HOSPITAL STORIES: IMPLEMENTING THE 7 CORE ELEMENTS

HAYS MEDICAL CENTER
KANSAS MEDICAL CENTER
STORMONT VAIL HEALTH SYSTEM

HAYSMED
THE UNIVERSITY OF KANSAS HEALTH SYSTEM

2220 Canterbury Drive
Hays, Kansas
www.haysmed.com

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ABOUT US

Hospital characteristics

- Regional Referral Center for Western Kansas
  - 207 Beds; ADC 85
  - 24 CAH (Regional Referral Center)
- DNV Accredited
  - ISO 9001 Certified
  - Certified Primary Stroke Center
  - Management of Infection Risk (MIR) Certified
- Verified Level 3 Trauma Center
- Accredited Chest Pain Center
- Disciplines of care
  - 30 Specialties
- Your ASP Team
  - Infection Control, Pharmacist, Physician, Laboratory, CNO, OR Director, IT

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OUR STORY

- Working on ASP development since 2011
- First formal meeting in September of 2015
- Quarterly Meetings

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MEASURES

- Defined daily doses/1000 patient days
- Antimicrobial sensitivities tracked
  - Formulary changes
  - Infusion changes
- PCR MRSA/MSSA rates
  - General (sepsis orderset)
  - Surgery (orthopedic) preoperative
- PCR C.diff. rates
- Pharmacy following procalcitonin levels
- Prescriber use of restricted antimicrobials

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TRENDING

- Improved *pseudomonas aeruginosa* and other gram negative bacteria sensitivities
- Low incidence of positive preoperative MRSA screenings
- Providers evaluating antibiotic therapy with serial procalcitonin levels and deescalating antibiotics themselves (!)

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BARRIERS/SUCCESSES

- Vancomycin overuse
- Physician acceptance on de-escalation efforts
- ASP physician meeting attendance
- Pharmacy staffing
- Decreased *C-diff* rates

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Hospital-Acquired C-diff

Kimberly Koerner BSN, RN

HAYSMED THE UNIVERSITY OF KANSAS HEALTH SYSTEM

Date: Feb. 2018

Aim Statement

Aim: Prevention of hospital-acquired C-difficile infections

Why is this project important?:

Preventing C-diff infections decreases patient harm.

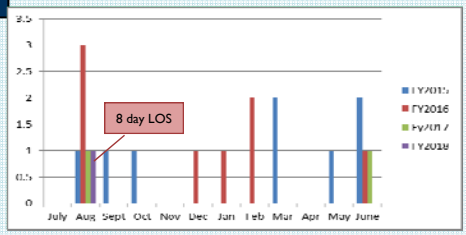
Benchmarks for hospital-acquired C-diff:
- Kansas 0.97
- National 0.89

CMS.gov (2017)

Changes being Tested, Implemented or Spread

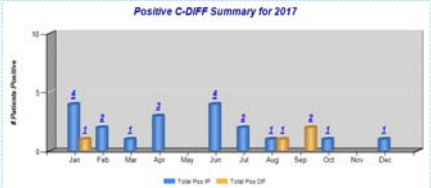
1. UV light boxes for hand held devices (Nov. 2017). (I)
2. Hand-hygiene campaign (ATP Testing) FY2016 Quality Goal
3. Ultraviolet disinfection system (Spring 2013) (S)
4. Antimicrobial Stewardship Program (I)
5. Kansas Foundation for Medical Care *Clostridium difficile Prevention Project (December 2012)*

Charts



July-Feb. 2018 C-diff Rate 0.06

Goal=0



Lessons Learned

Preventing C-diff infections decreases patient length of stay (LOS).

Recommendations and Next Steps

- Associate education
- Antibiotic Stewardship Program
- Education for outpatient departments

Team Members

Management of Infection Risk Committee

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ADVICE FOR OTHERS

- Find a physician champion
- Multidisiplinary effort – choose your team wisely
- Communication with administration and prescribers
- Be visible and actively involved “in the trenches”

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NEXT STEPS

- Vancomycin “time out”
- Required diagnosis and duration for antibiotic orders

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1124 West 21st Street
Andover, Kansas
www.ksmedcenter.com

KANSAS MEDICAL CENTER

ABOUT US

Hospital characteristics

- 58 bed acute care hospital
- ED, ICU, Tele, Medsurg, 6 OR's, 2 cath labs
- Strong emphasis on Cardiovascular services and surgeries.
- Ortho, cosmetic, maxillo-facial, urology, GI, and general surgeries.
- Nursing, PA, CRNA, ARNP, and PharmD student rotation site.
- 400 employees
- 150 contracted physicians
- Satellite ED department off campus
- 4 outpatient physician clinics

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KMC'S ANTIMICROBIAL STEWARDSHIP COMMITTEE

- Started as a pharmacist-driven program in 2006 when the hospital opened.
- Started our current Antimicrobial Stewardship Committee in 2016.
  - Pharmacist
  - Infectious Disease Physician
- Expanded our committee to include other disciplines
  - Infection Control Nurse
  - CNO
  - Hospitalist

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MEETING CORE ELEMENTS

- Leadership commitment
- Accountability
- Drug Expertise
- Actions that support optimal antibiotic use
- Tracking and Monitoring Antibiotic Use and Resistance
- Reporting Information on Improving Antibiotic Use and Resistance
- Education

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BARRIERS

- Reporting abilities/IT
- Allocating staff time without increasing FTE's
- Surgeon unwillingness to cut back on antimicrobial prophylaxis post-op.

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SUCCESSES

- Strong physician support
- Strong support through P&T
  - Willingness to implement automatic changes based on Pharmacist recommendations:
    - IV to PO autoswitch
    - Extended infusion Zosyn

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INFECTION CONTROL

- Role of Infection Control Nurse
  - Educate staff to reduce the risk of multidrug-resistant organisms (MDROs) like *C. diff*
  - Daily Culture Report
  - Isolation Team Email
  - Monitor and report trends to team
  - Educate Self – KHC, APIC, CDC, WHO, CMS, KDHE, Healthy People 2020

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INFECTION CONTROL

- Education:
  - Medical providers
  - Nursing and other relevant staff
    - prevention and control of HAIs
    - Training and education upon hire, annually and ongoing as needed
  - Patients and Visitors
    - Admission Packet Handouts
    - Posters in Departments
    - Bedside Education
    - Dismissal Education

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INFECTION CONTROL

- **Tracking:**
  - Daily Culture Report
  - Isolation Team Email
  - Review the Chart
  - Monitor Trends

- **Reporting:**
  - Report trends
    - medical providers
    - nurses
    - relevant staff
    - key stakeholders
    - NHSN – C. Diff rates
  - Come to conclusion as a team for Process Improvement

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PHYSICIAN PERSPECTIVES

INFECTIOUS DISEASE SPECIALTY INPUT

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SCOPE OF PHYSICIAN INVOLVEMENT AT KMC

- Each AM I review a pharmacy generated printout of all patients on IV antibiotics
- I then review (in peer review mode) the EMR of each patient to determine appropriateness of therapy
- I discuss each case with the attending physician
- If the patient's LOS will exceed 72 hrs, I then initiate a formal ID consult and begin management of the antibiotics
- Automatic ID consultation per protocol or medical staff parameters (ie on IV antibiotics >48-72 hrs)

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SCOPE OF PHYSICIAN INVOLVEMENT AT KMC

- 12-15 patients daily on the pharmacy IV antibiotic list
- Several of them I am already seeing in consult (8-10)
- A few patients are receiving only surgical prophylaxis
- I review the EMR and speak with attending physicians
- 2-3 new consults per day

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SUCCESS OF AMS AT KANSAS MEDICAL CENTER

- 100% concurrent review of all patients on IV antibiotics, and medical staff consent to ID consult for evaluation and management within 48-72 hrs of admission/start of treatment.
- Approximately 8-10 pts seen daily for ID assessment and antibiotic management (2-3 new consults daily)

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Stormont Vail Health

Cotton O'Neil Clinic and Stormont Vail Hospital

1500 S.W. 10th Ave. ● Topeka, KS ● www.stormontvail.org

ABOUT US

- Stormont Vail Health (SVH) is a 586-licensed bed acute care referral center in northeast Kansas
- Recognized Magnet Hospital, Trauma Level II, NICU level III, Stroke, MI and Total Joint Center JCAHO accredited
- Serves the city of Topeka which is ~ 150,000 people and 13-counties in northeast Kansas ~581,837 people
- Affiliated with Health Innovations Network of Kansas (HINK)
  - ~30 facilities associated with SVH
  - 450 physicians with medical staff privileges
  - 250 physicians employed by SVH
  - 5,000 employees

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OUR STORY

- Antibiotic Stewardship Program Started in the hospital August 2010
- Multidisciplinary Medical staff committee
- Completed CDC Antibiotic Stewardship Gap Analysis to help determine where to focus efforts
- Reviewed pharmacy antibiotic budget to determine high utilizations of antibiotics.
- Reviewed antibiogram to determine if there are antibiotics with <90% suscepetibilities.

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MEASURES/TRENDING

- Passed were only able to obtain pharmacy budget data.
- Reviewed retrospective data that was "manually extrapolated" to determine if antibiotics were used appropriately.
- Currently use Care Discovery data to review diagnosis related codes to review Stormont Vail Health data to national comparative data

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BARRIERS/SUCCESSES

- CPOE order oversight committee to let us review all orders with antibiotics
- Antibiotic Surgical Prophylaxis
- Recommendations thru multiple committees chains took so long as they got held up in committee
- Unable to provide feedback consistently because unable to measure DDD or DOT
- Not enough clinical pharmacists to review all pts on antibiotics at 48hrs
- Clinical pharmacists started to round with hospitalists (who loved it) but it couldn't be sustained except NICU Peds and ICUs
- Antibiotic indication and duration (Inpatient vs ambulatory)
- Penicillin Allergy testing

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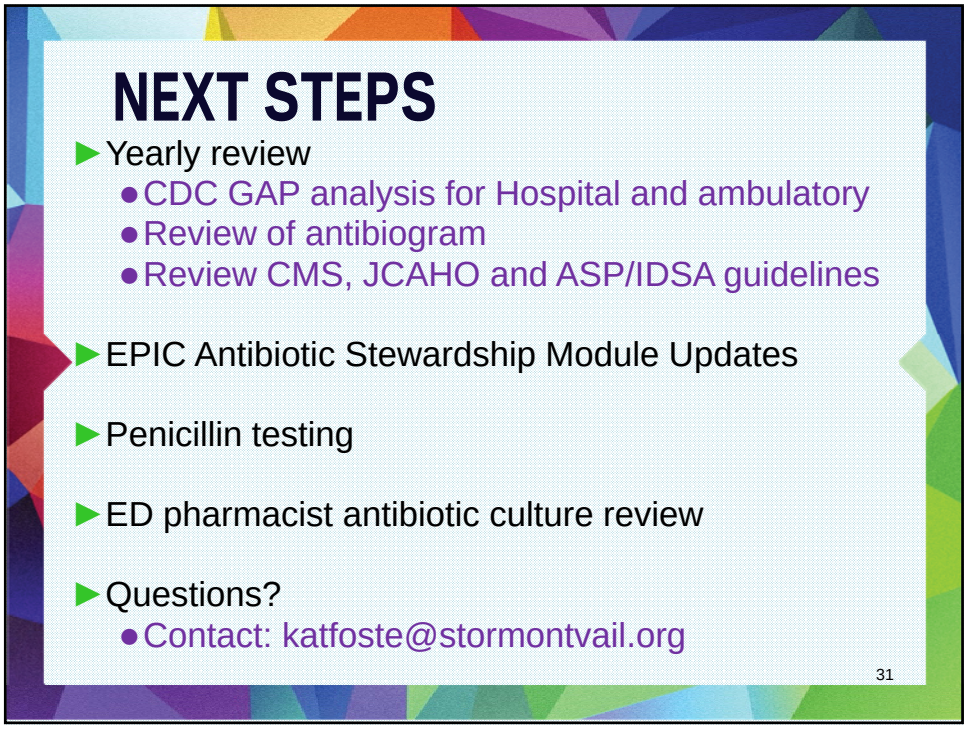
ADVICE FOR OTHERS

- Never Give up trying to do what is right
- Some times like doing the "Cha Cha" to get things accomplished


NEXT STEPS
Yearly review
CDC GAP analysis for Hospital and ambulatory
Review of antibiogram
Review CMS, JCAHO and ASP/IDSA guidelines
EPIC Antibiotic Stewardship Module Updates
Penicillin testing
ED pharmacist antibiotic culture review
Questions?
Contact: katfoste@stormontvail.org
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