

Leveraging Health Information Technology for ABS

Montana ABS Collaborative

11/7/2018



Quality Improvement Organizations

Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES



Mountain-Pacific
Quality Health

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. Please use the chat box throughout the presentation for any questions to be addressed during the Q&A session.
- ▶ We would greatly appreciate your feedback. There will be a poll at the end of the presentation and a survey at the end of the webinar today.

Presenter:

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Mountain–Pacific Quality Health
Alaska Office

Nine years' experience
supporting hospitals and
physician practices via state
and federal reporting
programs, quality
improvement projects and
HIE connectivity

MT ABS Collaborative Members

- ▶ **Montana Hospital Association (MHA)**
 - Flex Program
 - HIIN Program
- ▶ **Mountain–Pacific Quality Health (Mountain–Pacific)**
 - Quality Improvement Organization (QIO) – outpatient focus
 - Infection Control Assessment and Response (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
- ▶ **Montana Office of Rural Health**
 - State Health Insurance Assistance Program (SHIP)

MT ABS Collaborative – Goal



Through collaboration, implement the 7 inpatient and 4 outpatient CDC Core Elements in 85% of the recruited hospitals and clinics in Montana by the end of 2018



Outcome goal:

Reduce *Clostridium difficile* infection (CDI) rates across Montana by 10%



Process goal:

Establish days of therapy for antibiotic (NQF 2720) usage as a standard measure for inpatient facilities across Montana

Agenda/Learning Objectives

- 1) Learn ways to help reduce burden and improve patient safety by leveraging your health information technology to support your antibiotic stewardship program (ASP).
 - 2) Provide examples of how you can use EHR functionality and data to help support ABS protocols and your overall ASP program goals.
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CDC ASP Core Elements

Leadership Commitment: Dedicating necessary human financial and information technology resources

Accountability: Appointing a single leader responsible for program outcomes; experience with successful programs shows a physician leader is effective

Drug Expertise: Appointing a single pharmacist leader responsible for working to improve antibiotic use

Action: Implementing at least one recommended action such as systemic evaluation of ongoing treatment need after a set period of initial treatment (e.g., antibiotic “time out” after 48 hours)

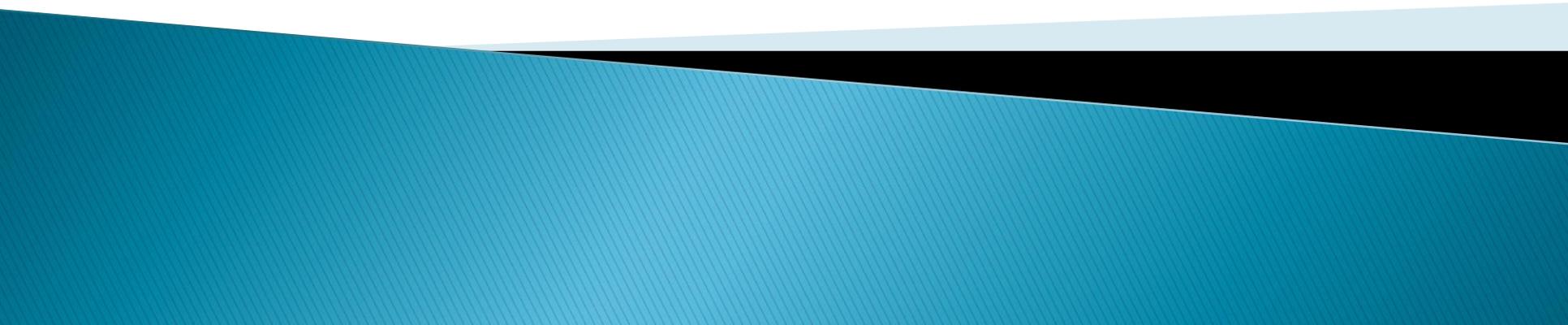
Tracking: Monitoring antibiotic prescribing and resistance patterns

Reporting: Regular reporting information on antibiotic use and resistance to doctors, nurses and relevant staff

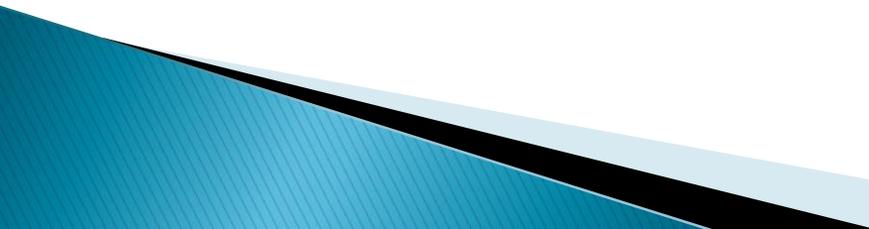
Education: Providing information to clinicians about resistance and optimal prescribing

Leveraging EHR Technology for ABS

EHR Technology – Overview



EHR Functionality

- ▶ Computer Provider Order Entry (CPOE)
 - ▶ Customizable fields/mandatory data entry
 - ▶ Patient Education
 - ▶ Clinical Decision Support (CDS)
 - ▶ Reminders/Alerts/Notifications
 - ▶ Patient panels/tracking/risk stratification
 - ▶ Report utilities/population analytics
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EHR Functionality



CPOE

- ▶ Data points can be retrieved from CPOE to affect care improvement
- ▶ CPOE enhances use of clinical decision support rules or guidelines at point of care



Patient Education/ Discharge Instructions

- ▶ Provide credible source of information
- ▶ Encourage patient engagement
- ▶ Assist with transition of care



Patient Reminders

- ▶ Proactive preventive care
- ▶ Follow-up and care coordination

EHR Functionality

- ▶ **Clinical Decision Support (CDS)– Target conditions and standardize treatments.**
 - **Data Display**
 - Flow sheets, patient data reports and graphic displays
 - **Workflow Assistance**
 - Task lists, patient status lists, integrated clinical and financial tools
 - **Data Entry**
 - Templates to guide documentation and structured data collection
 - **Decision – Making**
 - Access to resource rule–based alerts, clinical guidelines or pathways, patient/family preferences and diagnostic decision support

EHR Functionality

- ▶ **Lab interfaces (or lab results as structured data)**
 - Data points retrieved from lab results
 - Lab results (structured data) enhances use of clinical decision support rules or guidelines at the point of care
- ▶ **Patient Panels/Risk Stratification**
 - Track and monitor high risk patients
 - Use patient panels or risk scores to identify care coordination priorities
 - Track performance based on panels/risk scores

EHR Functionality

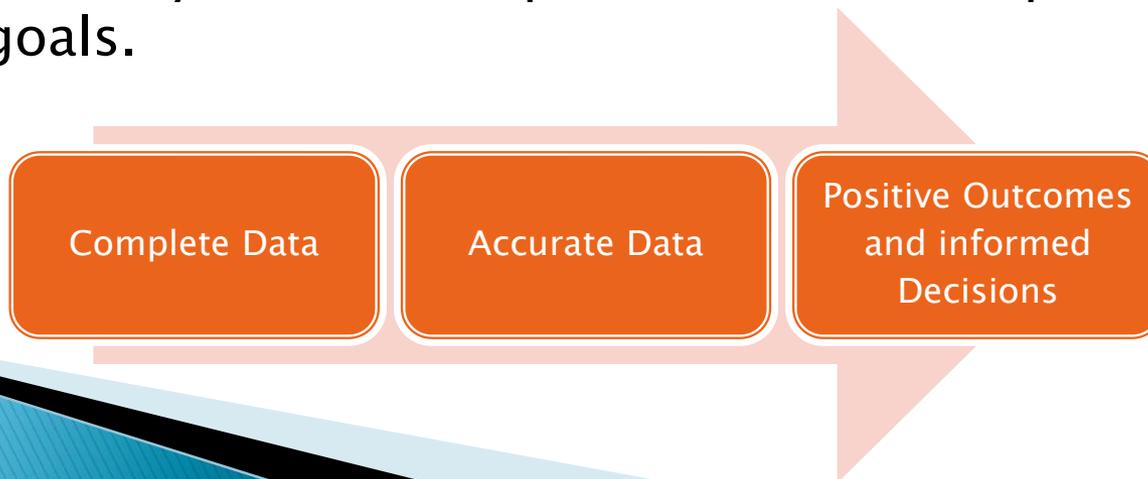
- ▶ **HIE/Transition of Care/Discharge Info/Public Health Registries**
 - Improve communication between providers and/or facilities
 - Provide and enhance continuity of care delivery
 - Data collection and analytics
 - Population health data
 - Secure Messaging

Leveraging EHR Technology for ABS

Use of Technology; Examples for ASP

Health Information Technology and Antibiotic Stewardship

- ▶ IT staff should be integral part of ABS team and data should play key role in your ABS strategy.
- ▶ Completeness of clinical documentation in the EHR provides necessary data for ABS interventions and improvements.
- ▶ Know your EHR:
 - All EHR systems differ in user interface and capability.
 - Know what your EHR's capabilities are to help achieve your ABS goals.



Important Data Elements and Tracking

Antibiotic Name	Therapeutic and Drug Class
Dose, Duration, Route	Indication
ABX Start Date	ABS Stop Date
Prescriber Identifier	Unit Location

Customizable/Mandatory Fields

Customize the EHR to make the below fields mandatory. Requiring these fields will **help with tracking vital antibiotic usage data points** and **create a standardization across your facility**.

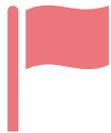
- Dose, duration, and indication for all antibiotics prescriptions
- Diagnosis
- Patient allergies

Customizable/Mandatory Fields

Indication can be customized further to **have a drop-down standardized list** instead of a non-discrete data field. Modify the EHR field so clinicians are required to use a drop-down box to enter antibiotic indications during order entry.

Alerts / Flags

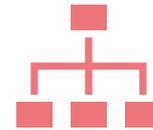
Utilize alert/flag functionality to notify clinicians at critical times or as workflow reminders.



Flags or other alerts to make it apparent if cultures have not yet been obtained and checkboxes indicating cultures have been obtained



Set up EHR alert or flag to notify clinicians when a new culture is received



Culture prompts or default orders incorporated into standardized order sets for various conditions

Alerts / Flags



Set up within the EHR alert/flag to notify clinicians when antibiotic times out and needs to be reviewed.



Prominently flag the medical record or computer order entry system to show patient allergies to antibiotics.



Customize EHR alerts to notify clinicians when they are ordering restricted agents.

- Standardize order sets for various conditions.
- Enable prescriber to answer questions with alert that will help determine whether use of restricted agent is appropriate.

Advanced Patient Lists

Patient lists can be provided routinely to support chart/antibiotic review and follow-up tasks to appropriate staff.

- Generate a list of all patients in need of a 48–72 hour antibiotic review on a given day
- Patient who have been on antibiotics for 7days.
- Patient who are on 3 or more antibiotics.
- Patients who are on restricted antibiotics (expensive antibiotics).

Available Guidelines

Ensure prescribers have the right information at the right times. Embed and make information available:

- ▶ Facility-specific treatment recommendations or protocols based on national guidelines
- ▶ Antibiogram: local susceptibility data
- ▶ Antibiotic recommendations on dose/duration for most popular antibiotics
- ▶ Incorporate communication tools/forms in EHR

Antibiotic Time Out

Supporting Technology:

- ▶ Provide automated alerts for each patient on antibiotics, timed for 48–72 hours post-initial administration.
- ▶ Generate a list of all patients in need of a 48–72-hour antibiotic review on a given day.
- ▶ Documenting the completion of an antibiotic time-out in the health record, for assessment of staff compliance with time-out protocols.
- ▶ Asses the percent of antibiotic starts that received an assessment timeout.

Formulary restriction and preauthorization

Supporting Technology:

- ▶ Standardize order sets for various/most common conditions.
 - ▶ Restrict use of certain antibiotics and require authorization.
 - ▶ Customize EHR alerts to notify clinicians when they are ordering restricted agents.
 - ▶ Enable prescriber to answer questions with alert that will help determine whether use of restricted agent is appropriate for justification.
 - ▶ Require preauthorization documentation for prescribing restricted antibiotics.
 - ▶ Review prescribing trends by provider.
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Optimizing Antibiotic Dosing



Look for the most commonly used antibiotics (review and update orders)



Embed guidelines in order sets for recommended dosing



Dose range alerts

Leveraging EHR Technology for ABS

Next step ideas

Where to start?

- 
- ✓ Make dose, duration, indication mandatory fields.
 - ✓ Report on most used antibiotics and create guidelines.
 - ✓ Provide patient lists for review and follow-up.
 - ✓ Make critical information and guidelines available.

Intermediate Activities



Set up alerts for antibiotic timeouts or cultures



Formulary restrictions and preauthorization

- Standardize order sets for various/most common conditions
- Review and restrict use of certain antibiotics
- Require preauthorization for any restricted antibiotics

Leveraging EHR Technology for ABS

Wrap Up, Resources and Q&A

Leveraging EHR Technology

Wrap-Up

- ▶ Focus on **how you can leverage your technology** to support your ABS goals and create more complete documentation and efficient workflows for your clinicians.
 - ▶ Ensure any ABS strategy **can be monitored and measured** for effectiveness.
 - ▶ **Train staff** on any new data workflow.
 - ▶ Try not to implement too many changes at once.
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ABS Collaborative Resources

- ▶ **Website:** [MT ABS Resources](#)
- ▶ **ABS Blog:** [Register and posts](#)
- ▶ **Upcoming Education:** [MT ABS Webinars](#)
- ▶ **Presentation Resources:**
 - <https://www.cdc.gov/antibiotic-use/healthcare/implementation/core-elements-small-critical.html>
 - <https://www.cdc.gov/antibiotic-use/healthcare/pdfs/core-elements.pdf>
 - <http://www.health.state.mn.us/divs/idepc/dtopics/antibioticresistance/hcp/ehrf.pdf>

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Q&A
and
Poll Question



Thank You

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