

Wisconsin Mycobacteriology Laboratory Network Data Report | 2018

There were 49 new Report-Verified Cases of Tuberculosis in Wisconsin in 2018. 44 Wisconsin patients had culture-confirmed tuberculosis with susceptibility testing performed.

Number of Wisconsin Patients with New Isolations of *Mycobacterium tuberculosis* complex:

County of Residence	Dane	Douglas	Eau Claire	Fond du Lac	Kenosha	Marathon	Milwaukee	Outagamie	Racine	Rock	Sheboygan	Trempealeau	Waukesha	TOTALS
Pulmonary	4	0	2	1	2	1	15	1	1	1	3	1	4	39
Extra-pulmonary	2	1	0	1	0	0	4	0	0	0	0	0	0	8
Totals	6	1	2	2	2	1	19	1	1	1	3	1	4	44

(*)Extra-Pulmonary sources of isolation: 2 lymph node, 3 pleural, 1 CSF, 1 neck, 1 disseminated (left wrist synovial fluid)

<i>M. tuberculosis</i> complex First-Line Drug Susceptibility Testing[§]	
Susceptible to all first-line drugs	31
Resistant to INH (0.2 ug/ml) only	0
Resistant to both INH concentrations	3
Resistant to rifampin only	1
Resistant to ethambutol only	0
PZA resistant	4
PZA indeterminate	1
poly-resistant	0
Multi-drug resistant (MDR) #	2
non-viable, unable to perform	2*
TOTAL	44

(§)TB First-Line Drugs tested: isoniazid (INH) 0.2 and 1.0 ug/ml, rifampin 1.0 ug/ml, ethambutol 5.0 ug/ml, pyrazinamide (PZA) 100 ug/ml.

(#) MDR = resistant to at least INH and rifampin.

(*) These isolates were tested at CDC and presumed pan-susceptible via molecular detection of drug resistance testing and/or agar proportion testing

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Continued	Brown	Dane	Door	Douglas	Eau Claire	Fond du Lac	Kenosha	Kewaunee	La Crosse	Manitowoc	Marathon	Milwaukee	Outagamie	Portage	Racine	Sheboygan	Washington	Waukesha	Winnebago	Wood	
<i>M. llatzerense</i>												1									1
<i>M. mageritense</i>												2									2
<i>M. malmoense</i>												1									1
<i>M. marinum</i>		1										2									3
<i>M. mucogenicum</i>																				1	1
<i>M. mucogenicum</i> group		5						1				15	3								24
<i>M. nebraskense</i>		1																			1
<i>M. neoaurum</i>												3									3
<i>M. paraffinicum</i>							1														1
<i>M. parascrofulaceum</i>		1																			1
<i>M. peregrinum</i>		19										14	1								34
<i>M. phlei</i>		1																			1
<i>M. porcinum</i>											5	2									7
<i>M. septicum</i>		1										3				1					5
<i>M. shimoidei</i>											1										1
<i>M. simiae</i>		1																			1
<i>M. simiae</i> complex		1																			1
<i>M. smegmatis</i>		1																			1
<i>M. szulgai</i>												2									2
<i>M. terrae</i> complex																	1				1
<i>M. xenopi</i>		11										16					2				29
Other Mycobacteria		1										1									2
Totals	24	206	1	1	29	17	21	1	29	11	31	925	40	7	2	4	20	3	36	24	1437

Table 1. Mycobacteria Groups and Complexes

Name	Species within group or complex (This list may not be exhaustive.)
<i>M. avium</i> complex ¹	<i>avium</i> subsp. <i>avium</i> , <i>avium</i> subsp. <i>silvaticum</i> , <i>avium</i> subsp. <i>paratuberculosis</i> , <i>avium</i> subsp. <i>hominissuis</i> , <i>intracellulare</i> , <i>chimaera</i> , <i>colombiense</i> , <i>vulneris</i> , <i>marseillense</i> , <i>timonense</i> , <i>bouchedurhonense</i> .
<i>M. chelonae-abscessus</i> group ¹	<i>chelonae</i> , <i>immunogenum</i> , <i>abscessus</i> subsp. <i>abscessus</i> , <i>abscessus</i> subsp. <i>bolletii</i> , <i>massiliense</i> , <i>salmoniphilum</i> , (<i>franklinii</i> , proposed)
<i>M. fortuitum</i> group ¹	<i>fortuitum</i> , <i>peregrinum</i> , <i>senegalense</i> , <i>setense</i> , <i>septicum</i> , <i>porcinum</i> , <i>houstonense</i> , <i>boenickei</i> , <i>brisbanense</i> , <i>neworleansense</i> , <i>alvei</i> , (<i>conceptionense</i> , proposed)
<i>M. mucogenicum</i> group	<i>mucogenicum</i> , <i>aubagnense</i> , <i>phocaicum</i>
<i>M. terrae</i> complex ³	<i>terrae</i> , <i>arupense</i> , <i>engbaekii</i> , <i>hiberniae</i> , <i>kumamotonense</i> , <i>nonchromogenicum</i> , <i>senuense</i>
<i>M. tuberculosis</i> complex ¹	<i>tuberculosis</i> , <i>bovis</i> , <i>bovis BCG</i> , <i>africanum</i> , <i>caprae</i> , <i>microti</i> , <i>canetti</i> , <i>pinnipedii</i> , <i>mungi</i>

References:

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2. McNeil M. and Brown J. 1994. The medically important Aerobic Actinomycetes: epidemiology and microbiology. *Clin Microbiol Rev.* 7(3):357-417.
3. Tortoli et al. 2013. Survey of 150 strains belonging to the *Mycobacterium terrae* complex and description of *Mycobacterium engbaekii* sp. nov., *Mycobacterium heraklionsense* sp. nov., and *Mycobacterium longobardum* sp. nov. *Int J Syst Evol Microbiol.* 63: 401-411.
4. Tortoli et al. 2011. *Mycobacterium europaeum* sp. nov., a scotochromogenic species related to the *Mycobacterium simiae* complex. *Int J Syst Evol Microbiol.* 61: 1606-1611.