MICROBIOLOGY SECTION – MILWAUKEE HEALTH DEPARTMENT

M O N T H L Y R E P O R T

September 2007 Vol. 12, No. 9 **Ajaib Singh, D.V.M., Ph.D.**

MICROBIOLOGY REPORT: The September 2007 issue of the Microbiology Monthly Report, Volume 12, presents the laboratory diagnosis of some of the infectious diseases, the reference microbiology work done in this laboratory during August 2007 and new cases of syphilis in Milwaukee during July 2007. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during July is also included.

Legionnaires Disease (August, 2007)

Patient		Test		
Age	Sex	Urine Antigen	Culture	DFA
26	F	+	ND	ND

ND = Not done

Pertussis (Whooping cough) August 2007

No positive case(s) detected.

Syphilis (August 2007)

Test	Number Positive	Test	Number Positive
RPR	0	TP-PA	16
VDRL	20	DARKFIELD	0

New Cases of Syphilis

The Wisconsin Division of Health has reported 7 new cases (early stages) of syphilis during July 2007 in Milwaukee. The median age of early syphilis cases is 37.0 years (range: 16-52 years). Morbidity distributions of the disease reported in this and the corresponding month of the previous year are as follows:

New Cases of Syphilis (July 2007 and July 2006)

Stage	Number of Cases	
	July 2007	July 2006
Primary syphilis	3	2
Secondary syphilis	1	4
Early latent	3	5
Late latent	0	1
Total	7	12

Gonorrhea (August 2007)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
96	3 DS; 6 R	0	0	0

Gonorrhea from Other Sources (Aurora Consolidated Labs) August 2007

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
8	1 R	0	0	0

Isolates Other Than *N. gonorrhoeae* (August 2007)

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	2	*Mycoplasma hominis*	Genital	3

Enteric Parasites Identified (August 2007)

Age	Sex	Pathogen	Number Cases
28	M	*Strongyloides stercoralis*	1
5	M	*Giardia lamblia*	1
41	M	*Strongyloides stercoralis*	1
9	M	*Blastocystis hominis*	1
20	F	*Iodamoeba butschlii*	1
9	F	*Entamoeba coli*	1
12	F	*Entamoeba coli*	1
18	F	*Entamoeba coli* *Iodamoeba butschlii* *Blastocystis hominis*	1 1 1
3	F	*Giardia lamblia* *Entamoeba coli* *Blastocystis hominis*	1 1 1
17	M	*Giardia lamblia*	5
3	M	*Cryptosporidium species*	1

Mycobacterial Infections (August 2007)

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
47	M	+	+	+	*M. tuberculosis*
82	M	-	+	+	*M. avium* complex
47	M	-	+	+	*M. avium* complex

Reference Cultures (August 2007)

Age	Sex	Source	Culture Identification
31	F	Other	*Acinetobacter sp*
85	F	Blood	*Agrobacterium radiobacter*
59	M	Blood	*Bacillus sp. Not anthracis*
59	M	Blood	*Bacillus sp. Not anthracis*
18	M	Blood	*Bacillus sp. Not anthracis*
37	F	Blood	*Bacillus sp. Not anthracis*
58	F	Blood	*Bacillus sp. Not anthracis*
44	M	Blood	*Bacillus sp. Not anthracis*
83	F	Blood	*Brevundimonas vesicularis*
77	M	Blood	*Cardiobacterium hominis*
28	M	Other	*CDC group EF-4b*
66	M	Blood	*Clostridium sp.*
71	M	Stool	*Escherichia coli*
53	F	Not specified	*Escherichia coli O157:H7*
29	F	Urine	*Klebsiella pneumoniae*
25	F	Vaginal	*Neisseria gonorrhoeae*
22	M	Genital	*Neisseria gonorrhoeae*
22	F	Genital	*Neisseria gonorrhoeae*
7	F	Vaginal	*Neisseria gonorrhoeae*
17	F	Not specified	*Neisseria gonorrhoeae*
18	F	Cervix	*Neisseria gonorrhoeae*
17	F	Vaginal	*Neisseria gonorrhoeae*
23	F	Genital	*Neisseria gonorrhoeae*
24	M	Urine	*Oligella urethralis*
33	M	Tissue biopsy	*Oligella urethralis*
22	M	Other	*Propionibacterium acne*
33	F	Stool	*Salmonella bovismorbificans*
63	F	Stool	*Salmonella bovismorbificans*
10m	F	Stool	*Salmonella bredeney*
33	F	Stool	*Salmonella derby*
75	F	Stool	*Salmonella enteritidis*
29	F	Stool	*Salmonella enteritidis*
82	M	Blood	*Salmonella enteritidis*
46	F	Stool	*Salmonella enteritidis*
49	M	Stool	*Salmonella heidelberg*
6	F	Stool	*Salmonella heidelberg*
3	F	Urine	*Salmonella heidelberg*
57	F	Urine	*Salmonella infantis*
83	M	Blood	*Salmonella montevideo*
54	M	Stool	*Salmonella oranienburg*
4	F	Blood	*Salmonella paratyphi 'A'*
4	F	Blood	*Salmonella paratyphi 'A'*
29m	M	Stool	*Salmonella stanley*

Age	Sex	Source	Culture Identification
20	F	Surface wound	*Salmonella typhi*
33	M	Stool	*Salmonella typhimurium*
29	F	Stool	*Shigella flexneri type 2*
7	F	Stool	*Shigella sonnei*
5	M	Stool	*Shigella sonnei*
54	F	Stool	*Shigella sonnei*
27	M	Stool	*Shigella sonnei*
6	M	Stool	*Shigella sonnei*
3	M	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
78	M	Stool	*Shigella sonnei*
26	F	Stool	*Shigella sonnei*
32	F	Stool	*Shigella sonnei*
47	F	Stool	*Shigella sonnei*
20	F	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
4	F	Stool	*Shigella sonnei*
7	F	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
23m	F	Stool	*Shigella sonnei*
4	M	Stool	*Shigella sonnei*
26	M	Stool	*Shigella sonnei*
29m	F	Stool	*Shigella sonnei*
7	M	Stool	*Shigella sonnei*
13m	F	Stool	*Shigella sonnei*
73	M	Stool	*Shigella sonnei*
19	F	Surface wound	*Shigella sonnei*
3	NS	Stool	*Shigella sonnei*
48	F	Surface wound	*Tsukamurella pulmonis*

Bacterial Enteric Pathogens (August 2007)

Age	Sex	Pathogen	Age	Sex	Pathogen
24m	F	*Shigella sonnei*	9	M	*Shigella sonnei*
5	M	*Shigella sonnei*	28	F	*Shigella sonnei*
27	F	*Shigella sonnei*	12	M	*Shigella sonnei*
35m	M	*Shigella sonnei*			

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during July 2007

***Mycobacterium* species**		**Brown**	**Dane**	**Eau Claire**	**Kenosha**	**La Crosse**	**Marathon**	**Milwaukee**	**Outagamie**	**Racine**	**Rock**	**Waushara**	**Waukesha**	**Winnebago**	**Wood**	**TOTALS**
M. tuberculosis complex	Pulm		1				1	3								**5**
	Extra	1											1			**2**
Total *M. tuberculosis* complex		**1**	**1**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**7**
M. avium complex	Pulm	1	5		1	1		68	3	1				4	2	**86**
	Extra							2								**2**
M. gordonae	Pulm		5	4		1	1	11			2			2	1	**27**
	Extra															**0**
M. abscessus	Pulm								1						2	**3**
	Extra															**0**
M. chelonae	Pulm							3						2	1	**6**
	Extra			1												**1**
M. fortuitum group	Pulm		2	1			1	7	2			1				**14**
	Extra															**0**
M. kansasii	Pulm	1														**1**
	Extra															**0**
M. marinum	Pulm															**0**
	Extra							2								**2**
M. mucogenicum	Pulm							2								**2**
	Extra							2							1	**3**
M. xenopi	Pulm							3			1					**4**
	Extra															**0**
M. scrofulaceum	Pulm														1	**1**
M. smegmatis	Pulm							1								**1**
M. simiae complex	Pulm		1													**1**
M. terrae complex	Pulm							1								**1**
TOTALS		**2**	**13**	**6**	**1**	**2**	**2**	**102**	**6**	**1**	**3**	**1**	**0**	**8**	**8**	**155**

Extra-Pulmonary Sources of Isolation:

M. tuberculosis Extra-pulmonary:	1 lymph node, 1 T9-10 disk
M. avium complex Extra-pulmonary:	1 sinus, 1 skin
Other *Mycobacterium* species	*M. chelonae*: 1 hand; M. *mucogenicum:* 2 blood, 1 pleural; *M. marinum*: 1 arm, 1 wrist

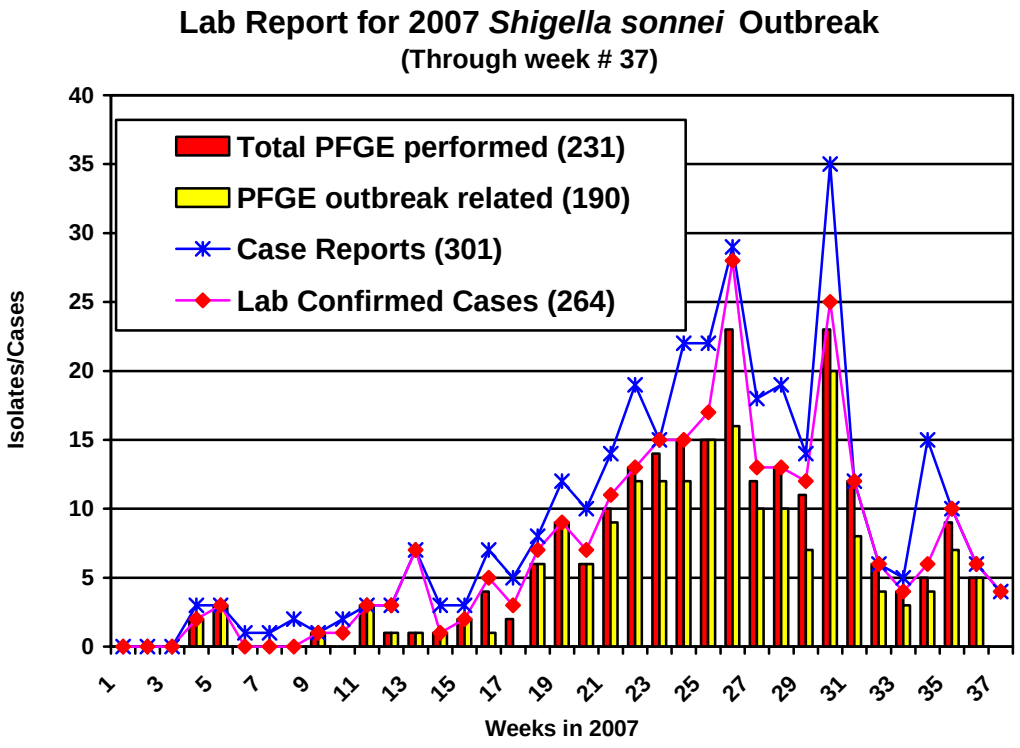
***M. tuberculosis* complex First-Line Drug Susceptibility Testing*:**
Drugs tested: isoniazid=INH (0.2 ug/ml and 1.0 ug/ml), rifampin (1.0 ug/ml), ethambutol (5.0 ug/ml), and pyrazinamide=PZA (100 ug/ml). Six *M. tuberculosis* isolates were susceptible to all first-line drugs. One isolate was resistant to both concentrations of INH and rifampin.

Source: Mycobacteriology Laboratory Network Data Report, Wisconsin State Laboratory of Hygiene, Madison, WI

Lab Update - *Shigella sonnei* 2007 Outbreak for week # 37 (09/10/07 – 09/14/07)

The total number of cases in Milwaukee County is now 339, with 317 cases residing in the Milwaukee city limits. The numbers are down considerably from the peak of the outbreak, but above what is typically expected for this time of year.

For Week # 36 (09/10/07 to 09/14/07), MHDL confirmed 2 of 17 stool samples positive for *Shigella sonnei* and 2 referred isolates for at total of 4 confirmed *Shigella sonnei*. PFGE was performed on 12 isolates of which 11 were part of the outbreak. PFGE has confirmed 190 of 231 *S. sonnei* isolates as part of the outbreak cluster. A total of 264 *S. sonnei* isolates have been confirmed in 2007.



SUMMARY OF CONFIRMED INFECTIONS

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August 2007 Data

Agent	No. of Isolates	Age	Sex	Specimen	Symptoms
Rhinovirus	1	14 mo	M	NP Referred isolate	NA
Herpes simplex, type 1	4				
Herpes simplex, type 2	14				

***N/A – Not Available**

Agent	Method	Tested	Positive	% Positive
Chlamydia trachomatis	ProbeTec	781	100	12.8%
Neisseria gonorrhoeae	ProbeTec/GenProbe	1037	116	11.2%
Mumps virus	EIA	43	0	0%
Enterovirus	Real-time RT-PCR	25	2	8%
HSV	Real-time PCR	4	0	0%
Varicella zoster virus	Real-time PCR	2	0	0%
Adenovirus	Real-time PCR	2	0	0%

Important News

The following new Real-time PCR-based tests are now being offered by the City Lab:

1) Respiratory Syncytial Virus (RSV)
2) Adenovirus

Discontinuation of Tests:

As of July 10, 2007 the City lab will no longer offer *Legionella* IFA serology.

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