Best Practices for Creating Local Antimicrobial Stewardship Clinical Practice Guidelines in Healthcare Settings

Why Create Local Guidelines?[1]

- Adapt national best practices to reflect local antibiotic resistance patterns, costs, and pharmacy formularies.
- Promote antimicrobial stewardship as part of standard facility processes
- Focus on national data that is most relevant to the specific needs of the facility and population
- Meet stewardship regulatory requirements

Which Healthcare Settings Can Benefit from Having Local Guidelines?

- All settings can benefit, including:
  - Nursing homes
  - Acute care facilities
  - Emergency departments
  - Outpatient clinics (urgent care, family practice, specialty, etc.)
  - Dialysis centers
  - Surgical centers
  - Dental clinics

Who Can Create Local Guidelines?

- Physicians, pharmacists, dentists, nurse practitioners, physician's assistants, & nursing leadership with support from nurses, infection preventionists, and microbiologists

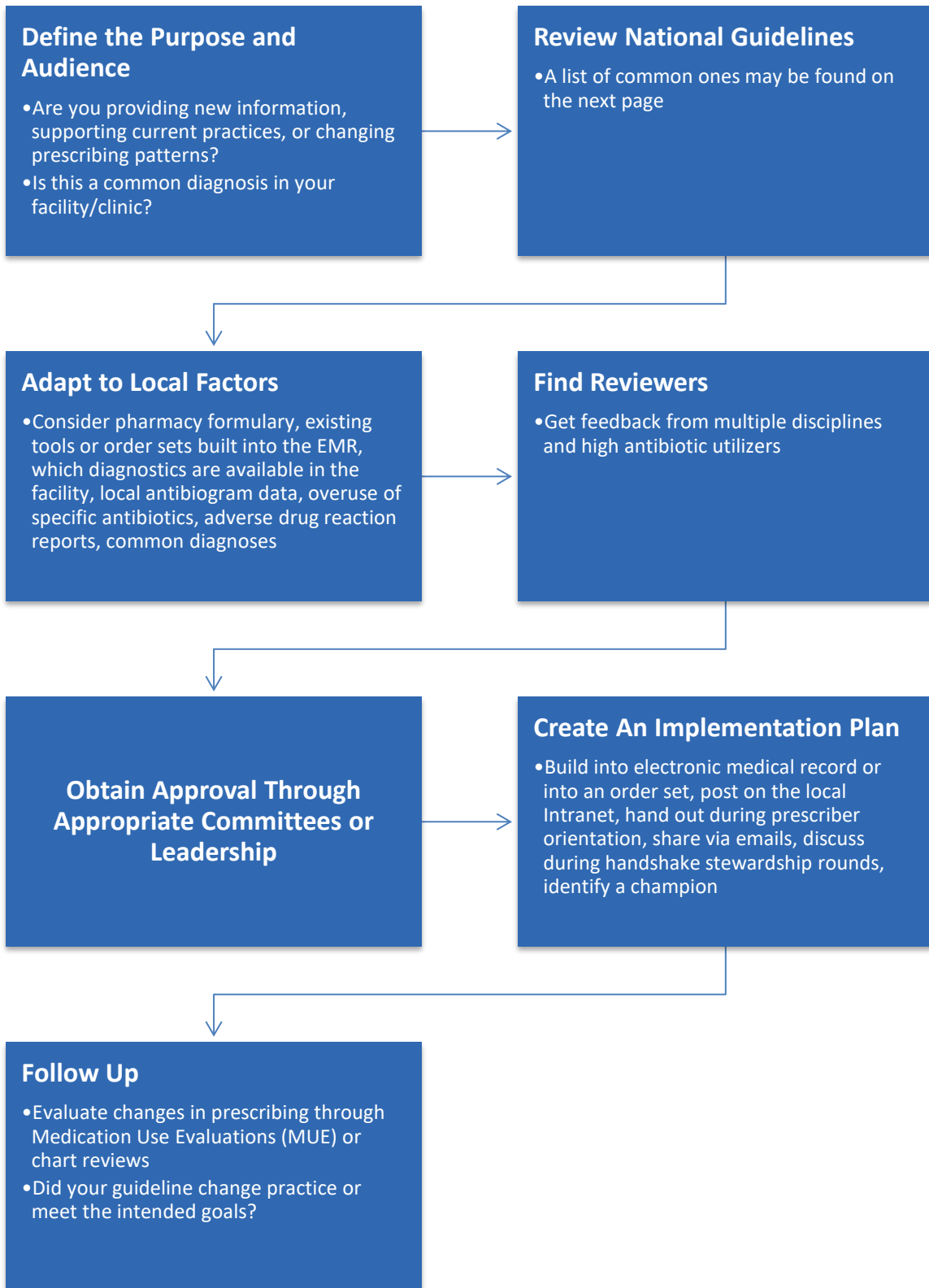## What National Guidelines Support the Creation and Usage of Local Guidelines?

Infectious Diseases Society of America (IDSA)[2]

- Recommends that stewardship programs develop facility-specific clinical practice guidelines and a strategy for dissemination and implementation of the guideline

CDC's Core Elements of Antibiotic Stewardship[3,4,5]

- **The Core Elements of Antibiotic Stewardship for Nursing Homes** recommends standardizing the practices which should be applied during the care of any resident suspected of an infection
- **The Core Elements of Outpatient Antibiotic Stewardship** recommends implementation of facility-specific or system-specific practice guidelines
- **The Core Elements of Hospital Antibiotic Stewardship Programs** recommends facility-specific guidelines as a priority intervention to improve antibiotic usage

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How Do I Create a Local Guideline?

Define the Purpose and Audience

- Are you providing new information, supporting current practices, or changing prescribing patterns?
- Is this a common diagnosis in your facility/clinic?

Review National Guidelines

- A list of common ones may be found on the next page

Adapt to Local Factors

- Consider pharmacy formulary, existing tools or order sets built into the EMR, which diagnostics are available in the facility, local antibiogram data, overuse of specific antibiotics, adverse drug reaction reports, common diagnoses

Find Reviewers

- Get feedback from multiple disciplines and high antibiotic utilizers

Obtain Approval Through Appropriate Committees or Leadership

Create An Implementation Plan

- Build into electronic medical record or into an order set, post on the local Intranet, hand out during prescriber orientation, share via emails, discuss during handshake stewardship rounds, identify a champion

Follow Up

- Evaluate changes in prescribing through Medication Use Evaluations (MUE) or chart reviews
- Did your guideline change practice or meet the intended goals?

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What National Clinical Guidelines Are Available to Guide Facility Efforts?

- Some of the most referenced clinical guidelines include:

IDSA Practice Guidelines
- Guidelines for common disease states such as pneumonia, skin infections, asymptomatic bacteriuria, and urinary tract infections

SHEA's Strategies to Prevent Surgical Site Infections in Acute-Care Hospitals
- Provides practical recommendations to assist hospitals in implementing and prioritizing surgical site infection efforts

GOLD Guidelines for COPD
- Provides recommendations for antibiotic treatment in patients with COPD

AAAI's Drug Allergy Guideline
- Guidance for penicillin and beta-lactam allergy delabeling efforts

Adult Outpatient Treatment Recommendations
- Contains the most recent recommendations for appropriate antibiotics for adults in the outpatient setting

Pediatric Outpatient Treatment Recommendations
- Contains the most recent recommendations for appropriate antibiotics for pediatric patients

Guideline Formatting Tips:

- Be clear and concise
  - An example of a clear and concise local guideline may be found here:
    - Community-acquired Pneumonia | Infectious Diseases Management Program at UCSF
- Consider the use of tables, figures, or infographics to present the guideline information
- Include diagnostics, medication (dose, duration, cost) and pertinent supplementary information such as most common causative organisms and reference sources

Example:

- **Scenario:**
  - After performing an annual clinic antibiogram update, the family practice provider notices that the methicillin-resistant *Staphylococcus aureus* (MRSA) isolates in the past year is susceptible to the antibiotic sulfamethoxazole-trimethoprim (SMZ/TMP) only 50% of the time.
  - The provider knows that this antibiotic is commonly prescribed for MRSA-suspected skin

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infections at the clinic & would like to ensure this antibiotic is not used as a first choice.

  o The provider would also like to make sure that the recommended antibiotic is used only when it is needed so as to prevent further resistance.

- **Application:**

1. Define the purpose and the audience:

- The provider wants to make sure that SMZ/TMP is not prescribed by clinic providers as the initial empiric therapy for MRSA-suspected skin infections.
- The provider would like to make sure that the recommended antibiotic is used only when it is needed.

2. Review national guidelines

- The provider chooses to review the IDSA's Skin and Soft Tissue Infection guideline.
- The guideline recommends either SMZ/TMP or doxycycline only when specific criteria are met.

3. Adapt to local factors

- The clinic's antibiogram shows that while MRSA is susceptible to SMZ/TMP only 50% of the time, it is almost always susceptible to doxycycline which is listed as a preferred choice in the IDSA guidelines. As a result, doxycycline is considered the better local choice.

4. Find reviewers

- A concise draft guideline (**visual example for inspiration here**) is written and sent to a multidisciplinary clinical team for review and feedback.

5. Obtain approval

- Once consensus is obtained, the guideline goes through local approval processes.

6. Create an implementation plan

- The new guideline is emailed to all clinic providers and posted on the local Intranet.

7. Follow Up

- Chart review of patients with MRSA-suspected skin infections is performed 3 months after the guideline is distributed.
- An increase in prescriptions written for doxycycline as initial therapy is noted, indicating success.

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Tips For Success:

1. Ask your colleagues to share their favorite national guidelines
2. Integrate a local guideline into an electronic health record (EHR) can be especially valuable for uptake and use of a new guidance document
3. Be receptive to all feedback
4. Review these guidelines regularly, preferably in conjunction with the institution antibiogram
5. Make sure to update any pre-selections in the electronic health record or paper order bundles to match the new guideline

References:

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3. CDC. The Core Elements of Antibiotic Stewardship for Nursing Homes. US Department of Health and Human Services; 2015. https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf
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5. CDC. The Core Elements of Hospital Antibiotic Stewardship Programs. US Department of Health and Human Services; 2019. https://www.cdc.gov/antibiotic-use/healthcare/pdfs/hospital-core-elements-H.pdf

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