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

**April 2010, Vol. 15, No. 4**

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Chief Microbiologist

The April 2010 issue presents the laboratory diagnosis of some of the infectious diseases and the reference microbiology work done in this laboratory during March 2010 and new cases of syphilis in Milwaukee during March 2010. Information on the laboratory diagnosed mycobacterial infections in Wisconsin during February 2010 is also included.

**Syphilis**

| Test | Total | Test | Total |
|---|---|---|---|
| RPR Reactive | 1 | TPPA Reactive | 9 |
| VDRL Reactive | 22 | Darkfield Positive | 0 |

**New Cases of Syphilis:**

| Stage | Number of Cases | |
|---|---|---|
| | March 2010 | March 2009 |
| Primary syphilis | 0 | 1 |
| Secondary syphilis | 3 | 2 |
| Early latent | 1 | 2 |
| Late latent | 1 | 0 |
| Total | 4 | 5 |

Source: Wisconsin Division of Health

**Gonorrhea Antimicrobial Susceptibility Testing**

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

**Isolates Other Than *N. gonorrhoeae***

| Organism | Site | Number Isolates | Organism | Site | Number Isolates |
|---|---|---|---|---|---|
| *Ureaplasma urealyticum* | Genital | 8 | *Mycoplasma hominis* | Genital | 2 |

**Enteric Parasites Identified**

| Age | Sex | Parasite |
|---|---|---|
| 50 | M | *Blastocystis hominis* |
| 10 | F | *Blastocystis hominis* |
| 28 | F | *Blastocystis hominis* |
| 20 | F | *Blastocystis hominis* |
| 56 | F | *Blastocystis hominis* |
| | | *Entamoeba histolytica / Entamoeba dispar* |
| 14 | F | *Blastocystis hominis* |
| | | *Giardia lamblia* |
| 8 | M | *Blastocystis hominis* |
| | | *Giardia lamblia* |
| 7 | M | *Entamoeba coli* |
| 22 | M | *Entamoeba coli* |
| 31 | M | *Entamoeba coli* |
| 3 | M | *Entamoeba coli* |
| | | *Giardia lamblia* |
| 22 | M | *Giardia lamblia* |
| 12 | F | *Giardia lamblia* |
| 4 | F | *Giardia lamblia* |
| 15 | M | *Giardia lamblia* |
| 21 | M | *Hookworm* |

**Mycobacterial Infections**

| Age | Sex | Test Results | | | Identification |
|---|---|---|---|---|---|
| | | Sputum Smear | Culture | DNA Probe | |
| 52 | M | - | + | ND | *M. abscessus* |
| | | - | + | + | *M. avium* complex |
| 53 | F | - | + | + | *M. avium* complex |
| 72 | M | - | + | + | *M. avium* complex |
| 25 | F | - | + | + | *M. avium* complex |
| 74 | M | - | + | + | *M. avium* complex |
| | | - | + | ND | *M. fortuitum* group |
| 56 | M | - | + | + | *M. avium* complex |
| | | - | + | ND | *M. mucogenicum* |
| 20 | M | - | + | ND | *M. fortuitum* group |

ND = Not done

**Reference Cultures**

| Age | Sex | Source | Identification |
|---|---|---|---|
| 20 | F | Genital | *Neisseria gonorrhoeae* |
| 26m | F | Stool | *Salmonella* Enteritidis |
| 28m | M | Stool | *Salmonella* Infantis |
| 11m | F | Stool | *Salmonella* Kiambu |
| 38 | M | Stool | *Salmonella* Mbandaka |
| 32 | F | Stool | *Salmonella* Typhimurium |
| 74 | F | Stool | *Salmonella* Schwarzengrund |

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Sanjib Bhattacharyya, PhD
Chief Molecular Scientist

**Virus Isolations from Clinical Specimens**

| Age | Sex | Source | Symptoms | Agent |
|---|---|---|---|---|
| 15 | M | Throat/NP | Influenza-like illness | 2009 Influenza A H1N1 |
| 21 | M | Throat/NP | Acute respiratory disease | 2009 Influenza A H1N1 |
| 22 | M | Throat/NP | Fever, cough, sore throat, body aches | 2009 Influenza A H1N1 |
| 21 | M | Throat | Sore throat | Adenovirus |
| 18 | M | Throat/NP | Acute respiratory disease | Parainfluenza type-1 |
| 19 | M | Lesion swab | Abdominal lesion | Varicella Zoster Virus |
| 20 | M | Lesion swab | Abdominal lesion | Varicella Zoster Virus |

**Herpes Simplex Virus Isolations**

| Agent | Number of Isolates |
|---|---|
| Herpes Simplex type 1 | 10 |
| Herpes Simplex type 2 | 9 |

**Influenza Real-time RT-PCR Testing**

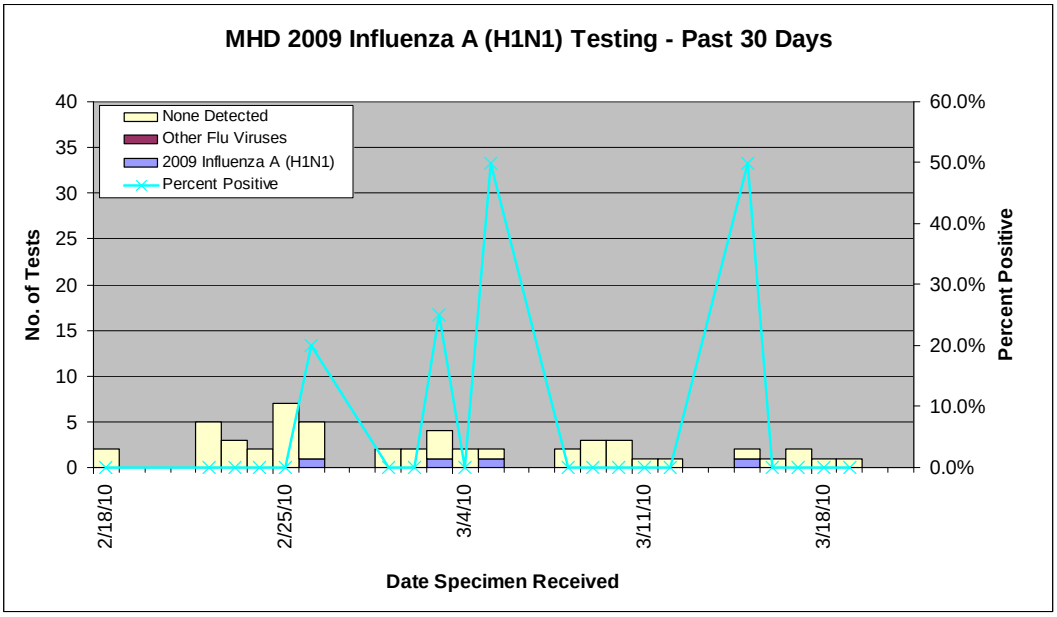
| Samples Tested | 2009 Influenza A (H1N1) Positive |
|---|---|
| 43 | 3 |

**Molecular Amplification and PCR**

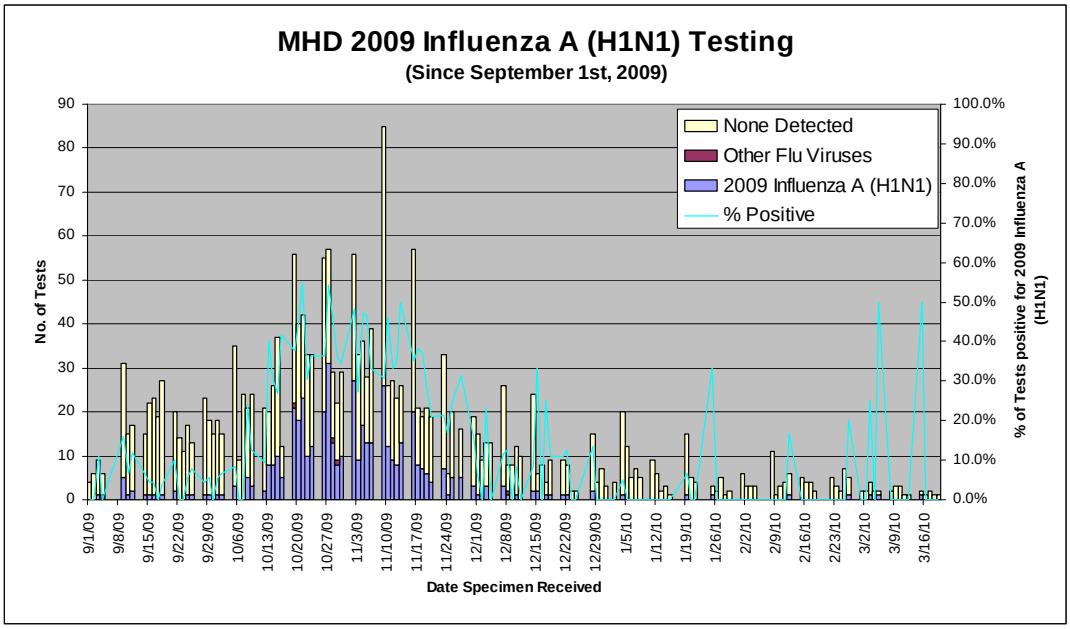
| Agent | Method | Tested | Positive | % Positive |
|---|---|---|---|---|
| *Parainfluenza* | RT-PCR | 1 | 1 | 100.0% |
| *Norovirus* | RT-PCR | 5 | 3 | 60.0% |
| *Chlamydia trachomatis* | ProbeTec | 709 | 105 | 14.8% |
| *Neisseria gonorrhoeae* | ProbeTec / GenProbe | 923 | 49 | 5.3% |

**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 | *Bacillus megaterium* |
| Bacteria | 16S rRNA | *Clostridium butyricum* |
| Bacteria | 16S rRNA | *C. disporicum* |
| Bacteria | 16S rRNA | *C. perfringens* |




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




This graph demonstrates the total number of specimens tested at MHDL for influenza, the number

## ****** IMPORTANT NOTES ******

The MHD laboratory recently participated in two *C. difficile*- associated diarrheal disease outbreak investigations from elderly care centers. During mid March 6 residents were reported sick, and 3 stool samples were collected from ill patients. Two (2) out of three (3) tested positives for toxigenic *C. difficile* DNA, but no bacteria were isolated. Another similar incident was reported in early April when two residents and one staff member from the same elderly care center were tested positives for toxigenic *C. diff.* DNA, followed by *C. diff* isolation from stool samples. The MHD epidemiological investigations are in progress.

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.