Society for Infectious Disease Pharmacists (SIDP): Quality Improvement (QI) Projects Overview

August 27, 2024

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Housekeeping

- Who's in the room today? (Name, facility, role)
- Your line has been muted upon entry to eliminate any background noise during today's presentation.
- We encourage questions and open discussion.
- Please utilize the Q&A feature to type in your questions or comments.
- Utilize the Chat Box for comments or technical needs.
- This event is being recorded.

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Agenda

- Society of Infectious Diseases Pharmacists (SIDP) Antimicrobial Stewardship Certificate Training Program Overview
- Quality Improvement Project Presentations
- Q&A

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Flex Program Areas

Required in order to participate in other activities.

Quality Improvement

The quality improvement area includes MBQIP data. **Submitting MBQIP data is the only requirement for critical access hospitals to participate in the Flex Program.** If critical access hospitals meet the MBQIP reporting requirements, they are automatically able to participate in Flex Program activities.

Iowa Healthcare Collaborative sends MBQIP reports to hospitals and provides technical assistance, webinars/calls, and live events related to quality improvement.

Financial Improvement

HomeTown Health provides financial improvement webinars, triage resources, live meetings, comparative dashboards, in-depth assessments and action planning, and peer assistance.

Operational Improvement

HomeTown Health provides operational improvement webinars, live meetings, comparative dashboards, in-depth assessments and action planning, and peer assistance.

Population Health

Iowa Healthcare Collaborative provides community health needs assessment technical assistance webinars. The Iowa Department of Public Health provides individual technical assistance with community health needs assessments and health improvement plans.

Can participate in these activities if quality improvement requirements are met.

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Certificate Overview

Part 1: **Core Content** **12 CE hours**	• **Goal:** provide foundational knowledge relevant for antibiotic stewardship • Self-paced, asynchronous, on-demand learning • Speakers - proven clinicians/educators with national name recognition within ID
Part 2*: **Application** **Minimum 4.25h required**	• **Goal:** expand general stewardship principles to acute care and outpatient settings • Self-paced, asynchronous, on-demand learning • Speakers – clinical with expertise in specific settings
Part 3: **QI module – 1 CE h** **Project - 10 CE hours**	• **Goal:** apply knowledge gained in Parts 1, 2, & 3 module (required for ACPE certificate) • Live office hours (optional) with volunteers from SIDP Stewardship Committee

SIDP | Antimicrobial Stewardship Certificate Program

**8.25h available*

SIDP Website (Link)

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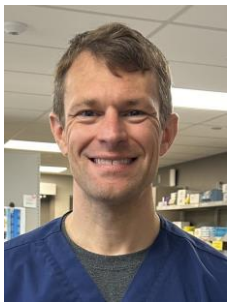
Presenting



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Staff Pharmacist
Boone County Hospital

Heather Ricklefs, PharmD, BCACP
Director of Hospital Pharmacy
Kossuth Regional Health Center

Sara Snitker, PharmD
Pharmacist
WinnMed

Kirsten Dougherty, RPh
Pharmacy Director
Mahaska Health

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Community Acquired Pneumonia (CAP) Order Set Modification

Mikel Brandhorst

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BOONE COUNTY HOSPITAL

- Critical Access Hospital in central Iowa
- Same day surgery, outpatient infusion, ER, birth center, 25-bed Medsurg unit

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Goals of Project

- Increase the rate of appropriate empiric therapy for CAP diagnoses
- Foster physician use of order sets
- Streamline updates

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Inspiration

- In “Academic Hospitals” module, David Ha cited a study by Chan, et al. from *Infection Control Epidemiology* showing dramatic increases in order set usage for UTI, SSTI, and CAP when antibiotics were carved out.

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Intervention

- Carve out the antibiotic orders from the general CAP order set, simplify the name, & simplify the options/view.
- Split the current pneumonia order set into:
  - CAP antibiotics
  - CAP supportive cares
- Presented change at physician staff meeting

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Measurements

- Compare rate of CAP order set usage prior to and after intervention.
- Compare average length of stay (LOS) prior to and after intervention.
- Compare actual appropriate antibiotic use prior to and after intervention

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Order Set Look-up

Prior to Intervention

Name	Active	Amb	Mnemonic
MSP.Pneumonia - Adult	Yes	No	ZMSP.PNEUMO

After Intervention

Name	Active	Amb	Mnemonic
Pneumonia (CAP) Antibiotics	No	No	PNAABX
Pneumonia (CAP) Support Cares	No	No	PNASUPPORT

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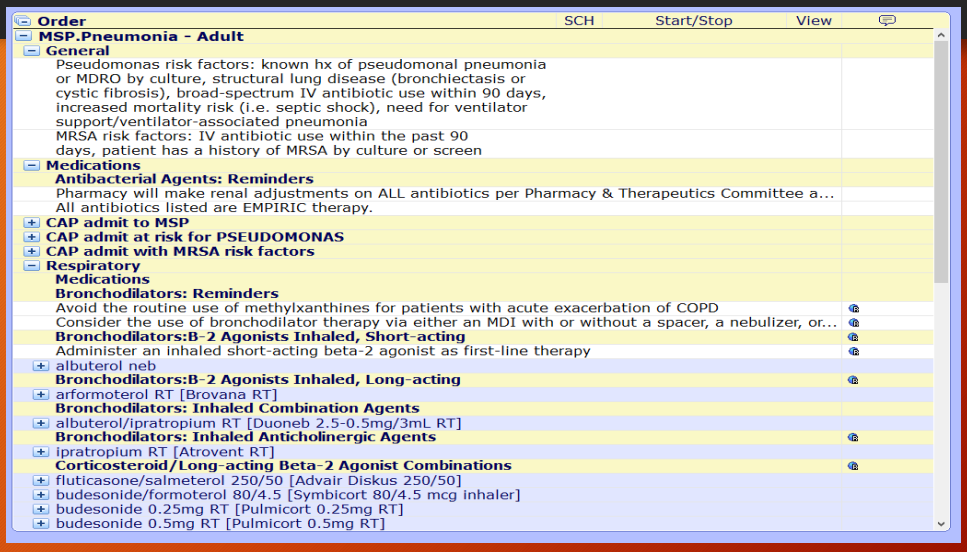
Initial View Prior to Intervention



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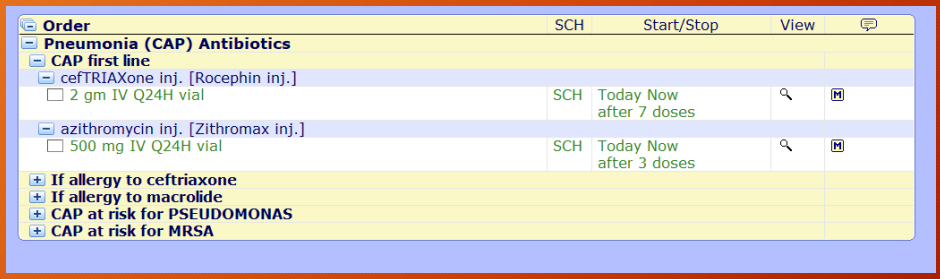
Initial View After Intervention



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Results

	Rate of order set usage	Average length of stay (days/visit)	Rate of appropriate first line antibiotics used
Prior to intervention (62)	8.1%	3.9	41.9%
After intervention (52)	11.5%	3.2	40.4%

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Conclusions/Analysis

- Minimal changes to endpoints (statistically significant?)
- More education and reminders needed.
- Follow-up with physicians to determine additional or continued barriers.
- Would expanding intervention to all infection-related order sets improve order set usage?

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SIDP Antimicrobial Stewardship Certificate Training Program

Heather Ricklefs, PharmD, BCACP

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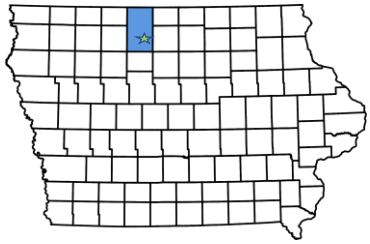
Kossuth Regional Health Center (KRHC)



Demographics

- Kossuth county is the largest county in Iowa (~972 square miles)
- Located in the north central part of Iowa, bordering Minnesota
- Only hospital in the county
  - Located in Algona, Iowa
- 25 bed critical access facility
- Medical staff includes: 8 family medicine physicians and 4 physician assistants, 1 general surgeon
- Pharmacy staff includes: 1 full-time on-site pharmacist, 1 full-time on-site pharmacy technician
  - Remote pharmacy coverage on nights, weekends and holidays

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KRHC Medical Care Provided

All medical staff provide both outpatient and inpatient coverage

- Family medicine ambulatory care clinic
  - 39,000+ visits annually
- Outpatient infusion center
- Hospital inpatient services
  - Acute adult and pediatric hospitalizations
  - Skilled nursing care
  - Surgical hospitalizations and same day surgeries
  - Labor and delivery including cesarian deliveries
  - Emergency room coverage

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Antimicrobial Stewardship Program

- Antimicrobial Stewardship Program
  - Committee membership: pharmacist, nursing, physician, infection control, lab, IT, and CNO
  - Initial antibiogram developed in 2022
  - Currently we do not have any restrictions on antimicrobials that are on the formulary or prior authorizations required
  - Daily and monthly reviews of antimicrobial appropriateness are conducted by pharmacist and infection control

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Project Goal

Target opportunities to improve antimicrobial dosing thereby optimizing antimicrobial therapy

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Intervention

- Policy created to allow pharmacists to autonomously adjust antimicrobial dosages based on current literature and current patient lab results
  - Pharmacist review orders and labs daily and adjust therapy based on changes in clinical status
- Policy was approved by P&T and hospital policy committee board in March 2024
- Uniform dosage adjustments are made based on current literature
  - Utilize Lexicomp as resource for dictating consistent dosage adjustments
  - Vancomycin dosing is based on approved hospital protocol

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Primary Outcomes

- Effectiveness of policy continues to be assessed based on the number of times a dose is adjusted by pharmacy
  - On average, we administer roughly 400 doses of antimicrobials a month at KRHC
  - During the past 2 months (June and July 2024) 47 antimicrobial dosages were adjustments by pharmacy
- All antimicrobial orders are reviewed daily for dosing appropriateness
  - Not all orders required adjustments by pharmacy, however all orders are tracked and followed for any potential changes that might be needed based on changes in patient clinical status
  - Patients are prioritized based on admission time; most recent hospital admissions are reviewed first
- Measurement of this project has become the new quality measurement for the antimicrobial stewardship committee for the FY 2025

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Additional Outcomes

- Adverse reactions avoided
  - No ability to measure this however assume that by optimizing dosing we are avoiding adverse effects related to incorrect dosing
- Pharmacist time saved
  - Workflow in the pharmacy has benefited from this change allow for additional pharmacist time to work on other antimicrobial stewardship projects
- Unexpected outcome
  - As a result of this policy; we are receiving more calls from providers asking pharmacy for dosing recommendations for inpatient and outpatient antimicrobial therapy
  - Nursing staff have become more aware of dosing adjustments required based on renal function

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Barriers

- Communication was essential when orders are changed to ensure that staff are aware of dosage changes
  - Solution: implemented documentation on orders when dosing changed per pharmacy
- Data collection is manual utilizing a spreadsheet
  - Easy to forget to document interventions made
  - Solution: Continuing to work with IT on utilizing options in Cerner that would work for documentation and report generating

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Key lessons learned

- Communication is essential
  - Ask questions and LISTEN
    - Seek recommendations from antimicrobial stewardship committee, CNO, nurse manager and nursing staff on areas for improvement
    - Speak individually with all providers for opportunities for improvements, opinions and feedback regarding antimicrobial stewardship
  - Building and nurture relationships with providers and nursing staff
    - Understanding providers different preferences and respecting their opinions is important when making decisions
- Small changes can have profound effects
  - Providers are now more mindful of potential dosing adjustments that may be required for both inpatient and outpatient antimicrobial therapies

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SIDP Program Feedback

- Self-paced learning was beneficial
- Knowledge checks and quizzes were beneficial
- Ability to go back and listen to lectures was useful on multiple occasions

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Society of Infectious Disease Pharmacist (SIDP) Quality Improvement (QI) Project

Hard stop on antimicrobial orders

Sara Snitker, PharmD
snitkers@winmedical.org

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- 25 Bed Critical Access Hospital located in Decorah, Iowa
  - Medical/Surgical Unit, Emergency Department, Urgent Care, Surgery, Obstetrics/Gynecology, Infusion Services
- 3 Community Clinic Locations
  - Multiple Specialties
- 2 Student Health Service Clinics
- 5 Rehabilitation & Sports Medicine Clinics
- 3 Full Time Pharmacists
  - Director of Pharmacy
  - 2 Patient Care Pharmacists

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Antimicrobial Stewardship Committee

- Pharmacist – Current lead: took over the committee about 1 year ago
- Physician – Hospitalist/Family Medicine Provider
- Infection Preventionist
- Administration – CNO
- Performance Excellence
- Lab
- Nursing
  - Surgery & Infusion
  - OR
  - Medical Surgical X 2

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SIDP QI Project Overview

- Implemented a hard stop for providers to 3 main areas to improve compliance in identification of source of infection when applicable.

- This project was chosen for ease of completion in the allotted time frame and impact on patient safety.

- Reports created in the EPIC reporting workbench.
  - This data was used to analyze our compliance pre and post intervention.

- CMO sent an email to providers to kick off the project and provide background for physicians and the change taking place.

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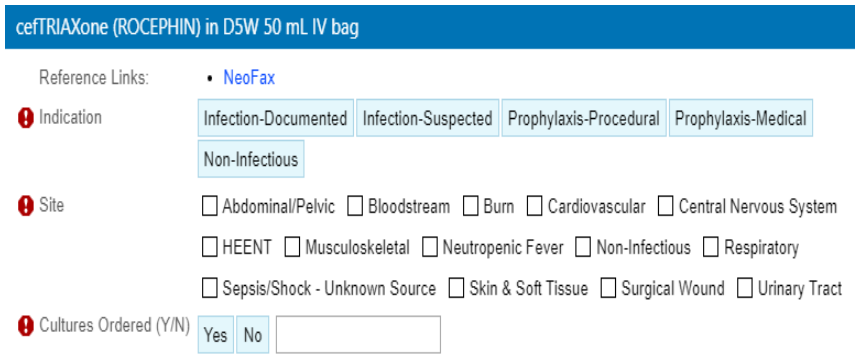
Intervention

- Hard stop implemented for:
  - Indication
  - Site
  - Culture



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Barriers

- Dedicated time for AMS activities
  - Scheduled biweekly work sessions with infection preventionist
- EPIC capabilities
  - Worked with EPIC team to create a new report and change the 3 questions from soft to hard stops in antibiotic orders
- Facility specific workflows for projects
- Expected: Physician push back

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Outcomes

- Compared June/July 2023 and June/July 2024

	2023	2024
All 3 Questions Answered	46	157
Total number of Orders Evaluated	197	157
% Compliance	23%	100%

*Excluded orders: 2023 (21), 2024 (18)

- The effect of our intervention was seen by the improvement in compliance with providers answering the 3 questions.

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Outcomes

- Identified 4 order records that did not contain the questions
  - Updated
- New service line, allergy, desensitization orders
- Identified a difference for orders selected from facility vs database lists
  - RPh should use facility order when able
- Original goal was to look at site but now we have data for culture obtained and indication.

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Future Projects

- AMS committee updated the empiric antibiotic order set as well during this time as they can go hand in hand
- Review of bug/drug matching
- IV to PO conversion
- Start/Stop/Change Therapy
- Asymptomatic bacteriuria

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SIDP QI Project:

Reducing Antibiotic Prescribing for Viral Pharyngitis and Viral Upper Respiratory Symptoms

Kirsten Dougherty, RPh
Director of Pharmacy
August 2024

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- Located in Oskaloosa, Iowa – Population 11,500
- Serving patients from all over southeast Iowa
- 25 Bed Acute Care Hospital comprising of Inpatient, Obstetric, Surgery, Emergency Room and Infusion services
- Medical Group Clinic comprising of 23 Family Medicine, Obstetric, Pediatric, and Walk-In Providers
- Specialty clinics including Allergy, Cardiology, General Surgery, Infectious Disease, Obstetrics and Gynecology, Neurology and Sleep Services, Oncology/ Hematology, Orthopedics and Sports Medicine, Pain Management, Podiatry, Rheumatology, and Urology

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Antimicrobial Stewardship Program

- Current: Co-led by Director of Pharmacy and Hospitalist
- Future: Co-led by Director of Pharmacy and Infectious Disease
  - New Infectious Disease provider started this month
- Antimicrobial Stewardship Committee meets quarterly
- Committee members consists of pharmacy, providers, laboratory, nursing, leadership, IT, quality, and infection control
- Our process:
  - Antibiogram updated annually
  - Facility specific therapeutic guidelines reviewed and updated annually
  - Antibiotic time outs performed daily on inpatient
  - Pharmacokinetic dosing and monitoring of Vancomycin
  - Renal dosing adjustments made on all antibiotics

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Project Overview

- Identified lack of antimicrobial stewardship processes for our outpatients in the clinic setting
- Stewardship committee reviews antibiotic prescribing from our outpatient providers quarterly
  - Due to high prescribing of antibiotics for viral illnesses, a decision was made to focus on the top 2 diagnoses.
  - The top 2 viral diagnoses were viral pharyngitis and viral upper respiratory symptoms
- Project goal was made to decrease antibiotic prescribing for the top 2 viral diagnoses and thereby increasing antibiotic prescribing appropriateness by at least 5 percentage points.
- Interventions that needed to be made involved pharmacy and clinic providers

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Interventions

- Followed CDC recommendations with antibiotic prescribing for viral illnesses
- Provided one-on-one education with providers
- Provided educational materials to providers for patients not receiving antibiotics for their viral diagnosis

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Barriers

- Some providers had concerns with upsetting patients if they did not prescribe an antibiotic.
  - Concerned about negative reviews
- Lack of time needed to educate patients
- Provider workload

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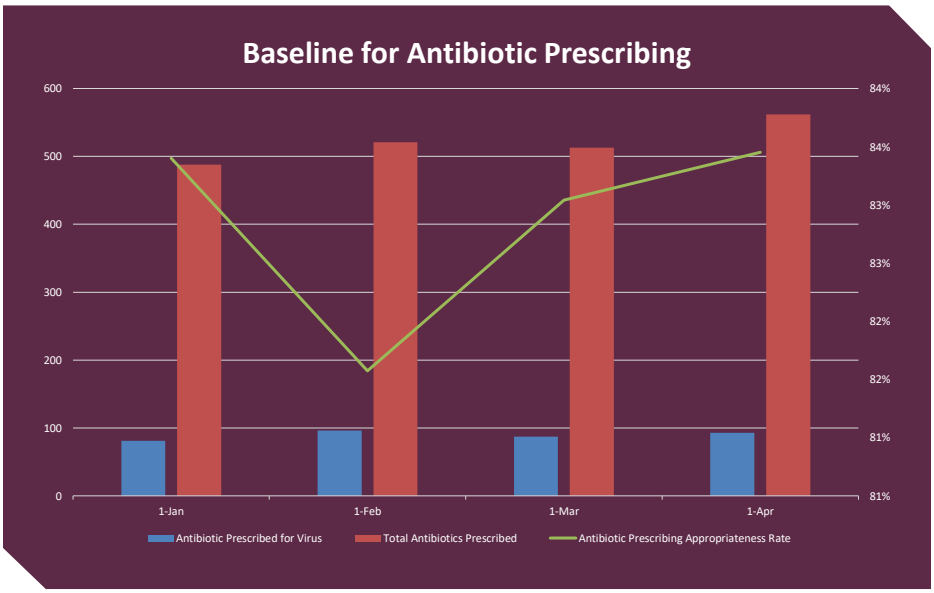

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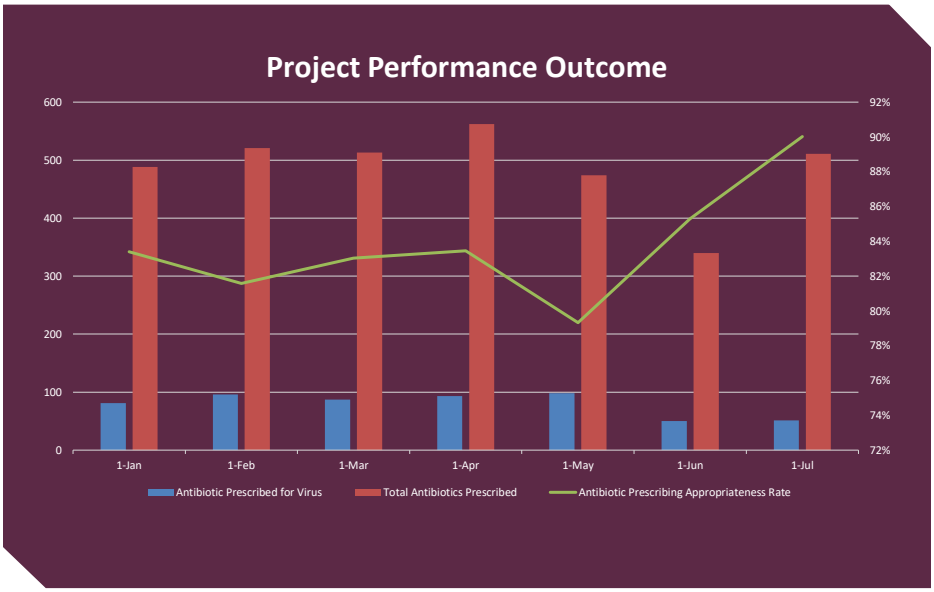

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Sustain Results

- Pharmacy's FY25 Performance Improvement Project
  - Maintain antibiotic appropriateness percentage rate of 90% or greater
- Continue face-to-face discussions with providers
- Provide more education to patients

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Questions

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iCompass Academy

- This webinar will be recorded and be available on iCompass Academy
- What is iCompass Academy?
  - iCompass Academy offers an online suite of eLearning products including webinars, courses and virtual events that can be accessed anywhere at any time.
- Learn more about the education platform by visiting https://education.ihconline.org/ (Link)
- To create an account, visit: https://education.ihconline.org/user/register?destination=homepage (Link)

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iCompass

- We encourage you all to also join us on IHC's communicative platform, iCompass.
- iCompass is an online IHC forum designed to share information throughout the entire industry and bring people together to drive sustainable healthcare transformation.
- Create an account today: https://www.ihconline.org/icompass/sign-up (Link)

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- Compass posts are available on the following platforms:
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    - Follow us: @IowaHealthcareCollaborative (Link)
  - LinkedIn:
    - Follow us: @iowa-healthcare-collaborative (Link)

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Thank You for Participating

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