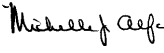





MEMORANDUM

Date: June 24, 2009

To: All Physicians Submitting Specimens to DSM Clinical Microbiology Laboratories
Clinical Microbiology Labs, Diagnostic Services of Manitoba

From: Dr. Michelle Alfa, Medical Director, Clinical Microbiology Discipline 
Shirley Hoban, Technical Director, Clinical Microbiology Discipline 

Re: Salmonella Nomenclature and the Reporting of Results on Salmonella Species

The number of *Salmonella* serotypes that cause disease in humans now approaches 3000 and new serotypes are identified continuously. However, more than 98% of *Salmonella* spp. infections are caused by the single species *Salmonella enterica*, which contains 6 subspecies and nearly all of the nearly 3000 serotypes. Historically, DSM reported *Salmonella* using the serotype as a species name, but this has little or no clinical relevance and serves primarily as a public health tool. For this reason, DSM laboratories will no longer report *Salmonella* spp. using the serotype designation as a species name. As of July 6, 2009, most *Salmonella* serotypes will be primarily reported by their true species name (*Salmonella enterica*) and a comment will be added to the report indicating the serotype when it becomes available.

The notable exception to this change will be *Salmonella* serotypes that cause typhoid and paratyphoid fever. These are readily distinguished from other *Salmonella enterica* serotypes using routine tests and due to their unique pathogenesis and public health implications; we will continue to report these isolates using their serotype designation.

TAKE HOME POINTS:

1. As of July 6, 2009, *Salmonella* species other than those that cause typhoid and paratyphoid fever will be reported as a single species, *Salmonella enterica*, to better reflect modern nomenclature.
2. Due to the special clinical and public health implication of typhoid and paratyphoid-causing *Salmonella* serotypes, these will continue to be reported with their serotype designation, for example, “*Salmonella* serotype Typhi.”

Some examples of reports are included should you require clarification. For more information, please do not hesitate to contact the DSM Clinical Microbiology Medical Director (malfa@sbgh.mb.ca) or the Technical Director (shoban@sbgh.mb.ca).



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Examples (taken from the WRHA Laboratory Information System) – reports from other sites will have different formats.

Example 1: If a *Salmonella enterica* that does **not** cause typhoid or paratyphoid fever is isolated from stool, the report will indicate:

INITIAL REPORT: (before serotyping result is known)

=== STOOL CULTURE ===

- 1) *Salmonella enterica*
- | | |
|-------------------------------|-----|
| | (1) |
| Ampicillin | S |
| Ceftriaxone..... | S |
| Ciprofloxacin..... | S |
| Trimethoprim-sulfamethoxazole | S |

S = Susceptible I = Intermediate R = Resistant

COMMENTS:

A copy of this report has been generated for Infection Control.
A copy of this report has been generated for Communicable Diseases.

Microorganism sent to Cadham Laboratory.

FINAL REPORT: (after serotyping result is known)

=== STOOL CULTURE ===

- 2) *Salmonella enterica*

Identified as *Salmonella enterica* subsp. *enterica* serotype Newport

- | | |
|-------------------------------|-----|
| | (1) |
| Ampicillin | S |
| Ceftriaxone..... | S |
| Ciprofloxacin..... | S |
| Trimethoprim-sulfamethoxazole | S |

S = Susceptible I = Intermediate R = Resistant

COMMENTS:

A copy of this report has been generated for Infection Control.
A copy of this report has been generated for Communicable Diseases.



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Example 2: If a *Salmonella enterica* known to cause typhoid fever (e.g. serotype Typhi) is isolated from blood, the report will indicate:

INITIAL REPORT: (before serotyping result is known)

=== BLOOD CULTURE (Two bottles submitted) ===

Site LT ARM

GRAM STAIN BLOOD

Gram negative rods

CULTURE

1) *Salmonella* serotype Typhi

Ampicillin S

Ceftriaxone..... S

Trimethoprim-sulfamethoxazole S

S = Susceptible I = Intermediate R = Resistant

Microorganism sent to Cadham Laboratory

FINAL REPORT: (after serotyping result is known)

=== BLOOD CULTURE (Two bottles submitted) ===

Site LT ARM

GRAM STAIN BLOOD

Gram negative rods

CULTURE

1) *Salmonella* serotype Typhi

Ampicillin S

Ceftriaxone..... S

Trimethoprim-sulfamethoxazole S

S = Susceptible I = Intermediate R = Resistant



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Example 3: If a *Salmonella enterica* that does **not** cause typhoid or paratyphoid fever (e.g. serotype Newport is identified from blood, the report will indicate:

INITIAL REPORT: (before serotyping result is known)

=== BLOOD CULTURE (Two bottles submitted) ===

Site LT ARM

GRAM STAIN BLOOD

Gram negative rods

CULTURE

1) *Salmonella enterica* (not serotype Typhi)

Ampicillin S

Ceftriaxone..... S

Ciprofloxacin..... R

Trimethoprim-sulfamethoxazole S

S = Susceptible I = Intermediate R = Resistant

Microorganism sent to Cadham Laboratory

FINAL REPORT: (after serotyping result is known)

=== BLOOD CULTURE (Two bottles submitted) ===

Site LT ARM

GRAM STAIN BLOOD

Gram negative rods

CULTURE

1) *Salmonella enterica* (not serotype Typhi)

Identified as *Salmonella enterica* subsp. *enterica* serotype Newport

Ampicillin S

Ceftriaxone..... S

Ciprofloxacin..... R

Trimethoprim-sulfamethoxazole S

S = Susceptible I = Intermediate R = Resistant

COMMENTS

Microorganism sent to Cadham Laboratory