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2007 HIV/AIDS Summary

North Dakota ranks near the bottom in incidence of HIV/AIDS in the United States. According to the U.S. Centers for Disease Control and Prevention, state-specific AIDS incidence rates per 100,000 people ranged from 0.7 in Montana to 29.0 in Maryland for 2006. North Dakota was ranked 49th with a rate of 0.9. Similar comparisons for HIV (non-AIDS) incidence rates are not possible because some states require only AIDS case reporting.

A total of 26 HIV/AIDS cases were reported to the North Dakota Department of Health (NDDoH) in 2007. This total includes newly diagnosed cases and cases diagnosed previously in other states that moved to North Dakota during 2007.

In 2007, 12 new cases were diagnosed in North Dakota residents and reported to the NDDoH. Three of the newly diagnosed HIV cases were advanced enough to meet the case definition for AIDS at the time of diagnosis. **Table 1** summarizes newly diagnosed HIV and AIDS cases for 2007 and compares data to the same time period in 2006.

Cumulative (1984–2007) 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, 2007, a cumulative total of 413 HIV/AIDS cases had been reported in North Dakota, including 149 AIDS cases and 264 HIV (non-AIDS) cases. Of the cumulative total HIV/AIDS cases, 166 are known to still be living in North Dakota.

Of the 166 HIV/AIDS cases still living in North Dakota:

- 77 percent were male; 23 percent female.
- 68 percent of reported cases were between the ages of 20 and 39 at diagnosis.
- 73 percent were white, 10 percent were American Indian, 13 percent were black, 3 percent were Hispanic and 2 percent were Asian/Pacific Islander and more than one race.
- The most frequently indicated risk factors were male-to-male sexual contact, 48 percent; heterosexual contact, 24 percent; and injecting drug use, 17 percent.

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

Risk Factors of HIV/AIDS Cases Diagnosed in 2007 Compared to Cumulative Cases Living in North Dakota

Slight differences were observed in the most common risk factors reported by newly diagnosed HIV/AIDS cases in 2007 compared to the cumulative cases still living in North Dakota. The percentage of newly diagnosed cases that reported male-to-male sexual contact and injecting drug use was lower than the percentage of cumulative cases still living in North Dakota that reported those risks. On the other hand, the percentage of newly diagnosed cases that reported heterosexual contact was higher than the percentage of cumulative cases still living in North Dakota that reported those risks. Although these changes are interesting, the small number of HIV/AIDS cases in North Dakota makes this difference statistically insignificant. (**Figure 1**)

Of the 12 newly diagnosed cases in 2007:

- 8 percent reported injecting drug use.
- 42 percent reported male-to-male sexual contact.
- 33 percent reported heterosexual contact.

Table 1. New HIV and AIDS Diagnoses by Race/Ethnicity, Gender, Exposure Risk, and Age at Diagnosis, North Dakota 2006-2007

	New HIV/AIDS cases ¹				Total HIV/AIDS Cases Living in ND ²	
	2007		2006		Number	Percent*
	Number	Percent*	Number	Percent*		
Diagnosis						
AIDS	3	25	7	54	75	45
HIV	9	75	6	46	91	55
Race/Ethnicity						
American Indian	0	0	2	15	17	10
Black	2	17	3	23	22	13
Hispanic	0	0	0	0	3	2
Pacific Islander	0	0	0	0	2	1
White	10	83	7	54	121	73
More than one race	0	0	1	8	1	1
Gender						
Male	7	58	12	92	128	77
Female	5	42	1	8	38	23
Risk						
Heterosexual contact	4	33	4	31	40	24
Injecting drug use (IDU)	1	8	0	0	29	17
Male-to-male sexual contact (MSM)	5	42	7	54	79	48
MSM/IDU	0	0	1	8	7	4
Perinatal transmission	1	8	0	0	4	2
Adult Hemophilia/coagulation disorder	0	0	0	0	1	1
Receipt of blood or tissue	0	0	0	0	1	1
Risk not specified	1	8	1	8	5	3
Age Group						
≤12	1	8	0	0	3	2
13-19	0	0	0	0	0	0
20-29	2	17	4	31	44	27
30-39	5	42	3	23	69	42
40-49	2	17	5	38	34	20
50-59	0	0	1	8	14	8
60+	2	17	0	0	2	1
Total	12		13		166	

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

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 December 31, 2007.

Race/Ethnicity of Cumulative HIV/AIDS Cases Living in North Dakota Compared to the State Population

Racial and ethnic minorities continue to be disproportionately affected by HIV in the United States. This is also true for North Dakota. While 13 percent of HIV/AIDS cases still living in North Dakota are black, only 1 percent of the population of North Dakota is black. Also, 10 percent of HIV/AIDS cases living in North

Dakota are American Indian, while American Indians make up 5 percent of the state’s population. (Figure 2)

Disease Status of New North Dakota HIV/AIDS Cases Compared to Disease Status at Diagnosis of Cumulative Cases Living in North Dakota

Of the 166 HIV/AIDS cases currently living in North Dakota, 36 percent were diagnosed with AIDS at their first positive HIV test. Only 25 percent of the HIV/AIDS cases

newly diagnosed in North Dakota in 2007 were diagnosed with AIDS at their first positive HIV test. This suggests that individuals may be getting tested for HIV at an earlier stage of their disease than in previous years. (Figure 3)

Figure 1. Risk factors of HIV/AIDS cases living in North Dakota as of Dec. 31, 2007, vs. cases newly diagnosed in North Dakota in 2007

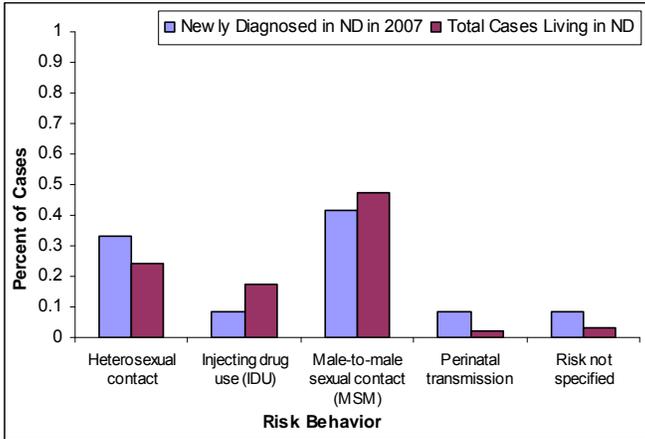


Figure 2. Race/Ethnicity of HIV/AIDS cases living in North Dakota as of Dec. 31, 2007, vs. the estimated population of North Dakota as of July 1, 2006

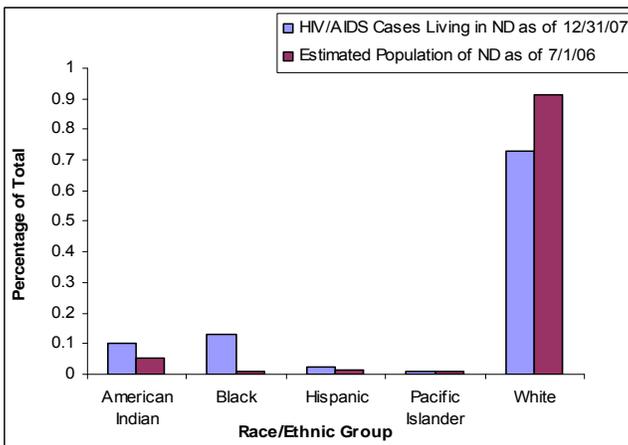
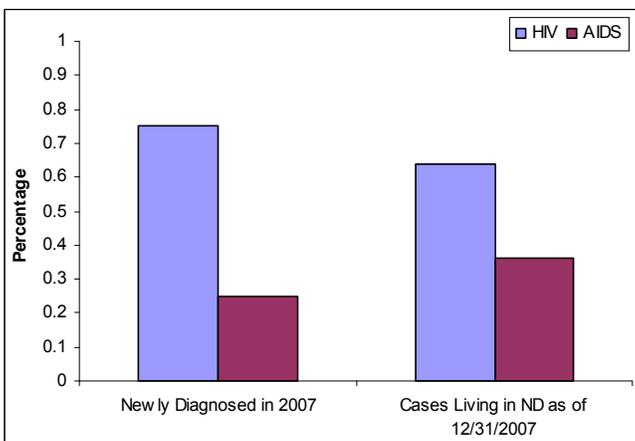


Figure 3. Disease status of North Dakota HIV/AIDS cases newly diagnosed in 2007 compared to disease status at diagnosis of cases living in North Dakota as of Dec. 31, 2007



2007 Tuberculosis Epidemiology Report

TB in North Dakota – 2007

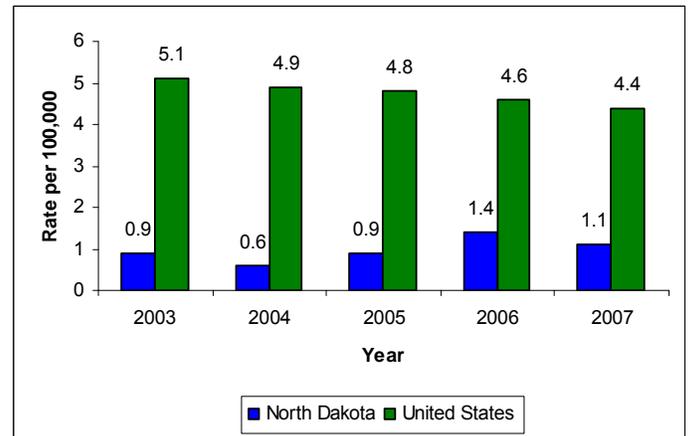
In 2007, seven cases of tuberculosis (TB) were reported in North Dakota. With an incidence rate of 1.1 per 100,000, the North Dakota rate continues to be below the national rate. (Figure 1)

Three of the tuberculosis cases were pulmonary and three were extra-pulmonary. One case was pulmonary/extra-pulmonary. Extra-pulmonary cases included peritoneal, bone, and psoas muscle infections.

The ages of the tuberculosis cases ranged from 26 to 77, with a median age of 50. Three cases were white, two were Asian, and two American Indian.

Risk factors associated with tuberculosis in 2007 included belonging to a high-risk racial/ethnic group, being foreign-born, having a history of being an employee of a high-risk congregate setting and having prior tuberculosis infection. Two tuberculosis-related deaths were reported in 2007.

Figure 1. United States and North Dakota Tuberculosis Disease Rates, 2003–2007.

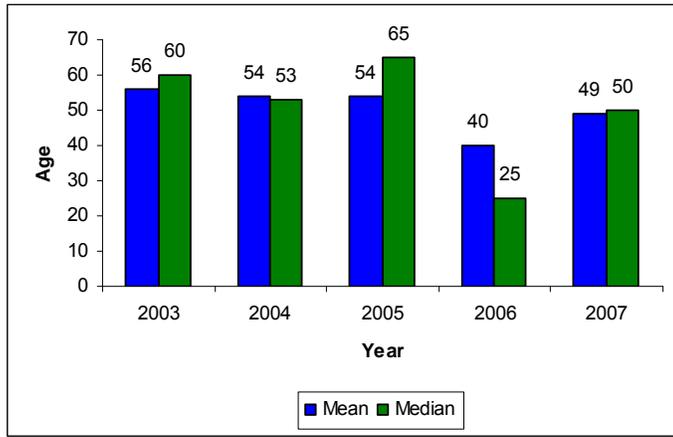


TB in North Dakota – 2003–2007

From 2003 through 2007, 32 cases of tuberculosis were reported in North Dakota. The number of annual tuberculosis cases ranged from four to nine, resulting in an incidence rate between 0.6 and 1.4 per 100,000.

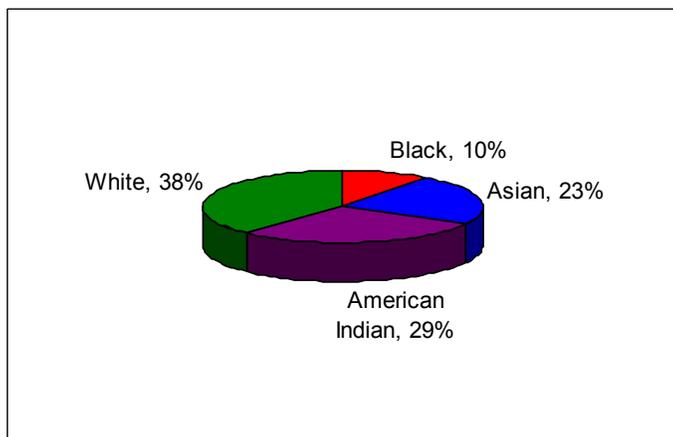
Of the 32 cases, 18 were pulmonary (56%), 12 were extra-pulmonary (38%) and two were pulmonary/extra-pulmonary (6%). The mean and median ages of tuberculosis cases during the past five years were 51 and 51, respectively. (Figure 2)

Figure 2. Tuberculosis by Age, North Dakota, 2003–2007.



The race/ethnicity of tuberculosis cases during the past five years shows a disproportionately high number of the cases reported among minority populations. Cumulatively, American Indians, blacks and Asians account for only 7 percent of North Dakota’s population but more than half of the state’s reported TB cases. (Figure 3)

Figure 3. Percentage of Tuberculosis Cases by Race/Ethnicity, North Dakota, 2003–2007.



An increase in the state’s racial/ethnic populations during the past few years has contributed to the increased number of tuberculosis cases reported in minority racial/ethnic groups. While the number of foreign-born people in the state represents less than 2 percent of the state’s total population, it increased 29 percent between 1990 and 2000.

Drug-Resistant Tuberculosis

Drug resistant tuberculosis (DR-TB) and multi-drug resistant tuberculosis (MDR-TB) present difficult problems for tuberculosis control. This is due to the complicated treatment regimen for the index case and the treatment of latent tuberculosis infection in contacts to the index case. The contact’s treatment regimen must be individualized based on the index case’s medication history and drug susceptibility studies.

With the increase in foreign-born populations entering the United States and North Dakota, the potential exists for an increase of DR-TB. During the past five years, however, no cases of multidrug-resistant tuberculosis have been identified in North Dakota. Furthermore, only one case of single-drug resistance has been ever been identified in the state; an isolate in 2002 was resistant to streptomycin.

Latent Tuberculosis Infection

Latent TB infection (LTBI) occurs when individuals are infected with *M. tuberculosis* bacteria through direct exposure to active tuberculosis disease.

People with latent infection do not have active disease and are not infectious. Clinical findings of LTBI normally include a positive tuberculin skin test, absence of symptoms and a normal chest x-ray.

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, 2003–2007.

2003	2004	2005	2006	2007
321	384	315	367	322

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For more information about tuberculosis, to find a TB controller in your area, or to utilize case studies for training purposes, visit www.ndhealth.gov/disease/tb.

Summary of Selected Reportable Conditions

North Dakota, January – March 2007-2008

Reportable Condition	January-March 2008*	January-March 2007*
Campylobacteriosis	4	12
Chlamydia	452	440
Cryptosporidiosis	1	2
<i>E. coli</i> , shiga toxin positive (non-O157)	1	0
<i>E. coli</i> O157:H7	0	2
Enterococcus, Vancomycin-resistant (VRE)	74	80
Giardiasis	8	6
Gonorrhea	28	22
Haemophilus influenzae (invasive)	3	1
Acute Hepatitis A	1	0
Acute Hepatitis B	0	0
Acute Hepatitis C	0	0
HIV/AIDS ¹	7	6
Legionellosis	0	0
Listeria	0	0
Lyme Disease	0	0
Malaria	0	0
Meningitis, bacterial ² (non meningococcal)	1	1
Meningococcal disease ³	2	1
Mumps	1	1
Pertussis	0	7
Q fever	0	0
Rabies (animal)	3	7
Salmonellosis	8	13
Shigellosis	20	10
<i>Staphylococcus aureus</i> , Methicillin-resistant (MRSA)	17	317
Streptococcal disease, Group A ⁴ (invasive)	7	12
Streptococcal disease, Group B ⁴ (infant < 3 months of age)	1	0
Streptococcal disease, Group B ⁴ (invasive ⁵)	8	5
Streptococcal disease, other ⁴ (invasive)	5	4
Streptococcal pneumoniae ⁴ , (invasive, children < 5 years of age)	1	1
Streptococcal pneumoniae ⁴ (invasive ⁶)	21	16
Streptococcus pneumoniae ⁴ , drug-resistant	0	0
Syphilis, Primary and Secondary	0	0
Tuberculosis	1	1
Tularemia	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 Meningitis caused by *Staphylococcus aureus* and *Streptococcus pneumoniae*.

³ Includes confirmed, probable and suspect meningococcal meningitis cases.

⁴ Includes invasive infections caused by streptococcal disease not including those classified as meningitis.

⁵ Includes invasive infections of streptococcal, Group B, disease in persons \geq 3 months of age.

⁶ Includes invasive infections caused by *Streptococcus pneumoniae* in persons \geq 5 years of age.