



**Illinois Statewide Report of Knee Arthroplasty (KPRO) Surgical Site Infections (SSI)  
Acute Care and Critical Access Hospitals - NHSN Event Reporting  
January 1, 2016 – December 31, 2016**

The Hospital Report Card Act (Illinois Public Act 93-563) requires Illinois hospitals to report surgical site infections (SSI) occurring following knee arthroplasty (knee replacement) (KPRO). SSIs are infections that occur in the wound created by an invasive surgical procedure and are one of the most important causes of healthcare-associated infections (HAI). Illinois hospitals have been reporting surgical site infection KPRO data using the CDC's National Healthcare Safety Network (NHSN) surveillance system since April, 2010. Comparison summary data for SSIs, expressed as a Standardized Infection Ratio (SIR), are presented by hospital for KPRO surgery. Interpretation of these summary measures is provided. This report and analysis reflects the January 1, 2016 to December 31, 2016 SSI data of Illinois hospitals that performs knee arthroplasty (KPRO).

**Standardized Infection Ratio and 95% Confidence Interval**

The SIR is a measure that compares the SSI burden at a facility to that of the national referent population (2015 NHSN inpatient data). NHSN uses risk models that determine the predicted number of surgical site infections based on the national baseline data, adjusting for statistically significant risk factors. A facility's SIR is calculated as the actual, or observed number of healthcare-associated incident cases reported by the facility divided by the predicted number of infections.

The corresponding 95% confidence interval (CI) is statistical measure that shows a range of estimated possible values for the SIR. The upper and lower bounds of the interval are used to determine the statistical significance and precision of the SIR. The SIR and 95% CI are interpreted as follows:

- If the 95% CI includes 1 (i.e., the lower bound is  $<1.00$  and the upper bound is  $>1.00$ ), the hospital's number of infections is similar to (not significantly different from) the predicted number.
- If the SIR is  $>1.0$  and the 95% CI does not include 1, the hospital had a significantly higher number of infections than predicted.
- If the SIR is  $<1.0$  and the 95% CI does not include 1, the hospital had a significantly lower number of infections than predicted.

Additional information regarding SSI risk models and SIR calculations can be found at: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf>

**Surgical Site Infection (SSI) Standardized Infection Ratio (SIR <sup>a</sup>)**  
**Knee Arthroplasty (KPRO)**  
**Reportable Period: January 1, 2016 - December 31, 2016**  
**STATEWIDE**

						95% Confidence Interval		
Hospital Name	Hospital City	Observed Number of KPRO <sup>b</sup>	Number of KPRO Performed	Statistically Predicted Number of KPRO	Standardized Infection Ratio (SIR) <sup>c</sup>	Lower Limit <sup>d</sup>	Upper Limit	Statistical Interpretation <sup>e</sup>
AMITA Health Adventist Medical Center Bolingbrook	Bolingbrook	1	45	0.23	.	.	.	Not Available
AMITA Health Adventist Medical Center Glen Oaks	Glendale Heights	0	24	0.06	.	.	.	Not Available
AMITA Health Adventist Medical Center Hinsdale	Hinsdale	1	370	1.20	0.83	0.04	4.11	Similar
AMITA Health Adventist Medical Center La Grange	LaGrange	0	201	0.97	.	.	.	Not Available
AMITA Health Alexian Brothers Medical Center Elk Grove Village **	Elk Grove Village	0	475	1.45	0.00	.	2.06	Similar
AMITA Health St.Alexius Medical Center Hoffman Estates	Hoffman Estates	1	457	1.50	0.67	0.03	3.29	Similar
Abraham Lincoln Memorial Hospital *	Lincoln	.	.	.	.	.	.	Not Available
Advocate BroMenn Medical Center	Normal	3	629	2.37	1.27	0.32	3.45	Similar
Advocate Christ Medical Center	Oak Lawn	3	824	3.15	0.95	0.24	2.59	Similar
Advocate Condell Medical Center	Libertyville	3	202	0.64	.	.	.	Not Available
Advocate Good Samaritan Hospital	Downers Grove	4	319	0.96	.	.	.	Not Available
Advocate Good Shepherd Hospital **	Barrington	0	301	1.20	0.00	.	2.50	Similar
Advocate Illinois Masonic Medical Center **	Chicago	0	267	1.21	0.00	.	2.49	Similar
Advocate Lutheran General Hospital	Park Ridge	3	916	2.69	1.11	0.28	3.03	Similar
Advocate Sherman Hospital	Elgin	1	317	0.98	.	.	.	Not Available
Advocate South Suburban Hospital	Hazel Crest	0	221	0.86	.	.	.	Not Available
Advocate Trinity Hospital	Chicago	0	73	0.30	.	.	.	Not Available
Alton Memorial Hospital **	Alton	0	311	1.18	0.00	.	2.54	Similar

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Anderson Hospital	Maryville	1	298	1.24	0.81	0.04	3.97	Similar
Blessing Hospital	Quincy	1	162	0.67	.	.	.	Not Available
CGH Medical Center	Sterling	2	108	0.27	.	.	.	Not Available
Carle Foundation Hospital	Urbana	2	584	2.40	0.84	0.14	2.76	Similar
Carle Hoopes Regional Hospital *	Hoopes	.	.	.	.	.	.	Not Available
Centegra Hospital - McHenry	McHenry	4	505	2.18	1.83	0.58	4.42	Similar
Centegra Hospital - Woodstock *	Woodstock	.	.	.	.	.	.	Not Available
Community First Medical Center	Chicago	1	35	0.13	.	.	.	Not Available
Crawford Memorial Hospital *	Robinson	.	.	.	.	.	.	Not Available
Crossroads Community Hospital	Mount Vernon	0	83	0.24	.	.	.	Not Available
Decatur Memorial Hospital	Decatur	2	493	1.39	1.44	0.24	4.75	Similar
Edward Hospital	Naperville	4	723	1.76	2.28	0.72	5.50	Similar
Elmhurst Memorial Hospital	Elmhurst	1	95	0.35	.	.	.	Not Available
FHN Memorial Hospital	Freeport	0	93	0.38	.	.	.	Not Available
Fayette County Hospital *	Vandalia	.	.	.	.	.	.	Not Available
Franciscan St. James Health	Chicago Heights	0	135	0.56	.	.	.	Not Available
Galesburg Cottage Hospital	Galesburg	0	114	0.53	.	.	.	Not Available
Gateway Regional Medical Center	Granite City	0	91	0.39	.	.	.	Not Available

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Genesis Medical Center-Silvis	Silvis	0	162	0.53	.	.	.	Not Available
Gibson Area Hospital & Health Services	Gibson City	0	121	0.43	.	.	.	Not Available
Graham Hospital	Canton	0	58	0.17	.	.	.	Not Available
HSHS St Anthony's Memorial Hospital **	Effingham	0	464	2.18	0.00	.	1.38	Similar
HSHS St Elizabeth's Hospital	Belleville	0	89	0.52	.	.	.	Not Available
HSHS St Francis Hospital	Litchfield	0	59	0.12	.	.	.	Not Available
HSHS St John's Hospital **	Springfield	0	455	1.71	0.00	.	1.76	Similar
HSHS St Joseph's Hospital	Highland	0	58	0.18	.	.	.	Not Available
HSHS St Joseph's Hospital *	Breese	.	.	.	.	.	.	Not Available
HSHS St Mary's Hospital	Decatur	2	238	0.94	.	.	.	Not Available
Hammond-Henry Hospital	Geneseo	2	77	0.18	.	.	.	Not Available
Heartland Regional Medical Center	Marion	0	134	0.60	.	.	.	Not Available
Herrin Hospital **	Herrin	0	321	1.04	0.00	.	2.87	Similar
Holy Cross Hospital	Chicago	0	33	0.20	.	.	.	Not Available
Hopedale Hospital *	Hopedale	.	.	.	.	.	.	Not Available
Illinois Valley Community Hospital	Peru	0	162	0.45	.	.	.	Not Available
Ingalls Memorial Hospital	Harvey	1	285	0.90	.	.	.	Not Available
Iroquois Memorial Hospital & Resident Home	Watseka	0	30	0.10	.	.	.	Not Available

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Jersey Community Hospital	Jerseyville	0	23	0.07	.	.	.	Not Available
John H Stroger Jr Hospital of Cook County *	Chicago	.	.	.	.	.	.	Not Available
Katherine Shaw Bethea Hospital	Dixon	0	88	0.21	.	.	.	Not Available
Little Company of Mary Hospital	Evergreen Park	0	104	0.94	.	.	.	Not Available
Loyola Gottlieb Memorial Hospital **	Melrose Park	0	305	1.57	0.00	.	1.91	Similar
Loyola University Medical Center	Maywood	2	244	1.70	1.18	0.20	3.89	Similar
MacNeal Hospital **	Berwyn	0	245	1.44	0.00	.	2.08	Similar
McDonough District Hospital	Macomb	1	41	0.11	.	.	.	Not Available
Memorial Hospital	Belleville	2	485	1.45	1.38	0.23	4.55	Similar
Memorial Hospital *	Carthage	.	.	.	.	.	.	Not Available
Memorial Hospital	Chester	0	21	0.04	.	.	.	Not Available
Memorial Hospital of Carbondale	Carbondale	1	348	1.12	0.89	0.05	4.39	Similar
Memorial Medical Center	Springfield	3	889	3.15	0.95	0.24	2.59	Similar
Mercy Hospital & Medical Center	Chicago	0	103	0.35	.	.	.	Not Available
Mercyhealth Hospital and Medical Center-Harvard *	Harvard	.	.	.	.	.	.	Not Available
Mercyhealth Hospital-Rockton Avenue	Rockford	1	289	1.43	0.70	0.04	3.45	Similar
Methodist Hospital of Chicago *	Chicago	.	.	.	.	.	.	Not Available
Metrosouth Medical Center	Blue Island	0	128	0.49	.	.	.	Not Available

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Morris Hospital & Healthcare Centers	Morris	0	188	0.47	.	.	.	Not Available
Mount Sinai Hospital	Chicago	0	58	0.20	.	.	.	Not Available
Northshore Univ HS Glenbrook Hospital	Glenview	4	557	1.81	2.21	0.70	5.33	Similar
Northshore Univ HS Highland Park Hospital	Highland Park	0	143	0.45	.	.	.	Not Available
Northshore Univ HS Skokie Hospital	Skokie	3	1071	2.70	1.11	0.28	3.02	Similar
Northwest Community Healthcare Hospital **	Arlington Heights	0	495	1.83	0.00	.	1.64	Similar
Northwestern Medicine Central DuPage Hospital	Winfield	0	1181	4.56	0.00	.	0.66	Lower
Northwestern Medicine Delnor Hospital	Geneva	0	232	0.74	.	.	.	Not Available
Northwestern Medicine Kishwaukee Hospital	DeKalb	0	143	0.44	.	.	.	Not Available
Northwestern Medicine Lake Forest Hospital	Lake Forest	4	398	1.27	3.16	1.00	7.61	Higher
Northwestern Medicine Valley West Hospital *	Sandwich	.	.	.	.	.	.	Not Available
Northwestern Memorial Hospital	Chicago	4	705	2.76	1.45	0.46	3.50	Similar
Norwegian-American Hospital *	Chicago	.	.	.	.	.	.	Not Available
OSF Saint Anthony Medical Center	Rockford	6	487	1.43	4.18	1.70	8.70	Higher
OSF Saint Anthony's Health Center	Alton	0	78	0.32	.	.	.	Not Available
OSF Saint Elizabeth Medical Center *	Ottawa	.	.	.	.	.	.	Not Available
OSF Saint Francis Medical Center	Peoria	1	641	1.90	0.53	0.03	2.60	Similar
OSF Saint James-John W Albrecht Medical Center	Pontiac	0	97	0.22	.	.	.	Not Available

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OSF St Joseph Medical Center	Bloomington	7	234	0.75	.	.	.	Not Available
OSF St Mary Medical Center	Galesburg	0	76	0.38	.	.	.	Not Available
OSF St Paul Medical Center *	Mendota	.	.	.	.	.	.	Not Available
Palos Community Hospital **	Palos Heights	0	418	1.50	0.00	.	2.00	Similar
Paris Community Hospital	Paris	1	41	0.14	.	.	.	Not Available
Passavant Area Hospital	Jacksonville	0	194	0.59	.	.	.	Not Available
Perry Memorial Hospital	Princeton	0	22	0.04	.	.	.	Not Available
Presence Covenant Medical Center	Urbana	0	153	0.76	.	.	.	Not Available
Presence Mercy Medical Center	Aurora	0	63	0.20	.	.	.	Not Available
Presence Resurrection Medical Center	Chicago	0	166	0.63	.	.	.	Not Available
Presence Saint Francis Hospital	Evanston	0	151	0.62	.	.	.	Not Available
Presence Saint Joseph Hospital	Elgin	2	306	0.78	.	.	.	Not Available
Presence Saint Joseph Hospital	Chicago	0	146	0.52	.	.	.	Not Available
Presence Saint Joseph Medical Center	Joliet	1	385	1.71	0.58	0.03	2.88	Similar
Presence Saints Mary and Elizabeth Medical Center	Chicago	0	220	0.75	.	.	.	Not Available
Presence St Marys Hospital	Kankakee	1	141	0.58	.	.	.	Not Available
Presence United Samaritans Medical Center	Danville	0	82	0.33	.	.	.	Not Available
Richland Memorial Hospital *	Olney	.	.	.	.	.	.	Not Available

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Riverside Medical Center	Kankakee	2	350	1.17	1.72	0.29	5.67	Similar
Rochelle Community Hospital *	Rochelle	.	.	.	.	.	.	Not Available
Rush Oak Park Hospital *	Oak Park	.	.	.	.	.	.	Not Available
Rush University Medical Center	Chicago	6	1544	4.95	1.21	0.49	2.52	Similar
Rush-Copley Medical Center **	Aurora	0	330	1.65	0.00	.	1.82	Similar
SSM Health Good Samaritan Hospital	Mount Vernon	0	195	0.70	.	.	.	Not Available
SSM Health St Mary's Hospital *	Centralia	.	.	.	.	.	.	Not Available
Salem Township Hospital	Salem	0	21	0.04	.	.	.	Not Available
Sarah Bush Lincoln Health Center	Mattoon	1	337	2.13	0.47	0.02	2.32	Similar
Silver Cross Hospital	New Lenox	2	421	1.56	1.28	0.22	4.24	Similar
Sparta Community Hospital *	Sparta	.	.	.	.	.	.	Not Available
St Anthony Hospital	Chicago	0	70	0.21	.	.	.	Not Available
St Margaret's Health	Spring Valley	0	136	0.27	.	.	.	Not Available
Swedish Covenant Hospital	Chicago	0	187	0.82	.	.	.	Not Available
SwedishAmerican Hospital **	Rockford	0	464	1.68	0.00	.	1.78	Similar
Taylorville Memorial Hospital *	Taylorville	.	.	.	.	.	.	Not Available
Thorek Hospital & Medical Center	Chicago	0	56	0.19	.	.	.	Not Available
Touchette Regional Hospital	Centreville	0	22	0.10	.	.	.	Not Available



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UnityPoint Health - Pekin	Pekin	0	139	0.57	.	.	.	Not Available
Unitypoint Health - Methodist	Peoria	3	344	0.82	.	.	.	Not Available
Unitypoint Health - Proctor	Peoria	0	162	0.33	.	.	.	Not Available
Unitypoint Health - Trinity Rock Island	Rock Island	1	350	1.03	0.97	0.05	4.79	Similar
University of Chicago Medicine	Chicago	1	285	1.87	0.54	0.03	2.64	Similar
University of Illinois Hospital & Health Sci System	Chicago	1	156	1.03	0.97	0.05	4.77	Similar
Vista Medical Center East	Waukegan	0	162	0.74	.	.	.	Not Available
Wabash General Hospital	Mount Carmel	0	186	0.39	.	.	.	Not Available
Weiss Memorial Hospital	Chicago	1	207	1.07	0.93	0.05	4.60	Similar
West Suburban Medical Center	Oak Park	0	52	0.29	.	.	.	Not Available
Westlake Hospital *	Melrose Park	.	.	.	.	.	.	Not Available

NHSN Data contained in this report were last generated on November 14, 2017

\* Hospital with 20 or fewer procedures performed. Reporting on too few procedures is a risk to patient confidentiality.

\*\* Hospital reported zero infections, however, the number of reported events is not significantly different than predicted.

<sup>a</sup> The Standardized Infection Ratio (SIR) is a summary measure used to compare the SSI experience amongst a group of patients undergoing the procedure to that of a standard population. It is the observed number of infections divided by the predicted number of infections.

<sup>b</sup> Excludes Superficial Incisional Secondary (SIS) and Deep Incisional Secondary (DIS) SSIs.

<sup>c</sup> If the predicted number of infections is less than 1.0, the SIR is not calculated because it does not meet the minimum requirement for precision.

<sup>d</sup> The lower bound of the confidence interval is calculated only if the infection count is greater than 0.

<sup>e</sup> Statistical Interpretation of SIR:

- If the 95% confidence interval includes 1, the hospital's infection rate is similar (not significantly different) from predicted

- If the SIR is greater than 1.0 and the 95% confidence interval does not include 1, the hospital's infection rate is significantly higher than predicted

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- If the SIR is less than 1.0 and the 95% confidence interval does not include 1, the hospital's infection rate is significantly lower than predicted  
NOTE: All conclusions are based on the assumption that the hospital's patient population is similar to the NHSN pooled patient population