

## 2009 Surgical Site Infection Rates – Knee Replacement

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The “Knee Replacement Surgery Infection Rate” refers to the percentage of people who underwent knee replacement surgeries who developed infections in their surgical wounds within one year of the surgery. Infections may have been identified during the initial hospital stay, or if patients returned for inpatient, emergency room, or observation care to the same hospital, a different Vermont hospital, or any reporting out-of-state hospital. Lower rates are better.

### What is Knee Replacement?

Knee replacement is a surgery in which certain parts of a damaged knee are removed and replaced with artificial implants. Infections following knee replacement surgery are infrequent, but they can be serious when they do happen.

### Why aren't data shown for all hospitals and all risk categories?

For hospitals that had fewer than twenty surgeries in a risk category, no data is shown, because that number of surgeries is considered too small to generate a meaningful infection rate.

### Are there any considerations I should be aware of when reviewing the data?

- Yes, be careful when drawing conclusions from this information, for the following reasons:
- Infections that appear after a patient is discharged from the hospital, and do not result in hospital treatment, are not captured in the data.
- Infections related to hip replacements can potentially occur up to one year after the surgery is performed, although most occur sooner than that. If any infections occurred after April 30, 2009, they are not yet reflected in this report (but they will be added when the report is updated in December of 2009).
- Small numbers of procedures can distort reported hospital performance.
- Hospitals treating higher risk patients would be expected to have higher infection rates.

### What are the results?

See below.

### Knee Replacement Infection Rates

The Infection Rate is the percent of knee replacement surgeries that had an infection. **Lower rates are better.** Results are presented separately for patients with different risks of infection (the categories are Lower, Moderate, and Higher Risk). The degree of risk is determined by the length of surgery, contamination of the wound, and an assessment of the overall physical status of the patient (using a standardized 1 to 5 scale). See the technical guide for more detail.

Where possible, Vermont hospitals are compared to the Average Infection Rate for “NHSN Hospitals”. “NHSN Hospitals” refers to the hospitals across the country that reported data on knee replacements to the Centers for Disease Control and Prevention’s National Healthcare Safety Network (NHSN) Database between January 2006 and December 2007.

There are three categories summarizing how Vermont hospital infection rates compare to the infection rates for NHSN hospitals:

- The hospital can have a **lower (better)** infection rate than the national average for hospitals reporting to NHSN.

- The hospital can have an infection rate that is **similar** to the national average for hospitals reporting to NHSN.
- The hospital can have a **higher (worse)** infection rate than the national average for hospitals reporting to NHSN.

Keep in mind that a hospital's infection rate is only one thing to consider when choosing where to get your care. The advice of your physician, the hospital's and specialist's experience with the type of care you need, and other factors unique to your situation should be considered as well. Be careful when drawing conclusions from this information. Small numbers of patients and infections may distort reported performance.

Brattleboro Memorial Hospital April 1, 2008 through March 31, 2009					
Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	2	37	5.41%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Central Vermont Medical Center April 1, 2008 through March 31, 2009					
Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	0	21	0%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Copley Hospital April 1, 2008 through March 31, 2009					
Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	0	27	0%	0.68%	Similar to national average
Moderate Risk	0	34	0%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				

**Fletcher Allen Health Care  
April 1, 2008 through March 31, 2009**

Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	0	222	0%	0.68%	Similar to national average
Moderate Risk	1	182	0.55%	1.12%	Similar to national average
High Risk	0	35	0%	1.82%	Similar to national average

**Gifford Medical Center  
April 1, 2008 through March 31, 2009**

Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	0	33	0%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				

**Grace Cottage Hospital  
April 1, 2008 through March 31, 2009**

Does not perform this surgery

**Mt. Ascutney Hospital and Health Center  
April 1, 2008 through March 31, 2009**

Fewer than 20 surgeries in each risk category, so data are not published

**North Country Hospital  
April 1, 2008 through March 31, 2009**

Fewer than 20 surgeries in each risk category, so data are not published

**Northeastern Vermont Regional Hospital  
April 1, 2008 through March 31, 2009**

Risk Category	Number of Infections	Number of Surgeries	Infection Rate (percent)	Average Infection Rate for NHSN Hospitals See Footnote 1	Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2
Lower Risk	0	29	0%	0.68%	Similar to national average
Moderate Risk	Fewer than 20 surgeries in this risk category, so data are not published				
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				

<b>Northwestern Medical Center April 1, 2008 through March 31, 2009</b>					
<b>Risk Category</b>	<b>Number of Infections</b>	<b>Number of Surgeries</b>	<b>Infection Rate (percent)</b>	<b>Average Infection Rate for NHSN Hospitals See Footnote 1</b>	<b>Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2</b>
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	0	42	0%	1.12%	Similar to national average
High Risk	1	40	2.50%	1.82%	Similar to national average
<b>Porter Hospital April 1, 2008 through March 31, 2009</b>					
<b>Risk Category</b>	<b>Number of Infections</b>	<b>Number of Surgeries</b>	<b>Infection Rate (percent)</b>	<b>Average Infection Rate for NHSN Hospitals See Footnote 1</b>	<b>Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2</b>
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	1	30	3.33%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				
<b>Rutland Regional Medical Center April 1, 2008 through March 31, 2009</b>					
<b>Risk Category</b>	<b>Number of Infections</b>	<b>Number of Surgeries</b>	<b>Infection Rate (percent)</b>	<b>Average Infection Rate for NHSN Hospitals See Footnote 1</b>	<b>Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2</b>
Lower Risk	0	109	0%	0.68%	Similar to national average
Moderate Risk	0	89	0%	1.12%	Similar to national average
High Risk	Fewer than 20 surgeries in this risk category, so data are not published				
<b>Southwestern Vermont Medical Center April 1, 2008 through March 31, 2009</b>					
<b>Risk Category</b>	<b>Number of Infections</b>	<b>Number of Surgeries</b>	<b>Infection Rate (percent)</b>	<b>Average Infection Rate for NHSN Hospitals See Footnote 1</b>	<b>Infection Rate Compared with NHSN Hospitals in U.S. See Footnote 2</b>
Lower Risk	Fewer than 20 surgeries in this risk category, so data are not published				
Moderate Risk	0	37	0%	1.12%	Similar to national average
High Risk	0	30	0%	1.82%	Similar to national average
<b>Springfield Hospital April 1, 2008 through March 31, 2009</b>					
Fewer than 20 surgeries in each risk category, so data are not published					

Footnotes:

<sup>1</sup> Includes hospitals across the country that reported data on total abdominal hysterectomies to the Centers for Disease Control and Prevention's National Healthcare Safety Network (NHSN) Database between January 2006 and December 2007.

<sup>2</sup> Vermont hospitals' infection rates can appear to be lower or higher than the national average, but when statistical testing is done they can be found to be "similar to national average." One of the biggest reasons for this is that Vermont hospitals perform a small number of surgeries compared to all NHSN reporting hospitals. A single infection can result in a rate that appears higher than the national average; similarly, it is hard to draw conclusions from a report of zero infections when the number of surgeries performed is low.