

**COPPER QUEEN COMMUNITY
HOSPITAL**
*ANTIMICROBIAL STEWARDSHIP
PROGRAM*



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COPPER QUEEN COMMUNITY HOSPITAL

- 14 Bed CAH in Bisbee, AZ
- 2 Emergency Rooms, Stroke Ready, Trauma Level 4
- 24/7 Lab, Radiology, Respiratory Therapy Coverage
- One OR suite, One Endoscopy Suite (Soon to be 2 each)
- 5 Rural Health Clinics
- 3 Quick Care Clinics
- 3 Physical Therapy clinics-cover inpatients, outpatients and home therapy
- Visiting Nurse Services (Home Health)
- Pharmacist on-site M-F 0700-1530
- Remote Tele-pharmacy after hours



CDC DEFINED CORE ELEMENTS

Core Elements of Hospital Antibiotic Stewardship Programs



Hospital Leadership Commitment

Dedicate necessary human, financial, and information technology resources.



Accountability

Appoint a leader or co-leaders, such as a physician and pharmacist, responsible for program management and outcomes.



Pharmacy Expertise (previously “Drug Expertise”):

Appoint a pharmacist, ideally as the co-leader of the stewardship program, to help lead implementation efforts to improve antibiotic use.



Action

Implement interventions, such as prospective audit and feedback or preauthorization, to improve antibiotic use.



Tracking

Monitor antibiotic prescribing, impact of interventions, and other important outcomes, like *C. difficile* infections and resistance patterns.



Reporting

Regularly report information on antibiotic use and resistance to prescribers, pharmacists, nurses, and hospital leadership.



Education

Educate prescribers, pharmacists, nurses, and patients about adverse reactions from antibiotics, antibiotic resistance, and optimal prescribing.

SELECT PROGRAM COMPONENTS

- Action:
 - Review of daily positive culture results to determine if correct antibiotic for organism.
 - Daily rounding on inpatients to review antibiotic selection.
 - Feedback given to providers for selection, dosing and duration.
- Tracking:
 - Monitoring of antibiotics prescribed both inpatient and outpatient using daily positive culture results. Interventions are entered into Cerner describing the action taken. A monthly intervention report is generated and reviewed.
 - Resistance patterns are tracked using the antibiogram from microbiology department and the Antibiotic Resistance Report from Cerner. Antibiograms are posted for provider use.



SELECT PROGRAM COMPONENTS

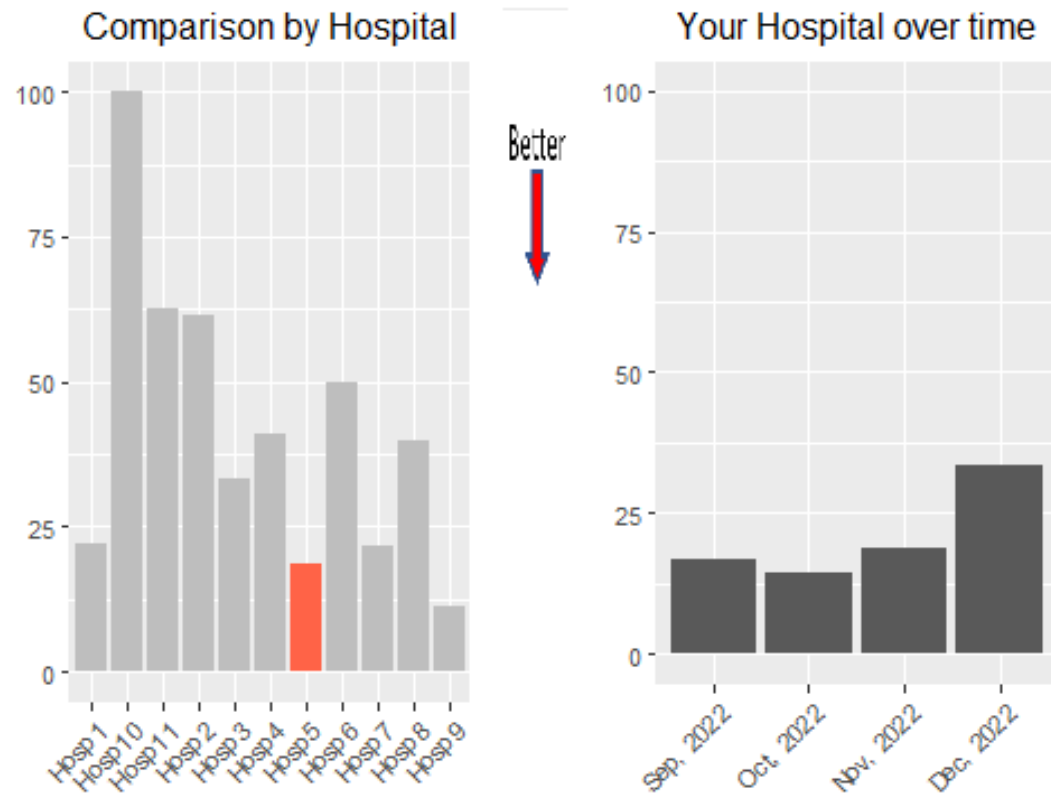
- Reporting: Ongoing updates on antibiotic use and resistance (via antibiogram and Antibiotic Pearls) to providers and leadership
- Examples of Antibiotic Pearls
 1. **Pseudomonas aeruginosa**
 - a. Cannot be treated with any oral Penicillin or Cephalosporin.
 - b. If Sensitive on MIC can use oral: Levaquin or Cipro (92% of isolates sensitive)
 - c. IV choices are: Zosyn, Ceftazidime, Cefepime, Imipenem (**resistant to Ertapenem**), Levaquin or Ciprofloxacin, and Gentamicin
 - d. Resistant to Ceftriaxone IV
 2. **Extended Spectrum Beta-Lactamase producing (ESBL)- E coli or Klebsiella**
 - a. Ideally should NOT be treated with any beta-lactam or cephalosporin drug even if MIC says sensitive. It may be sensitive in vitro testing but resistant in vivo resulting in treatment failure.
 - b. Can use oral Levaquin or ciprofloxacin if sensitive on MIC.
 - c. Can use Nitrofurantoin if sensitive on MIC and treating cystitis only. Will not penetrate kidney so cannot be used for treating pyelonephritis.
 - d. Ertapenem and Imipenem are first line therapy for serious infections needing IV treatment or if all oral agents are resistant.



SELECT PROGRAM COMPONENTS

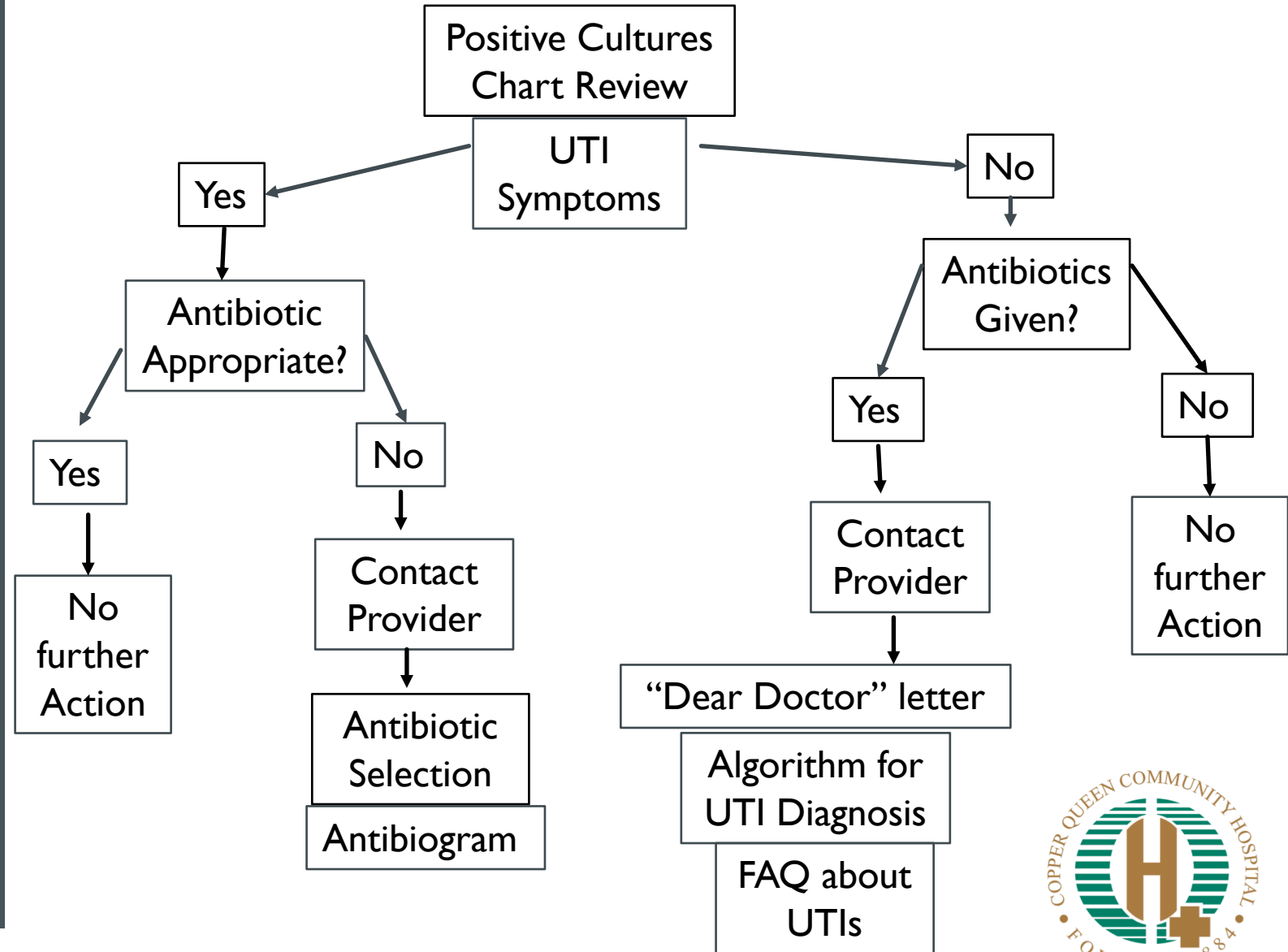
- Education: To providers, nursing, and leadership on current issues with antibiotics. For example-Asymptomatic Bacteriuria treatment with CSiM

Percent of Cases treated with Antibiotics that were Asymptomatic Bacteriuria (ASB)



INTERVENTIONS

Asymptomatic Bacteriuria (ASB) Cohort Study



ANALYSIS OF PROGRAM

- Strengths Identified
 - Providers have been very receptive to education
 - Providers contact pharmacy for guidance with therapy
 - Great lines of communication between nursing staff, providers and pharmacy
- Room for Improvement
 - Duration of therapy identified as needing improvement based on current guidelines. Education to follow.
 - Connecting with contracted providers can be a challenge. ED director helps with contacting and sending education to providers.



■ Questions?

Contact info for Jamie Pomeroy, PharmD
jpomeroy@cqch.org
520-432-6597



WORKS CITED

- <https://www.cdc.gov/antibiotic-use/healthcare/pdfs/hospital-core-elements-H.pdf>
- <https://www.uwcsim.org/> website for University of Washington, Center for Stewardship in Medicine

