

# Frequently Asked Questions

February 2006

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Safer systems

Saving lives

## 1. General

### 1.1 What is Safer Systems - Saving Lives?

**Safer Systems – Saving Lives** is a national collaborative initiated by the Australian Council for Safety and Quality in Health Care. The aim of the Safer Systems – Savings Lives project is to provide tangible evidence on the impact of six key interventions when applied consistently and comprehensively in Australian hospitals.

The Quality and Safety Branch of the Department of Human Services in Victoria will provide organisational lead and overarching project management for the SSSL project which is being implemented in hospitals across Australia.

### 1.2 How does it relate to the 100,000 Lives campaign in the USA?

The SSSL project is based on the 100,000 Lives Campaign, an initiative by the Institute for Healthcare Improvement (IHI). The IHI care bundles and measures have been adapted to suit the Australian context with the assistance of expert panels. Through the implementation of the six interventions the 100K campaign aims to avoid 100,000 deaths by June 2006, and every year thereafter. More information on the institute and the 100K campaign can be found on the IHI website ([www.ihl.org](http://www.ihl.org)).

### 1.3 What are the interventions?

The interventions are based on scientific evidence and known to improve patient care and prevent avoidable deaths. The six interventions are:

- Preventing ventilator-associated complications
- Preventing surgical site infection
- Preventing central venous catheter related-bloodstream infections
- Implementing a rapid response system
- Preventing adverse drug events
- Improving care for acute myocardial infarction.

The interventions are based on implementing a formalised process or applying a 'bundle' of care components. The care bundle builds on the concept that, whilst each component is of value, if all elements of the 'bundle' are used, the prevention factor is increased.

### 1.4 I am unable to download the project materials, is there any other way to obtain them?

Contact the project team and request a CD or, if appropriate, you may be able to obtain hard copies of the required material.

### 1.5 I have an excellent intervention tool. Who should I contact to discuss if it is useful to the project?

Participants should contact the SSSL project team if they would like to submit suggestions, resources or tools.

### 1.6 How can I find more information about the project?

For further information please contact the SSSL project team.

## 2. Implementation

### 2.1 Will full implementation be expected by the end of February?

The month of February is a time for sites to familiarise themselves with the toolkits, establish and instruct teams, and collect baseline data on the interventions. The SSSL project is aware that sites have not yet received funding for the project, and this may impact on their ability to fully implement the interventions. The SSSL project office will be ready to collect data during the first week of March.

### 2.2 The outcome measures are not all captured on the audit tools. Do we need to create another tool to capture this information?

We have not provided tools for the outcome measures. Part of the reason is that for a number of the interventions, sites will already have processes in place, for example, surgical site infections. In some cases, we are asking sites to adopt a definition of their choosing, for components of the intervention (for example, ventilator associated-pneumonia), therefore it is not possible to provide a generic tool. It may be necessary for sites to develop tools for collecting the outcome data.

## 3. Improving care for acute myocardial infarction

### 3.1 Should the time-frame for receipt of Aspirin on the admission audit tool for both STEMI and non-STEMI be “within 30 minutes” of arrival?

The toolkit states that the patient should receive an antiplatelet agent “before, or within 24 hours of admission”. The term ‘before’ is an indication of the intended optimal time. Twenty-four hours is mentioned as a cut off time for the sake of the audit.

### 3.2 Can patients diagnosed with unstable angina be included in the audits for non-STEMI?

The Heart Foundation’s ‘Management of Unstable Angina Guidelines - 2000’ identifies the distinction between unstable angina and non-STEMI as being ‘cloudy’ and the diagnoses of unstable angina, minor myocardial damage and non-STEMI representing a continuum<sup>1</sup>.

At the time of admission, it is likely that patients with unstable angina will receive the same care as patients with non-STEMI, and *may* continue to receive the same level of care throughout their stay. The point really is about the care that is received. If a patient diagnosed with unstable angina is receiving care as per the bundle, by all means audit accordingly.

### 3.3 Our hospital is often required to send patients to another hospital for treatment. If this occurs, for example, with an AMI patient, how is the patient represented in our data collection?

If possible exclude these patients from the audit. If it is not possible to exclude them because the sample size would be adversely affected, you can demonstrate compliance in care for the period the patient is at your hospital. If the patient receives all the components for STEMI admission, then is transferred, you should consider this patient to be compliant. The same will be true for the receiving hospital, if the patient arrives after receiving the admission components at your facility, then the receiving hospital will concentrate on demonstrating compliance with during hospitalisation and discharge care.

**3.4 The compliance measure for AMI implies that all patients need to be included. We are concerned that this is a large undertaking, especially as the other interventions are only required to collect data on up to 20 patients. Can you comment on this?**

In the interests of consistency, the AMI compliance measure can be limited to a sample of 'up to 20 patients' as for the other interventions (apart from RRS).

The compliance measure will be understood as:

$$\frac{\text{Number of patients with all components of care}}{\text{Number of patients in the sample}} \times 100 = \text{percentage of compliance.}$$

The sample will be the number of patients audited.

**4. Preventing CVC-related bloodstream infections**

**4.1 The toolkit suggests selecting 'one location for investigation'. What happens when the patient leaves the unit?**

This question may relate to both the compliance and the outcome measures.

For the compliance measure consider the care the patient received while present in the unit. That is, what level of compliance was achieved prior to the patient leaving? Where the unit has complied with every aspect of the care possible to the time of the patient leaving, and documentation reflects this, mark the case as compliant with the care bundle.

For the outcome measure, if the number of patients with CVCs moving to other units represents a significant proportion of the 'population', and adversely affecting sample size, it may be necessary to establish a means of tracking patients. Where the number is not significant it may be simply a matter of excluding them from the sample.

**4.2 What is the appropriate action when a CVC-BSI is identified? Should all lines be removed?**

The Guidelines for the Prevention of Intravascular Catheter-Related Infections recommend that catheters not be removed on the basis of fever alone, and removal of lines when infection is evidenced elsewhere is a matter of clinical judgement<sup>2</sup>.

**4.3 I understand the maximum sample number is 20 patients. I am unsure if the data is to be collected and entered for the entire month, or is to be a 'day' sample, as it states on page 15 of the toolkit? Do we audit only those patients in our ICU with CVCs on that day?**

The confusion may arise from the equation on page 15 of the toolkit that expresses the denominator as "*Number of patient (sic) with CVCs on the day of the sample*". If auditing on one day gives an adequate sample (that is, 20 patients) then a single day may be enough. If it is necessary to audit on a number of days to get a satisfactory sample, then data may be collected across the month.

The denominator could be expressed as "*Number of patients with CVCs on the day(s) of the sample*".

## 5. Preventing surgical site infections

### 5.1 Where a surgical patient has two wounds and both are infected, how do we represent this in our data collection?

The emphasis in the toolkits is on the 'number of patients' not the 'number of wound infections'. Therefore, regardless of how many infections a patient may have, for the SSSL outcome measure the patient is only counted once.

### 5.2 Why are we not categorising surgical site infection as superficial, deep, and organ space?

The aim of the SSSL project is to prevent surgical site infections (SSIs) generally. The scope of the project is the collection of general data relating to SSIs. Therefore, the outcome measure for the SSSL project is the number of patients with wound infections, with no emphasis on category. Though infection control surveillance may require sites to categorise surgical site infections, reporting to SSSL will only be aggregated SSIs for the chosen surgical procedure.

### 5.3 Is the denominator for the surgical site infection outcome measure ALL patients in the hospital with surgical wounds?

No! The toolkit suggests that sites choose a specific procedure for review. It may be that smaller sites choose a group of procedures (for example, all laparotomies or all joint replacements). For the outcome measure, the numerator will be the number of audited patients (in the chosen procedure) with a wound infection, and the denominator will be the number of patients audited during the collection period.

For example, during May your site performs 40 laparotomies and you audit 20 of the patients. You find that 2 have wound infections. The outcome measure for May is:

$$\frac{2}{20} \times 100 = 10 \text{ percent of surgical patients have a wound infection}$$

### 5.4 To effectively measure the rate of infections arising from surgery, 30-day surveillance of surgical site is necessary. Why is SSSL not doing this?

Post discharge surveillance is very resource intensive. The scope of the SSSL does not extend to this degree, however sites that are engaged in post discharged surveillance may wish to share their results with other sites during the course of the project.

## 6. Preventing ventilator associated complications

### 6.1 **Could you comment on the issue of angle of elevation of head of bed in VAC and evidence for 30-40 degrees? It has been suggested there is evidence to support 20-degree elevation.**

A recent meta-analysis by Hess concluded that the semi recumbent position was the most effective position for preventing ventilator associated pneumonia (VAP)<sup>1</sup>. Semi recumbent has been defined as elevation of the head of the bed to 45 degrees<sup>2</sup>. A study by Grap et al published at the same time as Hess suggested that elevation of the head of the bed at <30 degrees did not result in a statistically significant increase in the incidence of VAP<sup>3</sup>.

A most recent prospective multicentred trial tested elevations of 45 degrees and 10 degrees<sup>4</sup>. The authors concluded that elevation of 45 degrees is not feasible, finding the mean elevation for patients nursed at 45 degrees was in fact closer to 30 degrees. The editorial of the publication noted that the trial failed to answer the question of whether a strict semi recumbent position of 45 degrees will significantly decrease VAP<sup>5</sup>.

On this basis the SSSL project continues to recommend elevation of the head of the bed to  $\approx$ 30 degrees.

### 6.2 **Is it correct that we audit every ventilated patient three times per week?**

The toolkit does suggest that audits be performed three times a week for VAC patients. This is suggested because some ICUs may have difficulty gaining an ample sample if audits are not done regularly. On the other hand, the project is not seeking to create a burdensome workload, so sites can determine how frequently they need to audit to establish compliance, and gain an adequate sample.

## Implementing a rapid response system

### 6.3 **The data collection period is 1-28 Feb, but I note that the RRS data collection is a 2 monthly audit to a maximum of 30 patients. Does that mean that the next data collection period will be in April and the 30 patients need to come from Feb only?**

We are suggesting the 2 monthly cycle for RRS data collection begin with March-April. Data submitted at the beginning of March should be considered as 'baseline' and may represent February only or sites can be more retrospective if they desire.

## 7. References

- <sup>1</sup> National Heart Foundation of Australia, Management of Unstable Angina Guidelines, MJA 2000(173):S65-S88.
- <sup>2</sup> O'Grady, NP, Alexander, M, Dellinger, EP et al. Guidelines for the prevention of intravascular catheter-related infections. Centers for Disease Control and Prevention, MMWR Recommendations and Reports 2002(51);RR-10: 1-29.
- <sup>3</sup> Hess DR. Patient Positioning and Ventilator-Associated Pneumonia, Respiratory Care 2005(50); 7: 892-897.
- <sup>4</sup> Collard HR, Saint S, and Matthay MA. Prevention of Ventilator-Associated Pneumonia: An Evidence-Based Systematic Review, Ann Intern Med. 2003(138):494-501.
- <sup>5</sup> Grap MJ, Munro CL, Hummel RS 3rd, et al. Effect of backrest elevation on the development of ventilator-associated pneumonia, Am J Crit Care 2005(14);4:325-32.
- <sup>6</sup> vanNieuwenhoven CA, Vandenbroucke-Grauls C, vanTiel FH, et al. Feasibility and effects of the semirecumbent position to prevent ventilator-associated pneumonia: A randomized study, Crit Care Med 2006(34);2:396-402.
- <sup>7</sup> Combes A. Backrest elevation for the 'prevention of ventilator-associated pneumonia: Back to the real world? Am J Crit Care 2005(14); 4:559-561.

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