
REPORTING OF CLI, VAP AND SSI-PREVENTION RATES IN HOSPITALS

April 30, 2009

As part of its ongoing patient safety initiative, Ontario is now requiring all hospitals to monitor and publicly report central line infections (CLI), ventilator-associated pneumonia (VAP) and surgical site infection (SSI) prevention rates in their facilities so the most appropriate infection prevention and control measures can be put in place. The rates will be published on the Ministry of Health and Long-Term Care's public website.

Public reporting of these additional indicators represents a significant tool for hospitals to use to monitor their performance and determine what measures they need to take to strengthen infection prevention and control in their facilities. Hospitals will use this information to ensure they're maintaining the highest possible standards of patient safety.

Central Line Associated Bloodstream Infections (CLI)

CLI occur when a central venous catheter (or "line") placed into a patient's vein gets infected. This happens when bacteria grow in the line and spreads to the patient's bloodstream. Patients require a central line when blood, fluid replacement and/or nutrition need to be given to them intravenously. Central lines also allow health care providers to monitor fluid status and make determinations about the heart and blood.

The CLI rate is determined by adding up the total number of newly diagnosed CLI cases in the ICU after at least 48 hours of central line placement. This number is divided by the number of central line days in the reporting period and multiplied by 1,000. Central line days are the total number of days a central line was used in ICU patients 18 years and older.

This measure will be reported quarterly.

Ventilator-Associated Pneumonia (VAP)

VAP is defined as pneumonia (a serious lung infection) that can occur in patients (specifically ICU patients) who need assistance breathing with a mechanical ventilator for at least 48 hours.

The VAP rate is determined by the total number of newly diagnosed VAP cases in the ICU after at least 48 hours of mechanical ventilation. This number is divided by the number of ventilator days in the reporting period and multiplied by 1,000. Ventilator days are the number of days spent on a ventilator for all patients in the ICU 18 years and older.

This measure will be reported quarterly.

Surgical Site Infection (SSI) Prevention

Surgical site infections occur when harmful germs enter a patient's body through the surgical site (any cut the surgeon makes in the skin to perform the operation). Infections happen because germs are everywhere – on the skin, in the air and on things individuals touch. Most infections are caused by germs found on and in a patient's body.

The SSI-prevention rate is determined by the number of hip/knee joint replacement surgery patients who received antibiotics within 60 or 120 minutes of skin incision (depending on the antibiotic) divided by the total number of patients during the reporting period who had a primary knee/ hip total joint replacement surgical procedure, multiplied by 100.

This measure will be reported quarterly; however, for the first reporting period, SSI-prevention rates will comprise of March 2009 data.

How to interpret the data

When interpreting the data it's important to understand that many differences exist from hospital to hospital which could affect their case counts and rates. These include:

- Size of the hospital
- Complexity of the services offered
- Type of patient population served

Trends in rates will be posted on the Ministry of Health and Long-Term Care's website when enough data is available. Fluctuations in rates across reporting periods are better interpreted when rates from different periods are taken into account.

The data presented on the ministry website is best used to measure individual hospital performance over time. It can also be used to ask informed questions to hospital representatives about their infection prevention and control program. It's not intended to be the only source of information for making decisions about hospital care nor is it information for generalizing about the overall quality of care provided by hospitals.

How is the data presented?

Data is presented in tables by hospital site. Included in the tables is data on the number of new hospital-acquired cases as well as the rate by quarter. The data presented on the ministry's website has been confirmed by the hospitals and is also being reported on the hospitals' websites.

Hospitals are grouped by type to facilitate more relevant comparisons. The hospital types are:

- Large Community
- Small Community
- Mental Health
- Acute Teaching
- Complex Continuing Care & Rehabilitation

These hospital types take into consideration differences in hospital size and patient case mix, factors which can make a significant difference in average rates.

The provincial rate is determined by aggregating the data for all hospitals in Ontario.

January to March, 2009 data

For the period covering January, February and March 2009, there were:

- 106 cases of central line infections found among the hospital sites in Ontario with ICUs. The provincial rate was 1.56 per 1,000 central line days.
- 176 cases of ventilator associated pneumonia found among the hospital sites in Ontario with ICUs. The provincial rate was 3.51 per 1,000 ventilator days.

For the period covering March 2009:

- 85.19 per cent of hip/knee joint replacement surgery cases were given antibiotics within the appropriate length of time before a skin incision was made.

For public inquiries call ServiceOntario, INFOline at 1-866-532-3161 (Toll-free in Ontario only)

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