

## MEMO

**Date:** August 15, 2018

**To:** **All Manitoba Surgeons and Operating Room Staff served by Shared Health Microbiology Laboratories**

**From:** Dr. Philippe Lagacé-Wiens, Medical Microbiologist, Clinical Microbiology Discipline, Shared Health  
Dr. James Karlowsky, Medical Director, Clinical Microbiology Discipline, Shared Health

**Re:** **Microbiology specimens from operating room. Swabs don't do the job!**

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**Take home message:** Swabs are not appropriate for obtaining surgical specimens for culture. When obtaining a surgical specimen, always obtain tissue or an aspirate for culture and submit the specimen to the laboratory in a sterile container, not on a swab. Even the smallest volume tissues and aspirates should be submitted directly to the laboratory in a sterile container.

Operating room specimens for microbiology are among the most important specimens the laboratory receives. They often represent the one and only opportunity to make an accurate diagnosis of complex and esoteric infections and are also the most accurate means of identifying the true causative organisms in more common infections. Swabs only sample the surface of affected tissues and provide insufficient quantity of specimen for the testing required, potentially resulting in falsely negative and inaccurate results, significantly affecting patient management and care. Simply put, swabs have no place in the operating room.

When obtaining a sample for culture in the operating room:

1. Always obtain a tissue biopsy or aspirate.
2. In the case of amputations, never submit entire digits or limbs. They are grossly contaminated with resident bacteria. A tissue biopsy from the stump or bone (for osteomyelitis) prior to closure is most reflective of any ongoing infectious process.
3. Submit as much sample as possible in a sterile container.
4. Very small biopsies should be submitted with a few drops of sterile saline to prevent drying.
5. Request fungal and mycobacterial cultures only if there is reasonable suspicion of atypical infection. Submit additional sample for these tests as accurate diagnosis depends on the size of the sample.

Thank you for your cooperation in this matter. A few posters have been attached that can be placed in conspicuous areas or notice boards to encourage appropriate sampling. Some operating rooms in Winnipeg as well as elsewhere in Canada have ceased stocking swabs to encourage proper sampling, which I encourage all operating rooms to consider.

If you have any questions please do not hesitate to contact Dr. Philippe Lagacé-Wiens or Dr. James Karlowsky at 204-237-2484.

*Tips for collecting good microbiology specimens in the OR*

## Swabs don't do the job!

- For every 100 bacteria absorbed on a swab, only 3 make it out to culture.
- Anaerobic bacteria die on contact with air on swab surfaces, but survive in tissues and aspirates.
- A swab will only hold 0.15 mL of sample and comprehensive testing requires at least 5 mL of sample.



***For quality results, send fluids  
and tissues to microbiology!***

*Tips for collecting good microbiology specimens in the OR*

## Settle for the metal!

- **GOOD SPECIMENS:**

- Tissue in a sterile container.
- Aspirates in a sterile container (do not send syringes).



- **BAD SPECIMENS:**

- Any specimen on a swab.
- Any surface specimen.
- Any tissue or fluid placed in a swab collection device.



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*Tips for collecting good microbiology specimens in the OR*

## **Swabs don't add up!**

- A surgical specimen culture takes six agar plates one broth and one slide.
- A fungal culture takes three agar plates and one slide.
- A mycobacterial culture takes at least one agar plate, one broth and one slide.
- Only 3% of the bacteria on a swab make it to the media.

**If you send a swab, what are the chances you find what you're looking for?**

Close to nothing. Don't gamble on a 3% chance!



***For quality results, send fluids and tissues to microbiology!***