Inpatient AMS Program Implementation Pearls

Tom Richardson, PharmD, BCPS AQ–ID
May 25th, 2017
Welcome

- Thank you for spending your valuable time with us today.
- This webinar will be recorded for your convenience.
- A copy of today’s presentation and the webinar recording will be available on our website. A link to these resources will be emailed to you following the presentation.
- All phones will be muted during the presentation and unmuted during the Q&A session. Computer users can use the chat box throughout the presentation.
- We would greatly appreciate your providing us feedback by completing the survey at the end of the webinar today.
Tom Richardson, PharmD, BCPS AQ–ID
- Pharmacy Clinical Coordinator
- St. Peter’s Hospital, Helena, MT
Acronyms

- ABS – Antimicrobial Stewardship
- APIC – Association for Professionals in Infection Control
- ASP – Antimicrobial Stewardship Program
- CAH – Critical Access Hospital
- CDC – Center for Disease Control
- CDI – Clostridium Difficile Infection
- COP – Conditions of Participation
- DDD – Defined daily dose
- DOT – Days of therapy
- DPHHS – Department of Public Health and Human Services
- eCQI – Electronic Clinical Quality Improvement
- FLEX – Medicare Rural Hospital Flexibility Program
- HAI – Hospital Acquired Infections
- HIIN – Hospital Innovation Improvement Network
Acronyms Cont.

- ICAR – Infection Control Assessment Tools
- IDSA – Infectious Disease Society of America
- IT – Information Technology
- MHA – Montana Hospital Association
- MP – Mountain-Pacific Quality Health
- MT – Montana
- QIO – Quality Improvement Organization
- QI – Quality Improvement
- PDSA – Plan Do Study Act
- PPS – Prospective Payment Systems
- SSOP – Skaggs School of Pharmacy
- SMART – specific, measurable, actionable (or agreed upon), realistic, time based
MT ABS Collaborative Members

- Montana Hospital Association (MHA)
  - Flex Program
  - HIIN Program
  - Strive Program

- Mountain Pacific (MP)
  - Quality Improvement Organization (QIO) – outpatient focus
  - ICAR Program

- MT Department of Public Health and Human Services (DPHHS)
  - Communicable Disease Epidemiology Program

- Montana Communicable Disease Epidemiology/Skaggs School of Pharmacy (SSOP)
  - DPHHS contract
MT ABS Collaborative

Goal: Collaborate, assist facilities and offer resources, skills and tools available through the multiple programs into a combined state wide ASP implementation plan for use by MT inpatient and outpatient facilities

- Outcomes:
  - Increase effectiveness of technical assistance and educational services provided by programs, reduce redundancy between programs and improve value add program ASP services to inpatient and outpatient facilities in MT
  - Increase % of performance on CDC ASP elements for inpatient and outpatient facilities in MT
  - Optimize and reduce inappropriate antibiotic usage and infection rates in MT
Topics For First Half

- Getting your program off the ground
- Possible approaches for implementation of clinical AMS activities with examples
- Examples of how to build quality dashboard to track interventions and metrics
Practical Advice For Planning Your AMS Program
Get Educated!!!!
- IDSA Guidelines: CAP, HCAP, SSTI, MRSA will be especially helpful
  - Caveat: Guidelines outdate 2–3 years after publication
- Attend local and national conferences and absorb any available CE or AMS workshops!
  - MPA, ID Week, ICAAC

Seek Credentialing Opportunities
- SIDP Antimicrobial Stewardship Certification
- Making a Difference in Infectious Disease (MAD-ID)
  - Basic vs. Advanced certification
- Both certifications open to any discipline
Getting Your Program Off The Ground– GAP Analysis

- GAP analysis– Crosswalk your vulnerabilities
  - CDC core elements
  - CMS Conditions of Participation
  - Joint Commission Medication Management Standards for AMS programs
Essential questions to answer with your policy
- Who is on your AMS team?
- How does your institution intend to operationalize AMS clinical activities using the CDC Core Elements?
  - Prospective audit and feedback (Frequency of review?)
  - Antibiotic restriction or criteria for use
    - Target carbapenems, linezolid, daptomycin
  - Education to providers and staff
- What quality metrics will your program track?
  - Intervention acceptance rates
  - DOT/1000 patient days
  - Antibiotic expenditures
- How does the AMS program report up through the channels?
  - Pharmacy and therapeutics committee?
Getting Your Program Off The Ground– SPH AMS Policy Example

SPH AMS Policy

SPH Ertapenem Criteria For Use
## Getting Your Program Off The Ground—GAP Analysis and Phased Approach

<table>
<thead>
<tr>
<th>PHASE</th>
<th>ACTION ITEMS</th>
<th>TIMELINE</th>
</tr>
</thead>
</table>
| Phase I  | • Develop relationships and partnerships with key stakeholders  
• Heavy dose of education about AMS practices and regulatory requirements Provide reports showing opportunities with antibiotic utilization (MUE’s, days of therapy with target antibiotics  
• Develop GAP Analysis for AMS program  
• Begin writing AMS Policy that includes quality goals | 3–6 Months   |
| Phase II | • Develop and go–live with evidence based order stets and clinical pathways  
• Implement your audit and feedback methodology for antibiotic stewardship review  
• Develop a mechanism for requiring indication and duration for antibiotic prescription orders | 6–12 Months  |
| Phase III| • Implement antibiotic restriction/criteria for use  
• Bring data back to providers and admin showing early successes/challenges  
• Re–evaluate progress with meeting regulatory requirements and program goals | Ongoing      |
Getting Your Program Off The Ground– Goals

- Goals for AMS program
  - **3–6 months:** Identify AMS program leader and team, develop program policy, obtain letter of support from senior leadership, evaluate order sets, plan for setting into action antibiotic review and feedback
  - **1–2 years:** Show decreased trends in targeted antibiotic utilization (broad spectrum use, durations of therapy), achieve >90% compliance with regulatory mandates, achieve >80% acceptance recommendation rates
Practical Advice For Putting Your AMS Program Into Action!!!
Implementation of Clinical Activities– Clinical Decision Support

- Order set review and provider education
  - Do your written and/or electronic order sets follow best practices?
    - For example: Carbapenems, non-vanco MRSA agents, dual anaerobic therapy, double coverage for certain indications should not be empiric treatment options!
  - Do your order sets include requirements for indication and duration of therapy?
    - Evaluate to see if they are evidence based for anti-infectives that include built in durations of therapy
      - For example: SSTI, CAP/HCAP, Intra-abdominal, UTI all have evidence based duration of therapy (per IDSA)
  - Develop education for providers that includes support for evidence based antibiotic use
### Empiric Antibiotic Recommendations for Hospitalized NON-ICU Adult Patients WITHOUT Sepsis

#### INTRA-ABDOMINAL

<table>
<thead>
<tr>
<th>Condition</th>
<th>1st Line</th>
<th>2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community-Acquired</td>
<td>Cefazolin 2 gm IV q8h <strong>PLUS</strong> Metronidazole 500 mg IV q12h</td>
<td>Levofloxacin 750 mg IV q24h <strong>PLUS</strong> Metronidazole 500 mg IV q12h</td>
</tr>
<tr>
<td>Healthcare-Acquired</td>
<td>Pip/tazo Per Protocol</td>
<td>Cefepime 2gm IV q8h <strong>PLUS</strong> Metronidazole 500 mg IV q12h</td>
</tr>
</tbody>
</table>

#### RESPIRATORY

<table>
<thead>
<tr>
<th>Condition</th>
<th>1st Line</th>
<th>2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPD exacerbation</td>
<td>Levofloxacin 750 mg IV/PO q24h</td>
<td>Ceftriaxone 2 gm IV q24h</td>
</tr>
<tr>
<td>COPD- Pseudomonas Risk</td>
<td>Cefepime 2 gm IV q8h</td>
<td>Pip/tazo Per Protocol</td>
</tr>
<tr>
<td>Community Acquired Pneumonia</td>
<td>Ceftriaxone 2 gm IV q24h <strong>PLUS</strong> Azithromycin 500 mg IV q24h</td>
<td>Levofloxacin 750 mg IV daily</td>
</tr>
<tr>
<td>Community Aspiration Pneumonia</td>
<td>Ceftriaxone 2 gm IV q24h <strong>PLUS</strong> Clindamycin 900 mg IV q8h</td>
<td>Levofloxacin 750 mg IV q24h <strong>PLUS</strong> Clindamycin 900 mg IV q8h*</td>
</tr>
<tr>
<td>Healthcare-Associated Pneumonia</td>
<td>Cefepime 2 gm IV q8h <strong>PLUS</strong> Levofoxacin 750 mg IV q24h +/- <strong>Vancomycin</strong> per pharmacy</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Levofoxacin 750 mg IV q24h +/- <strong>Vancomycin</strong> per pharmacy</td>
</tr>
</tbody>
</table>

#### SKIN AND SOFT TISSUE INFECTIONS

<table>
<thead>
<tr>
<th>Condition</th>
<th>1st Line</th>
<th>2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bites (human/animal)</td>
<td>Amp/sub 3 gm IV q6h</td>
<td>Ceftriaxone 2 gm IV q24hr <strong>PLUS</strong> Metronidazole 500 mg IV q12h</td>
</tr>
<tr>
<td>Diabetic foot infection</td>
<td>Ceftriaxone 2 gm IV q24h <strong>PLUS</strong> Metronidazole 500mg IV q12h</td>
<td>Ampicillin/subactam 3 gm IV q6h</td>
</tr>
<tr>
<td>Cellulitis- Abscess</td>
<td><strong>Vancomycin</strong> per pharmacy</td>
<td>Call ASP for alternative Tx</td>
</tr>
<tr>
<td>Cellulitis- Streaking/ Erythema</td>
<td>Cefazolin 2 gm IV q8h</td>
<td>Clindamycin 900 mg IV q8h</td>
</tr>
<tr>
<td>Necrotizing</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Clindamycin 900 mg IV q8h</td>
<td>Ceftriaxone 2 gm IV q24h <strong>PLUS</strong> Metronidazole 500mg IV q12h <strong>PLUS</strong> Clindamycin 900 mg IV q8h</td>
</tr>
</tbody>
</table>

#### CNS

<table>
<thead>
<tr>
<th>Condition</th>
<th>1st Line</th>
<th>2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meningitis</td>
<td>Ceftriaxone 2 gm IV q12h <strong>PLUS</strong> <strong>Vancomycin</strong> per pharmacy</td>
<td>Metopenem 2gm IV q8h <strong>PLUS</strong> <strong>Vancomycin</strong> per pharmacy</td>
</tr>
</tbody>
</table>

#### URINARY TRACT INFECTION (UTI)

<table>
<thead>
<tr>
<th>Condition</th>
<th>1st Line</th>
<th>2nd Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Acquired</td>
<td>Ceftriaxone 2 gm IV q24h</td>
<td>Levofloxacin 750mg IV q24h</td>
</tr>
<tr>
<td>Hospital Acquired (permanent catheter, recurrent UTI)</td>
<td>Cefepime 2 gm IV q8h</td>
<td>+/- <strong>Vancomycin</strong> per pharmacy</td>
</tr>
</tbody>
</table>
# Implementation of Clinical Activities – Clinical Decision Support

## Severe Sepsis Pathway Antibiotic Selection Chart DRAFT

<table>
<thead>
<tr>
<th>Source</th>
<th>1st Line</th>
<th>2nd Line</th>
<th>Life-threatening PCN Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Acquired Non-ICU Admit</td>
<td>Levofloxacin 750 mg IV q24hrs <strong>PLUS</strong> Ceftriaxone 2 g IV q24hrs</td>
<td>Ceftriaxone 1 g IV q24hrs <strong>PLUS</strong> Ceftriaxone 2 g IV q24hrs</td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Ceftriaxone 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
</tr>
<tr>
<td>Community Acquired ICU Admit</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Levofoxacin 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td>Azithromycin 500 mg IV q24hrs</td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Ceftriaxone 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
</tr>
<tr>
<td>Community Acquired Pseudomonas risk</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Levofoxacin 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Levofoxacin 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td></td>
</tr>
<tr>
<td>Community Aspiration</td>
<td>Levofoxacin 750 mg IV q24hrs <strong>PLUS</strong> Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Clindamycin 600 mg IV q6hrs</td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Ceftriaxone 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td></td>
</tr>
<tr>
<td><strong>HAP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAP/HCAP/VAP</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Levofoxacin 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Levofoxacin 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Ceftriaxone 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
</tr>
<tr>
<td><strong>Urosepsis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Acquired</td>
<td>Ceftriaxone 2 g IV q24hrs</td>
<td>Ceftriaxone 2 g IV q24hrs</td>
<td></td>
</tr>
<tr>
<td>Healthcare-Acquired</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Pip/tazo Per Protocol</td>
<td>Pip/tazo Per Protocol</td>
<td>Meropenem 500mg IV q6hrs</td>
</tr>
<tr>
<td><strong>Intra-abdominal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBP</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
<td>Pip/tazo Per Protocol</td>
<td>Levofloxacin 750 mg IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
</tr>
<tr>
<td>Community-Acquired</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
<td></td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
</tr>
<tr>
<td>(ie Appendicitis, cholecystitis)</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
<td></td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
</tr>
<tr>
<td>Hospital-Acquired</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
<td></td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
</tr>
<tr>
<td>Post-op infection</td>
<td>Ceftriaxone 2 g IV q24hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
<td></td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs</td>
</tr>
<tr>
<td><strong>Skin and Soft Tissue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulitis</td>
<td>Vancomycin per pharmacy <strong>PLUS</strong> Ceftriaxone 2 g IV q24hrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Necrotizing Fasciitis</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Clindamycin 600 mg IV q6hrs <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs +/- Vancomycin per Pharmacy</td>
<td>Aztrenam 2 g IV q6hrs <strong>PLUS</strong> Ceftriaxone 750 mg IV q24hrs +/- Vancomycin per Pharmacy</td>
</tr>
<tr>
<td>Diabetic Foot</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Metronidazole 1 g IV q12hrs +/- Vancomycin per Pharmacy</td>
<td></td>
</tr>
<tr>
<td><strong>Meningitis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningitis (age 18-50 years)</td>
<td>Ceftriaxone 2 g IV q12hrs <strong>PLUS</strong> Vancomycin per Pharmacy <strong>PLUS</strong> If age &gt;50 years Ampicillin 2 g IV q4hrs</td>
<td>Meropenem 2gm IV q8hrs <strong>PLUS</strong> Vancomycin per Pharmacy <strong>PLUS</strong> If age &gt;50 years add Ampicillin 2 g IV q4hrs</td>
<td></td>
</tr>
<tr>
<td>Foreign Object</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td>Meropenem 2gm IV q8hrs <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td></td>
</tr>
<tr>
<td>Unknown Origin</td>
<td>Pip/tazo Per Protocol <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td>Cefepime 2 g IV q8hrs <strong>PLUS</strong> Vancomycin per Pharmacy</td>
<td>Meropenem 500mg IV q6hrs <strong>PLUS</strong> Vancomycin per Pharmacy</td>
</tr>
</tbody>
</table>
Implementation of Clinical Activities – Dive Into Action!

- Developing a report or mechanism for identifying and reviewing patients on antibiotics
  - Evaluating selection, dose, route, and duration of therapy
  - De-escalation, IV to PO conversion, antibiotic time outs
  - Developing a system for feedback to providers about therapy opportunities

- AMS feedback forms (retrospective)
- Face-to-face (prospective audit with feedback)

Utilize provider champion to help drive any of these approaches
Practical Advice For AMS
Program Quality Tracking
Developing an AMS Program Quality Dashboard

- Metrics for assessing AMS program could include:
  - **Recommendation acceptance rates**
  - **Antibiotic utilization data**
    - Days of therapy/1000 patient days
    - Antibiotic purchasing
    - Success with meeting regulatory mandates
      - Develop GAP analysis to show progress to admin
# Developing an AMS Program Quality Dashboard - Example

## Antimicrobial Stewardship Program Metrics March 2017

<table>
<thead>
<tr>
<th>Intervention Data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Patients Reviewed</td>
<td>500+</td>
</tr>
<tr>
<td>Total Number of Patients With Interventions</td>
<td>72</td>
</tr>
<tr>
<td>Total Number of Interventions</td>
<td>80</td>
</tr>
<tr>
<td>Interventions Resulting in Therapy Change</td>
<td>71</td>
</tr>
<tr>
<td>Total Number Accepted Interventions</td>
<td>71</td>
</tr>
<tr>
<td>Intervention Acceptance Rate (%)</td>
<td>89%</td>
</tr>
</tbody>
</table>

### Antibiotic Restriction Consults

<table>
<thead>
<tr>
<th>Antibiotic Restriction Consults</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met criteria and approved</td>
<td>3</td>
</tr>
<tr>
<td>Did not meet criteria but discussed and approved</td>
<td>5</td>
</tr>
<tr>
<td>Not approved but ordered and used</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restricted Agent</th>
<th>Empiric vs. Definitive</th>
<th>Indication</th>
<th>Duration</th>
<th>Timing of Start</th>
<th>Meet Criteria?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ertapenem</td>
<td>Empiric</td>
<td>Preoperative abx for pt with multiple medication allergies for cystoscopy, L retrograde pyelogram, ureteroscopy, laser lithotripsy, stone extraction, and stent placement.</td>
<td>1 dose</td>
<td>After hours</td>
<td>Yes</td>
</tr>
<tr>
<td>Ertapenem</td>
<td>Empiric</td>
<td>Klebsiella, GBS in sputum and wrist septic arthritis with GBS and anaerobes, Ertapenem started as definitive therapy for once daily option due to potential cost of Moxifloxacin for outpatient care. AMS confirmed cost of 28 days of Moxifloxacin to be less than $20, abx changed.</td>
<td>2 doses</td>
<td>After hours</td>
<td>No*</td>
</tr>
<tr>
<td>Ertapenem</td>
<td>Empiric</td>
<td>Pre-operative abx for patient with undocumented Augmentin allergy</td>
<td>1 dose</td>
<td>After hours</td>
<td>No*</td>
</tr>
<tr>
<td>Linezolid</td>
<td>Empiric</td>
<td>Diabetic foot infection, SOB requiring breathing treatments after Vancomycin in ER, Linezolid ordered for MRSA coverage as foot swab grew MRSA.</td>
<td>6 doses</td>
<td>Regular Hours</td>
<td>Yes</td>
</tr>
<tr>
<td>Daptomycin</td>
<td>Definitive</td>
<td>Recurrent MSSA PJ infection of hip. Unable to get home health to his house within 24 hours of discharge for his Cefazolin infusions, extensive review of literature performed and discussed with MD. Ultimately opted to give the dose of Daptomycin x 1 for 24 hour coverage until home health could see patient.</td>
<td>1 dose</td>
<td>Regular hours</td>
<td>No*</td>
</tr>
</tbody>
</table>
Developing an AMS Program Quality Dashboard – Example

AMS Restricted Antibiotic Utilization
Days of Therapy/1000 Patient Days

Jan 16' DOT  Jan 17' DOT  Feb 16' DOT  Feb 17' DOT  Mar 16' DOT  Mar 17' DOT  April 16' DOT  April 17' DOT

Daptomycin  Ertapenem  Linezolid  Meropenem
Developing an AMS Program Quality Dashboard—Example

SPH Antibiotic Administration Charges

AMS Program Go-live

$57,535 = Average dollars per month before antibiotic stewardship
$15,173 = Average dollars per month after antibiotic stewardship
$508,340 = Extrapolated annual savings with antimicrobial stewardship program
This document was requested by Joint Commission as part of survey
- Allows concise application of CDC core elements to meeting Joint Commission Medication Management standards for Antibiotic Stewardship
GAP analysis will help you manage the complexity of developing an AMS program and guide development of a timeline for implementation.

An AMS policy will help you drive initiatives and set expectations amongst staff for how stewardship will be put into action (in addition to making regulatory agencies happy).

Operationalizing antibiotic stewardship should begin with hospital education and evidence based order set review.

Identifying what and how for the metrics piece is important to demonstrate value and allow for ongoing quality assessment of program.

Don’t get overwhelmed! Develop a plan and timeline to help with prioritizing. Having a plan will help with meeting regulatory mandates as well!
Additonal Resources

- [https://www.nebraskamed.com/for-providers/asp](https://www.nebraskamed.com/for-providers/asp)
- [http://online.stanford.edu/courses](http://online.stanford.edu/courses)


Q & A

Special thanks to Heidi Simons, PharmD, BCPS and Don Skillman, MD

you can do it!
you've got this!

encourage mint

Peadoodles
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