Laboratory-Clinician Communication

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1:30 – 2:20 PM

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At the conclusion of this lecture, the attendee will be able to:

1. Highlight the importance of clinical information in laboratory workup of infectious disease specimens.
2. Discuss the role of new laboratory technologies on patient management.
3. Describe the impact of epidemiologic data on patient management.
The good old days:

Generalists made rounds every morning and afternoon.
Plate rounds in microbiology lab every morning!
Paper charts!
Everybody in the hospital knew your name and where you worked.
Patients were people, not just numbers in the computer.
Some things weren’t so good and others got old very fast:

Mixing your own media for culture.
QC on every item you made… even saline!
Mouth pipetting…. 😞
Manual data entry.
Hand-writing of ID information on each plate.
Few assays for viruses or non-cultivatable bacteria.
Poor sensitivity and specificity of assays.
The technological age of clinical microbiology!!!

**Advances:**
- Kits and pre-made media
- More automation/efficiency
- Electronic medical records
- PCR and MALDI-TOF

**New Issues:**
- Loss of special tests/media
- Can’t fix it yourself
- Nobody comes to visit anymore.. 😞
- MDs order every test in creation
**Communication:**

The transmission of information from one person to another.

Effective communication must be:
- accurate
- personal
- intelligible
- relevant

**Rule #1:** The patient record is for documentation; the phone is for communication.
Communication from the Microbiology Laboratory is often a one-way street....
You give lots of information, but rarely get any back!

So, how can we change that??

You’re too busy to actually go to the hospital wards to talk with doctors and nurses.
Physicians and nurses don’t visit the microbiology lab... 😞 Laboratory personnel are far-removed from the patient.

Yet....
The information you provide informs life-saving decisions!!
The information you provide can identify epidemics!!
The information you provide can shut down a hospital!!
You actually know the limitations of the fancy tests.
You can actually pronounce the name of rare germs.
You know what the typical resistance patterns are.
Who are the “customers” of the Microbiology Lab?

- Physicians (primary care and specialty)
- Nurses
- Infection Control Team
- Antimicrobial stewardship team
- Antibiotics Committee
- others
What are the routine communications for Microbiology Labs?

1. Call the unit clerk or nurse to report a positive culture.
2. Answer an occasional call from a physician who doesn’t understand the MIC data.
3. Enter data into the EHR.
4. Feed data to the Lab Director for periodic reports. (antibiogram, organisms of interest, etc.)
The new mantra: Demonstrate Value!!

The idea is this… it’s not the **COST** that determines whether something is good, it’s the **VALUE**.

One difference between a manager and a leader is that the manager worries about **cost**, while the leader recognizes **value**!

So, how do we demonstrate the **VALUE** of the microbiology laboratory??
Demonstrating VALUE for the Microbiology Laboratory

1. Perform mundane tasks well…. Improve TATs.
2. Work **with** clinicians (not for them).
3. Be customer-friendly in all communications.
   1. Try smiling while you talk on the phone.. 😊
   2. Invite physicians to visit the lab..
   3. Ask how the patient is doing..
4. Develop “Micro-Bundles” for common specimen types
   1. Osteomyelitis specimen handling
   2. Cystic Fibrosis sputum handling
   3. BAL fluid cultures
Demonstrating VALUE for the Microbiology Laboratory

5. Be proactive:
   1. Seasonal bulletins on influenza activity.
      1. Review last year’s activity and outcomes
      2. New vaccine components
      3. New testing methods
   2. “Germ-of-the-Month” bulletin.
      1. Common and uncommon germs
      2. Epidemic awareness… MMWR bulletins.
   3. Educate regarding new methods/tests/abilities.
      1. How the change from antigen detection to PCR improves *C. difficile* care.
   4. Engage in QI projects to improve patient outcomes.
      1. Volume of blood in blood culture bottles.
      2. GC susceptibility profile??
Highlight the importance of clinical information in laboratory workup of infectious disease specimens.

1. Is that a contaminant?
   It depends!

2. Can I treat with “CephaloFungiVir”?
   Vancomycin doesn’t treat Pseudomonas!

3. Looking for bugs in all the wrong places….
   Aspergillus in patient with Fever and Neutropenia

   When will we have a test to quickly rule-out fungal disease?
The impact of new laboratory technologies on patient management.

1. MALDI-TOF
2. Multiplex PCR
3. PBP-2A rapid test
The importance of epidemiologic data on patient management.

The Antibiogram is ESSENTIAL!!!

Prior isolates from the same patient are informative.

Funky germs are found in funky places and funky patients!!
rat bite fever....
tick-borne diseases....
Lymphadenopathy in a toddler
29 month old female from Togo. Emigrated to US with parents (father is US military) about 2 weeks prior to admission. He was reportedly treated for malaria (species unknown) about 3 months ago.

High level of parasitemia (11 of 63 total RBCs = 17% in this field)
Optimizing the Diagnostic Yield of Biological Specimens

- Proper specimen
- Properly obtained
- In proper media/transport conditions
- With proper forms
- To proper laboratory (internal vs. send-out)
- Communicate properly with the laboratory staff
- It’s your ethical responsibility!!!
**Conclusions**

Patient care is a TEAM effort!!

Communication is the glue to an effective team!!

The microbiology laboratory is a KEY player on the team!!

Proactive demonstration of VALUE is necessary to continue the incorporation of advanced technologies into patient care!!