



***Clostridium difficile* Infections (CDI)**

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Standardized Infection Ratios

- The SIR is a measure that compares the number of infections reported to NHSN to the number of infections that would be predicted based on national baseline data

$$\text{SIR} = \frac{\text{Observed \# of HAIs}}{\text{Predicted \# of HAIs}}$$



Interpreting SIRs

- An SIR of 1 indicates that the same number of infections were reported as would be predicted given the baseline data
- An SIR greater than 1 indicates that more infections have been reported than what would be predicted given the baseline data (an increase)
- An SIR less than 1 indicates that fewer infections have been reported than what would be predicted given the baseline data (a decrease)



Hospital-Onset *C. difficile* Infections

- **Data source** – CDC's National Healthcare Safety Network (NHSN)
- **Metric** – Standardized Infection Ratio (SIR)
- **5 year target** – 30% reduction in facility-wide inpatient healthcare facility-onset *C. difficile* LabID events (SIR = 0.70)
- **Baseline period** – 2010-11



Hospital-Onset *C. difficile* Infections

	Baseline 2010-2011	1 st Half 2012
Facilities reporting	846	1,050
States represented	40 (5 with mandates)	45 (6 with mandates)
Facility-wide patient days	62,262,776	21,908,528
Facility-wide admissions	13,102,078	4,882,118
Overall SIR	N/A	1.28* (28% increase)

*data are preliminary from 1st half of 2012 only and do not fully account for change in testing practices



Hospital-Onset *C. difficile* Infections

Variables from Final Model to be included for Risk Adjustment in SIR Calculation

Factor	Description
Intercept	
Facility Bed Size	> 245
	101-245
	≤ 100
Teaching Type	Major
	Graduate
	Limited & Non
CDI Test Type	NAAT (PCR)
	EIA
	All Other
Prevalence	Continuous (no CO-HCFA)

Data Sources and Submission

- CDI test type, facility bed size, and teaching type are collected on the required Annual Facility Survey.
- The survey is completed after the end of each year for accuracy in describing a full year's worth of data.
- Survey data for 2012 will be submitted by facilities January - March 2013.
- Due to reporting requirements from CMS, quarterly data are complete 4.5 months after the end of each quarter.



State Health Departments and *C. difficile* Prevention

- State health departments (SHDs) play a unique role in coordinating HAI prevention activities in their jurisdictions
- Prevention collaboratives led by SHDs have shown reductions in HAI incidence during ARRA funding period
- *C. difficile* - 8 SHDs funded by CDC through ACA to address CDI across different care settings (acute care, long term acute care, long term care)