

Journey Of A Small Hospital - The CAP Experience

Ascension River District Hospital

Community Hospital licensed for 68 beds

Located in East China Michigan

Affiliated with Ascension since 1999

Provided Hospital Services

- Med/Surg
- ICU
- ED
- Inpatient/Outpatient Surgeries
- PT/OT





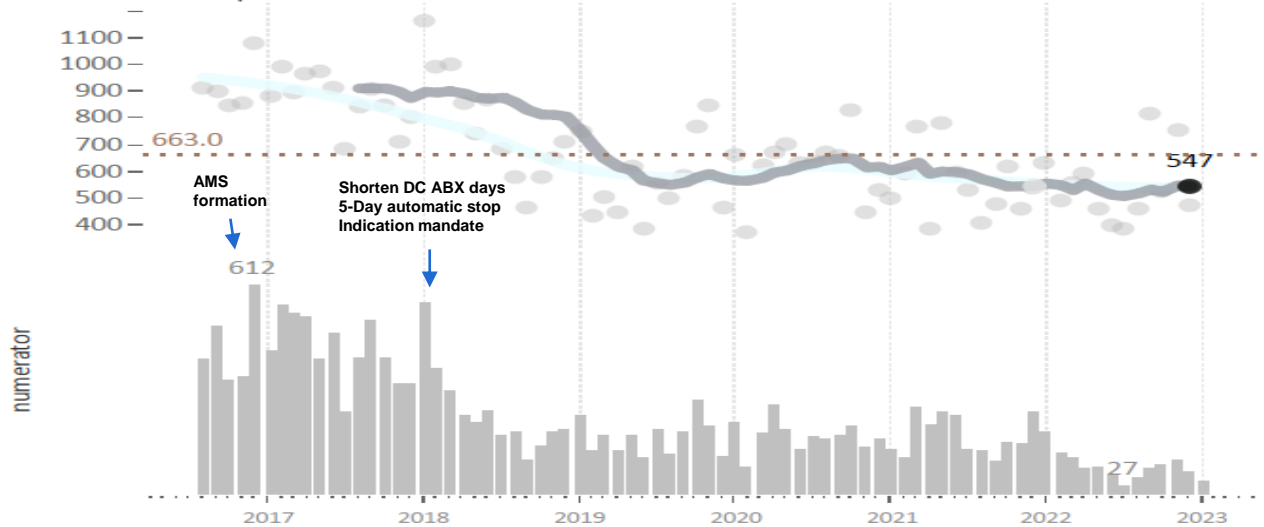
Earlier Focus of Antimicrobial Stewardship 2017 - 2018

Our first goal was to reduce unnecessary antibiotic consumption.

- Shorten the options on number of days on discharge order sentences
- Automatic 5 day stop on all antibiotic orders
- Indication mandate on all antibiotic orders at the time of entry

Total Systemic Antimicrobial Consumption

Total Systemic DOT
River District Hospital

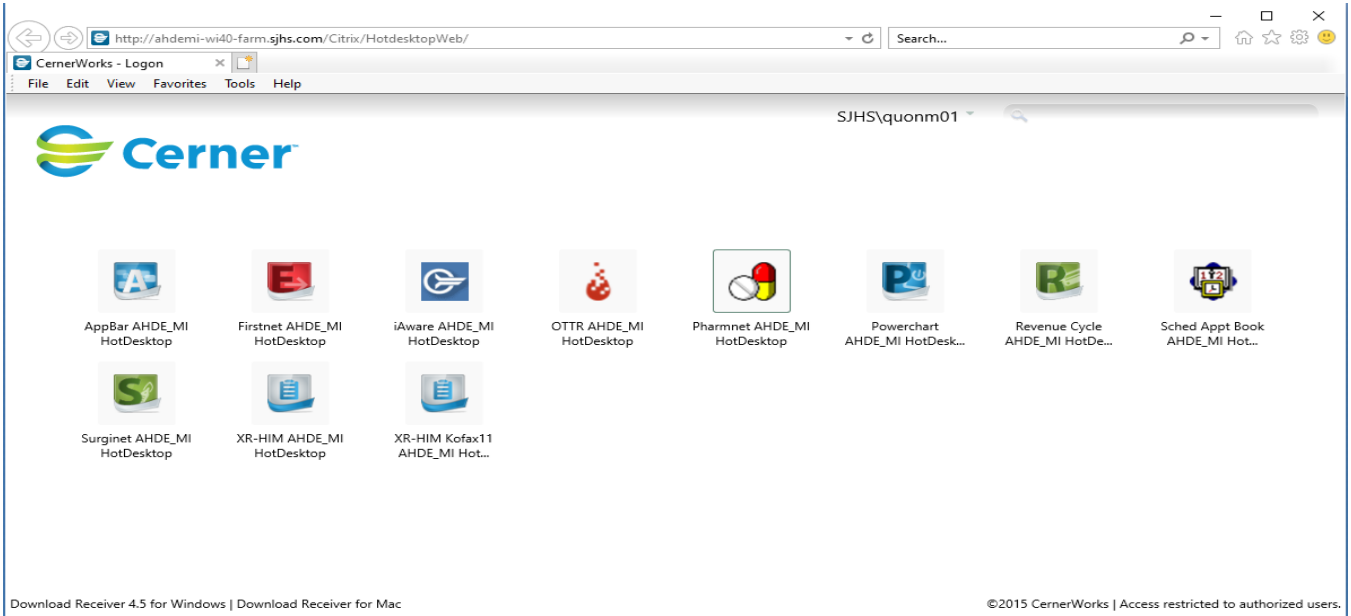


Quinolone Use

Quinolone DOT
River District Hospital



Current system - Cerner/Pharmnet



The screenshot displays a Citrix HotDesktop Web interface. The browser address bar shows the URL <http://ahdemi-wi40-farm.sjhs.com/Citrix/HotdesktopWeb/>. The page header includes the Cerner logo and the text "CernerWorks - Logon". The main content area features a grid of application icons, each labeled with its name and "HotDesktop". The applications are:

- AppBar AHDE_MI HotDesktop
- Firstnet AHDE_MI HotDesktop
- iAware AHDE_MI HotDesktop
- OTTR AHDE_MI HotDesktop
- Pharmnet AHDE_MI HotDesktop
- Powerchart AHDE_MI HotDe...
- Revenue Cycle AHDE_MI HotDe...
- Sched Appt Book AHDE_MI Hot...
- Surginet AHDE_MI HotDesktop
- XR-HIM AHDE_MI HotDesktop
- XR-HIM Kofax11 AHDE_MI Hot...

At the bottom of the interface, there are links for "Download Receiver 4.5 for Windows" and "Download Receiver for Mac", and a copyright notice: "©2015 CernerWorks | Access restricted to authorized users."



STRATEGIES

- #1 PHARMACY DEPARTMENT,
- #2 COMMUNICATION,
- #3 TECHNOLOGY, UTILIZING EMR CERNER SYSTEM
- #4 REVIEW AND IMPROVE

In Our Favor

- **Dedicated staff pharmacists**
- **One consistent hospitalist champion - Dr. Son**
- **Resource sharing with sister hospitals**
- **Incorporating HMS into the AMS meetings in 2018**
- **Supportive administration & HMS Physician Champion**





#1-PHARMACISTS

Incorporating antimicrobial stewardship activities into their daily routine

- A report is generated daily for every antibiotic ordered on every single patient. The pharmacist will review it daily for possible de-escalation recommendation.
- Daily reviewing of Senti7 Antimicrobial rules - will explain in the next slide for those of you who are not familiar with this function.
- Honing on HMS initiatives on 5-day CAP and reducing fluoroquinolone use.
- To reduce Fluoroquinolone use - we made it simple by automatically rejecting all fluoroquinolones to allow a pause, to have time to evaluate if alternative agents can be used.



What is Sentri 7?

Platform that interfaces with the EMR and microbiology database to facilitate :

- **Improvement in antimicrobial agent selection**
- **Reducing redundant coverage and medication-bug mismatches**
- **Optimization of medication dosing**
- **Tracking of restricted medication**
- **Suggesting therapeutic substitutions**
- **IV to oral conversions**
- **Reducing duration of antibiotic therapy**

Example of Senti 7 AMS rule

Wolters Kluwer Notifications Help Skoczen, Shariene

ASCENSION HEALTH Ascension River District Hospital 2/14/2023

Senti7® Dashboard Patients Regulatory Reporting Admin

Searching Active Patients Search

There are New Susceptibility Test value(s), New Organism Name value(s) that aren't matched Edit Values

ASC AMS (1) ASC Anticoagulation (0) ASC IV to PO (Abx) (0) ASC IV to PO (Non-Abx) (0) ASC Open Follow Ups (1) ASC PK Monitoring (0) ASC Quality & Safety (0) ASC Renal Dose (Abx) (0) ASC Renal Dose (Non-Abx) (0) ASC Therapeutic Initiative (0) ASC TPN Assessment (0) COVID-19 Treatment Monitoring (0) Monkeypox (0) Targeted Drug Monitoring (0)

Show Rules with No Patients SELECT FILTERS

ASC Ceftriaxone @ 48-72 Hours for Pneumonia* (1)

| Patient Id | Name | Location | Events in Last 7 Days | Allergies | WBC | Temp | RR | HR | Rule is moved |
|------------|------------|---------------|-----------------------|--------------------|--------|------|----|-----|---|
| [REDACTED] | [REDACTED] | MS - 155 - MS | | No known allergies | ↑ 5.67 | 36.8 | 20 | 103 | ADR AE INT Microbiology Relevant Drugs Review |

Suggested Action:
Review and intervene on ceftriaxone (+/- other antimicrobial therapy) indicated for pneumonia.

CAP De-escalation Checklist
Examine patient clinical status, imaging results/progress and laboratory/microbiology results.
Clarify reported antibiotic allergies.
Intervene by recommending an appropriate action to provider, for example:

- De-escalation to narrower therapy
- Transitioning to oral antibiotics
- Selecting an appropriate duration of therapy and stop date
- Discontinuation for appropriate patients

Have a Suggestion to Improve This Rule? - Send Us a Quick Request!

Few more examples of Sentri 7 AMS rules

[-] ASC Ceftriaxone @ 48-72 Hours for Pneumonia* (2) ⓘ

| Patient Id | Name | Location | Events in Last 7 Days |
|----------------------------|----------------------|--------------------------|---------------------------------------|
|----------------------------|----------------------|--------------------------|---------------------------------------|

[-] ASC Positive cultures in 7 Days (sterile sites) (27) ⓘ

| Patient Id | Name | Location | Events in Last 7 Days |
|----------------------------|----------------------|--------------------------|---------------------------------------|
|----------------------------|----------------------|--------------------------|---------------------------------------|

[-] ASC Targeted Surveillance - Levofloxacin (1) ⓘ

| Patient Id | Name | Location | Events in Last 7 Days |
|----------------------------|----------------------|--------------------------|---------------------------------------|
|----------------------------|----------------------|--------------------------|---------------------------------------|

[-] ASC Targeted Surveillance - Ciprofloxacin (2) ⓘ

| Patient Id | Name | Location | Events in Last 7 Days |
|----------------------------|----------------------|--------------------------|---------------------------------------|
|----------------------------|----------------------|--------------------------|---------------------------------------|



#2-COMMUNICATION - HMS/AMS

- **Teaming up with HMS provided focus**
- **Every fall-out case has a huge impact on the scorecard!!**
- **Working together from all fronts:**
 - HMS abstractor emailed fall-out cases to AMS team
 - Letters sent out to physicians involved in fallout CAP cases - Summer 2022
 - Quarterly AMS meetings and discussion
 - AMS education to Medical Staff by Dr. Johnson (ASJH & RDH, Michigan Market AMS Infectious Disease Physician Lead)



#3 - TECHNOLOGY

All antibiotic orders must include the reason for the order.

CERNER - MESSAGE CENTER

To facilitate the communication with prescribing physicians,

Message Center feature on Cerner. It directs the physician's ability to quickly identify the antibiotics and the number of days the patient received so far.

Piloting on CAP & uncomplicated UTI cases

- Utilizes Auto Text message consistency and enhances recognition
- Alert goes out once during therapy preferably on day #2 or 3.

The next slide will show an example of the message.

Message Center Alert

High Notify Message Journal (2) Portal Options Launch Orders

Patient: zzeclare, testmp Caller: zzeclare, testmp Caller #:

To: Brancato, Mona H Include me

CC: Provider: To consumer Disable further replies

Subject: Antibiotic Days Save to Chart As: Medication Renewal/Refill

Attachments
 Transition of Care

Message

Arial 10

Antibiotic name: Ceftriaxone
Indication: CAP
First dose was received on: 2/1/23
Today is day #: 3
Day 5 will be on: 2/5/23

Actions

Call charge nurse with results
 Call me with results
 Call nurse with results
 Call ordering physician with results
 Call patient with results
 Call pharmacy with results

Remind on:

Due on:

Message Center Alert - Official part of EMR

The screenshot displays an EMR interface with a left-hand menu and a main content area. The menu includes items like Patient Safety Summary, Medication List, Orders, Lab, Vitals, Rad, Microbiology Viewer (NEW), Microbiology, Pharmacy Document..., Documents - Clinical Notes (selected), Form Browser, IVIEW and I&O, Inpatient Summary, Outside Records, ED Summary, Nursing Summary, Perioperative Summary, Flowsheets, Patient Information, and PerfectServe. The main content area is titled 'Documents - Clinical Notes' and shows a list of documents for 'Sunday, January 22, 2023 - Friday, February 10, 2023 : 5 out of 5 documents are accessible.' The selected document is 'February 10, 2023' with a sub-entry '10:15 EST Medication Renewal'. Below the list are sorting options: 'By type', 'By status', 'By date' (selected), 'Performed by', and 'By encounter'. The message center alert details are as follows:

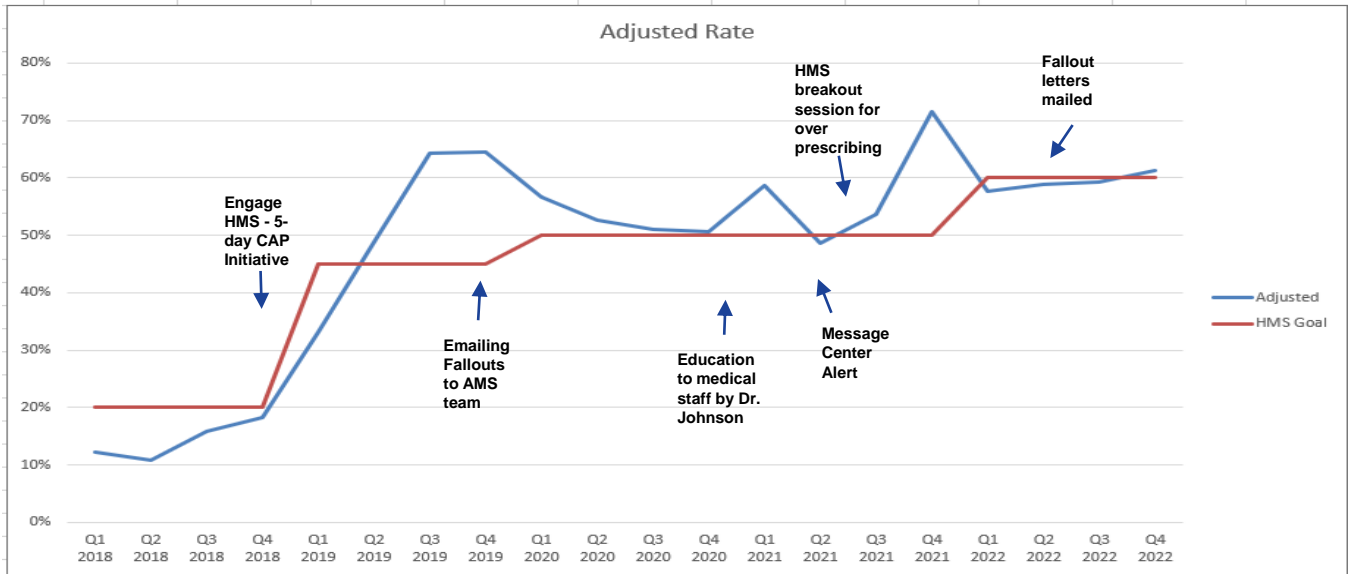
Result Type: Medication Renewal/Refill
Documentation Date: February 10, 2023 10:15 EST
Result Status: Auth (Verified)
Result Title: Antibiotic Days
Performed By: Brancato, Mona H on February 10, 2023 10:15 EST
Encounter info: 18989981100, SJH, Inpatient, 11/12/2019 -

*** Final Report ***

From: Brancato, Mona H
To: Brancato, Mona H;
Sent: 2/10/2023 10:15:22 EST
Subject: Antibiotic Days

Antibiotic name: Ceftriaxone
Indication: CAP
First dose was received on: 2/1/23
Today is day #: 3
Day 5 will be on: 2/5/23

Ascension River District 5 Day CAP Achievement over 5 Years





Summary of Key Drivers

- Antibiotic Stewardship team formation
- Participation with HMS and rotating physicians within AMS team to attend HMS meetings
- Persistent education and reminders to staff
- Use of Senti7 tools
- Daily diligence of pharmacy staff in reviewing data and alerting providers
- Influence of one dedicated hospitalist
- Working on re-educating outliers (fallout cases)

Limitations and Challenges from the pharmacy perspective

- Limited in-house resources
- Influence of physician groups from outside of the Ascension health systems
- Physicians providing coverage to Dr. Son/hospitalist
- Off hour pharmacy services provided by Ascension St. John pharmacy remotely (1700-0630)
- Time consuming task of investigating on what antibiotic and how many days the patient received



FUTURE AMS FORECAST MOSTLY SUNNY

What the future holds.....

