



WEST VIRGINIA TUBERCULOSIS PROFILE

ANNUAL REPORT 2021

**WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES
BUREAU FOR PUBLIC HEALTH
DIVISION OF TUBERCULOSIS ELIMINATION**

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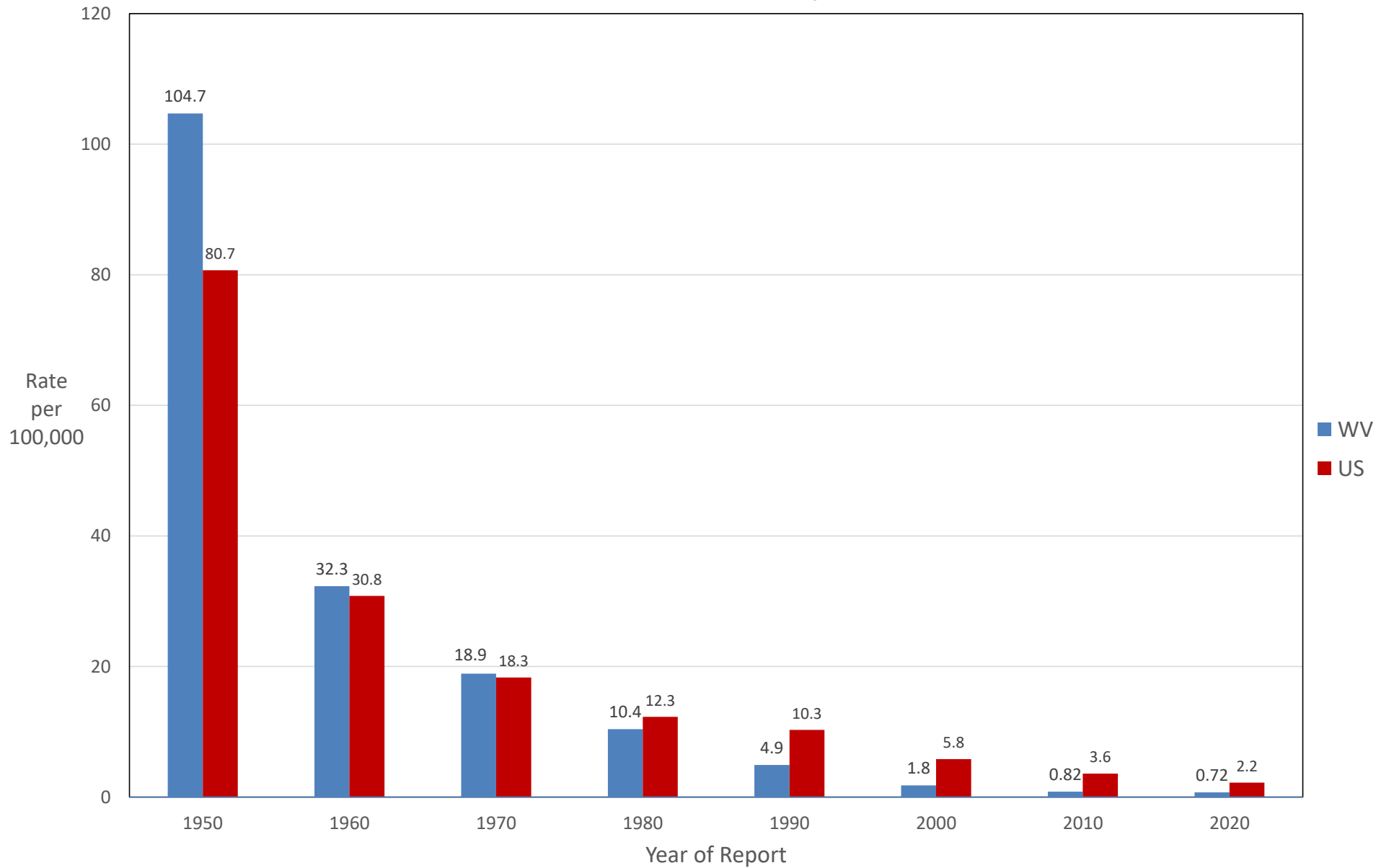
Website

oeeps.wv.gov/tuberculosis

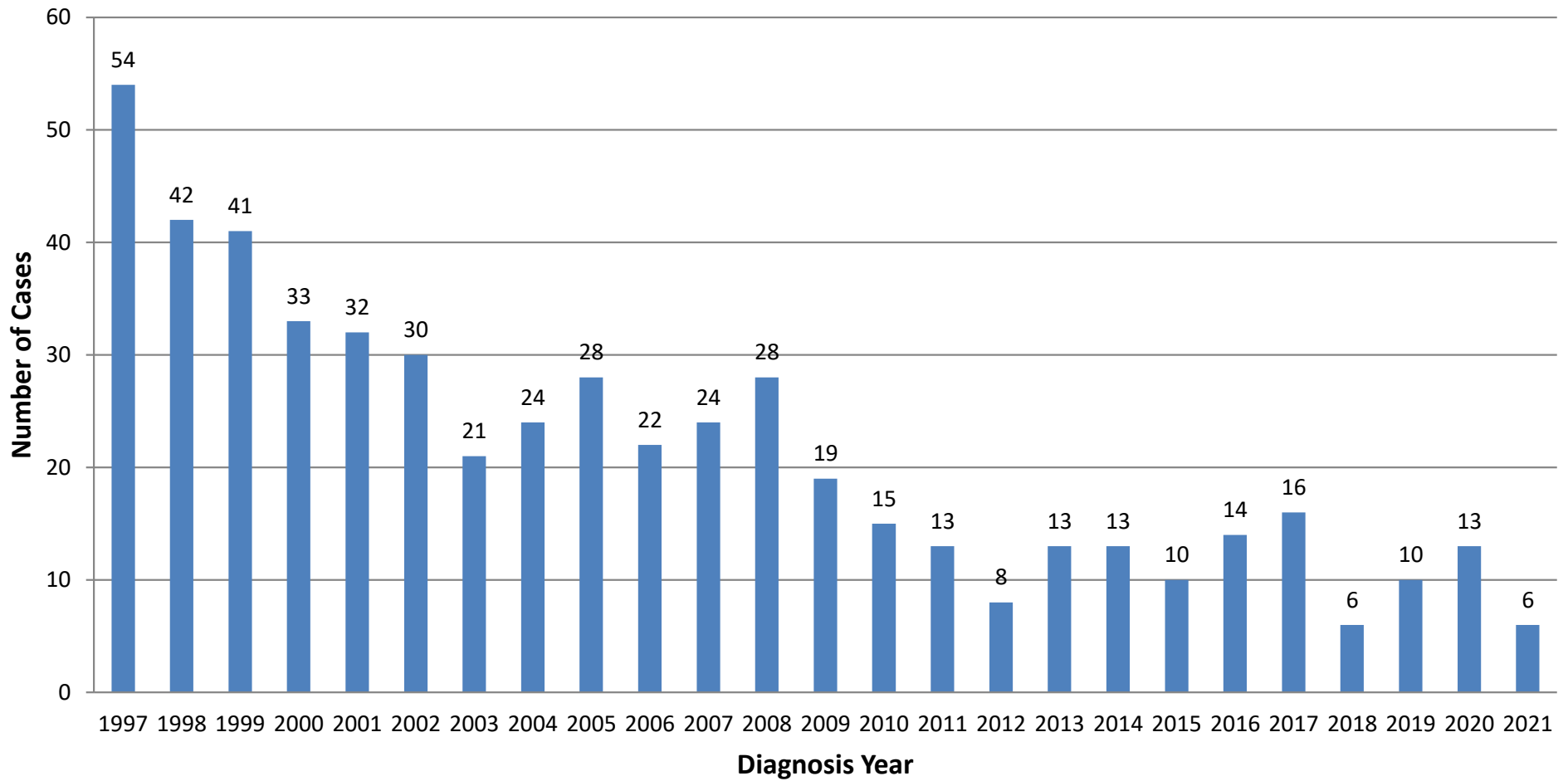
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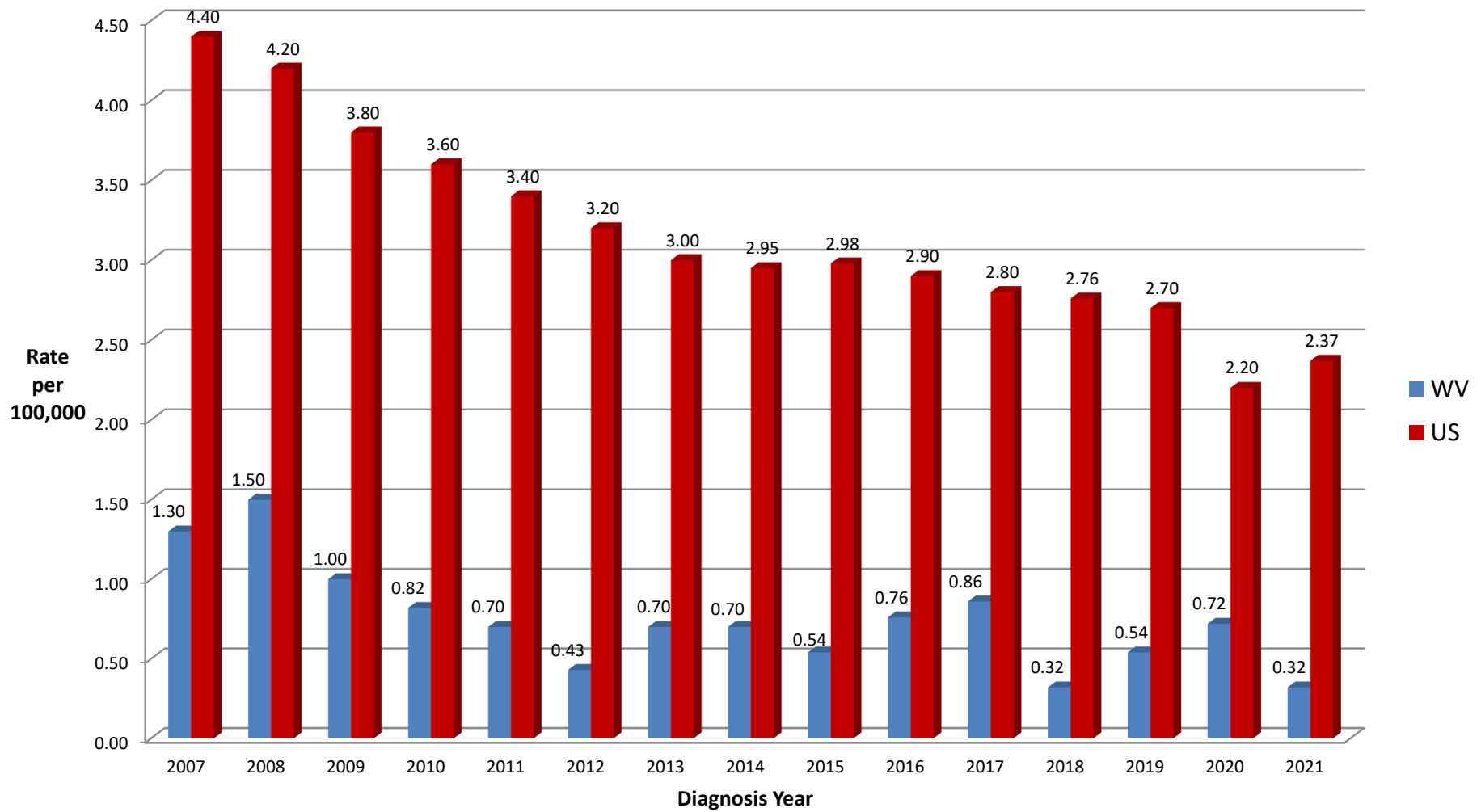
TB Incidence Rate by Year of Report WV and US Decennial Rates, 1950-2020



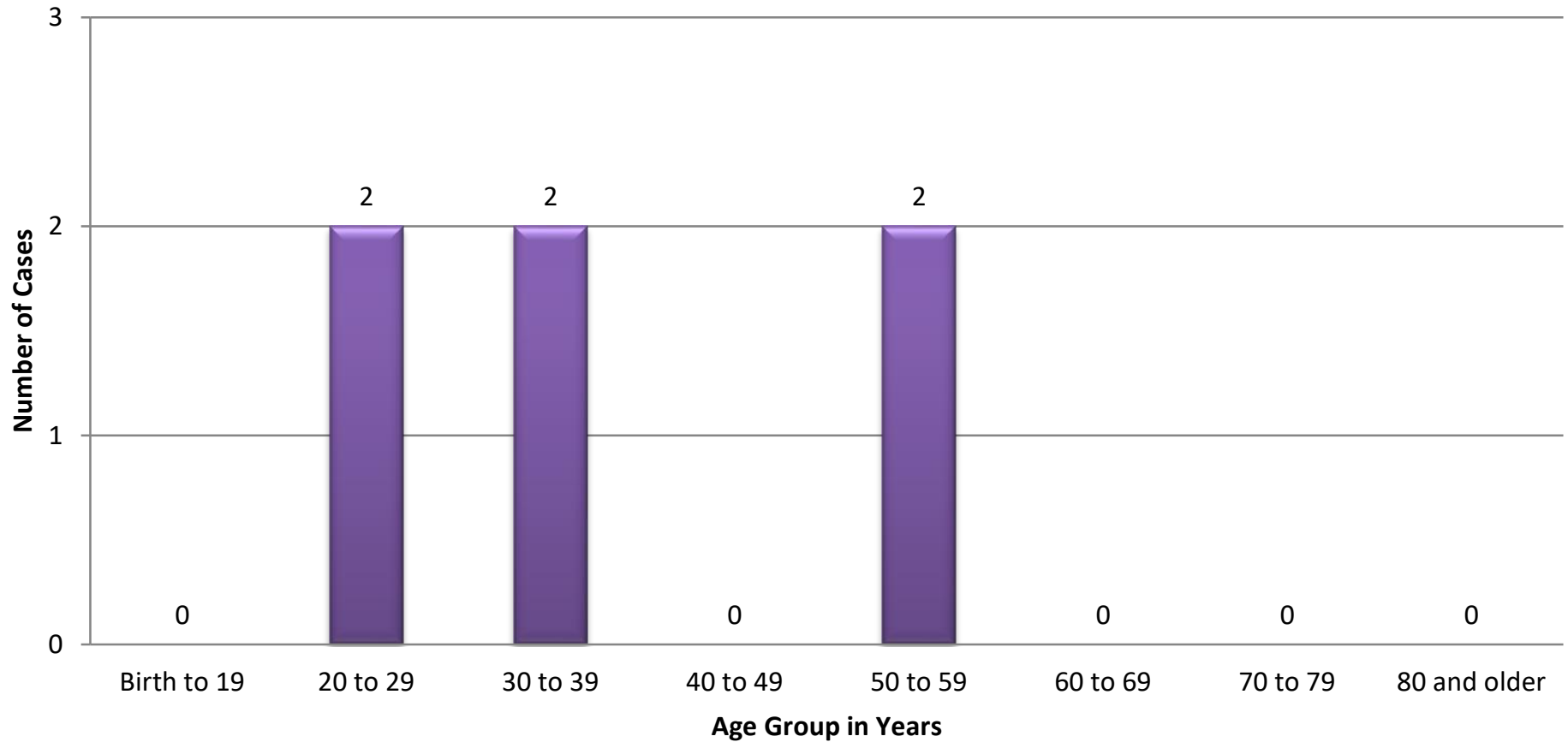
Newly Diagnosed Active TB Cases in WV by Year of Diagnosis 1997-2021



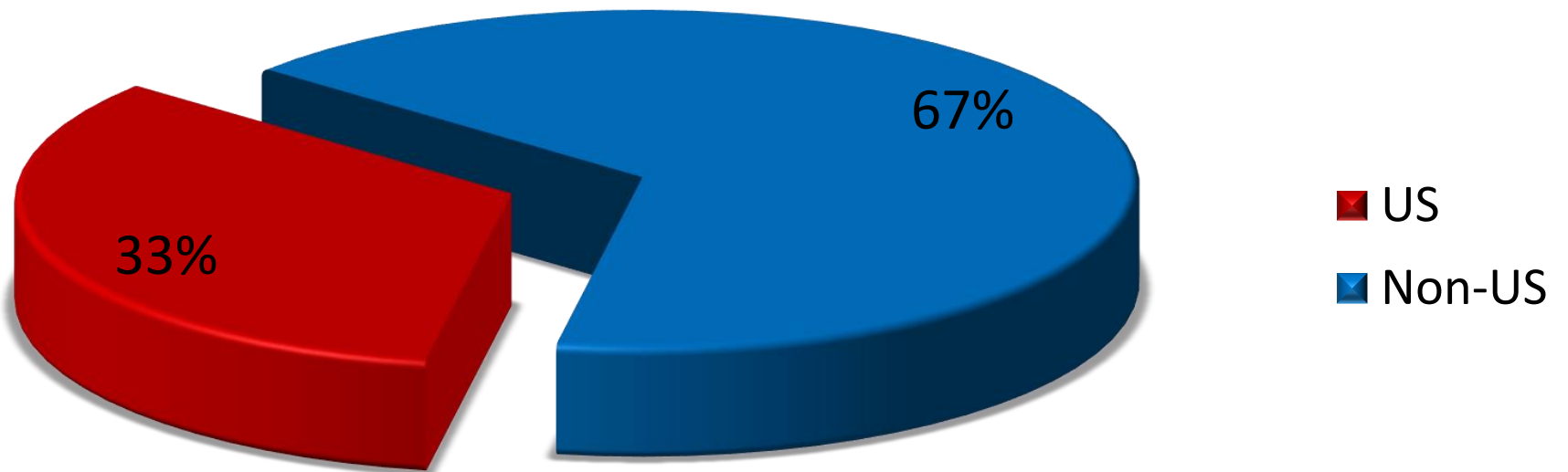
TB Incidence Rates by Diagnosis Year, WV and US 2007-2021



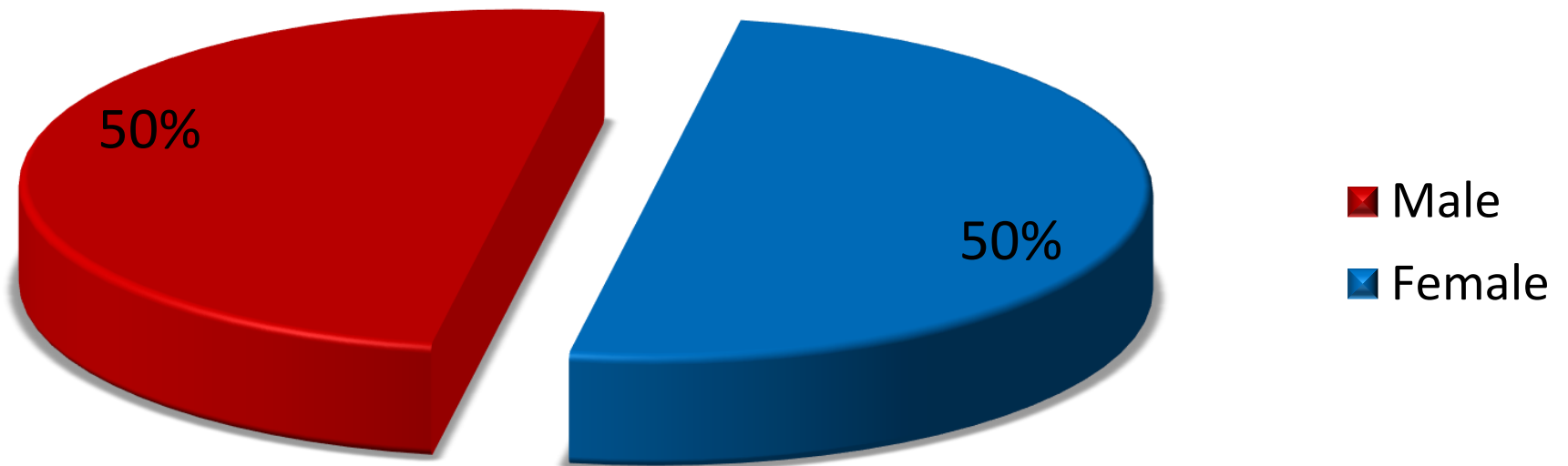
WV Cases of Active TB by Age Group at Diagnosis - 2021



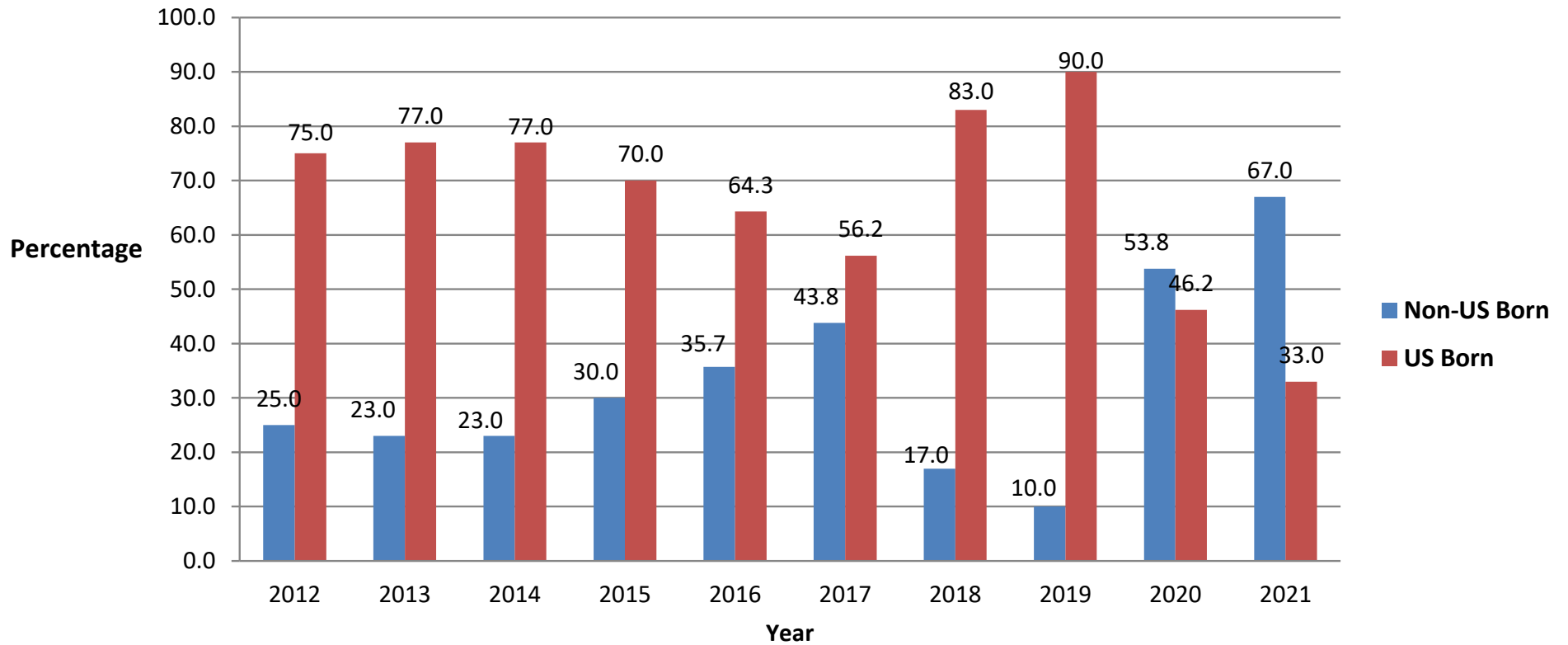
WV TB Active Cases by Country of Origin - 2021



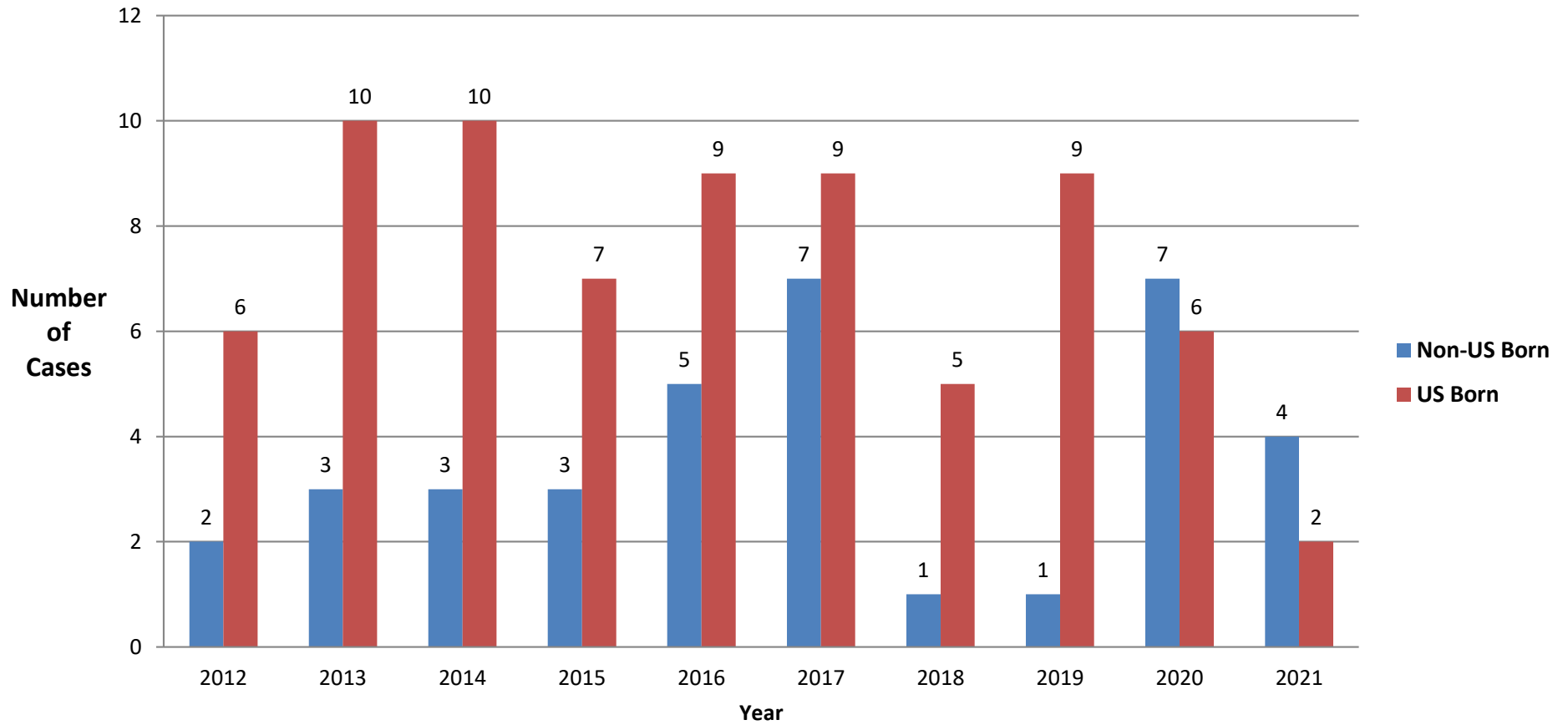
Gender of WV Active TB Cases - 2021



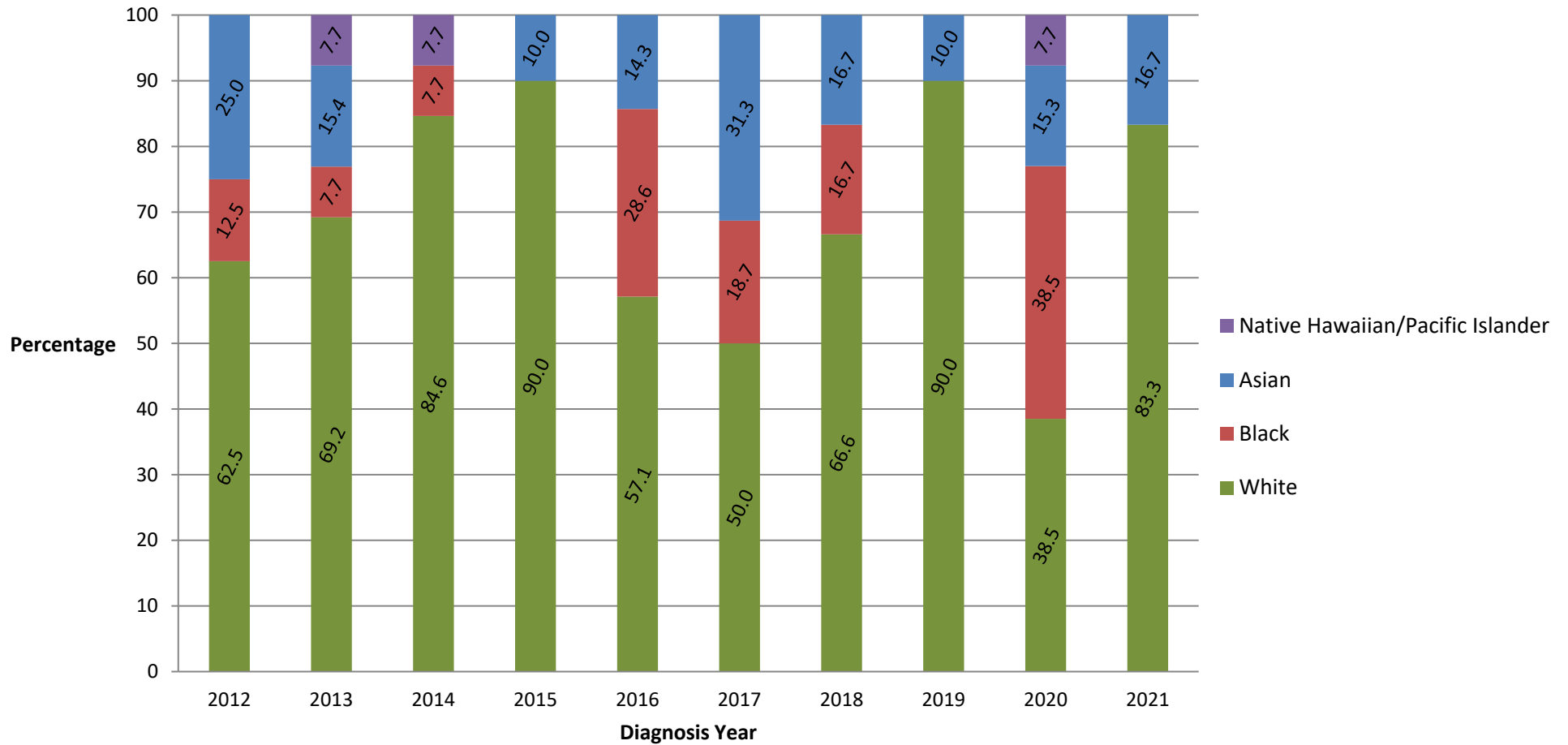
Percentage of WV Active TB Cases Non-US Born vs. US Born 2012-2021



Number of WV Active TB Cases Non-US Born vs. US Born 2012-2021



Race of WV Active TB Cases by Diagnosis Year 2012-2021



**Reported Risk Factors and Occupations
WV TB Cases, 2021**

<u>RISK FACTOR</u>	<u>Percentage of 2021 Cases</u>
Injected Drug Use	0.00%
Non-Injected Drug Use	0.00%
Excessive Alcohol Use	16.67%
Homeless in Past Year	0.00%
Resident of Long-Term Care Facility at Diagnosis	0.00%
Resident of Correctional Facility at Diagnosis	0.00%

OCCUPATION

<u>CLASSIFICATION</u>	<u>NUMBER</u>	<u>PERCENT</u>
Healthcare Worker	0	0.00%
Correctional Employee	0	0.00%
Migratory Agricultural Worker	0	0.00%
Other Occupation	4	66.66%
Retired	0	0.00%
Not Seeking Employment (e.g., student, etc.)	1	16.67%
Not Employed Within Past 12 Months	1	16.67%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

SURVEILLANCE CLINICAL DATA
 For the Month - Year Counted
 Beginning 1/2021 and Ending 12/2021

Reporting Area: West Virginia Department of Health and Human Resources,
 Bureau for Public Health - All Counties

STATUS AT DIAGNOSIS OF TB

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Alive	6	100.00%
Dead	0	0.00%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

PREVIOUS DIAGNOSIS OF TB

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
No	6	100.00%
Yes	0	0.00%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

SITE OF DISEASE

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Pulmonary	4	66.67%
Extrapulmonary	2	33.33%
Both	0	0.00%
Site Not Stated/Missing	0	0.00%
TOTAL	6	100.00%

SPUTUM SMEAR

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Positive	2	33.33%
Negative	2	33.33%
Not Done	2	33.33%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

SURVEILLANCE CLINICAL DATA
 For the Month - Year Counted
 Beginning 1/2021 and Ending 12/2021
 (continued)

SPUTUM CULTURE

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Positive	1	16.67%
Negative	3	50.00%
Not Done	2	33.33%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

MICROSCOPIC EXAM OF TISSUE AND OTHER BODY FLUIDS

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Positive	2	33.33%
Negative	1	16.67%
Not Done	3	50.00%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

CULTURE OF TISSUE AND OTHER BODY FLUIDS

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Positive	2	33.33%
Negative	1	16.67%
Not Done	3	50.00%
Unknown/Missing	0	0.00%
TOTAL	6	100.00%

CHEST X-RAY

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Normal	0	0.00%
Abnormal	6	100.00%
Not Done/Unknown/Missing	0	0.00%
TOTAL	6	100.00%

SURVEILLANCE CLINICAL DATA
 For the Month - Year Counted
 Beginning 1/2021 and Ending 12/2021
 (continued)

TUBERCULIN (MANTOUX) SKIN TEST AT DIAGNOSIS

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Positive	0	0.00%
Negative	0	0.00%
Not Done	6	100.00%
Unknown	0	0.00%
Missing	0	0.00%
TOTAL	6	100.00%

HIV STATUS

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
Negative	6	100.00%
Positive	0	0.00%
Indeterminate	0	0.00%
Refused	0	0.00%
Not Offered	0	0.00%
Test Done, Results Unknown	0	0.00%
Unknown	0	0.00%
Missing	0	0.00%
TOTAL	6	100.00%

INITIAL DRUG REGIMEN

CLASSIFICATION	NUMBER OF RECORDS	PERCENT
No Drugs	0	0.00%
One Drug	0	0.00%
INH, RIF, PZA, and EMB or SM	6	100.00%
INH, RIF, and PZA	0	0.00%
INH and RIF	0	0.00%
Any other Multiple Drug Combination	0	0.00%
Unknown	0	0.00%
TOTAL	6	100.00%

**NEWLY REPORTED VERIFIED CASES OF TUBERCULOSIS IN WEST VIRGINIA, 2015-2021
INCIDENCE RATES * (I-RATE) ARE SHOWN PER 100,000 RESIDENTS**

COUNTY	POPULATION 2010 CENSUS	2015 I-RATE	2016 I-RATE	2017 I-RATE	2018 I-RATE	2019 I-RATE	2020 I-RATE	2021 I-RATE
Barbour	16,589	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berkeley	104,169	0.00	2.88	0.96	0.00	0.00	1.92	0.96
Boone	24,629	4.06	0.00	4.06	0.00	0.00	4.06	0.00
Braxton	14,523	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke	24,069	0.00	0.00	0.00	4.15	0.00	0.00	0.00
Cabell	96,319	0.00	6.23	1.04	0.00	1.04	2.08	0.00
Calhoun	7,627	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clay	9,386	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doddridge	8,202	0.00	12.19	0.00	0.00	0.00	0.00	0.00
Fayette	46,039	0.00	0.00	0.00	2.17	0.00	0.00	0.00
Gilmer	8,693	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grant	11,937	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenbrier	35,480	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hampshire	23,964	0.00	0.00	4.17	0.00	0.00	0.00	0.00
Hancock	30,676	3.26	0.00	0.00	0.00	0.00	0.00	0.00
Hardy	14,025	0.00	0.00	7.13	0.00	0.00	0.00	0.00
Harrison	69,099	1.45	0.00	0.00	1.45	0.00	0.00	0.00
Jackson	29,211	0.00	0.00	0.00	3.42	0.00	0.00	3.42
Jefferson	53,498	0.00	1.87	0.00	0.00	0.00	1.87	0.00
Kanawha	193,063	1.55	0.00	0.52	0.00	0.52	1.04	0.52
Lewis	16,372	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln	21,270	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan	36,743	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marion	56,418	0.00	0.00	0.00	0.00	1.77	0.00	0.00
Marshall	33,107	0.00	0.00	0.00	0.00	0.00	0.00	3.02
Mason	27,324	0.00	0.00	0.00	3.66	0.00	0.00	0.00
McDowell	22,113	0.00	0.00	0.00	0.00	9.04	0.00	0.00
Mercer	62,264	0.00	0.00	0.00	1.61	0.00	0.00	0.00
Mineral	28,212	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mingo	26,839	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monongalia	96,189	1.04	1.04	2.08	0.00	2.08	4.16	0.00
Monroe	13,502	0.00	0.00	7.41	0.00	0.00	0.00	0.00
Morgan	17,541	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nicholas	26,233	0.00	0.00	0.00	0.00	0.00	3.81	3.81
Ohio	44,443	0.00	0.00	2.25	0.00	2.25	0.00	0.00
Pendleton	7,695	0.00	0.00	0.00	0.00	13.00	0.00	0.00
Pleasants	7,605	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pocahontas	8,719	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Preston	33,520	0.00	0.00	2.98	0.00	0.00	0.00	0.00

* Incidence rates must be interpreted with caution due to small number of cases.

**NEWLY REPORTED VERIFIED CASES OF TUBERCULOSIS IN WEST VIRGINIA, 2015-2021
INCIDENCE RATES * (I-RATE) ARE SHOWN PER 100,000 RESIDENTS**

COUNTY	POPULATION 2010 CENSUS	2015 I-RATE	2016 I-RATE	2017 I-RATE	2018 I-RATE	2019 I-RATE	2020 I-RATE	2021 I-RATE
Putnam	55,486	3.60	0.00	5.41	0.00	0.00	0.00	1.80
Raleigh	78,859	0.00	1.27	1.27	0.00	1.27	0.00	0.00
Randolph	29,405	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ritchie	10,449	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Roane	14,926	0.00	0.00	6.70	0.00	0.00	0.00	0.00
Summers	13,927	7.18	0.00	0.00	0.00	0.00	0.00	0.00
Taylor	16,895	0.00	5.92	0.00	0.00	0.00	0.00	0.00
Tucker	7,141	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tyler	9,208	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upshur	24,254	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne	42,481	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Webster	7,154	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wetzel	16,583	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wirt	5,717	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood	86,956	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wyoming	23,796	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1,852,994							
I-Rate for WV		0.54	0.76	0.86	0.32	0.54	0.70	0.32

* Incidence rates must be interpreted with caution due to small number of cases.

Latent Tuberculosis Infection (LTBI) Incidence/100,000 Population * by County, 2017-2021

COUNTY	POPULATION 2010 CENSUS	2017 Rate	2018 Rate	2019 Rate	2020 Rate	2021 Rate
Barbour	16,589	12.06	18.08	30.14	0.00	0.00
Berkeley	104,169	8.64	22.08	24.96	1.92	2.88
Boone	24,629	8.12	12.18	12.18	0.00	4.06
Braxton	14,523	13.77	13.77	0.00	0.00	0.00
Brooke	24,069	0.00	12.46	29.08	0.00	4.15
Cabell	96,319	33.22	21.80	56.06	7.27	1.04
Calhoun	7,627	0.00	0.00	26.22	0.00	0.00
Clay	9,386	0.00	0.00	10.65	0.00	0.00
Doddridge	8,202	0.00	24.38	12.19	0.00	0.00
Fayette	46,039	4.34	0.00	15.20	0.00	8.69
Gilmer	8,693	0.00	0.00	11.50	0.00	0.00
Grant	11,937	8.38	8.38	8.38	0.00	0.00
Greenbrier	35,480	8.46	16.91	11.27	62.01	0.00
Hampshire	23,964	8.35	8.35	0.00	0.00	0.00
Hancock	30,676	6.52	6.52	9.78	0.00	6.52
Hardy	14,025	171.12	64.17	28.52	49.91	0.00
Harrison	69,099	7.24	13.02	11.58	1.45	13.02
Jackson	29,211	3.42	3.42	10.27	0.00	0.00
Jefferson	53,498	5.61	9.35	20.56	0.00	0.00
Kanawha	193,063	12.43	17.09	22.27	9.84	9.32
Lewis	16,372	6.11	24.43	30.54	0.00	6.11
Lincoln	21,720	0.00	0.00	4.60	0.00	9.21
Logan	36,743	8.16	19.05	13.61	2.72	13.61
Marion	56,418	0.00	10.63	8.86	1.77	0.00
Marshall	33,107	0.00	3.02	18.12	0.00	0.00
Mason	27,324	0.00	7.32	10.98	0.00	10.98
McDowell	22,113	0.00	4.52	31.66	4.52	4.52
Mercer	62,264	0.00	17.67	12.85	0.00	19.27
Mineral	28,212	0.00	10.63	7.09	0.00	10.63
Mingo	26,839	3.73	7.45	3.73	3.73	3.73
Monongalia	96,189	34.31	42.62	22.87	17.67	16.63
Monroe	13,502	0.00	7.41	0.00	0.00	7.41
Morgan	17,541	5.70	0.00	0.00	0.00	0.00
Nicholas	26,233	3.81	15.25	3.81	0.00	7.62
Ohio	44,443	2.25	4.50	11.25	0.00	0.00
Pendleton	7,695	0.00	13.00	0.00	0.00	0.00
Pleasants	7,605	0.00	0.00	13.15	0.00	0.00
Pocahontas	8,719	0.00	0.00	0.00	0.00	22.94
Preston	33,520	0.00	8.95	8.95	0.00	8.95
Putnam	55,486	0.00	9.01	5.41	0.00	9.01
Raleigh	78,859	13.95	20.29	31.70	7.61	2.54
Randolph	29,405	3.40	6.80	3.40	0.00	23.81
Ritchie	10,449	19.14	9.57	9.57	9.57	0.00
Roane	14,926	6.70	0.00	6.70	0.00	20.10
Summers	13,927	0.00	14.36	7.18	0.00	0.00
Taylor	16,895	0.00	23.68	17.76	0.00	0.00
Tucker	7,141	0.00	14.00	0.00	0.00	0.00
Upshur	24,254	4.12	4.12	4.12	4.12	0.00
Wayne	42,481	0.00	4.71	4.71	0.00	2.35
Webster	7,154	0.00	13.98	0.00	0.00	0.00
Wetzel-Tyler	25,791	0.00	11.63	15.51	0.00	3.88
Wirt	5,717	0.00	0.00	0.00	0.00	0.00
Wood	86,956	1.15	9.20	9.20	0.00	9.20
Wyoming	23,796	12.61	4.20	4.20	0.00	21.01
TOTAL	1,852,994	9.44	14.09	16.73	4.70	6.64

* Incidence rates must be interpreted with caution due to small number of cases.

**TUBERCULOSIS IN WEST VIRGINIA AND THE US
1981-2021**

<u>YEAR</u>	<u># WV CASES</u>	<u>WV CASE RATE Per 100,000</u>	<u># US CASES</u>	<u>US CASE RATE Per 100,000</u>
2021	6	.32	7,860	2.37
2020	13	.70	7,163	2.2
2019	10	.54	8,920	2.7
2018	6	.32	9,029	2.76
2017	16	.86	9,093	2.8
2016	14	.76	9,287	2.9
2015	10	.54	9,563	2.98
2014	13	.70	9,412	2.95
2013	13	.70	9,588	3.0
2012	8	.43	9,951	3.2
2011	13	.70	10,521	3.4
2010	15	.82	11,181	3.6
2009	19	1.0	11,540	3.8
2008	28	1.5	12,898	4.2
2007	24	1.3	13,293	4.4
2006	22	1.2	13,779	4.6
2005	28	1.6	14,093	4.8
2004	24	1.3	14,511	4.9
2003	21	1.2	14,874	5.1
2002	30	1.7	15,075	5.2
2001	32	1.8	15,989	5.6

**TUBERCULOSIS IN WEST VIRGINIA AND THE US
1981-2021
(Continued)**

<u>YEAR</u>	<u># WV CASES</u>	<u>WV CASE RATE Per 100,000</u>	<u># US CASES</u>	<u>US CASE RATE Per 100,000</u>
2000	33	1.8	16,377	5.8
1999	41	2.3	17,531	6.4
1998	42	2.3	18,361	6.8
1997	54	3.0	19,851	7.4
1996	57	3.2	21,337	8.0
1995	71	3.9	22,860	8.7
1994	80	4.4	24,361	9.4
1993	75	4.1	25,287	9.8
1992	92	5.1	26,673	10.5
1991	64	3.6	26,283	10.4
1990	87	4.9	25,701	10.3
1989	77	4.1	23,495	9.5
1988	68	3.6	22,436	9.2
1987	99	5.2	22,517	9.3
1986	124	6.5	22,768	9.5
1985	108	5.6	22,201	9.3
1984	133	6.8	22,255	9.4
1983	133	6.8	23,846	10.2
1982	162	8.3	25,520	11.0
1981	181	9.3	27,373	11.9

TUBERCULOSIS DRUG RESISTANCE IN WV 2001 TO 2021

<u>YEAR</u>	<u>MONO</u>	<u>MDR</u>	<u>2 OR MORE</u>
2021	0	0	0
2020	0	0	0
2019	0	0	0
2018	0	0	0
2017	2	0	0
2016	1	0	0
2015	1	0	0
2014	2	0	0
2013	4	0	0
2012	2	0	0
2011	1	0	0
2010	1	0	1
2009	3	0	0
2008	0	0	0
2007	1	0	1
2006	2	0	0
2005	3	0	0
2004	3	0	0
2003	0	0	1
2002	2	0	1
2001	5	0	0