Outline

- Welcome

- Introduction of ASAP members

- ASAP program outline
  - ➢ Goals of ASAP
  - ➢ Expectation from participating facilities

- ASAP workflow

- Available Resources

- Questions & Answers

Overarching Program Goal

A partnership between Nebraska Medicine and Nebraska DHHS to promote appropriate use of antimicrobials to improve patient outcomes and prevent antimicrobial resistance throughout Nebraska.

Expected Outcomes

- Provide necessary tools to empower local team to
  - Form antimicrobial stewardship program

  - Improve appropriate antibiotic prescribing practices

  - Improve patient outcomes

  - Reduce rate of *C difficile* infections

  - Comply with regulatory requirements

ASAP Members

Muhammand Salman Ashraf, MBBS
Co-Medical Director for Nebraska ASAP

- Associate professor Division of Infectious Diseases, UNMC
- Board-certified in internal medicine, geriatric medicine, and infectious diseases
- Member of SHEA Long-Term Care Special Interest Group since 2009
- Contributed to McGeer Criteria revision

Trevor Van Schooneveld, MD
Co-Medical Director for Nebraska ASAP

- Associate professor in Division of Infectious Diseases, UNMC
- Medical Director for Nebraska Medicine Antimicrobial Stewardship Program
- Associate Medical Director of Department of Infection Control and Epidemiology
- Program Director for ID Fellowship Program

ASAP Members

Mark E Rupp, MD

Associate Medical Director for Nebraska ASAP

- Professor and Chief of Infectious Diseases, UNMC
- Medical Director of Department of Infection Control and Epidemiology
- Associate Medical Director for Nebraska ICAP
- Diplomat, American Board of Internal Medicine, and in the subspecialty of Infectious Diseases
- Fellow of the American College of Physicians, the Infectious Diseases Society of America, and the Society for Hospital Epidemiology of America
- Past-President of SHEA and of ASM Division L (Infection Control/Hospital Epidemiology)
- Served as consultant for FDA, CDC, NIH, and VA

ASAP Members

Philip Chung, PharmD, MS, BCPS
Co-Pharmacist Coordinator for Nebraska ASAP

- Founding member of Antimicrobial Stewardship Program at Montefiore Medical Center, Bronx, NY
- Clinical interests include appropriate use of antibiotics, antimicrobial medication safety, and comparative efficacy of antimicrobials

Scott Bergman, PharmD, BCPS-AQ ID
Co-Pharmacist Coordinator for Nebraska ASAP

- Coordinator for the Nebraska Medicine Antimicrobial Stewardship Program
- Clinical faculty of UNMC College of Pharmacy
- Fellow of IDSA
- Clinical interests include appropriate use of antimicrobials and rapid diagnostic testing

ASAP

ASAP Members

Kate Tyner, BSN, RN
Nurse Coordinator for Nebraska ASAP

- Worked in infection control and prevention in inpatient and ambulatory settings since 2005
- Instructor with the Nebraska Infection Control Network
- Enjoys educating healthcare professionals on prevention of HAIs

Regina Nailon, PhD, RN
Clinical Nurse Researcher & Data Support for Nebraska ASAP

- Facilitates and conducts interprofessional research aimed at improving health outcomes and healthcare infrastructure necessary in delivery of care across the care continuum

ASAP Members

Sue Beach

Senior Administrative Assistant for Nebraska ASAP

- Assists with planning, scheduling, recording keeping, and on-site visits

ASAP

Program Provisions

- Perform on-site assessment on current antibiotic prescribing practices and ASP-related activities

- Provide executive summary of findings

- Recommend individualized and practical strategies based on CDC Core Elements of Antimicrobial Stewardship
  - ➢ IV to PO conversion
  - ➢ Prospective audit-feedback
  - ➢ Syndrome-based treatment and/or diagnostic algorithms

- Assist with NHSN data submission

- Make available real-time consultative expertise in ASP implementation

ASAP

Facility Requirements

Absolute must:

➢ Your commitment to form a local team for improvement in antimicrobial prescribing

➢ Your valuable time (medical and pharmacy ASP leads) to meet with and answer questions from ASAP

➢ Your willingness to share information regarding your facility

➢ Your commitment to implement changes recommended by the ASAP program

- Establish ASP as organizational priority

- Educate prescribers on antibiotic resistance and ASP practices

- Educate patients/families on appropriate antibiotic use

- Create ASP that is multidisciplinary (ID, ICP, pharmacy, prescribers)

- Program has core elements (LeAD A TREn)

- Use approved multidisciplinary management protocols

- Collect, analyze, report data on ASP

- Act on improvement opportunities identified by ASP

ASAP

CMS Condition of Participation

- For long-term care facilities (finalized 10/2016)
  - 42 CFR 483.80(a)(3): "…Infection Prevention and Control Program (IPCP) that must include an antibiotic stewardship program that includes antibiotic use protocols and system to monitor antibiotic use."
  - 43 CFR 480.80(a)(4): "…a system for reporting incidents identified under the facility's IPCP and the corrective actions taken by the facility."

- For acute care facilities (proposed 6/2016)
  - 42 CFR 482.42: "…require a hospital to develop and maintain an antibiotic stewardship program…to improve hospital antibiotic prescribing practices and curb patient risk for possibly deadly CDIs…"
  - Goals and responsibilities include
    - Documenting evidence-base antibiotic use
    - Demonstrate sustained improvements in proper antibiotic use
    - Use nationally recognized guidelines to improve antibiotic use
    - Compentency-based training on ASP guidelines, policy, and procedures

ASAP

ASP Core Elements - Hospital

Core Elements of Hospital Antibiotic Stewardship Programs
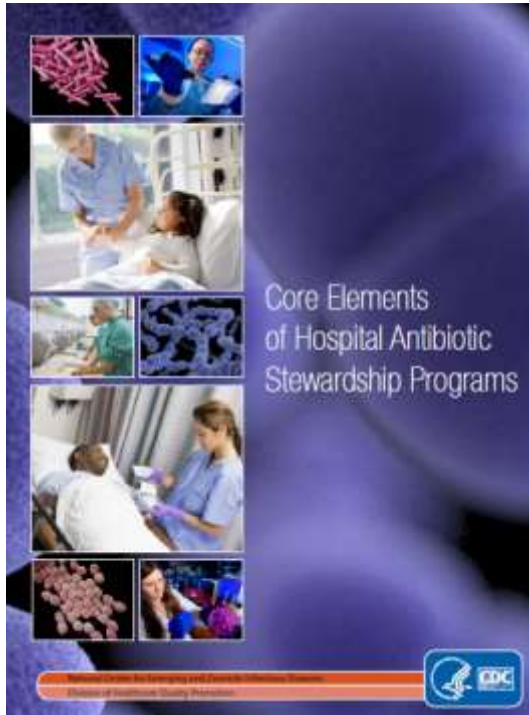
Leadership Commitment

Accountability

- Single MD Expert
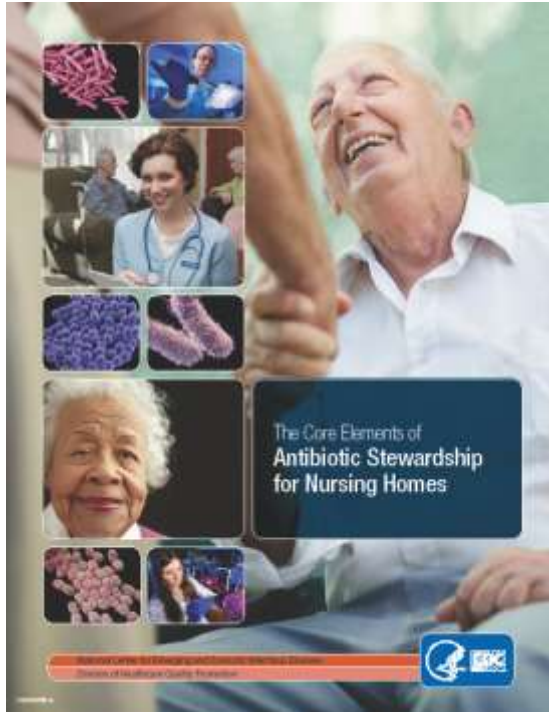
Drug Expertise

- Pharmacist

Action

Tracking

Reporting

Education

ASP Core Elements - LTCF

Leadership Commitment

Accountability

— MD, pharmacist, and nursing

Drug Expertise

— Consultant pharmacist

Action – do one thing

Tracking

— One process and outcome

Reporting

Education

IDSA/SHEA Stewardship Strategies

General interventions

➢ Restriction / pre-authorization

➢ Prospective audit and feedback

➢ Practice guidelines

➢ Improvement of outcomes and antibiotic use based on syndrome

➢ Reduce use of *C difficile*-associated antibiotics

➢ Clinical decision support system

➢ Education / Encourage prescribers to review antibiotic regimens

Pharmacy-Based Strategies

➢ PK monitoring service

➢ IV to PO conversion

➢ Use of PK/PD-optimized alternate dosing regimen

➢ Allergy assessment

➢ Shortest effective duration of therapy

Dellit TH, *et al*. Clin Infect Dis 2007;44:159-77.
Barlam TF, *et al*. Clin Infect Dis 2016;62:e51-77.

IDSA/SHEA Stewardship Strategies

Laboratory-Based Strategies

➢ Antibiograms based on sample source, location, age

➢ Selective susceptibility reporting

➢ Rapid testing for viral respiratory pathogens

➢ Rapid diagnostic for blood cultures

➢ Procalcitonin to reduce antibiotic use

➢ Fungal biomarkers to reduce antifungal use

Population-Based Strategies

➢ Guidelines for febrile neutropenia

➢ Antifungals in immunocompromised

➢ LTCF interventions

➢ Neonatal ICU

➢ Terminally ill patients

Dellit TH, *et al*. Clin Infect Dis 2007;44:159-77.
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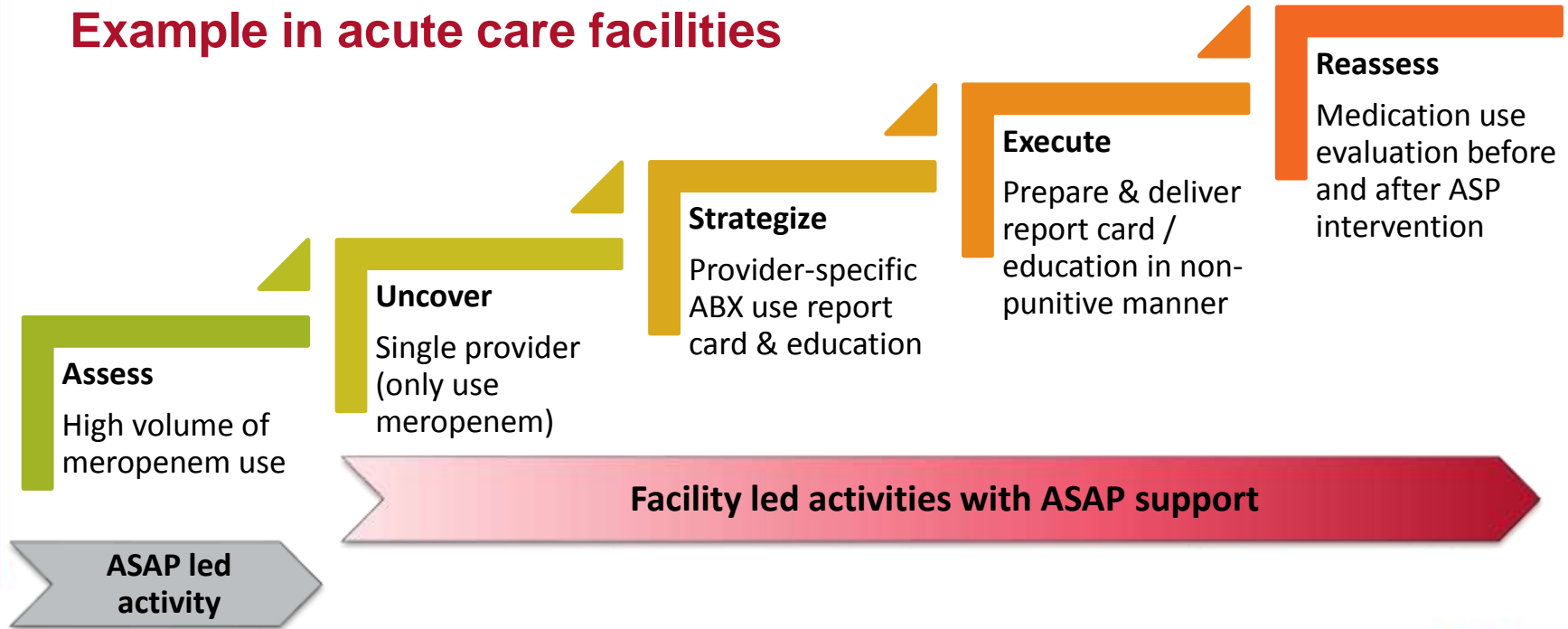
ASAP

Selecting Strategies

Should be based on

- – Size of facility
- – Availability of personnel / expertise (ID, micro, IT, etc)
- – Financial resources / manpower
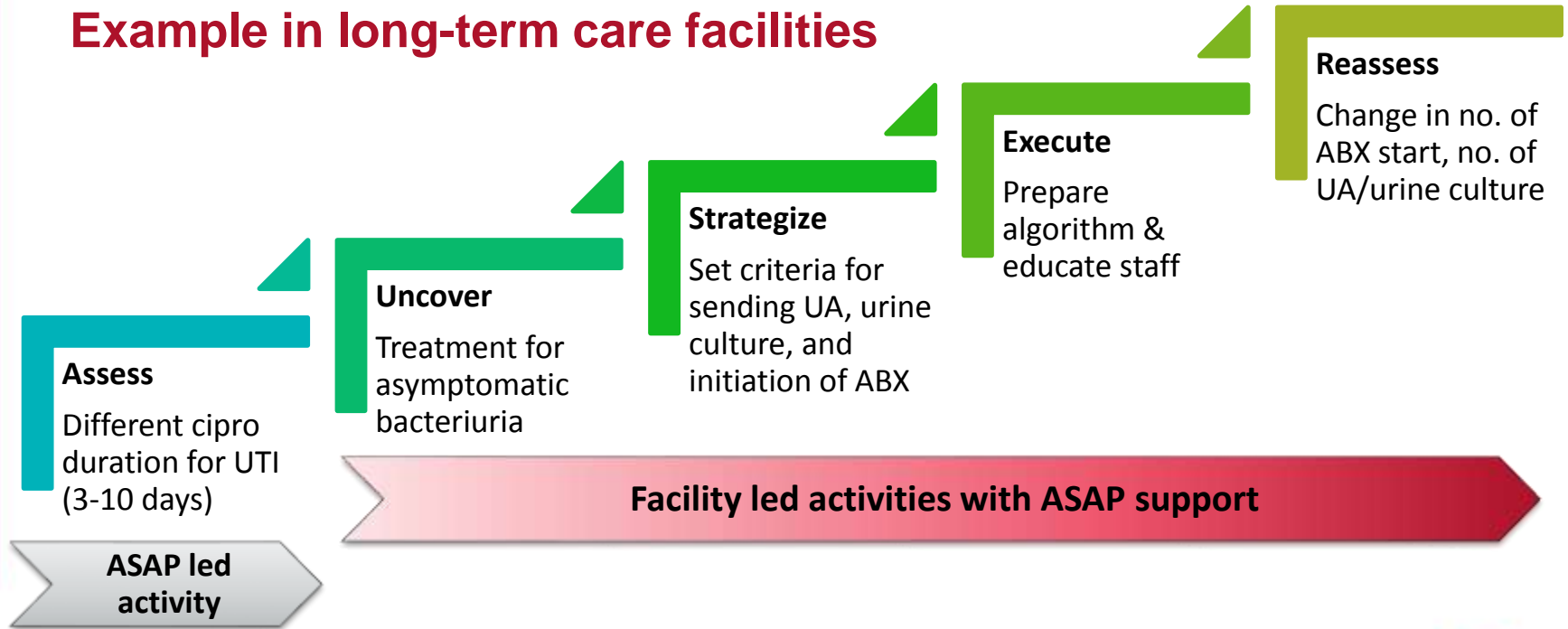- – Electronic ordering / clinical decision support systems
- – Goals

Customize

How will this work?
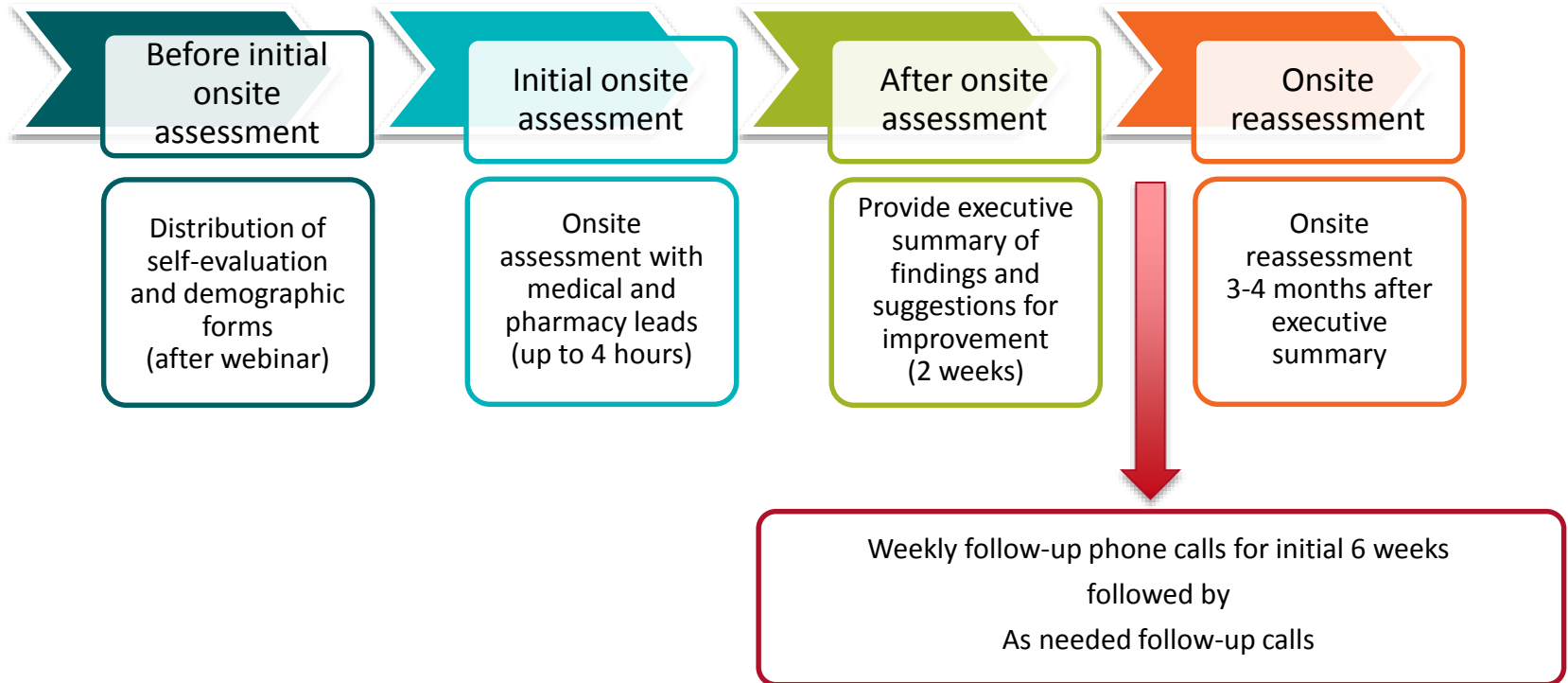## Example in acute care facilities

Reassess

Medication use evaluation before and after ASP intervention

Execute

Prepare & deliver report card / education in non-punitive manner

Strategize

Provider-specific ABX use report card & education

Uncover

Single provider (only use meropenem)

Assess

High volume of meropenem use

ASAP led activity

Facility led activities with ASAP support

ASAP

How will this work?
Example in long-term care facilities

Assess

Different cipro duration for UTI (3-10 days)

ASAP led activity

Uncover

Treatment for asymptomatic bacteriuria

Strategize

Set criteria for sending UA, urine culture, and initiation of ABX

Execute

Prepare algorithm & educate staff

Reassess

Change in no. of ABX start, no. of UA/urine culture

Facility led activities with ASAP support

ASAP

Information Requested Prior to Site Visit

- Antibiotic use data for past 6 months (acute care)

- Number of antibiotic starts for past 6 months (long-term care)

- *C difficile* infection rate

- Availability of antibiogram

Demographic Information and ASAP Self-Assessment

ASAP

en complimentar with Nebraska DHHS, Epidemiology

Nebraska Antimicrobial Stewardship Assessment and Promotion Program

General Information

Facility name: _____

Address: _____

Primary contact person: _____

Position: _____

Email: _____ Phone #: _____

ASP team lead: _____

Institution leadership: _____

Site Demographics

Beds (total): _____ # ICU beds (if applicable): _____

Services provided: _____

_____

Computer Systems

Electronic medical record: Y/N   Name: _____

Computerized physician order entry: Y/N   Name: _____

Other computer systems: _____

ASAP Self-Assessment for Acute Care Facilities

Facility Name: _____

Element	Established at Facility		
I. LEADERSHIP SUPPORT			
1) Does your facility have a formal, written statement of support from leadership that commits efforts to improve antibiotic use (antibiotic stewardship)?	Yes	No	If yes, please provide documentation and example
2) Has the facility assigned tasks or roles for various personnel associated with antimicrobial stewardship?	Yes	No	
3) Does your facility budget financial support for antibiotic stewardship activities?	Yes	No	
II. ACCOUNTABILITY			
1) Is there a physician leader responsible for program outcomes of antibiotic stewardship activities at your facility?	Yes	Actively seeking	No
III. DRUG EXPERTISE			
1) Is there a pharmacist leader responsible for improving antibiotic use at your facility?	Yes	No	If yes, please provide pharmacist leader name
KEY SUPPORT FOR THE ANTIBIOTIC STEWARDSHIP PROGRAM: Does any of the staff below work with the stewardship leadership to ensure optimal antibiotic use?			
Department/Division heads	Yes	No	Specify duties for each that is available on facility team
Non-ID physicians	Yes	No	
ID physician(s)	Yes	No	
Mid-level provider(s)	Yes	No	
Pharmacist(s)	Yes	No	
Infection Prevention (IP) and Healthcare Epidemiology personnel	Yes	No	
Quality Improvement personnel	Yes	No	
Microbiology / Laboratory personnel	Yes	No	
Information Technology (IT) personnel	Yes	No	
Nursing	Yes	No	

Available Resources

- Email and phone
    - pchung@nebraskamed.com
    - 402-552-7636
    - Response within next business day

- Website
    - http://www.nebraskamed.com/nebraska-asap