

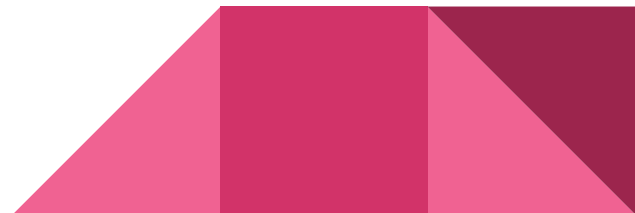


# Antimicrobial Stewardship in the Ambulatory Care Setting: Current Practice and Future PDSA

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# Disclosure

The opinions and conclusions expressed today are individual and do not necessarily reflect the views of the Department of Health and Human Services, United States Public Health Service, or Indian Health Service.



# Objectives

By the end of this presentation, attendees will be able to:


1. Discuss antimicrobial stewardship strategies in use at the Haskell Indian Health Center.
  2. Examine use of of formulary management and quick order management to assist with antimicrobial stewardship goals.
  3. Select methodology for future projects and areas of improvement at the Haskell Indian Health Center.
- 

# Haskell Indian Health Center - Lawrence, KS

- User population - ~7,000, but over 200 federally recognized tribes
- Centrally located to the KC Metro and Haskell Indian Nations University
- Primary care - dentistry, optometry, pharmacy, lab, behavioral health, physical therapy, nutrition
- Pharmacy initiatives: immunizations, anticoagulation, diabetes, hypertension, hyperlipidemia, PrEP, CGM, HCV, tobacco cessation.
- Decentralized ambulatory care pharmacist roles




# Staffing models

- **6 adult primary care providers, 1 pediatrician** (+ nursing staff)
  - 3-person behavioral health team
  - 2 dentists (+ dental assistants)
  - 1 optometrist
  - 1-2 Physical Therapists
  - 1 Dietitian + 1 Diabetes Prevention Program Director
  - 5 pharmacists, 2 techs (1 pharmacist decentralized)
- 

# What is Antibiotic Stewardship?

The effort

- To **measure** antibiotic prescribing
  - To **improve** antibiotic prescribing by clinicians and use by patients so that antibiotics are only prescribed when needed
  - To **minimize** misdiagnosis or delayed diagnosis leading to underuse of antibiotics
  - To **ensure** that the right drug, dose, and duration are selected when an antibiotic is needed
- 



# Antibiotic Stewardship Goal

- Improve the way health care providers prescribe antibiotics to optimize patient outcomes and reduce emergence of antibiotic resistance

# The Core Elements of Outpatient Antimicrobial Stewardship



## **Commitment**

Demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety.



## **Action for policy and practice**

Implement at least one policy or practice to improve antibiotic prescribing, assess whether it is working, and modify as needed.



## **Tracking and reporting**

Monitor antibiotic prescribing practices and offer regular feedback to clinicians, or have clinicians assess their own antibiotic prescribing practices themselves.



## **Education and expertise**

Provide educational resources to clinicians and patients on antibiotic prescribing, and ensure access to needed expertise on optimizing antibiotic prescribing.



- Antibiotic Use
- About Antibiotic Use +
- Patient Resources and Education +
- Healthcare Professional Resources and Training +
- Health Department Resources
- Improving Antibiotic Use +
- Core Elements of Antibiotic Stewardship**
- Hospital +
- Outpatient**
- Implementation Resources for Outpatient Facilities
- Nursing Home +
- Resource-Limited Settings
- U.S. Antibiotic Awareness Week +

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## Implementation Resources for Outpatient Facilities

[Print](#)

### Commitment

- [A Commitment to Improving Antibiotic Use 11x17 Poster](#)

### Action for Policy and Practice

- [Watchful Waiting for Ear Infections - 8.5x11 \(Print On/\)](#)
- [Delayed Prescribing Prescription Pads - 4.5 x 5.5](#)
- [Delayed Prescribing Prescription Pads - 8.5 x 11](#)
- [Symptom Relief Prescription Pads - 4.5 x 5.5](#)
- [Symptom Relief Prescription Pads - 8.5 x 11](#)
- [Adult Outpatient Treatment Recommendations](#)
- [Pediatric Outpatient Treatment Recommendations](#)

### Tracking and Reporting

- Resources for Health Departments
  - [Guide to Using Outpatient Antibiotic Prescription Data for Peer Comparison Audit & Feedback](#)
  - [Antibiotic Resistance & Patient Safety Portal: Antibiotic Use & Stewardship Data](#)
  - [Example Letter: Providing feedback to providers about number of antibiotics prescribed](#)
- Resources for Health Plans
  - [Fact Sheet: Improving outpatient antibiotic use through audit and feedback](#)
  - [Example Letter: Providing feedback on quality measure performance for the 2019 Healthcare Effectiveness Data and Information Set \(HEDIS\) Measure Avoidance of Antibiotic Treatment for Adults with Acute Bronchitis](#)
  - [Example Letter: Providing feedback on quality measure performance for the 2020 Healthcare Effectiveness Data and Information Set \(HEDIS\) Measure Avoidance of Antibiotic Treatment for Acute Bronchitis/Bronchiolitis](#)
  - [Measurement and Evaluation Approaches to Improve Outpatient Antibiotic Prescribing](#)

### Education and Expertise

- [NEW Community Pharmacy Posters](#)
- [CDC Training on Antibiotic Stewardship](#)
- [Improving Antibiotic Use](#)
- [Viruses or Bacteria—What's got you sick?](#)
- [Antibiotics Aren't Always the Answer](#)

### More Resources

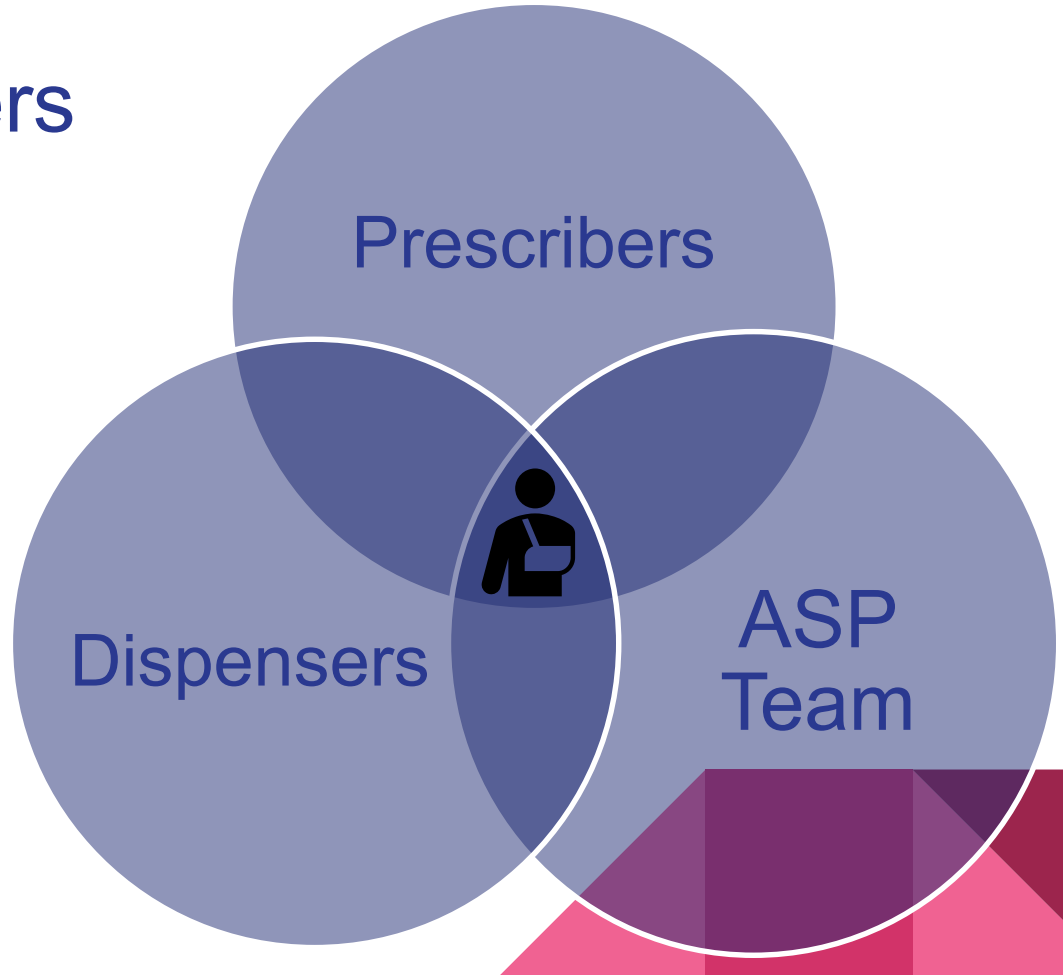
- [NEW Improving Outpatient Antibiotic Prescribing: A Toolkit for Healthcare Payers](#)
- [A Field Guide to Antibiotic Stewardship in Outpatient Settings](#)
- [MITIGATE Antimicrobial Stewardship Toolkit](#)

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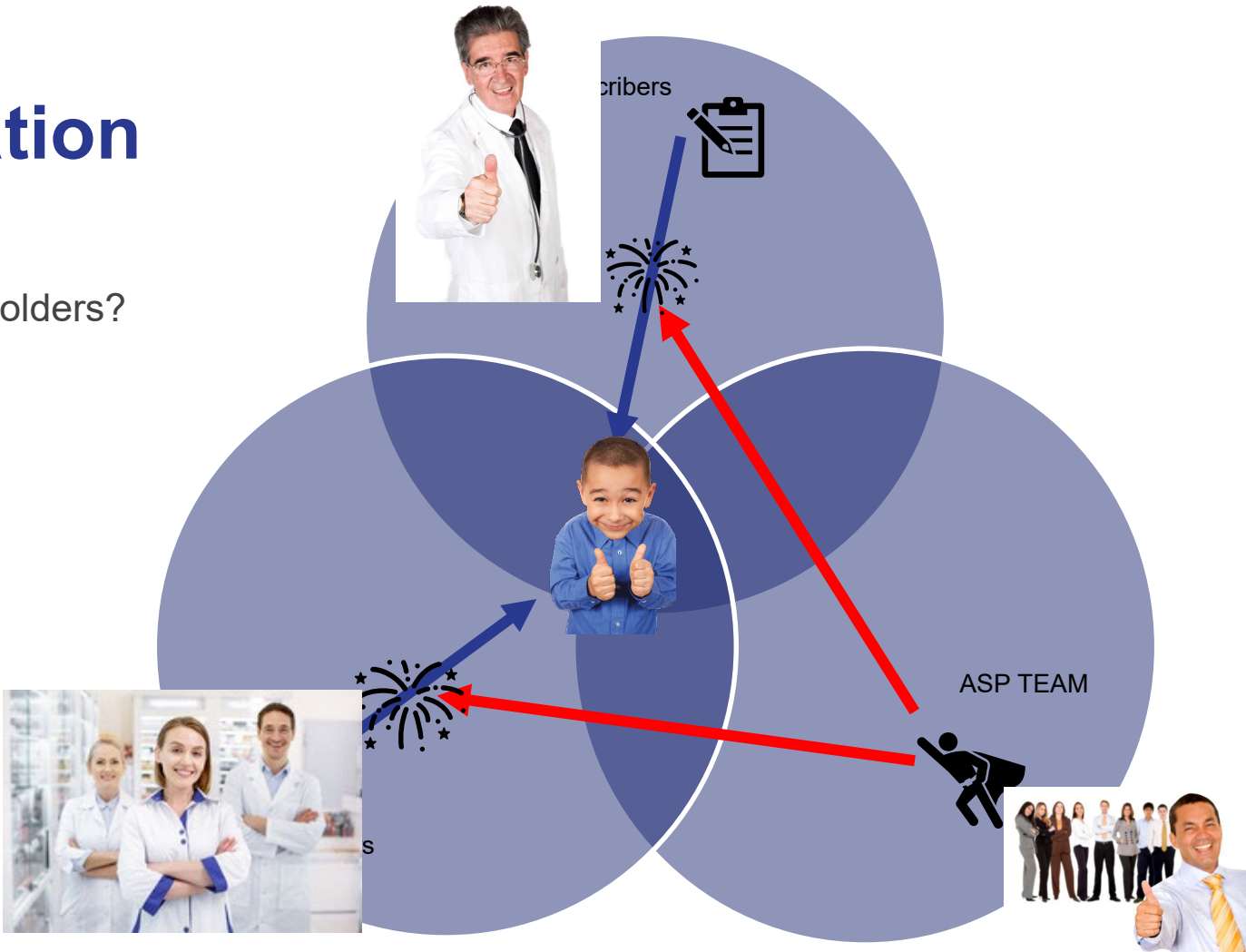
# Implementation Resources

# Identify Stakeholders



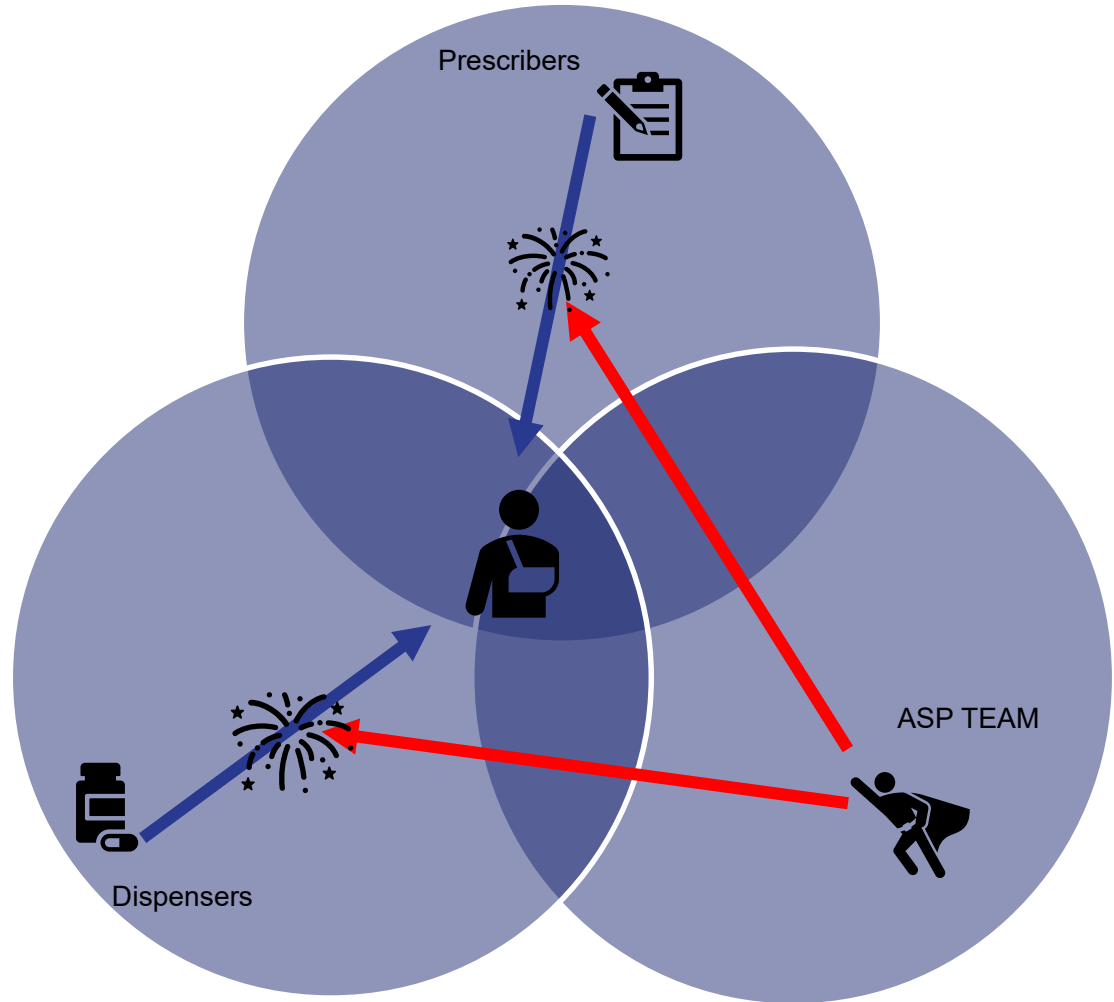
# Implementation

Remember our stakeholders?



# The Reality

Stewardship is not a primary  
roll of any one person at HIHC



# How is stewardship possible without anyone actively stewarding?

- Building relationships is 90% of a successful ASP
- Getting buy in from stakeholders
- Restricting/Steering
  - Developing tools as an ASP to help guide prescribing
  - Utilizing formulary restrictions with stewardship in mind



# Current practices: Quick orders

- Implemented in 2018-2019 by previous ambulatory care pharmacist
- Most providers use quick orders
- Both alphabetical and by indication
- Reduces errors and saves time:
  - provider indicates why other agent chosen over another
  - Orders placed with appropriate directions, quantity, etc
  - First-line agents chosen more often, can be placed based on antibiogram, etc
- Not unique to just ASP - but has pros/cons





## Medications

Done

### MEDICAL DEPT

- Alzheimer and Parkinson's Medications
- Anemia/Supplements/Anticoagulation Meds
- Anti Infective Medications
- Anti infective Medications by Indication
- Asthma/Allergy/COPD Medications
- Cardiovascular Meds
- COVID 19 Therapeutics
- Dermatologic Medications
- Diabetic Medications
- Eye/Ear/Nose/Throat Medications
- GI and Urinary Medications
- Inhouse Medications...
- Men's Health Medication
- OTC Medications
- Outside Medications
- Pain/Osteo/Misc Medications
- Pediatric Medications
- Psychiatric Meds
- Rheumatology...
- Same Day Appointments
- Smoking Cessation
- Thyroid and Pituitary Medications
- Weight Management Medications
- Women's Health Medications
- Outpatient Medications

### DENTAL MEDICATIONS

- Dental Medications

### NURSING STANDING ORDERS



Amoxicillin 400mg/5ml susp 2.5ml bid for 10 days  
 Amoxicillin 400mg/5ml susp 5ml bid for 10 days  
 Amoxicillin 400mg/5ml susp 7.5ml bid for 10 days  
 Amoxicillin 400mg/5ml susp 10ml bid for 10 days  
 Amoxicillin 400mg/5ml susp 12.5ml bid for 10 days  
 Amoxicillin 400mg/5ml susp 15ml bid for 10 days

Amoxil 500mg q8h

Augmentin ES 600mg/5ml SUSP

Augmentin 875mg q12h

Penicillin 250mg/5ml q6h

Penicillin VK 500mg PO BID x 10 days

#### MACROLIDES

Zithromax 100mg/5ml susp  
 Zithromax 200mg/5ml susp  
 Clindamycin 300mg po TID x 10 days  
 Clindamycin 2% Vaginal Cream hs  
 Erythromycin base 250mg qid  
 Erythromycin 333mg tid f 10 ds  
 Erythromycin 200mg/5ml q6h  
 Erythromycin (Ilotycin) 0.5% oph oint Q6H  
 Azithromycin 1gm today  
 ZPAK

#### PEDICULOSIS

Permethrin (Nix) 1% liquid ONCE

#### SCABIES

Permethrin (Elimite) 5% cream ONCE

#### Anthelmintic

aBENDazole 200mg take 2 tablets now and repeat as directed

#### HIV TREATMENT

First line: Biktarvy 1 tab PO daily  
 2nd line w/ HLAB5701 testing: Triumeq

#### HIV PREP (\*PRE\* EXPOSURE PROPHYLAXIS)

Cefdinir 250mg/5ml bid  
 Cefdinir (Omnicef) 300mg 2 caps daily  
 Cefdinir (Omnicef) 300mg 1 cap bid  
 Cephalexin 250mg/5ml q6h  
 Cephalexin 500mg q6h f 10 days  
 Cefprozil (Cefzil) 250mg/5ml bid  
 Ceftriaxone 500mg IM  
 Ceftriaxone 1gm IM

#### TETRACYCLINES

Minocycline (Minocin) 50mg BID  
 Doxycycline 50mg 1 cap po daily for acne  
 Doxycycline 100mg po BID x 10 days  
 Doxycycline 100mg daily

#### URINARY ANTIINFECTIVES

Macrobid 100mg po BID x 5 days (uncomplicated UTI)  
 Nitrofurantoin (Macrochantin) 100mg at BEDTIME

#### URINARY TRACT ANALGESICS

Phenazopyridine 99.5mg 2 tablets tid

#### ANTITUBERCULOSIS

Isoniazid (INH) 300mg QDAY  
 Rifampin 300mg 1 cap po bid x 10days

#### QUINOLONES

Ciprofloxacin (CIPRO) 500mg 1/2 tab bid x 3 days (uncomplicated UTI)  
 Ciprofloxacin (CIPRO) 500 mg bid f 10 days  
 Moxifloxacin (Avelox) 400mg QDAY for 14 days  
 LEVOfloxacin 250mg dy  
 LEVOfloxacin 500mg po daily x 10 days  
 LEVOfloxacin 750mg po daily x 7 days

Bactrim DS 1 tablet bid for 3 days (uncomplicated UTI)  
 Bactrim DS 1 tab bid for 14 days (complicated UTI)  
 SMZ/TMP 200/40mg/5ml bid for 10 days  
 Sulfacetamide (Sulamyd) 10% oph soln Q2H

#### ANTIVIRALS

Acyclovir Suspension 200mg/5ml

Valacyclovir 2grams BID x 1 day (HSV1)  
 Valacyclovir 1gram BID x 10 days (HSV2)  
 Valacyclovir 1gram TID for 10 days (Shingles)  
 Valacyclovir 500mg once daily  
 Valacyclovir 1gram once daily

Tamiflu (Oseltamivir) 75mg cap BID for 5 days  
 Tamiflu 75mg 1 cap daily x 7 days (Prophylaxis)

Tamiflu (Oseltamivir) 30mg cap BID x 5 days (CRCL 30 to 60 ml/min)  
 Tamiflu 30mg 1 cap daily x 7 days (Prophylaxis CRCL 30 to 60ml/min)  
 Tamiflu (Oseltamivir) 30mg cap daily x 5 days (CRCL 10 to 30ml/min)  
 Tamiflu 30mg 1 cap every other day x 7 days (Prophylaxis CRCL 10 to 30ml/min)

Tamiflu (Oseltamivir) 6mg/ml 10ml (60mg) BID X 5 DAYS  
 Tamiflu 6mg/ml 7ml (60mg) daily x 7 days (Prophylaxis)  
 Tamiflu (Oseltamivir) 6mg/ml susp 5ml (30mg) BID X 5 days  
 Tamiflu 6mg/ml 5ml (30mg) po daily x 7 days (Prophylaxis)

Molnupiravir 200mg 4 capsules twice daily x 5 days  
 PAXLOVID 3 tablets bid for 5 days  
 PAXLOVID 2 tablets bid x 5 days for eGFR between 30 and 60ml/min

#### ANTIFUNGALS

Nystatin 100000 units/ml susp 2ml QID  
 NYSTATIN CREAM TWICE DAILY  
 Clotrimazole 1% CREAM BID  
 Clotrimazole vag crm hs f 7 days  
 Fluconazole (Diflucan) 150mg ONCE  
 Fluconazole 150mg once weekly x 4 weeks  
 Griseofulvin (microsize) 125mg/5ml  
 metroNIDAZOLE 500mg BID x 7 days



The 'Anti Infective Medications by Indication' order menu was created as a tool to assist prescribers with therapeutic decision making and antimicrobial stewardship ultimately leading to improved patient outcomes. These guidelines have been developed using evidence based medicine and are not intended to replace clinical judgement. All recommendations are adapted from The Sanford Guide to Antimicrobial Therapy and the Centers for Disease Control & Prevention (CDC). The recommendations are adjusted based on susceptibility rates from the facility's most recent antibiogram. They will be updated yearly as new information becomes available and adjustments are made to the formulary.

Treatment medications are generally listed in order of selection preference indicated by numbering. Therapeutic decisions should be based on a number of factors including patient history / comorbidities / suspected etiology / antimicrobial susceptibility patterns / cost. In certain populations the suspected organism may include a broader range i.e. IV drug users / immunosuppressed / travelers.

The following guidelines are considered appropriate treatment algorithms for adult patients who are not pregnant. All doses are oral unless otherwise indicated.

Skin and Soft Tissue Infections  
Community Acquired Pneumonia  
Bronchitis  
HEENT  
Urinary Tract Infections / Pyelonephritis  
Sexually Transmitted Infections  
Women's Health  
Viral Infections  
HIV Prophylaxis  
Oral Infections  
H. Pylori



FOLLICULITIS

Usual etiologies: *S. aureus* / *P. aeruginosa* / *Candida*  
 Usually self limiting requiring no antimicrobial therapy  
 May use hot packs for comfort

Mupirocin 2% ointment topical TID (suspected staph)  
 Clotrimazole 1% cream topical BID (suspected candida)

ABSCESS / BOILS / FURUNCLES

Usual etiologies: *S. aureus* (MSSA and MRSA)  
 I&D is mainstay of therapy

- 1) Bactrim DS 1 tab BID x 7 days (BMI < 40)  
 Bactrim DS 2 tabs BID x 7 days (BMI > 40)
- 2) Doxycycline 100mg BID x 7 days
- 3) Clindamycin 300mg TID x 7 days (BMI < 40)  
 Clindamycin 450mg TID x 7 days (BMI > 40)

IMPETIGO

Usual etiologies: Group A strep most common / *S. aureus* (MSSA / MRSA)  
 Strep species manifests as papules that progress  
 to vesicles that lead to "honey crust" or  
 "punched out" skin lesions  
 Staph species cause exudate filled bullae

STREP SUSPECTED Few Lesions

- 1) Mupirocin 2% ointment topical TID x 5 days

STREP SUSPECTED Many Lesions

- 1) PenVK 500mg QID x 7 days  
 or  
 Benzathine Pen G 1.2 million units IM x 1 dose
- 2) Bactrim DS 1 tab BID x 7 days

MSSA SUSPECTED

- 1) Mupirocin 2% ointment topical TID x 7 days
- 2) Dicloxacillin 500mg QID x 7 days
- 3) Cephalexin 500mg QID x 7 days

MRSA SUSPECTED

- 1) Mupirocin 2% ointment topical TID x 7 days

NONDIABETIC CELLULITIS / ERYSIPELAS

Usual etiologies: Strep sp (group A B C G) / *S. aureus* (rare)  
 Rapidly spreading / red / edematous / tender / usually unilateral  
 Treatment Duration 7 to 10 days

STREP SUSPECTED

- 1) Penicillin VK 500mg QID x 7 days
- 2) Amoxicillin 500mg TID x 7 days
- 3) Cephalexin 500mg QID x 7 days
- 4) Bactrim DS 1 tab BID x 7 days (BMI < 40)  
 Bactrim DS 2 tabs BID x 7 days (BMI > 40)

MSSA SUSPECTED

- 1) Dicloxacillin 500mg QID x 7 days

MRSA SUSPECTED

- 1) Bactrim DS 1 tab BID x 7 days (BMI < 40)  
 Bactrim DS 2 tabs BID x 7 days (BMI > 40)
- 2) Doxycycline 100mg BID x 7 days

DIABETIC CELLULITIS / ERYSIPELAS

Usual etiologies: Strep sp (group A B C G) / *S. aureus* /  
 Enterobacteriaceae / anaerobes  
 Treatment Duration 7 to 14 days

- 1) Bactrim DS 1 tab BID + PenVK 500mg QID x 10 days (BMI < 40)  
 Bactrim DS 2 tabs BID + PenVK 500mg QID x 10 days (BMI > 40)
- 2) Bactrim DS 1 tab BID + Cephalexin 500mg QID x 10 days (BMI < 40)  
 Bactrim DS 2 tabs BID + Cephalexin 500mg QID x 10 days (BMI > 40)

DIABETIC FOOT INFECTION

Usual etiologies: Staph / Strep / coliforms / anaerobes  
 Assume MRSA until proven otherwise  
 Treatment Duration 10 to 14 days

ULCER WITHOUT INFLAMMATION

No antimicrobial therapy recommended

ULCER WITH SUPERFICIAL INFLAMMATION

- 1) Bactrim DS 1 tab BID x 10 days (BMI < 40)  
 Bactrim DS 2 tabs BID x 10 days (BMI > 40)

Medications are numbered in order of treatment preference.

May extend treatment duration to 7 days

#### NO COMORBIDITIES

No prior isolation of MRSA or *P. aeruginosa*  
No hospitalization with IV antibiotics in previous 90 days  
No risk for pseudomonas or MRSA

Usual etiologies: *S. pneumo* / atypical pathogens / viral

- 1) Amoxicillin 1000mg TID x 5 days
- 2) Doxycycline 100mg BID x 5 days

#### COMORBIDITIES

Chronic heart / lung / liver / renal disease  
Diabetes  
Alcohol use disorder  
Neoplastic disease  
Asplenia



Usual etiologies: *S. pneumo* / *H. influenzae* / *M. catarrhalis* /  
*S. aureus* / anaerobes

- 1) Levofloxacin 750mg daily x 5 days
- 2) Augmentin 1 tab BID + Doxycycline 100mg BID x 7 days
- 3) Augmentin 1 tab BID x 7 days + Azithromycin ZPak x 5 days

Antibacterial Medications

## SUSPENSIONS

Amoxicillin 400mg/5mL  
 Augmentin 600mg/5mL  
 Bactrim 200mg/40mg/5mL  
 Cefdinir 250mg/5mL  
 Cephalexin 250mg/5mL  
 Azithromycin 100mg/5mL  
 Azithromycin 200mg/5mL  
 PeriVK 250mg/5mL



## CAPSULES / TABLETS

Penicillin VK 250mg Tabs (Kids <27kg)  
 Penicillin VK 500mg Tabs (Kids over 27kg)

Amoxicillin 500mg po BID x 10 days  
 Amoxicillin 1000mg po BID x 10 days  
 Amoxicillin 500mg po TID x 10 days  
 Amoxicillin 1000mg po TID x 7 days

Macrobid 100mg po BID x 5 days

Augmentin 875mg/125mg po BID x 7 days  
 Augmentin 875mg/125mg po BID x 10 days

Azithromycin ZPack po x 5 days

Bactrim DS 1 tab po BID x 3 days  
 Bactrim DS 1 tab po BID x 5 days  
 Bactrim DS 1 tab po BID x 10 days  
 Bactrim DS 1 tab po BID x 14 days  
 Bactrim DS 2 tabs po BID x 7 days  
 Bactrim DS 2 tabs po BID x 10 days  
 Bactrim DS 2 tabs po BID x 14 days

Cefdinir 300mg po BID x 10 days

Doxycycline 100mg po BID x 7 days  
 Doxycycline 100mg po BID x 10 days  
 Doxycycline 100mg po BID x 14 days

Antiviral Medications

## SUSPENSIONS

Tamiflu (Osetamivir) 6 mg/mL susp  
 Acyclovir 200mg/5mL

## CAPSULES / TABLETS

## Influenza Prophylaxis

Tamiflu 30mg po daily x 10 days  
 Tamiflu 45mg po daily x 10 days  
 Tamiflu 75mg po daily x 10 days

## Influenza Treatment

Tamiflu 30mg po BID x 5 days  
 Tamiflu 45mg po BID x 5 days  
 Tamiflu 75mg po BID x 5 days

Antiparasitic Medications

← Permethrin 5% cream Apply to body once  
 Permethrin 1% liquid

Albendazole 400mg x 1 dose

Antifungal Medications

Griseofulvin microsize 125mg/5mL susp  
 Nystatin 100000 unit/mL susp  
 Nystatin 100000 unit/gram topical cream  
 Clotrimazole 1% topical cream  
 Terbinafine 250mg po daily

AMOXICILLIN 400MG/5ML PwDR,RENST-ORAL

Change

[Display Restrictions](#)  
[/ Guidelines](#)Pt Wt on 07/05/2022 145 lb (65.77 kg)  
Pt Ht on 07/05/2022 65 in (165.1 cm)

Dosage	Route	Schedule
2.5 ML 400MG/5ML	ORAL	BID <input type="checkbox"/> PRN
5 ML 400MG/5ML	ORAL	AC
10 ML 400MG/5ML		AC&HS
2.5 ML 400MG/5ML		AELBM
7.5 ML 400MG/5ML		ALL OTHER DAYS
12.5 ML 400MG/5ML		AT BEDTIME
15ML 400MG/5ML		AT NOON
		BEFORE BREAKFAST
		BEFORE LUNCH
		BEFORE SUPPER
		BID

Patient Instructions:

Days Supply: 10    Quantity: 100    Refills: 0    Clinical Indication:

Chronic Med     Dispense as Written

Pick Up:  Clinic     Mail     Window     Outside Pharmacy - eRx     Outside Pharmacy - Print

Priority  
ROUTINE Discharge Medication

Notes to Pharmacist:

AMOXICILLIN 400MG/5ML PwDR,RENST-ORAL 400MG/5ML  
SHAKE WELL & GIVE TWD (2) AND ONE-HALF (1/2) ML BY MOUTH TWICE A DAY  
Quantity: 100 Days: 10 Refills: 0 \*Chronic Med: YES Dispense as Written: NO

ADR's

Accept Order

Quit

Dosing table uses 45 mg/kg/day divided TID

kg	mL TID	kg	mL TID	kg	mL TID
3	0.5	16	3	29	5.5
4	0.75	17	3	30	5.5
5	1	18	3.5	31	6
6	1	19	3.5	32	6
7	1.25	20	4	33	6
8	1.5	21	4	34	6.5
9	1.5	22	4	35	6.5
10	1.75	23	4.5	36	7
11	2	24	4.5	37	7
12	2.25	25	4.5	38	7
13	2.25	26	5	39	7.5
14	2.5	27	5	40	7.5
15	2.75	28	5		

Pneumonia, community acquired, empiric therapy (\*\*HIGH DOSE\*\*): Infants > or = 3 months, Children, and Adolescents: Oral: 90 mg/kg/day in divided doses every 12 hours; max 4,000 mg/day

Otitis media, acute (AOM): Infants > or = to 2 months and Children: Oral: 80 to 90 mg/kg/day in divided doses every 12 hours; max 4,000 mg/day


Otitis Media Treatment Duration:

if < 2 years of age or severe symptoms (any age): 10 day course  
if 2 to 5 years of age with mild to moderate symptoms: 7 day course

> or = 6 years of age with mild to moderate symptoms: 5 - 7 day course

Dosing table uses 90 mg/kg/day divided BID

# Advantages and Challenges

- Advantages:
    - Updated with guidelines
    - Able to provide universal provider training
    - Streamlines orders for pharmacist review and processing
    - Reduces provider frustration and “clicks” in EHR, expediting order/note entry
    - Quick way to modify prescribing practices without waiting for P&T, monthly meetings, etc
    - Provider feedback: generally positive
  - Challenges:
    - Who is responsible for updating?
    - Staff turnover/working short
    - Multiple menus = multiple places to update quick orders
    - Time needed for this project grows exponentially based on facility size
  - Example: Ceftriaxone
- 

# Low-hanging fruit

- HIV Pre-Exposure Prophylaxis
- National Core Formulary - presented at P&T
- Not frequent in this setting
- No quick orders previously
- Utilize both quick orders and text to provide quick information - keep it concise!

History of inconsistent or no condom use  
Commercial sex work  
Recent bacterial STI

Heterosexual Women and Men  
HIV positive sexual partner  
High number of sex partners  
History of inconsistent or no condom use  
Commercial sex work  
Recent bacterial STI

Persons Who Inject Drugs  
HIV positive injecting partner  
Sharing injection equipment

Truvada (Emtricitabine 200mg / TDF 300mg) 1 tab daily

Descovy (Emtricitabine 200mg / TAF 25mg) 1 tab daily  
Not for receptive vaginal sex  
Favored in patients with low bone density

## HIV POST EXPOSURE PROPHYLAXIS (PEP)

Must be started within 72 hours of exposure  
PEP is not effective or recommended if started greater than 73 hours after exposure  
Treatment duration 28 days

For patients with normal renal function  
Truvada (Emtricitabine 200mg/TDF 300mg) 1 tab daily +  
Isentress (Raltegravir) 400mg BID x 28 days

# Formulary Management

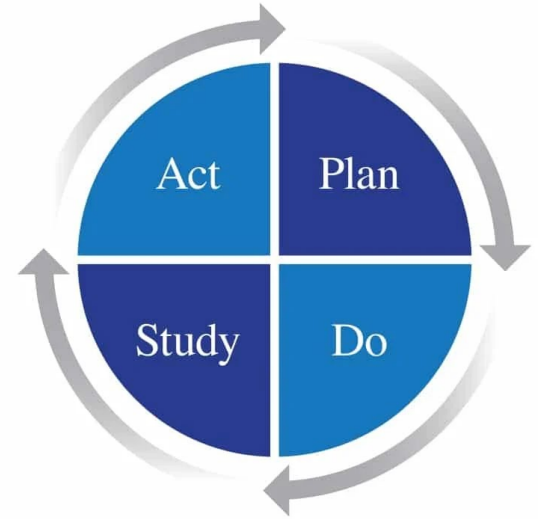
- Another area to guide prescribing habits and antimicrobial stewardship
- Restrictions on medications with long-term considerations - i.e., restrict fluoroquinolones
- May be beneficial when combined with quick order management
- Getting the time allocated
- Examples:
  - STIs in general
  - CAP
  - HIV PrEP, PEP and treatment





# Long-term projects: the PDSA

- Short term projects may also follow a PDSA model
- Great way to track previous efforts and make small changes
- Example PDSA is a longer term project



# Stewardship Strategies

- To date – passive stewardship
  - Restricting/Steering prescriptions
  - Examining appropriateness of therapy
  
- Current and future
  - prospective feedback
  - Active culture monitoring by pharmacist



# Prospective Stewardship?

- Clinic Pharmacy
  - Dispensing/order entry pharmacist
- Tracking real time interventions
  - Recommendations accepted/declined
  - Monitoring days of therapy
- Building stewardship centered care!



# Thank you!



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