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Illinois Statewide Central Line-associated Blood Stream Infection Report (CLABSI)

Neonatal and Pediatric Intensive Care

#### **Health Care Associated Infections**

Hospitals in Illinois are participating in programs to reduce the number of infections acquired during hospital stays. While it is difficult to reduce infections to zero, following specific protocols can greatly reduce the risk. The Hospital Report Card Act (Illinois Public Act 93-563) requires Illinois hospitals to report central line associated bloodstream infections(CLABSIs) occurring in critical care units, also known as intensive care units (ICUs). Comparison summary data for CLABSIs, expressed as a Standardized Infection Ratio (SIRa), are presented by hospital for each of Neonatal (Level II/III, Level III) and Pediatric (Cardiothoracic, Medical/Surgical, Medical) ICU types. SIRs for NICUs have been adjusted for NHSN birth weight category. Interpretation of these summary measures is provided.

Illinois Statewide Central Line-associated Bloodstream Infection Report (CLABSI), Illinois Department of Public Health June, 2011

Reportable Period: January 1, 2010 - December 31, 2010

Location: Neonatal Intensive Care Unit - Level II/III

		01	North	Statistically	11	95% Confidence Interval [CI] <sup>e</sup>		
Hospital	City	Observed [O]  Number of  CLABSIs	Number of Central Line Days <sup>b</sup>	"Expected" [E] Number of CLABSIs <sup>c</sup>	Unit- Specific SIR <sup>d</sup> = O/E	Lower Bound <sup>f</sup>	Upper Bound	Statistical Interpretation
ADVOCATE ILLINOIS MASONIC MEDICAL CENTER	CHICAGO	3	1660	4.86	0.62	0.12	1.8	Similar
ADVOCATE LUTHERAN GENERAL HOSPITAL	PARK RIDGE	8	5780	15.48	0.52	0.22	1.02	Similar
EDWARD HOSPITAL	NAPERVILLE	1	979	2.68	0.37	0.01	2.08	Similar
LOYOLA UNIVERSITY MEDUCAL CENTER	MAYWOOD	13	4347	10.77	1.21	0.64	2.06	Similar
MOUNT SINAI HOSPITAL	CHICAGO	3	2248	5.15	0.58	0.12	1.7	Similar
RUSH-COPLEY MEDICAL CENTER*	AURORA	0	763	2.04	0		1.8	Similar
ST ALEXIUS MEDICAL CENTER*	HOFFMAN ESTATES	0	655	1.77	0		2.08	Similar
ALEXIAN BROTHERS MEDICAL CENTER**	ELK GROVE VILLAGE	0	270	0.37				Not Available
LITTLE COMPANY OF MARY HOSPITAL & HC CENTERS**	EVERGREEN PARK	0	153	0.17				Not Available
NORTHWEST COMMUNITY HOSPITAL	ARLINGTON HEIGHTS	1	430	0.56				Not Available
NORTHWESTERN LAKE FOREST HOSPITAL**	LAKE FOREST	0	94	0.11				Not Available
PROVENA SAINT JOSEPH MEDICAL CENTER	JOLIET	1	135	0.22				Not Available
SAINTS MARY AND ELIZABETH MEDICAL CENTER**	CHICAGO	0	73	0.09				Not Available
SHERMAN HOSPITAL**	ELGIN	0	224	0.39				Not Available

Reportable Period: January 1, 2010 - December 31, 2010

Location: Neonatal Intensive Care Unit - Level III

Hospital	City	Observed [O] Number of CLABSIs	Number of Central Line Days <sup>b</sup>	Statistically "Expected" [E] Number of CLABSIs <sup>c</sup>	Unit- Specific SIR <sup>d</sup> = O/E	95% Con Interva Lower Bound <sup>f</sup>		Statistical Interpretation
ADVOCATE CHRIST HOSPITAL & MEDICAL CENTER	OAK LAWN	3	8141	18.24	0.17	0.03	0.48	Lower
CHILDREN'S MEMORIAL HOSPITAL	CHICAGO	6	6213	13.8	0.44	0.16	0.95	Lower
JOHN H STROGER JR HOSPITAL OF COOK COUNTY	CHICAGO	2	3918	9.04	0.22	0.03	0.8	Lower
NORTHWESTERN MEMORIAL HOSPITAL*	CHICAGO	0	3628	9.28	0		0.4	Lower
UNIVERSITY OF CHICAGO MEDICAL CENTER	CHICAGO	9	7559	18	0.5	0.23	0.95	Lower
ADVENTIST HINSDALE HOSPITAL*	HINSDALE	0	1058	2.57	0		1.43	Similar
CARLE FOUNDATION HOSPITAL	URBANA	6	1282	3.44	1.75	0.64	3.8	Similar
CENTRAL DUPAGE HOSPITAL*	WINFIELD	0	644	1.58	0		2.33	Similar
NORTHSHORE UNIV HS EVANSTON HOSPITAL	EVANSTON	8	4103	10.02	0.8	0.34	1.57	Similar
OSF SAINT FRANCIS MEDICAL CENTER	PEORIA	10	5369	12.84	0.78	0.37	1.43	Similar
ROCKFORD MEMORIAL HOSPITAL	ROCKFORD	8	3809	9.42	0.85	0.37	1.67	Similar
RUSH UNIVERSITY MEDICAL CENTER	CHICAGO	22	6256	16.41	1.34	0.84	2.03	Similar
ST JOHN'S HOSPITAL	SPRINGFIELD	2	1147	3.1	0.65	0.07	2.33	Similar
UNIVERSITY OF ILLINOIS MEDICAL CENTER AT CHICAGO	CHICAGO	15	3735	9.52	1.57	0.88	2.6	Similar

Reportable Period: January 1, 2010 - December 31, 2010

Location: Pediatric Medical/Surgical Intensive Care Unit

		Observed [O]	Number	Statistically "Expected" [E]	Unit-	95% Confidence Interval [CI] <sup>e</sup>			
Hospital	City	Number of CLABSIs	of Central Line Days <sup>b</sup>	Number of CLABSIs <sup>c</sup>	Specific SIR <sup>d</sup> = O/E	Lower Bound <sup>f</sup>	Upper Bound	Statistical Interpretation	
CHILDREN'S MEMORIAL HOSPITAL	CHICAGO	7	7616	22.85	0.31	0.12	0.63	Lower	
UNIVERSITY OF CHICAGO MEDICAL CENTER*	CHICAGO	0	2249	6.75	0		0.54	Lower	
ADVOCATE LUTHERAN GENERAL HOSPITAL	PARK RIDGE	2	1178	3.53	0.57	0.06	2.04	Similar	
LOYOLA UNIVERSITY MEDICAL CENTER	MAYWOOD	7	974	2.92	2.4	0.96	4.94	Similar	
OSF SAINT FRANCIS MEDICAL CENTER	PEORIA	5	2902	8.71	0.57	0.19	1.34	Similar	
ROCKFORD MEMORIAL HOSPITAL	ROCKFORD	1	444	1.33	0.75	0.01	4.18	Similar	
RUSH UNIVERSITY MEDICAL CENTER	CHICAGO	6	2015	6.04	0.99	0.36	2.16	Similar	
ST JOHN'S HOSPITAL	SPRINGFIELD	3	589	1.77	1.7	0.34	4.96	Similar	
UNIVERSITY OF ILLINOIS MEDICAL CENTER AT CHICAGO	CHICAGO	5	1921	5.76	0.87	0.28	2.02	Similar	
CENTRAL DUPAGE HOSPITAL**	WINFIELD	0	243	0.73				Not Available	
JOHN H STROGER JR HOSPITAL OF COOK COUNTY	CHICAGO	2	270	0.81				Not Available	
MOUNT SINAI HOSPITAL	CHICAGO	2	194	0.58				Not Available	
ST ALEXIUS MEDICAL CENTER**	HOFFMAN ESTATES	0	161	0.48				Not Available	

Reportable Period: January 1, 2010 - December 31, 2010

**Location: Pediatric Medical Intensive Care Unit** 

#### **STATEWIDE**

				Statistically		95% Confidence Interval [CI] <sup>e</sup>		
		Observed [O]	Number	"Expected" [E]	Unit-			
		Number of	of Central	Number of	Specific	Lower	Upper	Statistical
Hospital	City	CLABSIs	Line Days <sup>b</sup>	CLABSIs <sup>c</sup>	SIR <sup>d</sup> = O/E	Bound <sup>f</sup>	Bound	Interpretation
ADVOCATE CHRIST HOSPITAL & MEDICAL CENTER	OAK LAWN	9	2509	3.26	2.76	1.26	5.24	Higher

## Central Line Associated Bloodstream Infection (CLABSI) Standardized Infection Ratio (SIRa)

Reportable Period: January 1, 2010 - December 31, 2010

**Location: Pediatric Cardiothoracic Intensive Care Unit** 

Hospital	City	Observed [O] Number of CLABSIs	Number of Central Line Days <sup>b</sup>	Statistically "Expected" [E] Number of CLABSIs <sup>c</sup>	Unit- Specific SIR <sup>d</sup> = O/E	95% Con Interva Lower Bound <sup>f</sup>		Statistical Interpretation
ADVOCATE CHRIST HOSPITAL & MEDICAL CENTER	OAK LAWN	14	2596	8.57	1.63	0.89	2.74	Similar
UNIVERSITY OF CHICAGO MEDICAL CENTER	CHICAGO	1	334	1.1	0.91	0.01	5.05	Similar

- <sup>a</sup> The Standardized Infection Ratio (SIR) is a summary measure used to compare the central line associated bloodstream infection (CLABSI) experience among a group of reported locations to that of a standard population. It is the observed number of infections divided by the expected number of infections.
- <sup>b</sup> Too few central line days. Reporting on too few procedures is a risk to patient confidentiality. If there are fifty (50) or fewer central line days, the report for the number of infections will be deferred until there are more central line days.
- <sup>c</sup> Please note that the "expected" number of infections does not mean that you expect to get an infection when you are hospitalized.
- d If the expected number of infections is < 1.0, the SIR is not calculated because it does not meet the minimum requirement for precision.
- <sup>e</sup> The confidence interval for a hospital's standardized infection ratio (SIR) is the range of possible SIRs within which there is 95% confidence that the real SIR for that hospital lies, given the number of infections and procedures that were observed in that hospital in a specific time period.
- f The lower bound of the confidence interval is calculated only if the infection count > 0.
- \* Zero Infections, significantly better than expected.
- \*\* Zero Infections, but too few central line days to determine whether this is significantly better than expected.

Interpretation of the SIR: All conclusions are based on the assumption that the hospital's patient population is similar to the NHSN pooled patient population.

If the 95% confidence interval includes 1.0, the hospital's infection rate is similar (not significantly different) from "expected" (predicted).

If the SIR is greater than 1.0 and the 95% confidence interval does not include 1.0, the hospital's infection rate is significantly higher than "expected" (predicted).

If the SIR is less than 1.0 and the 95% confidence interval does not include 1.0, the hospital's infection rate is significantly lower than "expected" (predicted).