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CITY OF MILWAUKEE
HEALTH DEPARTMENT
Bevan K. Baker,
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City of Milwaukee Health Department Laboratory
Clinical and Environmental Microbiology
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SUMMARY OF CONFIRMED INFECTIONS

Steve Gradus, PhD, D(ABMM)
Laboratory Director

January 2010, Vol. 15, No. 1

Ajaib Singh, DVM, PhD
Chief Microbiologist

The January 2010 issue presents the laboratory diagnosis of some of the infectious diseases and the reference microbiology work done in this laboratory during December 2009. New cases of syphilis in Milwaukee during December 2009, as well as information on the laboratory diagnosed mycobacterial infections in Wisconsin during November 2009 was not available at the time of this publication.

Syphilis

Test	Total	Test	Total
RPR Reactive	3	TPPA Reactive	5
VDRL Reactive	13	Darkfield Positive	0

New Cases of Syphilis: Data not available

Gonorrhea Antimicrobial Susceptibility Testing

Number Tested	Decreased Susceptible (DS) / Resistant (R) Antibiotics			
	Ciprofloxacin	Cefixime	Spectinomycin	Azithromycin
7	2 R	0	0	0

Isolates Other Than *N. gonorrhoeae*

Organism	Site	Number Isolates	Organism	Site	Number Isolates
Ureaplasma urealyticum	Genital	10	*Mycoplasma hominis*	Genital	0

Enteric Parasites Identified

Age	Sex	Parasite
23m	M	*Ascaris lumbricoides*
54	F	*Blastocystis hominis*
5	F	*Blastocystis hominis*
28	M	*Blastocystis hominis*
13	F	*Blastocystis hominis*
		Entamoeba coli
22	M	*Blastocystis hominis*
		Entamoeba coli
13	M	*Blastocystis hominis*
		Entamoeba hartmanni
3	M	*Blastocystis hominis*
		Endolimax nana
		Entamoeba coli
5	F	*Blastocystis hominis*
		Giardia lamblia
33	M	*Entamoeba coli*
60	F	*Entamoeba coli*
20	M	*Entamoeba coli*
4	M	*Entamoeba coli*
		Giardia lamblia
71	M	*Entamoeba coli*
		Taenia species
27	F	*Entamoeba hartmanni*
29	F	*Giardia lamblia*
29	F	*Giardia lamblia*
5	F	*Giardia lamblia*
33	M	*Giardia lamblia*
23m	M	*Giardia lamblia*
20	M	*Giardia lamblia*

Mycobacterial Infections

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
46	M	-	+	+	*M. avium* complex
		-	+	ND	*M. fortuitum* group
38	F	-	+	+	*M. avium* complex
		+	+	ND	*M. fortuitum*
24	F	-	+	+	*M. avium* complex
		-	+	+	*M. tuberculosis*
72	F	-	+	ND	*M. xenopi*

ND = Not done

Reference Cultures

Age	Sex	Source	Identification
20	M	Throat	*Neisseria meningitidis*
19	M	Genital	*Neisseria gonorrhoeae*
20	M	Genital	*Neisseria gonorrhoeae*
24	F	Genital	*Neisseria gonorrhoeae*
17	F	Genital	*Neisseria gonorrhoeae*
23	F	Genital	*Neisseria gonorrhoeae*
32	F	Throat	*Neisseria gonorrhoeae*
28	F	Genital	*Neisseria gonorrhoeae*
34	M	Stool	*Salmonella* Enteritidis
8wk	M	Stool	*Salmonella* Enteritidis
59	M	Stool	*Salmonella* Hadar
37	M	Stool	*Salmonella* Hadar
32	F	Stool	*Salmonella* Newport
15	F	Stool	*Salmonella* Typhimurium
11m	M	Stool	*Shigella flexneri* type 1
4	F	Stool	*Shigella sonnei*

Antimicrobial Susceptibility of Shigella sonnei

Number Tested	Decreased Susceptibility (DS) / Resistant (R) Antibiotics		
	Ampicillin	Norfloxacin	Sulfamethoxazole-Trimethoprim (SXT)
1	0	0	0

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Virus Isolations from Clinical Specimens

Age	Sex	Source	Symptoms	Agent
20	M	NP and throat	Fever, cough, sore throat	2009 Influenza A H1N1
18	M	NP and throat	104.7° fever, headache, cough, sore throat, vomiting, diarrhea, nausea	2009 Influenza A H1N1
20	F	Mid-back	Vesicular rash	Varicella-Zoster Virus
25	M	Anterior and posterior left trunk	Dermatomal rash	Varicella-Zoster Virus

Herpes Simplex Virus Isolations

Agent	Number of Isolates
Herpes Simplex type 1	6
Herpes Simplex type 2	7

Influenza Real-time RT-PCR Testing

Samples Tested	2009 Influenza A (H1N1) Positive
213	19

Molecular Amplification and PCR

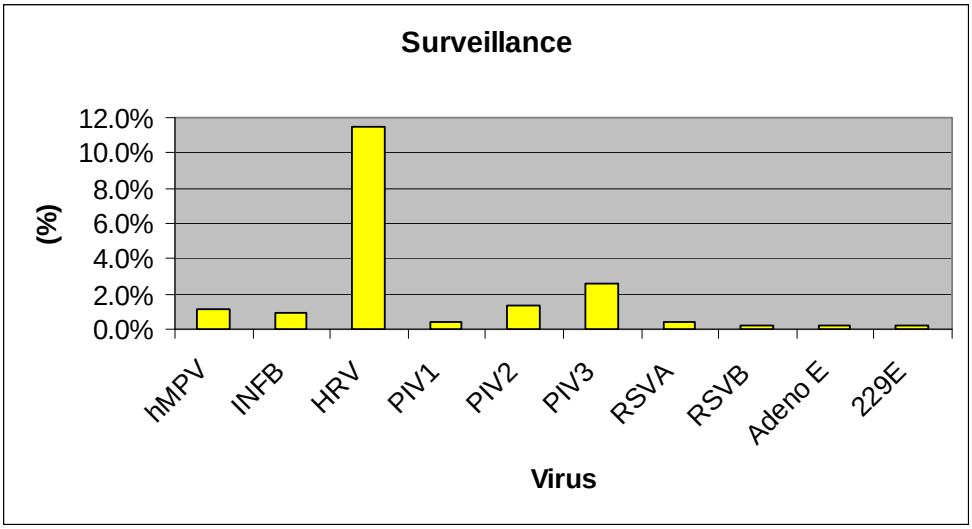
Agent	Method	Tested	Positive	% Positive
Chlamydia trachomatis	ProbeTec	629	81	12.9%
Neisseria gonorrhoeae	ProbeTec / GenProbe	830	53	6.4%

DNA Sequencing: The MHD laboratory uses 16S rRNA and the D2 region of the 26S rRNA genes for DNA sequence-based microbial identification of selective reference bacteria and fungal isolates.

Reference Microbe	Target gene	Final Identification
Bacteria	16S rRNA	*Yersinia frederiksenii*
Fungus	D2/26S rRNA	*Penicillium oxalicum*

Respiratory Viral Surveillance: **Total flu negative samples tested since April 2009: 531** (*Updated: 1/11/2010)*

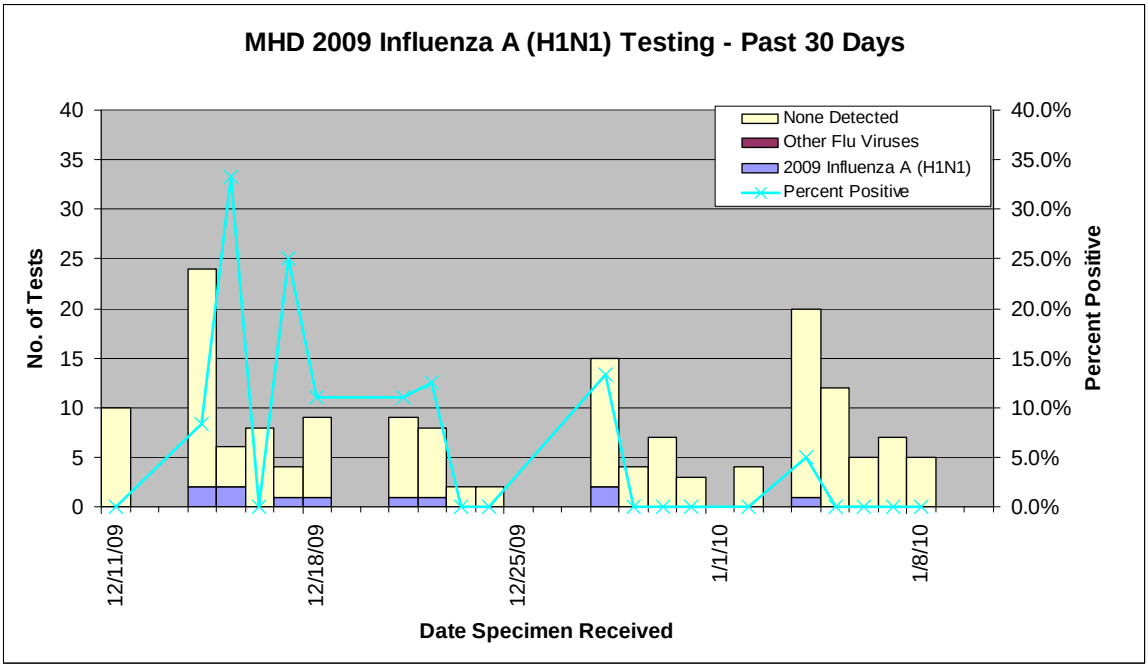
Detection to date: 1-11-2010		
Virus	**Positives**	**Percent**
Human Metapneumovirus (hMPV)	6	1.1%
Influenza B (INFB)	5	0.9%
Human Rhinovirus (HRV)	**61**	**11.5%**
Parainfluenza virus 1 (PIV1)	2	0.4%
Parainfluenza virus 2 (PIV2)	**7**	**1.3%**
Parainfluenza virus 3 (PIV3)	**14**	**2.6%**
Respiratory Syncitial Virus (RSV)	3	0.6%
Adenovirus Type E (Adeno E)	1	0.2%
Coronavirus 229E	1	0.2%



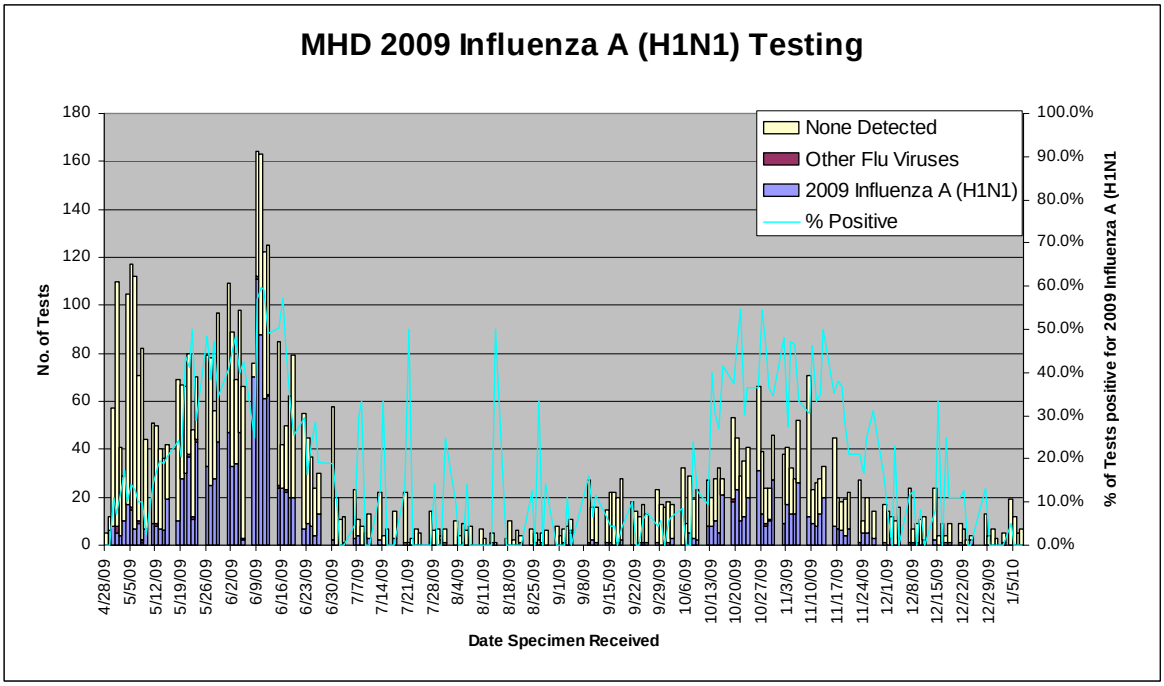
Influenza Report from MHDL (2009- 10)

1. The City of Milwaukee has had 1,260 cases of 2009 Influenza A (H1N1) since September 1st
2. The City of Milwaukee Health Laboratory detected 1,626 cases of 2009 Influenza A (H1N1) since April 2009
3. Milwaukee County has had 2,020 cases of 2009 Influenza A (H1N1) since September 1st

Cumulative Flu Data from MHDL (04/24/2009 – 12/18/2009)*			
Total Specimens Received	**Total FluA Positive/ %**	**Total 2009 Influenza A (H1N1) Positive/ %**	**Total FluA/H1+H3* Positive/ %**
5598	**1644** (29.36%)	**1626** (29.04%)	**14** (0.26%)
Milwaukee residents: 1014 (18.12%)			
Non-Milwaukee residents: 612 (10.93%)			
* MHDL has so far detected 3 FluB, 3 untypable FluA and one case of mixed infection for seasonal influenza (H1 & H3 probably from live vaccine) and 2009 Flu A/H1N1			



This graph demonstrates the total number of specimens tested at MHDL for influenza by date, the number positive or negative, and the percentage of total positives for 2009 Influenza A (H1N1)



This graph demonstrates the total number of specimens tested at MHDL for influenza by date, the number positive or negative, and the percentage of total positives for 2009 Influenza A (H1N1) since April 2009

****** IMPORTANT NOTES ******

Reference Culture Fee Revision:

MHDL will **continue** to accept for identification, **fee-exempt**, the following isolates of public health significance:

- Enteric pathogens for PFGE and/or MLVA typing and surveillance purposes, including *Shigella*, *Salmonella*, *Yersinia*, *Campylobacter*, *E. coli* 0157:H7 and other shiga toxin producing *E. coli*, etc.
- Pathogens such as *Bordetella* sp. and *Legionella* sp., *Listeria* sp., *Corynebacterium diphtheriae*, *Haemophilus influenzae*, *Neisseria meningitidis*, *Neisseria gonorrhoeae*
- Potential threat agent pathogens, such as *Francisella tularensis*, *Brucella* sp., *Bacillus anthracis*, *Yersinia pestis*, etc.
- Others as determined appropriate

UPDATE: **All other bacterial and fungal isolates for identification will not be fee exempt, but will be worked up with a new fee of $200. (Fees for probe-specific testing of *Blastomyces*, *Histoplasma* or *Coccidioides* will not change)**

Discontinuation of Legionella Urine Antigen Detection Testing:

Effective January 1, 2010, the MHDL is no longer receiving requests for *Legionella pneumophila* serogroup 1 urine antigen EIA test.

Please contact the laboratory at (414) 286-3526 or mhdlab@milwaukee.gov for any questions regarding these changes. In case of emergency please call 414-286-2150.