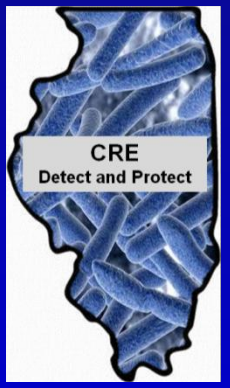
Patient Safety and Quality Starts at the Top

Webinar for Hospital Leadership and Quality Directors
Hosted by the Illinois Department of Public Health, Division of Patient Safety and Quality

May 13, 2014

Illinois Department of PUBLIC HEALTH



Featured Presenter

Rishi Sikka, M.D.

Senior Vice President, Clinical Transformation

Advocate Health Care

The opinions, viewpoints, and content presented in this webinar may not represent the position of the Illinois Department of Public Health

Patient Safety and Quality Starts at the Top

Rishi Sikka, MD
Senior Vice President
Clinical Transformation

May 13, 2014

Advocate Health Care

Presentation Goals

- Evaluate one health care systems approach to establishing system priorities related to patient safety, infection prevention, and quality.
- Describe the use of metrics in public reporting, tracking & trending, analysis, improvements, and patient outcomes.
- Explain the prioritization of infection prevention in patient outcomes through structure, focus and measurement.
- Examine a system program for mandatory vaccinations for associates and physicians.

Overview

- **Advocate Health Care**
- Key Result Areas (KRAs) and measurement framework
- Infection control KRAs and improvement
- Future KRAs and improvement opportunities
- Summary and conclusion

$4.7B Revenue
AA Rated

12 Hospitals

11 acute care hospitals
1 children's hospital
5 level 1 trauma centers
4 teaching hospitals
5 magnet designations

Physicians

6,000 affiliated physicians
4,000 APP physicians
1,100 AMG physicians
200 Dreyer physicians

34,000 Associates

Advocate Health Care

ADVOCATE 2020

Mission, Values, Philosophy

Vision

To be a faith-based system providing the safest environment and best health outcomes, while building lifelong relationships with the people we serve.

Strategies

- Advocate Experience
- Access and Affordability
- AdvocateCare

Key Result Areas

- Advocate Experience: Safety, Quality, Service
- Access and Affordability: Growth, Funding our Future
- AdvocateCare: Coordinated Care

Foundation

Strong Physician Engagement

Agenda

- Advocate Health Care
- **Key Result Areas (KRAs) and measurement framework**
- Infection control KRAs and improvement
- Future KRAs and improvement opportunities
- Summary and conclusion

KRA Journey

Advocate Health Care

Key Result Areas

- Areas that guide prioritization to fulfill Advocate's MVP
- Are at the forefront of actions, success & opportunities
- Cover the entire scope of our organization

It is imperative that there is alignment throughout the organization; everyone must be working on goals that ultimately support the achievement of Advocate's goals.

- Each KRA has:
  - Quantifiable, measurable goal based Key Performance Indicators (KPIs)
  - KPIs and Goals are developed by leadership & approved by the Executive Management Team
  - KPI alignment occurs through cascading to all sites and managers
- Continuously communicating the KRAs and goal outcomes support accountability to Advocate's MVP
- Tied to financial performance incentive

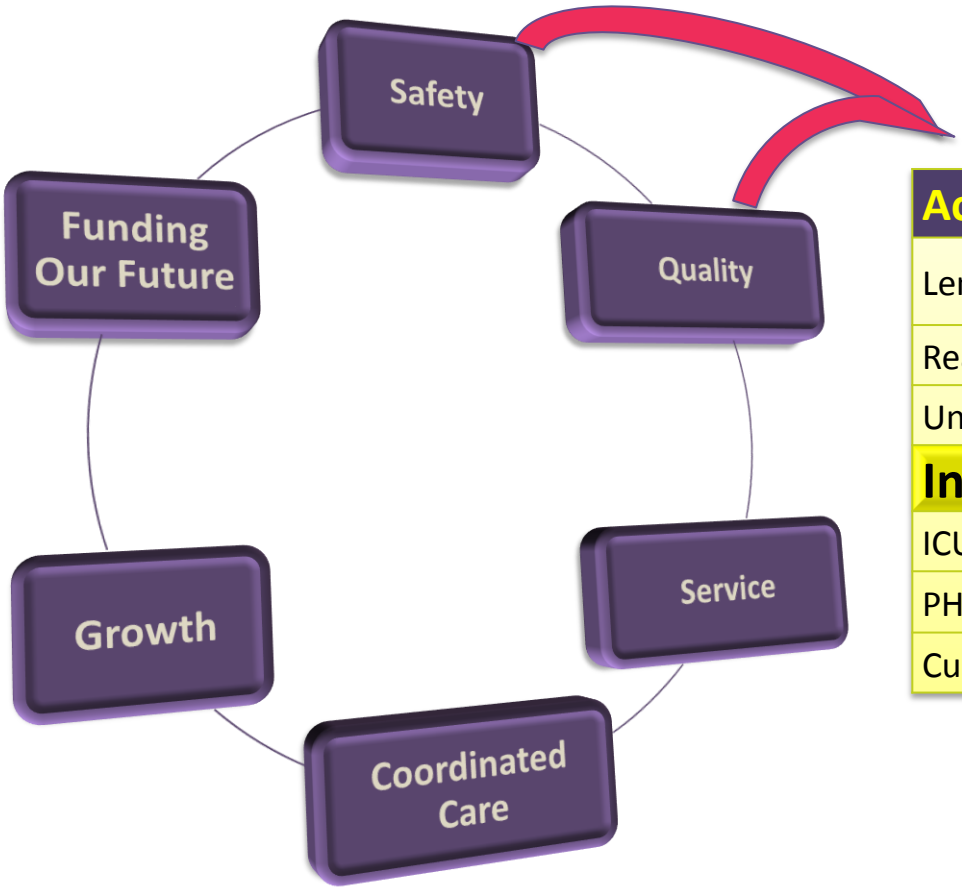
Watchlist

- Supports sustained performance
  - Reviewed during the Monthly Operations Review (MOR)
  - May cascade to managers, per each site's discretion
- Inclusion
  - Future KRA measures that do not currently meet KRA prerequisites (e.g. lack comparative data)
  - Publicly reported measures
  - Measures where successful target achievement has been realized
  - "In development" measures requiring final definition
- No weighting, not tied to financial performance incentive

Health Outcomes KRA Framework

- Measures are prioritized using the following criteria:
  - Availability of a comparative reference
  - Accuracy/reliability of measure
    - Established and well-defined operational definitions
    - Data availability (no additional burden for collection)
  - Extent of impact
    - Volume of patients impacted/touched
    - Size of opportunity
  - Market-driven
    - Public reporting
    - Regulatory requirement
    - Payer implications

2014 Key Result Areas



Acute Adult Hospital Measures	Weights
Length of Stay Days	11.0%
Readmission Rate	11.0%
Unassisted Falls Percentile	19.0%
Infection Control Composite	**19.0%**
ICU Ventilator Days Index	19.0%
PHO Clinical Integration Score	11.0%
Culture of Safety Survey Percentile	10.0%

Advocate Health Care

- Advocate Health Care
- Key Result Areas (KRAs) and measurement framework
- **Infection control KRAs and improvement**
- Future KRAs and improvement opportunities
- Summary and conclusion

Infection Prevention

- Structure
  - Infection prevention practitioners
  - Physician champions

- System Team
  - System director
  - System physician champion
  - Site practitioners
  - Site physician champions
  - Employee Health
  - Environmental services
  - Laboratory physician & director microbiology
  - Pharmacy

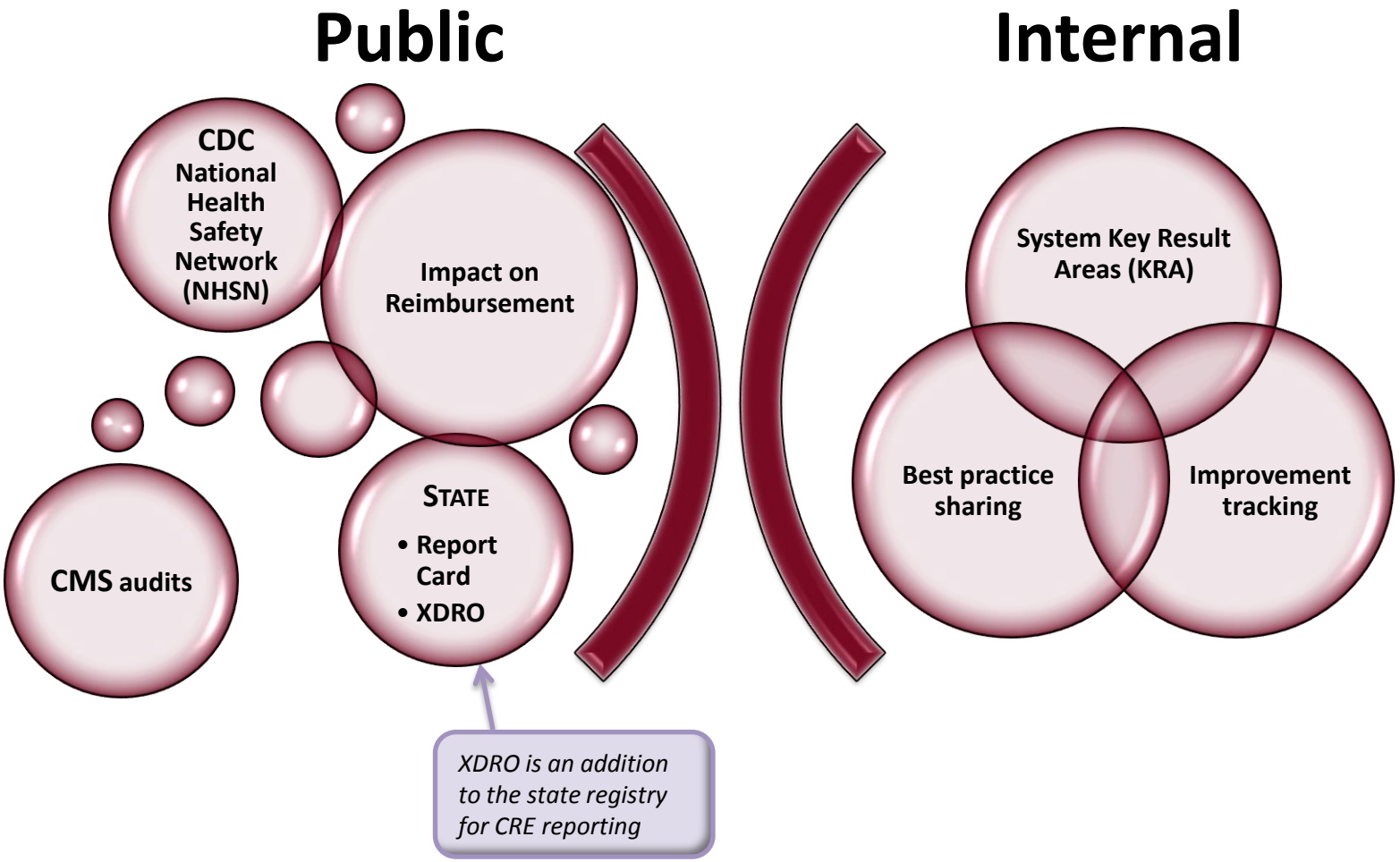
The role of Advocate Health Care's Infection Prevention Team is to serve as experts for infection prevention throughout the system.

This team will provide direction for standardization throughout the system in meeting legislative, regulatory and educational needs.

Metrics

- Significant increase in public data requirements
- Internally reported data used to direct improvement opportunities
- Moved from targeted surveillance to whole house surveillance
- Electronic surveillance system
- Comparisons to internal and external benchmarks

Reporting



Advocate Health Care

KRA: Infection Control Composite

Standardized infection ratios (SIRs) for measures defined by NHSN:

ICU CLABSI	Non-ICU CLABSI	ICU CAUTI
Non-ICU CAUTI	CABG SSI	COLO SSI
HYST SSI	KPRO SSI	

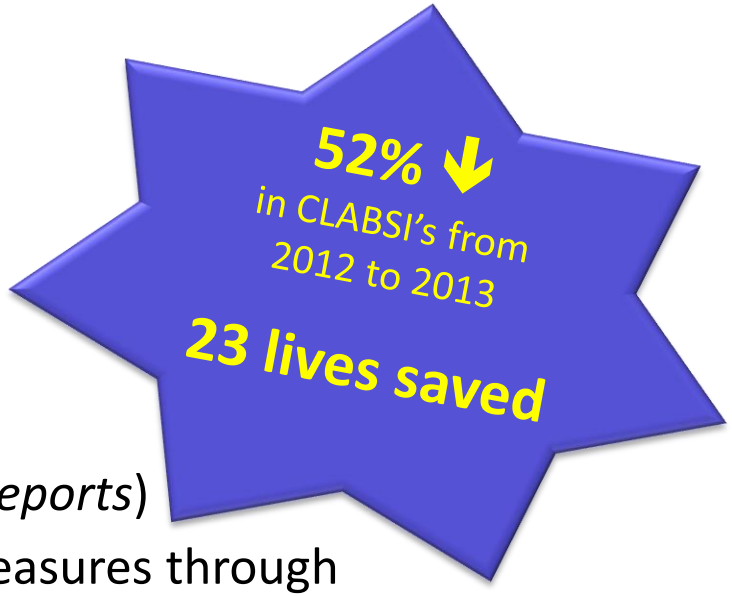
Target Methodology:

- Minimum: NHSN 50th Percentile across measures
- Target: NHSN 75th Percentile (CLABSI, CAUTI, COLO) and NHSN midpoint of 50th and 90th Percentiles** (CABG, HYST, KPRO)
- Maximum: NHSN 90th Percentile across measures

Central Line Improvements

The following standardization occurred throughout the system:

- Central Line policy
- EMR documentation
- Electronic reports from EMR (*daily*)
- Catheter care kits
- Required central line education
- CL insertion & maintenance bundles
- CL insertion & maintenance audits (*monthly reports*)
- Metrics: monthly compliance with process measures through
- Daily CHG baths



Current opportunity

- Opportunity: insertion kit standardization

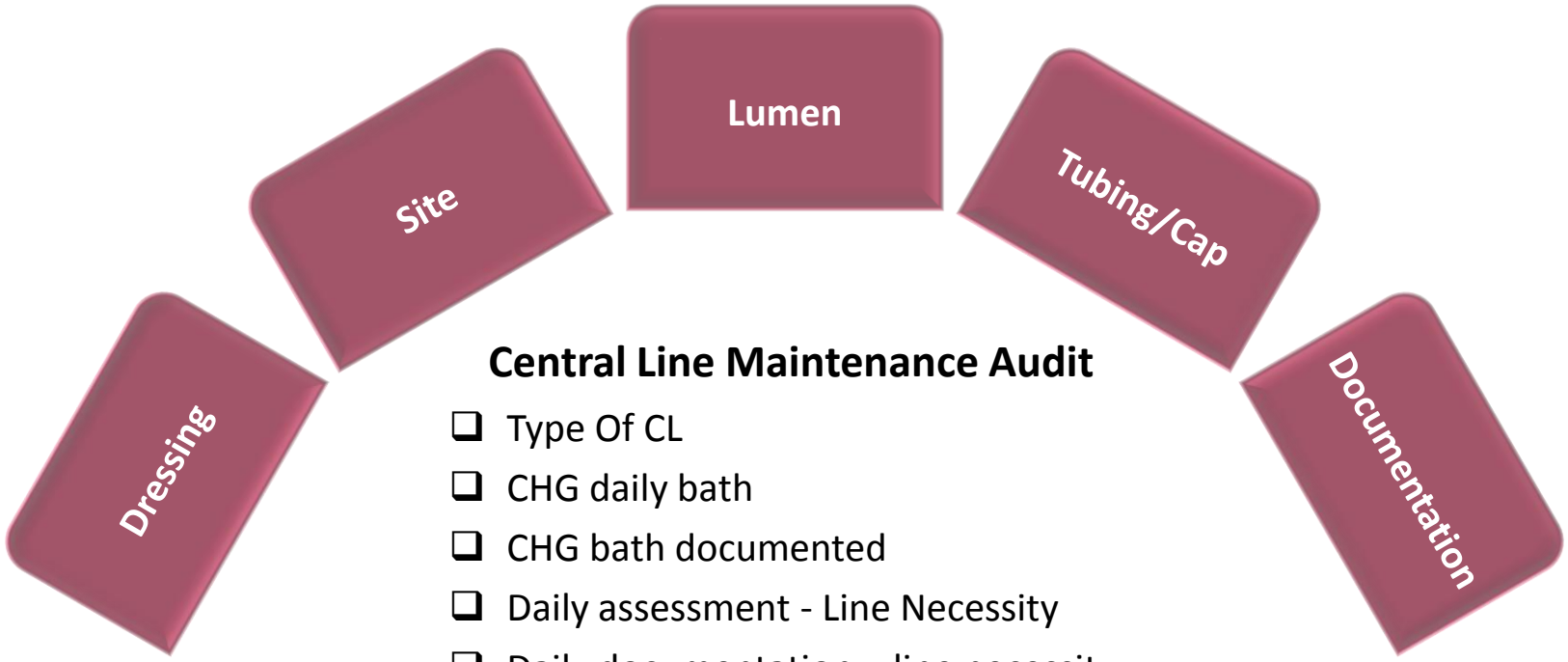
Central Line Insertion Bundle

Central Line Insertion Audit

- ❑ Central Line Insertion Bundle
- ❑ Wash Hands
- ❑ Patient Identification
- ❑ Universal Protocol/Time Out
- ❑ Central Line Bucket Use
- ❑ Central Line Bucket Stocked
- ❑ Chlorhexidine Prep
- ❑ Sterile Drape Used
- ❑ Physician Attire
- ❑ Assistant Attire
- ❑ Sterile Field Used
- ❑ Personnel in Room Masked
- ❑ Sterile Technique for Dressing
- ❑ Stat Lock Used
- ❑ Dressing Dated
- ❑ Pressure Caps Added

Advocate Health Care

Central Line Maintenance Bundle



Central Line Maintenance Audit

- ❑ Type Of CL
- ❑ CHG daily bath
- ❑ CHG bath documented
- ❑ Daily assessment - Line Necessity
- ❑ Daily documentation – line necessity
- ❑ Assessment of port patency & action of (all lumens) each shift
- ❑ Assessment of dressing and insertion each shift
- ❑ Cap change documented

Advocate Health Care

Urinary Catheter Guidelines

Appropriate Urinary Catheter Use

Indications

- Urinary retention/ obstruction
- Prolonged immobilization
- Unstable spine
- Multiple trauma
- Select surgeries
- Urine output (critical care)
- Comfort in end of life care
- Healing open sacral/ perineal wounds

Urinary Catheter Insertion

Technique

- Hand hygiene before and after insertion or manipulation

<u>Acute care setting</u>

- Aseptic technique
- Sterile equipment

<u>Non-acute care setting</u>

- Clean technique for catheterization
- Secure indwelling catheter

Urinary Catheter Maintenance

Closed system

- Break in aseptic technique → change catheter &collecting system
- Maintain unobstructed urine flow
- Secure catheter
- Keep catheter & tubing free from kinking
- Keep bag below the level of the bladder
- Empty bag regularly
- Standard Precautions during manipulation

Urinary Catheter Removal

Assessment

- Assess &document catheter necessity daily
- Remove catheter as soon as it is no longer required for care

<u>Surgical patients</u>

- Remove catheter within 24 hours, unless there are indications for continued use
- Consider alternatives to indwelling catheters

Primary focus for CAUTI management for 2014 is to explore standardization of nurse driven protocols

Key Surgical Infection Prevention Improvements

SSI-CABG

- 40% ↓ CABG SSI (2012-2013)
- Preoperative MRSA Screening

SSI-COLO

- 26% ↑ COLO SSI (2012-2013)
- Colon bundles trialed at several sites

SSI-HYST

- 22% ↓ HYST SSI (2012-2013)

SSI-KPRO

- 8% ↓ KPRO SSI (2012-2013)
- Preoperative MRSA Screening

- Advocate Health Care
- Key Result Areas (KRAs) and measurement framework
- Infection control KRAs and improvement
- **Future KRAs and improvement opportunities**
- Summary and conclusion

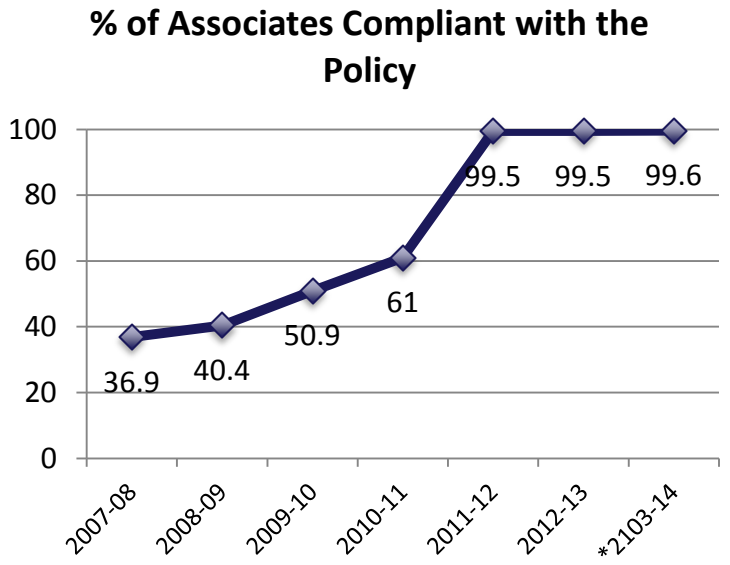
2014 Watchlist Measures

Measures	
Associate Vaccination Compliance Composite (pertussis and influenza)	Elective Delivery Rate
Infection Prevention Process Composite	Episiotomy Rate
• *Antimicrobial Stewardship*	ICU Length of Stay Index
• *EVS High Touch Area Cleaning*	HIMSS Level
• *Personal Protective Equipment*	NSQIP – Outcomes in Surgeries for Patients ≥ 65
• *Hand Hygiene*	NSQIP – Colon Surgical Outcomes
C.*diff* LabID SIR	NSQIP – Lower Extremity Bypass Surgical Outcomes
AHRQ PSI Composite	Hospital Harm Rate
HAC Composite Rate	Single Unit Transfusion Compliance/Non-bleeding Patients
Inpatient Core Measure Composite	CT Radiation Dose
ED Core Measure Composite	Mislabeled Specimens (Non-lab)

Associate Vaccination – Influenza & Pertussis

- Goals:
  - Prevent transmission to patients
  - Minimize risk of Health Care Provider (HCP) illness
  - Maintain a “critical” work force during peak influenza seasons and outbreaks
- Mandatory Influenza program for associates since 2011
- Mandatory influenza program for physicians 2013-14

Associate Vaccination Results
*Physicians included 2013-14 season



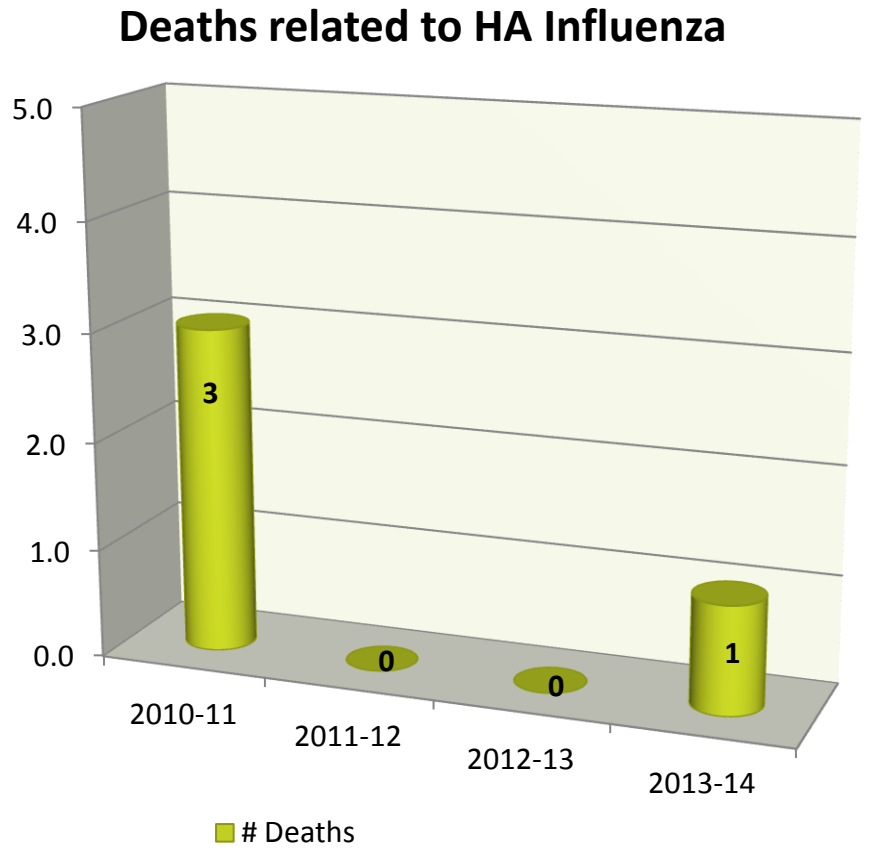
Measure	2011-12	2012-13	2013-14
Compliance with policy	99.5%	99.5%	99.5%
Associate Termination	0.06%	0.04%	0.03%
Physician suspension	---	---	1.16%

- ✓ All associates at clinical sites of care
- ✓ Physicians and other credentialed providers
- ✓ Extensive communication
- ✓ Application for medical or religious exemption only
- ✓ Exemption review oversight committee
- ✓ Consequences
  - ✓Associate: Suspension and termination
  - ✓Physicians and other credentialed providers: Administrative suspension and loss of medical staff privileges

Advocate Health Care

Mandatory Influenza Vaccination Outcomes

Reduced hospital acquired influenza from 3.2% of all flu hospitalizations to 2.4%



Advocate Health Care

Infection Prevention Process Composite

Antimicrobial Stewardship

- Required documentation for indication & therapeutic rationale for ordered antimicrobials
- 72h reassessment for empiric antimicrobials
- MD alert too
- Pharmacist follow up for Antimicrobials not re-assessed at 72 hours are followed
- Hardwired into EMR
- System standard empiric use guideline
- Minor site adaptations due to variations in antibiograms
- Posted on the system intranet
- Linked to EMR documentation as a Clinical Decision Support tool

EVS High Touch Area Cleaning

- Standard approach across system
- 10%-15% of discharge patient rooms
- 17 High touch areas
- Methods
  - Fluorescent Markers
  - ATP Bioluminesence
  - Direct Practice Observation
  - Swab Cultures, or
  - Agar Slide Cultures
- Annual requirement
  - Education
  - Competency

Compliance with use of Personal Protective Equipment (PPE)

- Site observation teams
- Observers competency tested on an annual basis
  - Anonymous
  - Compliance monitoring
- Ongoing education to site associates
- Focus: Contact precautions
- PPE on upon entry
- PPE off prior to exit

Hand Hygiene measures – HH compliance

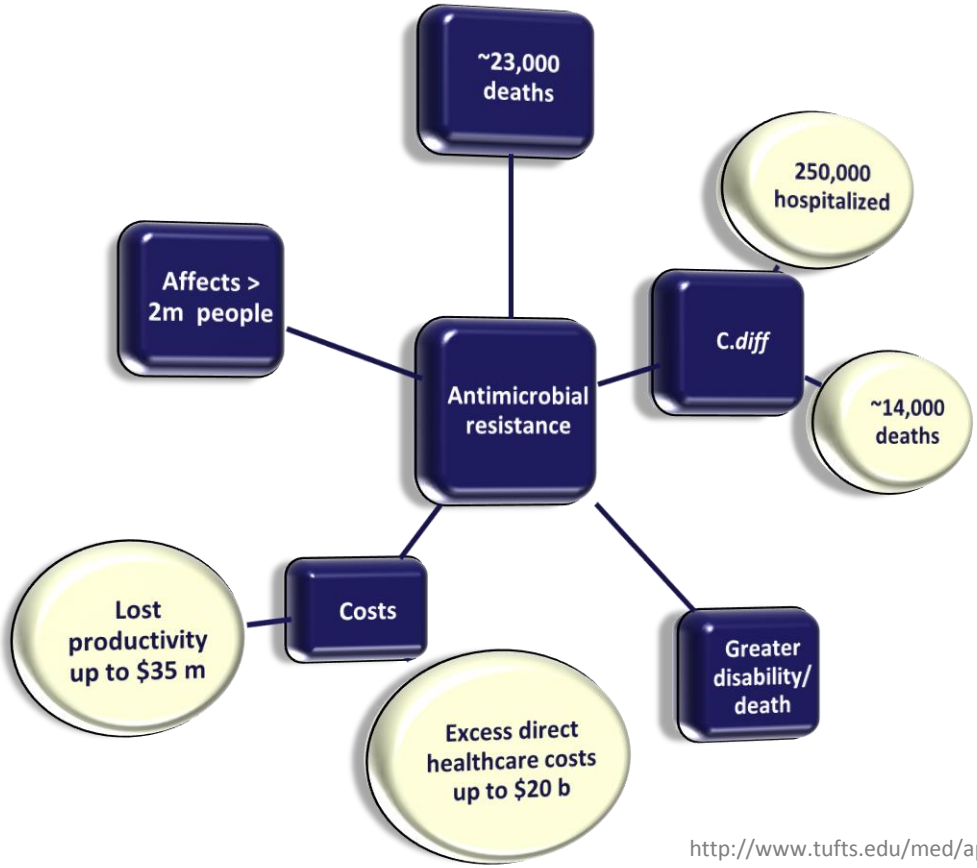
- Site observation teams
- Observers competency tested on an annual basis
  - Anonymous
  - Compliance monitoring
- Ongoing education to site associates
- Hand washing
- Glove practice
- Appropriate usage of products

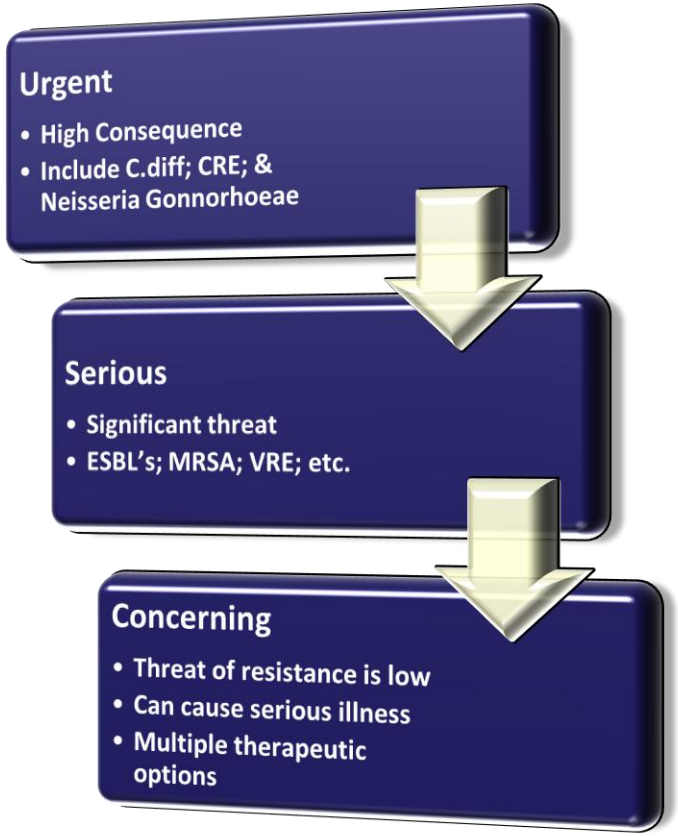
Antimicrobial Stewardship

- Purpose:
  - Optimize safe, judicious, and appropriate use of antibiotics
  - Enhance clinical outcomes
  - Minimize unintended consequences of anti-microbial use (e.g., toxicity, resistance, etc.)
  - Reduce healthcare costs without adversely affecting quality of care
- Membership:
  - Pharmacist
  - Infection Prevention Physician
  - Infection Prevention Practitioner
  - Microbiology representative

Advocate Health Care

ANTIBIOTIC RESISTANCE Threats in the United States *(CDC – 2013)*





http://www.tufts.edu/med/apua/consumers/personal_home_5_1451036133.pdf (accessed 8-5-2013); extrapolated from Roberts RR, Hota B, Ahmad I, et al.Hospital and societal costs of antimicrobial-resistant infections in a Chicago teaching hospital: implications for antibiotic stewardship.Clin Infect Dis.2009 Oct 15;49(8):1175-84

Advocate Health Care

Actions to Combat the Threats

Preventing Infection
- ❑ Immunizations
  - × Patients: influenza & pneumococcal
  - × Associate: influenza & pertussis
- ❑ Safe Food Preparation
- ❑ Hand washing
- ❑ Use Antibiotics only as necessary

1 PREVENTING INFECTIONS, PREVENTING THE SPREAD OF RESISTANCE

Avoiding infections in the first place reduces the amount of antibiotics that have to be used and reduces the likelihood that resistance will develop during therapy. There are many ways that drug-resistant infections can be prevented: immunization, safe food preparation, handwashing, and using antibiotics as directed and only when necessary. In addition, preventing infections also prevents the spread of resistant bacteria.

2 TRACKING

CDC gathers data on antibiotic-resistant infections, causes of infections and whether there are particular reasons (risk factors) that caused some people to get a resistant infection. With that information, experts can develop specific strategies to prevent those infections and prevent the resistant bacteria from spreading.

3 IMPROVING ANTIBIOTIC PRESCRIBING/STEWARDSHIP

Perhaps the single most important action needed to greatly slow down the development and spread of antibiotic-resistant infections is to change the way antibiotics are used. Up to half of antibiotic use in humans and much of antibiotic use in animals is unnecessary and inappropriate and makes everyone less safe. Stopping even some of the inappropriate and unnecessary use of antibiotics in people and animals would help greatly in slowing down the spread of resistant bacteria. This commitment to always use antibiotics appropriately and safely—only when they are needed to treat disease, and to choose the right antibiotics and to administer them in the right way in every case—is known as antibiotic stewardship.

4 DEVELOPING NEW DRUGS AND DIAGNOSTIC TESTS

Because antibiotic resistance occurs as part of a natural process in which bacteria evolve, it can be slowed but not stopped. Therefore, we will always need new antibiotics to keep up with resistant bacteria as well as new diagnostic tests to track the development of resistance.

Tracking
- ❑ Data tracking and submission to the state and federal government drug resistant organisms

Antibiotic Stewardship
- ❑ Indications & rationale for use
- ❑ Days of therapy
- ❑ Antimicrobial 72 hour reassessment
- ❑ "drug/bug" matching

New drugs & diagnostic tests
- ❑ Resistance can be slowed, but not stopped

Advocate Health Care

C.*diff* Bundle

- Hand washing sink in nearby
- Designated toileting capacity
- Designated bedside commode
- PPE readily available just outside room
- Stop contact precautions when free of diarrhea for 48 hours
- Do not isolate asymptomatic carriers

- Antibiotic assessment and appropriate actions. Discontinue inappropriate antibiotics

- Limit testing to a single PCR test.
  - avoid repeat testing
  - do not test formed stool
  - do not test for cure

- Routine cleaning: hospital approved & EPA registered disinfectant
- Terminal cleaning: bleach or a sporacidal product
  - discharge
  - transfer

Advocate Health Care

- Advocate Health Care
- Key Result Areas (KRAs) and measurement framework
- Infection control KRAs and improvement
- Future KRAs and improvement opportunities
- **Summary and conclusion**

Infection Prevention Summary 2013

Hospital Acquired Infections

- 37% overall reduction of HAI's
- $4,290,909 estimated cost avoidance[1] *(external data)*
- 23 lives saved

Opportunities

- Colon SSI's

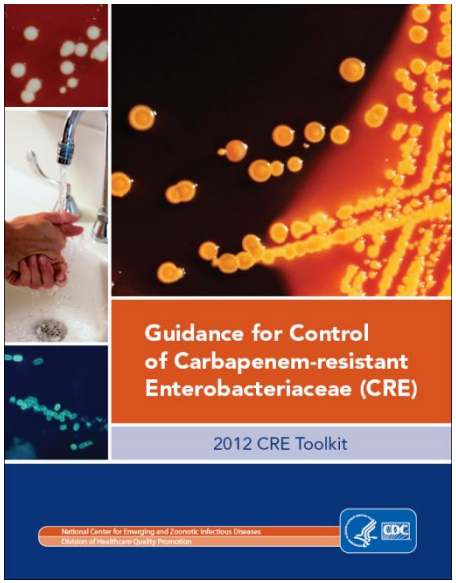
[1] Eyal Zimlichman, MD, MSc1,2; Daniel Henderson, MD, MPH1; Orly Tamir, PhD, MSc, MHA1; Calvin Franz, PhD3; Peter Song, BSE1; Cyrus K. Yamin, MD1,4; Carol Keohane, BSN, RN1,5; Charles R. Denham, MD6; David W. Bates, MD, MSc1,7Health Care–Associated Infections: A Meta-analysis of Costs and Financial Impact on the US Health Care System JAMA Intern Med. 2013;173(22):2039-2046. doi:10.1001/jamainternmed.2013.9763.

Infection Prevention Focus For 2014

- **Standardize practices impacting infection prevention outcomes**
  - Compliance with Hand Hygiene
    - Review & update hand hygiene program
    - Improve reliability of monitoring techniques
  - Compliance with use of personal protective equipment
  - CAUTI
  - High level disinfection
  - Environmental cleaning
    - High touch
    - Evaluate additional cleaning processes (UV, Hydrogen Peroxide, etc.)
  - Identify opportunities, develop and implement processes impacting Surgical Site Infections
- **Mandatory Tdap immunization**
- **Anti-microbial Stewardship -** 72 hour rule

CRE Detect & Protect Campaign

Carbapenem
Resistant
Enterobacteriaceae



eXtensively
Drug
Resistant
Organism
Registry

XDRO registry

Mandatory reporting began
November 1, 2013

https://www.xdro.org/img/MEMO_XDRO%20Registry_090413_Final.pdf

www.xdro.org

Illinois Department of PUBLIC HEALTH

Thank you for attending!

Please fill out webinar evaluation:

https://www.surveymonkey.com/s/idph-hospital-leaders

Webinar recordings and slides will be available at:
https://www.xdro.org/cre-campaign/index.html

CRE Project Directors:

Robynn Leidig
Robynn.Leidig@illinois.gov
312-814-1631

Angela Tang
Angela.Tang@illinois.gov
312-814-3143

Illinois Department of PUBLIC HEALTH