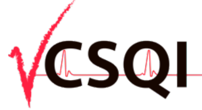

Prolonged Ventilation

What is prolonged ventilation?

Prolonged ventilation is a complication for all cardiac surgery patients in the Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database.

Prolonged ventilation happens when the patient is on the ventilator for more than a total of 24 hours. It is the total of the *initial vent hours* plus any hours ventilated if reintubated.

Initial vent hours are the number of hours from the time the patient left the OR suite to the time of extubation.

How was the 24 hours time period chosen to define prolonged ventilation?

The 24 hour time was chosen by the STS surgeons as a reasonable amount of time to extubate patients in regards to resource utilization and patient outcomes. The literature varies in the definition from 24 hrs to 21 days, but the 24 hour time period was chosen by the STS surgeons.

So What?

This outcome is reported for CABG only patients to both CMS and Anthem/WellPoint from the STS database. They give extra reimbursement to both the hospital and the physicians based on certain set points.

(The numbers reported to CMS and Anthem are risk adjusted, i.e., the numbers do take into account the comorbidities that the patient has).

How are we doing?

We have made some real improvements in out overall extubation times and in decreasing our prolonged ventilation!!!!! In 2006 our prolonged vent *Observed/Expected* was 1.49.

The average would be 1.0—for example, say we did 10 surgeries and we expected 5 to have prolonged vent and 5 pts did have prolonged vent. 5 into 5 =1.0. An O/E ratio greater than one means you aren't doing as well as expected. An O/E ratio less than one means that you are doing better expected.

In 2007 our prolonged vent O/E was 1.84. But….guess what?

In 2008 our prolonged vent O/E was 0.89—a huge improvement and better than "expected."

How can we improve?

It's time to remind us that this is really about quality patient care and having the best practice possible for the patients!!! It really isn't about the $$$$; it's about doing our best for the patients. CMS and Anthem want to reward centers and MD's that are practicing evidenced-based medicine and having the best outcomes. That's why it is called "pay for performance."

Patients who are intubated 24 to 30 hours *possibly* have a chance to extubate in fewer than 24 hours. By decreasing prolonged vent time for even one patient a month, we will significantly decrease our prolonged vent percentage.

Our current goal is to decrease prolonged vent by 2% (about one patient) each month over the next six months. However, the prolonged vent team will be meeting to discuss our progress and adjust the goals. We plan to start on January 4, 2010 and continue this project until June 4, 2010.

What are the timers for?

For those patients who have not been able to extubate in a timely manner, the timers can be a tool to alert us to patients approaching the 24 hour mark. By setting the bottom timer to alarm at 20 hours, we can have a collaborative team meeting to discuss the possibility of getting the pt extubated within the next 4 hours.

Who should be involved?

The bedside RN, the RT, and an NP, PA, or MD

What do you talk about?

What is keeping this patient from extubating?
What are the barriers to extubating? Can we do anything about those barriers?
Can the barriers be eliminated in the next four hours and the patient be extubated before the 24 hour mark?

Who is going to set the timer?

When report is called from the OR, go ahead and set the top timer for 6 hours and the bottom timer for 20 hours. Please start the timers as part of the time in process when the patient arrives on the unit.

What about the second timer?

Over the past several years, we have followed extubation times. We have been focusing on extubating patients within 8 hours of admission. We have significantly decreased our extubation time!

STS also reports on patients who are extubated in less than 6 hours. Because we have made such strides in extubating, we would like this to be the new goal for all cardiac surgery patients.

The first timer can be set for 6 hours as a reminder.

Remember, our goal is always to do the best thing for the patient. The timer is not meant to be a negative message in ANY way. We hope that the timer will be a tool to increase awareness for both prolonged vent and timely extubation.

What if I have questions or feedback?

Please see your nearest PV champion! They are Tara Deacon, Andrew Mears, Todd Edwards, Susan Melton, Dustin Money, Jim Risenberger, Bob Dailey, Dr. Crosby, Roxie MacFarlan, Ahmad Ismail, April Rathburn, Jana Gerding, and Judy Smith. Please let me know if YOU would like to be PV champion.

Thanks for your support and feedback with this project!

Judy