MICROBIOLOGY SECTION – MILWAUKEE HEALTH DEPARTMENT

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

January, 2008 Vol. 13, No. 1 **Ajaib Singh, D.V.M., Ph. D.**

MICROBIOLOGY REPORT: The January 2008 issue of Microbiology Monthly Report, Volume 13, presents the laboratory diagnosis of some of the infectious diseases, the reference microbiology work done in this laboratory during December 2007 and new cases of syphilis in Milwaukee during November 2007. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during November is also included.

Legionnaires Disease (December 2007)

Patient		Test		
Age	Sex	Urine Antigen	Culture	DFA
87	M	+	ND	ND

ND = Not done

Pertussis (Whooping cough) December 2007
No positive case(s) was detected.

Syphilis (December 2007)

Test	Number Positive	Test	Number Positive
RPR	0	TP-PA	20
VDRL	26	DARKFIELD	1

New Cases of Syphilis
The Wisconsin Division of Health has reported 6 new cases (early stages) of syphilis during November 2007 in Milwaukee. The median age of early syphilis cases is 33 years (range: 26-51 years). Morbidity distributions of the disease reported in this and the corresponding month of the previous year are as follows:

New Cases of Syphilis (November 2007 and November 2006)

Stage	Number of Cases	
	November 2007	November 2006
Primary syphilis	1	0
Secondary syphilis	1	6
Early latent	4	4
Late latent	0	0
Total	6	10

Gonorrhea (December 2007)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
49	10 R	0	0	1 DS

Gonorrhea from Other Sources (Aurora Consolidated Labs) December 2007

Number Tested	Decreased Susceptibility (DS) / Resistance (R)Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
2	0	0	0	0

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

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	3	*Mycoplasma hominis*	Genital	0

Enteric Parasites Identified (December 2007)

Age	Sex	Pathogen	Number Cases
33	M	*Blastocystis hominis*	1
11	F	*Blastocystis hominis*	1
4	F	*Blastocystis hominis* *Entamoeba coli*	1
6	F	*Blastocystis hominis* *Entamoeba coli*	1
8	F	*Giardia lamblia*	1
20	M	*Giardia lamblia*	1
37	M	*Giardia lamblia*	1
16	M	*Giardia lamblia*	1
11	F	*Giardia lamblia*	1
3	M	*Giardia lamblia* *Entamoeba coli*	1
11	M	*Blastocystis hominis* *Giardia lamblia*	1
46	M	*Entamoeba coli*	1
16	F	*Entamoeba histolytica / Entamoeba dispar* *Trichuris trichiura*	1
13	M	*Strongyloides stercoralis* *Trichuris trichiura*	1

Reference Cultures (December 2007)

Age	Sex	Source	Culture Identification
46	M	Blood	*Bacillus species,* NOT *Bacillus anthracis*
69	M	Ear	*Bacillus megaterium*
95	M	Blood	*Brevundimonas diminuta*
40	M	Stool	*Campylobacter coli*
68	F	Lung mass	*Corynebacterium propinqum* (CDC Group ANF-3)
81	F	Urine	*Escherichia coli*
81	F	Urine	*Escherichia coli*
18	F	Vagina	*Neisseria gonorrhoeae*
25	F	Vagina	*Neisseria gonorrhoeae*
20	M	Urethra	*Neisseria gonorrhoeae*
20	F	Cervix	*Neisseria gonorrhoeae*

Age	Sex	Source	Culture Identification
58	F	Stool	*Salmonella enteritidis*
49	F	Stool	*Salmonella enteritidis*
3	F	Stool	*Salmonella enteritidis*
91	F	Stool	*Salmonella hadar*
11m	F	Stool	*Salmonella heidelberg*
29	F	Stool	*Salmonella javiana*
26m	M	Stool	*Salmonella kiambu*
39	F	Stool	*Salmonella montevideo*
39	F	Blood	*Salmonella montevideo*
59	M	Wound, hip	*Salmonella typhimurium*
59	M	Stool	*Salmonella typhimurium*
24m	M	Stool	*Shigella flexneri* type 2
7	M	Stool	*Shigella sonnei*
13	M	Stool	*Shigella sonnei*
20m	F	Stool	*Shigella sonnei*
10	M	Stool	*Shigella sonnei*
33m	F	Stool	*Shigella sonnei*
3	M	Stool	*Shigella sonnei*
15	F	Stool	*Shigella sonnei*
10	F	Stool	*Shigella sonnei*
5	M	Stool	*Shigella sonnei*
3	F	Rectal swab	*Shigella sonnei*
16m	M	Stool	*Shigella sonnei*
7	F	Stool	*Shigella sonnei*
8	M	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
5	M	Stool	*Shigella sonnei*
18m	F	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
21	F	Stool	*Shigella sonnei*
3	F	Stool	*Shigella sonnei*
31	M	Stool	*Shigella sonnei*
4	M	Stool	*Shigella sonnei*
3	M	Stool	*Shigella sonnei*
20m	F	Stool	*Shigella sonnei*
23	M	Stool	*Shigella sonnei*
4	M	Stool	*Shigella sonnei*
6	M	Stool	*Shigella sonnei*
28	F	Stool	*Shigella sonnei*

Bacterial Enteric Pathogens (December 2007)

Age	Sex	Pathogen	Age	Sex	Pathogen
3	M	*Shigella sonnei*	5	M	*Shigella sonnei*
3	M	*Shigella sonnei*	31	F	*Shigella sonnei*
30m	F	*Shigella sonnei*	10	F	*Shigella sonnei*
3	M	*Shigella sonnei*	6	F	*Shigella sonnei*
27	F	*Shigella sonnei*			

Antimicrobial Susceptibility of *Shigella sonnei* Associated with 2007 Outbreak (December 2007)

Number Tested	Decreased Susceptibility (DS) / Resistance (R) Antibiotics					
	SXT	NOR	C	GM	AM	TE
36	21	0	0	0	20	0

* Intermediate susceptibility

AM= Ampicillin
C=Chloramphenicol
SXT=Sulfamethoxazole/trimethoprim
TE=Tetracycline
GM=Gentamicin
NOR=Norfloxacin

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during November 2007

***Mycobacterium* species**		**Brown**	**Dane**	**Dunn**	**Eau Claire**	**Kenosha**	**La Crosse**	**Marathon**	**Milwaukee**	**Outagamie**	**Racine**	**Rock**	**Washington**	**Waukesha**	**Winnebago**	**Wood**	**TOTALS**
M. tuberculosis complex	Pulm				1				2				1				**4**
	Extra								2								**2**
Total *M. tuberculosis* complex		**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**6**
***M. avium* complex**	Pulm	3	4		2	1		1	38	1	1			4	6	2	**63**
	Extra	1	2						1								**4**
M. gordonae	Pulm	1	3	1	3		1		6			1		1	1	2	**20**
	Extra	1	1														**2**
M. abscessus	Pulm		1						1								**2**
	Extra																**0**
M. chelonae	Pulm		1						1				1			3	**6**
	Extra						1		1							2	**4**
M. fortuitum group	Pulm								3							1	**4**
	Extra								1								**1**
M. kansasii	Pulm		1						1							1	**3**
	Extra																**0**
M. marinum	Pulm																**0**
	Extra																**0**
M. mucogenicum	Pulm				1				1	1							**3**
	Extra								2								**2**
M. xenopi	Pulm								4				1	1			**6**
	Extra																**0**
M. bovis BCG	Pulm		1														**1**
M. fortuitum complex	Extra													1			**1**
M. chelonae/abscessus	Pulm													1			**1**
Totals:		**6**	**14**	**1**	**6**	**1**	**2**	**1**	**60**	**2**	**1**	**1**	**2**	**8**	**7**	**11**	**123**

Extra-Pulmonary Sources of Isolation:

M. tuberculosis Extra-pulmonary:	1 axillary, 1 lymph node
M. avium complex Extra-pulmonary:	1 neck wound, 1 lymph node, 1 stool, 1 synovial fluid
M. gordonae Extra-pulmonary:	1 cheek tissue, 1 tissue
Other *Mycobacterium* species	*M. bovis* BCG: 1 blood; *M. chelonae*: 1 pancreas, 1 calf wound, 1 synovia, 1 contact lens solution; *M. fortuitum* group: 1 blood; and *M. mucogenicum*: 1 blood, 1 PICC line

***M. tuberculosis* complex First-Line Drug Susceptibility Testing*:**

Drug Resistance	**Number of Isolates**
Susceptible to all first-line drugs	5
Resistant to INH (0.2 ug/ml) only	1
TOTAL	6

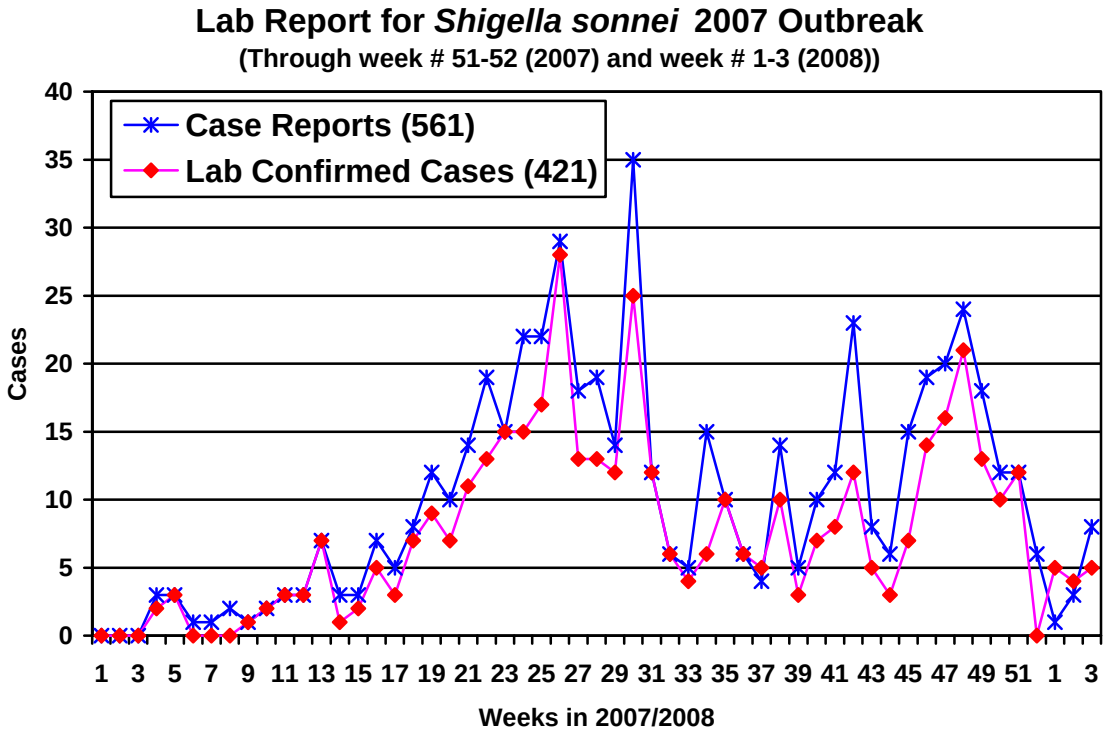
(*) Drugs tested: isoniazid = INH (0.2 ug/ml and 1.0 ug/ml), rifampin (1.0 ug/ml), ethambutol (5.0 ug/ml), and pyrazinamide = PZA (100 ug/ml).

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

City of Milwaukee Health Department Laboratory

Shigella sonnei 2007 Outbreak Update for week # 51 - 52 (12/17/07 – 12/31/07), the MHD Laboratory confirmed 12 stool samples for *Shigella sonnei.*

For 2008, weeks 1-3 (01/01/08 – 01/18/08), 14 stool samples were confirmed for *Shigella sonnei*.



SUMMARY OF CONFIRMED INFECTIONS

Virology & Molecular Diagnostic Section
City of Milwaukee Health Department Laboratory
(414) 286-3526
WEBSITE: www.milwaukee.gov/healthlab January 2008 ISSUE #1225

December 2007 Data

Agent	No. of Isolates	Age	Sex	Specimen	Symptoms
Adenovirus	1	19	M	Throat	Cough, sore throat, nausea, fever, headache
Influenza A (H1)	1	19	F	Throat	ARD, URI, cough, sore throat, fatigue, fever, headache, pleurodynia
Influenza A (H3)	1	52	F	Throat	Flu confirmation
Echovirus 7	1 1	33	F	CSF Throat	Referred Isolates
Parainfluenza 2	1	18	M	Throat	Bronchitis, cough, sore throat, fever, headache, lymphadenopathy
Respiratory syncytial virus	1	9 mo	M	NP	URI, cough, fever
Respiratory syncytial virus	1	4	M	NP	URI, cough, runny nose
Varicella zoster virus	1	21	M	Chest lesion	r/o Varicella
Herpes simplex, type 1	7				
Herpes simplex, type 2	12				

***N/A – Not Available**

Agent	Method	Tested	Positive	% Positive
Chlamydia trachomatis	ProbeTec	545	77	14.1%
Neisseria gonorrhoeae	ProbeTec/GenProbe	723	65	9.0%
Parainfluenza viruses	Real-time RT-PCR	3	1	33.3%
Respiratory syncytial virus	Real-time RT-PCR	2	0	0%
Enterovirus	Real-time RT-PCR	4	2	50.0%
Influenza virus	Real-time RT-PCR	20	2	10.0%
Parechovirus	Real-time RT-PCR	3	0	0%
Adenovirus	Real-time PCR	7	1	14.3%
Herpes simplex virus	Real-time PCR	4	3	75.0%

Important News

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

1) Respiratory Syncytial Virus (RSV)
2) Adenovirus

Sanjib Bhattacharyya, Ph.D.
Chief Molecular Scientist

Influenza Season has arrived in Milwaukee:

The City Lab reports 7 laboratory confirmed influenza cases for the 2007-2008 season through 1/25/08. : 2 A (H1) and 5 A (H3). Cases are identified by PCR within 24 hours and are then confirmed by culture.

The Wisconsin State Laboratory of Hygiene reports as of January 9, 2008, there have been 76 confirmed laboratory detections of influenza in Wisconsin; 7 influenza A (H3), 20 influenza A (H1), 15 influenza A (not subtyped), 1 influenza A and B and 33 influenza B.

Steve Gradus, Ph.D., ABMM