

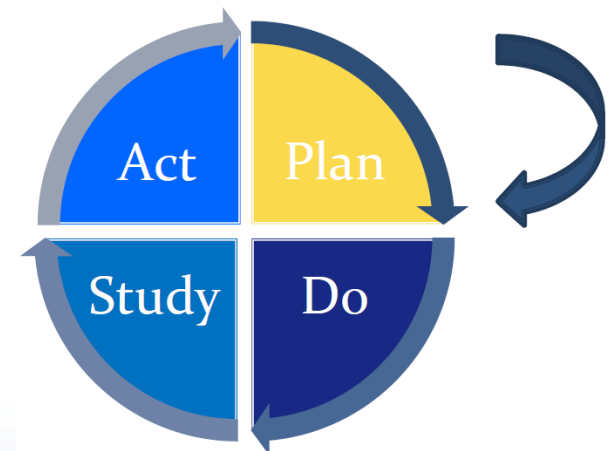
# Tennis Ball PDSA Game

- ▶ Divide into teams of 8 people
- ▶ One person will need a cell phone with a stop watch



# Tennis Ball PDSA Game Debrief

- ▶ How many more PDSA cycles would you need to complete improvements on the time of the process?
- ▶ What did you learn about PDSA from this exercise?





Community Infection Reduction Collaborative  
across Acute and Long-term Care

210-2011, An Overview

CRE Collaborative

May 28, 2014

we believe  
in life well-lived.





## **Collaborative Goal**

- Reduce C. Diff infections thru collaboration between Acute Care and Long Term Care settings
- Dates of collaborative: 2010-2011

## **Participants**

- Ga Dept Community Health (GDCH)
- Georgia Medical Care Foundation (GMCF), Ga's Medicare Quality Improvement Organization
- Centers for Disease Control (CDC)
- 11 Northwest Atlanta Nursing Homes
- WellStar Health System



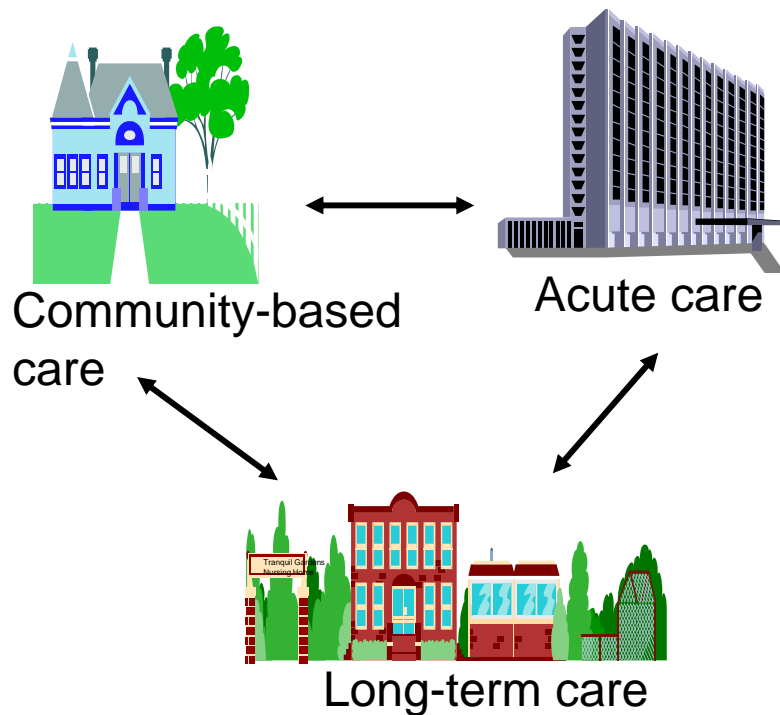
Community Infection Reduction Collaborative  
across Acute and Long-term Care

# Collaborative Design

- Capitalize on the expertise of each partner
- Leverage well established QIO LTC performance improvement network
- Local in person meetings bringing LTCs and partners together
- Individual LTC support calls and webinars
- Infection Prevention support through CDC and Acute Care mentors
- Data Collection through QIO capabilities

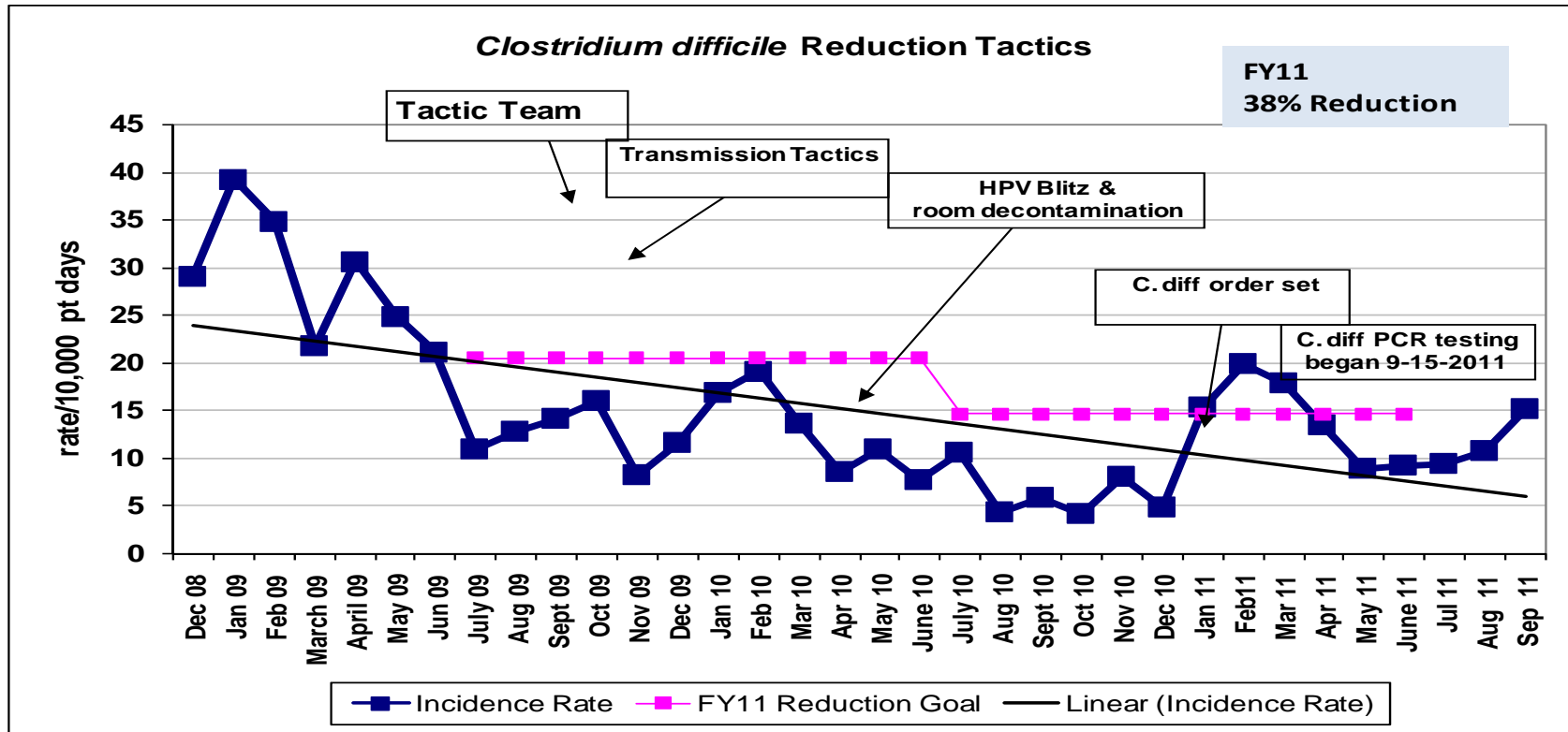
3

# Aligning goals of the continuum of care



- All healthcare facilities serve as a reservoir for *C. difficile*
- Patient risks and exposures travel with them

# Hospitals can't get further reductions without the help of LTC...





Community Infection Reduction Collaborative  
across Acute and Long-term Care

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# Participation Agreement



## LETTER OF PARTICIPATION AND EXECUTIVE AGREEMENT

Date: \_\_\_\_\_

\_\_\_\_\_, [name of facility] agrees to participate in the Community Infection Reduction Collaborative in partnership with the Georgia Division of Public Health, WellStar Health System, the Centers for Disease Control and Prevention and GMCF, the Medicare Quality Improvement Organization (QIO) for Georgia.

As an active participant in the Collaborative, benefits to our residents, staff and institution will include:

- ✍ Professional education from recognized experts in the field of infection control and prevention;
- ✍ Quality Improvement technical assistance from GMCF to review current practices for enhancement opportunities;
- ✍ Data collection and surveillance support;
- ✍ Tools to improve communication within our local healthcare communities;
- ✍ Access to infection prevention and control tools, resources and successful interventions; and
- ✍ Recognition of successes at a local and/or national level

We, \_\_\_\_\_ [name of facility] pledge to support this effort by participating in the following ways:

- ✍ Involvement in Collaborative Learning Sessions for education and action planning;
- ✍ We will seek opportunities for synergy with other participants in this Collaborative to reach a community goal for reduction of *C. Diff*;
- ✍ We will utilize a standard data collection method for surveillance of *C. Diff*;
- ✍ We will facilitate quality improvement through adoption of a standard environmental protocol for infection control related to *C. Diff*; and
- ✍ We will share intervention tools and information on effective methods for improving processes and outcomes with peers.

\_\_\_\_\_  
Signature of Facility Executive or Medical Staff Leader

\_\_\_\_\_  
Name of Facility Executive or Medical Staff Leader

### **Facility's Key Contact for CIRCAL:**

Name / Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

*Thank you for your enthusiastic participation in CIRCAL and our efforts to improve quality.*

This material was prepared by GMCF, the Medicare Quality Improvement Organization for Georgia, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication No. 9SOW-GA-PSF-10-117





Community Infection Reduction Collaborative  
across Acute and Long-term Care

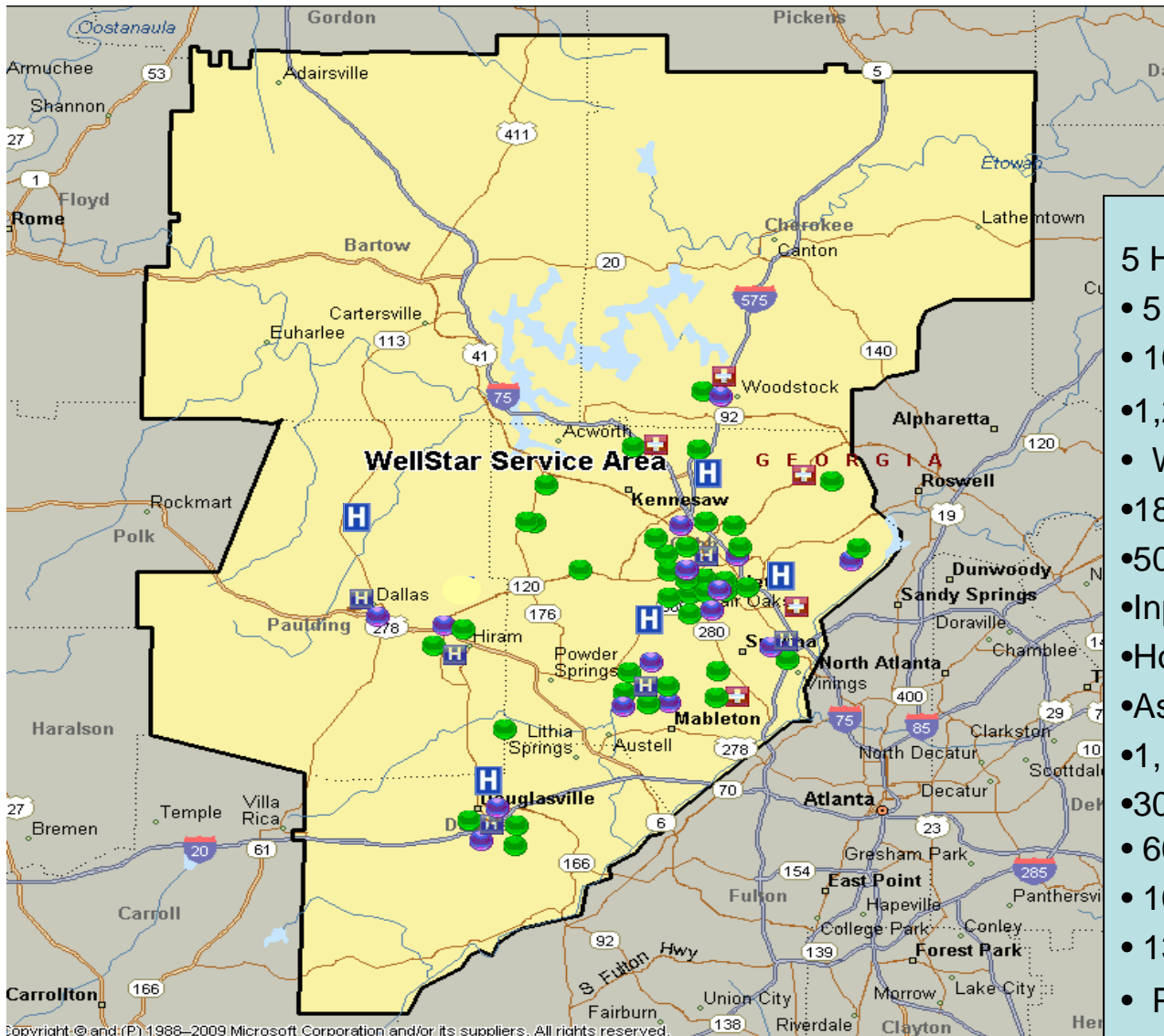
# LTC Participants

- **A.G. RHODES HOME, INC - COBB**
- **ANDERSON MILL HEALTH AND REHAB**
- **GOLDEN LIVING CENTER – KENNESTONE**
- **POWDER SPRINGS NURSING AND REHAB**
- **MARIETTA HEALTH & REHAB CENTER, INC**
- **PRESBYTERIAN VILLAGE**
- **ROSS MEMORIAL HEALTH CARE**
- **SIGNATURE OF MARIETTA**
- **UNIHEALTH OF AUSTELL**
- **WOODSTOCK NURSING & REHAB**
- **WELLSTAR PAULDING NURSING**

# WellStar Health System

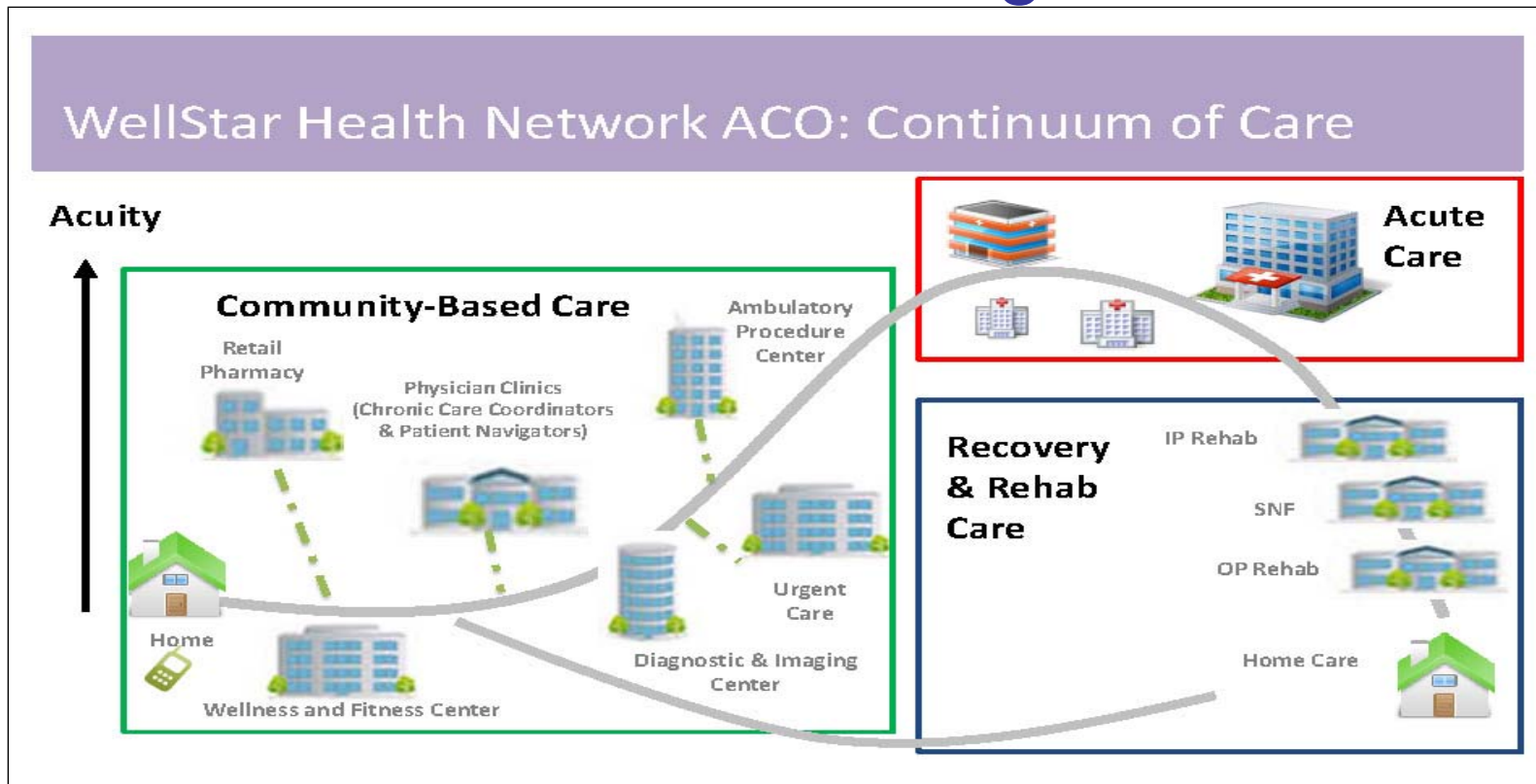


- Imaging Centers
- Hospitals
- Urgent Care Centers
- WMG Practices



- 5 Hospitals / 1,321 Beds
- 5 Urgent Care Centers
- 10 OP Imaging Centers
- 1,200 Affiliated Physicians
- WMG 700+ Licensed Professionals
- 184 bed LTC
- 50 bed LTAC
- Inpatient and home Hospice
- Home Health Care
- Assisted Living
- 1,146, 217 Medical Group Visits
- 306,346 ED Visits
- 66,585 Discharges
- 10,117 Deliveries
- 13,000 employees
- Patient Service Revenues: \$1.6B

# Connecting LTC Neighbors in WellStar's Medical Neighborhood





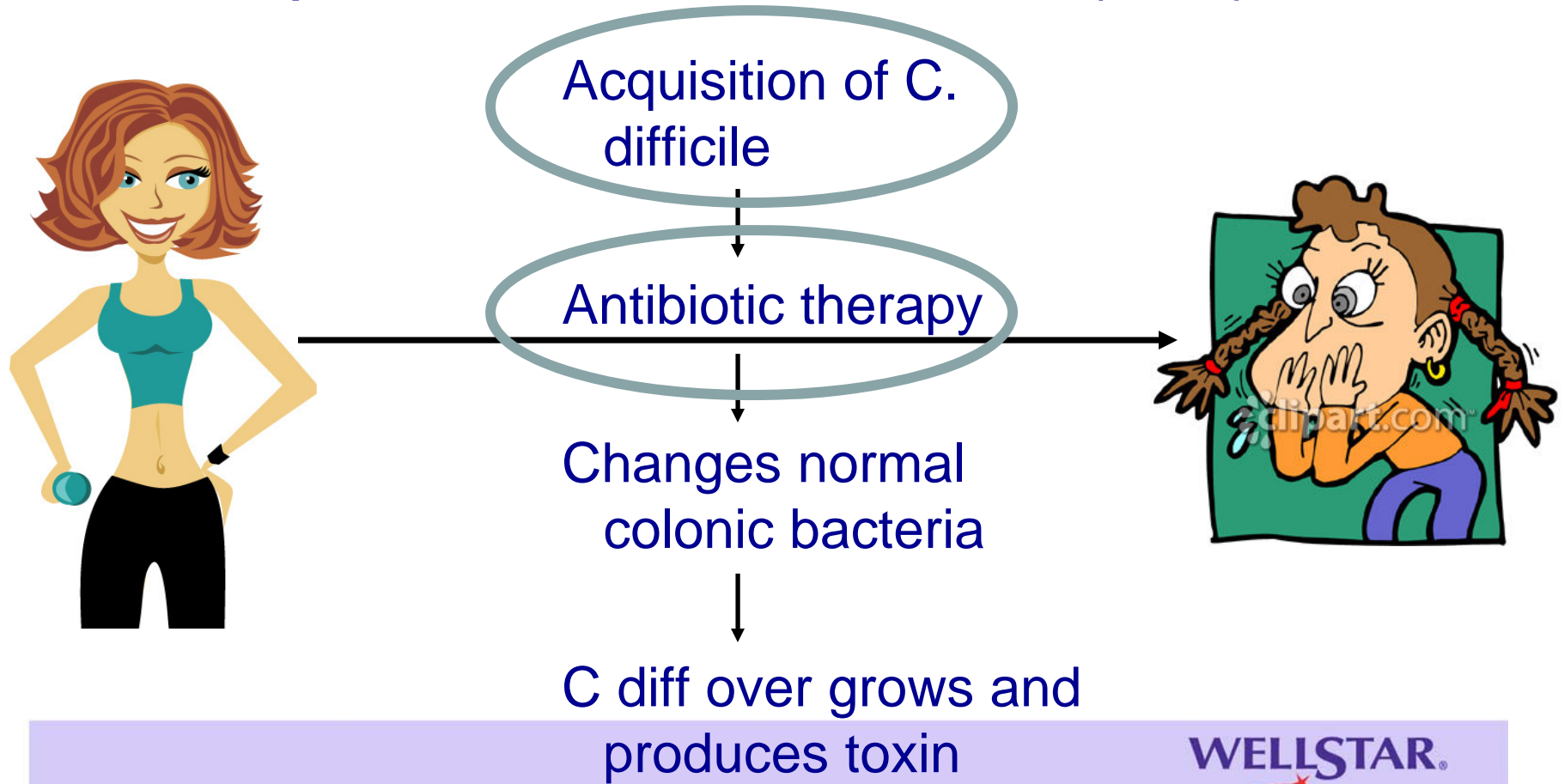
Community Infection Reduction Collaborative  
across Acute and Long-term Care

## Areas of focus for LTC

- Optimizing prevention tactics in the LTC environment
- Understanding LTC C Diff testing processes
- Improving the availability of experienced Infection Prevention resources
- Enhancing environmental cleaning and laundry care with special needs of LTC residents
- Expanding the performance improvement capabilities within LTC environment
- Data capabilities not just collection of data

11

# Focusing on opportunities to intervene to prevent C. diff Infection (CDI)



C diff over grows and produces toxin



Community Infection Reduction Collaborative  
across Acute and Long-term Care

# Prevention Strategies

- **FACILITY-LEVEL**
  - Assessing hand hygiene practices
  - Implementing Contact Precautions
  - Improving environmental cleaning
  - Appropriate use/ communication of labs
  - Antibiotic stewardship
- **ACROSS FACILITIES**
  - Inter-facility communication of CDI / risk factors at time of transfer



## Hand Hygiene and C. difficile

- Primary means of preventing transmission of infections...
- What is your facility's current message?



VS.







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across Acute and Long-term Care

## Assessing LTC use of CDI diagnostics

- What prompts stool testing for CDI in my facility?
- What test is used by the lab?
- How quickly are results communicated to providers?
- Do we have a protocol for implementing appropriate precautions on known or suspected CDI cases?



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across Acute and Long-term Care

## Barriers to communication during inter-facility transfers

- Main perceived barriers:
  - Hospital providers put limited effort in the transfer process
  - Unfamiliar with the patient
  - Both providers lacked time;
  - Both put low priority on the process
  - Sudden/unanticipated transfers or transfers on off-shifts (nights/weekends)



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across Acute and Long-term Care

## Some factors related to decreasing transfer communication barriers

- LTC and hospitals sharing common pharmacy/laboratory services
- Cross-site visits among LTC and hospital staff
- Greater consistency in goals of care between hospitals and LTCs
- Efforts in place to improve communication at the time of transfer



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across Acute and Long-term Care

# Improving transfer communication

Original concept and form developed by Utah HAI Working Group/ Courtesy of Utah State Dept of Health.

## Inter-facility Infection Control Transfer Form

This form must be filled out for transfer to accepting facility with information communicated prior to or with transfer  
*Please attach copies of latest culture reports with susceptibilities if available*

### Sending Healthcare Facility:

Patient/Resident Last Name	First Name	Date of Birth	Medical Record Number
Name/Address of Sending Facility		Sending Unit	Sending Facility phone
Sending Facility Contacts	NAME	PHONE	E-mail
Case Manager/Admin/SW			
Infection Prevention			

Is the patient currently in isolation?  NO  YES  
Type of Isolation (check all that apply)  Contact  Droplet  Airborne  Other: \_\_\_\_\_

Does patient currently have an infection, colonization OR a history of positive culture of a multidrug-resistant organism (MDRO) or other organism of epidemiological significance?	Colonization or history <i>Check if YES</i>	Active infection on Treatment <i>Check if YES</i>
Methicillin-resistant Staphylococcus aureus (MRSA)		
Vancomycin-resistant Enterococcus (VRE)		
Clostridium difficile		
Acinetobacter, multidrug-resistant*		
E coli, Klebsiella, Proteus etc. w/Extended Spectrum B-Lactamase (ESBL)*		
Carbapenemase resistant Enterobacteriaceae (CRE)*		
Other:		

### Does the patient/resident currently have any of the following?

- |  |  |
|--|--|
| <input type="checkbox"/> Cough or requires suctioning                    | <input type="checkbox"/> Central line/PICC (Approx. date inserted ___/___/___) |
| <input type="checkbox"/> Diarrhea  | <input type="checkbox"/> Hemodialysis catheter                                 |
| <input type="checkbox"/> Vomiting  | <input type="checkbox"/> Urinary catheter (Approx. date inserted ___/___/___)  |
| <input type="checkbox"/> Incontinent of urine or stool                   | <input type="checkbox"/> Suprapubic catheter                                   |
| <input type="checkbox"/> Open wounds or wounds requiring dressing change | <input type="checkbox"/> Percutaneous gastrostomy tube                         |
| <input type="checkbox"/> Drainage (source): _____                        | <input type="checkbox"/> Tracheostomy  |

Is the patient/resident currently on antibiotics?  NO  YES:

Antibiotic and dose	Treatment for:	Start date	Anticipated stop date

# Making environmental cleaning more reliable through checklists

For C. diff Isolation Only

Environmental Services  
Checklist for Daily High Touch Clean of Patient Rooms

Room Number: \_\_\_\_\_

1st shift - Check off as completed  
(please check box as complete or NA if non applicable)

**EVS - Use bleach wipes on the following High Touch surfaces**

- |   |  |                                    |                             |
|---|--|------------------------------------|-----------------------------|
| 1 | Bedside tables                         | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 2 | TV controller                          | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 3 | Call button                            | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 4 | Telephone                              | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5 | Bathroom - Safety-bars                 | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6 | Bathroom - Faucets                     | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 7 | Bathroom - Commodes (Use Clorox Spray) | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 8 | Door/door knobs                        | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 9 | Light switches                         | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |

**EVS - Daily clean with disinfectant**

- |   |  |                                    |                             |
|---|--|------------------------------------|-----------------------------|
| 1 | Bathroom - shower                        | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 2 | Sharps container                         | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 3 | Soiled areas of walls and windows        | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 4 | Television                               | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5 | Exterior surfaces of drawers and closets | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6 | Floors                                   | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |
| 7 | Shelves                                  | Completed <input type="checkbox"/> | NA <input type="checkbox"/> |

**Nursing - Daily clean/disinfect areas:**

- 1 Bedrails, bed frame - use bleach wipes
- 2 Over bed tables - use bleach wipes
- 3 Headboard - use Sani Cloth
- 4 Footboard - use Sani Cloth
- 5 Over-bed light - use Sani Cloth

Employee Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Developing data infrastructure to support change

- EIP and NHSN data to understand baseline CIRCAL status
- Developed common definition to identify C Diff infections between Acute Care and Long Term Care
- Developed common surveillance method for tracking C Diff in Long Term Care sites
- Developed easy to use data entry tool for LTC facilities

# Data support through GMCF QIO LTC Network

## Data Collection

- Information from the survey monkey tool will be extracted onto a spreadsheet by GMCF
- The case categories (initial, duplicate, or recurrent cases) will be automatically determined by the formulas in the spreadsheet

## Data Analysis

- GMCF will share specific results with individual LTCFs
- Group results will be blinded





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across Acute and Long-term Care

# GMCF Data Entry Tool...keeping it simple

## CDI Event for LTCF

### 1. Event Details

This survey will allow you to enter information on residents with positive *C. difficile* laboratory tests. (\*) indicates a required field.

\* 1. Enter unique resident ID or Medical Record Number

\* 2. Date of Current Admission to Facility: (MM/DD/YYYY)

\* 3. Date of Positive Stool: (MM/DD/YYYY)

\* 4. Has the resident had a previous positive stool in the last 2 months?

Yes

No

5. If yes, what is the date of the previous positive stool? (MM/DD/YYYY)

\* 6. Has the resident had an inpatient admission in the past 3 months?

Yes

No

7. If Yes, date of last transfer from acute care to your facility:(MM/DD/YYYY)

## CDI Event for LTCF

### 2. Resident information

8. Resident Gender

Male

Female

9. Resident Date of Birth (MM/DD/YYYY)

10. Resident type:

Short-stay (<90 days)

Long-stay (>90 days)

11. Primary Resident Service Type:(Check one)

Long-term general nursing

Long-term dementia

Long-term psychiatric

Skilled nursing/Short-term rehab (subacute)

Ventilator

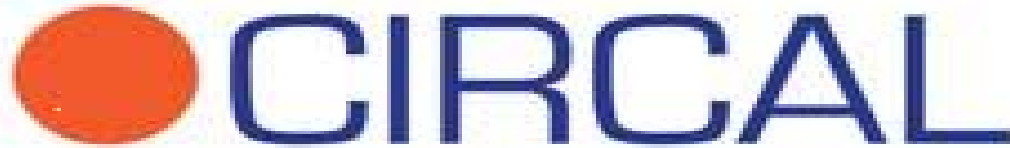
Bariatric

Other (please specify)



# Key Takeaways

- It is about the patient...regardless of care venue
- Relationships are critical
- Leverage established resources and networks
- Nothing about me (LTC...) without me



Community Infection Reduction Collaborative  
across Acute and Long-term Care

## Questions?

Contact info

[Marcia.delk@wellstar.org](mailto:Marcia.delk@wellstar.org)

470-644-0006

we believe  
in life well-lived.





Vermont Program for Quality in Health Care, Inc.

# Vermont HAI MDRO Collaborative

Eileen Paus, MSN, ANP-BC, CWCN

Vermont Program for Quality in Health Care, Inc.

Montpelier, Vermont







# United States Census Bureau 2012

## City of Atlanta, Georgia

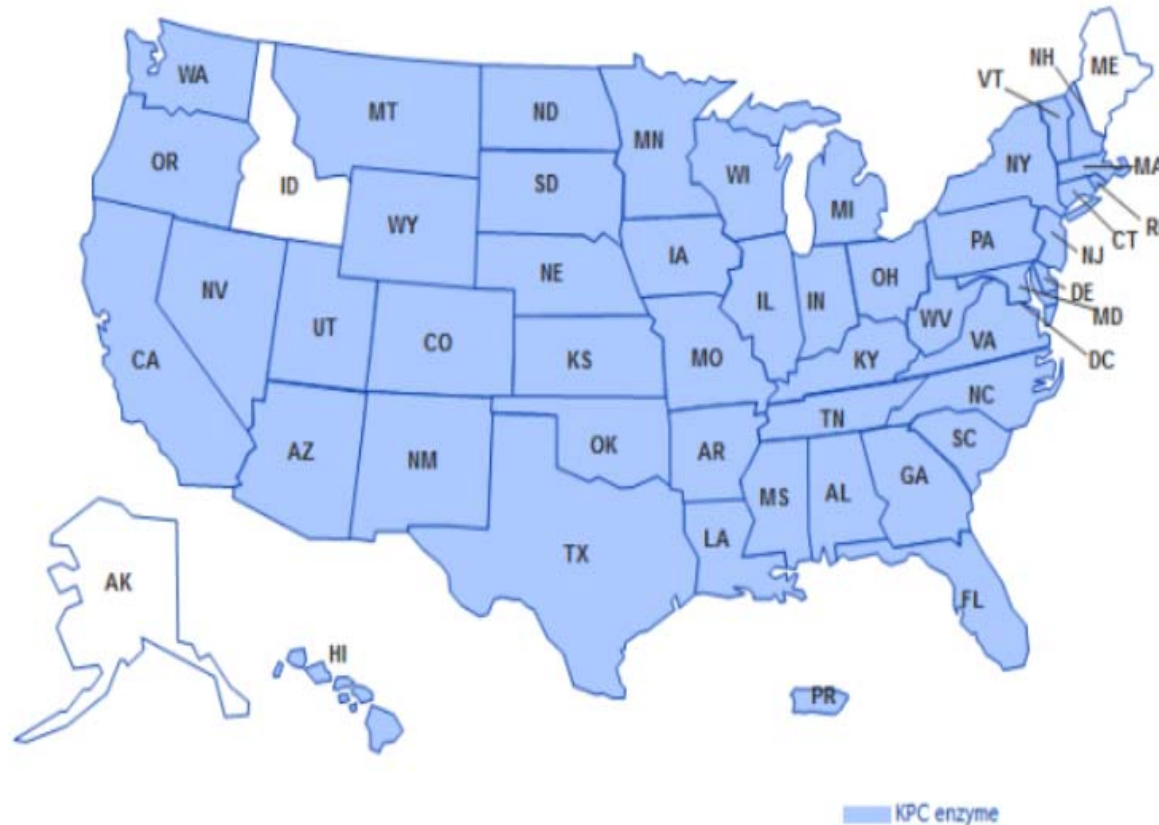
- Population:  
– 443,775
- 133 square miles
- 3,154 persons/m<sup>2</sup>
- % of people >65  
9.8%

## The State of Vermont

- Population:  
– 625,953
- 9,217 Square miles
- 66 persons/m<sup>2</sup>
- % of people >65  
15.7%

## Carbapenemase-producing CRE in the United States

Below is a map showing states with carbapenemase-producing CRE confirmed by CDC.



This map was last updated on February 2014

# February 2014

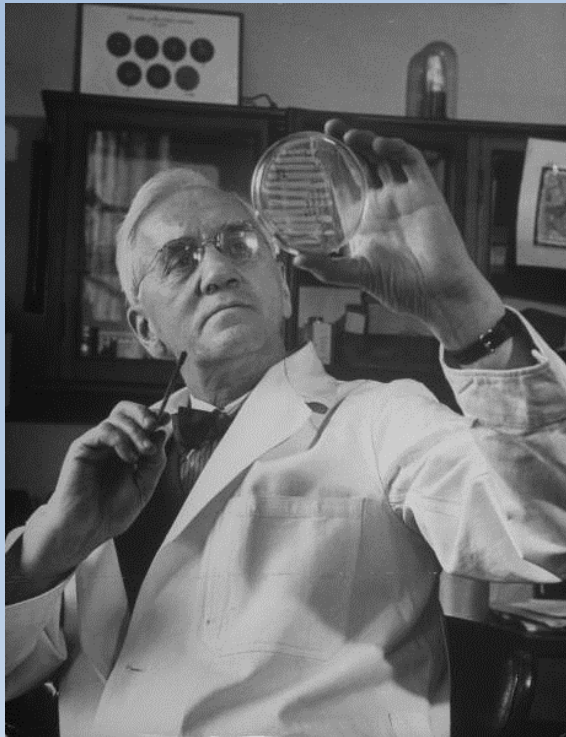
## C. difficile Infections in Vermont LTCF

- 11 (0.27/10,000 resident days) total infections reported between January and December, 2013 in 21 LTCFs
- **None** were community onset
- **3 out of the 11** were in residents that had been transferred from an acute care facility within 4 weeks (ACT-LO)
- **7 out of the 11** were in residents that had been transferred from an acute care facility within the past 3 months

**Numbers too small at this time;  
need to keep reporting!**



# Background

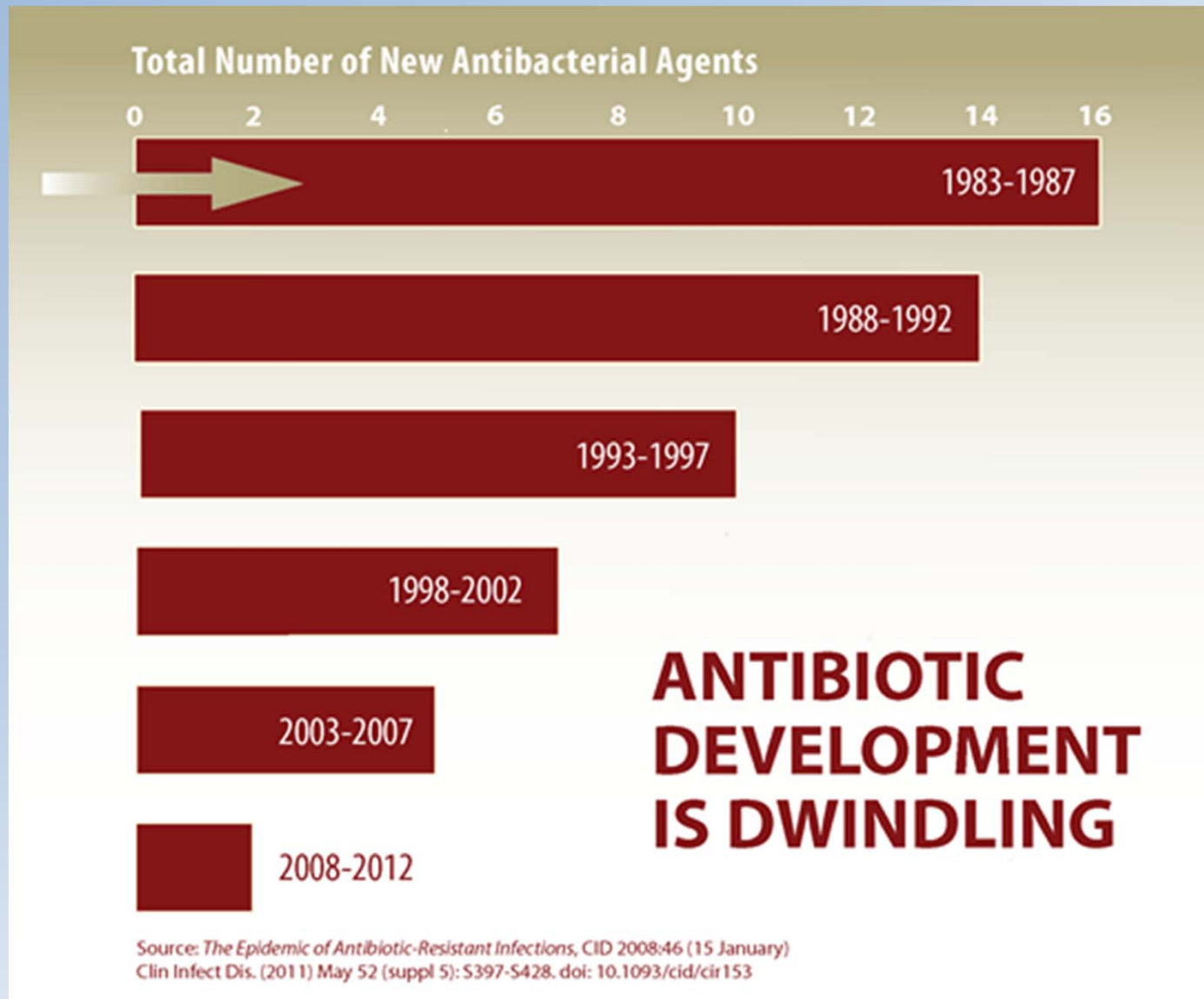


Sir Alexander Flemming  
1928



Penicillium notatum

# While bacterial resistance is increasing....





**LIPITOR**  
ATORVASTATIN CALCIUM

reduces the risk of  
heart attack

Common risk factors include: Family history, high blood pressure, smoking, low good cholesterol and age.

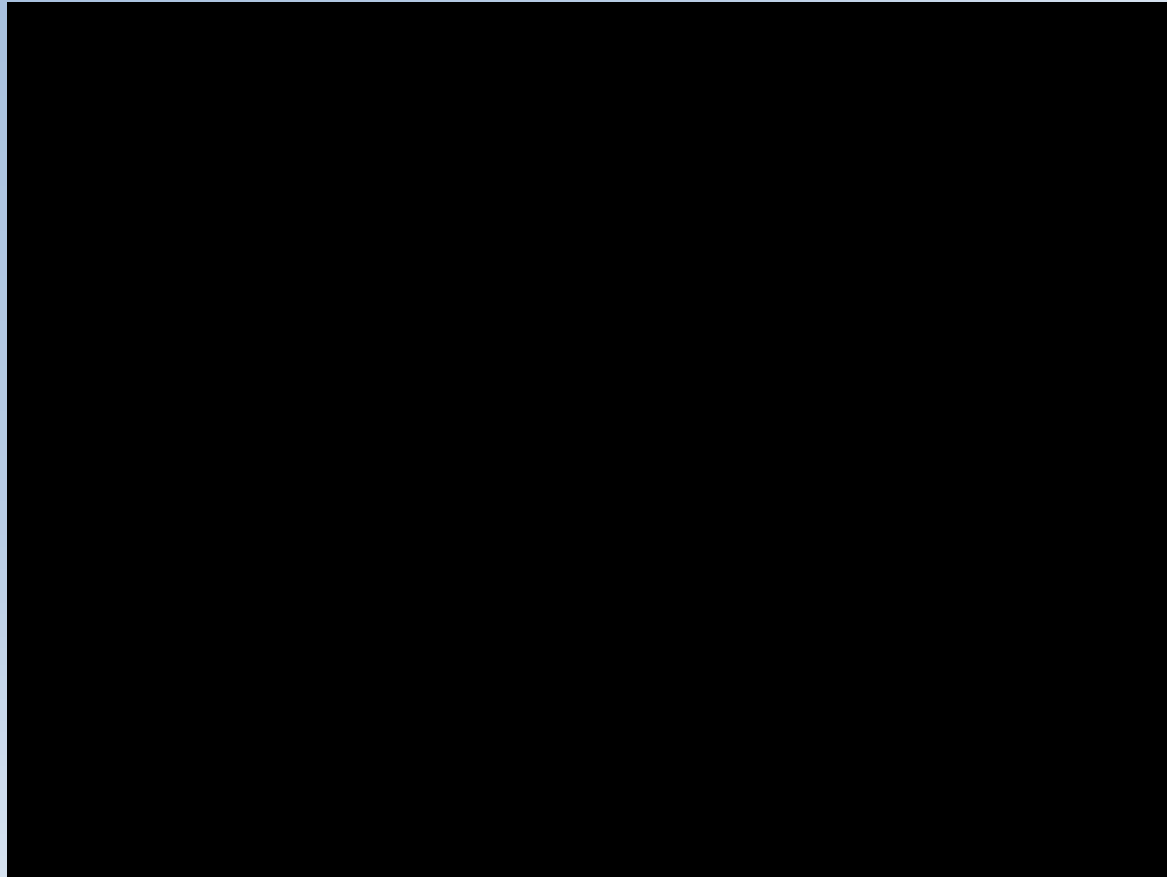
**VPQHC**

Vermont Program for Quality in Health Care, Inc.

# Vermont MDRO HAI Collaborative

- Through a CDC grant (2009) VPQHC began infection prevention planning with the Vermont Department of Health (VDH).
- Goal: For acute and long-term care facilities to work together toward the prevention and elimination of Healthcare Associated Infections with Multi-Drug Resistant Organisms in Vermont.

# The Vermont HAI Collaborative, Looking Up Stream

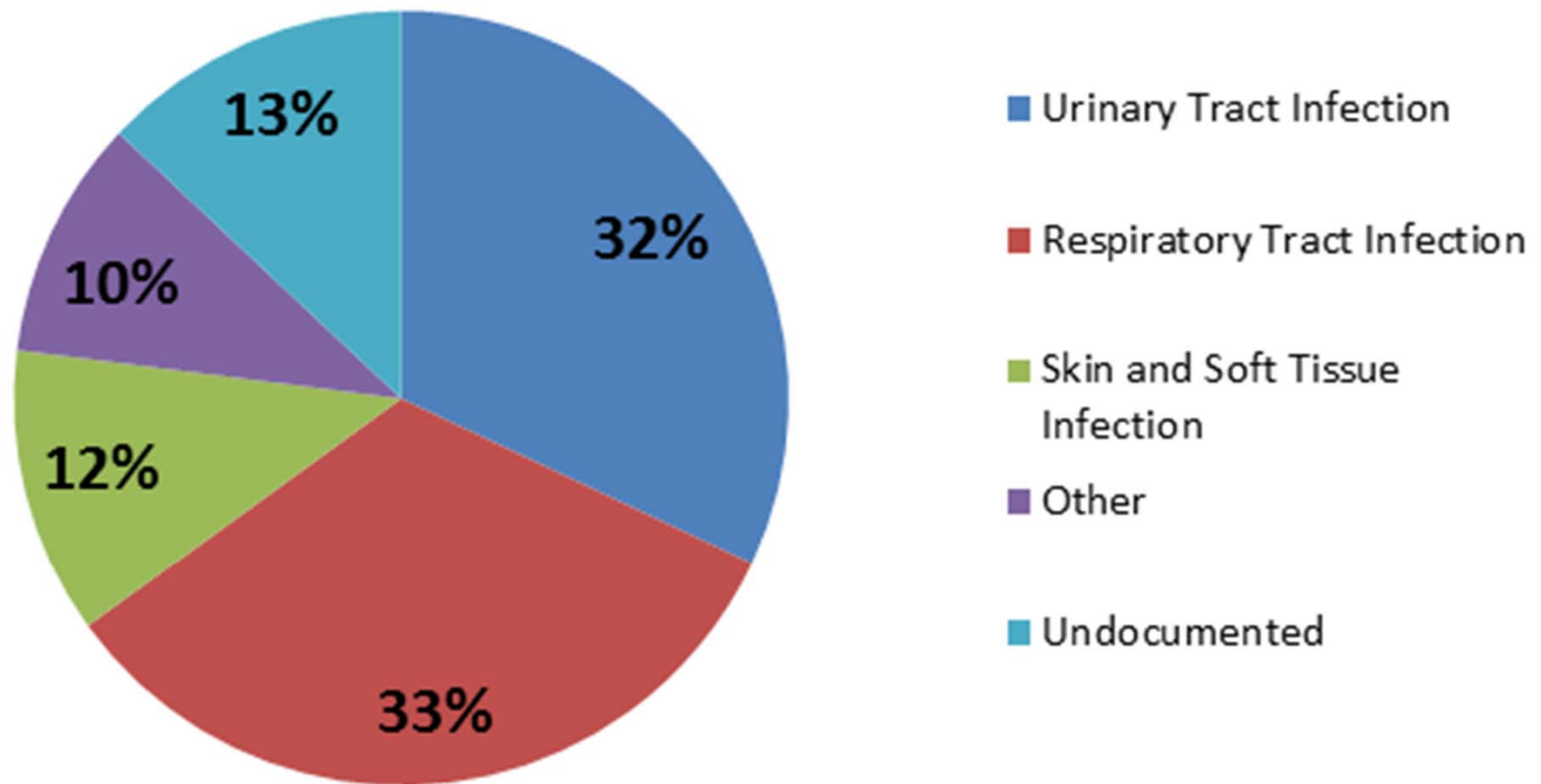


<http://vimeo.com/84418447>

# Why long-term care?

- Antibiotics are the most commonly prescribed medications in nursing homes.
- 70% of LTCF Residents receive an antibiotic each year.
- Many residents can be colonized.
- 30% to 50% have asymptomatic bacteriuria that is inappropriately treated with antibiotics.
- Close living conditions and level of personal care required for many residents.

# Most Common Infections Treated with Antibiotics in the Nursing Home



Source: Benoit et al. Journal of the American Geriatrics Society. 2008 Nov;

## The Rising Number of *Clostridium difficile*-Associated Disease

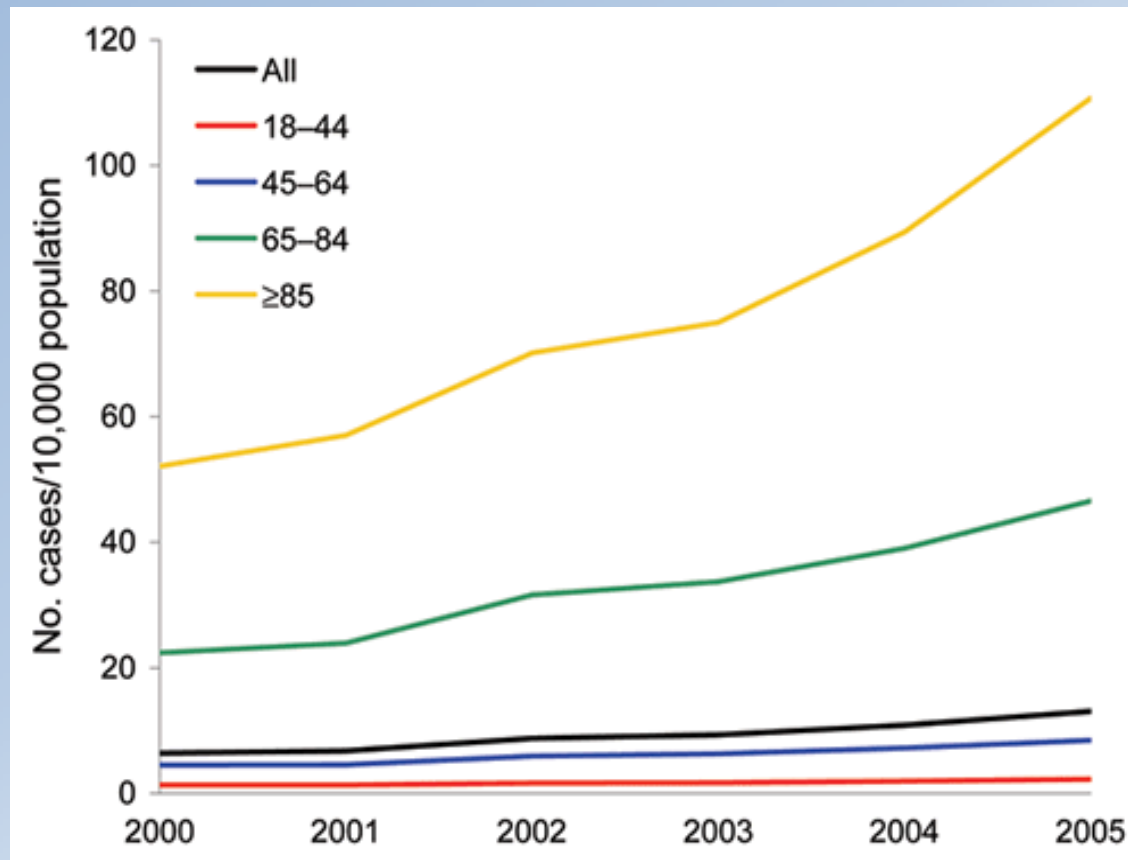


Figure 1. Changes in the age-specific *Clostridium difficile*-associated disease incidence rate per 10,000 population in the United States, 2000–2005  
<http://wwwnc.cdc.gov/eid/article/14/6/pdfs/07-1447.pdf>

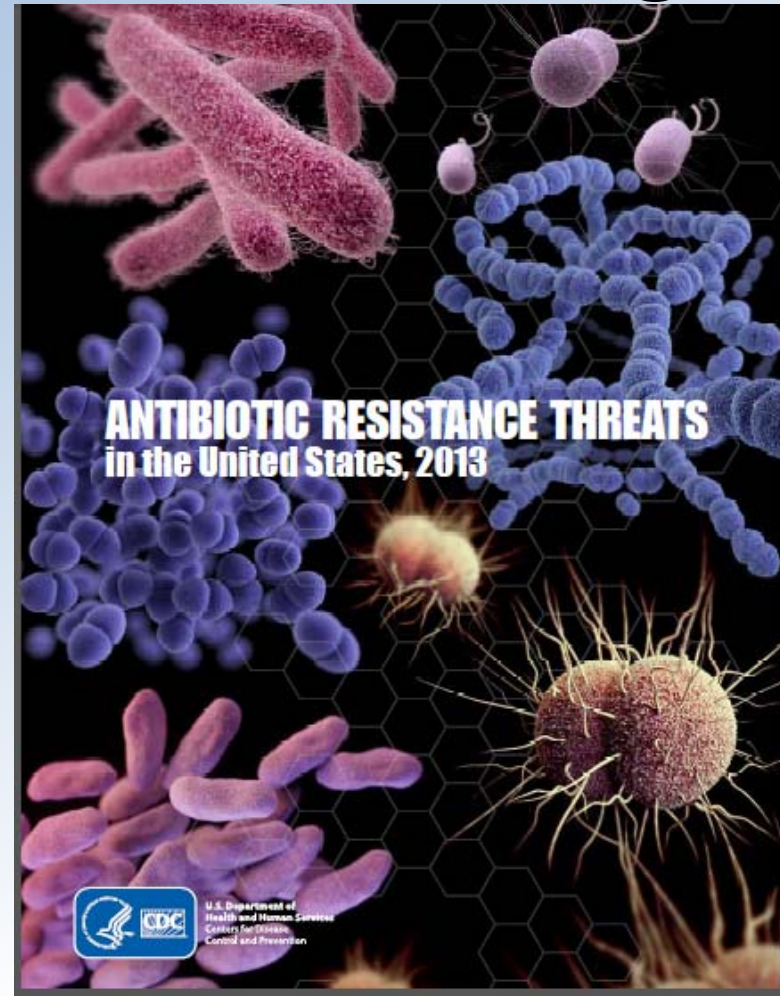


# Urgent, Serious, or Concerning?

## Urgent Threats

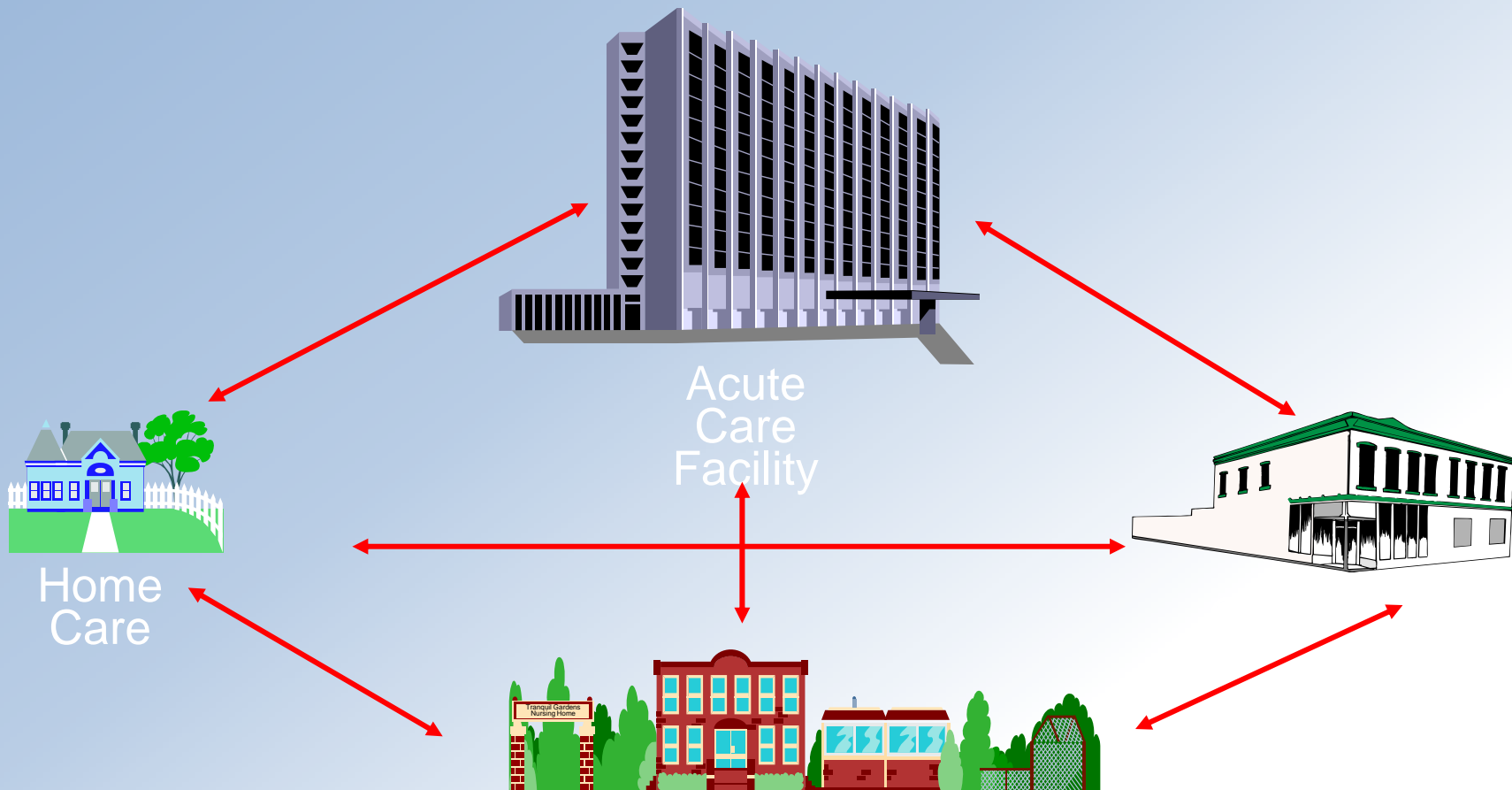
1. Clostridium difficile
2. Drug-resistant  
Neisseria gonorrhoeae
3. Carbapenem-resistant  
Enterobacteriaceae  
(CRE)

**“Require more monitoring and prevention activities.”**



<http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf>

# Transmission

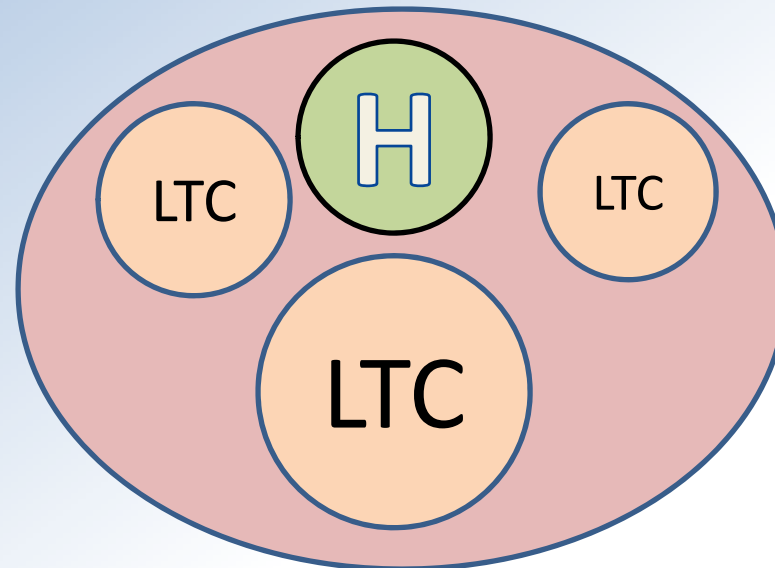


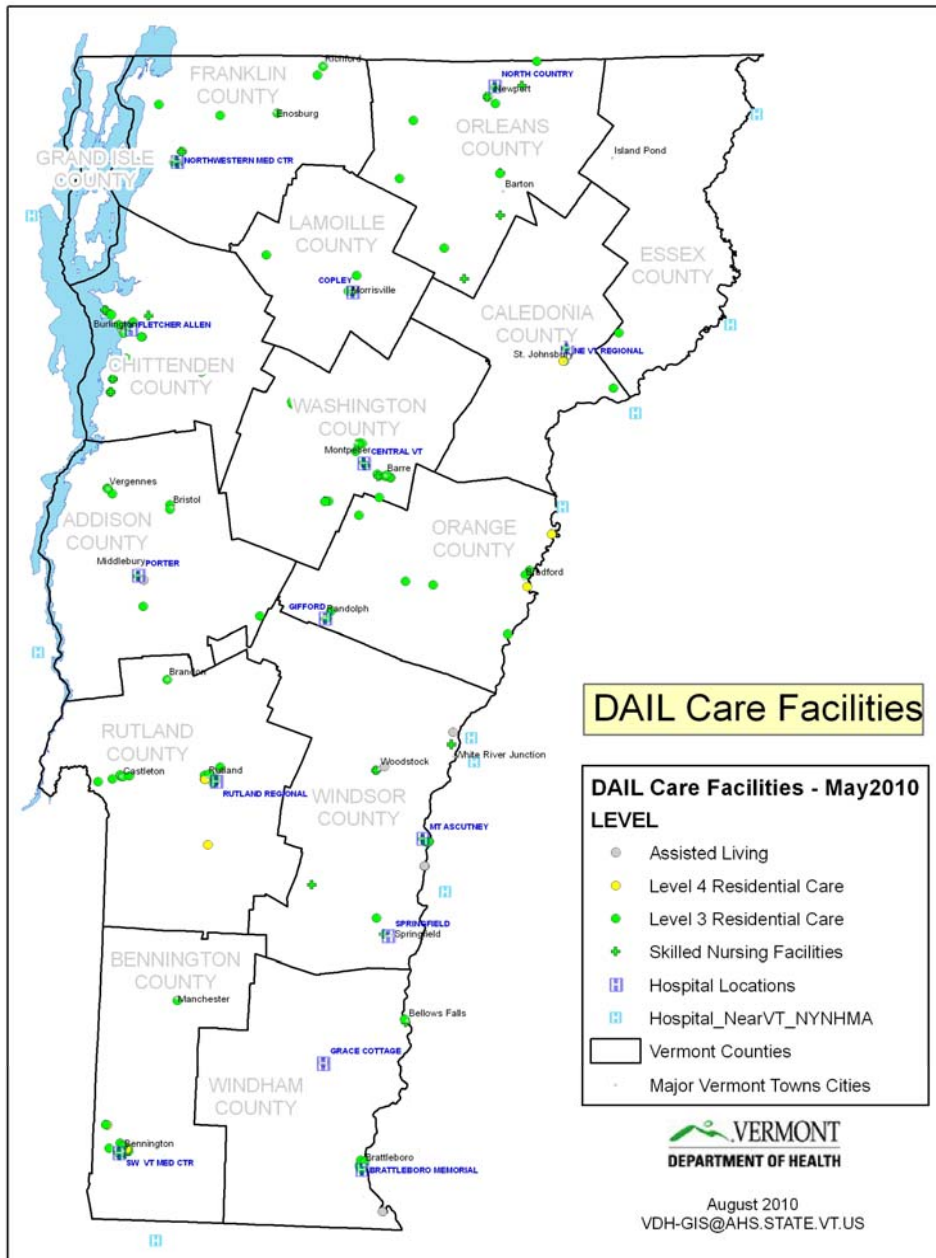
“All infection prevention and control work is local.”  
*Carol Haraden, IHI*

# Healthcare Clusters

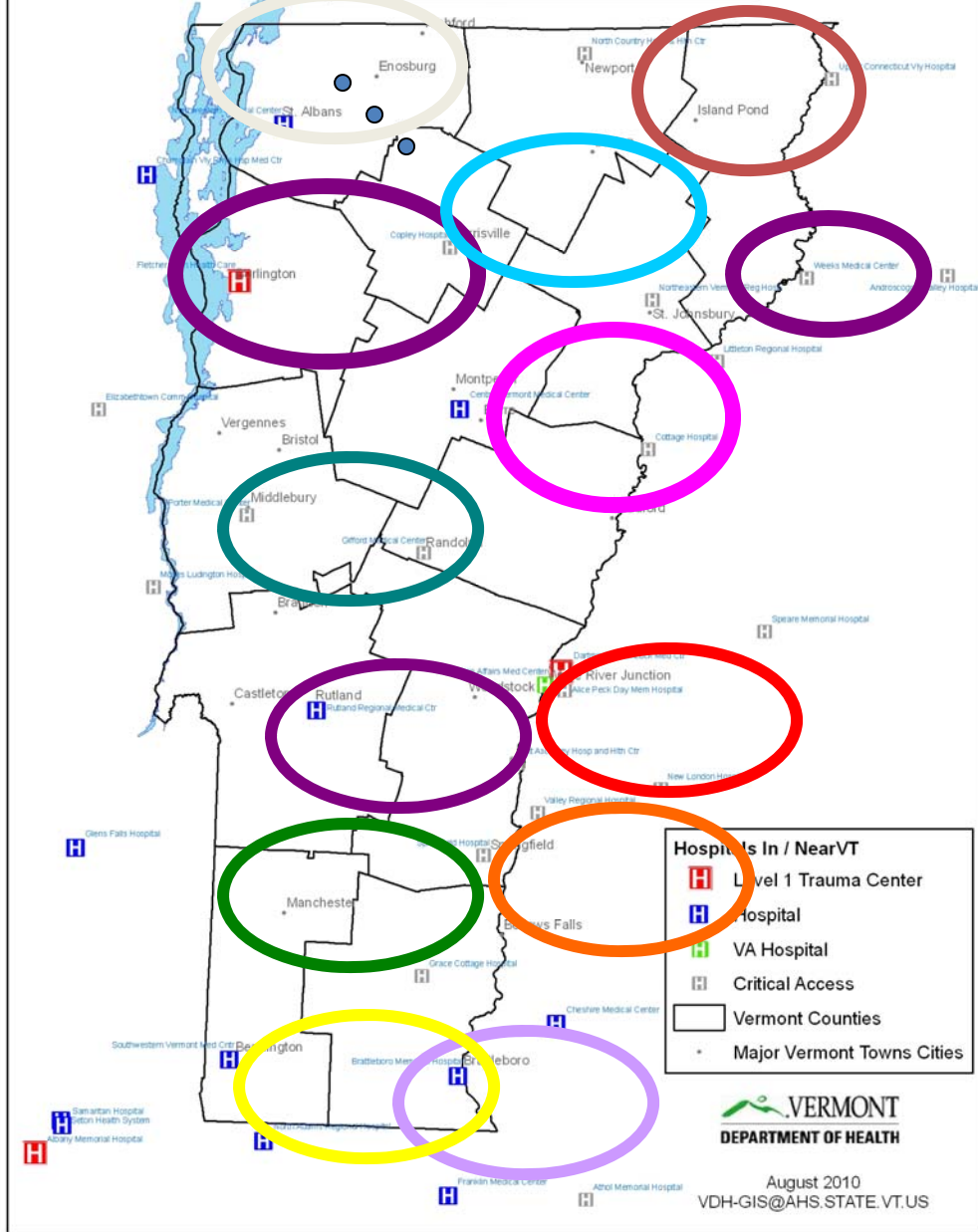
Peer to peer learning and support

- Geographically local groups of acute and long-term care facilities
- Share patients and laboratory
- Group decision-making about what interventions will work for them

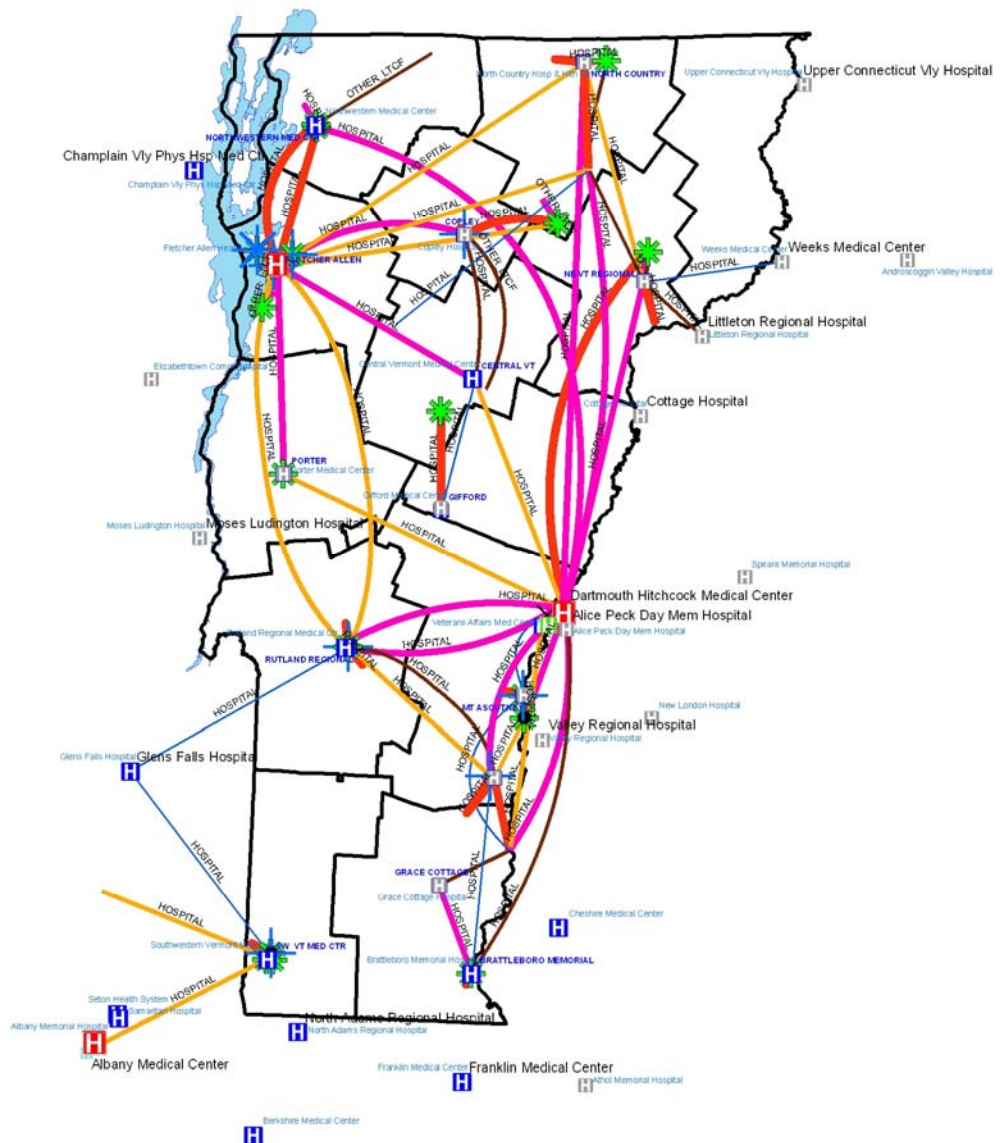




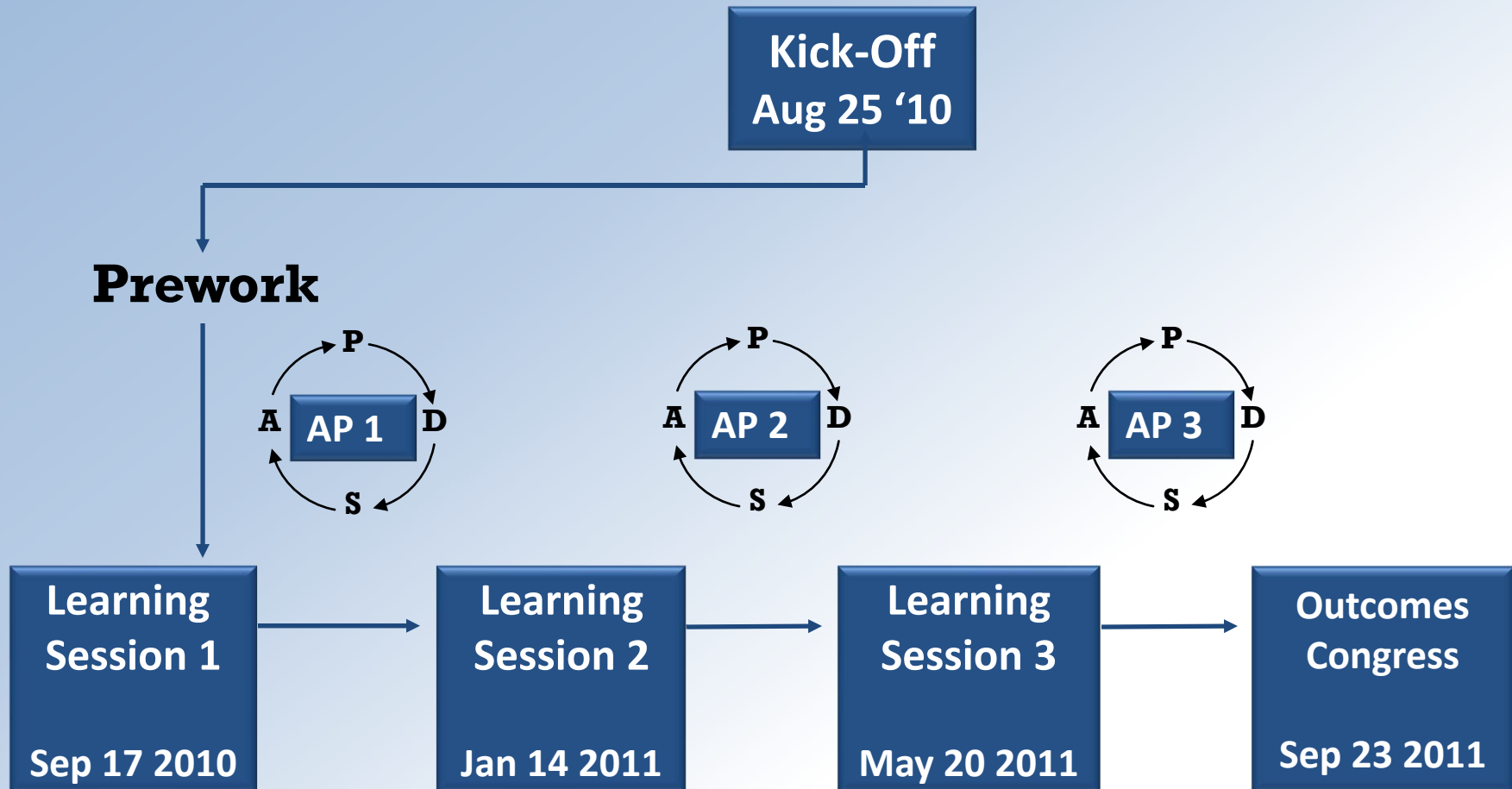
# Hospitals In & Near Vermont







# Our Timeline





# Initial Core Strategies

- ✓ Assessing hand hygiene practices
- ✓ Implementing Contact Precautions
- ✓ Recognizing previously colonized patients
- ✓ Rapidly reporting MDRO lab results
- CLUSTER-LEVEL
- ✓ Communication of MDROs/risks at time of transfer



# Prevention Strategies

## Supplemental Strategies

### – FACILITY-LEVEL

- Environmental cleaning with bleach (CDI)
- Enhanced contact precaution duration (CDI)
- Active surveillance testing (MRSA, VRE, CRE)
- Screening of individuals to detect colonization even if no evidence of infection

### – CLUSTER-LEVEL

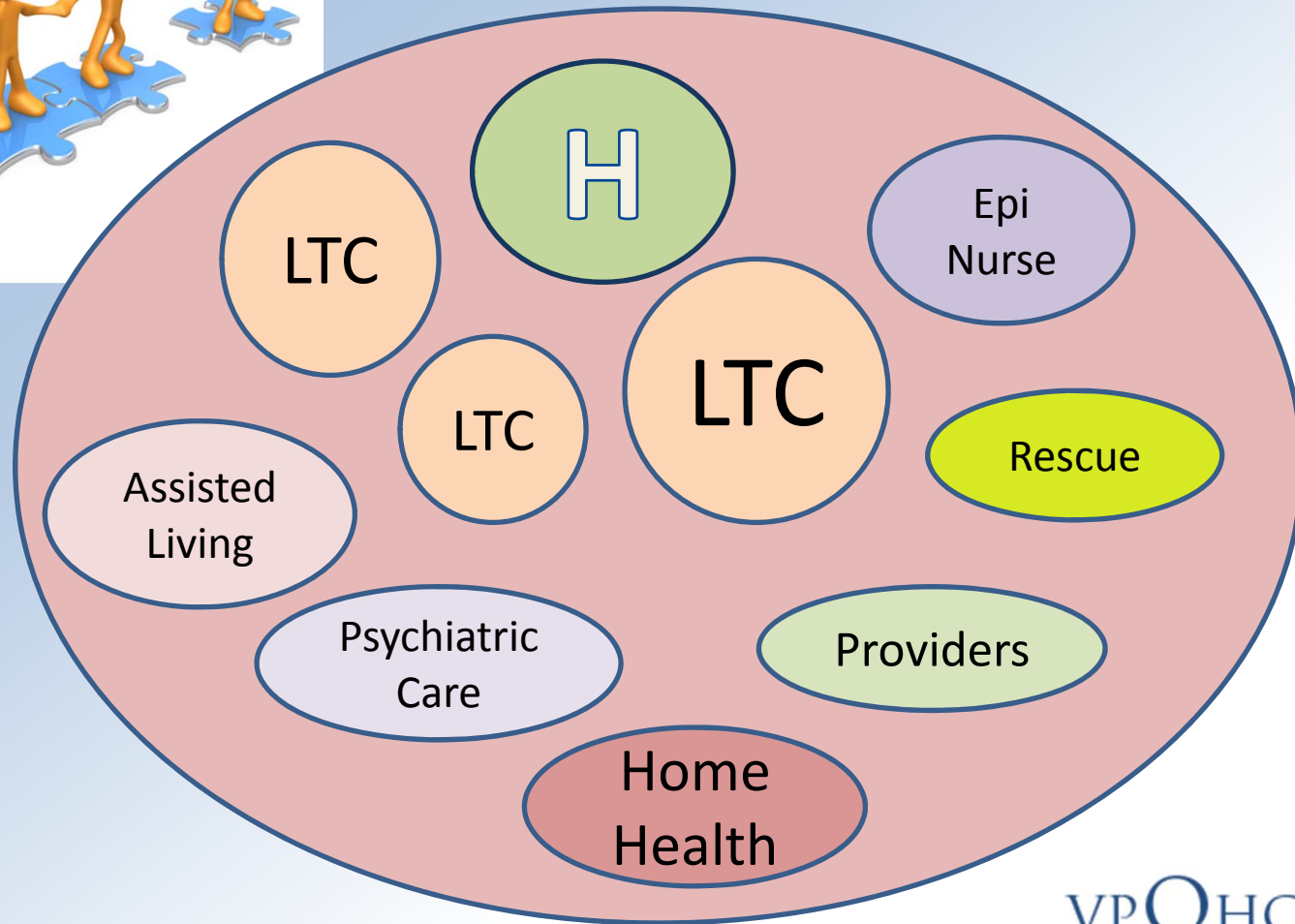
- Decolonization at transfer (MRSA)
- Chlorhexidine bathing at transfer

# Barriers

- **Time**
- Multiple Job Responsibilities
- High Staff Turnover
- Empty Infection Prevention Position
- Leadership Support
- Computer glitches reporting data
- Reorganization in LTCF



# Today's Healthcare Cluster Team



# CDC 2013 Report: Four Core Actions

- Prevent transmission
- Tracking resistant bacteria
- Improve use of Antibiotics
- Promote development of new antibiotics and new diagnostic tests for MDROs



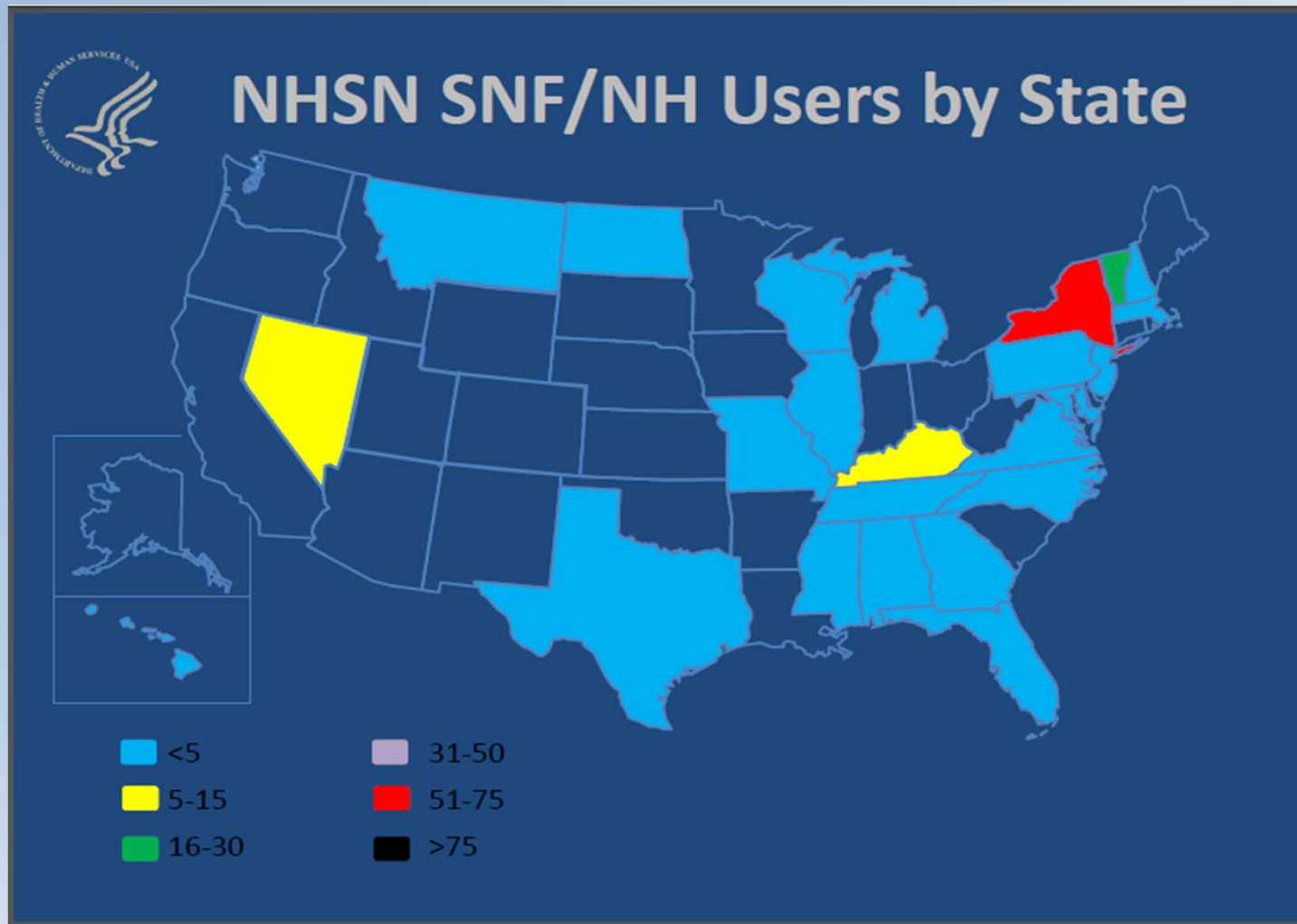
# Prevent Inter-facility Transmission

- Transfer forms with MDRO information -
  - Created new ones
  - Revamped old ones
  - Cultures pending?
  - Admissions checklist
  - EMS staff obtaining patient transfer information





# Tracking resistant bacteria in the National Healthcare Safety Network (NHSN)





# Improving Antibiotic Use

- Policy development for the treatment of urinary tract infections
- Family/patient education on antibiotics
- Implemented UTI Protocol and Standing Order
- Decrease or eliminate “dip stick” use
- Reporting MDRO and CDI data into NHSN

**ANTIBIOTIC FAX ORDER FORM**  
**ALL ANTIBIOTICS MUST BE ORDERED ON THIS FORM**

**COMPLETE BEFORE CALLING PROVIDER**

Date: \_\_\_\_\_ Unit: \_\_\_\_\_  
 Resident: \_\_\_\_\_ M F Age: \_\_\_\_\_  
 Ht: ft. \_\_\_\_\_ in. \_\_\_\_\_ Wt: \_\_\_\_\_  
 Antibiotic Allergies: \_\_\_\_\_ Reaction: \_\_\_\_\_  
 Current symptoms of infection: \_\_\_\_\_  
 \_\_\_\_\_  
 Creatinine: \_\_\_\_\_ Date: \_\_\_\_\_  
 Calculated Creatinine Clearance: \_\_\_\_\_ Date: \_\_\_\_\_  
**Alert MD if resident is on routine Warfarin administration.**  
 Antibiotic use in past 60 days: \_\_\_\_\_

**MD ORDER**

Drug: \_\_\_\_\_ Strength: \_\_\_\_\_  
 Route: \_\_\_\_\_ Frequency: \_\_\_\_\_ X \_\_\_\_\_ Days  
 **Hold iron preparations, calcium, zinc, multiple vitamin w/ minerals ,  
 magnesium and antacids for duration of Fluoroquinolone therapy.**  
 Prescriber: \_\_\_\_\_ Verbal order taken by: \_\_\_\_\_ RN/LPN  
 Time ordered: \_\_\_\_\_ Noted By: \_\_\_\_\_  
 C&S pending?  Yes  No

**This section to be completed by Infection Control Coordinator  
 on ICC Copy.**

**PATHOGEN**     Known     Unknown

<input type="checkbox"/> Staphylococcus aureus	<input type="checkbox"/> Proteus mirabilis	<input type="checkbox"/> Staphylococcus coag. neg.
<input type="checkbox"/> Acinetobacter	<input type="checkbox"/> Streptococcus pneumoniae	<input type="checkbox"/> Enterobacter aerogenes
<input type="checkbox"/> Enterococcus	<input type="checkbox"/> Enterobacter cloacae	<input type="checkbox"/> Haemophilus influenzae
<input type="checkbox"/> Serratia marcescens	<input type="checkbox"/> E. coli.	<input type="checkbox"/> Providencia stuartii
<input type="checkbox"/> Klebsiella pneumoniae	<input type="checkbox"/> Anaerobes	<input type="checkbox"/> Pseudomonas aeruginosa
<input type="checkbox"/> Other: _____	<input type="checkbox"/> VRE	<input type="checkbox"/> ESBL
	<input type="checkbox"/> MRSA	<input type="checkbox"/> C-Diff

Nosocomial?  No  Yes If yes, Comments: \_\_\_\_\_  
**SITE**  Known  Unknown  
 Genitourinary  Upper respiratory  Lower respiratory  Abdominal  CNS  
 Skin/Soft tissue (location: \_\_\_\_\_)  Bacteremia  Other: \_\_\_\_\_  
 Prophylaxis (i.e. Dental, Surgical Procedure or UTI Suppression)  
 Precautions:  YES  NO If YES, Type: \_\_\_\_\_

Jpadd 04/09

Copies: Original to Chart, White- T.O. Provider Box, Yellow to Infection Control, Pink to Kardex

FORM #3

# Cluster Meeting Accomplishments

- Review patient cases, reduce readmission and increase patient/family satisfaction
- Meet consistently to evaluate and plan
- Update Laboratory reports to include prescribed IV antibiotics
- Participated in IHI Antibiotic Stewardship
- Environmental services education and training

# Learning Opportunity

- Vermont is blessed with
  - IPs that have a decade or so of experience
  - Environmental Services Experts
  - Even Drug and Product sales representatives can be a wealth of knowledge on some topicsAll willing to share their expertise.

# Clusters meet to:

- solve on a regular basis.
- take a team approach to prevent infectious disease transmission.
- better understand and respect each other's CULTURE.
- know the battle against MDROs can only be WON when they work together.

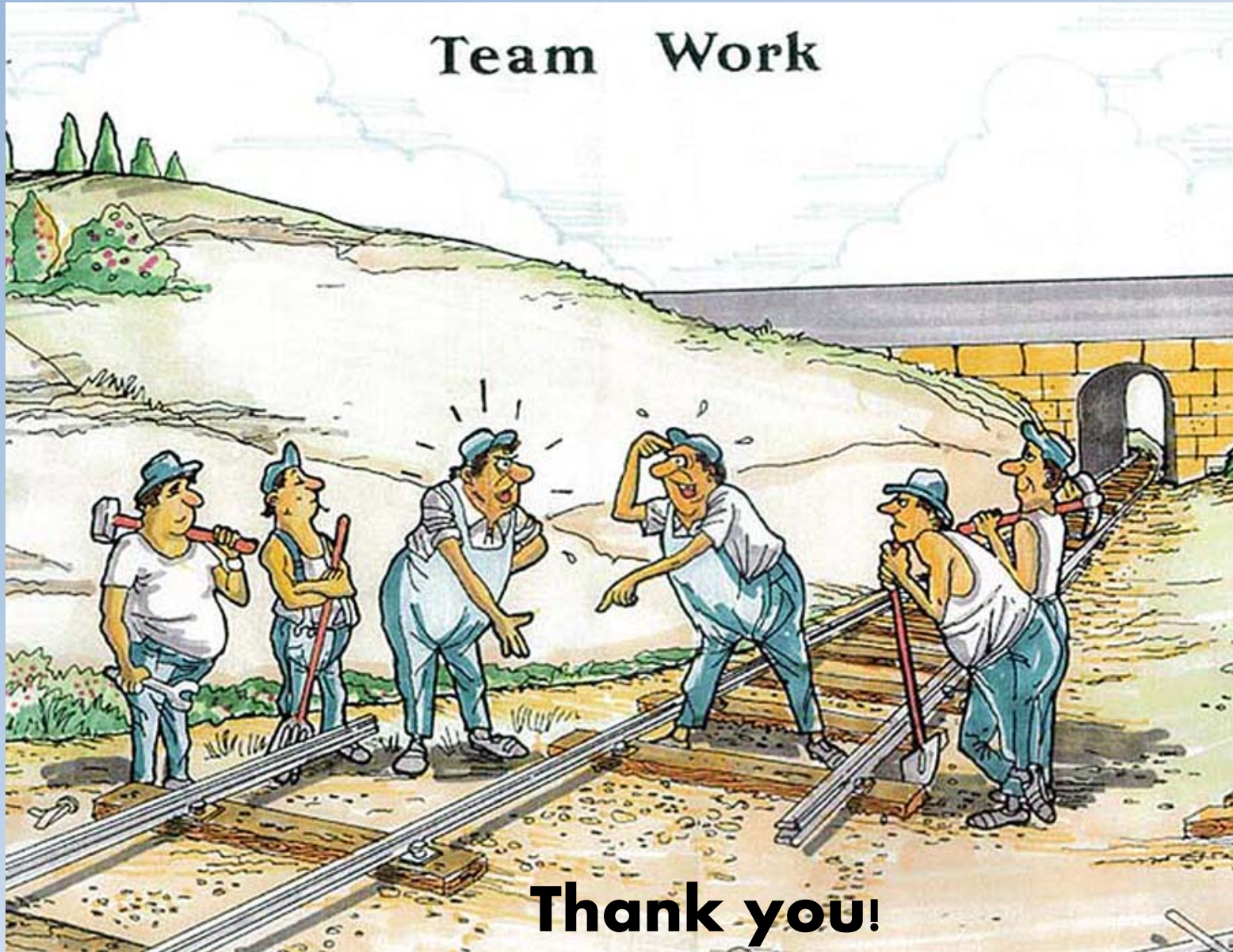
# The Post-antibiotic Era?

“Without urgent, coordinated action by many stakeholders, the world is headed for a post-antibiotic era, in which common infections and minor injuries which have been treatable for decades can once again kill.”

says Dr Keiji Fukuda, WHO's Assistant Director-General for Health Security.  
30 April 2014 | Geneva -A new report by WHO to look at antimicrobial resistance



# Team Work



**Thank you!**  
**Questions?**



# **Engaging Leadership for Patient Safety and Quality Improvement**

**Denise M. Flook, RN, MPH, CIC**  
**Vice President, Quality, Safety and Risk**  
**Eastside Medical Center**  
**May 28, 2014**



# The Challenge

How do we provide and **sustain** the highest quality and safest care for every patient, every time in the current environment of diminishing resources?



*It is easy to think that simply  
implementing a checklist is the path  
to better outcomes*

*BUT.....*

*Changing culture is the key to  
**sustained** safety and improved  
outcomes for our patients*

# Culture of Patient Safety

- All members of the organization have to be focused on the patient and the goal of keeping patients safe

# Culture of Safety

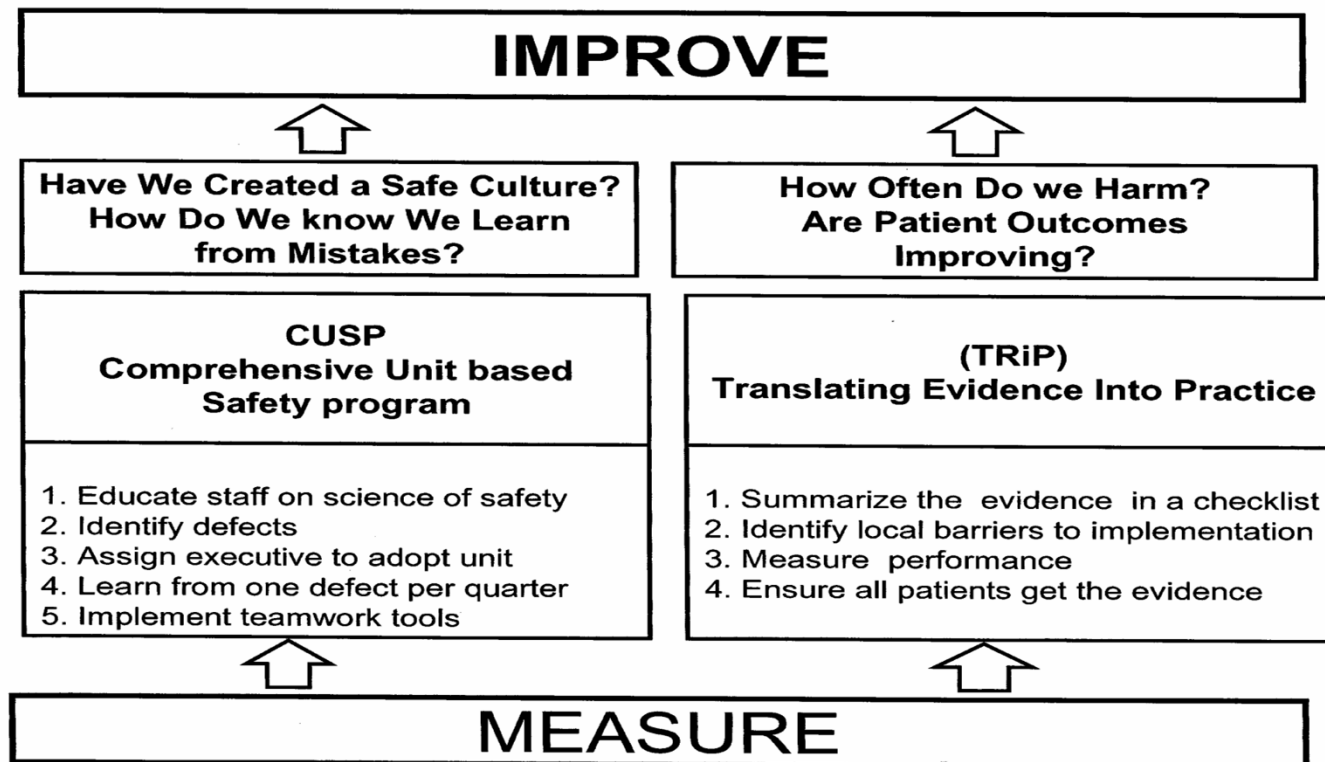
## Key elements

- Management support for patient safety
- Overall perceptions of patient safety
- Feedback and communication about error
- Communication openness
- Teamwork across units
- Staffing
- Handoffs and transitions
- Non punitive response to error

# Using the CUSP Principles to Engage Leadership and Staff



# Safety/Quality Improvement Is A Two Part Process



## On the CUSP: Process Intervention

### Comprehensive Unit-based Safety Program (CUSP)

- Improve or reinforce good cross-disciplinary communication and teamwork
- Enhance coordination of care
- Address overall patient safety
- Work towards healthy unit culture

### Reduction Protocol

- Best-evidence supplies, organization of supplies
- Ensuring all patients receive the best practices
- Checklist, protocol to ensure consistent application of evidence



# Ensure Patients Reliably Receive Evidence

	Senior leaders	Team leaders	Staff
Engage	<i>How does this make the world a better place?</i>		
Educate	<i>What do we need to do?</i>		
Execute	<i>What keeps me from doing it? How can we do it with my resources and culture?</i>		
Evaluate	<i>How do we know we improved safety?</i>		

Pronovost: Health Services Research, 2006

# **Engage Leaders Lead to Success**

- **Emphasizes effective communication**
- **Supports the technical and adaptive work of change**
- **Collaborates to develop and implement a plan addressing safety issues**
- **Holds staff accountable for reducing patient harms**

## **Engage: Make the Problem Real**

- Identify a patient who suffered needless harm from CRE share that patient's story with your colleagues.
- Ask them if this is the kind of care they would want for their family, if this is care they are proud of, and if this is the best your facility can do.

# Play By the Numbers

- Post the number, by month, of patients who developed CRE and the total number of CRE cases for the previous year.
- Post a trend line so nurses and physicians can see at a glance the CRE rate and how it changes over time. Post the number of days (or weeks or months) since the last case of
- Use formal and informal opportunities to talk about the intervention and about unit-specific infection rates.

# Educate: Teach the Science of Safety

- Understand system determines performance
- Use strategies to improve system performance
  - Standardize
  - Create independent checks for key process
  - Learn from mistakes
- Apply strategies to both technical work and team work
- Recognize teams make wise decisions with diverse and independent input
- <http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/index.html>

# Educate on the Evidence

- Raise awareness among unit staff members of evidence-based practices to eliminate CRE. The biggest barrier to compliance with evidence-based practice is that providers do not know the evidence exists or do not know what they should be doing.
- Provide a fact sheet on CRE

## **Execute: Reliable Processes**

- Staff must help develop and test the processes to ensure practices are reliably implemented
- Use small tests of change to improve process until reliable
- Spread



# Evaluate: Feedback for Reinforcement

- Using baseline data on CRE rates ,calculate the potential opportunity to improve the number of preventable CRE, preventable deaths, excess hospital days, and cost savings per year.
- Share the results openly with your colleagues.

# Celebrate Success

- Make a point of recognizing providers who appropriately follow evidence-based practices.
- Celebrate reduction and patients saved!

# **It Goes Back to Leadership – On All Levels**

- Engagement , commitment, communication is foremost
- Provide education
- Provide resources
- Visibility and transparency
- Feedback
- Investigation and ownership of outcomes and improvement

# AHRQ CUSP Web Site

- Tools, Education , Resources
- <http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/index.html>



**Denise M. Flook, RN, MPH, CIC**  
**[denise.flook@hcahealthcare.com](mailto:denise.flook@hcahealthcare.com)**

# Identification and Management of Patients with MDROs

Atlanta Regional CRE Collaborative  
5/28/2014

Kristin Hake, RN, MPH  
Infection Prevention  
Emory University Hospital Midtown

# IDENTIFYING MDRO PATIENTS

- Theradoc
  - New positive results
  - Previously positive readmissions
- Powerchart
  - Automatic isolation orders on readmissions
  - New isolation orders
  - Easy identification for providers (rounds report, banner bar)



# THERADOC

- Alert to new positive MDRO cultures

Expanded Result	Organism	Specimen Source
4+ Staphylococcus aureus POSSIBLE HOSPITAL-ASSOCIATED INFECTION (First occurrence: 05/22 12:32 Peritoneal fluid)	Methicillin resistant Staphylococcus aureus	PERICARDIAL FL&PERICA order #: 2412193381
2+ Staphylococcus aureus Susceptibility Test Performed on Accession # 002-14-143-04609 POSSIBLE HOSPITAL-ASSOCIATED INFECTION (First occurrence: 05/22 12:32 Peritoneal fluid)	Staphylococcus aureus	PERICARDIUM order #: 2412251029

Expanded Result	Organism	Specimen Source	Collect Date
2+ Staphylococcus aureus POSSIBLE HOSPITAL-ASSOCIATED INFECTION (First occurrence: 05/23 03:35 Blood)	Staphylococcus aureus	SWAB D/C @ URETHRAL MEATUS. order #: 2414465137	05/23/2014 03:35
4+ Staphylococcus aureus POSSIBLE HOSPITAL-ASSOCIATED INFECTION (First occurrence: 05/22 12:30 Urine)	Methicillin resistant Staphylococcus aureus	BODY FL&BODY FL order #: 2415351657	05/22/2014 12:30
Staphylococcus aureus (First occurrence: 05/22 12:30 Urine)	Methicillin resistant Staphylococcus aureus	PERIPHERAL&BLOOD PERIPHERAL order #: 2410932443	05/22/2014 12:30

Expanded Result	Organism	Specimen Source	Collect Date
4+ Staphylococcus aureus	Staphylococcus aureus	ABSCCESS&ABSCCESS order #: 2417395543	05/26/2014 05:36

# THERADOC

- List of current isolation patients (includes date of organism 'flag')

EUHM - 41 4133 01	05/23/2014	Toxigenic C. difficile	05/24/2014
EUHM - 11 1122 01	05/08/2014	Toxigenic C. difficile	05/23/2014
EUHM - 31IC 3107 02	05/10/2014	Toxigenic C. difficile	05/13/2014
EUHM - 21 2129 01	05/22/2014	MRSA	04/25/2011
EUHM - 11IC 1160 10	05/05/2014	ESBL	05/10/2014
EUHM - 62 6215 01	04/22/2014	Toxigenic C. difficile	04/26/2014
EUHM - 41 4133 01	05/14/2014	Toxigenic C. difficile	05/26/2014
EUHM - 41 4135 01	04/30/2014	CRE	05/05/2014
EUHM - 51S 5133 01	05/19/2014	CRE	08/21/2013
		ESBL	02/27/2013
		KPC	05/20/2010
EUHM - 52 5204 01	05/19/2014	MRSA	03/12/2013

# POWERCHART

- Automatic orders for readmissions

Displayed: All Active Orders | All Inactive Orders | All Non-Medications (All Statuses) Show More Orders...

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Order Name ^	Status	Details
<input checked="" type="checkbox"/>			Functional Assessment	Ordered	04/04/13 10:35:15, M + Th Order entered secondary to patient admission
<input checked="" type="checkbox"/>			Hemodynamic Monitoring	Ordered	04/04/13 11:20:00, PRN, 04/04/13 11:20:00
<input checked="" type="checkbox"/>			ICU Oral Care Procedure	Ordered	04/04/13 10:35:21, q4hr, Toothbrushing w/ CHG q12hr unless contraindicated Ordered secondary to admission to ICU.
<input checked="" type="checkbox"/>			Indwelling Urinary Catheter Care	Ordered	04/04/13 11:21:06, q12hr Catheter care q12hr & PRN.
<input checked="" type="checkbox"/>			Initiate Pressure Ulcer Prevention Phase	Ordered	04/04/13 11:26:29, At risk for pressure ulcer due to Braden Subscale Criteria or Scor... Initiate Prevention Phase of the Pressure Ulcer Prevention and Management Plan in t...
<input checked="" type="checkbox"/>			Integumentary Assessment...	Ordered	04/04/13 10:35:15, Once, 04/04/13 10:35:15
<input checked="" type="checkbox"/>			Isolation	Ordered	04/04/13 0:53:03, Contact Order entered via SYSTEM secondary to history of Contact Isolation within the past ...
<input checked="" type="checkbox"/>			Notify MD/Provider - Lab/T...	Ordered	04/04/13 11:20:00, Call MD for BG greater than 150 x 2 readings or greater than 20...
<input checked="" type="checkbox"/>			Notify MD/Provider - Urine/...	Ordered	04/04/13 11:20:00, UO <0.5 mL/kg x 2 hr, 04/04/13 11:20:00

▲ Details

# POWERCHART

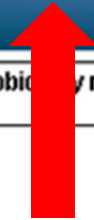
- Easy identification for providers

DOB:12/24/1931      Age:81 years      Location:2E ICU SJH; 215; 01  
Contact As of 12/02/13

30 days. Sequence based on last update date/time. Non-ESJH microbiology results are on the Micro NON ESJH tab and in the laboratory result flow sheet.

id: 13514730      Status: Preliminary Report

re



# TRANSFER OF ISOLATION PATIENTS

- Coordinated by Social Workers
- Copy of Chart
- Transfer Form
  - Multiple sections to be filled out by Physician, Nurse and Social Worker
  - Isolation Checkbox (MRSA, VRE, C-Diff, Other)

# TRANSFER OF ISOLATION PATIENTS

If patient is admitted from an outside facility, and needs to be transferred to EOH, DO NOT COMPLETE FORM, please call EUH Transfer Service @ 404-686-8334

<b>PATIENT INFORMATION:</b>	
*Name: _____	*Date of Admission: _____
*SS#: _____	*Date of Birth _____ Sex: <input type="checkbox"/> M <input type="checkbox"/> F
*Insurance Information _____	
<b>PHYSICIAN/NURSE INFORMATION:</b>	
*Admitting Physician: _____	Service: _____
*Person Completing Form: _____	Phone Number: _____
*Patient Type: <input type="checkbox"/> Inpatient <input type="checkbox"/> Observation (23hrs)	
*Diagnosis: _____	<input type="checkbox"/> ISOLATION/Reason _____
*Clinical Information (REASON FOR ADMISSION): _____	
_____	



# Multi-site Gram-negative Surveillance Initiative (MuGSI)

May 28, 2014

Healthcare-Associated Infections  
Georgia Emerging Infections Program



# Case Definition

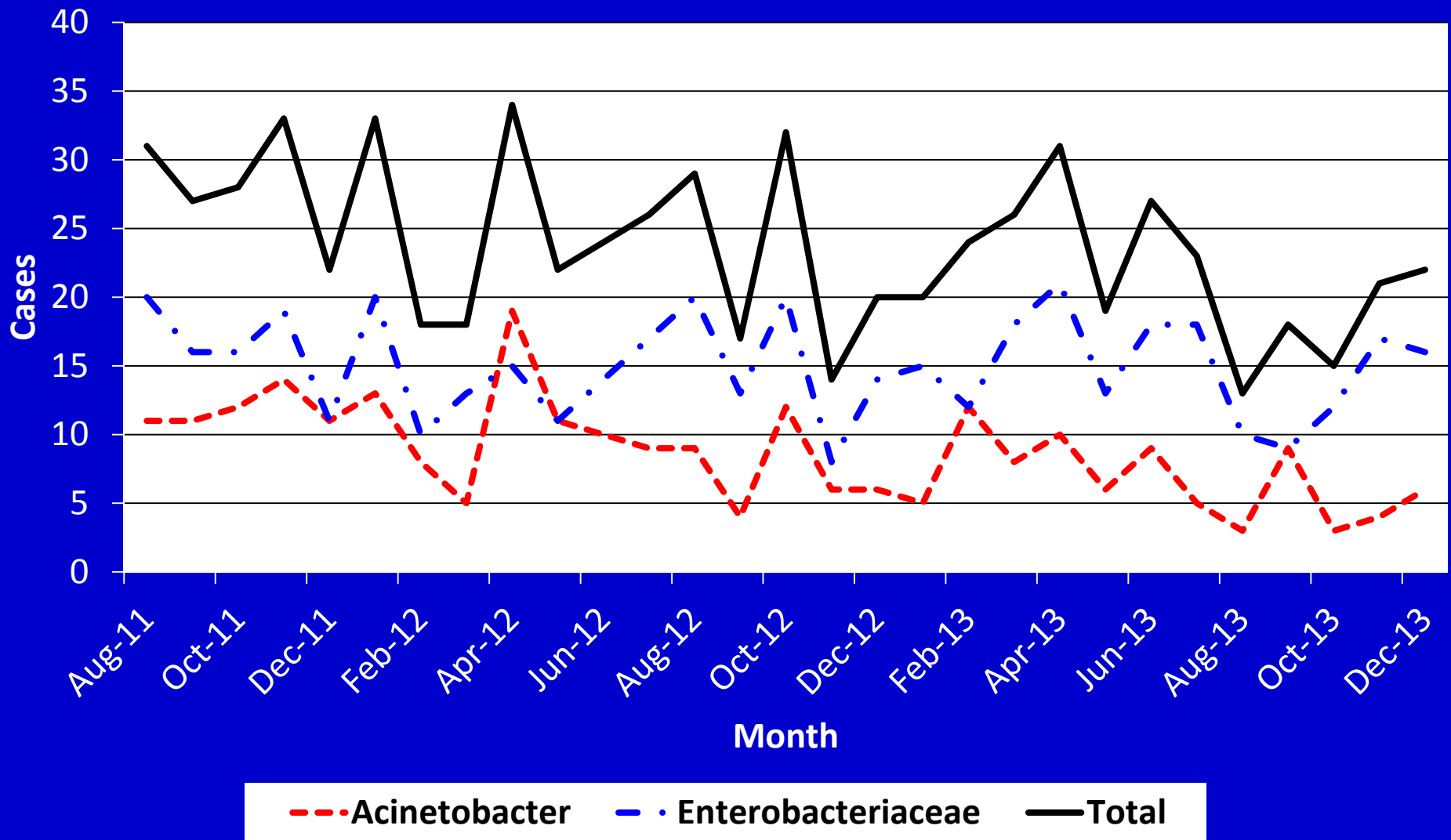
Category	Species	Carbapenem susceptibility phenotype
Carbapenem-nonsusceptible Enterobacteriaceae	Escherichia coli Klebsiella pneumoniae Klebsiella oxytoca Enterobacter cloacae Enterobacter aerogenes	Intermediate or resistant to: Imipenem (MIC >1), Meropenem (MIC >1), or Doripenem (MIC >1)  AND resistant to: Ceftazidime (MIC >8), Ceftriaxone (MIC >2), and Cefotaxime (MIC >2)
Carbapenem-nonsusceptible Acinetobacter baumannii	Acinetobacter baumannii Acinetobacter baumannii complex Acinetobacter calcoaceticus-baumannii complex	Intermediate or resistant to: Imipenem (MIC >4), Meropenem (MIC >4), or Doripenem (MIC >1)

**Specimens:** urine and normally sterile sites

**Patients:** HD3 resident

# Surveillance Trends

## August 2011 – December 2013



# Species Distribution

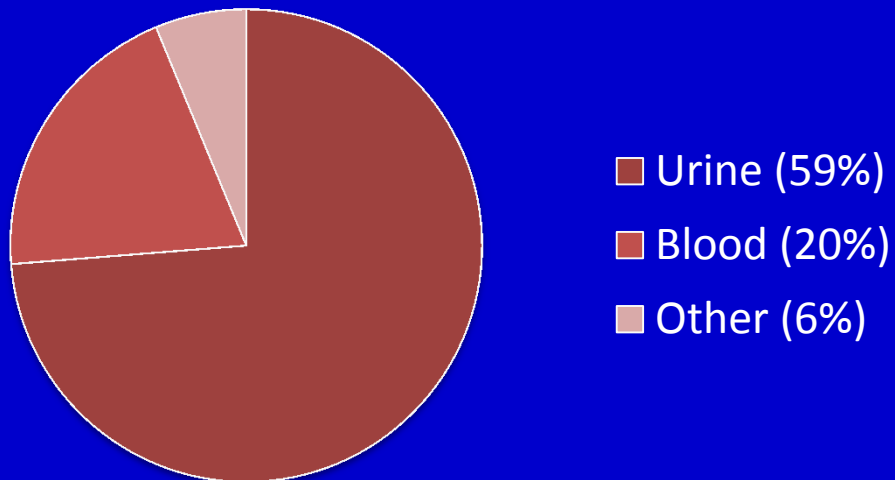
## August 2011 – December 2013

Species	2011 Cases (%)	2012 Cases (%)	2013 Cases (%)
<b>Enterobacteriaceae</b>	82 (58%)	175 (61%)	179 (69%)
<b>Escherichia coli</b>	13 (9%)	27 (9%)	26 (10%)
<b>Enterobacter cloacae</b>	4 (3%)	14 (5%)	23 (9%)
<b>Enterobacter aerogenes</b>	4 (3%)	11 (4%)	13 (5%)
<b>Klebsiella pneumoniae</b>	57 (40%)	121 (42%)	114 (44%)
<b>Klebsiella oxytoca</b>	4 (3%)	2 (1%)	3 (1%)
<b>Acinetobacter baumannii</b>	59 (42%)	112 (39%)	80 (31%)
<b>Total</b>	<b>141</b>	<b>287</b>	<b>259</b>

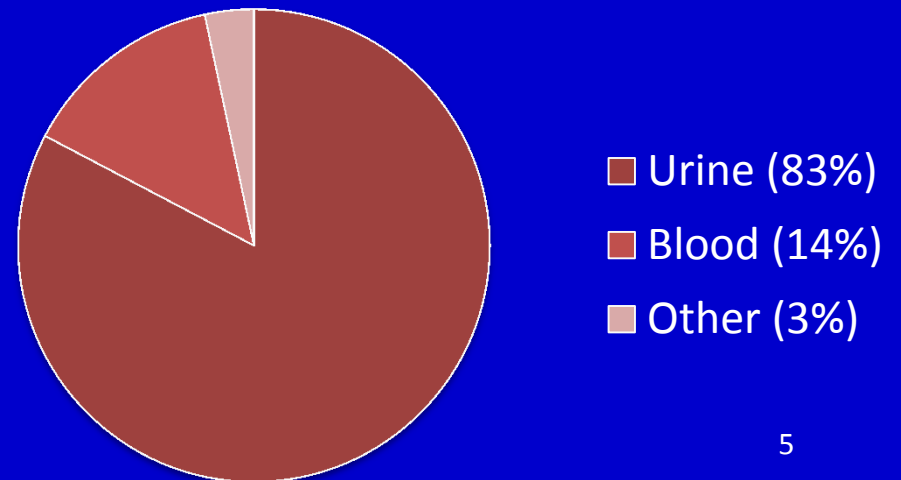
# Source and Species 2013

Source	Acinetobacter	Enterobacteriaceae	Total
Urine (%)	59 (74%)	148 (83%)	<b>207 (80%)</b>
Blood (%)	16 (20%)	25 (14%)	<b>41 (16%)</b>
Peritoneal Fluid (%)	0	4 (2%)	<b>4 (2%)</b>
Pleural Fluid (%)	1 (1%)	0	<b>1 (&lt;1%)</b>
Bone (%)	3 (4%)	0	<b>3 (1%)</b>
Other Invasive Site (%)	1 (1%)	2 (1%)	<b>3 (1%)</b>
<b>Total</b>	<b>80</b>	<b>179</b>	<b>259</b>

## Acinetobacter



## Enterobacteriaceae



# CRE Collaborative Baseline Data: Incident Enterobacteriaceae Cases

	Hospital		LTCF		Outpatient		Total	
	Urine	Invasive	Urine	Invasive	Urine	Invasive	Urine	Invasive
Sep-13	7	1	1	0	0	0	8	1
Oct-13	6	2	4	0	1	0	11	2
Nov-13	7	4	4	0	1	0	12	4
Dec-13	9	3	8	0	0	1	17	4
Jan-14	9	2	1	0	1	0	11	2
Feb-14	7	5	3	0	0	0	10	5
Total	45	17	21	0	3	1	69	18

# Thank you!

Jessica Reno, MPH  
MuGSI Surveillance Coordinator  
jreno@gaeip.org  
(404) 251-8706