

Surgical Safety Checklists and Briefings

Clinician's User Guidelines

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Surrey Memorial Hospital

Author: Keith Martinsen

Before Induction Checklist



Surgeon's Team Briefing



Before Skin Incision Checklist



Surgeon's Team Debriefing

Surgical Safety Briefing Checklist

Before Induction Checklist— (initiated by Anaesthetist) (read by Circulating Nurse – response by Anaesthesiologist)

Anaesthesia “safety check” complete?	Yes
Patient consent obtained?	Yes (sn)
Patient Identification confirmed?	Yes (all)
Site and procedure confirmed?	Yes
Site marked?	Yes / Not Required
Pulse Oximeter on and functioning?	Yes
Known allergy?	No / Yes, Specify
Difficult airway?	No / Yes assistance available
Risk of >500ml blood loss?	No / Yes adequate IV access

Before Induction Checklist Complete

Surgeon’s Team Briefing

To be completed by the Surgeon prior to scrubbing

- ▶ Patient’s name
- ▶ Procedure, site and site marked
- ▶ General overview of the procedure and duration
- ▶ Equipment, Instruments, imaging, implants required
- ▶ Patient positioning, warming, DVT, antibiotics (re-dose?)

Anticipated Critical Events:

- ▶ **Surgeon Review:**
Specific patient concerns, blood loss, critical steps, staffing, special equipment
- ▶ **Anaesthesia Review:**
Specific patient concerns, resuscitation plan, medications
- ▶ **Nursing Review:** Specific patient concerns, equipment, implants, supplies, staffing
- ▶ Introduction and role of all team members

Before Skin Incision Checklist— (initiated by Surgeon) (read by Circulating Nurse – response by Surgeon)

Patient’s name confirmed?	Yes
Procedure and Site confirmed?	Yes
Site Marked?	Yes / Not Required
Antibiotic Prophylaxis within 60 minutes?	Yes / Not Required
Essential Imaging displayed?	Yes / Not Required
DVT prophylaxis?	Yes / Not Required

“Does anyone have questions or concerns before we begin”?

Before Skin Incision Checklist Complete

Surgeon’s Team Debriefing

To be completed by the Surgeon prior to the patient leaving the room

- ▶ Instrument, sponge and needle count
- ▶ Specimen labeling
- ▶ Procedure performed and unplanned events
- ▶ Patient recovery concerns and management plan / destination
- ▶ Equipment shortages / malfunctions reviewed
- ▶ Surgical wound classification
- ▶ Could anything have been done to make this case safer or more efficient?

Background Information

According to a study by the World Health Organization of 6,775 operations, the implementation of a simple checklist completed during surgical procedures reduced the overall incidents of complications and death significantly.

- : *American College of Surgeons, Surgery News vol.4 no. 11 – November 2008*

The Surgical Safety Checklist was initially designed and sanctioned by the World Health Organization to be adapted by individual health regions to meet their specific needs. Fraser Health's Surgical Safety Briefing and Checklist has been designed in consultation with the Chief of Surgery Dr. Peter Doris, Dr. David Twist, Head of Anesthesia, Director of Acute Programs SMH Lorraine Gillespie, Nurse Educator Linda Jennings, and the CPSI working group.

Introducing briefings and checklists into the operating rooms as a standard procedure will require adjustments on the part of all surgical team members. It is anticipated that the learning curve and adjustment period will be short. Training and Coaching will be provided to assist in the transition. Experience has shown that the benefits of using a surgical checklist are substantial.

Checklist Philosophy

This interactive communication tool is comprised of two parts: "**Briefings** and **Checklists**", and is designed to coincide with the progress of a surgical procedure.

The **briefings** will be initiated by the Surgeon, and are designed to encourage discussion and to ensure that all team members of the surgical team have the same expectations.

The **checklists** are designed to be used as a final reminder of the items that must be completed prior to moving to the next phase of the operation.

Each step of the checklist must be addressed before proceeding to the next step.

Use of the checklist is based on a Question & Answer format. The Circulating Nurse will read the question and the appropriate surgical team member(s) will provide the answer.

All members of the surgical team have an equal responsibility to ensure that the checklist is conducted in a professional manner, and that the answers given are accurate.

Important Note:

To ensure success all other activities should cease during the short period of time required to conduct the Briefings and Checklists.

Team Resource Management (TRM)

Background

During the 70s and early 80s the airline industry came under public scrutiny as a result a series of devastating aircraft crashes which claimed thousands of lives. While the crews operating these aircraft had superior technical skills they lacked the ability to work effectively as a crew.

Dr. Robert Helmreich at the NASA Aims Research Center in the United States discovered seven human behaviors, that when used effectively reduce crew errors. These behaviors became the foundation for a new discipline in aviation to be known as Crew Resource Management or CRM.

CRM focuses on effective communication, leadership, preparation, planning, briefings, and managing workload, stress, and fatigue. CRM recognizes and respects the hierarchy that exists within a crew, but also respects the equal contributions made by all crew members.

Whether you are the crew onboard the space shuttle, a commercial airliner, working in a nuclear power plant, oil rig or in the operating room the importance of effective CRM cannot be overstated.

Crews work onboard an aircraft so Crew Resource Management was appropriate. In the operating room however clinicians operate as a team, so Team Resource Management or TRM is more fitting.

Team Resource Management

Effective **Team Resource Management** refers to a team's ability to identify and use all available resources, to manage their workload, stress and fatigue and to communicate effectively to ensure team synergy and situational awareness is maintained throughout the entire procedure.

Checklists and briefings are important resources that support the structure of a team, and guide communication throughout the procedure.

Effective **Team Resource Management** is essential in the formation and preservation of surgical teams.

Introductions are an extremely important component of Team Resource Management. Leadership is established and the tone is set for the open two way communication that is so vital in the operating room.

“A surgical team as a whole is greater than the sum of its parts”

Additional reading:

“Culture at Work in Aviation and Medicine”

Authors: Robert L. Helmreich and Ashleigh C. Merritt

Publisher: Ashgate

Surgical Team Formation

The reality is the surgical team develops slowly, first working independently of one and other and then gradually coming together to work effectively as a team prior to skin incision.

Independent responsibilities:

The **Surgeon** first meets with the patient and confirms their name and procedure to be performed, discusses patient concerns and confirms and marks the surgical site.

The **Anesthetists** conducts the pre-surgery interview with the patient confirming the patient's name and discussing medications, allergies etc.

The **Nurses** confirm the documentation and patient consent form, and begin to set up the instruments and supplies required. Nurses (x2) verbally confirm patient's name and visually check identification band and patient's chart.

Team responsibilities:

The first phase of team formation occurs as the patient enters the operating room and the Anesthetists and Nurses begin to work together to prepare for induction. During the "Before induction checklist they confirm that they have checked the patient's name, procedure and that the site is marked and all necessary preparation prior to induction has been completed.

The final stage of team formation occurs during the Surgeon's team briefing. The surgeon states the Patient's name, site and procedure aloud and discusses details of the case. All team members introduce themselves, state their role and have an opportunity to discuss their concerns.

The post surgery debriefing preserve the value of an effective team and sets the tone for future team member interactions. It is a time to ensure that all counts are accurate, specimens are labeled and patient post surgery care is finalized. It provides a moment to reflect on deficiencies with regards to processes, equipment, instruments, and supplies, and to determine if anything could have been done more effectively to improve patient care.

It is also a time to acknowledge the contributions of the entire team.

Expanded Checklist Guidelines

The purpose of the expanded checklist guidelines is to ensure that all surgical team members understand the procedures to follow with respect to the use of the surgical safety checklist and briefing. It includes a detailed account of the duties and responsibilities required by each person at each stage of the checklist. Having a working knowledge of this document will ensure that the briefings and checklists are conducted correctly, and will avoid delays in the operating room.

It can also be used as a learning tool and reference guide to ensure sustained proficiency.

The laminated checklist available in each operating room contains two checklists, and two Briefings. The briefings are to ensure all team members have the same expectations, and the checklists ensure that critical items are not missed.

All items in this expanded checklist should have been completed prior to calling for the actual checklist. If an item has been missed, it shall be completed at this time.

IMPORTANT: Each step of the checklist must be addressed before proceeding to the next step.

These guidelines are divided into two sections; **Checklists** and **Briefings**.

Checklists

The intended use of the **checklist** is to formalize existing procedures and ensure that nothing is missed. It will not increase workload or surgery times, in fact recent evidence suggests surgery times may be reduced due to increased team efficiency.

There are two checklists to be completed: one **before induction** and the other **before skin incision**.

Before Induction

Just prior to induction after all tasks have been completed, the Anesthesiologist will call for the Before Induction Checklist. The Circulating nurse will read the checklist and the Anesthesiologist will ensure the task has been completed and respond with the appropriate answer. At the end of the checklist the Circulating Nurse will say, "before induction checklist complete". The Anesthesiologist will then continue with induction.

Note: The "Before Induction" checklist requires less than thirty seconds to be completed.

In the operating room theatre a final check is done just before induction to ensure that all procedures required to that point have been completed. The checklist before induction is requested by the anesthesiologist. The circulating nurse will read the checklist.

Before Induction Checklist

– Prior to induction of anesthesia (initiated by Anesthesiologist)

Anesthesia Safety Check complete YES

The anesthesiologist confirms his or her agreement by stating “yes”.

The anesthesia safety check includes an inspection/review of the anesthetic equipment, medications and patient’s anesthetic risk. A helpful mnemonic is that, in addition to confirming that the patient is fit for surgery, the anesthesia team should complete the **ABCDEs** – an examination of the **A**irway equipment, **B**reathing system (including oxygen and inhalational agents), **s**u**C**tion, **D**rugs and **D**evelopments and **E**mergency medications, equipment and assistance to confirm their availability and functioning.

Patient consent obtained YES (sn)

The scrub nurse confirms his or her agreement by stating “yes”.

The circulating and scrub nurse have checked the patient consent form. If there are any consent concerns they must be reconciled before continuing with the checklist. Refer to Surgical Consent policy and procedure for further information.

Patient Identification confirmed YES (all)

The anesthesiologist, Scrub and Circulating Nurses confirm that they have previously checked the patient’s name by stating “yes”.

Prior to entering the operating room the anesthesiologist interviews the patient and confirms identification. Nurses check the patient’s chart and identify the patient before surgery, often in a pre-operative holding or admitting area.

Site and procedure confirmed YES

The anesthesiologist confirms his or her agreement by stating “yes”.

The anesthesiologist and nurses have verbally confirms with the patient the surgical site and procedure.

Refer to Fraser Health Correct Site for Surgical Procedure,

Site marked YES / NOT REQUIRED

The anesthesiologist confirms his or her agreement by stating “yes”. or not required

If site marking is required the surgeon marks the surgical site prior to the patient entering the room. The anesthesiologist visually confirms the site is marked prior to induction.

Refer to Fraser Health Correct Site for Surgical Procedure.

Surgical Safety Checklists and Briefings

Pulse Oximeter on and functioning YES

The anesthesiologist confirms his or her agreement by stating “yes”.

Ideally, the pulse oximetry should be visible to the operating team. An audible system should be used when possible to alert the team to the patient’s pulse rate and oxygen saturation.

Known allergy NO / YES, Specify

The anesthesiologist answers the question No or Yes.

If yes the type and severity of allergy is stated. If the circulating nurse knows of an allergy that the anesthesiologist is not aware of, this information should be communicated at this time.

Difficult airway..... NO / YES assistance available

The anesthesiologist answers the question No or Yes.

If yes the anesthesiologist confirms adequate equipment and assistance present.

Risk of >500ml blood loss ...NO / YES adequate IV access

The anesthesiologist answers the question No or Yes.

If yes, adequate IV access, adequate blood and fluids, and adequate available equipment must be available. Guidelines for blood loss are as follows; Adults > 500ml and children 7ml/kg. If there is a significant risk of blood loss the World Health Organization highly recommends that at least two large bore intravenous lines or a central venous line.

*At the end of the before induction checklist the Circulating Nurse will say;
“Before Induction Checklist Complete”*

This will inform the team that induction will commence.

Surgical Safety Checklists and Briefings

Before Skin Incision

Just prior to skin incision or other interventions and after all tasks have been completed, the Surgeon will call for the “Before Skin Incision” checklist. The Circulating nurse will read the checklist and the appropriate team member will ensure the task has been completed and respond with the appropriate answer. At the end of the checklist the Circulating Nurse will say; “Before skin incision checklist complete”. The Surgeon will advise the team that the surgery will begin.

The “Before Skin Incision” checklist requires less than thirty seconds to complete, and replaces the surgical pause.

Before Skin Incision Checklist

- *Prior to start of procedure or skin incision (initiated by Surgeon)*
The circulating nurse will read the checklist.

Patient’s name confirmed ... YES (all)

The surgical team members will confirm their agreement by stating “Yes”.

The Anesthesiologist and Nurses confirmed the patient’s name prior to induction. The Surgeon stated the patient’s name aloud during the briefing. Stating yes confirms that all are in agreement to the patient’s identification.

If the name was not stated aloud by the Surgeon during the briefing or if a briefing was not conducted the name must be stated aloud at this time. The circulating nurse will ask the surgeon to state the patient’s name.

Procedure and Site confirmed... YES (all)

The surgical team members will confirm their agreement by stating “Yes”.

If there is any doubt, consensus must be reached prior to continuing the checklist

Antibiotic Prophylaxis within 60 minutes ... YES / NOT REQUIRED

The surgeon will answer the question Yes or Not Required

The Surgeon will confirm that antibiotic prophylaxis has been given within the last 60 minutes. If re-dosing is required during the case and was not discussed during the briefing it should be discussed prior to continuing with the checklist.

If prophylactic antibiotics have not been administered, they should be administered now, prior to incision. If prophylactic antibiotics have been administered longer than 60 minutes before, the team should consider re-dosing the patient before the skin incision. For cases with an anticipated duration of greater than 3 hours re-dosing of the antibiotic during the surgery should be discussed.

Surgical Safety Checklists and Briefings

Essential Imaging displayed YES / NOT REQUIRED

The Surgeon will answer the question Yes or Not Required.

Imaging is critical to ensure proper planning and conduct of many operations, including orthopedic, spinal and thoracic procedures and many tumor resections. Essential imaging includes x-rays, angiograms, CT scans, and MRI scans that display the operative site.

Essential imaging may also display areas of the body that add risk to the operative procedure, for example the neck in patients with rheumatoid arthritis, and the chest in patients with lung disease.

If imaging is needed but not available, it should be obtained. The surgeon will decide whether to proceed without the imaging if it is necessary but unavailable. .

DVT prophylaxis applied..... YES / NOT REQUIRED

The Surgeon will answer the question Yes or Not Required

If Yes, the Surgeon will confirm DVT prophylaxis is applied. If DVT prophylaxis is required but not applied it should be applied at this time.

“Does anyone have questions or concerns before we begin?”

This final question will be asked by the Circulating Nurse.

This is an important time to discuss issues or concerns that may affect patient or clinician safety that have not been addressed previously.

The Circulating Nurse will state “Before Skin Incision Checklist Complete”

At this point the team may proceed with the case.

Surgical Safety Checklists and Briefings

Expanded Team Briefing Guidelines

To be conducted by the Surgeon

Overview

The intended use of **briefings** is to encourage discussion ensuring everyone has an opportunity to contribute and ask questions so that each team member has the same expectations with regards to the surgical procedure to be performed.

There is one Team Briefing to be completed before surgery and one Debriefing at the end of the procedure.

The Team Briefing should be initiated by the Surgeon after induction but prior to scrubbing. The Surgeon will use the laminated briefing / checklist to guide the briefing content. The time required to conduct a briefing depends on the complexity of the surgical procedure, the patient's ASA rating, and the experience level of the team members.

Briefing should not be commenced until all team members are present and free of other duties. All team members should be encouraged to ask questions to clarify expectations.

Surgeon's Team Briefing (before surgery)

▶ **Patient's name**

The Surgeon will state the patients name aloud. The name must coincide with the name previously confirmed by Anesthetists the Nurses prior to induction.

▶ **Procedure, site and site marked**

The Surgeon will state aloud the procedure to be performed, identify the site and state that the site is marked or that site marking is not required.

If site marking is required and has not been marked, it will be marked prior to continuing with the briefing.

▶ **General overview of the procedure and duration**

The Surgeon will give a general overview of the procedure to be completed and state the anticipated duration.

▶ **Required Equipment, Instruments, imaging, implants**

The Surgeon will discuss with the team all necessary requirements with regards to equipment, Instruments, imaging, implants etc.

Surgical Safety Checklists and Briefings

▶ **Patient positioning, warming, DVT and antibiotics (re-dose)**

The Surgeon will discuss the requirements with regards to Patient positioning, warming devices, DVT prophylaxis, and antibiotic prophylaxis including possible re-dose of drugs.

Anticipated Critical Events:

▶ **Surgeon Review:**

The Surgeon will discuss with the team all specific patient concerns, blood loss, critical steps, staffing, special equipment and any other issues affecting patient safety.

▶ **Anesthesia Review:**

The Anesthetist will discuss with the team any specific patient concerns, resuscitation plan, medications, and any other issues affecting patient safety

▶ **Nursing Review:**

The Nurses will discuss with the team all specific patient concerns, equipment, implants, supplies, staffing, and any other issues affecting patient safety

▶ **Introduction and role of all team members**

The Surgeon may introduce all team members or may choose to have team members introduce themselves. The role of each team members should also be discussed.

Note: If the team is together for several cases during the day, introductions are only required for the first case of the day, or when new clinicians join the team and change in roles.

** Introductions are an extremely important component of Team Resource Management (TRM). Leadership is established and the tone is set for the open two way communication that is so vital in the operating room.*

Surgical Safety Checklists and Briefings

Expanded Team Debriefing Guidelines

To be conducted by the Surgeon

Overview

The debriefing should be initiated by the Surgeon prior to any team member leaving the operating room. All surgical team members should be present and free of other duties.

The time required to conduct a debriefing depends largely on the duration and complexity of the surgical procedure performed, patient's overall health.

Team members should be encouraged to make suggestions and ask questions.

Surgeon's Team Debriefing

To be completed by the Surgeon prior to the patient leaving the room

The Surgeon will verbally confirm the following with the team

▶ **Instrument, sponge and needle count**

The Surgeon shall confirm with the nursing team that the count is complete and accurate. The circulating and scrub nurses should verbally confirm the completeness of final sponge and needle counts. In cases with an open cavity, instrument counts should also be confirmed as complete

▶ **Specimen labeling**

The Surgeon shall confirm with the nursing team that all labeling is complete and accurate.

The circulating nurse confirms the correct labeling of any specimens obtained during the procedure by reading out loud the patient's name, the specimen description, and any orienting marks or sutures.

The management/handling and labeling of all specimens must be completed before the surgical procedure setup is dismantled.

Incorrect labeling of specimens is potentially disastrous for a patient and has been shown to be a frequent source of laboratory error.

Refer to policies and procedures for handling of specimens.

▶ **Procedure performed and unplanned events**

The Surgeon shall state the procedure performed and discuss any unplanned events. The circulating nurse will document the procedure(s) on the operative record.

The purpose of this step is to have complete and accurate documentation and transfer of critical information to the recovery room team.

Surgical Safety Checklists and Briefings

▶ **Patient recovery concerns and management plan / destination**

The surgeon, anesthesiologist and nurse should review the post-operative recovery and management plan, focusing in particular on intraoperative or anesthetic issues that might affect the patient.

Events that present a specific risk to the patient during recovery and that may not be evident to all involved are especially pertinent.

▶ **Equipment shortages / malfunctions reviewed**

The team will discuss equipment shortages or malfunctions and document if necessary

Equipment problems are universal in operating rooms. Accurately identifying the sources of failure and instruments or equipment that have malfunctioned is important in preventing devices from being recycled back into the room.

The circulating nurse should ensure that equipment problems arising during a case are identified by the team.

The teams concerns will be communicated to the applicable departments involved in resolving problems identified (e.g. SPD, biomedical and maintenance departments).

▶ **Surgical wound classification**

The surgical wound classification will be determined and documented

The surgeon and the circulating nurse will review the classification of the surgical wound. If the wound classification was downgraded during the procedure due to contamination, the circulating nurse will change the classification and document on the nurse's notes why this was done.

The circulating nurse will also document any reprocessing (flashing) of instruments and the reason why this was done. The use of flexible endoscopes will also be documented.

▶ **Could anything have been done to make this case safer or more efficient?**

The Surgeon will ask the team if anything could have been done differently or if anyone has suggestions or concerns.

It is also a time to acknowledge the contributions of the entire team.