INFECTION PREVENTION BOOT CAMP

Presented by KyIP Training Center

Electronic Booklet

2025

KENTUCKY INFECTION PREVENTION Training Center

Understanding the Rise of the Resistance: Multidrug Resistant Organisms

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Funding for this presentation provided by the Centers for Disease Control and Prevention and the Kentucky Department for Public Health in collaboration with the Norton Infectious Diseases Institute.

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Objectives

- Define types of antimicrobial resistance
- Discuss important multi-drug resistant organisms including extended spectrum beta-lactamases (ESBL) producing *Enterobacterales*, carbapenem resistant *Enterobacterales* (CRE) and carbapenem-resistant *Acinetobacter* spp. (CRAB)
- Determine MDRO rates from antibiogram data
- Define antibiotic de-escalation
- Describe how antibiotic de-escalation and discontinuation prevents the development of MDROs
- Discuss methods for nurses to support antimicrobial stewardship

Resistance

Intrinsic Resistance: an antimicrobial medication's action is completely ineffective against a pathogen; the pathogen is outside of the drugs spectrum of activity

ex. Fluconazole, an antifungal medication, will not treat a urinary tract infection due to *E. coli,* a bacteria

Acquired Resistance: a pathogen has developed resistance to a medication that would typically be effective against it

ex. An *E. coli* acquires a gene which allows it to produce an enzyme that attacks/destroys beta lactam antibiotics (e.g. ESBL)

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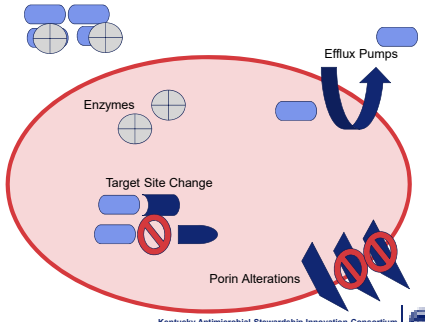
Reygaert, AIMS Microbiol 2018

Resistance



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Reygaert, AIMS Microbiol 2018; Tenover Am J Infect Control 2006

Resistance

Organism	Threat Estimate 2020
ESBL-producing *Enterobacterales* (ESBLs)	• Overall 10% increase • Hospital-onset 32% increase • 97500 cases • 9300 deaths
Carbapenem resistant *Enterobacterales* (CRE)	• Overall stable • Hospital-onset 35% increase • 12700 cases • 1100 deaths
Carbapenem-resistant *Acinetobacter* (CRAB)	• Overall 35% increase • Hospital-onset 78% increase • 7500 cases • 700 deaths

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CDC Resistance Report 2022

Resistance

Extended spectrum beta-lactamase producers (ESBLs)

- Produce enzymes that will hydrolyze and destroy antibiotic before it can reach its target site
- Resistant to:
  - Penicillin antibiotics
  - Cephalosporin antibiotics
- Many rapid diagnostic blood culture platforms can detect the CTX-M gene, which most commonly encodes for ESBL resistance
- Typically rates are estimated based on ceftriaxone resistance

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Reygaert, AIMS Microbiol 2018, Tenover Am J Infect Control 2006, Livermore J Antimicrob Chemother 2001

Resistance

Extended spectrum beta-lactamase producers (ESBLs)

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Resistance

Carbapenem resistant *Enterobacterales* (CRE)

- Produce enzymes that will hydrolyze and destroy antibiotic before it can reach its target site
- Resistant to:
  - Penicillin antibiotics
  - Cephalosporin antibiotics
  - Carbapenem antibiotics
- Several CRE genes exist and different therapies are needed depending on which type of CRE enzyme is present
  - KPC
  - NDM
  - OXA
  - VIM
  - IMP

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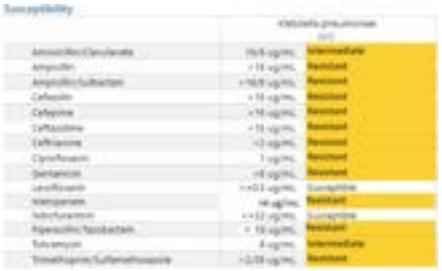
Reygaert, AIMS Microbiol 2018, Tenover Am J Infect Control 2006, Ma Microbiol Res 2023

Resistance

Carbapenem resistant *Enterobacterales* (CRE)



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Resistance

Carbapenem resistant *Acinetobacter* (CRAB)

- Multiple mechanisms of resistance work together, including enzymes, efflux pumps and porin loss
- Resistant to:
  - Carbapenem antibiotics
- Typically carbapenem resistance also comes with resistance to other classes of antibiotics

	Acinetobacter baumannii MIC
Ampicillin/sulbactam	Susceptible
Meropenem	Resistant
Colistin	Susceptible
Levofloxacin	Resistant

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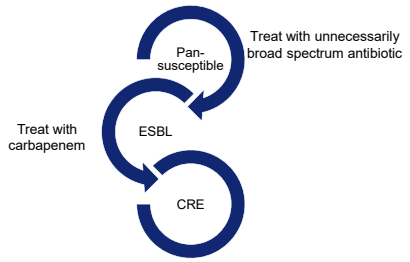
Reuyaert. AIMS Microbiol 2018. Tenover Am J Infect Control 2006. Hamidian Microbial Genomics 2019

Resistance

Escalating spectrum, increasing resistance



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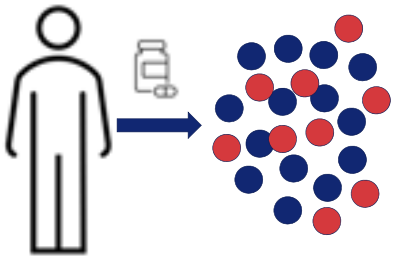
Sarma J Hosp Infect 2015

Resistance



Selective Pressure

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Antibiograms

Antibiogram: summary of local antibiotic susceptibility and resistance trends: useful for making empiric antibiotic choices

Organism	Number tested	Oxacillin	Amoxicillin/ clavulanate	Cefazolin	Ceftriaxone	Vancomycin
Staphylococcus aureus	102	54	54	54	54	99
Enterococcus faecalis	77	*	98	0	0	99
Streptococcus agalactiae	85	*	100	*	100	100
Escherichia coli	166	*	72	79	89	*
Klebsiella pneumoniae	80	*	80	85	93	*

Illustrative example, do not use for clinical guidance

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Reller Clin Infect Dis 2009

Antibiograms

Let's practice! Estimate ESBL *E. coli* rates based on the antibiogram below

Organism	Number tested	Oxacillin	Amoxicillin/ clavulanate	Cefazolin	Ceftriaxone	Vancomycin
Staphylococcus aureus	102	54	54	54	54	99
Enterococcus faecalis	77	*	98	0	0	99
Streptococcus agalactiae	85	*	100	*	100	100
Escherichia coli	166	*	72	79	89	*
Klebsiella pneumoniae	80	*	80	85	93	*

Illustrative example, do not use for clinical guidance

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Antibiograms

Let's practice! Estimate ESBL *K. pneumoniae* rates based on the antibiogram below

Organism	Number tested	Oxacillin	Amoxicillin/ clavulanate	Cefazolin	Ceftriaxone	Vancomycin
Staphylococcus aureus	102	54	54	54	54	99
Enterococcus faecalis	77	*	98	0	0	99
Streptococcus agalactiae	85	*	100	*	100	100
Escherichia coli	166	*	72	79	89	*
Klebsiella pneumoniae	80	*	80	85	93	*

Illustrative example, do not use for clinical guidance

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Antimicrobial Stewardship

Antimicrobial Stewardship: the optimal and responsible use of antimicrobials in every setting of society

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Over Clin Microbiol Infect 2019. CDC Be Antibiotics Aware. CDC Core Elements

Antimicrobial Stewardship

OPTIMAL ANTIBIOTIC CHOICES

- Right Diagnosis
- Right Drug
- Right Dose
- Right Route
- Right Duration

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Over Clin Microbiol Infect 2019. CDC Be Antibiotics Aware. CDC Core Elements

Antimicrobial Stewardship

Empiric therapy: the antibiotic which is initially chosen for therapy with the intention of treating any possible pathogen, "broad therapy"

Targeted therapy: antibiotic therapy selected based on identified pathogen(s), "narrow therapy"

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Ther Clin Microbiol Infect 2019, CDC Be Antibiotics Aware, CDC Core Elements

Antimicrobial Stewardship

Empiric therapy: the antibiotic which is initially chosen for therapy with the intention of treating any possible pathogen, "broad therapy"

DE-ESCALATION

Targeted therapy: antibiotic therapy selected based on identified pathogen(s), "narrow therapy"

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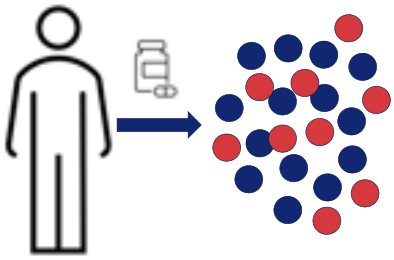
Ther Clin Microbiol Infect 2019, CDC Be Antibiotics Aware, CDC Core Elements

De-escalation



Selective Pressure

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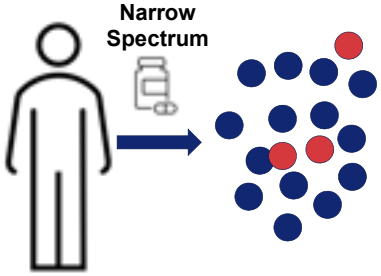
De-escalation



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Antimicrobial Stewardship & Nurses

- Asymptomatic bacteriuria
- Collecting cultures
- Clarifying allergies
- Prompting IV to PO transition
- Prompting de-escalation based on cultures

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Mayo Infect Dis Clin of N America 2019, Carter Am J Infect Control 2018

Antimicrobial Stewardship & Nurses – ASB

Urinalysis	• Flags as abnormal for bacteria, WBCs/leukocyte esterase, nitrites, etc. • Should not be used alone to diagnose UTI
Urine culture	• Growth of bacteria or yeast from a urine culture • Should not be used alone to diagnose UTI
Symptoms	• Confusion, falls, foul smell, cloudy appearance are not specific • Dysuria, urgency, frequency, flank pain, fever are more indicative • **Should guide diagnosis of UTI**

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Nicolle Clin Infect Dis 2019

Antimicrobial Stewardship & Nurses – ASB

Population
- 17 nursing homes in Australia
- Underwent educational program to self-reflect on urine dipstick testing and education on best practices & practice audit
- Emphasis on using clinical assessment to determine need to test

Design
- Qualitative before-after multisite study
- Conducted interviews with nurses and pharmacists
- Reviewed urine dipstick orders at baseline, 3 months, 6 months

Key Results
- Respondents reported increased prescribing appropriateness at 3 and 6 months
- Keys to success were noted to include nurse empowerment and family education

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Lim BMJ Open 2024

Antimicrobial Stewardship & Nurses– Collecting cultures

Timing
- Collecting cultures prior to antibiotic exposure or change increases culture yield

Technique
- Sterile collection technique increases quality

Impact
- Cultures allow team to individualize therapy and de-escalated from empiric to targeted/narrow therapy

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Antimicrobial Stewardship & Nurses– Clarifying Allergies

Timing
- Collecting cultures prior to antibiotic exposure or change increases culture yield

Technique
- Sterile collection technique increases quality

Impact
- Cultures allow team to make informed decisions & de-escalate from empiric to targeted/narrow therapy

Kentucky Antimicrobial Stewardship Innovation Consortium

Lim BMJ Open 2024

Antimicrobial Stewardship & Nurses – Penicillin Allergies

Population
- Blood cultures positive for MSSA
- Compared vancomycin to beta lactams
- n=16,973

Design
- Retrospective cohort study at 122 VA hospitals 2003-2010
- Compared 30 day all-cause mortality

Outcomes
- Vancomycin = 14% mortality
- Beta lactams = 12% mortality
- p=0.047

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McDaniel JS. CID 2015.

Antimicrobial Stewardship & Nurses– IV to PO Transition

Assessment
- Nurses are in the best position to holistically assess oral tolerance

Prompting
- Nurses have the opportunity to prompt prescribers to utilize oral therapy consistently

Impact
- IV to oral conversion is associated with:
  - Similar clinical outcomes
  - Decreased nursing burden

Kentucky Antimicrobial Stewardship Innovation Consortium

Ramirez JAMA 1999; Jenkins J Antimicrob Chemother 2023

Antimicrobial Stewardship & Nurses– Prompting De-escalation

Notification
- Nurses may be aware cultures have resulted prior to providers

Prompting
- Nurses can ask “Are we able to de-escalate antibiotics now cultures are back?”

Impact
- Another care team member advocating for antibiotic de-escalation

Kentucky Antimicrobial Stewardship Innovation Consortium

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Questions?

McKissick K. Scientific American. Published 2015.

KASIC

BEST PRACTICES BEST OUTCOMES

www.kymdro.org

Norton Infectious Diseases Institute
224 E. Broadway
3rd floor
Louisville, KY 40202
502.861.4545 ext. 14927

Baptist Heath Association of Health Care Environmental Program

Charles Stillings, EMHA, T-CHEST, T-CSCT
System AVP, Environmental Service & Linen Management
April 30th, 2025

AHE Program Overview

Benefits of CHEST: Data Findings

PROGRAM OVERVIEW

AHE is the leading health care environmental services association

AHE is the organization of choice for professionals responsible for establishing and maintaining health care environments that are free of surface contamination and that support safety, service, and efficient and effective operations.

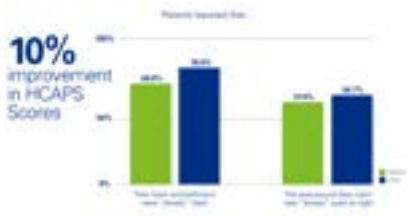
- ✓ Certification Training for Surgical Cleaning Technicians (CSCT)
- ✓ Certified Health Care Environmental Services Technician (CHEST)
- ✓ Certificate in Non-Acute Care Cleaning (CNACC)

EVS FRONTLINE TURNOVER

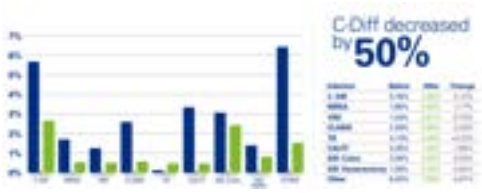
Baptist Pilot Program

Since 2020, 41 Environmental Service Team Members have received CHEST Certification. Only 1 has left the organization.

HCAHPS SCORES

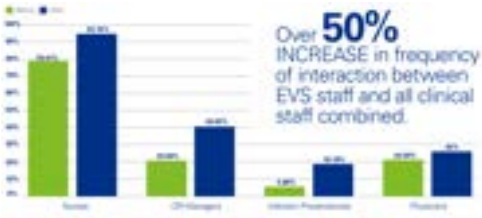


INFECTION RATES



C.Diff decreased by **50%**

INTERACTION FREQUENCY

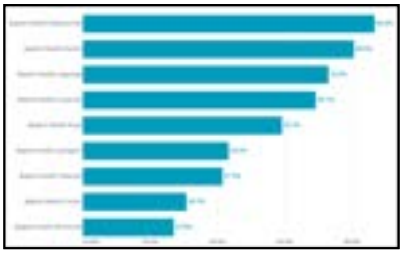


Over **50%** INCREASE in frequency of interaction between EVS staff and all clinical staff combined.

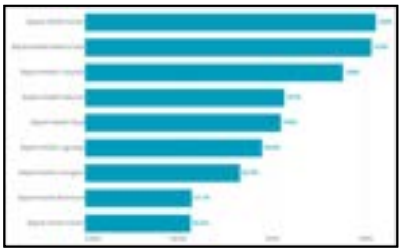
Baptist Health - 2021

Baptist Health – AHE Partnership

Overall – Turnover Rate



New Hire – Turnover Rate



BH 2021 - Overview

- **Baptist Pilot Programs**
  - In 2021, 41 EVS Team Members have received CHEST Certification
- No Formal Cleaning Process – Post Contractor
- No Formal Quality Assessment to Measure Cleanliness
- Feedback: Lack of Nursing Engagement / Confidence
- Cost to Replace: $5,331,840 / $16,662 per Person

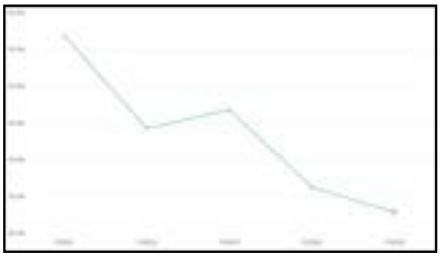
Baptist Health - 2025

Baptist Health – AHE Partnership

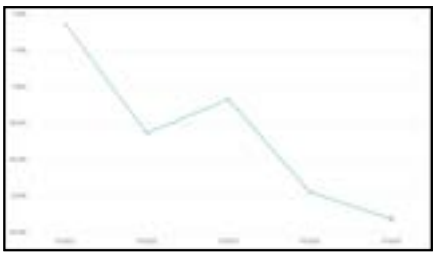
BH 2025 - Overview

- Partnered with the Baptist Health Foundation
- System – Wide & Local CHEST Training Session
- Total Number of EVS Staff Certified: 135
- 95% Graduation Rate

Overall – Turnover Rate



New Hire – Turnover Rate



Congratulations CHEST Graduates!

Feedback

- “I feel more confident in my training….”
- “The training has greatly improved at BAPTIST….”
- “Great break from the normal routine…”
- “I understand why we need to clean & disinfect…”

Nursing Collaboration

FY25 - Cost to Replace

Year	Headcount	Cost Avoidance
2022	84	-$1,399,608
2023	17	$283,254
2024	61	-$1,016,382
2025	17	-$283,254

- Total Headcount T/O: 145
- Total Cost Avoidance: $2,415,990

EVS Productivity Bonus Program

RECOMMENDATION

- Upon completion of one of the certifications, EVS Team Members will receive an additional $1.00 per hour.
- Currently, we are limited to $1.00 per hours, per certificate. We cannot exceed $1.00.
- EVS Team Member will need to stay up-to-date with all Baptist Health Training
- After EVS Team Member achieve certification, they must maintain good standings with EVS & Baptist Health Policies & Procedures.

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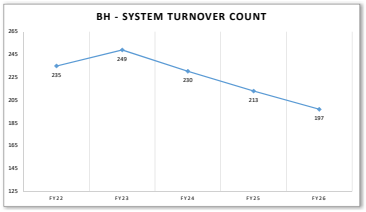
Program Funding



Fiscal Year (FY)	ROI ($)
FY22	$0
FY23	$0
FY24	$311,163
FY25	$287,826
FY26	$266,239
Total	$865,227

AHE Data suggested 7.5% turnover rate drop with full implementation. BH Goal 50% over 2 years.

Program Expense

	Staff Completion Rate		
Location(s)	50%	75%	100%
System	$ 502,090.92	$ 753,136.38	$ 1,004,181.84
Louisville	$ 117,356.04	$ 176,034.06	$ 234,712.08
Lexington	$ 107,845.20	$ 161,767.80	$ 215,690.40
Paducah	$ 48,170.16	$ 72,255.24	$ 96,340.32
Madisonville	$ 36,707.04	$ 55,060.56	$ 73,414.08
Hardin	$ 68,225.40	$ 102,338.10	$ 136,450.80
Floyd	$ 53,170.92	$ 79,756.38	$ 106,341.84
Corbin	$ 52,596.72	$ 78,895.08	$ 105,193.44
Richmond	$ 37,072.44	$ 55,608.66	$ 74,144.88
LaGrange	$ 17,935.92	$ 26,903.88	$ 35,871.84

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Let's Talk

KY Infection Prevention
Training Center Boot Camp
Tuberculosis Program Update

Emily Anderson, BSN, RN

April 30, 2025

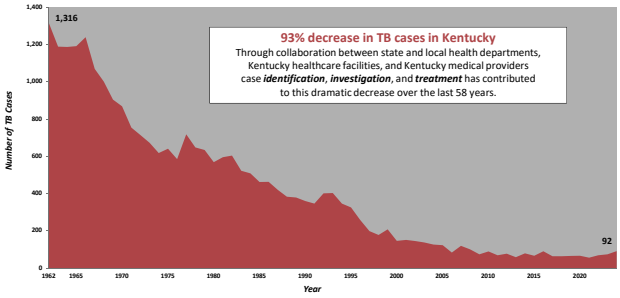
Kentucky Public Health

TEAM KENTUCKY
CABINET FOR HEALTH AND FAMILY SERVICES

Objectives

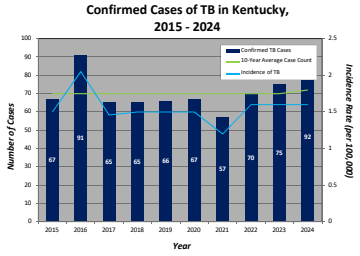
- Review the current epidemiology of *Mycobacterium tuberculosis* (TB) in KY and the U.S.
- Review the current Kentucky regulations regarding reporting, treatment, employee testing, and prevention of TB in Kentucky.
- Identify improvements and future directions important in continuing reduction of TB cases and resultant transmission in communities across Kentucky.

Confirmed Cases of Tuberculosis in Kentucky, 1962 - 2024



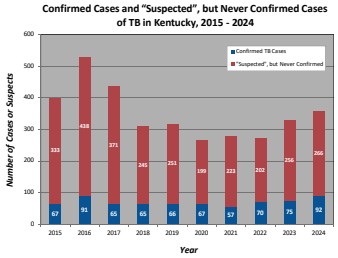
TB Case Counts – Confirmed Cases, 2024

2024 Kentucky Case Totals	
Case Classification	Count
Confirmed Cases of TB	92

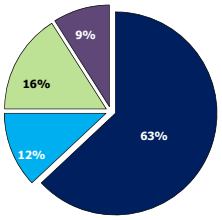


TB Case Counts- "Suspected" but never Confirmed Cases, 2024

2024 Kentucky Case Totals	
Case Classification	Count
Confirmed Cases of TB	92
"Suspected" but Never Confirmed	266



TB Case Data- Case Verification, 2024



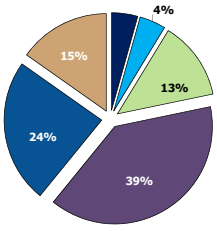
*Clinical Case Definition:
- Positive TST or IGRA
- Signs and symptoms consistent with active TB
- Treated with at least 2 or more anti-TB medications
- Completed physical evaluation

Case Verification Method		
Method	Case Count	%
Positive Culture	58	63
Positive NAA**	15	16
Clinical Case Definition*	11	12
Verified by Provider Diagnosis	8	9

**NAA is a nucleic acid amplification test. For TB, this is most commonly a GeneXpert test for *M. tuberculosis* which also evaluates for the presence of the rpoB gene, which suggests drug resistance to Rifampin.

Percentage is based on total case count (n = 75).

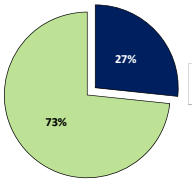
TB Case Data – Age Groups, 2024



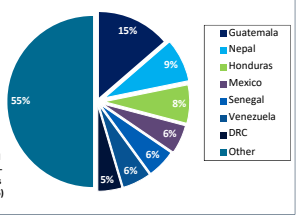
Age Statistics
Age Range = 0 – 99
Median Age = 37
Average Age = 41

Percentage is based on total cases count (n = 92).

TB Case Data – Non-U.S. Born, 2024

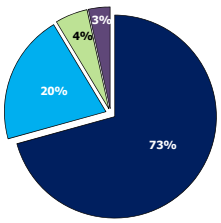


Percentage is based on total case count (n = 90)
*2 cases pending data input



Percentage is based on total number of non-U.S. born cases counted (n = 66)

TB Case Data- Case Verification, 2022



*Clinical Case Definition:
- Positive TST or IGRA
- Signs and symptoms consistent with active TB
- Treated with at least 2 or more anti-TB medications
- Completed physical evaluation

Case Verification Method		
Method	Case Count	%
Positive Culture	51	73
Positive NAA**	3	4
Clinical Case Definition*	14	20
Verified by Provider Diagnosis	2	3

**NAA is a nucleic acid amplification test. For TB, this is most commonly a GeneXpert test for *M. tuberculosis* which also evaluates for the presence of the rpoB gene, which suggests drug resistance to Rifampin.

Percentage is based on total case count (n = 70).

Reporting Regulations

- **902 KAR 2:020 Reportable Disease Surveillance (RDS)**
- **902 KAR 20: 205 TB Testing in Healthcare Workers (HCW)**

https://www.chfs.ky.gov/agencies/dph/dehp/idb/Pages/tbregs.aspx

Resource: TB Regulation Toolkit

Available on the DPH Website, TB Prevention and Control Webpage
https://chfs.ky.gov/agencies/dph/dehp/idb/Pages/tbregs.aspx

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Reporting Regulations: 902 KAR 2:020 Reportable Disease Surveillance (RDS)

Section 6

Notifiable Infectious Conditions and Notifiable non-Infectious Conditions: Tuberculosis

- Report to local or state health department within **1 business day:**
  - Examples:
    - Positive Acid Fast Bacilli (AFB) sputum smear
    - TB signs and symptoms
    - Positive Polymerase Chain Reaction (PCR) for TB (GeneXpert)
    - Positive Culture

Reporting Regulations: 902 KAR 2:020 RDS Continued

Section 2(5)(b)

Notification Standards

The reporting health professional shall furnish:

clinical, epidemiologic, and laboratory information pertinent to the disease including sources of specimens submitted for laboratory testing.

Reporting Regulations: 902 KAR 2:020 RDS Continued

Section 12

Healthcare-Associated Infections (HAI) Surveillance and Health Insurance Portability and Accountability Act (HIPAA)

CMS authorizes CDC to allow DPH to access healthcare-associated infection data reported to the National Healthcare Safety Network (NHSN).

DPH shall

- Preserve patient confidentiality
- Issue reports directly to CDC
- Evaluate HAI data for accuracy and completeness

Reporting Regulations: 902 KAR **2:020**

Pharmacy Reporting
Section 15

Tuberculosis

*A pharmacist shall give notice if **two (2) or more** of the following medications used for the initial treatment of active tuberculosis are dispensed to an inpatient in a health facility or to an ambulatory patient in a health facility or a pharmacy: (a) Rifampin, (b) Isoniazid, (c) Pyrazinamide, and (d) Ethambutol*

- Submit EPI-200 form when reporting 2 or more drugs
- Communication with local health department (LHD) of treatment regimen

902 KAR 20:205 TB Testing for Healthcare Workers (HCW)

Reporting Regulations: 902 KAR **20:205**
TB Testing for Healthcare Workers (HCW)

Section 10(1)

- Report to local or state health department within **1 business day:**
  - Employee exposure with TST or BAMT conversion; *OR* identified from a contact investigation after TB exposure
  - Chest X-ray (CXR) suspicious for TB disease
  - Positive sputum smear for AFB

Reporting Regulations: 902 KAR 20:205
HCW Continued

Section 10(1) *continued*

- Report to LHD or state within **1 business day:**
  - Positive PCR for TB (DNA or RNA)
    - NAA, GeneXpert, HAINS
  - Positive culture for TB
  - Initiation of multi-drug anti-tuberculosis treatment for active TB disease

**Collaborate with local health department prior to initiating facility contact investigations.*

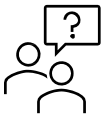
Reporting Regulations: 902 KAR 20:205
HCW Continued

Section 10(2)

- Report to LHD or state within **5 business days:**
  - **(a)** TST of 10mm or more at time of initial employment
  - **(b)** TST of 5mm or more at time of initial employment who has a medical risk factor
  - **(c)** Positive BAMT at time of initial employment

Frequently Asked Questions

902 KAR 20:205
TB Testing For Healthcare Worker (HCW)



FAQS: Section 2 – **Infection Prevention Control Plan and TB**

What is it?

Section 2 Describes
- **Infection Control Plan**
- **New employee testing**
- **Annual testing plan**
- **Testing on exposure**

FAQS: Section 2 – Infection Prevention Control Plan and TB

Is a facility risk assessment required?

- **HCW regulation does NOT require a facility risk assessment for TB; however, this IS an OSHA requirement**
- **Cannot declare a healthcare facility at low-risk and only test on hire or exposure**
- **Must have annual baseline testing for high risk**

Facility Risk Assessment

How to Calculate the Burden of TB for Annual Facility Risk Assessments

Review the following metrics to assess the true burden of TB at your facility and assist with the completion of annual facility risk assessments:

1. Annual TB case rates for your county or district
2. Annual TB case rates for surrounding counties
3. Annual TB case rates for other counties served by your facility (i.e., patient catchment area)
4. Annual suspected cases of TB
5. Five-year average TB incidence
6. Ten-year average TB incidence

Annual Confirmed TB Case Statistics

2022 (PDF, 275 KB)
2023 (PDF, 309 KB)

Annual Confirmed and Suspected TB Case Statistics

2022 (PDF, 346 KB)
2023 (PDF, 362 KB)

10-Year TB Case Statistics

2014-2023 (PDF, 1.3 MB)

2020 DHCT and TBLISA Resources

TB Data Webpage - https://www.chfs.ky.gov/agencies/dph/dehp/idb/Pages/tbdata.aspx

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FAQS: Section 2 – Infection Prevention Control Plan and TB

What is included in the Infection Control Plan?

- **Identification of employee job series that are at greatest risk for TB exposure.**
- **Those employees in the plan will be required to have annual TB testing.**
  (See annual testing Section 5)

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FAQS: Section 2 – Infection Prevention Control Plan and TB

Is annual testing required?

Maybe, for certain job series-
HCW regulation does require new hire and annual testing of employees *included in Infection Control plan*

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FAQS: Section 3 – TB Testing Requirements for Tuberculin Skin Testing (TST)

Is two-step TST testing done for both initial hire and annual testing?

Two-step testing is useful only for the initial skin testing of adults who are going to be retested periodically, such as health care workers or nursing home residents.

FAQS: Section 3 – TB Testing Requirements for Tuberculin Skin Testing (TST)

Two-step testing is useful only for the **initial skin testing** of adults who are going to be retested periodically, such as health care workers or nursing home residents. This two-step approach can reduce the likelihood that a boosted reaction to a subsequent TST will be misinterpreted as a recent infection.

http://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm

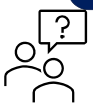
FAQS: Section3(2)(h)

When is a new hire exempt from a TST two-step testing?

Documentation of a TST or BAMT result *within three (3) months prior* to initial employment at the facility *and* previous participation in a serial testing program at another medical facility or health care setting.

FAQS: Section 4(5)(b)3

Can you accept a TST result from another facility as part of the initial two-step testing?



The initial TST shall count as the second-step TST if the health care worker aged fourteen (14) years and older provided medical documentation that he or she has had a one-step TST interpreted as negative within one (1) year prior to initial testing at the time of initial employment.

FAQS: Sections 4 – Initial Employment Testing

How far back can I accept a previous TST or BAMT result?

Section 4:
Situations vary based on the individual's risk *and* if they have been in serial testing

- Previous test <3 mos = NO new test
- Previous test >3 and <11 mos. = only one TST or BAMT needed
- >11 mos. Two-step TST or one BAMT needed

FAQS: Sections 4 – Initial Employment Testing

What must be documented for your Employees?

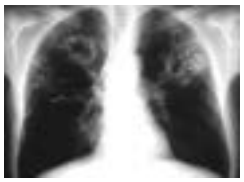
- Past Previous positive TST or Blood Assay for M.TB (BAMT)
- Initial and annual TST or BAMT testing
- Initial and annual Individual TB risk assessment

Individual TB Risk Assessment

https://www.cdc.gov/tb-healthcare-settings/media/pdfs/Health_Care_Personnel_Baseline_Individual_TB_Risk_Assessment.pdf

Expanding Diagnostics FAQs – Chest X-Rays

- **When is a CXR is necessary?**
  - Reactive TST
  - Positive BAMT
  - Indicated by risk assessment *(i.e. recent exposure or travel)*
  - Exhibits signs and symptoms of TB disease
- **When NOT to perform a CXR:**
  - In lieu of TST or BAMT
  - Can not detect TB Infection



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FAQS: Sections 5-Annual Testing

Are all healthcare workers required to have annual testing?

- **No, <u>not all</u> healthcare workers are required to have annual TB testing *(See Section 2 for Infection Control Plan)***
- **However, <u>all</u> healthcare workers are required to have an annual risk assessment**

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FAQS: Sections 5-Annual Testing

Which healthcare workers are required to have annual testing?

Annual TB Testing is required for:

- **Healthcare workers whose job series are identified in the facility Infection Control Plan as having a high risk for TB exposure**
  (i.e. Bronchoscopy, ED, etc.)
- **Any individual who has a newly identified risk (Exposure, travel, etc.)**

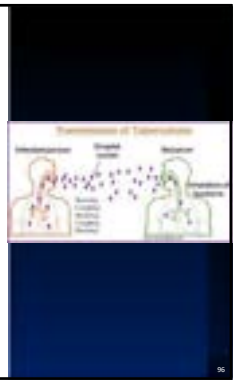
FAQS: Section 5 – TB Testing Requirements

How should I determine when to begin staggered testing for each employee?

- **Staggered screening of HCWs (e.g., on the anniversary of their employment or on their birthdays) increases opportunities for early recognition of infection-control problems that can lead to conversions in test results for M. tuberculosis infection.**
  http://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf [page 30]
- **Facilities may stagger testing at their discretion (i.e. monthly, quarterly, or semi-annually). For your facility to meet this requirement, it may require testing some employees early (i.e. twice within a calendar year). Testing for each individual should not go beyond 12 months from the last test done.**

Contact Investigation (CI) Guidance

- **Must** be performed on all employees who had exposure to TB suspect/case
- **Must** test initially, then **repeat** in 8-10 weeks
- LHD will dictate need for expansion of CI
- Communication with LHD:
  - Mandated reporting of line-list of all contacts, initial and f/u test results
  - CDC reports real-time
  - HIPPA compliant



Release of Patients from Airborne Infection Isolation (AII)

When can a patient be released from AII?

Release from AII https://www.cdc.gov/mmwr/pdf/rr/rr5412.pdf

While in hospital for any reason, patients **with pulmonary TB** should remain in airborne infection isolation (AII) until they are:

1) Receiving standard multidrug anti-TB therapy
2) Have demonstrated clinical improvement
3) Have had **three** consecutive AFB-negative smear results of sputum specimens collected 8–24 hours apart with at least one being an early morning specimen.

Please check with the local health department prior to releasing patients to home isolation!

https://www.cdc.gov/mmwr/pdf/rr/rr5412.pdf

Releasing from AII

Hospitalized patients returning to a congregate setting (e.g., a homeless shelter or detention facility) should have three consecutive AFB-negative smear results of sputum specimens collected >8-24 hours apart before being considered noninfectious.

Release from AII Cont.

Remember:

Two negative PCR GeneXpert results are accepted in lieu of three AFB-negative sputum results.

Initiating Medications

- **Before** initiating any TB treatment…
  - Contact the local health department to report suspect
  - Obtain sputum samples
  - Assure positive PCR results
    - Rule out medication resistance

TB Awareness

New **Quarterly TB Newsletter "The DOT"**

- Targeted to all TB and Infection Control staff at local health departments, hospital and long-term care facilities

New **KY TB Program Office Hours**

- Coordinated with the Southeastern National TB Center
- Target audience: all TB partners (Physicians, Nurses, local health departments, and Infection Control personnel)
- Updates include: TB Epidemiology, regulations, protocols, emerging treatments, and TB case studies.

Summary

- Always **ISOLATE** patient and **COLLECT 3 SPUTUM** before giving anti-tuberculosis medications ***"Get the Bugs before You Give the Drugs"***
- Assure laboratories are sending an isolate or direct specimen to the state lab (Division of Laboratory Services)
- Assure in-house pharmacists are compliant with reporting when dispensing two (2) or more anti-tuberculosis medications
- Report any suspected or confirmed active TB case to the local health department within one (1) business day
- Comply with annual TB testing and screening requirements
- Avoid unnecessary chest x-rays

Summary Continued

- Review and/or update Facility Infection Control Plan to assure identification for annual TB testing of healthcare workers with the highest risk for TB exposure
- For patients who have symptoms or signs of active TB disease, all tests and examinations for TB diagnosis should be pursued without delay, regardless of any additional vaccinations (i.e. COVID, MPX, etc.)

DON'T FORGET WE ARE HERE TO HELP!

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Supply shortages, OH MY!

Julia Frith DNP, RN, CIC
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Manager, Clinical Research Development and Support
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Kentucky Infection Prevention Training Center

KentuckyIPTraining.org

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Objectives

- List potential causes of a supply chain interruption
- Identify previous instances of supply shortages in healthcare
- Describe actions an IP can take to mitigate a supply shortage

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What is the supply chain

- Complex global system
- Involve multiple groups
  - Production
  - Technology
  - Policies
  - People
- Typically designed for cost and efficiency

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Who are the stakeholders in the supply chain

- Raw material suppliers
- Manufacturers
- Distributors and GPO
- Health System and providers
- Patients

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What is a supply shortage

- Not having what you need when you need it
- Not a new problem

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What can disrupt the supply chain

- Natural disaster
- Public health emergency
- Contamination in product
- Social disruption

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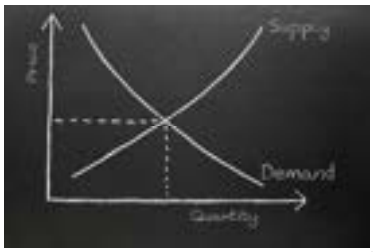
Causes of shortages



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Vulnerability of the medical product supply chain: the wake-up call of COVID-19

Miller FA, Young SB, Dobrow M, et al. BMJ Qual Saf 2021;30:331–335.

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Vulnerability of the medical product supply chain: the wake-up call of COVID-19

Miller FA, Young SB, Dobrow M, et al. BMJ Qual Saf 2021;30:331–335.

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Saline shortage

[redacted]

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Who is impacted by supply shortages

- Patients
- Health Systems
- Manufacturers and suppliers

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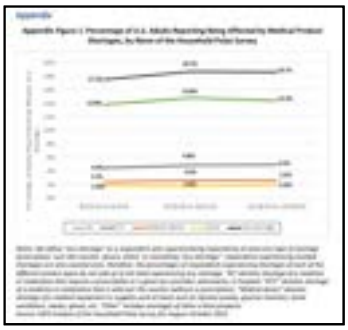
"Medical product shortages in the United States: Demographic and geographic factors and impacts." Beleche, Trini, and Allison Kolbe. (2024).



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"Medical product shortages in the United States: Demographic and geographic factors and impacts." Beleche, Trini, and Allison Kolbe. (2024).

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What is a resilient supply chain

- *By definition, a resilient supply chain should have the capacity to reliably supply medical products under normal conditions as well as protect public health and safety in emergencies*

https://www.nationalacademies.org/news/2023/01/untangling-why-critical-drug-and-medical-supply-shortages-keep-happening

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What is being done to address the problem

- Notifying FDA of a Permanent Discontinuance or Interruption in Manufacturing of a Device Under Section 506J of the FD&C Act
  - *"Requires manufacturers to submit a notification at least six months in advance of a permanent discontinuance in manufacturing of a device or an interruption in manufacturing of a device that is likely to lead to a meaningful disruption in supply of the device in the United States. If that timeframe is not possible, section 506J(b)(2) requires that notification be done "as soon as practicable."*

https://www.fda.gov/media/155245/download

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When do manufacturers notify

- Permanent discontinuance
- Interruptions in manufacturing
- Meaningful disruption
- During or in advance of a public health emergency

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506J Device List

https://www.fda.gov/medical-devices/medical-device-supply-chain-and-shortages/506j-device-list

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How do we know there is a shortage

- Value Analysis/Supply Chain
- Manufacturer notification

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What do we do when a shortage occurs

- Communication
  - Here is the new process
  - This is why processes changing
- FMEA
  - What can go wrong with the change and how will you mitigate the risk

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FMEA

- Failure
  - What could go wrong
- Modes
  - How could it go wrong
- Effects
  - What happens if it goes wrong
- Analysis
  - Severity, likelihood of occurrence, likelihood of detection prior to reaching a patient
- Actions
- Evaluation of actions

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What do we do when a shortage occurs

- Understanding current use of product
  - Par level
  - Allocation
  - Shortage
- Conservation and mitigation strategies
  - Changing process
  - Using beyond expiration date
  - Central location within the facility

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What do we do when a shortage occurs

- What are your policies
  - When do you transition to an SWI
  - When do you change policy for new process
- How do you monitor for issues

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Issues

- How do you know who uses the product
- How do you know how the product is used
- How do you educate people on the new process
- Infection prevention may not be included in the conversation
- How do you get people to go back to the original process

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Scenario

- Sterile water is on backorder
- The backorder is intended to last at least 6 months
- Your facility has on hand 30 days worth of sterile water
- Your facility will be allocated 30% of normal par
- Par is typically 1000 30mL bottles of sterile water per month

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Scenario

- Blood culture bottles are on backorder
- It is unclear how long the backorder will last
- Your facility has on hand 30 days worth of blood culture bottles available
- Your facility will receive 600 blood culture bottles in two weeks after that time it is unclear how much of your order you will receive
- Your facility collects rough 500 blood cultures per month

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SMARTER, FASTER, BETTER

IMPROVING PROCESSES AND PERFORMANCE

Rochelle Beard, MSN, RN, CIC, CPHQ

RBiP

OBJECTIVES

- Distinguish between process and performance improvement
- Explain DMAIC and PDCA/PDSA methodology
- Apply a performance improvement tool to an initiative at your facility

WHY?

- Apply evidence-based techniques and practices to ensure quality and safety in your healthcare organizations
- Align with the organization's mission, vision, values, goals, and objectives
- Safety!

WHAT'S THE DIFFERENCE?

Process Improvement

- Workflows (processes) and systems
- Streamlining
- Efficiency/effectiveness
- Reduce waste
- Improve quality and productivity
- Lean, Six Sigma

Performance Improvement

- Individual skills, motivation, overall performance
- Increased productivity and quality of work
- Enhance organizational effectiveness and outcomes
- PIPs, coaching

HISTORY

- 1863 Florence Nightingale
- 1913-1917 Dr. Codman & the American College of Surgeons

Image generated by AI using custom prompt via ChatGPT (OpenAI), not based on real events or persons.

VOCAB

1. Kaizen
2. Kanban
3. Gemba

management
defining,
and improving
at deliver
work
s improvement
ace

PI Methods/Approaches

LEAN

- Reduce waste and add value to the customer
  - defects, overproduction, waiting, nonutilized talent/resources, transportation, inventory, motion, and extra processing
- 5 principles
  - Customer value, ID value-added steps, make steps flow, pull system based on demand, flow and pull to remove non-value steps and start over until perfect

WASTE HUNT!

- Read the scenario
- List as many types of waste (from Lean's 8) as you can find
  - defects, overproduction, waiting, nonutilized talent/resources, transportation, inventory, motion, and extra processing

WASTE HUNT!

Scenario: "The Case of the Contaminated Contact Precautions"

It's 10:15 AM on the med-surg floor. A patient on contact precautions needs wound care. The nurse goes to get PPE but finds the isolation cart is empty—again. She walks to the supply room at the end of the hall, only to realize they're out of gowns. She radios the tech, who spends 5 minutes locating more. The nurse finally gowns up, only to be interrupted by a provider who enters without PPE, claiming "I'm just popping in real quick."

Later, the nurse discovers the wound care documentation is missing because the chart was left on the counter and got thrown out during terminal cleaning.

WASTE HUNT!

Scenario: “The Hand Hygiene Hang-Up”

It’s the start of a busy shift in the ICU. Staff are reminded during huddle about a recent CLABSI. A CNA goes to clean a shared blood pressure machine but can’t find the disinfectant wipes—someone moved them again. Meanwhile, a provider uses the machine without cleaning it because they’re in a rush.
A nurse preps a central line dressing change, but the hand sanitizer dispenser at the room door is empty. She shrugs and enters anyway.
An infection preventionist auditing hand hygiene documents the missed opportunity, but realizes the data form is outdated and doesn’t match the current policy.

SIX SIGMA

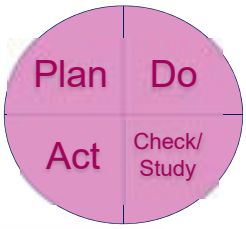
σ

- Improve quality by removing errors
- Projects: process redesign, problem, change
  - Black Belts
- Define, Measure, Analyze, Improve, Control (DMAIC)

Beaudin, N.A.F.H.Q.(.L.R.P.C. L. (2022). *HQ Solutions: Resource for the Healthcare Quality Professional* (5th ed.). Jones & Bartlett Learning. https://bookshelf.vitalsource.com/books/9781284265149

PLAN, DO, CHECK, ACT

- PDCA or PDSA



SMART GOAL

- Specific
- Measurable
- Achievable
- Relevant
- Time-bound

SMART GOAL

- Your facility had 6 CLABSIs in the last quarter, double the usual rate. Audits show inconsistent catheter maintenance documentation.
- Specific, Measurable, Achievable, Relevant, Time-bound
- The Hem-Onc unit will reduce CLABSIs by 25% by the end of Q4 2025 by implementing scheduled dressing changes and completing 95% documentation compliance audits weekly.

PLAN, DO, CHECK, ACT

Problem: double CLABSIs
Process: documentation, drsg changes, etc
Data: increased infections, dressings not changed appropriately/on time
Opportunities: dressing changes

Education
Daily audit of dressing documentation
Rounding on lines Q shift
Weekly dressing changes on Tuesdays (and PRN)

Implement for one month
Review data
Success?
Conclusions?

Standardize for entire facility
Monitor (adapt if needed)

PI Tools

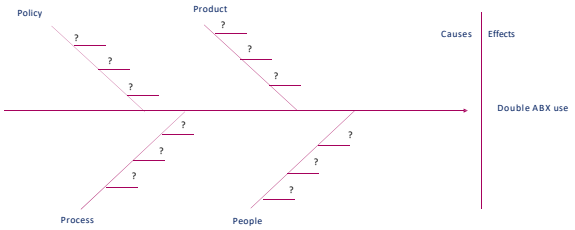
PROJECT/TEAM CHARTER

- Description of process, why it needs to be improved, and who it impacts
  - Scope, risks, budget
- Develop criteria to show the process improved
- Timeline for deliverables/meetings
- Resources available
- Structure of leadership (give authority)
- Expected communication of progress and results

BRAINSTORM

- Free-flowing generation of ideas
- No censoring or discussion (later)
- No limits on ideas

ISHIKAWA (FISHBONE)



CHECKLISTS

1. Ordered List	A. Includes meaningful info, used as guide or reference
2. Itemized List	B. Branch of another ordered list
3. Sublist	C. Any list with a space for a check mark, initials, or additional info
4. Prioritized List	D. Numbered, tasks need to go in order, ensures correct and complete processing
5. General List	E. Any list ordered with a priority scheme

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- What is a Project Charter? Definition and Examples

CONTACT

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www.rbipconsulting.com

https://www.youtube.com/@RBeardIP

Addressing Social Determinants of Health to Reduce Infection Risks

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Norton Infectious Diseases Institute

Kentucky Infection Prevention Training Center

KentuckyIPTraining.org

Funding for this presentation provided by the Kentucky Department for Public Health.

Content includes discussion of unlabeled use of products. Presenter has no financial interests or other relationships with the manufacturers of products. No commercial support was provided for this educational activity.

Objectives

- Define Social Determinants of Health (SDOH)
- Analyze the relationship between specific SDOH factors and increased susceptibility to infectious diseases.
- Evaluate different SDOH screening tools highlighting challenges with lack of standardization
- Apply best practices for integrating SDOH screening into infection prevention efforts
- Utilize SDOH screening in case-based infection scenarios

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What are Social Determinants of Health (SDOH)?

- Factors which affect health outcomes, which are not medically related
- Conditions which people are born, live, grow—as such shaping their daily life
- Forces and systems include:
  - Economics
  - Politics
  - Societal norms
  - Policies
- All of these can influence health outcomes (for better or worse)

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When did we start linking SDOH to health outcomes?

- As early as the 19th century discussion
- 1967-UK Whitehall
- 1985-1988-further Whitehall II study
- 1985-Task Force on Black and Minority Health released first report on minority health in America
- 1995-Sauvaget et al launched a study in India which found social-economic disparity led to shorter life expectancy
- 1999-Book released “Social Determinants of Health” by Michael Marmot and Richard Wilkenson
- 2007-WHO released a report from the WHO Global Commission of SDOH (CSDH)
- 2010-WHO released “Conceptual Framework for Action on the Social Determinants of Health”
- 2022-CMS added “Advancing Health Equity” to its objectives for its 2030 vision

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Healthy People 2030 SDOH Overview

(Healthy People 2030, 2024)

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Health Related Social Needs (HRSN)

- **Health Related Social Needs (HRSN):** per the department of Health and Human Services (HHS) "*Health-related social needs are social and economic needs that individuals experience that affect their ability to maintain their health and well-being. These include needs such as employment, affordable and stable housing, healthy food, personal safety, transportation, and affordable utilities"*

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Healthy People 2030 Current Work

- Healthy People 2030 Initiative
- Social Determinants of Health Workgroup
  - Experts in SDOH factors
    - Health equity
    - Health disparities
    - Economics
    - Populations which are vulnerable
  - Eight objectives defined
    - Tracking objective status

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Healthy People 2030 SDOH Workgroup Objectives

(Healthy People 2030, 2024b)

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Healthy People 2030 Objective Measure Example

(Healthy People 2030, 2024b)

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What does the data show?

- 7.9% of households without broadband internet (2023)
- Crowding in 3.5% of occupied housing (2023)
- 40.6 million make <75k, and spend >30% of that income on housing (2021)
- Of adults >25 years old, 10.2% did not have a high school diploma of equivalent (2023)
- Persons identifying as racial and ethnic minorities made up 42.9% of the population (2023)
- 7.8 million single-parent households
- September 2024 unemployment rate 4.1 %
- 65 million living 150% below the poverty level (2023)

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Poverty Levels in 2025

(LIHAEP, 2024)

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Census Bureau Data-Kentucky

United States Census Bureau, 2025)

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Social Vulnerability Index (SVI)

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SDOH related to **Infectious Disease**

- Personal health literacy
- Employment
- Housing instability/Housing quality
- Language
- Medical insurance
- Transportation
- Primary Care Provider
- Environmental Conditions
- Incarceration

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As the IP, you might be thinking… Where do I fit in?

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Historical example of TB Decline in Western Societies

- Late 19th to early 20th century
- Western decline of Tuberculosis *before* medical therapies
- Why?
  - Housing improvements
  - Less crowding
  - Changes to improve nutrition and living conditions
  - Process of pasteurization

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RSV


Residential crowding and severe respiratory syncytial virus disease among infants and young children: A systematic literature review

Relationship between neighborhood census-tract level socioeconomic status and respiratory syncytial virus-associated hospitalizations in U.S. adults, 2015–2017

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Methicillin-Resistant *Staphylococcus aureus* (MRSA)


Global Implications of the Emergence of Community-Associated Methicillin-Resistant *Staphylococcus aureus* in Indigenous Populations

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COVID-19


Social Science & Medicine

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HIV

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What are we doing about it?

- The *Ideal* Process
  - Screen
  - Refer
  - Follow-up
- The *Reality*
  - Breaks in the *ideal* process
  - Difficulties implementing screening tools
    - Facilitators
    - Barriers
    - Systematic uptake of implementing these processes
  - Referrals
    - Might be missed
    - Maybe the patient refuses
    - What about bandwidth of social services

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Screening for SDOH

- What tool should you be using to screen?
- Who asks the questions?
- Who answers the questions?
- Is the process standardized across your organization?
- How do you decrease stigma and discomfort to ensure answer are true and accurate?

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Screening tools for SDOH

- Iscreen
- WE CARE
- HealthBegins
- Health Leads
- PRAPARE
- WellRx
- The Accountable Health Communities (ACH)
- HelpStep
- AFFP

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The Accountable Health Communities Health-Related Social Needs Screening Tool

- 13 Categories
  - Living situation
  - Food
  - Transportation
  - Utility
  - Safety
  - Financial Strain
  - Employment
  - Family and Community Support
  - Education
  - Physical Activity
  - Substance Use
  - Mental Health
  - Disabilities
- 26 Questions
  - Time constraints

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The Accountable Health Communities Health-Related Social Needs Screening Tool

(CMS, 2023a)

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The Accountable Health Communities Health-Related Social Needs Screening Tool

(CMS, 2023a)

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(CMS, 2023a)

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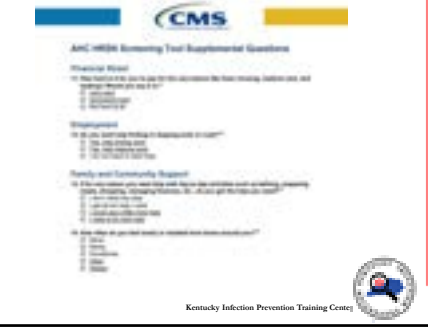
The Accountable Health Communities Health-Related Social Needs Screening Tool



(CMS, 2023a)

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The Accountable Health Communities Health-Related Social Needs Screening Tool

(CMS, 2023a)

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The Accountable Health Communities Health-Related Social Needs Screening Tool

(CMS, 2023a)

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The Accountable Health Communities Health-Related Social Needs Screening Tool

(CMS, 2023a)

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What are the requirements?

- According to CMS, not standard practice or required yet across the U.S.
- Only standard practice in the Accountable Health Communities (AHC) at this time

(CMS, 2024d)

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Concerns and barriers when screen SDOH

- Fear of repercussions
- Stigma
- Fear of involvement of Child Protective Services (CPS)
- Less likely for mothers to seek care (both for self or children)

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Who asks the questions, and how?

- One review showed preference toward self-reported electronically (systematic review)
- Another study on electronic self-report (specifically HER portals) found that those who responded most had more access to resources in their neighborhoods, had private insurance, and identified as White
  - Results showed those less likely to respond are more likely to have a need—*nonresponse bias*
    - Possibly due to digital inequities
- Regardless of the format—***trust*** and ***empathy*** are going to be the best assets to get honest answers

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What should happen after screening?

- Referral to social services
- Follow-up to ensure services were rendered
- Clinical-community linkage
- Educate when you have their attention
- Make it important to the person

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What are Z Codes?

(CMS, 2023b)

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Z Code Categories

(CMS, 2023b)

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How to use Z Codes

(CMS, 2023c)

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So…What is your role?

- Proactively address social determinants of health
- Work with multi-disciplinary team to discover barriers
- Collaborate with community health partners
- Seek out gaps in how patient care is managed and how patients are educated
- Dedicate resources
- Utilize educational toolkits
- Forge relationships with community organizations

Build trust…be empathetic…take time to listen

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Scenario

- Lao, a 22-year-old woman, arrives at a clinic with symptoms of painful urination. She does not have transportation, so she walked to her appointment. She is not proficient in English, and her primary language is Swahili.

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Pathway 1- Patient **NOT** screened for SDOH

No interpreter is available. She does her best to explain her symptoms, but the hurried provider offers minimal communication. She is asked to give a urine sample but is not given instructions for a clean-catch, which may affect test accuracy. The provider prescribes antibiotics and tells her they will call with results. When they later call, her urine culture shows that the prescribed antibiotic will not effectively treat the infection, so they send a new prescription to her pharmacy. Lao does not fully understand the call and, not wanting to take up time, does not ask for clarification. She also does not have transportation to pick up the new medication. Three days later, she develops a high fever and severe pain, leading to hospitalization for pyelonephritis (kidney infection).

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Pathway 2- Patient screened for SDOH

- Lao arrives at the clinic, and a medical interpreter is arranged through a video service. The provider takes time to listen to her symptoms and explain the importance of a proper urine sample, to ensure accurate test results. Recognizing her transportation challenges, the clinic assists by arranging a pharmacy delivery service for her antibiotic for a urinary tract infection. The clinic follows-up with a call with urine culture results, and the interpreter relays information and the new prescription instructions in Swahili, ensuring Lao understands the need for the new medication. The pharmacy delivery service delivers the new prescription, she takes it as prescribed, and recovers without complications.

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Scenario Summary of SDOH

- Access to Transportation
- Language and Health Literacy
- Healthcare Access and Quality
- Socioeconomic Factors
- Cultural and Systemic Barriers

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Resources

- Social Determinants of Health - Healthy People 2030 | odphp.health.gov
- Assess | Pathways to Population Health Equity
- The Impact of HealthDisparities andInequities on Healthcare-Associated Infections:A Call to Action
- The AHC Health-Related Social Needs Screening Tool
- A Guide to Using the Accountable Health Communities Health-Related Social Needs Screening Tool: Promising Practices and Key Insights

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Key Takeaways

- SDOH impact patient outcomes in many ways, including infection risks
- Lack of standardization for screening is challenging when screening for SDOH
- Be proactive and assess for the risks before there is a problem
- Take time to listen, understand, and build trust

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Strengthening Kentucky's Defense Against MDROs: Enhancing Our Reporting Process

Michael J. Curran MPH, BSN, RN, CIC, NHDP-BC
Infection Control Nurse/MDRO Prevention Lead, HAI/AR Prevention Program
Kentucky Department for Public Health

April 30, 2025

Objectives

- Participants will be able to identify how proposed improvements can streamline your reporting workflows, reduce administrative burden, and provide you with more timely and relevant feedback on multidrug-resistant organism (MDRO) trends in your facilities and the wider region
- Participants will be able to describe how enhanced reporting will equip us with more accurate and timely data for proactive surveillance, outbreak response, and the development of targeted prevention strategies to protect our communities
- Attendees will collaborate on shaping a practical and sustainable MDRO reporting system for Kentucky by sharing your insights, experiences, and concerns

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Slide 1

Strengthening Kentucky's Defense Against MDROs: Enhancing Our Reporting Process

Michael J. Curran MPH, BSN, RN, CIC, NHDP-BC
Infection Control Nurse/MDRO Prevention Lead, HAI/AR Prevention Program
Kentucky Department for Public Health

April 30, 2025

Kentucky Public Health
Prevent. Promote. Protect.

PHAB

TEAM KENTUCKY
CABINET FOR HEALTH AND FAMILY SERVICES

Slide 2

Objectives

- Participants will be able to identify how proposed improvements can streamline your reporting workflows, reduce administrative burden, and provide you with more timely and relevant feedback on multidrug-resistant organism (MDRO) trends in your facilities and the wider region
- Participants will be able to describe how enhanced reporting will equip us with more accurate and timely data for proactive surveillance, outbreak response, and the development of targeted prevention strategies to protect our communities
- Attendees will collaborate on shaping a practical and sustainable MDRO reporting system for Kentucky by sharing your insights, experiences, and concerns

Slide 3

HAI/AR Prevention Program Updates

- **KDPH Antimicrobial Stewardship Efforts**
  - **Aravind Pillai MBBS, PhD, MPH**
    - Antimicrobial Stewardship Lead
    - Aravind.pillai@ky.gov
    - Phone: 502-564-7218
  - ***New*** Antimicrobial Resistance and Stewardship webpage at KDPH
    - https://www.chfs.ky.gov/agencies/dph/dehp/idb/Pages/AS.aspx

Slide 4

HAI/AR Prevention Program Updates (cont.)

- ***New* NHSN Program Lead**
  - Cody Rocha MPH, CIC
    - Cody.rocha@ky.gov
    - Phone: 502-564-6584

Slide 5

MDROs and their Impact in Kentucky

INCREASED ANTIBIOTIC RESISTANCE

LONGER HOSPITAL STAYS AND HEALTHCARE COSTS

MDROS IN SKILLED NURSING FACILITIES

SURVEILLANCE AND REPORTING

Slide 6

MDRO Prevention and Management in Kentucky

Infection control practices

Antimicrobial stewardship

Enhanced barrier precautions

Early identification and management

Slide 7

MDROs Reportable in Kentucky

Routine reporting

- *Clostridioides difficile* (*C. difficile*)
- Enterobacterales species resistant to ceftazidime, ceftriaxone, or cefotaxime
- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant Enterococcus species (VRE)

Priority reporting

- *Candida auris* (*C. auris*)
- Carbapenem-resistant *Acinetobacter*
- Carbapenem-resistant Enterobacterales (CRE)
- Carbapenem-resistant *Pseudomonas*
- Vancomycin-intermediate *Staphylococcus aureus* (VISA)
- Vancomycin-resistant *Staphylococcus aureus* (VRSA)

Slide 8

MDRO Reporting in Kentucky

902 KAR 2:020 KY Reportable Disease Surveillance Regulation
https://apps.legislature.ky.gov/law/kar/titles/902/002/020/

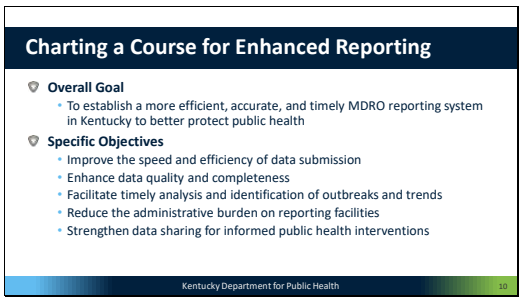
Sections 10 – 15
Reporting related to the Healthcare-Associated Infections and Antimicrobial Resistance (HAI/AR) Prevention Program

KY Reportable MDRO Form
EPID-250

Slide 9

What challenges do you face in reporting MDRO data to KDPH?

Slide 10



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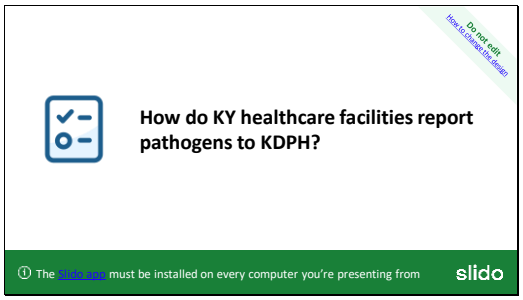

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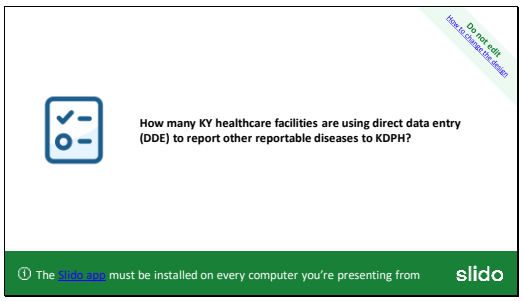

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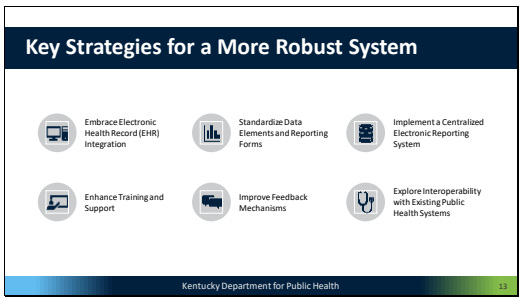

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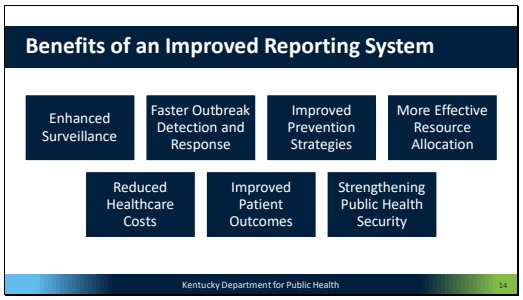

Slide 15

Slide 16

Your Role in Strengthening MDRO Reporting

PROVIDE FEEDBACK ON PROPOSED CHANGES

ADVOCATE FOR RESOURCES

EMBRACE NEW REPORTING PROCESSES

Slide 17

Questions & Discussion

Slide 18

References

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- https://www.cdc.gov/antimicrobial-resistance/media/pdfs/antimicrobial-resistance-threats-update-2022-508.pdf
- https://www.cdc.gov/antimicrobial-resistance/data-research/facts-stats/index.html
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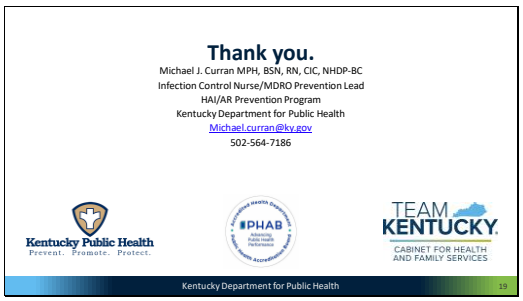
Slide 19


Thank you.
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