Medical and Surgical Errors

Dept. of Surgery

"Many doctors know the guilt, shame and self doubt that occur when patients suffer a serious complication or die due to a mistake made by the clinician, healthcare team or health care system"

- A 79 year old Male was on regular dialysis due to CRF. Once while undergoing dialysis he started having SOB. He was admitted to the ICU and was managed. Next day he complained of epigastric pain for which he was prescribed antacid, which he received from his nurse. Only…….. It was'nt an antacid, it was pancuronium!

Objectives

(1)To become familiar with common patient safety definitions.

(2) To become familiar with the causes of medical errors.

(3) To become familiar with the common types of medical errors.

(4) To become familiar with recommendation that help prevent adverse events/medical errors in the healthcare system.

Patient Safety Definitions

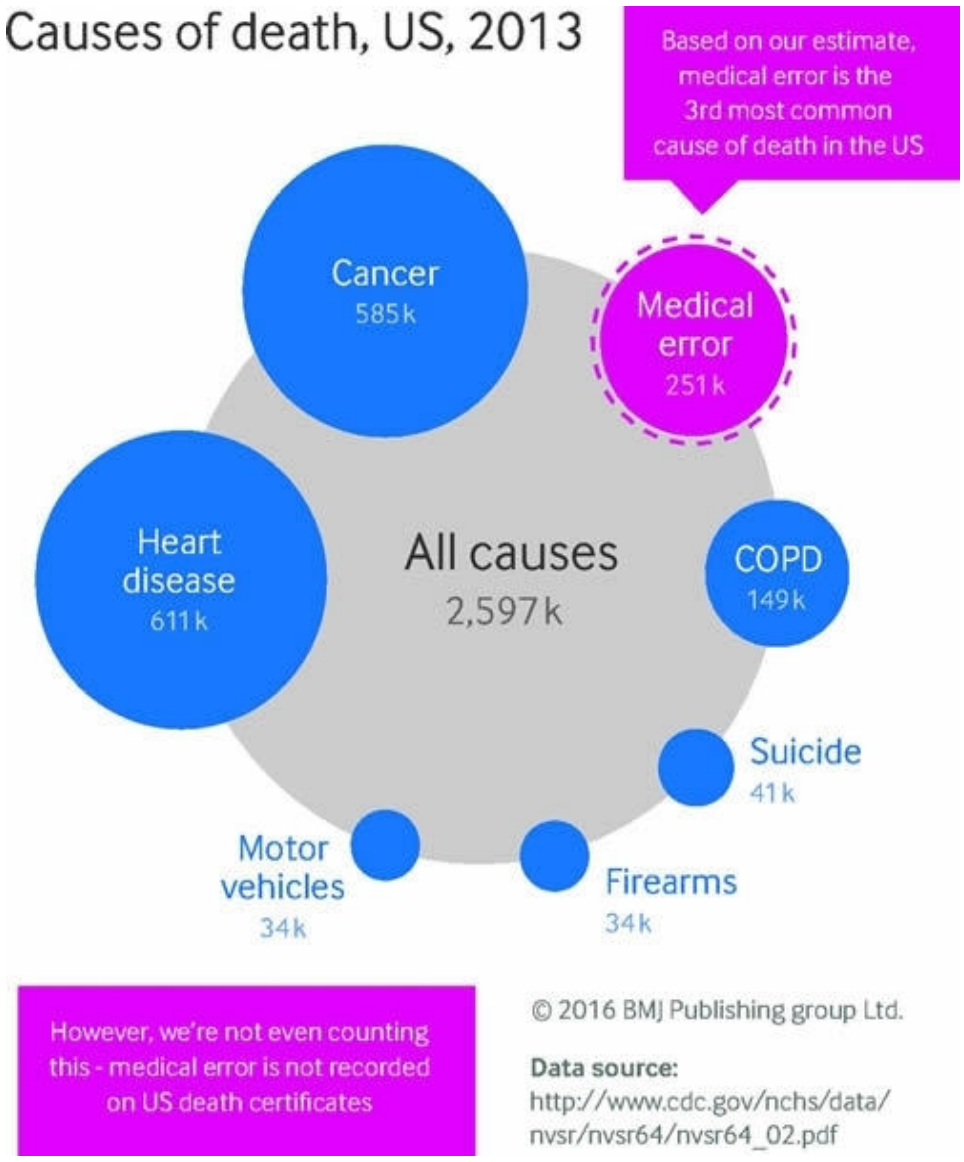
- Medical error, defined as the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.
- Adverse event, defined as an injury caused by medical management rather than by the underlying disease or condition of the patient.
- Preventable adverse event, defined as an injury that could have been avoided as a result of an error or system design flaw.

- Ameliorable adverse event, defined as an injury whose severity could have been substantially reduced if different actions or procedures had been performed or followed.
- Negligence, defined as whether the care provided failed to meet the standard of care reasonably expected of an average physician qualified to take care of the patient in question.
- Error of omission, occurs when a necessary procedure or intervention failed to be performed leading to morbidity or mortality to the patient involved.

Why do errors happen?

- All humans make errors: indeed, “the ability to make mistakes” allows human beings to function
- Most of medicine is complex and uncertain
- Most errors result from “the system”--inadequate training, long hours, ampoules that look the same, lack of checks, etc
- Healthcare has not tried to make itself safe

EPIDEMIOLOGY



Epidemiology

- Medical errors are the 3rd leading cause of death in the US.
- In India, 5.2 million medical errors occur annually.

"Medicine today has preventable harm as the third leading cause of death. We do not know how many people die needlessly, but we should."

- Dr. Peter Pronovost

TYPES OF MEDICAL ERRORS

- Misdiagnosis/delayed diagnosis/overdiagnosis

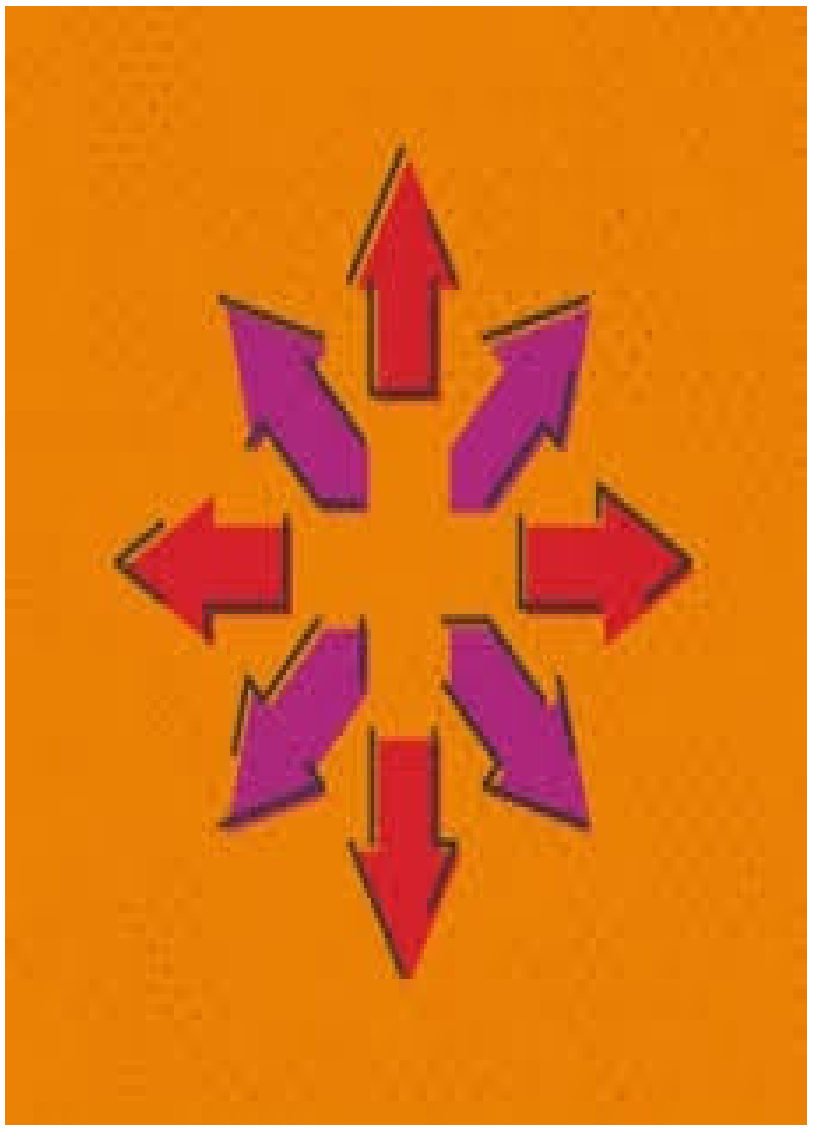
- Unnecessary tests/procedures

- Unnecessary treatment

- Medication errors

- “Never-events”

- Uncoordinated care



- HAIs

- “Not- so- accidental accidents”

- Pressure ulcers

- Missed warning signs

- “Jholachaap” doctors

Failure to provide prophylactic treatment

- Failure of communication

RISK FACTORS

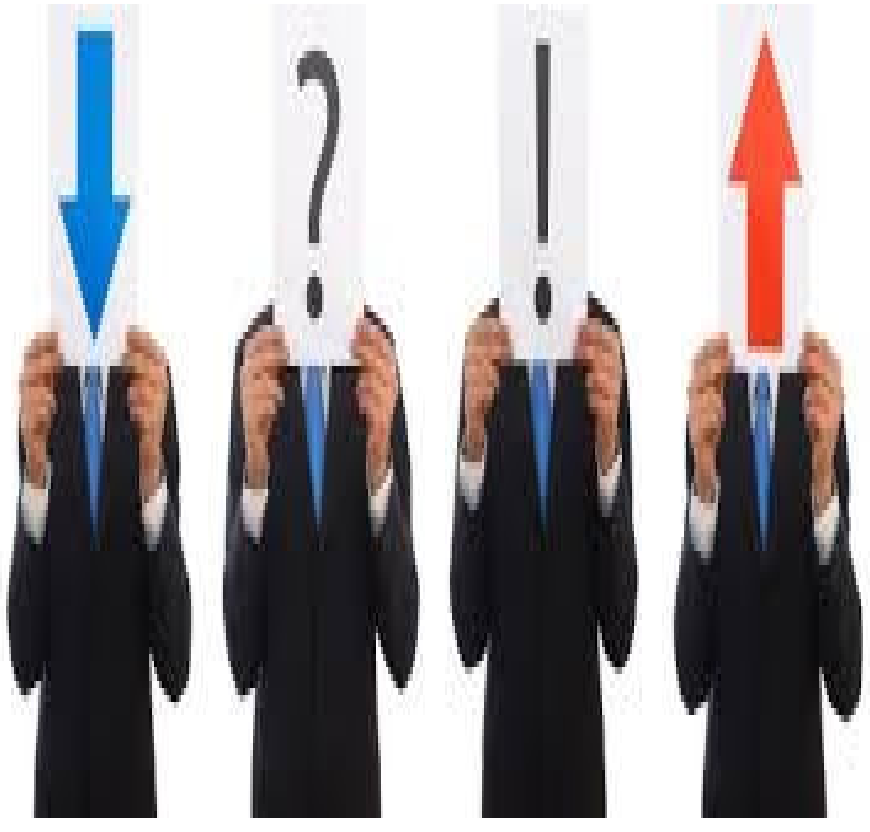
Risk factors

- Age
- Complexity of care
- Emergency or acute care
- Insufficient knowledge
- Ignorance of sources of error
- Low community spirit
- Clinician autonomy and low acceptance to change

CAUSES

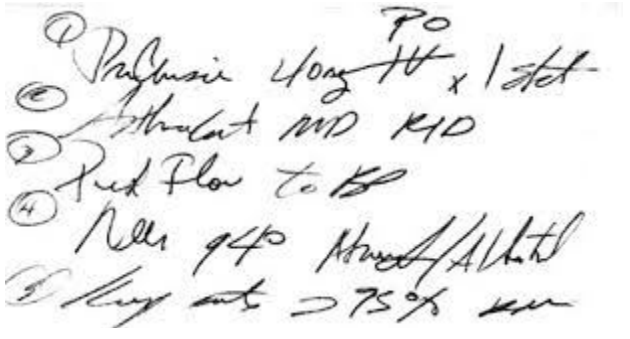
- “July effect”

- Poor communication



- Improper documentation

- Illegible handwriting



- Inadequate nurse to patient ratio

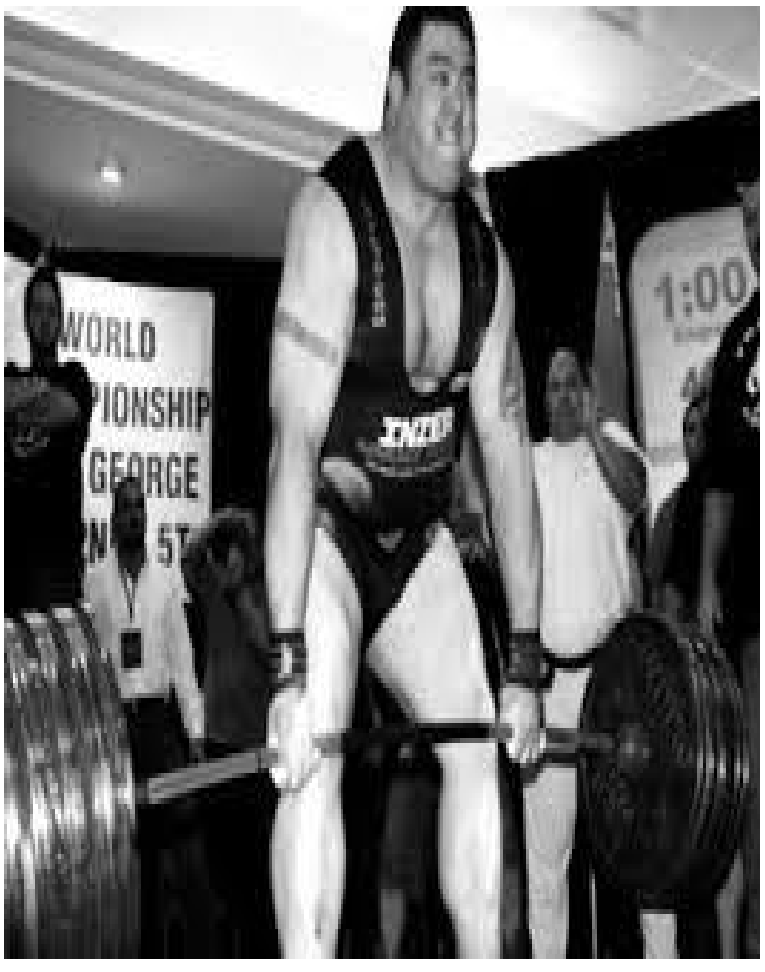
- Cost cutting measures

- Similarly named/sounding medicines

- Disconnected reporting systems in the hospital

- Sleep deprivation

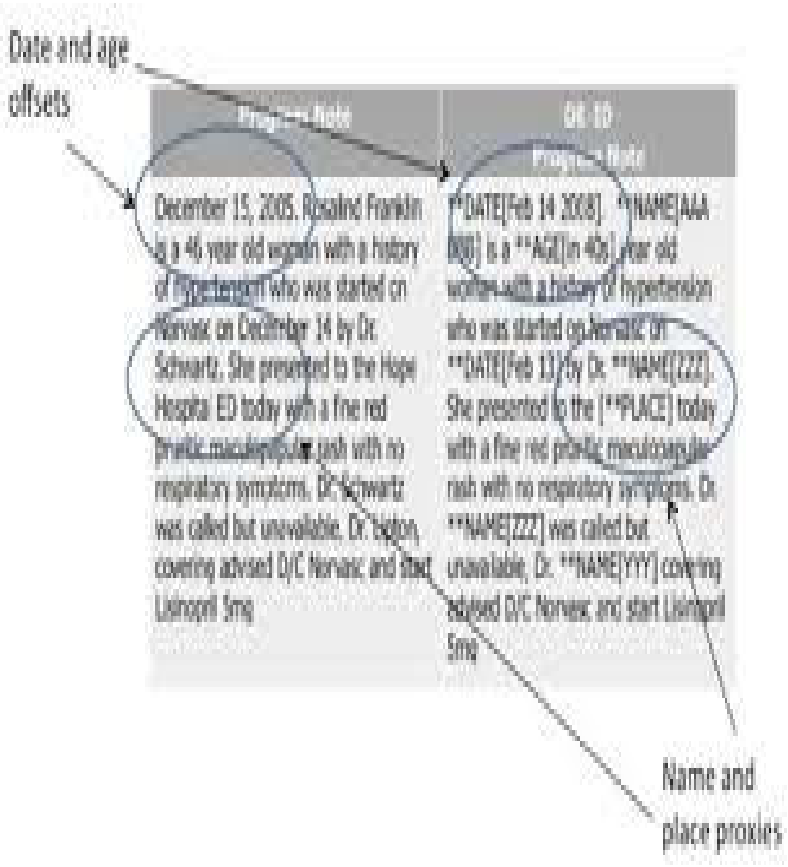
- Extreme specialization



- Logistic problems

- Equipment related issues

- Unstructured discharge summaries



MEDICATION ERRORS

Medication errors

- There are inherent risks associated with therapeutic use of drugs.
- The hazards that result from such risk are called drug-misadventuring, which includes both ADRs and medication error.
- Episodes in drug misadventuring that should be preventable through effective systems control.

TYPES OF MEDICATION ERROR

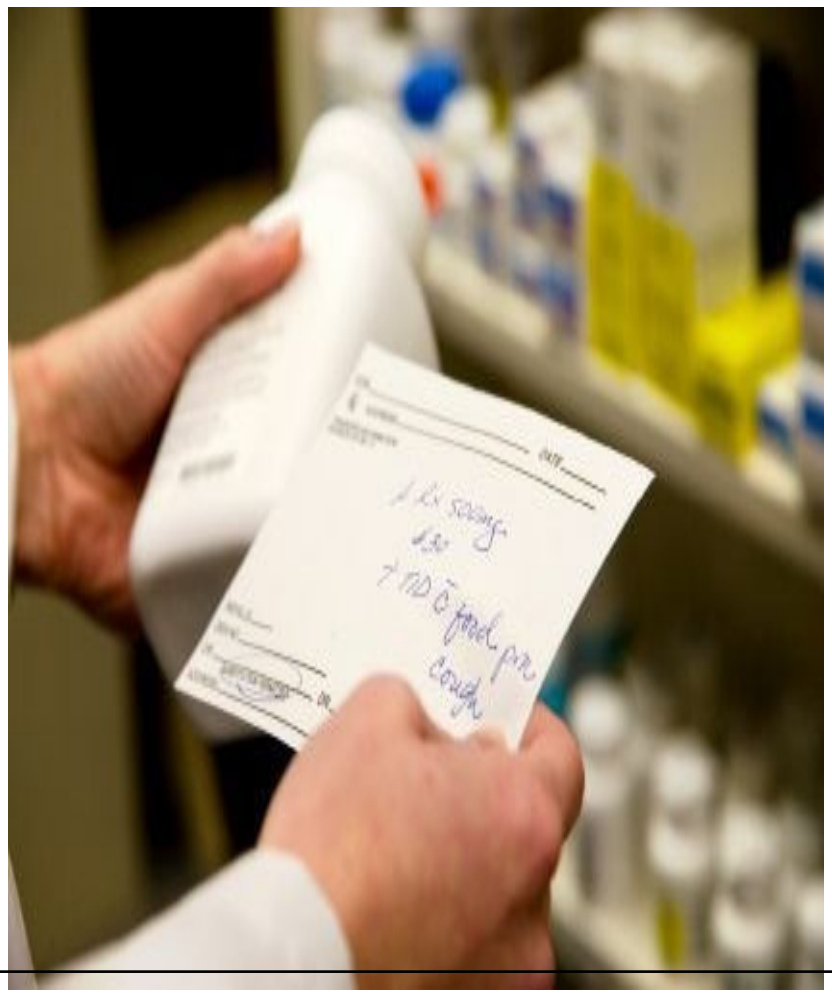
- Prescribing error

- Omission error

- Wrong time error

- Unauthorized drug error

- Improper dose error



- Wrong dosage form error

- Wrong administration technique error

- Deteriorated drug error

- Monitoring error

- Compliance error

CAUSES OF MEDICATION ERROR

Causes of medication error

- Look alike/sound alike
- Illegible handwriting
- Inaccurate dose calculation
- Inadequately trained personnel
- Inappropriate use of abbreviations
- Labelling errors
- Excessive workload
- Medication unavailable

SURGICAL ERROR

- It is a preventable mistake during surgery. Surgical errors go beyond the known risk of surgery.

TYPES OF SURGICAL ERROR

- Nerve injury

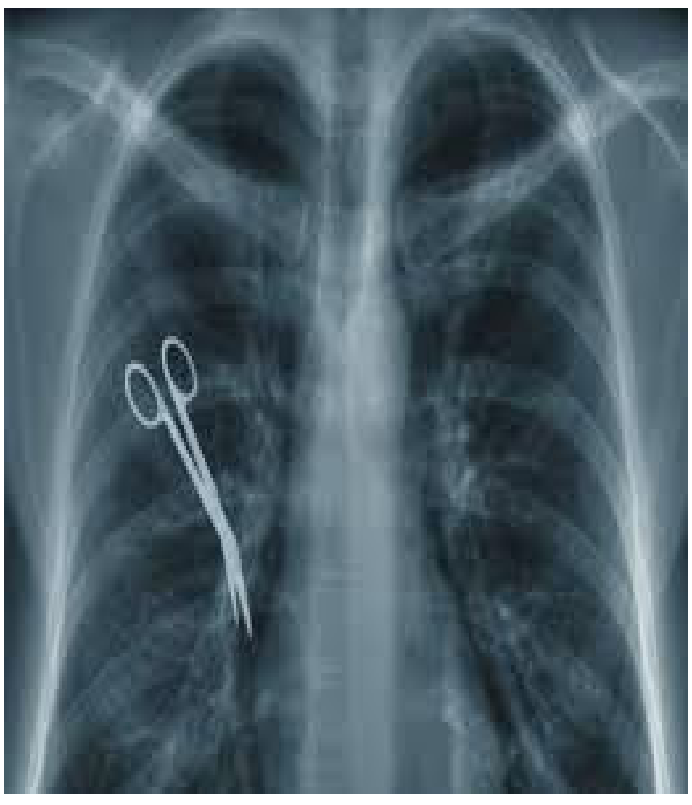
- Wrong site

- Wrong patient

- Wrong procedure

- Wrong equipment

- Surgical souvenirs!



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PREVENTABLE " NEVER EVENTS" IN OPERATING ROOM: GOSSYPIBOMA

Surgery

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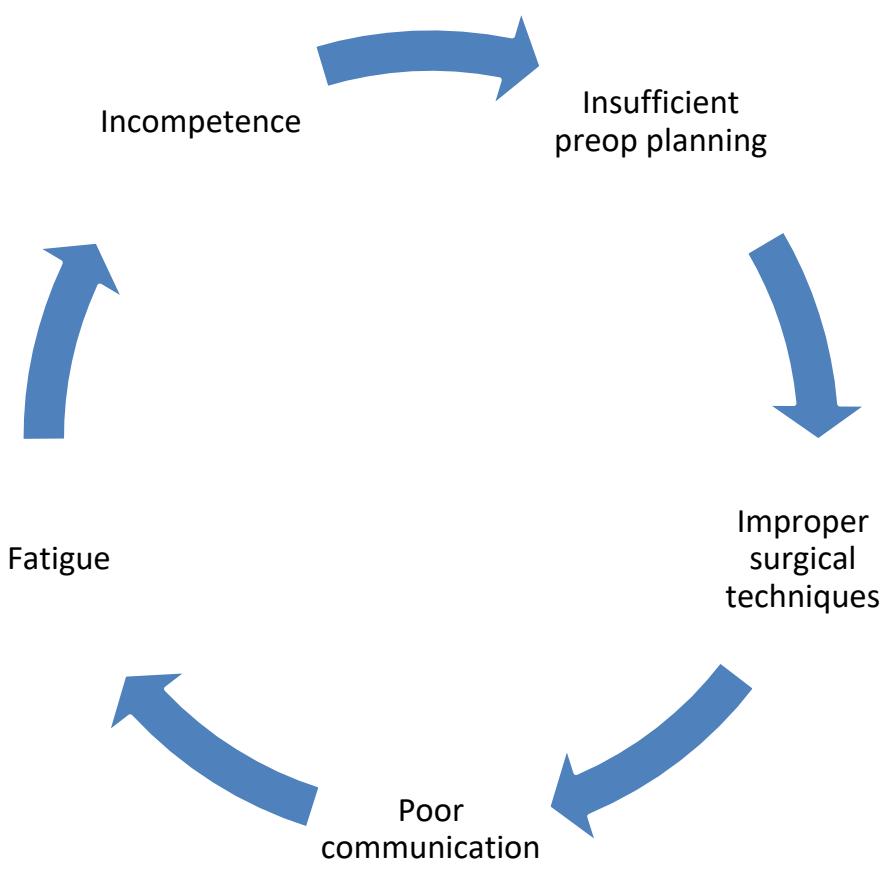
- Anaesthesia errors

CAUSES OF SURGICAL ERROR



The Second Victim

- Is the physician that cared for the patient.
- Implications for the second victim: -
- Emotional and psychological
- May result in a career change
- May destroy the reputation and career

How to think of error?

- An individual failing
- Blaming them for carelessness, forgetfullness
- Will not solve the problem--Doctors will hide errors
- It is often the best people who make the worst mistakes
- Mishaps tend to occur in recurrent patterns

How to think of error?

- A systems failure
  - This is the starting point for redesigning the system and reducing error.
  - Team work
  - Better communication
  - Evidence based practice

PREVENTION

INTERNATIONAL PATIENT SAFETY GOALS(IPSG)

Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia
(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision
(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

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

Revised 1 / 2009

MISCONCEPTIONS

- “Bad apples” are a common cause- faulty process of care delivery is more common.
- High risk procedures are responsible for most avoidable errors- surgical errors are harder to conceal, but errors occur at all levels.

Bottom line

- Fallibility is part of the human condition
- We can’t change the human condition but we can change the conditions under which people work.
- Naming, blaming and shaming have no remedial value
- We need to design health care systems that put safety first (First, do no harm)

- These goals highlight problematic areas in health care
- Describe evidence-based and expert-based consensus solutions
- It is essential that EVERYONE should be familiar and able to incorporate into daily practice

IPSG 1-Identify Patients Correctly

Two-fold Intent :

- **FIRST**, to identify the individual as the person for whom the service or treatment is intended.

- **SECOND**, to match the service or treatment to that individual.

IPSG 1-Identify Patients Correctly

- Patients must be identified using “two unique identifiers” i.e. **FULL NAME** and **CRN**
- **MUST NEVER** use patient’s room **or location** to identify patient.
- **ALWAYS** ask the patient / guardian / parent to verbalize patient’s name whenever possible

IPSG 2- IMPROVE EFFECTIVE COMMUNICATION

Verbal medication orders are reserved for **code/emergency** situations **ONLY**.

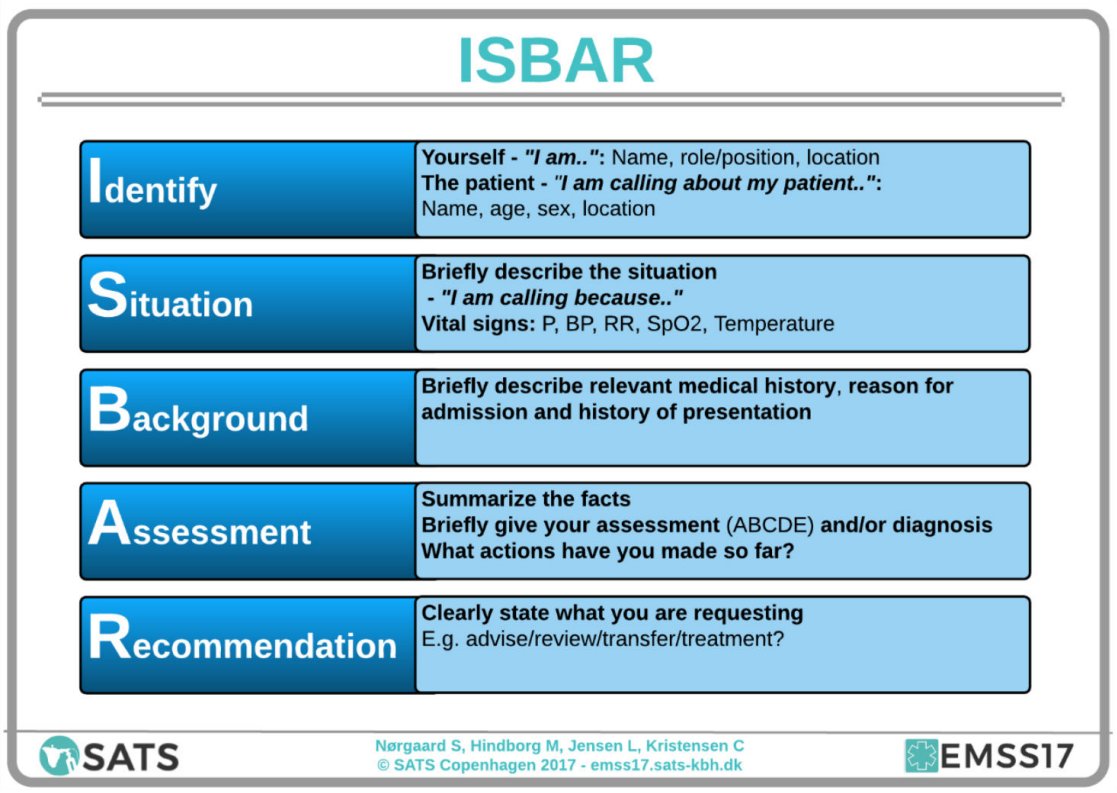
- **When receiving a medication telephone order from a physician:**
- **Nurse A writes** the order in the physician order sheet.
- **Nurse B** will **read back** the order written by Nurse A to the physician.
- **The prescriber** will verify the order is correct to Nurse B.
- Both Nurse A and Nurse B must document the date and time the order was received, badge number of **the prescriber**, and their own names, job title and badge numbers and both must sign the order sheet.

IPSG 2- IMPROVE EFFECTIVE COMMUNICATION

- Reporting critical results of diagnostic tests.
- The technologist/reporter will provide the report to the Receiver (Requesting Physician/Ward Nurse).
- The receiver will document (hand -**WRITE)** the critical results.
- The receiver (or another person - could be another nurse) will **READ BACK** the information provided, including the patient's medical record number and name to the reporter.
- The technologists/reporter will verify the information is correct.
- Both the reporter and the receiver must document the **READ BACK** verification procedure was carried out; date and time the report was received, badge number of the person providing/receiving the report.

IPSG 2- IMPROVE EFFECTIVE COMMUNICATION

- **Handovers of patient care:**
- During shift changes
- Between different levels of care
- From in-patient units to diagnostic units



IPSG 3-Improve the Safety of High-Alert Medications

- Medications that pose an increased risk of causing significant harm to patients if used in error.
- Independent double checks in handling is one of the safety measures.

- **Look alike & Sound alike**

IPSG 4- Ensure Correct-Site, Correct-Procedure, Correct-Patient Surgery

- UNIVERSAL PROTOCOL:

1.Marking the surgical site

2.Pre-operative verification

3. Time out

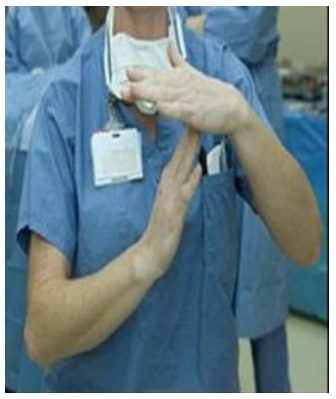
Marking the surgical site

- made by the **person performing the procedure** with a permanent skin marker.
- takes place with the patient **AWAKE and AWARE, if possible.**
- to be done in all cases involving laterality (right, left), multiple structures (fingers, toes, lesions) or multiple levels or region (spine).
- be done using an instantly recognizable mark (**ARROW**) that is consistent throughout the hospital.

TIME OUT – Pause with a purpose

- *full verification that is performed immediately prior to the induction of Anaesthesia or the start of an invasive procedure*
- the entire care team actively and verbally confirms:

- Patient's identity (two identifiers)
- Procedure to be performed
- Correct procedure side/site
- Necessary imaging, equipment, implants or special requirements are present



IPSG 5- Reduce the Risk of HAI

- 5 moments of hand hygiene
- Before patient contact
- Before aseptic task
- After body fluid exposure
- After patient contact
- After contact with patient surroundings

- Wash hands with soap and water when hands are visibly soiled.
- Use alcohol-based hand rub when hands are not visibly soiled

IPSG 6- Reduce the Risk of Patient Harm Resulting from Falls

- Upon initial admission assessment, Physicians should **screen Patient's Functional** status which include "FALL RISK".
- Functional Screening should be documented in the Physicians History and Physical form complimented by nurses' assessment.
- Communicate to nurses for implementation.

SUMMARY

Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia (with at least nurse and anaesthetist)	Before skin incision (with nurse, anaesthetist and surgeon)	Before patient leaves operating room (with nurse, anaesthetist and surgeon)
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Is the site marked? ☐ Yes ☐ Not applicable	☐ **Confirm the patient's name, procedure, and where the incision will be made.**	☐ Completion of instrument, sponge and needle counts ☐ Specimen labelling (read specimen labels aloud, including patient name) ☐ Whether there are any equipment problems to be addressed
Is the anaesthesia machine and medication check complete? ☐ Yes	**Has antibiotic prophylaxis been given within the last 60 minutes?** ☐ Yes ☐ Not applicable	**To Surgeon, Anaesthetist and Nurse:** ☐ What are the key concerns for recovery and management of this patient?
Is the pulse oximeter on the patient and functioning? ☐ Yes	**Anticipated Critical Events** **To Surgeon:** ☐ What are the critical or non-routine steps? ☐ How long will the case take? ☐ What is the anticipated blood loss?	
Does the patient have a: **Known allergy?** ☐ No ☐ Yes **Difficult airway or aspiration risk?** ☐ No ☐ Yes, and equipment/assistance available **Risk of >500ml blood loss (7ml/kg in children)?** ☐ No ☐ Yes, and two IVs/central access and fluids planned	**To Anaesthetist:** ☐ Are there any patient-specific concerns? **To Nursing Team:** ☐ Has sterility (including indicator results) been confirmed? ☐ Are there equipment issues or any concerns?	
	Is essential imaging displayed? ☐ Yes ☐ Not applicable	

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