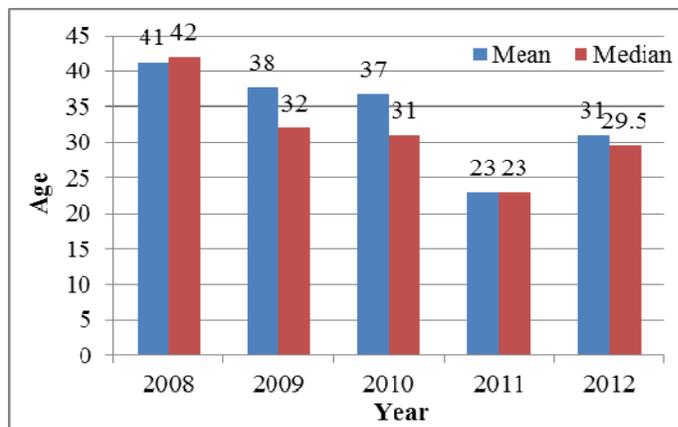
Between 2008 to 2012, there have been 53 cases of reported, active TB. The annual reporting range is from three to 26 cases. The annual incidence rate for the past five years is 0.5 and 3.7 per 100,000. (Figure 7).

Figure 7. Number of active cases reported 2008-2012



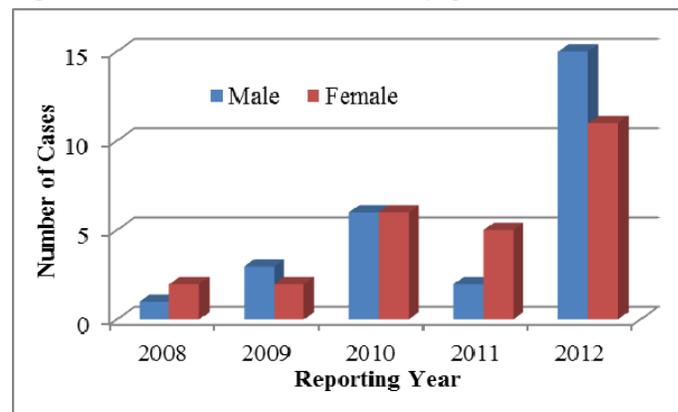
In the last five years, 37 of the 53 cases were pulmonary (70%) and 16 were extra-pulmonary (30%). The mean age for TB cases in the last five years was 35. The median age was 32 (Figure 8).

Figure 8. North Dakota Mean and Median Ages 2008-2012



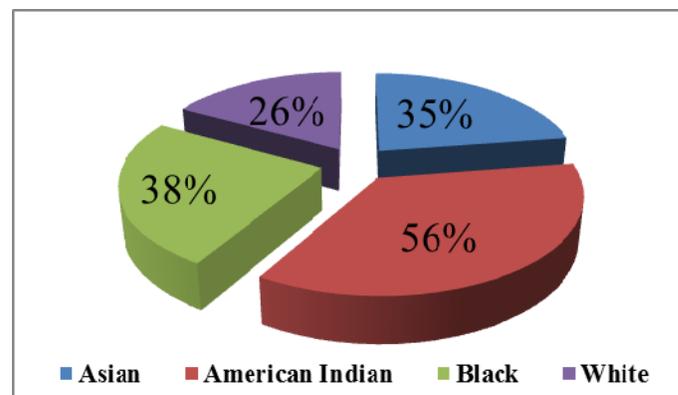
Both men and women were affected by TB in North Dakota during the last five years. There were 27 male cases and 26 female cases. (Figure 9).

Figure 9. North Dakota cases by gender 2008-2012



In 2011, 90.4 percent of the population of North Dakota was estimated to be identified as white. TB data from the previous five years shows that individuals of racial and ethnic minorities to be disproportionately affected by TB (Figure 10).

Figure 10. Tuberculosis Cases by Race/Ethnicity, North Dakota, 2008-2012



Grand Forks Outbreak

Twenty cases of active TB were identified in Grand Forks County in 2012. Through genotype testing, these cases were linked to two cases from 2010. North Dakota had a total of 26 cases of active TB in 2012, corresponding with an incidence rate of 3.7 new cases for every 100,000 people.

Of the 26 cases, 22 were pulmonary and four were extra-pulmonary. Two cases were both pulmonary and extra-pulmonary. Twelve cases were part of the same cluster as evidenced by genotyping; an additional eight cases were epidemiologically linked to the outbreak.

The TB cases ranged in age from 5 months of age to 67 years old, with a median age of 30 years old. Fifteen cases were male and 11 were female.

Risk factors associated with the TB cases in North Dakota in 2012 included being part of a racial minority, being homeless and substance abuse.

Drug-Resistant Tuberculosis

Some forms of TB can develop resistance to certain anti-TB medications. This drug resistant TB (DR-TB) can be much more complicated and costly to treat than drug susceptible TB, especially if it is a form of multi-drug resistant TB (MDR-TB). MDR-TB is resistant to the two most commonly used anti-TB drugs: isoniazid and rifampicin.

The TB outbreak cases in Grand Forks County all showed the same low-level INH resistance at 0.2 ug/ml. There were no instances of MDR-TB.

Latent Tuberculosis Infection

Latent Tuberculosis Infection (LTBI) is an infection of TB in which the disease is in a dormant state. One-third of the global population has TB infection with most of these having LTBI. Individuals with LTBI are not infectious and do not have symptoms of TB disease. Certain methods (such as skin testing) are available to determine if an individual has LTBI. The number of latent tuberculosis infections reported in North Dakota over the past five years is shown in **Table 2**.

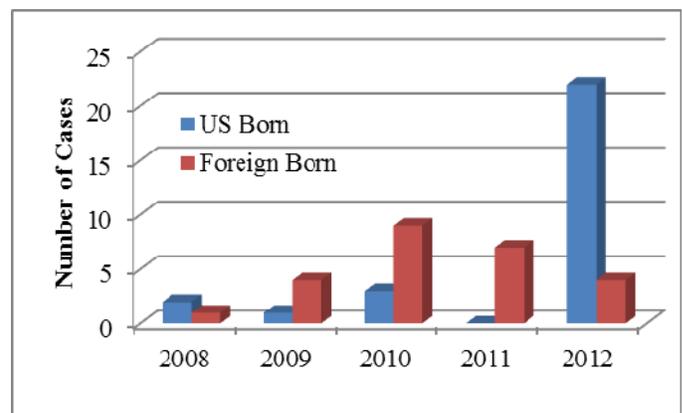
Table 2. Reported Cases of LTBI North Dakota, 2008-2012

2008	2009	2010	2011	2012
430	564	574	562	654

Foreign Born

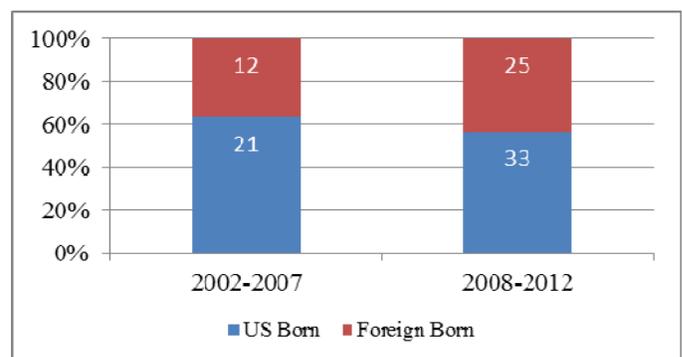
The number of foreign-born cases exceeded the number of U.S. born cases from 2008-2011 (**Figure 11**). No foreign-born cases were connected to the outbreak, resulting in more U.S. born cases in 2012. Although tuberculosis (TB) has been on the decline in the United States since 1993, an increasing proportion of cases has been observed among the foreign-born. Racial and ethnic minorities have represented a higher proportion of cases among the U.S. born. (**Figure 12**).

Figure 11. Number of U.S. Born and Foreign-Born TB cases in North Dakota



The number of foreign-born cases in 2008-2012 (43%) in North Dakota increased from 2002-2007 (36%).

Figure 12. Percentage of U.S. Born and Foreign-Born TB in North Dakota



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Summary of Selected Reportable Conditions

North Dakota, January – March, 2012-2013

Reportable Condition	January-March 2013*	January-March 2012*
Campylobacteriosis	17	11
Chickenpox	10	5
Chlamydia	684	730
Cryptosporidiosis	5	8
<i>E. coli</i> , shiga toxin positive (non-O157)	1	4
<i>E. coli</i> O157:H7	2	1
Enterococcus, Vancomycin-resistant (VRE)	56	150
Giardiasis	9	12
Gonorrhea	102	79
Haemophilus influenzae (invasive)	3	4
Acute Hepatitis A	2	0
Acute Hepatitis B	0	0
Acute Hepatitis C	0	0
HIV/AIDS ¹	18	8
Influenza	3060	822
Legionellosis	0	1
Listeria	0	0
Lyme Disease	0	1
Malaria	0	0
Meningococcal disease ²	0	0
Mumps	0	0
Pertussis	4	33
Q fever	0	0
Rabies (animal)	10	31
Rocky Mountain spotted fever	0	0
Salmonellosis	20	15
Shigellosis	3	1
<i>Staphylococcus aureus</i> , Methicillin-resistant (MRSA)	19	30
Streptococcal pneumoniae ³ , (invasive, children < 5 years of age)	4	0
Syphilis, Primary and Secondary	1	1
Trichinosis	0	0
Tuberculosis	3	4
Tularemia	0	0
Typhoid fever	0	0
West Nile Virus Infection	0	0

*Provisional data

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

² Includes confirmed, probable and suspect meningococcal meningitis cases.

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