

MICROBIOLOGY DIVISION – MILWAUKEE HEALTH DEPARTMENT

MONTHLY REPORT

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MICROBIOLOGY REPORT: The May 2005 issue of Microbiology Monthly Report, Volume 10, presents the laboratory diagnosis of some of the infectious diseases, the reference microbiology work done in this laboratory during April 2005 and new cases of syphilis in Milwaukee during March 2005. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during March is also included.

Legionnaires Disease (April 2005)

No positive case detected.

Pertussis (Whooping cough (April 2005)) No positive case detected

Syphilis (April 2005)

Test	Number Positive	Test	Number Positive
RPR	0	FTA-ABS	7
VDRL	49	DARK FIELD	0

New Cases Syphilis

The Wisconsin Division of Health has reported 4 new cases (early stages) of syphilis during March 2005 in Milwaukee. The median age of early syphilis cases is 46.0 years (range: 38-51 years). Morbidity distributions of the disease reported in this and the corresponding month of the previous year are as follows:

New Cases of Syphilis (March 2005 and March 2004)

Stage	Number of Cases	
	March 2005	March 2004
Primary syphilis	1	0
Secondary syphilis	1	3
Early latent	2	6
Late latent	0	2
Total	4	11

Gonorrhea (MHD – April 2005)

Number Tested	Decreased Susceptibility (DS)/Resistance (R) to Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
44	1(I) ; 1(R)	0	0	0

Gonorrhea from Other Sources (April 2005)

Number Tested	Decreased Susceptibility (DS)/Resistance (R) to Antibiotics			
	Ciprofloxacin	Ceftriaxone	Spectinomycin	Azithromycin
7	0	0	0	0

Isolates Other Than *N. gonorrhoeae* (April 2005)

Organism	Site	Number Isolates	Organism	Site	Number Isolates
<i>Ureaplasma urealyticum</i>	Genital	17	<i>Mycoplasma hominis</i>	Genital	5

Parasitic Enteric Pathogens (April 2005)

Age	Sex	Pathogen	Number Cases
8	F	<i>Entamoeba histolytica/dispar</i>	1

Mycobacterial Infections (April 2005)

No positive case detected.

Reference Cultures (April 2005)

Age	Sex	Site/Specimen Source	Culture Identification
69	F	Sputum	<i>Nocardia asteroides</i>
67	F	BAL	<i>Pseudomonas aeruginosa</i>
67	F	Bronchial wash	<i>Pseudomonas aeruginosa</i>
65	M	Left hip	<i>Corynebacterium minutissimum</i>
50	M	Finger	<i>Pasteurella multocida</i>
50	F	Urine	<i>Acinetobacter lwoffii</i>
61	F	Blood	<i>Corynebacterium striatum</i>
61	F	Blood	<i>Corynebacterium jeikeium</i>
63	F	Left nare	<i>Moraxella nonliquefaciens</i>
63	F	Right nare	<i>Moraxella nonliquefaciens</i>
7	F	Leg	<i>Bacillus sp.</i> NOT <i>B. anthracis</i>
3days	F	Blood	<i>Bacillus megaterium</i>
62	M	Stool	<i>Escherichia coli</i> NOT O157:H7
27	M	Throat	<i>Neisseria meningitidis</i>
13	M	Stool	<i>Escherichia coli</i> O157:H7
8days	F	Blood	<i>Bacillus megaterium</i>

Bacterial Enteric Pathogens (April 2005)

Age	Sex	Pathogen	Age	Sex	Pathogen
3	M	<i>Shigella sonnei</i>	3	M	<i>Salmonella saintpaul</i>
28mo	F	<i>Shigella sonnei</i>	24	F	<i>Salmonella saintpaul</i>
25mo	F	<i>Shigella sonnei</i>	48	M	<i>Salmonella saintpaul</i>
36	F	<i>Shigella sonnei</i>	39	F	<i>Salmonella oranienburg</i>
19mo	M	<i>Shigella sonnei</i>	7	F	<i>Salmonella panama</i>
69	F	<i>Shigella sonnei</i>	15	M	<i>Salmonella subsp</i> IV 44(V):Z4, Z23, -
3	M	<i>Shigella sonnei</i>	43	M	<i>Salmonella java</i>
19mo	M	<i>Shigella sonnei</i>	46	F	<i>Salmonella subsp. I monophasic i</i>
7	M	<i>Shigella sonnei</i>	44	F	<i>Salmonella kentucky</i>
6	F	<i>Shigella sonnei</i>	6	F	<i>Salmonella enteritidis</i>
31	F	<i>Shigella sonnei</i>	41	F	<i>Salmonella enteritidis</i>
13mo	M	<i>Shigella sonnei</i>	75	F	<i>Salmonella enteritidis</i>
10	M	<i>Shigella flexneri type 2</i>	24	M	<i>Salmonella enteritidis</i>
88	F	<i>Salmonella newport</i>	39	F	<i>Salmonella enteritidis</i>
4	M	<i>Salmonella oranienburg</i>	56	M	<i>Salmonella enteritidis</i>

Laboratory Diagnosed Mycobacterial Infections in Wisconsin during May 2005

<i>Mycobacterium</i> species		Brown	Dane	Eau Claire	Jefferson	Kenosha	La Crosse	Marathon	Milwaukee	Outagamie	Portage	Racine	Rock	Waukesha	Winnebago	Wood	TOTAL
<i>M. tuberculosis</i> complex	Pulm				1		1		1								3
	Extra	1							1							1	3
Total <i>M. tuberculosis</i> complex		1	0	0	1	0	1	0	2	0	0	0	0	0	0	1	6
<i>M. avium</i> complex	Pulm		4					1	60	1				1	7		74
	Extra		1						2							1	4
<i>M. goodii</i>	Pulm	3	2	1		1	1	1	7			1			5	1	23
	Extra																0
<i>M. abscessus</i>	Pulm	1							1							1	3
	Extra																0
<i>M. chelonae</i>	Pulm			1													1
	Extra								2								2
<i>M. fortuitum</i> group	Pulm		1						2		1						4
	Extra																0
<i>M. kansasii</i>	Pulm													2			2
	Extra																0
<i>M. marinum</i>	Pulm																0
	Extra								1								1
<i>M. mucogenicum</i>	Pulm								2						1		3
	Extra								1								1
<i>M. xenopi</i>	Pulm								4								4
	Extra																0
<i>M. terrae</i> complex	Pulm						1										1
<i>M. smegmatis</i> group	Extra								1								1
<i>M. scrofulaceum</i>	Pulm														1		1
<i>M. szulgai</i>	Extra														1		1
TOTALS		4	8	2	0	1	2	2	83	1	1	1	0	3	15	3	126

Extra-Pulmonary Sources of Isolation:

<i>M. tuberculosis</i> Extra-pulmonary:	1 lymph node, 1 paracentesis, 1 CSF; <i>M. avium</i> complex:, 1 finger, 1 abdomen, 1 submandibular gland, 1 lingular node
Other <i>Mycobacterium</i> species	1 <i>chelonae</i> scalp, 1 <i>chelonae</i> skin, 1 <i>marinum</i> finger, 1 <i>mucogenicum</i> blood, 1 <i>smegmatis</i> groin, 1 <i>szulgai</i> ankle

Wisconsin TB Isolations and Antibiotic Susceptibilities: Five of TBC isolates reported were from Wisconsin TB cases, one was from Minnesota. Three of the TBC isolates tested were susceptible to all first-line drugs. Results of remaining two are pending.

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

SUMMARY OF CONFIRMED VIRUS INFECTIONS

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MILWAUKEE HEALTH DEPARTMENT

VIROLOGY DIVISION, G. SEDMAK, Ph.D. (414)286-3526

WEBSITE: www.milwaukee.gov/healthlab

**"We welcome any question or comments you have. Please see our
"Feedback" form on our website.**

VIRUS ISOLATION: WEEKS OF MAY 10 TO JUNE 8, 2005

Patient	Symptoms	Specimen	Submitted	Virus
F 20 yr	Pregnant, meningitis	CSF/RMK Cells	06/04/05	Coxsackievirus B5

NOTE: As part of our enterovirus surveillance program, we test the local sewage treatment plant influent (raw sewage) each month for culturable viruses. In April of 2005, we detected 10 MPN(I.U.)/L Coxsackievirus B5 and for sewage collected in May, 2005, 42 MPLN(I.U.)/L Coxsackievirus B5. In prior years, early year detections of enteroviruses in sewage was a good predictor of which viruses would be important clinically during the typical enterovirus season in Milwaukee (July-October). Coxsackievirus A4 and echovirus 9 were also detected in May, 2005 sewage. See attached figures for summaries. Coxsackievirus B5 appears to cause local outbreaks on a five year cycle and the last year with significant Coxsackievirus B5 clinical activity was 2000.

F 8 wk	Infant death	Autopsy NP Swab	05/19/05	Rhinovirus
F 5 wk	Infant death	Autopsy NP Swab	05/16/05	Rhinovirus
M 3 mo	Infant death	Autopsy NP Swab	05/03/05	Rhinovirus

NOTE: This is an unusual cluster of rhinovirus infections associated with infant deaths. See attached tables for a summary of viruses associated with infant deaths. The Milwaukee Health Department Virus Lab has been

working with the Milwaukee County Medical Examiner's Office on the role of viruses in infant deaths since December 1987.

M 5 yr	A.R.D.	NP/MRC-5 Cells	05/17/05	Rhinovirus
M 4 mo	Diarrhea	Stool	05/03/05	Adenovirus
F 70 yr	Eye infection	Cornea Swab/SF Cells	05/02/05	Adenovirus
M 25 mo	Infant death	Autopsy Colon Swab	05/06/05	Rotavirus
F 20 yr	Labial ulcers, genital	Ulcer Swab	06/06/05	HSV (Type 1 CPE)
F 23 yr	STD	Vulva Lesion Swab	06/03/05	HSV (Type 2 CPE)
F 20 yr	STD	Vulva Lesion Swab	06/03/05	HSV (Type 2 CPE)

SUMMARY OF CONFIRMED VIRUS INFECTIONS

ISSUE #1194 PAGE TWO

MILWAUKEE HEALTH DEPARTMENT

VIROLOGY DIVISION, G. SEDMAK, Ph.D. (414)286-3526

VIRUS ISOLATION: WEEKS OF MAY 10 TO JUNE 8, 2005

Patient	Symptoms	Specimen	Submitted	Virus
M 17 yr	Wrist lesion	Lesion Swab	06/02/05	HSV (Type 1 CPE)
F 45 yr	Finger lesion	Lesion Swab	05/27/05	HSV (Type 2 CPE)
M 29 yr	S.T.D.	Penis Lesion Swab	05/25/05	HSV (Type 1 CPE)
F 16 yr	S.T.D.	Genital Lesion Swab	05/20/05	HSV (Type 2 CPE)
M 26 yr	S.T.D.	Pubic Lesion Swab	05/18/05	HSV (Type 2 CPE)

M 31 yr	S.T.D.	Penis Lesion Swab	05/16/05	HSV (Type 2 CPE)
M 22 yr	S.T.D.	Penis Lesion Swab	05/13/05	HSV (Type 2 CPE)
M 23 yr	S.T.D.	Penis Lesion Swab	05/12/05	HSV (Type 2 CPE)
F 35 yr	S.T.D.	Cervical Lesion Swab	05/12/05	HSV (Type 2 CPE)
M 25 yr	S.T.D.	Penis Lesion Swab	05/12/05	HSV (Type 2 CPE)
F 18 yr	S.T.D.	Vaginal Lesion Swab	05/12/05	HSV (Type 1 CPE)
F 17 yr	S.T.D.	Introitus Lesion Swab	05/11/05	HSV (Type 2 CPE)
F 21 yr	S.T.D.	Genital Lesion Swab	05/11/05	HSV (Type 1 CPE)
M 41 yr	S.T.D.	Groin Lesion Swab	05/11/05	HSV (Type 2 CPE)
F 21 yr	S.T.D.	Genital Lesion Swab	05/10/05	HSV (Type 1 CPE)
F 27 mo	Oral lesion	Lip Lesion Swab	05/10/05	HSV (Type 1 CPE)
M 69 yr	S.T.D.	Penis Lesion Swab	05/09/05	HSV (Type 2 CPE)

SEROLOGY: NONE



Gerald V. Sedmak, Ph.D.
Chief Virologist

City of Milwaukee Virus Laboratory/Medical Examiner Summary 2004			
“Autopsy Specimens on Infant Death Cases” (<24 months of age)			
Number Tested Cases		54	
Number of Cases with Virus Detected		14 (14/64 = 25.9%)	
A.	Viruses Detected by Site:		
1.	By site:	(a)	Lung tissue or swab-4 x cases
		(b)	NP Swabs –8x cases
		(c)	Colon Swabs –11 x cases
		(d)	Both lung (or NP) and colons positive – also counted separately –6x cases
		(e)	Colons with more than 1 virus – 0 x cases
		(f)	Unusual cases: 5 cases: 1 x HPeV-3: 2X HPeV-1(echo-22) 2 x dual infections; rhino plus rota & para-3 plus rota
B.	Specific Viruses Detected (Cases)		
	I.	Poliovirus	0
	II.	ECHOvirus	4(E25; HPeV-3 ;2X HPeV-1)
	III.	Coxsackie B	0
	IV.	Coxsackie A	0
	V.	HSV-1	0
	VI.	HSV-2	0
	VII.	CMV	0
	VIII.	Para-3	1
	IX.	REOVirus	0
	X.	ROTAvirus	3
	XI.	ADENOVirus	4
	XII.	ADENO 40/41	0
	XIII.	Rhinovirus	4
	XIV	Influenza A	0
	XV.	Influenza B	0
	XVI.	Respiratory Syncytial Virus	0
	XVII.	Para-1	0
	Total Enterovirus cases –4(E25, HPeV-3, 2X HPeV-1)		

	2004	2004
	Cases Tested Per Month	<i>Cases Positive Per Month</i>
January	5	1
February	3	1
March	5	0
April	7	1
May	4	2
June	9	2
July	2	2
August	5	1
September	4	1
October	2	0
November	3	2
December	5	1
	54	14

Summary Through 2004

VIRUSES AND INFANT DEATHS

MILWAUKEE HEALTH DEPT. VIRUS LAB

AND

MILWAUKEE CO. MEDICAL EXAMINER'S OFFICE

December 1987 through December 2004

Summary - Total Cases Studies – 1,277

Positive Cases	430 (33.7%) 370 Colons and 107 Lungs(or NP)
Enterovirus	199 (96 Polio: 60 ECHO includes 17 HPeV-1 or echo-22: 39 Cox;1xEV-71: 3xHPeV-3)
Adenovirus	99
Rotavirus	88
HSV	8(7 HSV-1; 1 HSV-2)
RSV	6
CMV	24
Para-3	7
Rhinovirus	9
REOvirus	5
Influenza-A	1
Influenza-B	2
Adeno 40/41	14
Para-1	1

City of Milwaukee Virus Laboratory/Medical Examiner's Office – STUDY OF VIRUSES ASSOCIATED WITH INFANT DEATHS :

For every autopsy, at least lung tissue and colon swab were provided. Specimens were inoculated into cell cultures for isolation of virus and colon swabs were also tested for Rotavirus and Adeno 40/41 by EIA. For the 1275 cases studied, >90% of the children were $\leq$ 12 months of age at the time of death.