Key Actions of an ASP Pharmacist

a day in the life of a stewardship pharmacist

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This presentation is intended for educational use only, and does not in any way constitute medical consultation or advice related to any specific patient.

Objectives

- Describe day to day actions of a stewardship pharmacist
- Discuss monthly and quarterly actions
- Apply principles discussed to your practice site

Program Overview

1. Education
   - Dosing cards
   - Occam.medicine.org
2. Guideline development
   - Ordersets for EMR
   - VAP, sepsis protocol
3. Prospective feedback
   - Carbapenems (restricted to ID after 72 hours)
   - Linezolid, Daptomycin, restricted antibiotics
4. Review antimicrobials for formulary consideration
5. Patient Safety

Stewardship Daily Work Flow

Report from Theradoc: Pts on Carbapenems, Linezolid, Daptomycin…

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ASP reviews microbiology, clinical status, etc

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Contact Clinical Pharmacist/ Infectious Diseases Team for further discussion

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provide verbal RECOMENDATIONS

Meropenem Restricted to ID After 72 hours…

80 yo M with hx of NSLCL s/p resection in 12/2016 with course complicated by E.coli PNA, sepsis, respiratory failure requiring tracheostomy, and VT arrest, who was d/c to SNF for ongoing rehabilitation on 12/23/16, presenting today for

a few days of increasing breath sounds and profound fatigue.

Meropenem start = 2/7 (72 hours = 2/10)

2/7: sputum 3+ PMNs, 4+ GPR, 2+ GPC, 2+ serratia, 2+ enterobacter **4+ OPF**

Abx history cefepime x1, and vancomycin. Changed to meropenem due concern for resistant organisms

Stewardship assessment/plan (sent via email to ID team):

- Await culture results to tailor antibiotics. Meropenem is unlikely required based on initial sputum results.
- ID required after 2/10, if meropenem continued

Attend Microbiology Rounds

- Monday, Wednesday, Fridays: 11- 12
- All ID teams attend
  - Responsibility of the fellow: Present the clinical history
- Review all positive blood cultures and some cultures from other sterile sites (CSF, pleural fluid, etc)
- Goal: Ensure appropriate therapy, testing and appropriate consultation of Infectious Disease Service.

Wait, microbiology is off-site! How do I apply this my setting?

- **Approach lab about getting a list of patients with positive blood cultures**
- **Help providers interpret microbiology results**

Monthly Activities

- Review antimicrobials for formulary
  - Review medication utilization evaluations (MUE)
  - in collaboration with Harborview

- Mentor pharmacy students and residents

Dalbavancin Medication Use Evaluation

2016:

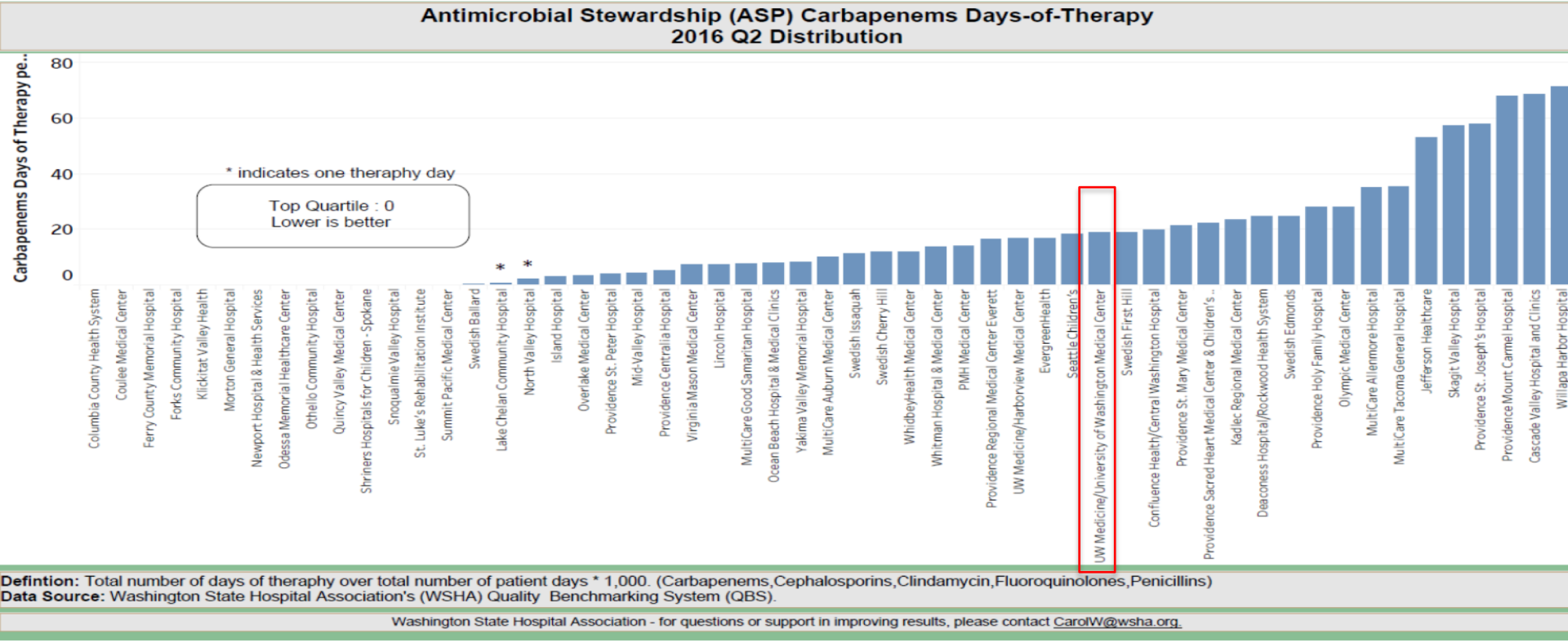
- UW Medicine added Dalbavancin to formulary with defined clinical criteria

2017:

- Review 36 patients prescribed Dalbavancin
- Present at Pharmacy & Therapeutics
- Maintain criteria specified in 2016

Quarterly Activities

- Summarize the antibiotic consumption for the hospital
- Submit data to WSHA



Yearly Activities

- Review published antibiogram
- Review yearly antimicrobial costs

- Are there drastic changes that *MAY* impact our antibiotic usage?
  - Do we need to review recent shortages?
  - Do we need to change our ordersets?
  - Do we need to review our formulary?

How Do I Apply This to My Setting?

- Start small!
- What is your baseline antibiotic usage at your institution?
- Are there particular antibiotics that you are concerned about being misused?
  - Do a MUE to review indication, duration, IV to PO, etc
  - ***I noticed an increase in IV levofloxacin---do a review of the last 6 months.***
- Develop a guideline for a common question or disease (renal dosing of antibiotics, IV to PO, etc)

Develop Guidelines

Pneumonia

Diagnosis: Send sputum gram stain & culture, CXR, urinary pneumococcal antigen, urinary legionella antigen, and blood cultures. During flu season, send nasal swab for rapid influenza testing.

FIRST LINE:

- Ceftriaxone 1 gm IV q24 hours PLUS
- Azithromycin 500 mg PO/IV q24 hours

SECOND LINE for Severe beta-lactam allergy:

- Levofloxacin 750mg PO/IV q24 hours

Consider adding vancomycin if post-influenza pneumonia or necrotizing pneumonia.

On Day 2/3: De-escalate therapy

- If started on broad-spectrum empiric therapy, de-escalate to first-line therapy based on patient's condition and laboratory data.
- If evidence of pneumococcal infection (including bacteremia), use amoxicillin 1g PO TID and discontinue azithromycin. Typical treatment duration is 5 days, though if bacteremic, 7 days is recommended.
- If no positive cultures, then use both amoxicillin 1g PO TID + azithromycin 500mg PO q day.
- Discontinue vancomycin if MRSA nares swab is negative or sputum without growth of MRSA.

Typical Duration: 5 days

You can do it!

- Questions

UWTASP
tele-antimicrobial stewardship program