Antibiotic Stewardship New Provider Orientation
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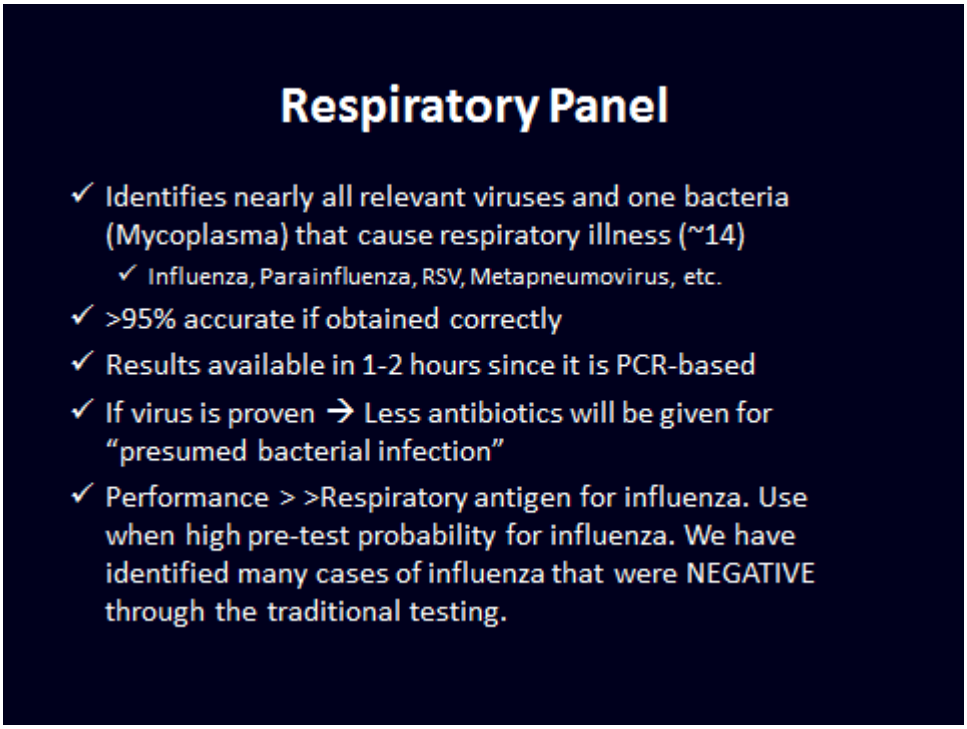
Antibiotic stewardship program at MGMC

- National trend/soon a requirement by CMS and Joint Commission. MGMC was early adopter of a "real program" (as opposed to a program in paper, just to fulfill the requirement). Up and running since September 2015. Jill Bode, PharmD (pharmacist); Dr. Fulton (leader)
- Goals:
    - Reduce inappropriate antibiotic use.
    - Increase appropriate antibiotic use.
    - Reduce antibiotic-associated side effects including C. diff, WHICH HAS BEEN UNEXPECTEDLY HIGH SINCE 2013 AT MGMC – **Improved dramatically since 2016 after stewardship implemented!!!**
- Activities
    - Prospective review of all INPATIENT antibiotic orders (does not affect ER)
    - Implementation of more effective diagnostic techniques/allergy screening for infections (see below)
    - ID service available (Dr. Fulton/Dr. Rearigh) for phone consultation weekdays year-round or urgently on weekends.

Crash course on what you can do to use antibiotics judiciously at MGMC

Use RESPIRATORY PANEL if you are undecided if the patient has a viral or bacterial respiratory illness:



    - Caveats:
        - Ticket price of the test is >$500. Use judiciously if you suspect the patient will be responsible for charges.
        - Use "ADULT RESPIRATORY PANEL" order. (6 main targets (Flu A & B, COVID-19, Rhino/Enterovirus, Metapneumovirus, M. pneumoniae + any other Positive target.)

- **If positive, this does not exclude bacterial pneumonia in addition to the virus identified, but it usually helps lowering down the suspicion of bacterial pneumonia, so the patient can receive no antibiotic or a narrower antibiotic.**

Meningitis panel :

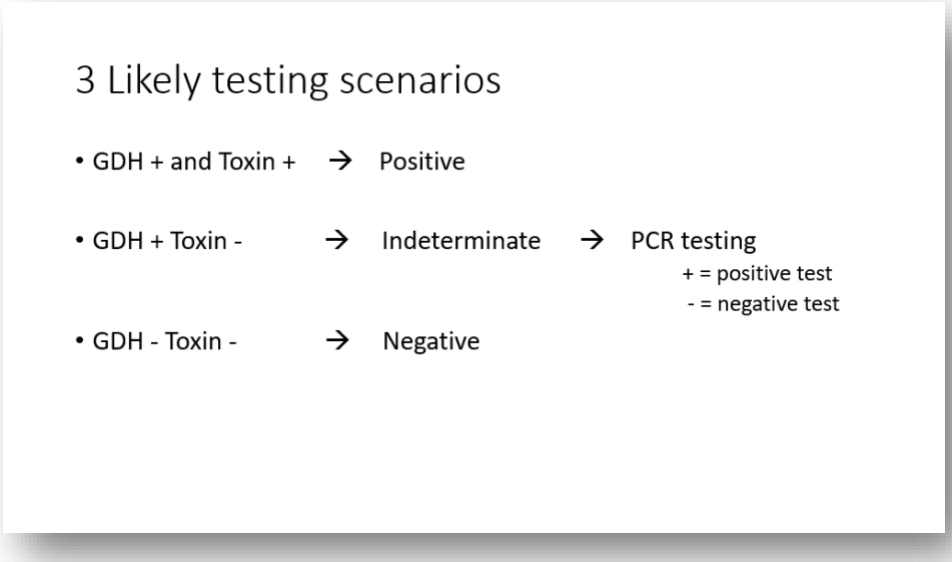
- PCR-based. Similar turn over.
- Tests for most relevant viruses, bacteria and fungus causing meningitis.
- In the appropriate clinical context (taking in account other parameters of CSF) it may be used to stop antibiotics

GI panel:

- PCR-based. Similar turn over.
- Detects essentially all relevant pathogens in stool causing acute diarrhea, including C. diff and norovirus.
- Use when you consider a variety of causes of diarrhea.
- Do not use if you are only or primarily suspecting C. diff. Order of choice is **MGMC C. diff Complete**

C. diff Infection (CDI)

- Do not test all patients with loose water stools for CDI
  - CDI is responsible for <10% of nosocomial diarrhea
  - Consider other causes of diarrhea (e.g. tube feeds, oral contrast, bowel regimens, antibiotic side effects, etc.) unless symptoms strongly suggest CDI
  - Never test formed stool, asymptomatic patients, or perform a “test of cure”

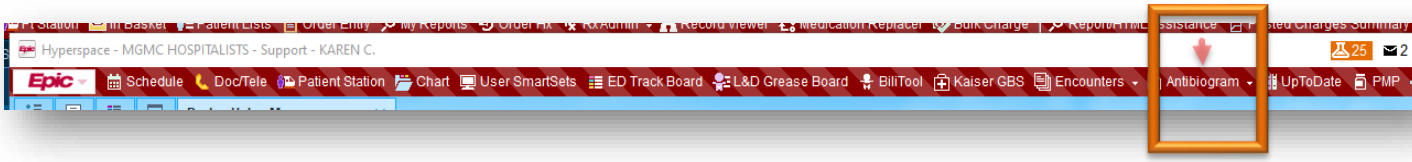


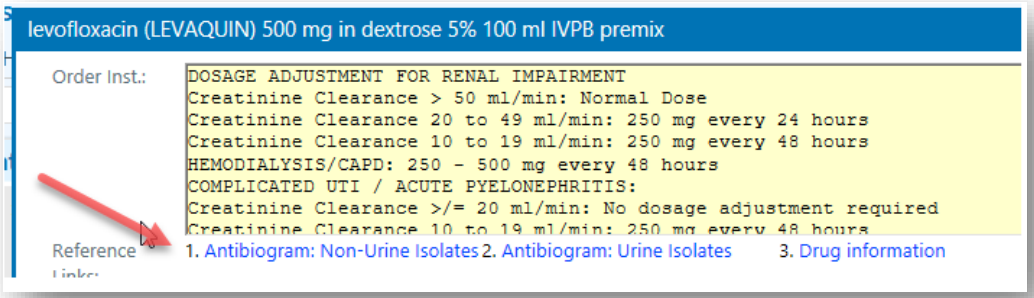
Rapid Diagnostics Blood Culture Identification Panel (BCID)

- PCR based. 1 hour turnaround time after culture flagged positive.
- Allows for early adjustment of antimicrobials to the most appropriate therapy.
- Final pathogen susceptibilities are usually available in 24-72 hours and should always be reviewed to determine if therapy adjustments should be made.

Antibiogram

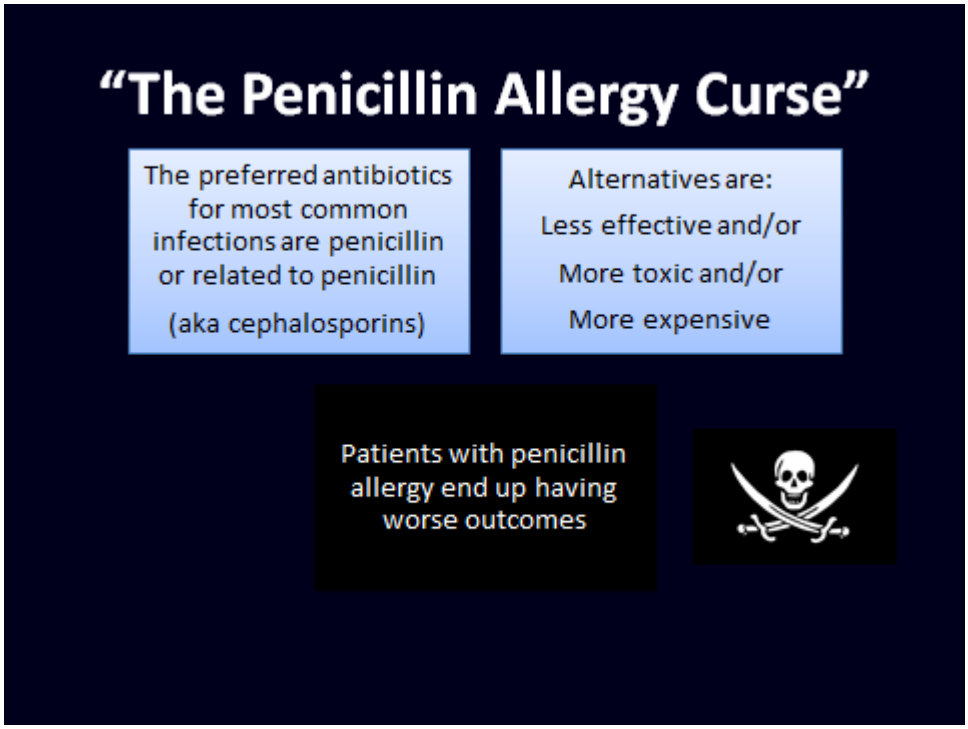
- EPIC Header or embedded as a reference when ordering anti-infectives





Incorporate into your assessment a good allergy history, in particular when penicillin allergy is reported.

Cefazolin (Ancef) can be used in penicillin allergic patients (< 0.3% cross-reactivity due to low side chain similarity)



Only 10% of people who claim a penicillin allergy truly have one!

- ✓ Out of 10 people who claim a penicillin allergy, 1 tests positive through the standard penicillin testing (which is very accurate)

Why?

- ✓ Recollection bias
- ✓ Allergies can be outgrown. The furthest away, the less likely to still have them.

Out of those 10% confirmed penicillin allergic patients, only **4%** will have an allergy to cephalosporins