

# ANTIMICROBIAL STEWARDSHIP

Mon Health Medical Center

# THE BASICS

- ▶ Because overuse or inappropriate use of antibiotics leads to bacterial resistance:
  - ▶ Antibiotic only if needed
  - ▶ The right antibiotic
  - ▶ At the right dose
  - ▶ For the right duration

# MULTIDISCIPLINARY

- ▶ Infectious Disease Physicians
- ▶ Microbiology Lab
- ▶ Medical Staff Leadership
- ▶ Nursing Leadership
- ▶ Nursing
- ▶ Pharmacy
- ▶ Quality
- ▶ Infection Control

# DATA BASED

- ▶ Antibiogram
  - ▶ Updated per current susceptibilities, resistance trends, and Formulary
- ▶ Antibiotic usage
  - ▶ Reports from Cerner
  - ▶ Meropenem usage reviewed by pharmacist and Infectious Disease physician, with recommendations to prescribers
- ▶ State Collaborative
  - ▶ Data on usage and resistance compared across the state
- ▶ *Clostridia difficile* rate compared with fluoroquinolone usage
- ▶ MRSA rate compared to antibiotic usage

# ACTIONABLE

- ▶ Order sets
  - ▶ Antibiotics for orders are selected in collaboration with Infectious Disease physicians based on national guidelines and adjusted per our antibiograms
- ▶ Formulary Decisions
  - ▶ Informed by Infectious Disease physician recommendations
  - ▶ Restricting some antibiotics to Infectious Disease Consult
- ▶ Antibiotic Recommendations
  - ▶ Indication Based
  - ▶ Pocket Cards
  - ▶ Posters
  - ▶ Standardization across three hospitals with adjustment for antibiograms

# ACTIONABLE

- ▶ Automated culture result notices
- ▶ Pharmacists contact prescribers as soon as culture results are available, to discuss de-escalation
  - ▶ More focused therapy by narrowing the spectrum
  - ▶ Avoidance of redundancy
  - ▶ Reduction in risk of harm (resistance, renal failure, *C. diff* colitis, development of allergies, etc.)

# COVID-19

- ▶ Education regarding appropriate treatment
- ▶ Monoclonal antibody (MAB) updates
- ▶ Education to clinics regarding ordering MABs
- ▶ Coordinating with Infusion, Emergency Department, and Pharmacy to provide MABs
- ▶ Pharmacist education regarding criteria for use, patient/family education, preparation, and dosing of tocilizumab, remdesivir, outpatient monoclonal antibodies, etc.
- ▶ Reporting of adverse events via Medwatch

# EFFECTIVE

- ▶ Reduction in fluoroquinolone (FQ) use
- ▶ Avoidance of antibiotics likely to be ineffective, e.g. clindamycin for treatment
- ▶ De-escalation of meropenem based on discussion of pharmacist with Infectious Disease physician
- ▶ Reduction in *C. difficile* after reduction in FQ use
- ▶ Reduction in piperacillin/tazobactam (Zosyn®) use