

# Welcome!

Office for State, Tribal, Local and Territorial Support  
presents...



## CDC *Vital Signs* Healthcare-associated Infections

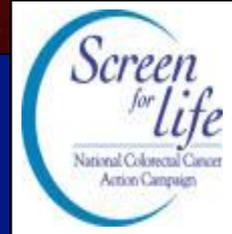
March 8, 2011  
2:00pm – 3:00pm EST



Centers for Disease Control and Prevention  
Office for State, Tribal, Local and Territorial Support

# Agenda

- 2:00 pm**            **Welcome & Introductions**  
Dr. Judy Monroe, OSTLTS Director, CDC
- 2:02 pm**            **Speaker Introductions**  
Mamie Jennings Mabery,  
Communities of Practice, KMB, OSTLTS, CDC
- 2:04 pm**            ***Vital Signs* Overview**  
Dr. Arjun Srinivasan,  
Associate Director, HAI Prevention Programs, DHQP, CDC
- 2:10 pm**            **Presentations**  
**Marion A. Kainer, MD, MPH, FRACP**  
Director, Hospital Infections and Antimicrobial Resistance Program  
Tennessee Department of Health  
**Teresa Fox, MEd, MT(ASCP), CIC**  
HAI Surveillance Program Director  
Georgia Department of Community Health  
Division of Public Health
- 2:30 pm**            **Q&A and Discussion**  
Mamie Jennings, Facilitator
- 2:55 pm**            **Wrap – up**
- 3:00 pm**            **End of call**



**CDC Vital signs™ Teleconference**  
**to support STLT efforts and build momentum around the monthly release of CDC *Vital Signs***





# CDC Vital Signs *Focus on HAIs*

**Arjun Srinivasan, MD, FSHEA  
CDR USPHS**

Associate Director for Healthcare Associated Infection Prevention Programs

Medical Director, Get Smart for Healthcare

Division of Healthcare Quality Promotion



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention

# Central Line Associated Bloodstream Infections (CLABSIs)

- ❑ Central lines are used in the sickest patients to provide critical treatments.
- ❑ They create a risk for bacteria/fungi to enter the blood and cause infections.
- ❑ Bloodstream infections due to central lines are associated with high morbidity, mortality and cost.
  - **Estimated excess medical cost of a CLABSI: \$16,550**
  - **Reported mortality of CLABSI: 12-25%**
- ❑ Data in past 5 years show that most CLABSIs (especially in ICUs) are preventable.

# Vital Signs: MMWR Findings

- ❑ **Hospital ICUs: 58% reduction (2001 vs 2009)**
  - ❑ 25,000 fewer CLABSIs
  - ❑ 3-6K lives saved (2009)
  - ❑ \$414M saved (2009)
  - ❑ \$1.8B cumulative savings, 27K lives (2001-2009)
- ❑ **41,000 CLABSIs hospital-wide (2009)**
  - ❑ 17,000 ICU
  - ❑ 24,000 wards
- ❑ **37,000 CLABSIs in outpatient dialysis centers (2008)**
- ❑ ***Staphylococcus aureus* reduced more than other pathogens**

## What Can be Done

- ❑ U.S. Government: Apply ICU success to other types of infections in health care. Identify which actions and organisms cause the most problems and learn how to prevent them.
- ❑ Facilities: Use data for action. Track infection rates and organism types with CDC's NHSN to learn where and why infections are happening, target actions to stop them, and track progress.
- ❑ Healthcare Providers: Use CDC-recommended infection control steps every time a central line is put in and used.

# What States Can Do

- ❑ Join, start, or expand programs to prevent infections.
- ❑ Encourage facilities to join [CDC's infection tracking system](#) and validate their data (NHSN).
- ❑ Join [On the CUSP: Stop BSI](#) program to develop a prevention roadmap and share best practices.
- ❑ Build partnerships with and give technical support to hospitals, dialysis centers, and other medical care locations.

# Vital Signs: Key Points

- ❑ Significant progress in ICUs
  - ❑ More to be done
- ❑ Need to expand best practices and full collaboration model (federal to local) to all settings and HAIs
- ❑ States are central to prevention efforts and are playing a growing role in HAI prevention efforts



# Central Line Associated Blood Stream Infections (CLABSI) in Tennessee: Making Progress

**Marion Kainer, MD, MPH, FRACP**  
**Tennessee Department of Health**  
**March 8, 2011**

# Standardized Infection Ratio (SIR): Risk Adjusted Summary Measure

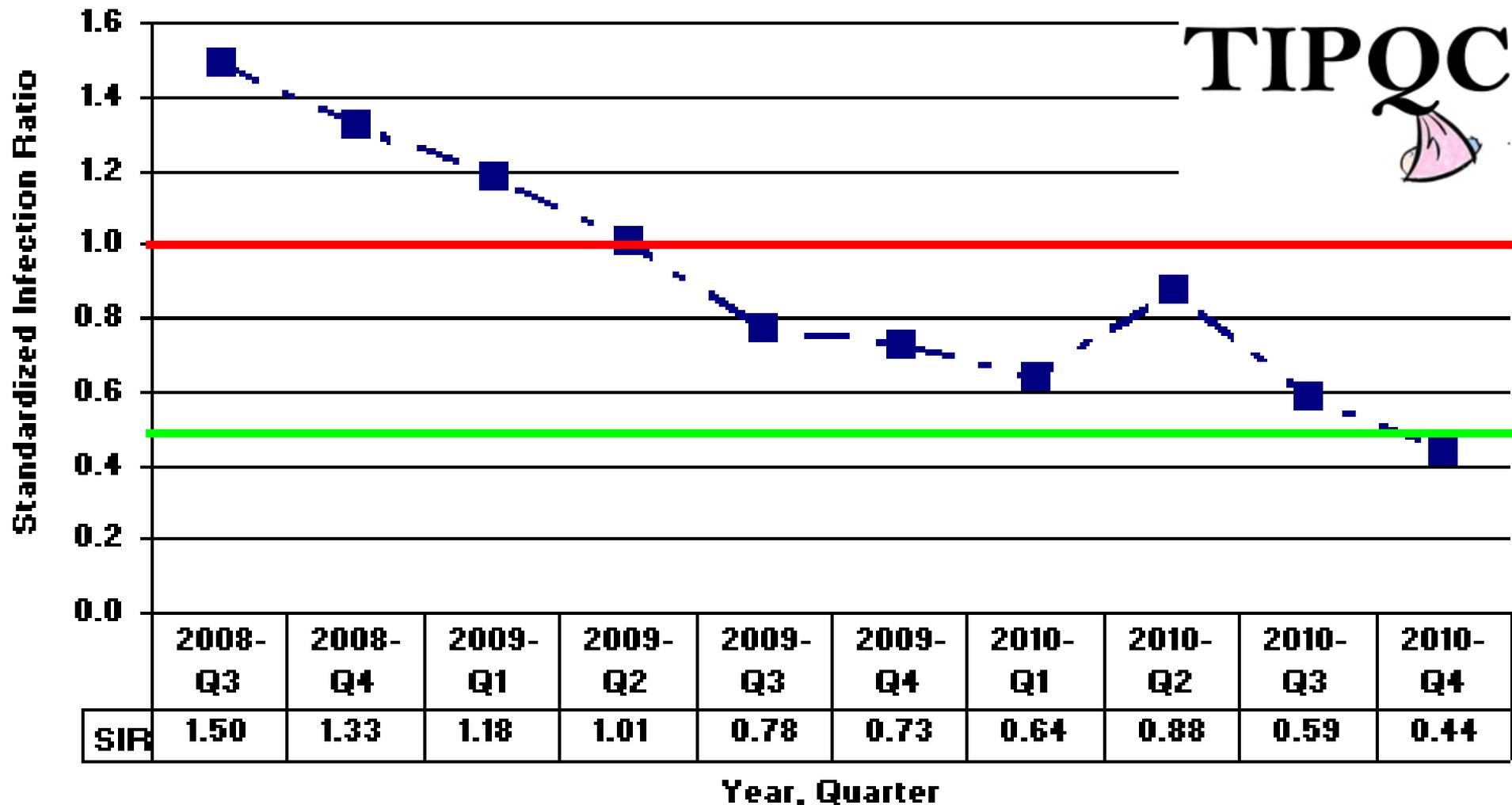
$$\text{SIR} = \frac{\text{Observed (O) HAIs}}{\text{Predicted (P) HAIs}}$$

To calculate O, sum the # of HAIs among a group

To calculate P, requires the use of the appropriate aggregate data (risk-adjusted rates) (e.g., national NHSN data for 2006-2008)

- **SIR > 1.0: # infections are HIGHER than predicted**
  - SIR= 1.5: # infections = 50% HIGHER than predicted
- **SIR < 1.0: # infections are LOWER than predicted**
  - SIR= 0.4: # infections = 60% LOWER than predicted

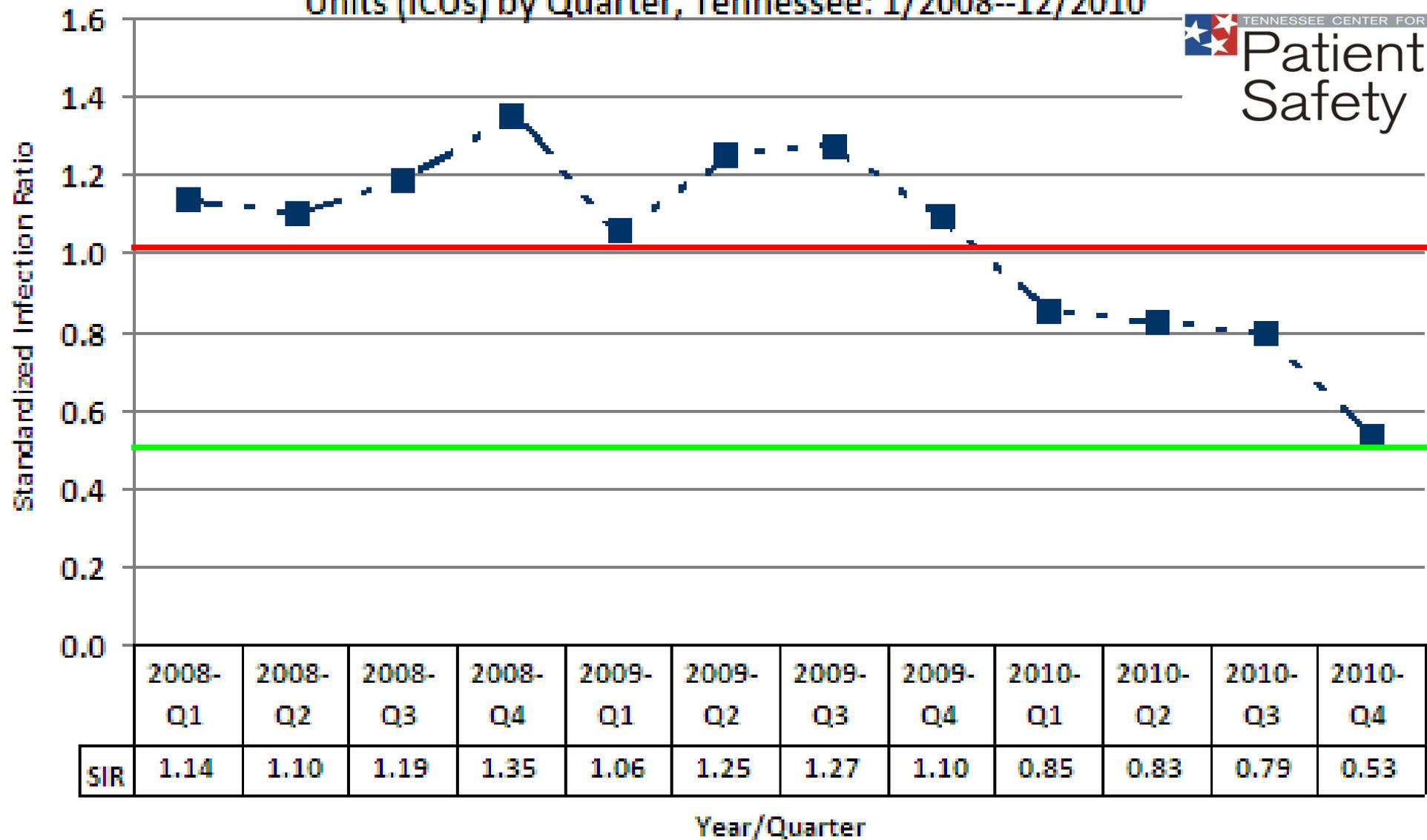
# Central Line Associated Blood Stream Infections (CLABSI) Standardized Infection Ratio (SIR) in Neonatal Intensive Care Units (NICUs) by Quarter, Tennessee, 7/2008-12/2010



# Central Line Associated Blood Stream Infection (CLABSI)

## Standardized Infection Ratio (SIR) in Adult & Pediatric Intensive Care

### Units (ICUs) by Quarter, Tennessee: 1/2008--12/2010



# CLABSI SIR: Tennessee, 2008-2010

## Adult & Pediatric ICUs (exclude Burn & Trauma)

YEAR	No.	SIR	LL	UL	10%	25%	50%	75%	90%
2010	79	0.75	0.67	0.84	0.00	0.00	0.43	0.86	1.61
2009	79	1.17	1.07	1.27	0.00	0.00	0.70	1.30	2.04
2008	79	1.19	1.09	1.30	0.00	0.00	0.90	1.57	2.65

## Neonatal ICUs

YEAR	No.	SIR	LL	UL	10%	25%	50%	75%	90%
2010	23	0.64	0.50	0.80	0.00	0.00	0.41	1.01	1.15
2009	25	0.92	0.76	1.10	0.00	0.00	0.32	1.05	1.71
2008	25	1.41	1.14	1.73	0.00	0.00	0.69	1.65	2.35

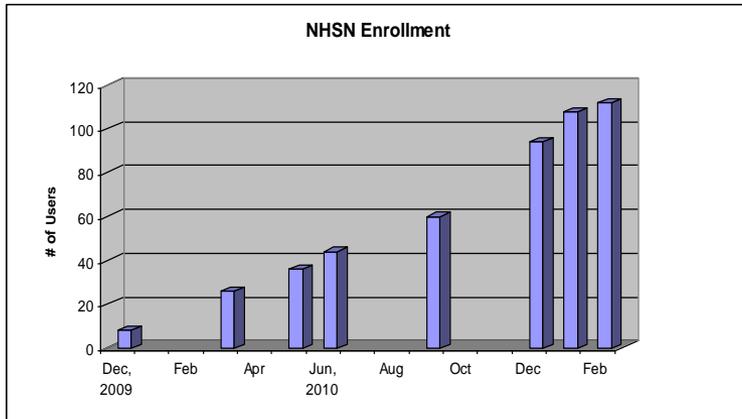
# Georgia HAI Prevention

## CDC Vital Signs: Focus on HAIs



Teresa Fox, M.Ed. MT(ASCP), CIC  
Georgia Division of Public Health

# Georgia's Approach Using Partnerships



- NHSN Trainings in State

- GMCF trainings

- 73 participants

- GHA trainings

- 70 participants
- 4 webinars, 1 in person, 1 audio conference

- Establish multidisciplinary Advisory Committee
- Identify stakeholders for reducing HAIs in the state
- Promote, recruit and provide technical support of NHSN
- Conduct statewide IP needs assessments
- Provide education for IPs

# Georgia's Approach Using Partnerships

- Identify, support and promote existing Georgia collaboratives
  - CUSP: Stop BSI
- Help to form new collaboratives in Georgia
  - LTC Infection Prevention Training
  - Regional C.diff reduction collaborative
  - Mentoring program
- Design and promote state's Public Health HAI website
- Partner with Georgia Emerging Infections Program (GA-EIP)

# Lessons Learned

- Need to educate stakeholders
- Focus plans on identified needs
- Implement teamwork and communication across the continuum of practice



# Georgia's Unanswered Questions

- How do we engage facilities to join G-SNUG voluntarily?
- How do we protect facilities under the strong “sunshine laws” that are present in Georgia?
- How do we sustain the state’s program without designated ongoing funding?
- How do we evaluate program impact?



# Provide Feedback on this Teleconference:

[Vital Signs Town Hall Survey](#)  
[Get a Vital Signs button on your website](#)



Please mark your calendars for the next  
OSTLTS Town Hall Teleconference:

**April 12, 2011**  
**2:00pm – 3:00pm EST**

**For more information please contact Centers for Disease Control and Prevention**

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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