State of Wyoming

Department of Health

2012 Wyoming Tuberculosis Report

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Director

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WYOMING DEPARTMENT OF HEALTH

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2012 Wyoming TB Report—Introduction

The Wyoming Department of Health (WDH) Tuberculosis (TB) Program is located in the Communicable Disease Unit within the Public Health Division. Wyoming is a low morbidity state and most of the TB infections occur in the foreign born population. The WDH TB Program strives to eliminate TB infections statewide by providing low-cost testing and free treatment for latent and active TB.

Recently, the WDH TB Program has been focusing on risk-based screening for TB. The Program has been collecting risk factors in the Wyoming Immunization Registry (WyIR) since 2010 and will be routinely evaluated to determine those at greatest risk for infection in the state. Currently, the Program recommends the following populations be screened for TB:

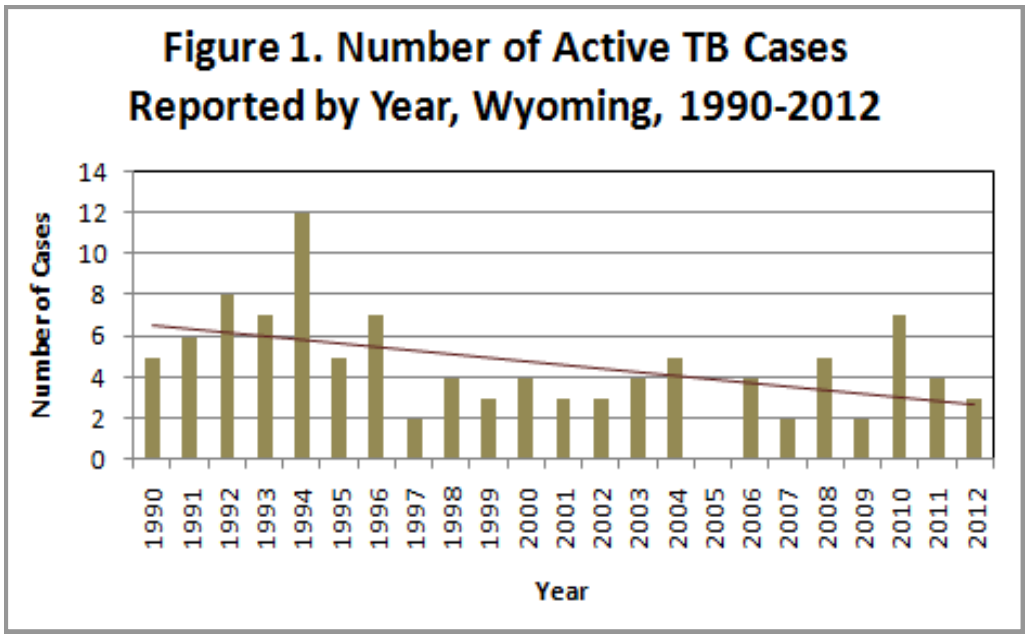
- Contacts to active cases,
- Foreign Born,
- Homeless,
- Immunocompromised,
- Residents of congregate settings,
- Incarcerated for more than six months,
- Travel to a country with a high prevalence of TB,
- Those with symptoms of the disease, and
- Injection drug users.

The WDH TB Program trains public health nurses, jail and prison nurses, and other healthcare providers in all 23 counties to place and read skin tests, information about TB, risks, and screening recommendations. The TB Program also published a TB Manual for clinics to reference when they have a new latent or active case (http://www.health.wyo.gov/phsd/tb/manual.html). Once trained, the Program will provide Tuberculin Skin Test (TST) supplies to the clinics free of charge. Any person who tests positive for TB can receive a chest x-ray, liver panel test, and LTBI or active disease treatment free of charge regardless of insurance status. The public health nursing (PHN) clinics also provide directly observed therapy (DOT) for active clients as well as those recommended to take the twelve week, DOT LTBI treatment.

In 2012, the WDH TB Program piloted the use of Interferon-Gamma Release Assay (IGRA) testing for TB. The Program now recommends and provides free IGRA testing for foreign born populations, contacts of an active case, and HIV positives through PHN clinics. As of March 20, 2013, twelve PHN offices have the ability to do IGRA testing.

This report describes the epidemiology of active and latent TB in Wyoming, the prevention efforts by the WDH TB Program, and the services offered through the Program. National data was retrieved from the Center for Disease Control and Prevention (CDC) tuberculosis surveillance reports.[1] Population data was retrieved from the U.S. Census Bureau. All reported Wyoming rates are calculated from 2010 census data.[2]

From 1990 to 2012, the average number of active TB cases reported each year was five. The number of cases has decreased since 2010 and in 2012, three cases of active disease were reported. Figure 1 displays the trend of cases from 1990 to 2012.



In 2012, the rate of active TB disease was 0.5 cases per 100,000 population. Due to the low morbidity of active TB in Wyoming, changes in rates are difficult to interpret. The rate of TB in Wyoming has declined by 68% since 2010. Figure 2 displays the rate of infection from 1990 through 2012.

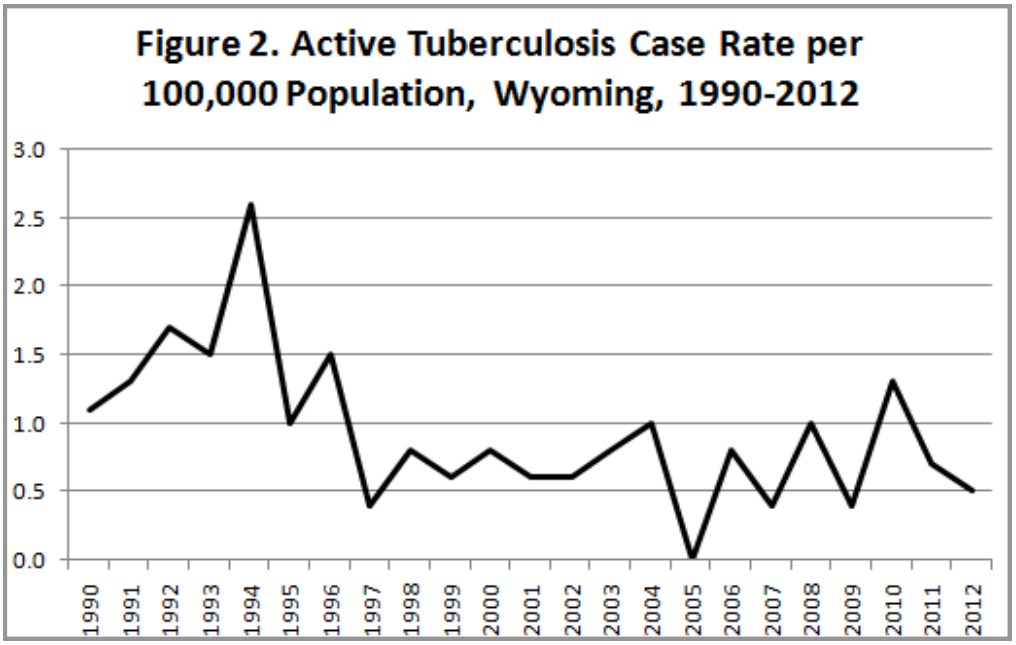


Table 1 shows active TB cases from 2008 through 2012 by race and ethnicity. A total of 21 active cases were reported from 2008-2012. The highest number of cases (33%) have been reported in Non-Hispanic Whites, followed by Hispanics of all races (29%). No cases were reported in American Indians/Alaskan Natives from 2008 through 2012. Over 50% of active cases in the state from 2009-2012 were foreign born. Data from 2008 is unavailable.

Table 1. Active TB Cases by Race/Ethnicity, Wyoming, 2008-2012

Year	White	Black	AI/AN	Asian	Hispanic	Total	Foreign Born
2008	2	0	0	1	2	5	-
2009	0	1	0	1	0	2	1
2010	3	1	0	1	2	7	5
2011	1	0	0	2	1	4	3
2012	1	1	0	0	1	3	2
Total	**7**	**3**	**0**	**5**	**6**	**21**	**11**

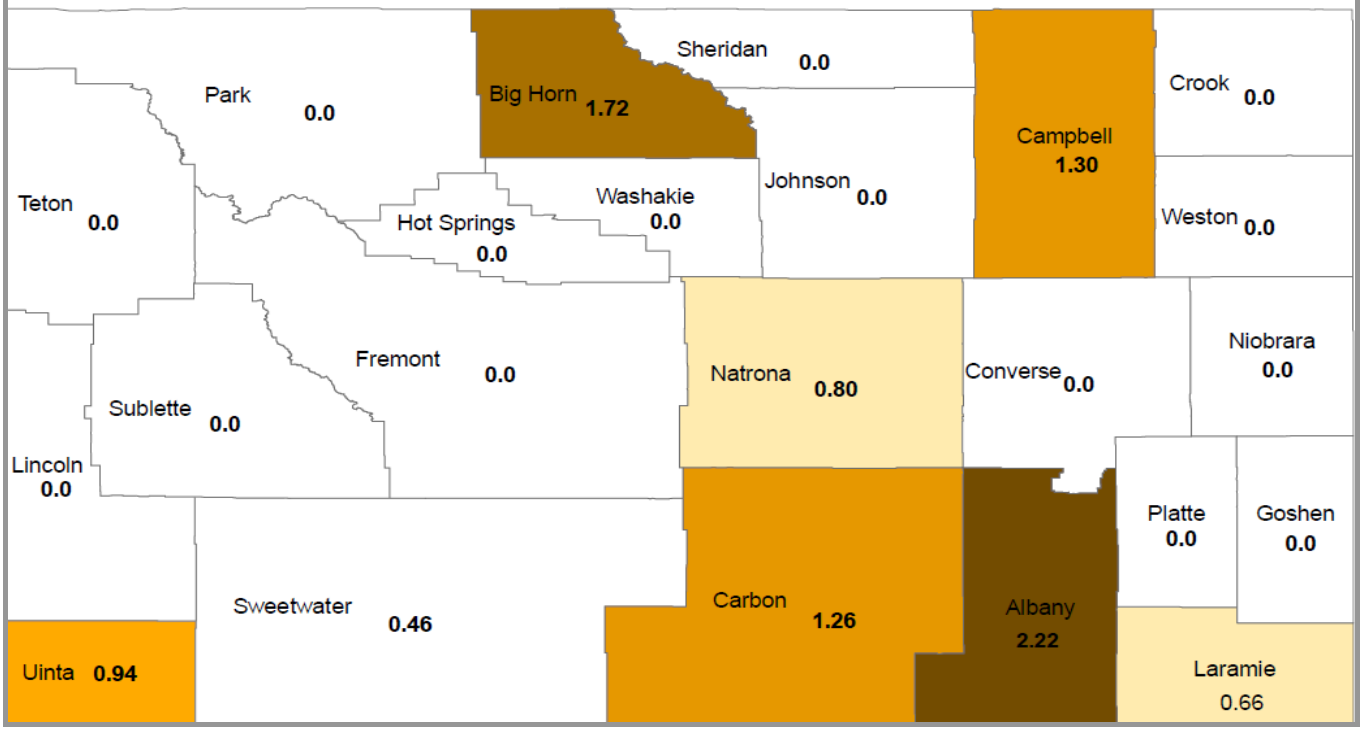
Table 2 shows the risk factors of patients who were screened and provided treatment for active or latent TB through the WDH TB Program. Patients may report more than one risk. The majority of patients immigrated from a country with a high incidence of TB, followed by those who were employed in a healthcare setting and those who were in detention for greater than six months. In 2012, the WDH TB Program provided 170 people with TB medications.

Table 2. Reported Risk Factors for Patients Started on TB Medications, 2011-2012

Risk Factor	2011	2012
Contact Investigation: Extrapulmonary Case	2	0
Contact Investigation: Active Pulmonary Case	10	10
Contact Investigation: Other	1	3
Employment: Corrections	4	2
Employment: Daycare	15	12
Employment: Healthcare	29	36
Employment: Homeless Shelter	1	0
Employment: Other	4	8
Risk Factor: Behavior Risk History	6	6
Risk Factor: Immunocompromising Condition	2	1
Risk Factor: Detention >6 months	36	27
Risk Factor: Homeless	5	7
Risk Factor: Immigration from Country with High Incidence of TB	63	82
Risk Factor: Other	13	9
Risk Factor: Symptoms Consistent with TB	6	2
Risk Factor: Travel to High-Risk TB Country	5	17
Total Number of Patients Started on TB Medications	**165**	**170**

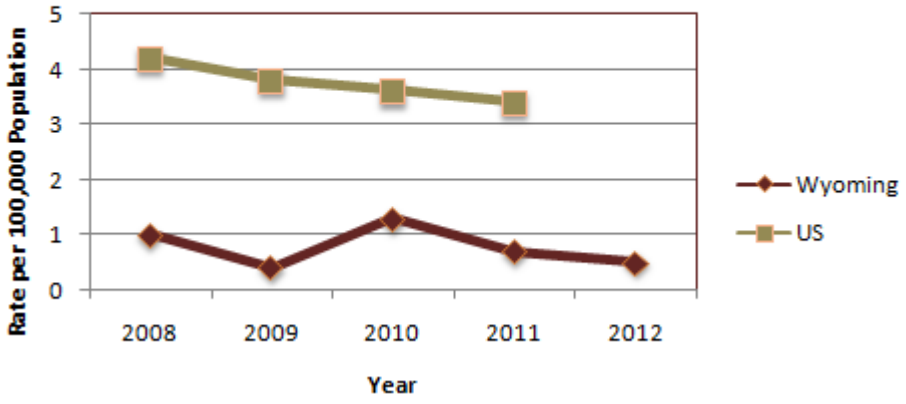
Over the past five years, Albany county has had the highest rate of active TB disease followed by Big Horn County and Campbell County. Of the 23 counties in Wyoming, 16 did not report an active TB case in from 2008 through 2012. Figure 3 displays the five year average active TB rates by county.

Figure 3. Five Year Average Rate per 100,000 Population of Reported Active TB Disease by County, Wyoming, 2008-2012



Nationally, TB has declined since 2008 from 4.2 cases per 100,000 to 3.4 cases per 100,000 in 2011. From 2008 to 2012 Wyoming rate were lower than U.S. rates. In 2011, the U.S. rate was 4.9 times higher than Wyoming.[1]

Figure 4. Active TB Rate per 100,000 Population, Wyoming and US, 2008-2012



In 2012, approximately 55 facilities utilized the WDH TB Program supplies for TB screening. These facilities include PHN offices, treatment facilities, hospitals, long term care facilities, and student health services. Since 2010, the WDH TB Program has worked to change policies from annual testing to annual risk assessments in facilities such as daycare and healthcare facilities in accordance with CDC recommendations.[3] The Program is also focusing on improving the quality of TB testing by making priority partners in the community experts in the field of TB. Priority partners include PHN offices, state facilities, detention and correction facilities, and substance abuse and treatment facilities. The Program will then provide supplies only to these priority partners.

National TB Prevention and Control goals focus on detection and treatment of LTBI. On average, 20,000 Wyoming residents are screened for TB annually using WDH TB Program supplied materials and had an approximate positivity of 1.5%. Over the past twenty years, the WDH TB Program has provided over 4,000 LTBI and Active TB patients with free medications. Table 3 outlines the number of people provided with medication annually from 1992 through 2012.

Table 3. Number of People Started on TB Medications Through the WDH TB Program, 1992-2012.

Year	Number
1992	300
1993	322
1994	231
1995	219
1996	220
1997	194
1998	248
1999	272
2000	212
2001	262
2002	194
2003	204
2004	201
2005	167
2006	220
2007	153
2008	200
2009	148
2010	171
2011	165
2012	170
Total	**4,473**

2012 Wyoming TB Report—Conclusion

Though Wyoming has a low incidence of TB, prevention efforts are imperative in eliminating outbreaks and preventing resurgence of disease. Though TB is declining in the United States, controlling TB in foreign born and others disproportionately affected by disease is essential in meeting TB elimination goals.[1] The Program is committed to screening those at risk and treating those who test positive for active and latent TB. At this time, only facilities which use our supplies are required to report latent infection. Out of the 170 LTBI patients started on medication through the WDH TB Program, 122 were screened with a PPD solution, showing a positivity of .58% and 89 were screened using the IGRA showing a positivity of 26.1%. The positivity rate of the IGRA demonstrates that Wyoming clinics are utilizing the IGRA screening recommendations, and only testing individuals that are at increased risk for TB. Of the 170 individuals who started therapy through the Program, 43% of these clients (73 out of 170) are on track to complete at least six (6) months worth of LTBI treatment.

The Program makes recommendations with guidance from the Wyoming TB Advisory Committee. This committee meets biannually and is comprised of health department staff, nurses, and doctors from public, private, and correctional settings around the state. The TB Advisory Committee exists to combine expertise and knowledge to influence TB policies and WDH TB recommendations.

The WDH TB Program and Advisory Committee has established the following goals to direct Program activities:

- Continue to evaluate risk data to influence risk-based screening to increase positivity;
- Target treatment and increase adherence to treatment for LTBI;
- Continue working with healthcare facilities and department of corrections to change TB screening policies; and
- Evaluate IGRA data for increased and targeted use.

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1. CDC. Reported Tuberculosis in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, CDC, October 2012.
2. U.S. Census Bureau. State and County QuickFacts, 2010. March, 2013.
3. CDC. Tuberculosis. Atlanta, GA: U.S. Department of Health and Human Services, CDC, August, 2012.