

Objective

To create a system wide antibiotic stewardship team with the goal to achieve safe, effective patient care through appropriate use of antibiotics

Goals:

- Ensure timely and appropriate initiation of antibiotics
- Ensure appropriate administration and de-escalation of antibiotics
- Monitor data for effectiveness and resistance patterns
- Promote teamwork, transparency, reporting and open communication

Background

We began our antibiotic stewardship journey by pulling a team together that included:

- A drug subject matter expert (SME)
- Microbiology SME
- Quality leader
- Infection Prevention nurse
- Patient Care leader
- Leadership representative

We reviewed the CDC Core Elements, developed a team charter, and educated our team members on antibiotic stewardship. We chose a focus area(s) to collect data for inpatient, outpatient and senior care. We reviewed literature related to UTI symptoms and treatment in the elderly, effective use of an antibiogram and use of procalcitonin related to antibiotic prescribing.

We gathered baseline data on:

- UTI prescribing, reducing treatment of asymptomatic bacteriuria
- Diagnosis and symptoms in our long-term care (LTC)
- Days of therapy for inpatients
- Antibiotic use in outpatient settings

Interventions implemented included:

- Staff and provider education
- Development of criteria for assessment and treatment of UTI's in LTC
- Development of an easy-to-read antibiogram for prescribers that included cost
- Newspaper articles
- Facebook™ posts
- Clinic lobby displays for community education
- Graphing days of therapy both monthly and annually
- Provider comparison report for outpatient antibiotic prescribing

Effectiveness was monitored by the team through tracking of data and provider feedback.

Actions Taken

- Development of an antibiogram in an easy-to-read format.
- Improvement in UTI reporting and treatment in senior care.
- Provider education – fluoroquinolones, appropriate treatment of pharyngitis, UTI's, duration of antibiotic therapy for common conditions, use of procalcitonin to guide antibiotic use.
- Provider specific feedback on antibiotics prescribed per 100 outpatient encounters and 2nd line antibiotic ordered without a PCN allergy.
- Changed standard length of Zosyn administration to improve MIC for pseudomonas.
- Community Education – virus bags, virus vs bacteria, treatment of ear infection, bronchitis, COVID vs Flu vs Cold.

Multidisciplinary Antibiotic Stewardship Committee in a Critical Access Hospital

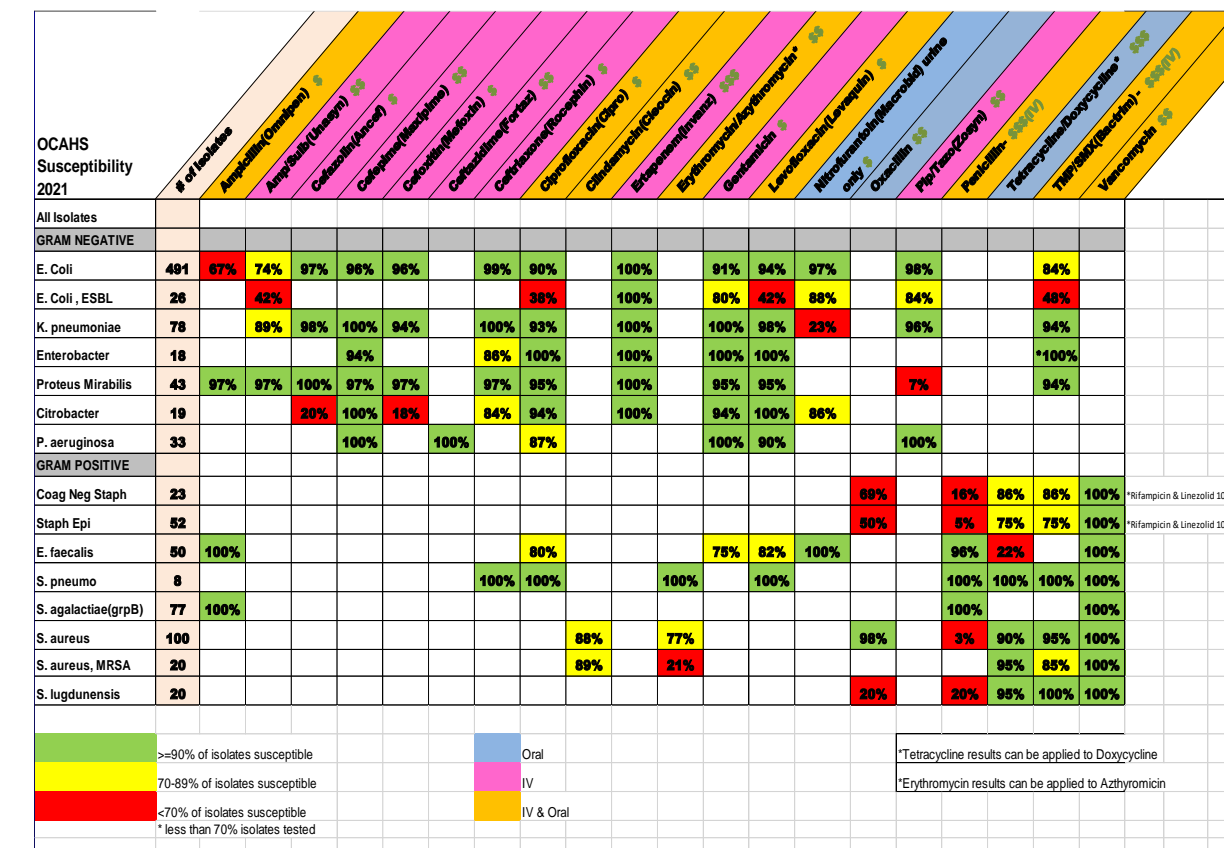
Orange City Area Health System

Team: Inpatient & Outpatient Pharmacist, Physician, CEO, Director of Patient Care, Lab Manager, Infection Prevention/Senior Care, Quality Director/Infection Prevention/Hospital

Metrics

Days of therapy (inpatient, senior care)
Initial antibiotic order over 7 days (senior care)
Antibiotics prescribed per 100 encounters (outpatient)
2nd line antibiotic ordered w/o PCN allergy (outpatient)

Antibiogram



UTI criteria in LTC

SUSPECTED UTI CRITERIA
RESIDENT WITHOUT INDWELLING CATHETER
NOTE: foul smelling urine, dark urine are not criteria for a UA

Must meet 1 of 3 following criteria:

1. Acute dysuria
OR

2. Temp of 100 °F (38°C) or two repeated temps of 99°F (37°C) and at least one new or worsening:

urgency suprapubic pain
 frequency gross hematuria
 flank pain urinary incontinence

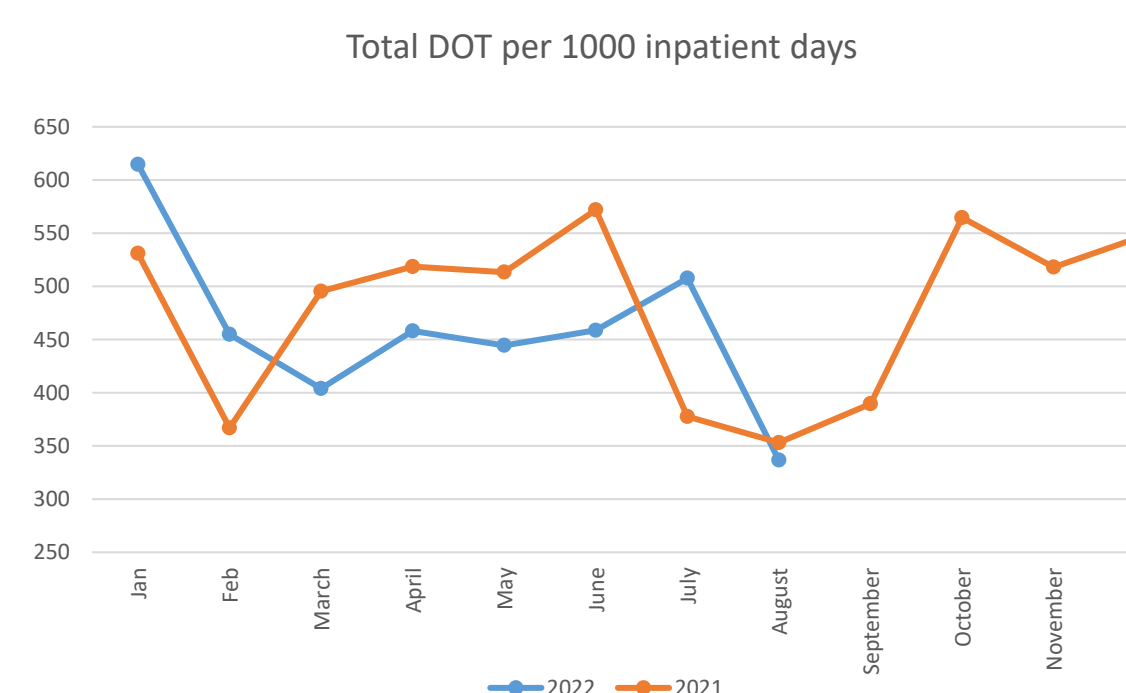
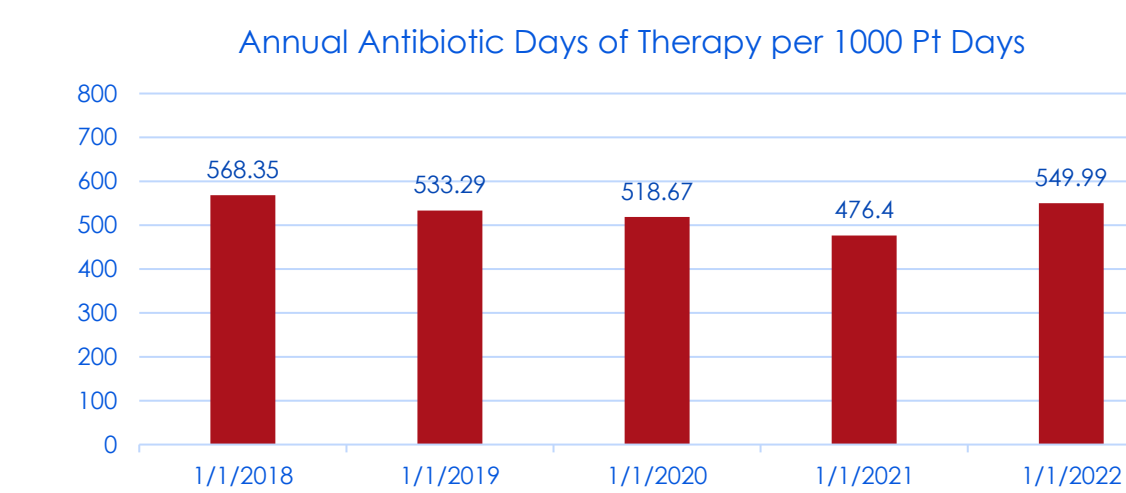
OR

3. No fever but two or more new or worsening:

urgency suprapubic pain
 frequency gross hematuria
 urinary incontinence

If one of three criteria met above, contact physician for possible UA
 If criteria are NOT met, initiate red alert for 48 hours

Days of Therapy Data



Patient Education

Virus Bag Contents
Hand Sanitizer
Individual pack of tissues
Free cookie in gift shop
Coupon for 10% off OTC med in retail pharmacy
Virus or Bacteria – what's got you sick
Recommended Immunizations chart
Tylenol & Ibuprofen dosing chart

Other Handouts:
Do I need antibiotics for my child's runny nose
Treatment of bronchitis
Treatment of ear infections
Cold, Flu or COVID-19
Be Antibiotics Aware Message for Patients

Analysis

Our team analyzed changes in our resistance patterns and days of therapy year to year. Resistance patterns have not increased since 2018. Days of therapy increased Jan 2022 (from 2021) due to more antibiotics ordered for COVID-19 inpatients. C-diff rates for inpatient and emergency department are looked at yearly with no increase in those rates from 2019-2021.

We changed reporting of outpatient metrics to compare "like" providers to each other for a more effective comparison between providers. Reports are given to providers annually so they can see how often they are prescribing antibiotics and 2nd line w/o PCN allergy compared to their peers.

UTI reporting and treatment in senior care has improved with more UTI's meeting McGeers criteria. A similar process was implemented for upper respiratory infections due to the success of the UTI project.

Our goal for community education was to do at least one education piece per year. We provided some form of education (display, newspaper or Facebook™ article in 2018, 2019, 2021 and 2022) We did not do community education in 2020 due to COVID-19.

Next Steps

In order to grow and sustain our efforts in antibiotic stewardship we plan to:

- Incorporate stewardship into the pharmacist and infection preventionist job descriptions.
- Consider use of antibiotic time-outs for inpatient and senior care settings.
- Explore development of local treatment specific guidelines for certain infections.

