Seven Steps to Safer Surgery

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“Choose well, cut well, get well”.

–Old surgical aphorism.
Aims and objectives for the session
Seven areas of focus

• Safety culture/systems
• Human factors and teams
• Involving patients in decisions
• Checks and checklists
• Assessment and recovery
• Learning from harm
• The importance of leadership
Seven areas of focus

• Safety Culture/Systems
  • Human factors and teams
  • Involving patients in decisions
  • Checks and checklists
  • Assessment and recovery
  • Learning from harm
  • The importance of Leadership
Understanding safety culture

• How good are you?
Manchester Patient Safety Framework (MaPSaF)

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – Pathological</td>
<td>Why do we need to waste our time on patient safety issues?</td>
</tr>
<tr>
<td>B – Reactive</td>
<td>We take patient safety seriously and do something when we have an incident.</td>
</tr>
<tr>
<td>C – Bureaucratic</td>
<td>We have systems in place to manage patient safety.</td>
</tr>
<tr>
<td>D – Proactive</td>
<td>We are always on the alert/thinking about patient safety issues that might emerge.</td>
</tr>
<tr>
<td>E – Generative</td>
<td>Managing patient safety is an integral part of everything we do.</td>
</tr>
</tbody>
</table>
Seven areas of focus

- Safety Culture/Systems
- Human factors and teams
- Involving patients in decisions
- Checks and checklists
- Assessment and recovery
- Learning from harm
- The importance of Leadership
Human factors

- Human factors and safety
- Team behaviours
- Risk management
- Responding to error
Safety

Situation Awareness

Leadership
Followership
and Motivation

Risk Management

Choosing Behaviour

Communication

Feedback
<table>
<thead>
<tr>
<th>Briefing</th>
<th>Leadership / Followership / Concern for the Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>The effective briefing will be operationally thorough, interesting and will address coordination, planning and potential problems.</td>
<td>The extent to which appropriate leadership and followership are practiced.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication and Decision</th>
<th>Interpersonal Relationships / Group Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflects the extent to which free and open communication is practiced. Active participation in decisions encouraged.</td>
<td>Reflects the quality of relationships among the team, the overall climate in the workplace.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Team Self Feedback</th>
<th>Preparation / Planning / Vigilance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The extent to which a team recognises the need to give and receive feedback.</td>
<td>Reflects the extent to which teams plan ahead, maintain situation awareness and anticipate contingencies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enquiry / Advocacy / Assertion</th>
<th>Workload / Distractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team members advocate, with appropriate persistence, the course of action they feel is best, even if it involves disagreement.</td>
<td>This is a rating of time and workload management. It reflects how the team distributes tasks, avoids overload and distractions.</td>
</tr>
</tbody>
</table>
Characteristics of highly reliable organisations

- Preoccupation with failure
- Reluctance to simplify
- Sensitivity to operations
- Commitment to resilience
- Deference to expertise
High reliability organisations

- Nuclear industry
- Air traffic control
- Aircraft carriers
Lessons from HROs

- Tend to have strict training, discipline, adherence to procedures, protocols and routine (Reason, 1997)

- Acceptance and understanding of standardisation, shared assumption and values (culture)

- Response to unexpected or crisis (Weick and Sutcliffe)
Seven areas of focus

- Safety Culture/Systems
- Human factors and teams
- **Involving patients in decisions**
- Checks and checklists
- Assessment and recovery
- Learning from harm
- The importance of Leadership
What Is Choosing Wisely?

• International clinician-led campaign
• To promote conversations between doctors and patients by helping patients to choose care that is:
  – Supported by evidence
  – Not duplicative of other tests or procedures already received
  – Free from harm
  – Truly necessary

Now being implemented in the UK
How else can we involve patients?

- With your neighbors, discuss:
  - How do you involve patients in their care?
  - What advantages might this bring?
  - Where is your institution on this journey?
Seven areas of focus

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Quick guide to Briefing

Why do a pre-list brief?

**What is it?**
- The plan for the day is discussed by all team members.

**When?**
- Initiate the briefing before the first case of the day, once all team members are available in the department.

**Why?**
- Ensure a shared understanding of the plan for the day.
- Anticipate and prepare for problems.

**Who is leading the briefing?**
- It can be any member of staff.
- Consider rotating the lead including and encouraging junior staff/trainees.

### People
- Team members introduce themselves.
- Clarify roles, responsibilities, actions and interactions - who's doing what, where, when.
- Who's missing?
- Does everyone feel comfortable about today?
- Qualify any supervision/assessment considerations.
- Remember - we're part of a team.
- Everybody has a valid role, perspective and opinion.
- Additional personnel e.g. multi-specialty case/perioperative/angiography.

### List
- Highlight any issues arising from the previous list's debrief.
- Overview of the list:
  - Any changes?
  - Anticipated events e.g. Fire Alarm test, Industry observer.
  - If emergency procedures are needed what changes may be necessary?
- Details of each case:
  - Be clear about the plan, expectations, special considerations e.g. latex allergy/positioning.

### Equipment
- What, where, when and how.
- Loan equipment.
- Decontamination issues.
- Consumables.

### Questions and concerns
- Check for any misunderstandings.
- Ask the team to highlight potential risks and hazards.
- Identify and discuss contingency and mitigation plans.
- Agree when the debrief will be performed.

**Note:** Briefing is one of the Five Steps to Safer Surgery. Small tests of change and local adoption of the WHO Surgical Safety Checklist are encouraged to identify aspects of the Checklist that might be usefully moved to the pre-list briefing. This guidance is consistent with guidance from NPSA and Patient Safety First on implementing the WHO Surgical Safety Checklist.
STOP before you block

Notice for anaesthetists and anaesthetic assistants

- A STOP moment must take place immediately before inserting the block needle
- The anaesthetist and anaesthetic assistant must double-check:
  - the surgical site marking
  - the site and side of the block

- For unilateral blocks
- Simple double-check
- Separate from WHO checklist
- Immediately before insertion of needle for block
- Initiated by anyone (Anaesthetist / ODP / other theatre staff)
The WHO Checklist was piloted in 8 cities...
...and was found
to reduce the
rate of
postoperative complications
and death by
more than one-third.

Results – All Sites

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Checklist</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>3733</td>
<td>3955</td>
<td>-</td>
</tr>
<tr>
<td>Death</td>
<td>%1.5</td>
<td>%0.8</td>
<td>0.003</td>
</tr>
<tr>
<td>Any Complication</td>
<td>%11.0</td>
<td>%7.0</td>
<td>0.001&gt;</td>
</tr>
<tr>
<td>SSI</td>
<td>%6.2</td>
<td>%3.4</td>
<td>0.001&gt;</td>
</tr>
<tr>
<td>Unplanned Reoperation</td>
<td>%2.4</td>
<td>%1.8</td>
<td>0.047</td>
</tr>
</tbody>
</table>

# Surgical Safety Checklist (First Edition)

## Before Induction of Anaesthesia

<table>
<thead>
<tr>
<th>SIGN IN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENT HAS CONFIRMED</strong></td>
</tr>
<tr>
<td>• IDENTITY</td>
</tr>
<tr>
<td>• SITE</td>
</tr>
<tr>
<td>• PROCEDURE</td>
</tr>
<tr>
<td>• CONSENT</td>
</tr>
<tr>
<td><strong>SITE MARKED/NOT APPLICABLE</strong></td>
</tr>
<tr>
<td><strong>ANAESTHESIA SAFETY CHECK COMPLETED</strong></td>
</tr>
<tr>
<td><strong>PULSE OXIMETER ON PATIENT AND FUNCTIONING</strong></td>
</tr>
<tr>
<td><strong>DOES PATIENT HAVE A:</strong></td>
</tr>
<tr>
<td><strong>KNOWN ALLERGY?</strong></td>
</tr>
<tr>
<td>NO</td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td><strong>DIFFICULT AIRWAY/ASPIRATION RISK?</strong></td>
</tr>
<tr>
<td>NO</td>
</tr>
<tr>
<td>YES, AND EQUIPMENT/ASSISTANCE AVAILABLE</td>
</tr>
<tr>
<td><strong>RISK OF &gt;500ML BLOOD LOSS (7ML/KG IN CHILDREN)?</strong></td>
</tr>
<tr>
<td>NO</td>
</tr>
<tr>
<td>YES, AND ADEQUATE INTRAVEOUS ACCESS AND FLUIDS PLANNED</td>
</tr>
</tbody>
</table>

## Before Skin Incision

<table>
<thead>
<tr>
<th>TIME OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE</strong></td>
</tr>
<tr>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM</strong></td>
</tr>
<tr>
<td>• PATIENT</td>
</tr>
<tr>
<td>• SITE</td>
</tr>
<tr>
<td>• PROCEDURE</td>
</tr>
<tr>
<td><strong>ANTICIPATED CRITICAL EVENTS</strong></td>
</tr>
<tr>
<td><strong>SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?</strong></td>
</tr>
<tr>
<td><strong>ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?</strong></td>
</tr>
<tr>
<td><strong>NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?</strong></td>
</tr>
<tr>
<td><strong>HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?</strong></td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td>NOT APPLICABLE</td>
</tr>
<tr>
<td><strong>IS ESSENTIAL IMAGING DISPLAYED?</strong></td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td>NOT APPLICABLE</td>
</tr>
</tbody>
</table>

## Before Patient Leaves Operating Room

<table>
<thead>
<tr>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NURSE VERBALLY CONFIRMS WITH THE TEAM:</strong></td>
</tr>
<tr>
<td><strong>THE NAME OF THE PROCEDURE RECORDED</strong></td>
</tr>
<tr>
<td><strong>THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)</strong></td>
</tr>
<tr>
<td><strong>HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME)</strong></td>
</tr>
<tr>
<td><strong>WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED</strong></td>
</tr>
<tr>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT</strong></td>
</tr>
</tbody>
</table>

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This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.
Seven areas of focus

• Safety Culture/Systems
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• Involving patients in decisions
• Checks and checklists
• Assessment and recovery
• Learning from harm
• The importance of Leadership
Purpose of pre-operative assessment

- Swabs, infection risk, MRSA
- Consent, understanding, reduce stress
- Fitness for anaesthesia, reduce cancellations on health grounds, reduce avoidable anaesthetic risk
- Agree dates, reduce DNA rates
- Ensure availability of necessary equipment or staff or appropriate beds
POA and planning is an essential part of the planned care pathway which enhances the quality of care in a number of ways.

If a patient is fully informed, they will be less stressed and recover more quickly.

A health check ensures good medical health before anaesthesia and surgery.

Planning admission and discharge individually ensures that patient and carers know what to expect facilitating earlier post operative care at home.

Cancellations due to patient ill health or DNAs are reduced.

Admission on the day of surgery and early discharge are more likely.
Other peri op safety considerations

- SSI bundles
- CVC/PVC care
- Retained packs/swabs/instruments
ERAS

• Reduced LOS
• Reduced morbidity
• Greater patient empowerment
• Better pain control
• Faster physiological return to normality
Seven areas of focus

• Safety Culture/Systems
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• Checks and checklists
• Assessment and recovery
• **Learning from harm**
• The importance of Leadership
How to learn

• Reporting

• Incidents

• Near misses

• Patient experience questionnaires

• Complaints

• Audit and M and M
Learning from Error

- Titan Rocket - rewarding not punishing error reporting
- Reporting systems and the response to them
- The patient voice
- Error into action and the knowledge from the near miss
A combination of events, circumstance, activities and decisions which lead to an unsafe outcome
ERROR TYPES

Unsafe acts

Intended actions

Unintended actions

Basic error types

Mistakes

Lapses

Slips

Violations

Attentional failures

Intrusions

Omissions

Rule based Knowledge based

Routine Reasoned Reckless & Malicious

Memory failures

Losing place

Omitting items etc

Attentional failures

Intrusions

Omissions

Misordering etc

Basic error types

Attentional failures

Intrusions

Omissions

Misordering etc

Memory failures

Losing place

Omitting items etc

Rule based Knowledge based

Routine Reasoned Reckless & Malicious
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Adaptive Leadership

- Avoid technical solutions and work avoidance.
- Step up onto the balcony to see what is really going on.
System factors to enable safer care

- Leadership at all levels
- A culture of openness that supports learning
- Effective team working
- Effective use of information and data and technology that supports it
Questions?

Thank you for your attention

شكرا لكم على اهتمامكم.