Surgical Safety Checklist in Obstetrics and Gynaecology

This clinical practice guideline has been reviewed by the Clinical Practice Gynaecology Committee and reviewed and approved by the Executive and Council of the Society of Obstericians and Gynaecologists of Canada.

PRINCIPAL AUTHORS
Sukhbir S. Singh, MD, Ottawa ON
Neeraj Mehra, MD, Ottawa ON
Laura Hopkins, MD, Ottawa ON

CLINICAL PRACTICE GYNAECOLOGY COMMITTEE
Nicholas Leyland, MD (Co-Chair), Ancaster ON
Wendy Wolfman, MD (Co-Chair), Toronto ON
Catherine Allaire, MD, Vancouver BC
Alaa Awadalla, MD, Winnipeg MB
Sheila Dunn, MD, Toronto ON
Mark Heywood, MD, Vancouver BC
Madeleine Lemire, MD, Quebec QC
Violaine Marcoux, MD, Ville Mont-Royal QC
Chantal Menard, RN, Ottawa ON
Frank Potestio, MD, Thunder Bay ON
David Rittenberg, MD, Halifax NS
Sukhbir S. Singh, MD, Ottawa ON

Disclosure statements have been received from all members of the committee.

Abstract

Objective: To provide guidance on the implementation of a surgical safety checklist (SSCL) in the practice of obstetrics and gynaecology.

Outcomes: Outcomes evaluated include the impact of the SSCL on surgical morbidity and mortality.

Evidence: Medline databases were searched for articles on subjects related to “Surgical Safety Checklist” published in English from January 2001 to January 2011. Results were restricted to systematic reviews, randomized control trials/controlled clinical trials, and observational studies. Searches were updated on a regular basis and incorporated in the guideline to January 2012.

Values: The quality of evidence was rated with use of the criteria described by the Canadian Task Force on Preventive Health Care. Recommendations for practice were ranked according to the method described by the Task Force (Table).

Benefits, harms, and costs: Implementation of the guideline recommendations will improve the health and well-being of women undergoing obstetrical or gynaecologic surgery.

SUMMARY STATEMENTS AND RECOMMENDATIONS

Summary Statements
1. Surgery may account for up to 40% of all hospital adverse events. (II-2)
2. Good communication is essential for safer surgical care, as communication failure is common in the operating room. (III)
3. The concept of a surgical safety checklist has been studied globally, and there have been decreases in complications and mortality when the checklist has been implemented. (II-1)
4. Emergency cases such as a “crash” Caesarean section will require a modified approach that is centre- and situation-dependent. (III)
5. The SOGC endorses the adoption of the surgical safety checklist in obstetrics and gynaecology. (III)

Recommendations
1. The surgical safety checklist should be adopted by all surgical care providers and their respective institutions to improve patient safety. (II-1A)
2. Surgeons should be familiar with, advocate for the use of, and participate in all 3 parts of the surgical safety checklist. (II-1A)
3. The surgical safety checklist may be modified and adapted for use in surgical obstetrics cases. (II-2A)


Key Words: Patient safety, surgical safety checklist

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BACKGROUND

The aviation industry has long embraced a culture of safety, understanding the integral role that human and organizational factors play in accident prevention. Similar scrutiny is now being applied to the medical field. Over the past 10 years, hospitals have been placing increased emphasis on improving patient safety. This attention is largely in response to the 1999 Institute of Medicine report *To Err is Human*, which suggested that 44 000 to 98 000 patients die in hospital in the United States each year because of preventable medical errors. The *Canadian Adverse Events Study* found similarly alarming numbers, including a possible 185 000 admissions to acute care hospitals that were associated with an adverse event, and up to 70 000 potentially preventable events. A recent systematic review suggested that almost 1 in 10 patients admitted to hospital experience an adverse event, with operations accounting for 40% of these events.

In addition to patient safety, specific attention is being paid to team relationships and communication. Much as an airplane pilot must rely on the ground crew, flight personnel, and air traffic controllers for a safe and successful flight, a surgeon must rely on the anaesthetist and nurses during an operation. The common element critical for success amongst these teams is good communication. Communication failures occur in approximately 30% of team exchanges in the operating room, and one third of these failures have immediate effects such as inefficiency or team tension. Failures in communication can have significant impact on patient safety in the operating room, and their reduction is an essential part of a checklist to improve surgical safety.

Summary Statements

1. Surgery may account for up to 40% of all hospital adverse events. (II-2)
2. Good communication is essential for safer surgical care, as communication failure is common in the operating room. (III)

THE WHO SURGICAL SAFETY CHECKLIST

In 2008, an initiative from the World Health Organization to improve surgical safety and reduce perioperative harm to patients led to the development of the surgical safety checklist (SSCL). A study conducted in 8 hospitals in 8 cities around the world showed that with the use of a checklist, surgery complications were reduced by more than one third (from 11.0% to 7.0%) and deaths reduced by almost one half (from 1.5% to 0.8%). The sites were in both developing and developed nations, including Canada. A further study involving 6 Dutch hospitals with high standards of care showed a similar reduction in adverse events (1 or more complications decreased from 15.4% to 10.6%, and mortality decreased from 1.5% to 0.8%). Control hospitals showed no improvement. New versions of the checklist, implementation manual, and guidelines...
were released in September 2009, including versions in 6 languages and wording modifications to improve the checklist's usability.7

Summary Statement
3. The concept of a surgical safety checklist has been studied globally, and there have been decreases in complications and mortality when the checklist has been implemented. (II-1)

Recommendation
1. The surgical safety checklist should be adopted by all surgical care providers and their respective institutions to improve patient safety. (II-1A)

SURGICAL SAFETY CHECKLIST OUTLINE

The current WHO checklist identifies 3 phases in an operation, each corresponding to a specific time period in the normal flow of a procedure (Figure 1).
3. The “sign out” or “debriefing” occurs as soon as the operation is over, before any cleanup or patient transfer begins.

The team reviews the following:
- The operation that was performed
- Completion of sponge and instrument counts
- Labelling of any surgical specimens
- Any equipment malfunction or other issue that needs to be addressed
- Any concerns regarding postoperative management

Since its introduction, the SSCL has been widely accepted and implemented in operating rooms throughout the world. The Canadian Patient Safety Institute endorses the SSCL and provides a Canadian version of the checklist.8 Since April 2010, the SSCL has become mandatory in hospitals in some provinces, and other provinces are likely to mandate its implementation and monitoring.

**Clinical Reminder**
The 3 components of the surgical safety checklist are “Briefing,” “Time Out,” and “Debriefing.”

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**Figure 2. Surgical safety checklist for obstetrics**

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**Clinical Reminder**
The 3 components of the surgical safety checklist are “Briefing,” “Time Out,” and “Debriefing.”

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**Recommendation**
2. Surgeons should be familiar with, advocate for the use of, and participate in all 3 parts of the surgical safety checklist. (II-1A)

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**SURGICAL SAFETY CHECKLIST IN OBSTETRICS**

The SSCL should be implemented for all obstetrical and gynaecologic surgical procedures, especially obstetrical procedures in which both maternal and neonatal factors need to be taken into consideration. Team briefings that include obstetricians, anaesthetists, family physicians, nurses, midwives, and paediatricians allow the team to prepare for potential surgical difficulties and for newborn resuscitation and care. The use of the SSCL in complicated obstetrical cases and those that may require double set-up, such as placenta previa and placenta accrete, may assist with patient safety, although this has not yet been studied.

Although the current SSCL can easily be adapted for gynaecologic surgery, some may argue that labour and delivery is a unique environment and that the SSCL is not
specific to the needs of obstetrics. The WHO surgical safety checklist is by no means exclusive or comprehensive. Rather, additions and modifications to suit local practice are not only allowed but encouraged. Detailed examples of how the SSCL can be modified for obstetrics have been published. Furthermore, some Canadian hospitals have developed versions of the SSCL specifically for obstetrics (Figure 2).

**Recommendation**

3. The surgical safety checklist may be modified and adapted for use in surgical obstetrics cases. (II-2A)

**EMERGENCY CASES**

Specific attention must be given to the use of the SSCL in emergency situations. Heightened patient acuity and time pressure increase the potential for critical errors and omissions in established standards of care. A subgroup analysis of urgent surgeries (within 24 hours of assessment) carried out at the 8 hospitals in the original WHO study demonstrated a one third decrease in complications (from 18.4% to 11.7%) with introduction of the SSCL. However, in obstetrical emergencies, time is an important determinant in fetal outcome. In these instances, clinical judgement is needed in weighing the risks of a short delay against the consequences of omitting surgical checks. A surgical team that uses the SSCL routinely may get through the list quickly, even in emergencies, such as the “crash” Caesarean section in which the procedure is performed as quickly as possible.

**Summary Statement**

4. Emergency cases such as a “crash” Caesarean section will require a modified approach that is centre- and situation-dependent. (III)

**INTERNATIONAL AND NATIONAL PERSPECTIVES**

The Royal College of Obstetricians and Gynaecologists in the United Kingdom supports the introduction of surgical checklists to ensure patient safety in operating theatres. The American Congress of Obstetricians and Gynecologists has released a similar bulletin. The Canadian Patient Safety Institute has received endorsement from several national organizations for the Canada-wide adoption of the SSCL. Given this support for the SSCL and evidence that its use improves patient safety in the operating room, the SOGC supports the use of the surgical safety checklist in obstetrics and gynaecology.

**Summary Statement**

5. The SOGC endorses the adoption of the surgical safety checklist in obstetrics and gynaecology. (III)

**CONCLUSION**

The implementation of the SSCL worldwide has resulted in a significant reduction in adverse events and therefore a remarkable improvement in patient safety. Consistent use of the SSCL ensures that critical steps of the operation are completed while preparing the team for potential complications. The SSCL is readily available, inexpensive to implement, and—with team acceptance—easy to use. Finally, it fosters communication among team members by requiring them to introduce themselves and voice concerns or issues regarding the patient’s surgery. The SSCL is critical to improving patient safety in the operating room and should be implemented in all obstetrical and gynaecologic surgery.

**REFERENCES**