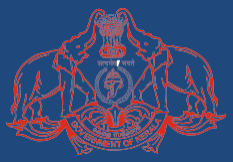


Medical near missed cases and errors –

Facts and solutions

KERALA.HEALTH

PREAMBLE

Patient safety is a fundamental pillar of quality healthcare. Medical errors and near misses remain significant contributors to preventable morbidity, mortality, prolonged hospital stay, and increased healthcare costs worldwide. While adverse events directly harm patients, near misses-events that could have caused harm but did not-offer invaluable opportunities for system learning and improvement.

Modern healthcare systems recognize that most errors arise not from individual negligence but from latent system failures, communication gaps, workflow inefficiencies, and human factors.
Establishing a robust framework for identifying, reporting, analysing, and preventing medical errors and near misses is therefore essential.

This booklet aims to provide a practical, implementable framework for healthcare institutions to strengthen patient safety culture, improve reporting mechanisms, and institute evidence-based preventive strategies. It is designed for adoption at tertiary care hospitals, medical colleges, district hospitals, and accredited healthcare facilities.

PREFACE

This is a different book and therefore the background of this book is narrated in the following paragraph! The idea of publishing such a book came while attending an event organized by the Association of Nurse Executive (India). There, I received a book titled Learning Ignited from Errors (A handbook on patient safety events). I appreciated the efforts taken by ANEi in publishing such a resource book. The book captures relevant case studies, positive outcomes, errors encountered and important lessons learned from day-to-day work. The noticeable fact is that the Nurses acknowledged that there are certain mistakes happened inadvertently and need more attention to avoid repeat of such instances in future. It requires bold and honest approach for doing capacity building. The book reflects the efforts of the nursing sector to excel.

Later, I discussed this idea of documenting easy-to-resolve errors and the methodology to avoid them with my colleagues. Even after repeated discussions there was a lukewarm response. It took time for them to realize the importance of doing such a document. World over, countries have been taking strong efforts to minimize mistakes and to bring 'never events' to an end. Researchers have conducted studies to understand and quantify problems encountered in day-to-day work. WHO, NHS and many other global health organizations have done extensive work on this area. After the desk review, everyone realized the value of such a document and so the work started.

Evidence based interventions form an integral part of medical science. Therefore, it is important to understand the work flows, examine and re-examine the same again and again to find out areas of improvement. The team has taken efforts to collate such instances and study them in depth. Each case study is presented as follows

- An abstract issue
- Errors occurred
- Positive outcome learned
- Lessons learned - for the participants/ for the trainer/ for the administration ■
- Dos
- ■ Don'ts

It is our endeavour to elucidate responses from the functionaries, encourage discussion among the individual teams in the Hospitals to take continuous quality improvement interventions, develop standard work flows and scrupulously follow the SOPs.

I take this opportunity to appreciate efforts taken by Dr Ravi and his team in preparation of this book and all those who contributed the cases studies. One more noteworthy aspect of this exercise is Dr Ravi has involved UG / PG students also. The members who participated will always remember that they had assisted for such an initiative and imbibe the most important aspect that SOPs are for following 100% and not merely to produce the nice looking flow charts and documents! This is the way we need to build the culture of respecting the SOPs and practice accordingly.

I wish all the success.

Dr Rajan Khobragade IAS
Addl Chief Secretary
Health & Family Welfare
Govt of Kerala

The delivery of safe and effective healthcare rests not only on clinical expertise but also on the ability of a system to learn, adapt, and improve from its own experiences. Among these experiences, near misses and medical errors-often unrecognized or underreported-offer some of the most powerful insights for strengthening patient safety. This volume is a timely and commendable effort to systematically capture such instances and translate them into practical learning for the healthcare community.

This initiative reflects the visionary leadership of **Dr. Rajan Khobragade,** Additional Chief Secretary, Health and Family Welfare, whose unwavering emphasis on patient safety, accountability, and system-based improvement has provided the foundation for such meaningful work. His encouragement to document, analyse and learn from everyday clinical realities has been instrumental in shaping this effort.

I would like to place on record my appreciation for **Dr. Ravindran C**, the editor of this volume, whose dedication and commitment have brought this important work to fruition. The meticulous compilation of case scenarios, identification of system gaps, and articulation of preventive strategies reflect both clinical insight and academic rigor. This work stands as a model for how reflective practice can be translated into actionable guidance.

Equally noteworthy is the active involvement of young doctors and medical students, whose enthusiasm and openness to learning have significantly enriched this document. Their participation underscores an important shift in medical education-towards fostering a culture that encourages questioning, critical analysis, and continuous quality improvement. Engaging trainees in such initiatives not only strengthens their clinical acumen but also instills the principles of patient safety early in their professional journey.

In a healthcare system that is often heavily burdened, the occurrence of micro-errors is inevitable. However, it is the recognition, analysis, and prevention of these errors that define the maturity and resilience of the system. This document serves as a practical guide to identifying common pitfalls and preparing healthcare teams to mitigate them through structured approaches, adherence to protocols, and effective communication.

I am confident that this work will serve as a valuable resource for clinicians, administrators, and trainees alike. More importantly, it will contribute to building a culture where learning from near misses is institutionalized, and patient safety becomes an integral part of everyday practice.
I commend the entire team for this sincere and impactful effort and wish this publication wide acceptance and meaningful implementation across healthcare institutions.

Dr. Viswanathan K V
Director of Medical Education
Kerala

In the complex and demanding ecosystem of healthcare delivery, perfection is aspired to, but human and system vulnerabilities inevitably coexist. Within this reality lie "near misses" - silent warnings that often go unnoticed, yet hold invaluable lessons. This book is an earnest attempt to bring those moments to light, to learn from them, and to transform them into opportunities for safer, more resilient patient care.
The inspiration for this work stems from the vision and guidance of Dr. Rajan Khobragade, Additional Chief Secretary, Health and Family Welfare, whose emphasis on accountability, system strengthening, and patient safety instilled both the motivation and the sense of purpose required to undertake this compilation. His leadership has been instrumental in nurturing a culture where learning from errors is seen not as a weakness, but as a cornerstone of progress.

This effort is also deeply influenced by the enthusiasm and commitment of my junior colleagues - **Dr. Sumin Sulaiman, Dr. Soorya Gayathri P, Dr. Akhtar, Dr. Anagha Viswanath,** and many dedicated interns - whose active participation, clinical insights, and willingness to reflect critically on everyday practices have enriched this work. Their engagement reflects the emergence of a new generation of clinicians who value transparency, continuous learning, and patient-centred care. I must also acknowledge the significant technological support provided by Adithya Chandran, whose contributions helped shape and structure this document into its present form.

I remain deeply indebted to **Dr. Viswanathan KV**, Director of Medical Education, for his unwavering support, guidance, and encouragement throughout this endeavour. His commitment to academic rigor and system improvement has been a constant source of strength.

This document is not merely a compilation of errors; rather, it is a guidance note - a practical reflection on where systems and individuals may falter, and more importantly, how such lapses can be anticipated and prevented. In a heavily burdened healthcare system, micro-errors are inevitable. However, when recognized early, they provide powerful insights into system gaps, communication failures, and process inefficiencies. This book represents a humble attempt to identify some of these recurring pitfalls and outline pragmatic avoidance strategies. It emphasizes preparedness, adherence to protocols, and the cultivation of a safety-oriented mindset across all levels of healthcare delivery.

Ultimately, the goal is to foster a culture where near misses are not ignored, but examined; where errors are not hidden, but discussed; and where every incident becomes a stepping stone toward safer patient care.

Dr Ravindran Chirukandath MS, DiNB, FRCS, FRCS
Professor of Surgery,
Medical college, Thrissur

List of contributors

Dr Ravindran C
Professor of Surgery,
Medical college, Thrissur

Dr Sumin V S
Assistant Professor of Surgery
Medical college, Thrissur

Dr Akhtar Zamil
Research Assistant
Medical college, Thrissur

Dr Ardra Narayanan
Resident
Medical college, Thrissur

Dr Anagha Viswanath
Resident
Medical college, Thrissur

Dr Anagha Ravi
Resident
Medical college, Thrissur

Dr Anzy Mol
Resident
Medical college, Thrissur

Dr Kevin
Resident
Medical college, Thrissur

Dr Mazin
Resident
Medical college, Thrissur

Dr Anagha Eldhos
Resident
Medical college, Thrissur

Dr Rahul Ravindran
Resident
Medical college, Thrissur

Dr Abhishek
Resident
Medical college, Thrissur

Dr Soorya Gayathri P
MBBS Student
Medical college, Thrissur

Adithya Chandran
MBBS Student
Medical college, Thrissur

Table of CONTENTS

INTRODUCTION

1. PURPOSE

- To standardize definitions and understanding of medical errors and near misses
- To promote a non-punitive patient safety culture
- To recommend actionable prevention strategies by highlighting ■ Dos and Don'ts
- To improve patient outcomes and healthcare quality

2. SCOPE

This book is an information eye opener to

- All healthcare professionals (medical, nursing, allied health)
- Administrative and quality teams
- Clinical and non-clinical departments
- Inpatient, outpatient, emergency, OT, ICU, and procedural area

3. DEFINITIONS

3.1 Medical Error

A preventable failure in the process of care that may cause or lead to inappropriate patient outcomes.

Examples:

- Wrong drug dose
- Wrong-site surgery
- Delay in diagnosis

3.2 Near Miss

An event that could have resulted in harm but did not, either by chance or timely intervention.

Examples:

- Wrong medication intercepted before administration
- Mislabelled specimen detected before processing
- Incorrect blood unit identified before transfusion

3.3 Adverse Event

An injury caused by medical management rather than the underlying disease.

3.4 Sentinel Event

A serious adverse event resulting in death, permanent harm, or severe temporary harm.

4. BURDEN AND FACTS (RATIONALE)

4.1 Key Facts

- A significant proportion of hospital adverse events are preventable
- Near misses occur far more frequently than reported errors
- Medication errors remain the most common category
- Communication failures contribute to a large share of serious events
- Surgical and ICU environments are high-risk settings

4.2 Common Types of Errors

- Medication errors
- Diagnostic errors
- Surgical/procedural errors
- Transfusion errors
- Communication failures
- Documentation errors
- Equipment-related errors

5. CORE DOMAINS

These domains form the backbone of any patient safety guideline.

Domain 1: Governance and Safety Culture

Domain 2: Incident Reporting System

Domain 3: Human Factors and Workforce

Domain 4: Communication and Handover

Domain 5: Medication Safety

Domain 6: Diagnostic Safety

Domain 7: Procedural and Surgical Safety

Domain 8: Equipment and Technology Safety

Domain 9: Infection Prevention and Control

Domain 10: Patient Identification and Documentation

II. DEPARTMENT-WISE COMMON NEAR MISSES AND ERRORS

1. Emergency Department

High-Risk Issues

- Triage misclassification
- Delayed recognition of critical illness
- Wrong drug in resuscitation
- Missed trauma injuries
- Handover gaps during shift change
- Overcrowding-related errors

2. Operation Theatre Complex

Common Near Misses

- Wrong site marking absent
- Checklist skipped
- Instrument count mismatch
- Specimen labelling errors
- Sterility breaches
- Equipment not ready

3. Intensive Care Unit

Common Issues

- Ventilator setting errors
- Line/tube misplacement
- Drug infusion errors
- Device-associated infections

4. Inpatient Wards

Common Issues

- Medication timing errors
- Missed vitals deterioration
- Fall risk not identified
- Pressure injury development
- Poor handover
- Incomplete notes

5. Obstetrics and Labour Room

High-Risk Areas

- CTG misinterpretation
- Delay in decision-to-incision
- PPH preparedness gaps
- Wrong drug (oxytocin errors)
- Neonatal resuscitation delays

6. Paediatrics and Neonatal Units

Common Issues

- Weight-based dosing errors
- IV fluid miscalculations
- Identification errors in neonates
- Thermoregulation failures
- Feeding errors

7. Laboratory Services

Common Near Misses

- Wrong sample labelling
- Haemolyzed samples processed
- Critical values not communicated
- Sample transport delays
- Report entry errors

8. Blood Bank and Transfusion

High-Risk Issues

- Wrong blood in tube (WBIT)
- Crossmatch errors
- Transfusion without checklist
- Reaction monitoring gaps

9. Pharmacy

Common Issues

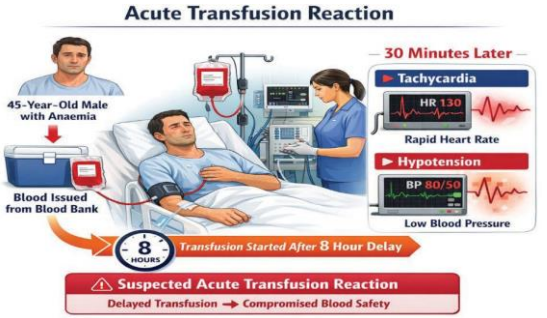
- LASA drug dispensing
- Look-alike packaging
- Expired stock
- Storage errors and Wrong concentration

SPECIFIC ISSUES FACTS AND SOLUTIONS

01. DELAYED BLOOD TRANSFUSION

Abstract issue with example

A 45-year-old male patient with anaemia planned for a blood transfusion. Blood was transfused 8 hours after being issued from blood bank. Half an hour later, patient had tachycardia and hypotension



Department - General medicine, Surgery

Domain of address - Psychomotor skills, Communication gaps

ERRORS OCCURRED

- Significant delay (8 hours) between issue of blood and initiation of transfusion.
- Blood likely kept outside recommended storage conditions, increasing risk of contamination and reaction.
- Failure in coordination between ward staff and treating team regarding readiness for transfusion.
- Lack of awareness or non-adherence to transfusion protocols (initiation and completion timelines).
- Absence of alert system or tracking mechanism after blood was issued.
- Inadequate pre-transfusion preparation of the patient.
- Possible deficiency in patient monitoring protocol adherence during transfusion.

POSITIVE OUTCOMES LEARNED

- Early recognition of tachycardia and hypotension allowed prompt suspicion of transfusion reaction.
- Immediate response and stoppage of transfusion prevented further deterioration.
- Highlighted the importance of strict adherence to transfusion timing protocols.
- Brought attention to communication gaps between blood bank, ward staff, and treating team.
- Encouraged implementation of alert systems and structured transfusion workflows.
- Provided an opportunity to strengthen transfusion safety practices and training.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	*(Consultants, Faculty, Supervisors)*	
• ***Blood should be transfused within 30 minutes of issue and completed within 4 hours.*** • ***Ensure patient readiness before requesting blood from the blood bank.*** • ***Maintain proper coordination with nursing staff regarding blood arrival.*** • ***Monitor patients closely during the first hour of transfusion.*** • ***Be vigilant for early signs of transfusion reactions (tachycardia, hypotension, fever, chills).*** • ***Follow strict identification and verification protocols before transfusion.*** • ***Communicate clearly with patient and bystanders regarding warning symptoms.***	• ***Conduct regular training sessions on transfusion protocols and safety.*** • ***Emphasize importance of timing and storage conditions of blood products.*** • ***Encourage case-based discussions on transfusion reactions and near misses.*** • ***Reinforce checklist-based transfusion practices during ward rounds.*** • ***Promote a culture of safety and incident reporting without blame.*** • ***Audit transfusion practices periodically in the department.***	• ***Implement standard transfusion protocols across all wards.*** • ***Introduce alert/notification systems when blood is issued from the blood bank.*** • ***Ensure availability of trained staff for transfusion monitoring.*** • ***Conduct regular competency-based training programs.*** • ***Strengthen coordination between blood bank and clinical departments. Establish incident reporting and quality improvement systems for transfusion-related events.***

■ Dos

- Inform the ward nurse beforehand about the blood transfusions to be performed in the ward so they can inform u when the issued blood comes
- An Alarm can be set up for alerting the arrival of the blood to ward and also to Transfuse
- Follow the protocol that says the issued blood has to be transfused within 4 hours
- Monitor the patient for the first hour of transfusion
- Counsel the patient and bystanders about the warning signs of a blood transfusion reaction
- Proper communication to be established with patient

■ Don'ts

- Don't Keep Blood at Room Temperature for Long
- Don't Store Blood in Ward Refrigerators
- Don't Delay Patient Preparation
- Don't Start Transfusion Without Proper Identification

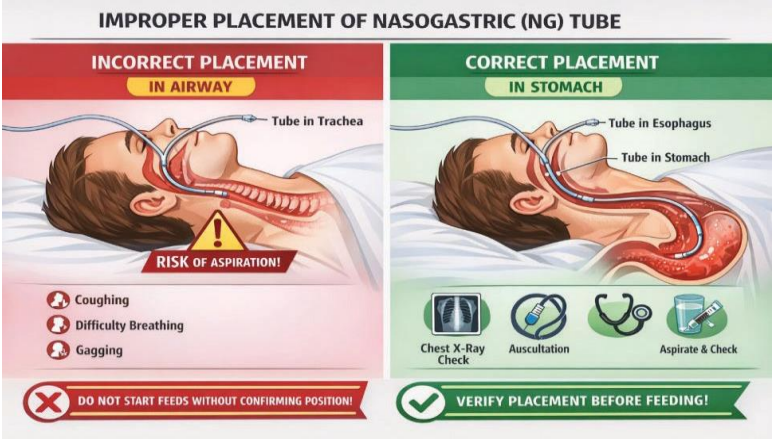
02. IMPROPER PLACEMENT OF NASOGASTRIC TUBE

Abstract issue with example

A male patient posted for abdominal surgery, advised a RT insertion. The doctor inserted a RT tube and the tube was later found to be in the airway

Department - All possible departments

Domain of address - procedural skills



ERRORS OCCURRED

- Incorrect placement of the nasogastric tube into the airway.
- Failure to confirm tube position adequately before use.
- Over-reliance on inadequate confirmation methods (e.g., auscultation alone).
- Lack of adherence to standard insertion and verification protocols.
- Possible inexperience or improper technique during insertion.
- Failure to escalate or cross-check when in doubt.
- Risk of starting feeds without confirmation, which could have led to serious complications.

POSITIVE OUTCOMES LEARNED

- The error was identified before feeding, preventing a major adverse event.
- Highlighted the importance of proper verification of NG tube placement.
- Reinforced the need for standardized protocols for tube insertion and confirmation.
- Increased awareness regarding limitations of bedside methods like auscultation.
- Encouraged use of objective confirmation methods such as chest X-ray.

- Provided an opportunity to improve procedural training and supervision.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• *Always confirm NG/RT tube placement before use.* • *Do not rely solely on auscultation ("whoosh test"), as it can be misleading.* • *Use objective methods such as chest X-ray when in doubt or in high-risk patients.* • *Ensure proper patient positioning (neck flexion, chin to chest) during insertion.* • *Ask the patient to swallow during insertion to facilitate correct placement.* • *Be alert for signs of airway placement (coughing, respiratory distress, inability to speak).* • *Always seek senior help if difficulty or doubt arises.* • *Document procedure details and confirmation method clearly.*	• *Provide hands-on training and demonstrations for NG tube insertion.* • *Emphasize safe confirmation techniques and limitations of traditional methods.* • *Encourage simulation-based training for procedural skills.* • *Supervise junior staff during initial procedures.* • *Promote checklist-based procedural practice.* • *Discuss near-miss cases in teaching sessions to improve awareness.*	• *Develop and implement standard protocols for NG tube insertion and confirmation.* • *Ensure availability of imaging facilities (X-ray) for confirmation when required.* • *Conduct regular skill-based training programs for staff.* • *Introduce procedure checklists and documentation formats.* • *Encourage incident reporting and quality improvement initiatives.* • *Ensure adequate supervision in high-risk procedures*

■ Dos

- Confirm the position of the RT tube using a stethoscope
- Ask the patient to swallow the tube as we insert the tube
- Position the patient properly, chin touching the chest
- Crosscheck with seniors when in doubt
- Chest Xray can be used to confirm the position

■ Don'ts

- Don't give RT feeds before ascertaining the position
- Do not attempt RT insertion without proper lubrication

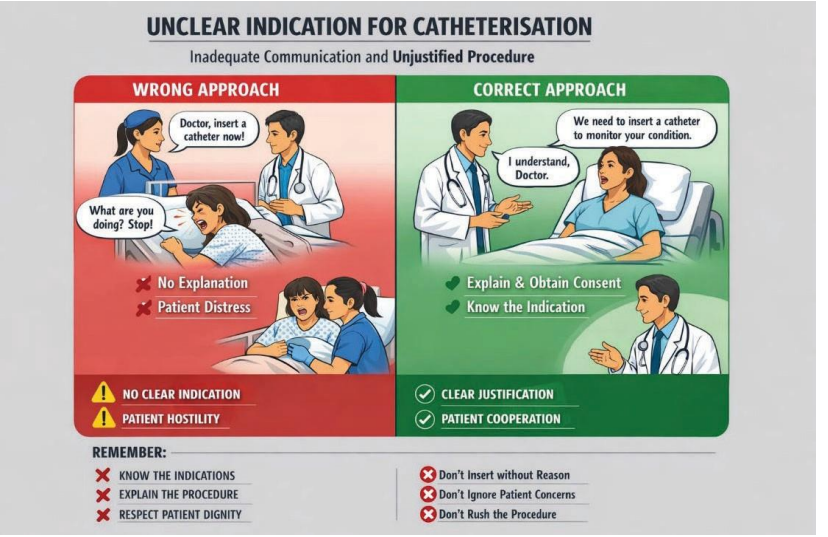
03. IMPROPER PLACEMENT OF NASOGASTRIC TUBE

Abstract issue with example

A female no bystander patient who was irritable urinated on the floor in the ward. The ward nurse called the duty doctor informing her about a urinary catheterization for this patient. The patient became hostile towards the doctor while attempting urinary catheterization

Department: General medicine

Domain of address: misbehaviour of nurses, lack of awareness on behalf of the doctor



ERRORS OCCURRED

- Catheterisation attempted without clear medical indication.
- Inadequate clinical assessment prior to deciding the procedure.
- Failure to communicate with the patient regarding need and consent.
- Over-reliance on nursing request without independent clinical judgment.
- Lack of awareness regarding appropriate indications for urinary catheterisation.
- Inadequate handling of an irritable/uncooperative patient.
- Potential violation of patient dignity and autonomy.

POSITIVE OUTCOMES LEARNED

- Reinforced need for clear indication before invasive procedures
- Improved doctor–patient communication and consent practices
- Increased awareness of ethics and patient autonomy
- Strengthened independent clinical decision-making
- Promoted education and teamwork among staff

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Confirm indication before catheterisation*** • ***Use only for valid reasons (e.g., retention, critical monitoring, perioperative use)*** • ***Avoid use for convenience*** • ***Always explain and obtain consent*** • ***Maintain dignity, privacy, and comfort*** • ***Practice independent judgment*** • ***Handle patients with empathy and patience***	• ***Teach indications and contraindications clearly*** • ***Emphasize ethics and consent*** • ***Encourage communication skills*** • ***Reinforce clinical judgment over convenience*** • ***Use case-based discussions*** • ***Promote team-based learning***	• ***Establish guidelines for catheter use*** • ***Conduct regular training programs*** • ***Ensure documentation of indication*** • ***Promote patient rights and dignity*** • ***Implement audit systems*** • ***Strengthen interprofessional communication***

■ Dos

- Always know the indication before going forward with the procedure
- The ward nurses should also be educated about the indications
- Explain the need for the procedure to the patient before doing

■ Don'ts

- Don't catheterise without **clear indication**
- Don't skip **clinical assessment**
- Don't proceed without **consent**

04. DELAYED INTERVENTION IN PNEUMOTHORAX

Abstract issue with example

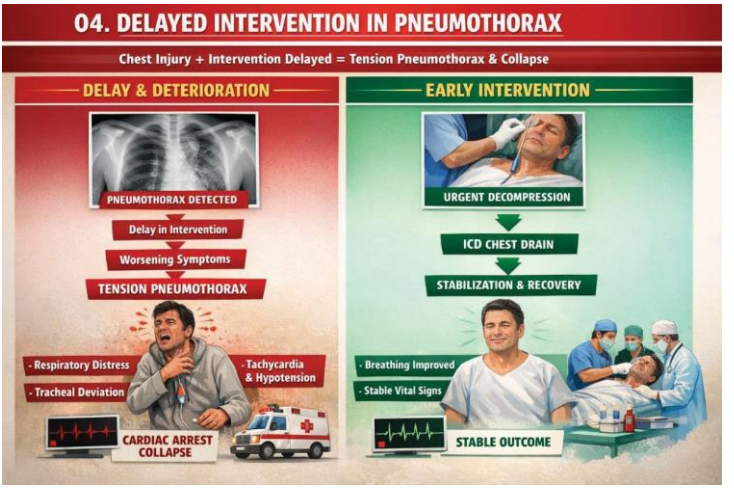
A 32-year-old male patient presented to the emergency department after a road traffic accident with complaints of chest pain and breathlessness. Chest X-ray confirmed a right-sided pneumothorax. However, due to communication gaps and delay in arranging equipment, intercostal chest drain (ICD) insertion was performed 6 hours later. During the waiting period, the patient developed worsening respiratory distress, tachycardia, hypotension, and signs suggestive of tension pneumothorax.

Departments involved: General Medicine, General Surgery, Emergency Medicine

Domain of Address:

Psychomotor skills (ICD insertion technique, emergency decompression)

Communication gaps (delay in informing seniors, delay in arranging equipment, poor monitoring)



ERRORS OCCURRED

- Delay in performing ICD insertion despite confirmed pneumothorax.
- Failure to recognize progression toward tension pneumothorax early.
- Delay in informing senior clinicians and trauma/emergency team.
- Unavailability or delayed arrangement of necessary equipment.

- Inadequate monitoring of vital signs during the waiting period.
- Lack of emergency preparedness and prioritization of a life-threatening condition.
- Poor coordination between departments and staff.

POSITIVE OUTCOMES LEARNED

- Highlighted the time-sensitive nature of pneumothorax management.
- Reinforced the importance of early recognition of tension pneumothorax signs.
- Emphasized need for rapid decision-making and immediate intervention.
- Improved awareness regarding emergency readiness and equipment availability.
- Encouraged better communication and escalation protocols in emergency settings.
- Provided an opportunity to strengthen training in life-saving procedures like needle decompression and ICD insertion.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Recognize that pneumothorax is a potentially life-threatening condition requiring urgent action.*** • ***Be vigilant for signs of tension pneumothorax:*** • ***Increasing breathlessness*** • ***Tachycardia*** • ***Hypotension*** • ***Tracheal deviation (late)*** • ***Do not wait for deterioration—intervene early.*** • ***Perform emergency needle decompression if tension pneumothorax is suspected.*** • ***Ensure timely ICD insertion once diagnosis is confirmed.*** • ***Monitor vital signs continuously in unstable patients.*** • ***Escalate promptly to senior doctors and surgical teams.*** • ***Ensure equipment readiness before initiating management***	• ***Conduct hands-on training for emergency procedures (ICD insertion, needle decompression).*** • ***Emphasize early recognition and management of life-threatening chest injuries.*** • ***Use simulation-based training for emergency scenarios.*** • ***Reinforce importance of rapid decision-making and escalation.*** • ***Review such cases in morbidity and mortality meetings.*** • ***Encourage adherence to trauma protocols (e.g., ATLS principles).***	• ***Ensure availability of emergency equipment (ICD sets, needles) at all times in ER.*** • ***Develop standard protocols for management of pneumothorax and trauma cases.*** • ***Conduct regular emergency drills and training programs.*** • ***Improve communication systems within emergency departments.*** • ***Maintain readiness of trauma teams and rapid response systems.*** • ***Implement audit and quality improvement measures for emergency care delays.***

Dos

- Early Recognition
- Assess ABC
- Immediate Communication
- Follow Protocol: Immediate needle decompression - Insert Intercostal Chest Drain (ICD) under aseptic precautions as per guidelines.
- Repeat chest X-ray after ICD insertion.

Donts

- Do not delay intervention in suspected tension pneumothorax waiting for imaging.
- Do not insert ICD without proper anatomical landmark identification.
- Do not leave patient unmonitored after diagnosis.
- Do not clamp chest tube unnecessarily.
- Do not ignore sudden hypotension or increased respiratory distress after tube insertion.
- Do not fail to escalate care if the patient deteriorates.

05. PARAPHIMOSIS DUE TO IMPROPER URINARY CATHETERISATION

Abstract issue with example

A middle-aged male patient requiring urinary catheterization underwent the procedure after retraction of the foreskin to visualize the urethral meatus. Following successful catheter insertion, the foreskin was not repositioned over the glans penis. Within a few hours, the patient developed painful swelling of the glans with edema and discoloration, consistent with paraphimosis.

Department All

ERRORS OCCURRED

- Failure to reposition the foreskin after catheterisation.
- Lack of post-procedure inspection before leaving the bedside.
- Inadequate awareness regarding paraphimosis as a complication.
- Failure to document foreskin status after the procedure.
- Absence of a checklist-based approach to catheterisation.
- Delay in recognition of early signs of paraphimosis.
- Inadequate training and supervision of junior staff.

POSITIVE OUTCOMES LEARNED

- Highlighted the importance of post-procedure steps in preventing complications.
- Increased awareness regarding paraphimosis as a preventable iatrogenic complication.
- Reinforced the need for structured procedural checklists.

- Encouraged better documentation practices.
- Provided an opportunity to educate staff on simple yet critical steps in routine procedures.
- Improved vigilance for early detection and management of complications.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always reposition foreskin after catheterisation*** • ***Perform post-procedure inspection*** • ***Watch for paraphimosis signs (pain, swelling, discoloration)*** • ***Recognize it as a urological emergency*** • ***Follow a checklist-based approach*** • ***Ensure proper documentation***	• ***Emphasize complete procedure + post-care*** • ***Conduct skill-based training*** • ***Highlight preventable complications*** • ***Promote checklist-based teaching*** • ***Include in M&M discussions*** • ***Ensure supervision of juniors***	• ***Implement standard protocols and checklists*** • ***Make foreskin reposition documentation mandatory*** • ***Conduct regular training programs*** • ***Encourage incident reporting*** • ***Ensure adequate supervision*** • ***Promote patient safety culture***

■ Dos

- Always reposition the foreskin over the glans immediately after urethral catheterization.
- Inspect the penis post-procedure before leaving the bedside.
- Document foreskin status after catheterization in the case sheet.
- Monitor the patient for early signs of paraphimosis: Pain, Swelling of glans Discoloration
- Educate interns and nursing staff regarding the risk of paraphimosis.
- Make "foreskin reduced" a mandatory final step in the catheterization checklist.

■ Don'ts

- Don't leave foreskin unreduced after catheterisation
- Don't skip post-procedure inspection
- Don't ignore early signs of paraphimosis
- Don't delay management of suspected paraphimosis

06. IMPROPER CVA MANAGEMENT

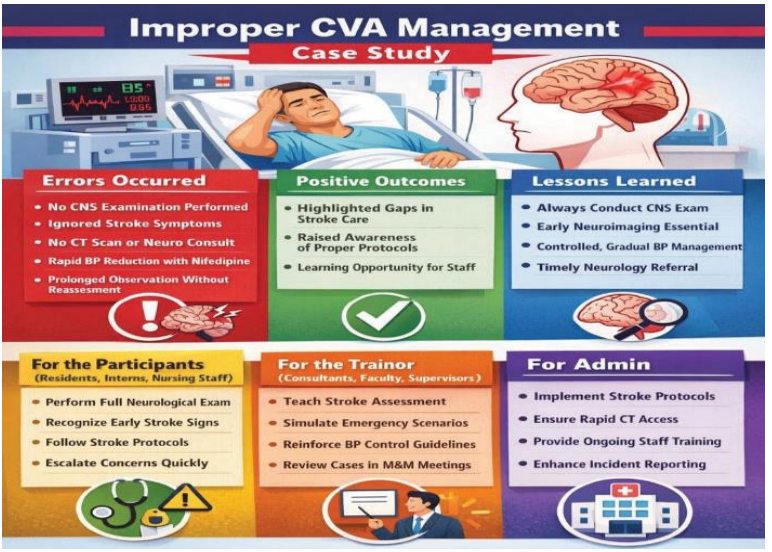
Abstract issue with example

A 55-year-old male patient presented to the casualty with complaints of severe headache. His blood pressure was recorded as 210/100 mmHg. He was a known case of systemic hypertension and type 2 diabetes mellitus. The patient was examined by the doctor and started on paracetamol infusion and sublingual nifedipine 10 mg. An ECG was performed, which showed sinus rhythm with left ventricular hypertrophy. After 45 minutes, his blood pressure was reassessed and had reduced to 180/90 mmHg. The patient was then kept under observation. However, a detailed central nervous system (CNS) examination was not performed, and no CT scan or neurology consultation was obtained.

After 4 hours, the patient developed weakness in both upper and lower limbs, and his blood pressure again increased to 220/100 mmHg.

Department: casualty and clinics

Domain of address: lack of CNS examination



ERRORS OCCURRED

- Failure to perform detailed central nervous system (CNS) examination at presentation
- No consideration of cerebrovascular accident (CVA) despite severe headache and high BP
- Absence of neuroimaging (CT scan) and neurology consultation

- Inappropriate initial focus on symptomatic BP reduction without identifying underlying cause
- Use of sublingual nifedipine, which can cause rapid BP fluctuations
- Patient kept under prolonged observation without reassessment of neurological status
- Delay in diagnosis leading to progression of neurological deficit
- Lack of structured stroke protocol activation in casualty

POSITIVE OUTCOMES LEARNED

- Early presentation of the patient to hospital provided a window for potential intervention
- Initial monitoring allowed recognition of BP fluctuations
- Event highlighted critical gaps in emergency stroke assessment
- Opportunity created for improving stroke management protocols
- Case serves as an important teaching model for emergency care teams

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always perform and document a complete CNS examination in hypertensive emergencies*** • ***Recognize early warning signs of stroke:*** • ***Severe headache*** • ***Weakness in limbs*** • ***Altered sensorium*** • ***Monitor patients closely for neurological deterioration*** • ***Follow stroke protocol including early imaging and escalation*** • ***Avoid inappropriate or rapid BP reduction methods*** • ***Ensure timely communication with senior doctors***	• ***Emphasize importance of neurological assessment in emergency settings*** • ***Train staff on early identification and management of stroke*** • ***Reinforce adherence to standard stroke protocols*** • ***Conduct simulation-based training for emergency scenarios*** • ***Highlight risks of improper BP management practices*** • ***Encourage case discussions in morbidity and mortality meetings***	• ***Implement standard stroke management protocols in casualty and wards*** • ***Ensure availability of CT scan and rapid imaging pathways*** • ***Mandate documentation of CNS examination in emergency cases*** • ***Organize regular training programs on stroke management*** • ***Promote multidisciplinary coordination between emergency, medicine, and neurology departments*** • ***Establish systems for early referral and escalation*** • ***Encourage incident reporting and audit mechanisms to prevent recurrence***

■ Dos

- Thrombolysis
- Anti platelet therapy
- Anticoagulation
- Bp management
- Statins
- Free of salt diet

■ Don'ts

- Don't Overexert the Patient Early On
- Don't Mobilize Without Medical Stability
- Don't Ignore Proper Positioning
- Don't keep pt in long observation

07. URETERIC INJURY IN PELVIC SURGERY

Abstract Issue with example

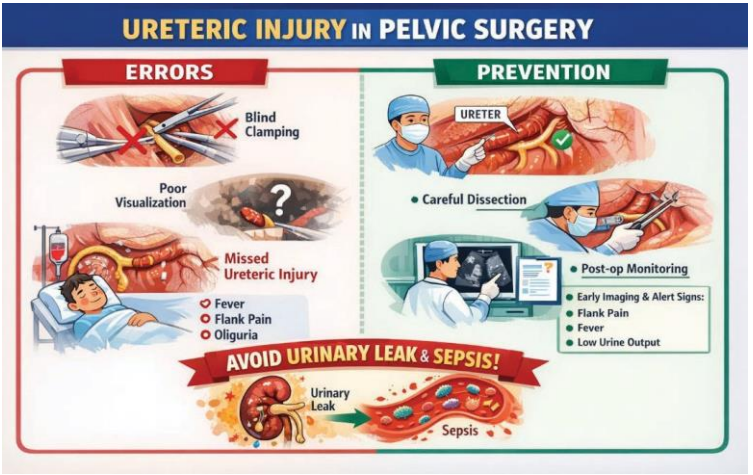
A middle-aged female underwent pelvic surgery for a Gynecological / colorectal condition. Postoperatively, the patient developed flank pain, fever, reduced urine output, and prolonged ileus. Imaging later revealed a **ureteric injury** that had gone unrecognized intraoperatively, leading to urinary leak and sepsis. Delay in diagnosis resulted in the need for secondary intervention and prolonged hospital stay.

Departments Involved

- General Surgery
- Obstetrics & Gynaecology
- Urology

Domain of Address

- Procedural (psychomotor) skills
- Anatomical knowledge
- Intraoperative vigilance
- Communication and documentation



ERRORS OCCURRED

- Failure to identify and visualize the ureter intraoperatively before ligation or dissection
- Lack of adequate intraoperative vigilance during pelvic surgery

- Possible blind clamping or dissection in areas of distorted anatomy
- Inadequate recognition of intraoperative warning signs of ureteric injury
- Absence of intraoperative urology consultation despite potential risk
- Poor or incomplete documentation of ureter identification and protection
- Delay in recognizing postoperative symptoms suggestive of ureteric injury
- Delay in diagnostic imaging (USG/CT urography)
- Resultant urinary leak, sepsis, and need for secondary intervention

POSITIVE OUTCOMES LEARNED

- Ureteric injury was eventually identified and diagnosed
- Appropriate secondary intervention was performed
- Complication provided an opportunity for multidisciplinary involvement (Surgery, OBG, Urology)
- Case contributed to awareness regarding preventable intraoperative injuries
- Highlighted the importance of early postoperative monitoring and escalation

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always ensure clear identification of ureter during pelvic procedures*** • ***Avoid blind clamping or ligation in the pelvic region*** • ***Recognize high-risk situations such as adhesions, malignancy, or prior surgery*** • ***Monitor patients closely for postoperative signs:*** • ***Flank pain*** • ***Fever*** • ***Reduced urine output*** • ***Hematuria*** • ***Promptly report abnormalities to senior team members*** • ***Maintain accurate and detailed documentation***	• ***Emphasize anatomical knowledge and surgical landmarks during training*** • ***Provide hands-on skill training in pelvic dissection techniques*** • ***Reinforce importance of intraoperative identification of ureter*** • ***Encourage early involvement of urology in complex cases*** • ***Conduct case-based discussions and morbidity & mortality meetings*** • ***Ensure close supervision of trainees during high-risk procedures***	• ***Develop and implement standard operating protocols (SOPs) for pelvic surgeries*** • ***Ensure availability of urology support and interdepartmental coordination*** • ***Promote preoperative risk stratification systems*** • ***Conduct regular training programs on surgical safety and complication prevention*** • ***Encourage incident reporting and audit mechanisms*** • ***Strengthen documentation policies and medico-legal awareness*** • ***Ensure access to timely imaging facilities (USG/CT urography)***

Dos

- Always identify and visualize the ureter before ligation, clamping, or division of pelvic structures.
- Maintain adequate surgical exposure and illumination during pelvic dissection.
- Use gentle tissue handling and avoid blind clamping, especially near the pelvic brim and uterosacral region.
- Consider preoperative ureteric stenting in high-risk cases (distorted anatomy, malignancy, re-operative pelvis, prior radiation).
- Be alert to intraoperative warning signs such as unexpected bleeding, loss of ureteric peristalsis, or unclear anatomy.
- If ureteric injury is suspected intraoperatively, seek urology consultation immediately.
- Document intraoperative findings and steps taken to identify and protect the ureter.
- Monitor postoperatively for flank pain, fever, oliguria, hematuria, or unexplained sepsis.

Donts

- Do not perform blind clamping, ligation, or cauterization in the pelvic field.
- Do not ignore distorted anatomy due to adhesions, malignancy, or inflammation.
- Do not proceed without senior assistance when ureteric anatomy is unclear.
- Do not dismiss postoperative flank pain, fever, or rising creatinine as routine.
- Do not delay imaging (USG/CT urography) when ureteric injury is suspected.
- Do not fail to inform the patient and relatives promptly if an intraoperative injury occurs

08. INADEQUATE PAIN CONTROL

Abstract Issue with example

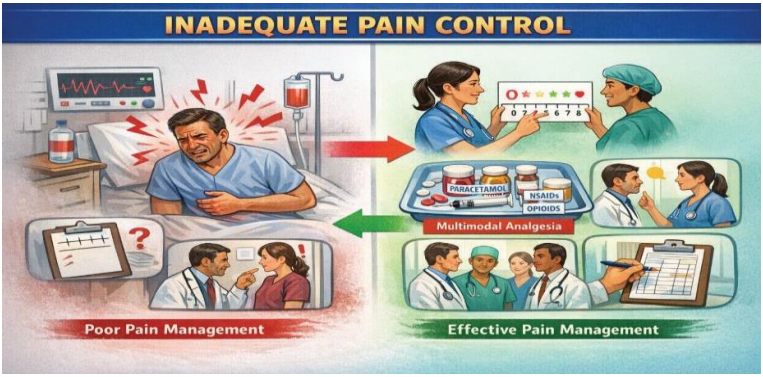
A postoperative patient complained repeatedly of severe pain despite routine analgesic prescriptions. Pain scores were not formally assessed or documented, and escalation of analgesia was delayed. The patient became anxious, tachycardic, hypertensive, and non-compliant leading to delayed recovery and dissatisfaction. The issue later escalated to a formal complaint alleging neglect of pain management.

Departments Involved

- General Surgery
- Anaesthesiology
- Orthopaedics
- General Medicine
- Emergency Medicine

Domain of Address

- Cognitive skills (pain assessment and decision-making)
- Communication gaps
- Monitoring and documentation
- Multidisciplinary coordination



ERRORS OCCURRED

- Failure to perform systematic pain assessment using validated pain scales
- Lack of documentation of pain scores and reassessment findings
- Delay in escalation of analgesia despite persistent severe pain
- Over-reliance on routine analgesic prescriptions without individualization

- Ignoring repeated patient complaints of pain
- Inadequate monitoring of patient response to analgesics
- Poor communication during handover regarding pain status
- Lack of multidisciplinary involvement, especially delayed anaesthesiology/pain team consultation
- Underestimation of pain leading to patient anxiety, tachycardia, hypertension, and non-compliance

POSITIVE OUTCOMES LEARNED

- Issue highlighted the importance of pain as an important vital sign
- Prompted review and improvement of pain management protocols
- Increased awareness regarding patient-centered care and comfort
- Encouraged better documentation and monitoring practices
- Provided opportunity for interdepartmental coordination and learning
- Reinforced the role of early escalation and specialist involvement

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• *Always assess pain using validated scales (VAS/NRS) and document findings* • *Reassess pain after every intervention* • *Report uncontrolled pain promptly to seniors* • *Follow stepwise analgesic protocols and avoid delays in escalation* • *Monitor for side effects of analgesics* • *Educate patients to report pain early and clearly* • *Ensure proper handover of pain status during shift changes*	• *Emphasize importance of pain assessment and documentation* • *Train staff in multimodal pain management strategies* • *Encourage case-based discussions and audits on pain control* • *Reinforce early escalation and multidisciplinary approach* • *Supervise and guide juniors in individualizing analgesic therapy* • *Promote patient-centered care practices*	• *Implement standard pain management protocols and guidelines* • *Make pain scoring a mandatory vital parameter in all patients* • *Ensure availability of analgesics and pain management resources* • *Facilitate regular training programs on pain management* • *Promote multidisciplinary pain teams (including anaesthesiology)* • *Strengthen documentation and audit systems* • *Encourage patient feedback and grievance redressal mechanisms*

Dos

- Assess pain systematically using validated pain scales and document findings.
- Reassess pain at regular intervals, especially after administering analgesics.
- Follow a stepwise, multimodal analgesia protocol (paracetamol, NSAIDs, opioids, adjuvants).
- Escalate analgesia promptly when pain is uncontrolled and seek anaesthesia/pain team consultation early.
- Individualize pain management based on patient factors (age, comorbidities, renal function).
- Educate the patient and bystanders that pain control is a priority and encourage early reporting.
- Monitor for side effects of analgesics (respiratory depression, nausea, renal dysfunction).
- Ensure clear handover regarding pain status during shift changes.
- Document all assessments, interventions, and patient responses clearly.

Donts

- Do not assume pain is “expected” or “tolerable” after surgery.
- Do not rely solely on orders without reassessment.
- Do not ignore repeated complaints of pain from the patient or relatives.
- Do not delay escalation due to fear of side effects without proper evaluation.
- Do not administer analgesics without considering contraindications.
- Do not fail to document pain scores and response to treatment.

09. WRONG PATIENT / WRONG SITE / WRONG PROCEDURE

Abstract Issue with example

A patient was taken to the operating theatre for a planned surgical procedure. Due to inadequate verification of patient identity and surgical site, the procedure was initiated on the wrong patient / wrong anatomical site / wrong procedure. The error was identified only after the incision, resulting in preventable harm, emotional distress to the patient and family, and serious medico-legal consequences for the healthcare team and institution.

Departments Involved

- All Surgical Specialties
- Anaesthesiology
- Operation Theatre Staff

Domain of Address

- Cognitive errors
- Communication failures
- Team coordination and checklist compliance
- Documentation lapses

ERRORS OCCURRED

- Failure to verify patient identity using standard identifiers
- Lack of proper cross-checking between consent form, case sheet, and planned procedure
- Absence or improper preoperative site marking

- Failure to conduct a formal "Time-Out" before incision
- Poor communication among surgical, anaesthesia, and OT teams
- Non-adherence to WHO Surgical Safety Checklist
- Over-reliance on assumptions or memory
- Inadequate handover during patient transfer to OT
- Proceeding with surgery despite potential discrepancies

POSITIVE OUTCOMES LEARNED

- Error recognition highlighted critical gaps in patient safety practices
- Increased awareness of the importance of checklists and verification systems
- Opportunity to strengthen team communication and accountability
- Reinforced the role of multidisciplinary responsibility in patient safety
- Prompted review and implementation of standard operating protocols
- Helped initiate quality improvement and training programs

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always verify patient identity before any procedure*** • ***Cross-check consent, records, and procedure details carefully*** • ***Ensure site marking is present and correct*** • ***Actively participate in the Time-Out process*** • ***Speak up immediately if any discrepancy is noticed*** • ***Do not proceed with any step if uncertainty exists*** • ***Maintain clear and accurate documentation***	• ***Emphasize strict adherence to the WHO Surgical Safety Checklist*** • ***Reinforce the importance of Time-Out and site marking practices*** • ***Conduct simulation-based training on OT safety protocols*** • ***Encourage a culture where all team members can speak up*** • ***Supervise and ensure compliance during high-risk procedures*** • ***Include such cases in morbidity and mortality discussions***	• ***Implement and enforce mandatory WHO Surgical Safety Checklist protocols*** • ***Make Time-Out documentation compulsory before incision*** • ***Ensure availability of standardized consent and site-marking systems*** • ***Conduct regular training and audits on surgical safety practices*** • ***Promote a non-punitive reporting culture for near-misses and errors*** • ***Strengthen interdepartmental coordination and communication systems*** • ***Monitor compliance through quality assurance and patient safety committees***

Dos

- Strictly follow the WHO checklist for patient safety.
- Verify patient identity using at least two identifiers (name, hospital number, date of birth).
- Ensure procedure and site are clearly documented in the case sheet and consent form.
- Perform preoperative site marking by the operating surgeon with patient involvement whenever possible.
- Conduct a formal "Time-Out" in the operating theatre before incision, involving the entire team.
- Cross-check patient details, procedure, and site with:
- Consent form
- Case records
- Imaging reports
- Encourage all team members to speak up if any discrepancy is noticed.
- Ensure proper handover and communication during patient transfer to OT.
- Document completion of the surgical safety checklist.

Donts

- Do not rely on memory or assumptions regarding patient identity or procedure.
- Do not skip site marking, even in apparently "obvious" cases.
- Do not proceed if there is any mismatch between consent, records, and planned procedure.
- Do not perform surgery without a documented Time-Ou
- Do not ignore concerns raised by nursing or OT staff.
- Do not rush procedures due to time pressure or workload.

10. SURGICAL SITE INFECTIONS (SSI)

Abstract Issue with example

A patient underwent an elective surgical procedure with an initially uneventful postoperative course. By postoperative day three, the patient developed fever, wound pain, erythema, and purulent discharge from the surgical site. Review of records revealed lapses in perioperative antibiotic timing, breaks in aseptic technique during dressing changes, and inadequate postoperative wound monitoring. The patient required prolonged antibiotics, wound debridement, extended hospital stay, and later alleged medical negligence.

Departments Involved

- All Surgical Specialties
- Nursing Services
- Infection Control Committee

Domain of Address

- Aseptic and procedural skills
- Antibiotic stewardship
- Perioperative planning and monitoring
- Documentation and communication

ERRORS OCCURRED

- Delay or omission in administration of prophylactic antibiotics
- Incorrect timing of perioperative antibiotics
- Breaks in aseptic technique during surgery or dressing changes

- Inadequate sterilization of instruments or OT environment
- Poor postoperative wound monitoring and delayed recognition of infection
- Failure to document wound status and progression
- Inadequate patient and staff education on wound care
- Lack of infection control surveillance and reporting
- Suboptimal control of risk factors (glycaemia, temperature, oxygenation)

POSITIVE OUTCOMES LEARNED

- Early identification of SSI allowed timely intervention (antibiotics, debridement)
- Highlighted importance of infection prevention protocols
- Improved awareness regarding aseptic practices and wound care
- Strengthened role of infection control teams and audits
- Encouraged better documentation and monitoring systems
- Provided opportunity for quality improvement in perioperative care

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Ensure timely administration of prophylactic antibiotics*** • ***Follow strict aseptic technique during procedures and dressing*** • ***Perform and document regular wound inspections*** • ***Recognize early signs of SSI:*** • ***Pain*** • ***Redness*** • ***Swelling*** • ***Discharge*** • ***Fever*** • ***Maintain proper hand hygiene and infection control practices*** • ***Educate patients on wound care and warning signs*** • ***Report any abnormalities promptly to seniors***	• ***Reinforce infection prevention protocols and aseptic techniques*** • ***Ensure adherence to antibiotic stewardship guidelines*** • ***Conduct training sessions on wound care and SSI prevention*** • ***Encourage regular audits and feedback*** • ***Supervise adherence to perioperative protocols*** • ***Include SSI cases in morbidity and mortality discussions***	• ***Implement and monitor standard SSI prevention protocols*** • ***Ensure availability of sterile equipment and infection control resources*** • ***Strengthen infection control committees and surveillance systems*** • ***Conduct regular training programs for staff*** • ***Enforce antibiotic policy and stewardship programs*** • ***Promote audit systems and quality improvement initiatives*** • ***Ensure proper documentation and reporting mechanisms***

Dos

- Follow standard preoperative skin preparation protocols.
- Administer appropriate prophylactic antibiotics before incision (as per guidelines).
- Maintain strict aseptic technique in the operating theatre.
- Ensure proper sterilization of instruments and OT environment.
- Minimize operating time and avoid unnecessary tissue trauma.
- Maintain normothermia, adequate oxygenation, and glycaemic control perioperatively.
- Perform regular postoperative wound assessment and documentation.
- Educate nursing staff and patients on proper wound care.
- Report SSI cases to the infection control team for surveillance and audit.

Don'ts

- Do not delay or omit prophylactic antibiotics.
- Do not extend antibiotic prophylaxis unnecessarily beyond recommended duration.
- Do not compromise on aseptic precautions during surgery or dressing changes.
- Do not ignore early signs of wound infection such as pain, redness, or discharge.
- Do not allow untrained personnel to perform wound care.
- Do not fail to document wound findings and interventions.

11. **POSTOPERATIVE BLEEDING AND RE-SURGERY**

Abstract Issue with example

A patient underwent an elective surgical procedure and was shifted to the ward in a stable condition. Within a few hours postoperatively, the patient developed increasing drain output, wound soakage, tachycardia, and hypotension. These warning signs were either inadequately monitored or not escalated promptly. The patient required emergency re-surgery for postoperative bleeding, blood transfusion, and ICU care. The delay in recognition and intervention led to prolonged hospital stay and allegations of medical negligence.

Departments Involved

- All Surgical Specialties
- Anaesthesiology
- Nursing Services
- Blood Bank
- Intensive Care Unit

Domain of Address

- Psychomotor skills (haemostasis)
- Postoperative monitoring
- Communication and escalation of care
- Documentation and handover

ERRORS OCCURRED

- Inadequate intraoperative haemostasis before closure

- Failure to perform a final check for bleeding points
- Poor postoperative monitoring of vitals and drain output
- Early warning signs (tachycardia, hypotension, soakage) not recognized or ignored
- Delay in escalation to senior team
- Inadequate communication between nursing staff and doctors
- Delay in arranging blood investigations and transfusion
- Delay in decision-making for re-exploration surgery
- Poor documentation and handover instructions

POSITIVE OUTCOMES LEARNED

- Emergency re-surgery helped achieve bleeding control and stabilization
- Reinforced importance of vigilant postoperative monitoring
- Improved awareness regarding early warning signs of bleeding
- Strengthened team coordination and escalation protocols
- Highlighted need for early senior involvement
- Opportunity for system-level improvements in surgical safety

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Monitor and record:*** • ***Vital signs (HR, BP)*** • ***Drain output*** • ***Wound soakage*** • ***Urine output*** • ***Recognize warning signs:*** • ***Tachycardia*** • ***Hypotension*** • ***Increasing drain output*** • ***Pallor or restlessness*** • ***Report abnormalities immediately to seniors*** • ***Follow clear postoperative orders and escalation protocols*** • ***Ensure accurate and timely documentation*** • ***Prepare for emergency response (IV access, fluids, blood samples)***	• ***Emphasize importance of meticulous haemostasis techniques*** • ***Train teams on early recognition of postoperative bleeding*** • ***Establish clear monitoring and escalation guidelines*** • ***Encourage simulation-based training for emergency scenarios*** • ***Ensure proper handover communication practices*** • ***Review such cases in morbidity and mortality meetings***	• ***Implement standardized postoperative monitoring protocols*** • ***Ensure adequate staffing for close monitoring in wards*** • ***Maintain availability of:*** • ***Blood products*** • ***Emergency OT access*** • ***ICU beds*** • ***Strengthen communication systems between departments*** • ***Conduct regular audits and quality improvement programs*** • ***Support training in patient safety and early warning systems***

Dos

- Ensure meticulous haemostasis before wound closure.
- Perform a final surgical field check for bleeding points prior to closure.
- Monitor vital signs, drain output, wound soakage, and urine output at regular intervals.
- Maintain clear postoperative orders regarding monitoring frequency and escalation criteria.
- Educate nursing staff to report early signs of bleeding immediately.
- Act promptly on warning signs such as tachycardia, hypotension, falling haemoglobin, or increasing drain output.
- Arrange timely blood investigations and blood products when indicated.
- Involve seniors early and do not delay decision for re-exploration when bleeding is suspected.
- Document all findings, decisions, and patient communication clearly.

Donts

- Do not assume postoperative bleeding is self-limiting without assessment.
- Do not ignore excessive drain output or wound soakage.
- Do not delay senior review in a deteriorating patient.
- Do not postpone re-surgery due to fear of complications or administrative delays.
- Do not shift unstable patients without adequate resuscitation.
- Do not fail to inform the patient and relatives about complications and need for re-surgery.

12. COMMUNICATION & HANDOVER FAILURES

High-Risk Transition: ICU to Ward

Abstract Issue with example

A critically ill patient showed clinical improvement and was shifted from the ICU to the ward. However, the handover was incomplete, with inadequate documentation of ongoing issues, pending investigations, and escalation criteria. In the ward, early warning signs such as hypotension and reduced urine output were missed or not acted upon promptly. The patient subsequently deteriorated and required readmission to the ICU. The incident raised concerns regarding communication failure during transition of care and resulted in allegations of negligence.

Departments Involved

- Intensive Care Unit
- Primary Treating Surgical / Medical Team
- Nursing Services
- Anaesthesiology

Domain of Address

- Communication skills
- Team coordination
- Handover and documentation
- Patient monitoring and escalation

ERRORS OCCURRED

- Incomplete handover during transfer from ICU to ward.
- Inadequate documentation of ongoing clinical issues, active problems, and recent complications.
- Pending investigations and expected results were not clearly communicated to the ward team.
- Escalation criteria and warning signs were not documented in the transfer notes.
- Lack of structured verbal communication between ICU team and ward doctors/nursing staff.
- Monitoring instructions and frequency after transfer were not clearly specified.
- Early warning signs such as hypotension and reduced urine output were not recognized or acted upon promptly in the ward.
- Delay in escalation and review by the primary treating team, resulting in deterioration and ICU readmission.

POSITIVE OUTCOMES LEARNED

- The incident highlighted the critical importance of structured handover during transition of care.
- Increased awareness among clinical teams regarding communication gaps during patient transfers.
- Encouraged adoption of standardized handover protocols and documentation formats.
- Strengthened focus on early warning signs and escalation pathways in wards.
- Reinforced the importance of team coordination between ICU staff, ward staff, and the primary treating team.
- The event served as a learning opportunity to improve institutional patient safety practices.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	*(Consultants, Faculty, Supervisors)*	
• *Always perform structured handover during ICU-to-ward transfers.* • *Clearly document:* *Current clinical condition* *Active medical/surgical problems* *Ongoing treatment and supportive care* *Pending investigations* *Escalation criteria and warning signs* • *Carefully monitor vital signs, urine output, and early warning parameters after transfer.* • *Ensure timely escalation to senior doctors if deterioration occurs.* • *Never assume that all relevant information has been communicated unless explicitly confirmed.* • *Maintain accurate documentation of handover and clinical observations.*	• *Conduct training sessions on safe patient handover practices.* *Introduce standardized handover tools (e.g., structured handover checklist).* • *Encourage case discussions and simulation-based training on communication failures.* • *Reinforce the importance of clear documentation and escalation pathways during teaching rounds.* • *Promote a culture of open communication and non-punitive reporting of near misses.* • *Periodically review ICU transfer cases and readmissions during departmental audits.*	• *Implement institution-wide standardized handover protocols for patient transfers.* • *Introduce structured handover templates in case records or electronic medical records.* • *Strengthen early warning systems and monitoring protocols in wards.* • *Ensure adequate staffing and training for patient monitoring after ICU discharge.* • *Establish quality assurance audits for ICU readmissions and transition-of-care events.* *Promote multidisciplinary communication and coordination between departments.*

Dos

- Use a structured handover tool during ICU-to-ward transfer.
- Clearly document:
    - Current clinical status
    - Active problems and comorbidities
    - Ongoing infusions, oxygen or ventilatory support

  - Pending investigations and expected results
  - Clear escalation criteria
- Ensure verbal handover between ICU team and ward doctor/nurse.
- Specify monitoring frequency and early warning signs in transfer notes.
- Confirm availability of ward-level resources before transfer.
- Inform the patient and bystanders about the transfer plan and warning symptoms.
- Ensure a review by the primary team soon after transfer.
- Document time, personnel involved, and acceptance of handover.

Donts

- Do not rely solely on written notes without verbal handover.
- Do not transfer unstable or borderline patients prematurely.
- Do not omit information about recent complications or near-miss events.
- Do not assume ward staff are aware of ICU-level concerns.
- Do not delay escalation when deterioration is noticed after transfer.
- Do not fail to document handover details.

13. FAILURE TO RECOGNIZE POLYTRAUMA

Near Miss: Missed Head, Chest, or Abdominal Injuries in Fracture Patients

Abstract Issue with example

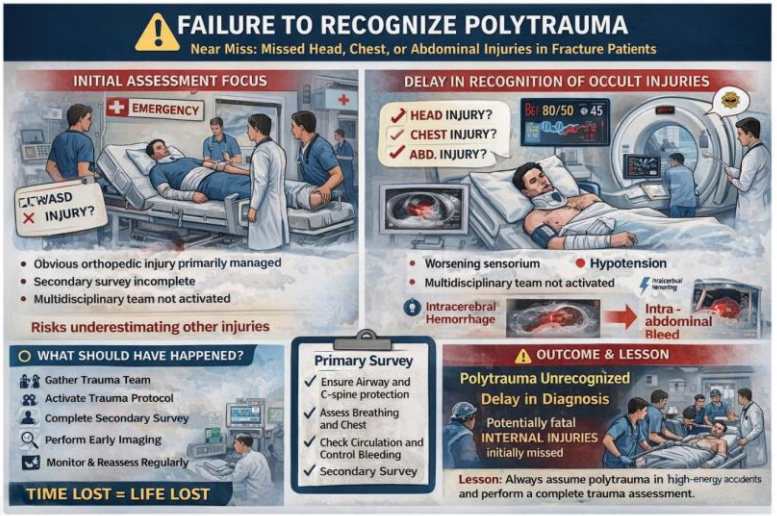
A patient presented after a road traffic accident with an obvious long-bone fracture and was managed primarily for the orthopedic injury. Detailed secondary survey was either incomplete or delayed. Subsequently, the patient developed worsening sensorium and hypotension. Further evaluation revealed an associated head injury and intra-abdominal bleed that had been missed initially. The delay in diagnosis led to clinical deterioration and allegations of failure to recognize polytrauma.

Departments Involved

- Emergency Medicine
- Orthopaedics
- General Surgery
- Neurosurgery
- Trauma Team

Domain of Address

- Cognitive skills (clinical judgment and prioritization)
- Trauma assessment skills
- Team coordination
- Protocol adherence



ERRORS OCCURRED

- Clinical attention was primarily focused on the obvious long-bone fracture, leading to tunnel vision during the initial assessment.
- Primary and secondary trauma surveys were incomplete or delayed, resulting in missed associated injuries.
- Head injury and intra-abdominal bleeding were not identified during the initial evaluation.
- Early warning signs such as worsening sensorium and hypotension were not immediately correlated with possible occult injuries.
- Imaging investigations (FAST/CT scan) were delayed despite clinical suspicion of polytrauma.
- Multidisciplinary trauma team involvement was not initiated early in the patient's management.
- Inadequate documentation and reassessment of systemic examination findings.

POSITIVE OUTCOMES LEARNED

- The incident reinforced the importance of systematic trauma assessment using established protocols.
- Highlighted the need to avoid fixation error (focusing on a single obvious injury) in trauma cases.
- Improved awareness regarding the importance of secondary and tertiary surveys in detecting occult injuries.
- Encouraged early multidisciplinary involvement in trauma management.
- Strengthened the need for continuous reassessment of trauma patients, as clinical status may evolve.
- Provided an opportunity to reinforce trauma training and protocol adherence among residents and emergency staff.

LESSONS LEARNED

FOR THE PARTICIPANTS	*FOR THE TRAINER*	*FOR ADMINISTRATION*
(Residents, Interns, Nursing Staff)	***(Consultants, Faculty, Supervisors)***	
• ***Always assume polytrauma in high-energy mechanisms such as road traffic accidents, falls from height, or crush injuries.*** • ***Follow systematic trauma evaluation principles (Primary Survey, Secondary Survey, and Tertiary Survey).*** • ***Prioritize life-threatening***	• ***Conduct regular training on trauma assessment and ATLS principles for residents and interns.*** • ***Emphasize the importance of avoiding cognitive biases such as fixation error and premature***	• ***Conduct regular training on trauma assessment and ATLS principles for residents and interns.*** • ***Emphasize the importance of avoiding cognitive biases such as fixation error and premature***

conditions before limb injuries. • ***Maintain a high index of suspicion for occult head, chest, or abdominal injuries even if fractures are obvious.*** • ***Use appropriate imaging modalities (FAST, CT scan, X-ray) when indicated.*** • ***Reassess patients regularly, as clinical deterioration may reveal missed injuries.*** • ***Document complete examination findings, reassessments, and negative findings clearly.*** • ***Ensure clear communication during handover between emergency, surgical, and orthopedic teams.***	***closure.*** • ***Encourage simulation-based trauma training and case discussions.*** • ***Reinforce the need for structured trauma team activation in polytrauma cases.*** • ***Promote regular morbidity and mortality meetings to review trauma-related near misses and errors.*** • ***Ensure that junior doctors are supervised adequately during initial trauma assessment***	***closure.*** • ***Encourage simulation-based trauma training and case discussions.*** • ***Reinforce the need for structured trauma team activation in polytrauma cases.*** • ***Promote regular morbidity and mortality meetings to review trauma-related near misses and errors.*** • ***Ensure that junior doctors are supervised adequately during initial trauma assessment***

Dos

- Always assume polytrauma in high-energy mechanisms (RTA, fall from height, crush injury).
- Follow ATLS principles with systematic Primary and Secondary Survey.
- Address life-threatening injuries before limb injuries.
- Perform and document a complete secondary survey once the patient is stabilized.
- Maintain a high index of suspicion for occult injuries in fracture patients.
- Use appropriate imaging (FAST, CT scan) when indicated.
- Reassess the patient periodically—tertiary survey within 24 hours.
- Ensure early multidisciplinary involvement in trauma cases.
- Clearly document findings, reassessments, and negative examinations.
- Communicate concerns and findings clearly during handovers.

Donts

- Do not focus solely on obvious fractures and ignore other systems.
- Do not skip secondary or tertiary survey due to time pressure.
- Do not attribute hypotension or altered sensorium only to pain or fractures.
- Do not delay imaging when clinical suspicion exists.
- Do not manage trauma patients in isolation without senior or trauma team input.
- Do not assume absence of symptoms rules out serious internal injury.

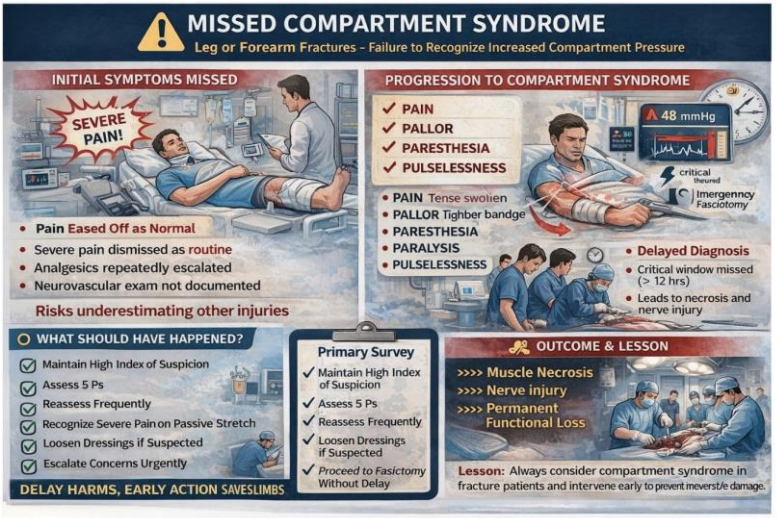
14. MISSED COMPARTMENT SYNDROME

Abstract Issue with example

A patient with a fracture of the forearm / leg presented with severe pain and swelling. Despite repeated complaints of increasing pain disproportionate to the injury, analgesics were escalated without adequate reassessment. Neurovascular examination was either incomplete or undocumented. The diagnosis of **acute compartment syndrome** was missed, leading to delayed fasciotomy and subsequent muscle necrosis, nerve injury, and permanent functional impairment. The case resulted in allegations of medical negligence due to failure of timely recognition and intervention.

Departments Involved

- Orthopaedics
- General Surgery
- Emergency Medicine
- Anaesthesiology



Domain of Address

- Clinical assessment skills
- Monitoring and reassessment
- Communication and escalation
- Documentation

ERRORS OCCURRED

- Failure to recognize severe pain disproportionate to injury, which is an early warning sign of compartment syndrome.
- Repeated escalation of analgesics without proper clinical reassessment.
- Neurovascular examination was incomplete or not documented.
- Lack of regular monitoring and reassessment during the early high-risk period (first 24–48 hours).
- Delayed escalation to senior doctors or orthopedic team despite persistent symptoms.
- Tight cast/splint or swelling was not promptly evaluated or relieved.
- Delayed decision for fasciotomy, resulting in muscle necrosis and nerve injury.
- Inadequate documentation of complaints, examination findings, and clinical decisions.

POSITIVE OUTCOMES LEARNED

- The case highlighted the critical importance of early recognition of compartment syndrome.
- Increased awareness regarding the significance of pain out of proportion and pain on passive stretch
  Reinforced the need for frequent neurovascular assessment in fracture patients.
- Emphasized the importance of early surgical consultation and escalation of care.
- Strengthened the practice of proper documentation of neurovascular examination findings.
- The event served as a learning opportunity to improve monitoring protocols in trauma and postoperative patients

LESSONS LEARNED

FOR THE PARTICIPANTS (Residents, Interns, Nursing Staff)	*FOR THE TRAINER (Consultants, Faculty, Supervisors)*	*FOR ADMINISTRATION*
• *Keep high suspicion in fractures/crush injuries* • *Assess 5 Ps (pain, pallor, paresthesia, paralysis, pulselessness)* • *Identify early signs (pain out of proportion, stretch pain)* • *Perform frequent reassessment* • *Don't rely on pulses alone* • *Escalate early if symptoms persist* • *Loosen tight casts/splints* • *Ensure clear documentation*	• *Teach early identification* • *Emphasize reassessment over masking pain* • *Use case-based/simulation training* • *Reinforce systematic neurovascular exams* • *Promote M&M discussions* • *Ensure junior supervision*	• *Implement monitoring protocols* • *Use neurovascular charts* • *Ensure fasciotomy availability* • *Conduct training programs* • *Encourage incident reporting* • *Improve interdepartmental coordination*

■ Dos

- Maintain a high index of suspicion for compartment syndrome in fractures, crush injuries, and tight casts or dressings.
- Assess and document the 5 Ps: pain (out of proportion), pallor, paresthesia, paralysis, pulselessness (late sign).
- Reassess patients frequently, especially in the first 24–48 hours after injury or surgery.
- Recognize that severe pain on passive stretch is an early and critical sign.
- Remove or loosen tight casts, splints, or dressings immediately if compartment syndrome is suspected.
- Escalate concerns urgently to seniors and involve orthopaedics early.
- Measure compartment pressures when the diagnosis is unclear and facilities are available.
- Proceed to emergency fasciotomy without delay when clinically indicated.
- Clearly document findings, reassessments, decisions, and patient communication.

■ Don'ts

- Do not dismiss severe pain as routine postoperative or fracture-related pain.
- Do not rely on presence of distal pulses to exclude compartment syndrome.
- Do not mask symptoms by repeatedly escalating analgesics without reassessment.
- Do not delay surgical intervention waiting for confirmatory tests.
- Do not fail to inform the patient and relatives about the seriousness of the condition.
- Do not omit neurovascular examination documentation.

15. IMPLANT INADEQUATE FIXATION TECHNIQUE

Errors: Malreduction or Malalignment

Abstract Issue with example

A patient with a long-bone fracture underwent operative fixation using an internal implant. Postoperative radiographs revealed **malreduction and malalignment** due to inadequate fixation technique and improper implant positioning. The patient later developed persistent pain, abnormal limb mechanics, delayed union/non-union, and functional limitation, eventually requiring revision surgery. The case raised allegations of surgical negligence related to technical error and failure to adhere to standard fixation principles.

Departments Involved

- Orthopaedics
- Trauma Surgery
- Operation Theatre Team
- Radiology

Domain of Address

- Procedural (psychomotor) skills
- Surgical planning and execution
- Intraoperative assessment
- Postoperative evaluation and documentation

ERRORS OCCURRED

- Inadequate preoperative planning, including insufficient evaluation of fracture pattern and implant choice.
- Improper reduction of the fracture fragments before definitive fixation.
- Malalignment in length, rotation, or angulation during fixation.
- Incorrect implant positioning or size selection, resulting in inadequate mechanical stability.
- Insufficient use or misinterpretation of intraoperative imaging (C-arm) to confirm reduction and implant placement.
- Failure to seek senior assistance in technically challenging fractures.
- Failure to identify malreduction intraoperatively, leading to postoperative radiographic evidence of malalignment.
- Delayed recognition and correction of malalignment postoperatively.
- Inadequate documentation of intraoperative difficulties and decision-making.

POSITIVE OUTCOMES LEARNED

- The case highlighted the importance of meticulous preoperative planning and fracture analysis.
- Reinforced the role of intraoperative imaging to confirm proper reduction and implant positioning.
- Increased awareness regarding biomechanical principles of fracture fixation.
- Encouraged surgeons to review postoperative radiographs critically and act early when errors are identified.
- Emphasized the importance of team communication and seeking expert assistance when needed.
- Provided an opportunity for improving surgical training and operative supervision.

LESSONS LEARNED

FOR THE PARTICIPANTS (Residents, Interns, Nursing Staff)	FOR THE TRAINER (Consultants, Faculty, Supervisors)	FOR ADMINISTRATION
• Do proper preoperative planning (classification, implant choice) • Achieve adequate reduction before fixation • Ensure correct alignment, length, rotation • Use C-arm in multiple views • Apply biomechanical principles • Review post-op X-rays early • Seek senior help if unsure • Maintain clear documentation	• Provide structured teaching on fixation principles • Encourage pre-op planning discussions • Supervise complex cases • Teach intraoperative decision-making • Promote audits & M&M meetings • Emphasize post-op imaging review	• Ensure adequate instruments, implants, imaging • Support orthopedic training programs • Implement operative safety checklists • Encourage audit systems • Maintain structured documentation systems • Promote quality improvement initiatives

■ Dos

- Perform adequate preoperative planning, including fracture classification and implant selection.
- Achieve anatomical or acceptable functional reduction before definitive fixation.
- Ensure proper alignment, length, and rotation intraoperatively.
- Use intraoperative imaging (C-arm) to confirm reduction and implant position in multiple views.
- Follow biomechanical principles of fixation appropriate to the fracture pattern.
- Seek senior assistance in complex fractures or when reduction is suboptimal.
- Check and document final alignment and stability before wound closure.
- Review postoperative radiographs promptly and act early if malreduction is detected.
- Clearly counsel the patient and relatives regarding expected outcomes and need for revision if required.

Donts

- Do not accept poor reduction or malalignment for the sake of completing the procedure.
- Do not use inappropriate implant size or type for the fracture pattern.
- Do not ignore intraoperative imaging discrepancies.
- Do not proceed without adequate fixation stability.
- Do not delay revision when significant malalignment is identified postoperatively.
- Do not fail to document intraoperative challenges and decision-making.

16. DELAY IN DECISION-TO-DELIVERY INTERVAL (DDI)

Common Scenarios

- Prolonged fetal distress with delayed LSCS
- Delay in shifting to OT due to logistics or communication gaps

Abstract Issue with example

A pregnant woman in active labor developed persistent fetal distress on continuous fetal monitoring. Although the decision for emergency LSCS was taken, there was a significant delay in shifting the patient to the operation theatre due to communication lapses, non-availability of OT, delayed anesthesia clearance, and lack of coordinated response. The prolonged decision-to-delivery interval resulted in neonatal depression requiring NICU admission. The incident later led to allegations of obstetric negligence.

Departments Involved

- Obstetrics & Gynaecology
- Anaesthesiology
- Neonatology
- Operation Theatre Team
- Nursing Services

Domain of Address

- Clinical decision-making
- Communication and teamwork
- Logistics and system preparedness
- Documentation and escalation

ERRORS OCCURRED

- Delay in recognition and escalation of fetal distress
- Failure to activate emergency LSCS pathway promptly
- Poor communication between obstetrician, anaesthetist, and OT team
- Delay in shifting patient to operation theatre
- Non-availability or delayed readiness of OT and anaesthesia team
- Lack of parallel processing (consent, preparation, transfer)
- Inadequate documentation of decision time and delivery time
- Failure to escalate logistical/system delays
- Absence of prepared neonatal resuscitation team

POSITIVE OUTCOMES LEARNED

- Identification of system gaps in emergency obstetric response
- Improved awareness regarding importance of DDI in fetal outcomes
- Strengthened need for team coordination and rapid response systems
- Highlighted role of protocol-driven emergency pathways
- Opportunity to improve OT readiness and staffing systems
- Reinforced importance of timely neonatal support

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	***(Consultants, Faculty, Supervisors)***	
• ***Recognize and promptly report fetal distress (CTG changes, clinical signs)*** • ***Note and document exact decision time for LSCS*** • ***Initiate rapid preparation and shifting protocols*** • ***Ensure readiness of:*** • ***IV access*** • ***Consent*** • ***Basic investigations*** • ***Maintain clear and immediate communication with seniors and OT*** • ***Assist in parallel processing to avoid delays*** • ***Be prepared for neonatal resuscitation support***	• ***Train teams on emergency LSCS protocols and timelines*** • ***Conduct simulation drills for fetal distress scenarios*** • ***Emphasize importance of decision-to-delivery time standards*** • ***Ensure clear role allocation during emergencies*** • ***Promote effective communication and leadership in crisis situations*** • ***Review delays in***	• ***Establish standard emergency LSCS pathways and protocols*** • ***Ensure 24/7 OT availability for obstetric emergencies*** • ***Maintain adequate staffing:*** • ***Obstetricians*** • ***Anaesthetists*** • ***Nursing staff*** • ***Strengthen communication systems (alerts, call protocols)*** • ***Ensure readiness of:*** • ***Blood bank services***

	clinical audit and morbidity meetings	• ***Neonatal resuscitation/NICU team*** • ***Conduct regular emergency drills and audits*** • ***Implement systems to track and reduce DDI delays***

Dos

- Recognize fetal distress early using CTG and clinical parameters.
- Clearly document the time of decision for LSCS.
- Activate a predefined emergency LSCS pathway.
- Ensure parallel processing (consent, shifting, anaesthesia preparation
- Keep OT, blood products, and neonatal resuscitation team ready.
- Escalate immediately if delays occur due to logistics or manpower.
- Document reasons for delay, actions taken, and communication details.
- Counsel relatives regarding urgency, risks, and ongoing steps.

■ Don'ts

- Do not delay LSCS in persistent fetal distress hoping for spontaneous recovery.
- Do not wait for ideal conditions when emergency delivery is indicated.
- Do not allow communication gaps between obstetrician, anaesthetist, and OT staff.
- Do not fail to document decision time and delivery time.
- Do not ignore system-related delays without escalation.
- Do not proceed without neonatal resuscitation preparedness.

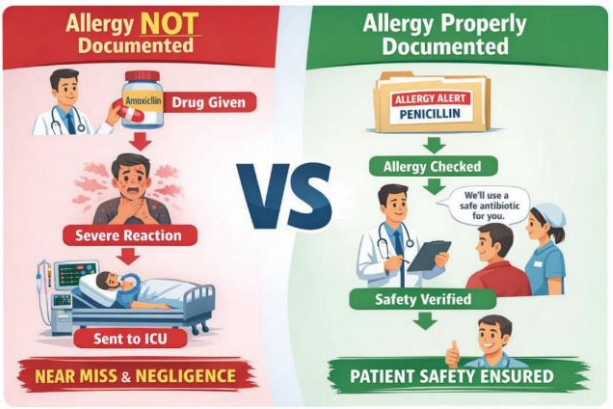
17. DRUG ALLERGY NOT DOCUMENTED

Abstract issue with example

Patient with penicillin allergy given amoxicillin and developed severe allergic reaction. Prompt intervention was done and patient had to be moved to MDICU and then recovered. Patients care givers alleged the negligence and near miss

Department – Medicine / Surgery

Domain – Documentation, Communication



ERRORS OCCURRED

- Failure to document drug allergy clearly in the patient case sheet.
- Allergy history was not actively elicited before prescribing medication.
- Prescription of contraindicated drug (amoxicillin in penicillin allergy).
- Lack of cross-verification by nursing staff before drug administration.
- Absence of visual alerts (allergy stickers/flags) in patient records.
- Over-reliance on incomplete or previous documentation.
- Inadequate communication among healthcare providers regarding allergy status.

POSITIVE OUTCOMES LEARNED

- Prompt recognition and management prevented fatal outcome.
- Highlighted the critical importance of allergy documentation in patient safety.
- Reinforced need for multi-level verification (doctor + nurse) before drug administration.
- Encouraged adoption of visual alert systems like allergy stickers.

- Increased awareness regarding high-risk prescribing errors.
- Provided an opportunity to improve prescribing practices and communication systems.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	*(Consultants, Faculty, Supervisors)*	
• *Always ask and confirm drug allergy history before prescribing.* • *Clearly document allergies in case sheets and prescription charts.* • *Use allergy indicators (stickers, alerts) prominently.* • *Cross-check medications before administration.* • *Be alert for signs of allergic reaction:* • *Rash* • *Breathlessness* • *Hypotension* • *Maintain clear and legible prescriptions.* • *Never assume absence of documentation means absence of allergy*	• *Emphasize safe prescribing practices and allergy checks.* • *Reinforce documentation standards during ward rounds.* • *Conduct case-based discussions on medication errors and near misses.* • *Encourage double-check systems in prescribing and administration.* • *Promote a culture of accountability and safety.* • *Include drug safety protocols in teaching sessions.*	• *Implement mandatory allergy documentation fields in case sheets/EMR.* • *Introduce allergy alert systems (stickers, wristbands, digital flags).* • *Ensure standard prescribing protocols are followed.* • *Conduct regular training on medication safety.* • *Establish incident reporting systems for drug errors.* • *Promote interdisciplinary communication between doctors, nurses, and pharmacists.*

Dos

- Clearly document allergies in file.
- Use allergy stickers on file.
- Ask patient directly before prescribing.
- Educate nursing staff to cross-check.

■ Don'ts

- Don't rely on previous discharge summary.
- Don't skip allergy inquiry in emergency.
- Don't write illegible prescriptions.

18. IMPROPER HAND HYGIENE DURING WOUND DRESSING

Abstract issue with example

A post-operative patient developed surgical site infection after daily wound dressings were performed without proper hand washing and sterile precautions.

Department – General Surgery / General Medicine

Domain of address – Psychomotor skills, Infection control practices, Communication gaps

ERRORS OCCURRED

- Failure to perform hand hygiene before and after wound dressing.
- Use of non-sterile or contaminated gloves during procedure.
- Break in aseptic technique while handling the wound.
- Use of non-sterile instruments or dressing materials.

- Touching non-sterile surfaces after donning sterile gloves.
- Inadequate infection control awareness among staff.
- Lack of supervision during dressing procedures.
- Failure to recognize early signs of surgical site infection.
- Improper disposal of contaminated materials.
- Rushing procedures due to workload and time pressure.

POSITIVE OUTCOMES LEARNED

- Highlighted the critical role of hand hygiene in preventing surgical site infections (SSI).
- Reinforced the importance of strict aseptic precautions during wound care.
- Increased awareness regarding infection control protocols among healthcare workers.
- Encouraged adoption of standardized dressing techniques and checklists.
- Improved emphasis on continuous monitoring and documentation of wound status.
- Provided an opportunity to strengthen training programs in infection prevention.
- Promoted a culture of patient safety and accountability.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	***(Consultants, Faculty, Supervisors)***	
• ***Always perform hand hygiene as per WHO guidelines (5 moments).*** • ***Use sterile gloves and aseptic technique for all surgical wound dressings.*** • ***Ensure sterile instruments and dressing materials are used.*** • ***Avoid touching non-sterile surfaces once sterile field is established.*** • ***Monitor wound for early signs of infection:*** • ***Redness*** • ***Warmth*** • ***Discharge*** • ***Pain***	• ***Emphasize infection control practices during teaching sessions and ward rounds.*** • ***Conduct hands-on training in aseptic dressing techniques.*** • ***Reinforce WHO hand hygiene protocols.*** • ***Perform periodic audits and feedback on dressing practices.*** • ***Encourage simulation-based learning for infection control.*** • ***Highlight real-case scenarios in morbidity and mortality***	• ***Ensure availability of hand hygiene facilities (soap, water, alcohol-based hand rubs).*** • ***Maintain adequate supply of sterile dressing materials and instruments.*** • ***Implement infection control protocols and standard operating procedures (SOPs).*** • ***Conduct regular training programs on infection prevention.*** • ***Establish infection control committees and audit systems.*** • ***Monitor and reduce***

• ***Document wound condition during each dressing.*** • ***Dispose of biomedical waste appropriately.*** • ***Educate patients not to touch or contaminate the wound.***	***meetings.*** • ***Ensure supervision of junior staff during procedures.***	***hospital-acquired infection (HAI) rates.*** • ***Ensure proper biomedical waste disposal systems.*** • ***Promote a culture of safety, accountability, and compliance.***

■ Dos

- Perform proper hand hygiene before and after wound dressing (soap and water or alcohol-based hand rub as per protocol).
- Follow the 5 moments of hand hygiene.
- Use sterile gloves for surgical wounds.
- Maintain aseptic technique throughout the procedure.
- Use sterile dressing sets and instruments.
- Educate nursing staff and interns regularly on infection control protocols.
- Document wound condition during each dressing.
- Dispose of contaminated material appropriately.
- Counsel patient not to touch wound unnecessarily.

■ Don'ts

- Don't perform dressing without washing hands, even if gloves are worn.
- Don't reuse gloves between patients.
- Don't touch non-sterile surfaces after donning sterile gloves.
- Don't keep dressing materials open in ward environment.
- Don't rush through the procedure due to workload.
- Don't ignore early signs of infection (redness, warmth, discharge).
- Don't assume "minor wound" does not require sterile precautions.

19. INCOMPLETE HANDOVER

Abstract issue with example

During a shift change, a critical laboratory value (e.g., severe electrolyte imbalance) was not communicated to the incoming team. The lack of proper handover resulted in delay in clinical decision-making, placing the patient at risk of deterioration.

Department – All Departments

Domain of address – Communication

ERRORS OCCURRED

- Failure to communicate critical lab values during handover.
- Absence of a structured handover system (e.g., SBAR).
- Over-reliance on written notes without verbal confirmation.
- Pending tasks and critical issues not highlighted clearly.
- Lack of read-back or confirmation by receiving team.
- Rushed or incomplete handover process due to time constraints.
- Assumption that incoming team is already aware of patient status.
- Inadequate documentation of critical findings and actions required.

POSITIVE OUTCOMES LEARNED

- Highlighted the importance of structured communication during shift changes.
- Reinforced the need to prioritize critical information during handover.
- Encouraged use of standard tools like SBAR for effective communication.
- Increased awareness regarding patient safety risks associated with poor handover.
- Promoted accountability and responsibility during transitions of care.
- Provided an opportunity to standardize handover practices across departments.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	***(Consultants, Faculty, Supervisors)***	
• ***Use structured handover methods (SBAR: Situation, Background, Assessment, Recommendation).*** • ***Always communicate critical lab values and abnormal findings clearly.*** • ***Highlight pending tasks and required actions.*** • ***Ensure verbal communication along with written documentation.*** • ***Practice read-back to confirm understanding.***	• ***Train staff in structured handover techniques (SBAR).*** • ***Emphasize importance of clear and concise communication.*** • ***Conduct simulation exercises on handover scenarios.*** • ***Monitor and provide feedback on handover quality during rounds.*** • ***Encourage team-based communication***	• ***Implement standardized handover protocols across departments.*** • ***Introduce handover templates or checklists (SBAR-based).*** • ***Ensure dedicated time and environment for proper handover.*** • ***Promote training programs on communication skills.***

• ***Avoid rushing—handover is a critical clinical responsibility.*** • ***Clarify doubts immediately rather than making assumptions.***	***culture.*** • ***Include handover errors in morbidity and mortality discussions.***	• ***Establish audit systems to evaluate handover quality.*** • ***Encourage a culture of safe communication and accountability.***

■ Dos

- Use structured handover (SBAR)
- Document and highlight critical results
- Verbally confirm pending tasks
- Practice read-back for confirmation

■ Don'ts

- Do not rely only on written notes
- Do not rush handovers
- Do not assume next team is aware
- Do not omit critical information

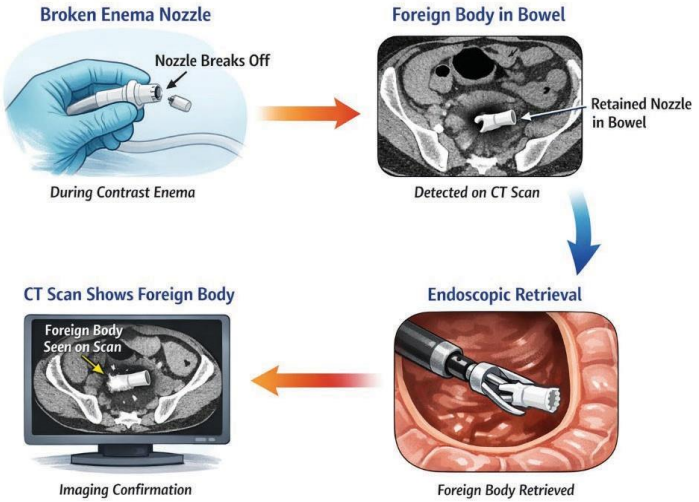
20. FOREIGN BODY RETENTION FOLLOWING CONTRAST ENEMA

Abstract issue with example

An elderly male patient underwent sigmoidectomy for carcinoma colon. In the postoperative period, a contrast-enhanced CT with rectal contrast (contrast enema) was performed to assess anastomotic integrity. During administration, the nozzle of the enema tube accidentally broke and was retained inside the bowel. Imaging later revealed a foreign body within the bowel lumen. The patient subsequently underwent endoscopic retrieval, and the foreign body was successfully removed. The incident was identified as a near miss with potential for serious complications.

Department – General Surgery, Radiology, Nursing / Technical staff

Domain of address – Procedural safety, Equipment handling, Communication and supervision, Patient safety



ERRORS OCCURRED

- Use of faulty or low-quality equipment, leading to breakage of enema nozzle.
- Failure to inspect equipment before use.
- Lack of supervision during contrast administration.
- Breakage not immediately recognized or reported.

- Delay in identification of retained foreign body.
- Inadequate protocols for checking completeness of instruments post-procedure.
- Poor communication between technical staff and treating team.

POSITIVE OUTCOMES LEARNED

- Early detection on imaging prevented serious complications such as perforation or obstruction.
- Successful endoscopic retrieval avoided need for reoperation.
- Highlighted importance of equipment safety and pre-procedure checks.
- Reinforced need for strict procedural protocols and supervision.
- Increased awareness about iatrogenic foreign body risks even in minor procedures.
- Led to improvement in reporting and incident analysis systems.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always inspect equipment before and after use.*** • ***Ensure integrity of devices (no cracks, loose parts) before insertion.*** • ***Be vigilant during procedures and report any malfunction immediately.*** • ***Do not proceed if equipment appears defective or substandard.*** • ***Confirm complete retrieval/removal of all devices used.*** • ***Maintain clear communication with supervising doctors.*** • ***Document any intra-procedural complications promptly.***	• ***Emphasize importance of equipment safety in routine procedures.*** • ***Train staff on safe handling of devices and recognition of equipment failure.*** • ***Encourage checklist-based procedural approach.*** • ***Supervise junior staff and technicians during procedures.*** • ***Include such cases in morbidity and mortality discussions.*** • ***Promote early reporting culture without blame.***	• ***Ensure procurement of high-quality, standard-approved medical equipment.*** • ***Implement equipment checking protocols before and after procedures.*** • ***Conduct regular maintenance and quality checks of devices.*** • ***Develop standard operating procedures (SOPs) for contrast studies.*** • ***Train staff in equipment handling and safety protocols.*** • ***Establish incident reporting and audit systems.*** • ***Strengthen coordination between radiology and surgical teams.***

■ Dos

- Inspect enema tube and nozzle before use
- Use standard, good-quality equipment
- Ensure supervision during procedure
- Confirm all parts are intact after procedure
- Report any breakage immediately

■ Don'ts

- Do not use damaged or low-quality equipment
- Do not ignore resistance or abnormal feel during insertion
- Do not proceed without checking equipment integrity
- Do not delay reporting of procedural complications
- Do not assume all devices are intact without verification

21. RETAINED FOREIGN BODY AFTER SURGERY

Abstract issue with example

A patient who had undergone abdominal surgery several years earlier presented with chronic abdominal pain and discomfort. Imaging revealed a metallic foreign body, later identified as a retained artery forceps from the previous surgery. The patient required re-exploration and removal of the instrument. This incident represents a serious never event, highlighting major lapses in surgical safety protocols and count procedures.

Department –

- **General Surgery**
- **Operation Theatre Team**
- **Radiology**
- **Nursing Staff**

Domain of address –

- Procedural safety
- Surgical checklist adherence
- Team communication
- Documentation and accountability

ERRORS OCCURRED

- Failure of instrument count protocol at the end of surgery.
- Lack of standardized surgical safety checklist adherence.
- Poor communication among OT team members (surgeon, scrub nurse, circulating staff).
- Absence of final cavity check before closure.
- Inadequate documentation of instrument counts.
- Possible handover lapses during surgery or shift changes.
- Lack of postoperative verification in high-risk cases.

POSITIVE OUTCOMES LEARNED

- Highlighted the seriousness of retained surgical items as preventable "never events."
- Reinforced the importance of strict surgical count protocols.
- Emphasized need for team accountability and communication in OT.
- Encouraged adoption of WHO Surgical Safety Checklist.
- Increased awareness regarding long-term complications of retained foreign bodies.
- Led to strengthening of audit and patient safety systems.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Residents, Interns, Nursing Staff)	***(Consultants, Faculty, Supervisors)***	
• ***Always follow standard instrument and sponge count protocols.*** • ***Ensure counts are performed before incision, before closure, and at final closure.*** • ***Perform a thorough surgical field inspection before wound closure.*** • ***Do not proceed with closure if counts are incorrect.*** • ***Communicate clearly with OT team members regarding counts.***	• ***Enforce strict adherence to WHO Surgical Safety Checklist.*** • ***Emphasize importance of team communication and accountability.*** • ***Supervise and ensure proper count protocols are followed.*** • ***Conduct regular OT audits and morbidity meetings.*** • ***Encourage a culture of safety rather than***	• ***Implement mandatory WHO Surgical Safety Checklist in all OTs.*** • ***Ensure adequate staffing and trained OT personnel.*** • ***Introduce standardized count sheets and documentation systems.*** • ***Conduct regular audits and compliance checks.*** • ***Provide training programs on patient***

• ***Document all counts accurately in operative records.*** • ***Maintain high vigilance in emergency and long-duration surgeries.*** • ***Adhere to surgical safety check list.***	***blame.*** • ***Train staff on management of count discrepancies.***	***safety and OT protocols.*** • ***Consider use of adjunct technologies (RFID-tagged sponges, tracking systems).*** • ***Establish incident reporting and root cause analysis systems.***

■ Dos

- Perform strict instrument and sponge counts
- Use WHO Surgical Safety Checklist
- Conduct final cavity check before closure
- Ensure clear communication among OT team
- Document all counts properly

■ Don'ts

- Do not close wound without confirming correct counts
- Do not ignore count discrepancies
- Do not bypass surgical safety protocols
- Do not assume someone else has checked
- Do not compromise safety in emergency situations

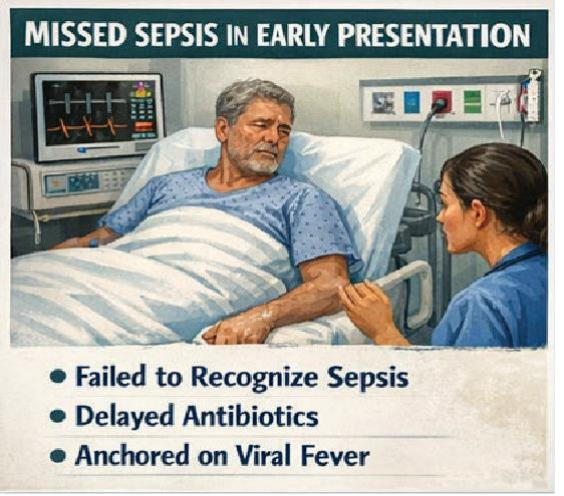
22. MISSED SEPSIS IN EARLY PRESENTATION

Abstract issue with example

A 62-year-old diabetic male presented with fever and mild confusion. Initial vitals showed borderline hypotension and tachycardia, but he was treated symptomatically for viral fever. Six hours later, the patient deteriorated with septic shock requiring ICU admission.

Department - General Medicine, Emergency Medicine

Domain of address - Cognitive error (clinical judgment), Communication gaps



ERRORS OCCURRED

- Failure to recognize early warning signs of sepsis (tachycardia, altered sensorium).
- Inadequate use of sepsis screening tools (e.g., qSOFA/SIRS criteria).
- Delay in initiation of antibiotics and fluid resuscitation.
- Anchoring bias towards a benign diagnosis (viral fever).
- Lack of escalation to senior clinician despite abnormal vitals.
- Poor documentation of clinical reasoning and reassessment plan.
- Inadequate monitoring frequency for a high-risk patient.

POSITIVE OUTCOMES LEARNED

- Deterioration prompted rapid ICU transfer and aggressive management.
- Highlighted importance of early sepsis recognition protocols.

- Reinforced need for repeated clinical reassessment.
- Encouraged use of standardized scoring systems.
- Identified gaps in escalation pathways and supervision.
- Led to improved awareness of atypical presentations in elderly/diabetic patients.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always consider sepsis in patients with fever + abnormal vitals.*** • ***Use qSOFA/SIRS criteria routinely in emergency settings.*** • ***Reassess patients frequently—clinical status can change rapidly.*** • ***Escalate early to seniors when vitals are unstable.*** • ***Start empirical antibiotics promptly after suspicion.*** • ***Document reassessment plans clearly.***	• ***Emphasize early sepsis recognition in teaching rounds.*** • ***Conduct simulation-based training on septic shock.*** • ***Encourage discussion of cognitive biases (anchoring, premature closure).*** • ***Reinforce importance of early escalation and supervision.*** • ***Audit time-to-antibiotic administration regularly.***	• ***Implement hospital-wide sepsis protocols and bundles.*** • ***Introduce early warning score (EWS) systems in wards.*** • ***Ensure availability of rapid response teams.*** • ***Conduct periodic training on sepsis management.*** • ***Establish audit and feedback systems for sepsis cases.***

■ Dos

- Screen all febrile patients for sepsis indicators
- Start antibiotics within 1 hour if sepsis suspected
- Monitor vitals frequently
- Escalate care early
- Use standardized scoring systems

■ Don'ts

- Don't dismiss tachycardia or confusion as trivial
- Don't delay antibiotics in suspected sepsis
- Don't rely on a single clinical assessment
- Don't hesitate to escalate care

23. WRONG DRUG DOSE IN PEDIATRIC PATIENT

Abstract issue with example

A 5-year-old child admitted with pneumonia was prescribed intravenous antibiotics. Due to miscalculation of weight-based dosing, the child received nearly double the recommended dose, leading to vomiting and transient renal dysfunction.

Department - Pediatrics, General Medicine

Domain of address - Psychomotor skills, System error

ERRORS OCCURRED

- Incorrect calculation of weight-based drug dosage.
- Failure to double-check dose with standard pediatric dosing charts.
- Lack of independent verification by nursing staff.
- Absence of electronic prescribing or dose-check systems.
- Poor documentation of patient weight and dose calculation.
- High workload leading to oversight.
- Inadequate awareness of pediatric dosing safety protocols.

POSITIVE OUTCOMES LEARNED

- Early identification of adverse effects prevented severe toxicity.
- Prompt discontinuation and supportive care led to recovery.
- Reinforced importance of weight-based dosing accuracy.

- Encouraged implementation of double-check systems.
- Highlighted need for pediatric-specific safety measures.
- Improved awareness regarding medication safety in children.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Always calculate drug doses based on accurate body weight.*** • ***Double-check calculations before prescribing/administering.*** • ***Use standard pediatric dosing charts or apps.*** • ***Clearly document weight and dose calculations.*** • ***Be vigilant for early signs of drug toxicity.*** • ***Encourage cross-verification among team members.***	• ***Emphasize pediatric dosing safety during training.*** • ***Promote use of checklists and standardized charts.*** • ***Conduct medication error case discussions.*** • ***Encourage a culture of double-checking and teamwork.*** • ***Supervise high-risk prescriptions closely.***	• ***Implement electronic prescribing with dose alerts.*** • ***Ensure availability of pediatric dosing charts in wards.*** • ***Mandate double-checks systems for pediatric medications.*** • ***Conduct regular medication safety audits.*** • ***Provide training programs on drug safety.***

■ Dos

- Always record accurate patient weight
- Use dosing calculators or charts
- Cross-check prescriptions
- Monitor for adverse drug reactions
- Encourage team-based verification

■ Don'ts

- Don't estimate weight for dosing
- Don't skip double-checking
- Don't rely solely on memory for drug doses
- Don't ignore early signs of toxicity

24. OPERATIONAL LAPSE – PATIENT FALL FROM TROLLEY

Abstract issue with example

A 28-year-old woman admitted for safe confinement underwent Lower Segment Caesarean Section (LSCS). After completion of surgery, while shifting the patient from the operation table to the trolley, the patient slipped and fell, sustaining a contusion over the left shoulder. She was evaluated and managed symptomatically and recovered without further complications. The incident highlighted lapses in patient transfer protocols and staff coordination in the operating theatre.

Department

- Obstetrics & Gynaecology
- Operation Theatre Team
- Nursing Staff

Domain of address

- Operational safety
- Patient handling procedures
- Team coordination and supervision

ERRORS OCCURRED

- Insufficient number of trained staff available to assist in patient transfer.
- Standard protocol for shifting unconscious or postoperative patients was not followed.
- Absence of safety equipment, such as trolley with side barricades.
- Inadequate coordination and supervision during patient transfer.
- Lack of clear assignment of roles among staff involved in shifting the patient.
- Possible lack of awareness or training in safe patient transfer techniques.

POSITIVE OUTCOMES LEARNED

- The patient did not sustain serious injury or fracture.
- Immediate assessment and symptomatic treatment prevented further complications.
- The incident prompted deployment of additional trained staff in the OT.
- Increased awareness regarding safe patient transfer protocols.
- Encouraged review and strengthening of operational safety procedures in the OT.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Ensure adequate number of trained staff during patient transfer.*** • ***Follow standard protocols for shifting unconscious or postoperative patients.*** • ***Use trolleys with side rails or barricades to prevent falls.*** • ***Maintain clear communication and coordination among staff during transfer.*** • ***Assign specific roles to team members during patient movement.*** • ***Handle patients gently and cautiously, especially when***	• ***Provide training sessions on safe patient handling and transfer techniques.*** • ***Emphasize importance of operational safety in OT practices.*** • ***Supervise patient transfer processes during postoperative care.*** • ***Conduct periodic drills or demonstrations on safe shifting methods.*** • ***Encourage incident reporting and discussion during***	• ***Develop and implement written protocols for shifting bedridden or unconscious patients.*** • ***Ensure adequate staffing in operation theatres and wards.*** • ***Provide appropriate equipment such as trolleys with side rails and transfer boards.*** • ***Conduct regular training programs on patient safety and handling techniques.*** • ***Implement monitoring***

sedated or unconscious.	***departmental meetings.***	***and audit systems to prevent operational lapses.*** • ***Promote a culture of patient safety and accountability.***

Dos

- Ensure adequate number of trained staff during patient transfer
- Follow standard transfer protocols
- Use trolleys with side rails or safety barricades
- Maintain clear communication among team members
- Supervise patient transfer activities

■ Don'ts

- Do not shift patients with inadequate staff
- Do not move unconscious patients without proper support
- Do not use unsafe or unsuitable trolleys
- Do not rush patient transfer procedures
- Do not ignore patient safety protocols

25. HIV POSITIVE SEROCONVERSION FOLLOWING BLOOD TRANSFUSION

Abstract issue with example

A middle-aged female patient admitted for deep pelvic abscess received blood transfusion during her hospital stay. At the time of admission, she tested HIV negative. During later evaluation, she was found to be HIV positive, leading to allegations that the infection was acquired through transfused blood.

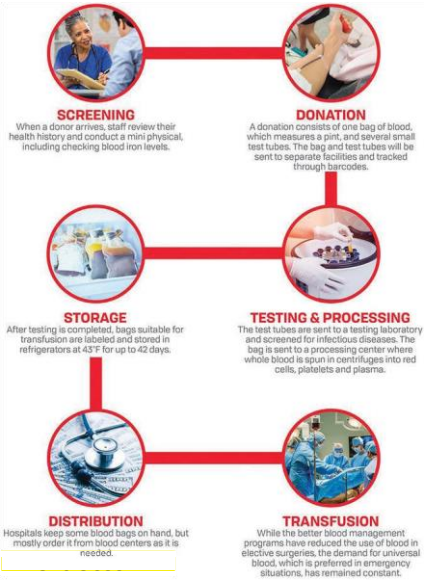
Although HIV transmission through blood transfusion is extremely rare today, the case raised concerns regarding blood safety protocols, donor screening, and documentation practices.

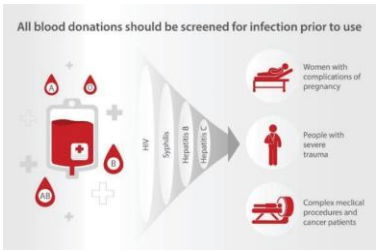
Department

- General Surgery / General Medicine
- Blood Bank
- Laboratory Service

Domain of address

- Blood transfusion safety
- Screening protocols
- Documentation and counselling
- Communication with patients





ERRORS OCCURRED

- Possible inadequate verification of blood donor screening protocols.
- Lack of clear documentation regarding pre-transfusion HIV status and counselling.
- Failure to communicate blood transfusion risks effectively to patient and family.
- Possible system gaps in blood handling, testing, or traceability.
- Delay in investigating the source of infection (transfusion vs other routes).
- Lack of transparent documentation of transfusion records and donor details.

POSITIVE OUTCOMES LEARNED

- Highlighted the importance of strict adherence to blood safety protocols.
- Reinforced awareness regarding screening of all donated blood units.
- Encouraged better documentation and traceability of blood products.
- Improved understanding of rare but serious transfusion-related infections.
- Prompted strengthening of quality control systems in blood banks.
- Increased emphasis on patient counselling and informed consent before transfusion.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Ensure proper documentation of indication and consent for blood transfusion.*** • ***Verify that blood units come from certified blood banks following national guidelines.*** • ***Record pre-transfusion screening status clearly in case sheet.*** • ***Monitor patients carefully for post-transfusion complications.*** • ***Maintain clear communication with blood bank regarding blood products used.*** • ***Educate patients about benefits and rare risks of transfusion.***	• ***Emphasize safe transfusion practices during training sessions.*** • ***Reinforce adherence to national transfusion safety guidelines such as those issued by National AIDS Control Organisation.*** • ***Conduct case discussions on transfusion-transmitted infections.*** • ***Encourage strict documentation and traceability of blood products.*** • ***Promote awareness about window period infections and advanced screening techniques.***	• ***Ensure strict implementation of national blood safety guidelines from National AIDS Control Organisation.*** • ***Encourage voluntary, non-remunerated blood donors.*** • ***Implement mandatory screening of all blood units, including:*** • ***HIV-1 & HIV-2 antibody testing*** • ***HIV p24 antigen testing*** • ***Nucleic Acid Testing (NAT) where available*** • ***Maintain proper donor selection criteria to exclude high-risk donors.*** • ***Ensure safe blood collection and handling protocols:***

		• ***Use sterile single-use blood bags and needles*** • ***Maintain aseptic technique*** • ***Prevent mix-ups through barcoding and labelling systems*** • ***Conduct regular audits and quality assurance in blood bank services.***

■ Dos

- Follow standard blood donor selection protocols
- Perform mandatory screening for transfusion-transmitted infections
- Maintain strict documentation of transfusion details
- Counsel patient before blood transfusion
- Ensure traceability of blood products

■ Don'ts

- Do not use unscreened or improperly labelled blood units
- Do not bypass standard blood bank protocols
- Do not ignore documentation of donor and transfusion records
- Do not assume blood safety without verification
- Do not delay investigation when post-transfusion infection is suspect

26. ELECTROCAUTERY BURN DURING SURGERY

Abstract issue with example

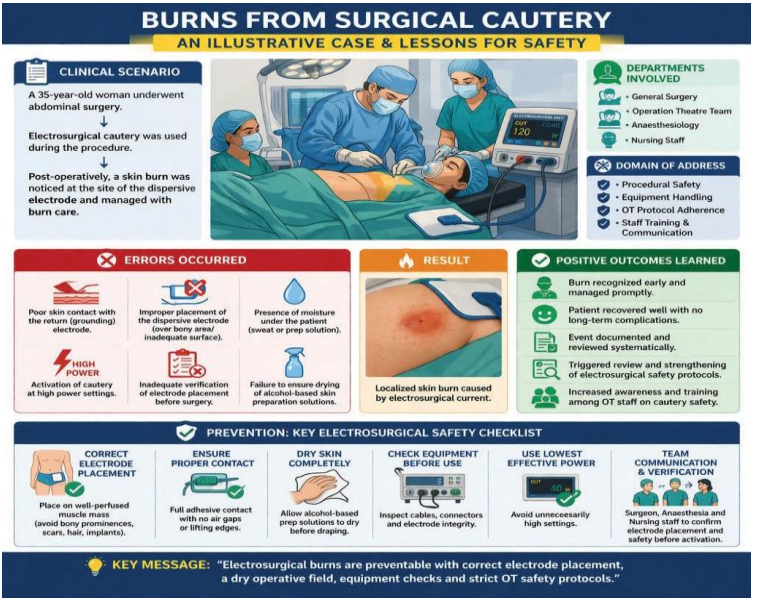
A 35-year-old woman underwent abdominal surgery. During the procedure, she sustained skin burns caused by electrosurgical cautery. The burns were recognized post-operatively and managed appropriately with burn care and wound management. The patient recovered well and was discharged without complications. The event highlighted important concerns regarding electrosurgical safety practices in the operating theatre.

Department

- General Surgery
- Operation Theatre Team
- Anaesthesiology
- Nursing Staff

Domain of address

- Procedural safety
- Equipment handling
- OT protocol adherence
- Staff training and communication



ERRORS OCCURRED

- Poor skin contact with the return (grounding) electrode.
- Improper placement of the dispersive electrode.
- Presence of moisture under the patient (sweat or prep solution).
- Possible activation of cautery at high power settings.
- Inadequate verification of electrode placement before surgery.
- Possible failure to ensure drying of alcohol-based skin preparation solutions.

POSITIVE OUTCOMES LEARNED

- The complication was recognized early and managed promptly.
- The patient did not sustain severe burns or long-term complications.
- The event was documented and reviewed systematically.
- Triggered review and strengthening of electrosurgical safety protocols.
- Increased awareness among staff regarding cautery-related injuries.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• *Ensure proper placement of return (grounding) electrode on well-perfused muscle area.* • *Avoid placing electrode over:* • *Bony prominences* • *Scar tissue* • *Hairy areas* • *Metallic implants* • *Confirm complete drying of skin preparation solutions before draping.* • *Ensure no moisture under the patient before activating cautery.* • *Use the lowest effective power settings during electrosurgery.* • *Activate cautery only when the electrode tip is in contact*	• *Conduct regular training on electrosurgical safety.* • *Emphasize correct placement of dispersive electrode during teaching.* • *Demonstrate safe cautery techniques and device handling.* • *Supervise equipment checks before surgery begins.* • *Encourage reporting and discussion of near*	• *Develop and enforce standard operating procedures for electrosurgical safety.* • *Ensure regular maintenance and inspection of electrosurgical units.* • *Provide adequate training for OT staff on safe use of cautery devices.* • *Maintain availability of high-quality dispersive electrodes and equipment.* • *Implement OT safety checklists including*

with tissue. • ***Inspect cables, electrodes, and insulation before surgery.***	***misses in OT meetings.*** • ***Include electrosurgical safety in simulation-based training.***	***cautery safety verification.*** • ***Conduct periodic audits of surgical safety practices.***

■ Dos

- Place return electrode on well-perfused muscle area
- Ensure skin preparation solutions are completely dry
- Inspect cautery equipment and cables before use
- Use lowest effective power settings
- Maintain full contact between dispersive electrode and skin

■ Don'ts

- Do not place electrode over bony prominences, scars, or hair
- Do not activate cautery without tissue contact
- Do not allow moisture under the patient
- Do not ignore equipment damage or faulty cables
- Do not bypass OT safety protocols

27. WRONG VACCINE ADMINISTRATION

Abstract issue with example

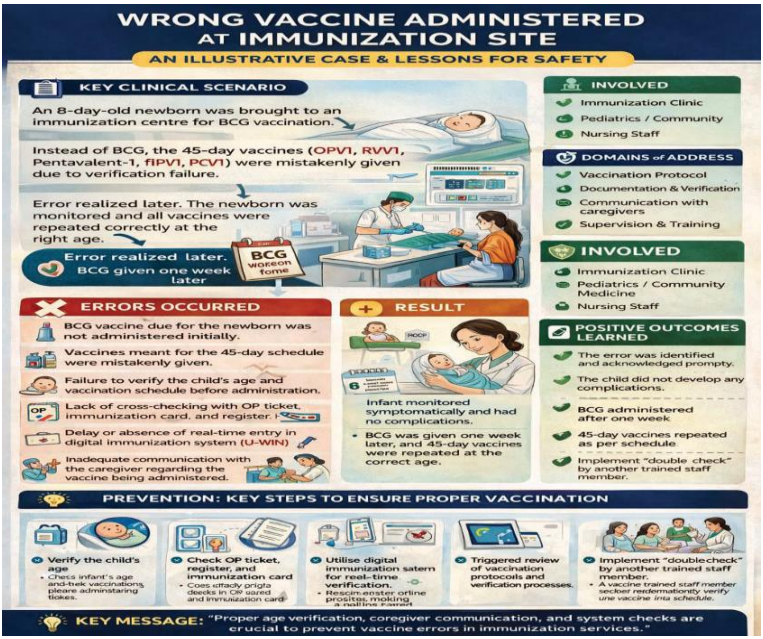
An 8-day-old newborn was brought to the immunization centre for BCG vaccination. However, instead of BCG, the infant was mistakenly administered the 45-day vaccines — OPV1, RVV1, Pentavalent-1, fIPV1 and PCV1. These vaccines were not due at that age, making the doses invalid. The error was identified later. The infant was monitored and managed symptomatically without complications. BCG was administered one week later, and the scheduled vaccines were repeated at the correct age.

Department

- Immunization Clinic
- Pediatrics / Community Medicine
- Nursing Staff

Domain of address

- Vaccination protocol adherence
- Documentation and verification
- Communication with caregivers
- Supervision and training



ERRORS OCCURRED

- BCG vaccine due for the newborn was not administered initially.
- Vaccines meant for the 45-day schedule were mistakenly given.
- Failure to verify the child's age and vaccination schedule before administration.
- Lack of cross-checking with OP ticket, immunization card, and register.
- Delay or absence of real-time entry in digital immunization system (U-WIN).
- Inadequate communication with the caregiver regarding the vaccine being administered.
- Lack of supervisory oversight at the vaccination site.

POSITIVE OUTCOMES LEARNED

- The error was identified and acknowledged promptly.
- The child did not develop any complications.
- Corrective steps were taken:
- BCG administered after one week
- 45-day vaccines repeated as per schedule
- Triggered review of vaccination protocols and verification processes.
- Reinforced the importance of documentation and supervision in immunization services.

LESSONS LEARNED

FOR THE PARTICIPANTS	FOR THE TRAINER	FOR ADMINISTRATION
(Medical Officers, Vaccinators, Nursing Staff)	***(Supervisors, Public Health Officers)***	
• ***Always verify the identity and age of the child before vaccination.*** • ***Check the previous vaccine doses from immunization card and register.*** • ***Cross-check vaccines due for the visit according to schedule.*** • ***Confirm eligibility and contraindications before administering vaccines.*** • ***Enter vaccination details promptly in the U-WIN system.*** • ***Inform the caregiver about the vaccine being***	• ***Conduct regular refresher training for vaccinators.*** • ***Emphasize standard immunization protocols and national guidelines.*** • ***Reinforce verification procedures before vaccination.*** • ***Encourage communication with caregivers during immunization sessions.*** • ***Monitor and supervise vaccination practices at immunization sites.***	• ***Ensure strict adherence to Government of India Immunization Guidelines.*** • ***Implement multi-level verification system at:*** • ***Registration desk*** • ***Medical officer verification*** • ***Immunization room*** • ***Promote digital documentation through the U-WIN platform.***

administered and the disease it prevents. • *Follow the "Rights of Vaccination" principle.*	• *Use case discussions to improve awareness and prevent recurrence.*	• *Conduct regular supervision and audits of immunization sessions.* • *Provide continuous training and supportive supervision for vaccinators.* • *Strengthen communication protocols between healthcare staff and caregivers.*

■ Dos

- Verify child identity, age, and vaccine schedule
- Cross-check with immunization card, register, and digital system
- Explain vaccine name and disease prevented to caregiver
- Follow U-WIN documentation protocol
- Adhere to Rights of Vaccination

■ Don'ts

- Do not administer vaccines without verifying schedule and age
- Do not skip documentation and digital entry
- Do not assume previous vaccine history without checking records
- Do not administer vaccines without informing caregiver
- Do not bypass supervisory checks

28. ABSCESS AFTER DPT BOOSTER DOSE

Abstract issue with example

A 5-year-old child received the **second booster dose of DPT** in the left upper arm. The next day, the child developed **pain and swelling at the injection site**. Initially managed symptomatically with paracetamol, the swelling progressively increased over 3–4 days. The child was later taken to a hospital where **incision and drainage (I&D)** was performed, and pus was evacuated. The child subsequently **recovered without complications**. The case raised concerns regarding **vaccine handling and aseptic technique during immunization**.

Department

- Immunization Clinic
- Pediatrics / Community Medicine
- Nursing Staff

Domain of address

- Injection technique
- Infection control practices
- Cold chain maintenance
- Vaccination protocol adherence

ERRORS OCCURRED

- Development of injection site abscess following DPT vaccination.
- Possible breach in aseptic technique during vaccine administration.
- Possible use of contaminated needle or improper handling of syringe.
- Likelihood of administration of frozen or improperly stored vaccine.
- Inadequate verification of vaccine storage conditions (cold chain).
- Lack of strict adherence to standard immunization practices.

POSITIVE OUTCOMES LEARNED

- The abscess was recognized and treated appropriately with I&D.
- The child recovered completely without long-term complications.
- No clustering of similar cases indicated localized or isolated lapse.
- Highlighted importance of cold chain maintenance and aseptic precautions.
- Prompted review of immunization practices and protocols at the site.

LESSONS LEARNED

FOR THE PARTICIPANTS *(Residents, Interns, Nursing Staff)*	FOR THE TRAINER *(Consultants, Faculty, Supervisors)*	FOR ADMINISTRATION
• ***Maintain strict aseptic precautions during vaccination:*** • ***Clean hands of vaccinator*** • ***Clean injection site*** • ***Use sterile, single-use AD syringes*** • ***Do not:*** • ***Touch needle tip*** • ***Inject through clothing or infected skin*** • ***Prefill syringes*** • ***Ensure proper vaccine storage (2–8˚C) at all times.*** • ***Never use frozen vaccines, especially freeze-sensitive ones like DPT.*** • ***Use conditioned ice packs during transport.*** • ***Check:*** • ***Expiry date*** • ***Vaccine Vial Monitor (VVM)*** • ***Avoid vigorous massage after injection.*** • ***Follow correct intramuscular injection technique.***	• ***Conduct regular training on safe injection practices.*** • ***Emphasize importance of cold chain maintenance.*** • ***Demonstrate correct IM injection techniques.*** • ***Reinforce WHO and national immunization guidelines.*** • ***Monitor and supervise vaccination sessions regularly.*** • ***Discuss such cases in review meetings to prevent recurrence.***	• ***Ensure strict adherence to cold chain protocols (2–8˚C storage).*** • ***Provide functional cold chain equipment and monitoring systems.*** • ***Ensure availability of adequate sterile supplies (AD syringes, needles).*** • ***Conduct regular audits of immunization practices.*** • ***Implement training and refresher programs for vaccinators.*** • ***Maintain quality control of vaccine storage, transport, and handling.***

■ Dos

- Maintain cold chain (2–8˚C) for all vaccines
- Use sterile, single-use AD syringes
- Follow strict aseptic technique
- Check expiry date and VVM before use
- Use conditioned ice packs during transport

■ Don'ts

- Do not use frozen vaccines
- Do not touch needle tip or contaminate syringe
- Do not inject through clothing or infected skin
- Do not prefill syringes
- Do not ignore aseptic precautions

STANDARD OPERATION GUIDELINE FOR OUTLIER EVENTS (KERALA HEALTH SYSTEM)

Healthcare delivery is a complex, high-risk system where unexpected adverse events may occur despite best efforts. International experience from organisations such as the World Health Organization and advanced health systems including the National Health Service demonstrates that structured reporting, scientific investigation, and system improvement are essential for patient safety.

Government has observed the need for a uniform mechanism to manage serious healthcare incidents, including unexpected deaths, procedural complications, infrastructure failures, workplace violence, and other sentinel events across government institutions.

Accordingly, Government hereby orders the establishment of a **State Outlier Event Management and Patient Safety Framework** with immediate effect.

1. Definitions

Outlier Event includes:

1. Unexpected death or serious harm
2. Retained surgical item
3. Wrong patient / wrong site procedure
4. Maternal or neonatal death with concern
5. Equipment or infrastructure failure affecting care
6. Cluster of infections or complications
7. Workplace violence incidents
8. Any event causing significant public concern or media attention
9. Near-miss events with high risk potential

2. State Patient Safety Cell

A **State Patient Safety Cell (SPSC)** shall be established under the Ministry of health and Family Welfare and under both directorates

Functions:

- Incident registry
- Root Cause Analysis coordination
- Safety alerts
- Training programs
- Policy recommendations
- Data analytics and early warning dashboards

3. Institutional Patient Safety Committees

Every Government Medical College and District Hospital shall constitute:

Hospital Patient Safety Committee (HPSC)

Chairperson: Superintendent / Principal

Members:

- Medical Administrator
- Nursing Superintendent
- Quality Manager
- Department Heads (rotational)
- Biomedical Engineer
- Legal Officer (if available)

4. Mandatory Reporting

All Outlier Events must be reported within:

- **2 hours** — Immediate notification to Superintendent
- **24 hours** — Preliminary report to DME
- **72 hours** — Detailed incident report

Non-reporting will be treated as administrative lapse.

5. Investigation Protocol

Investigations shall follow **Root Cause Analysis (RCA)** methodology focusing on:

- System factors
- Human factors
- Process failures
- Infrastructure issues
- Communication gaps

The objective is **system improvement, not individual blame**, unless gross negligence or misconduct is evident.

6. Communication and Transparency

Institutions shall ensure:

- Timely communication with patient relatives
- Compassionate disclosure of facts
- Documentation of counselling

7. Staff Protection and Just Culture

Healthcare workers involved in events shall receive:

- Psychological support
- Legal guidance
- Protection from violence

Administrative or disciplinary action shall follow **Just Culture principles**.

8. Corrective Actions

Institutions must implement:

- Protocol revision
- Training programs
- Infrastructure correction

- Workforce adjustments

Compliance reports to be submitted within 30 days.

9. State Safety Alerts

SPSC may issue statewide alerts when risks are identified to prevent recurrence across institutions.

10. Monitoring and Review

Quarterly review meetings shall be conducted under the Principal Secretary (Health) / DME.
Annual State Patient Safety Report shall be published.

11. Implementation

This order comes into force with immediate effect.
By Order of the Governor
Secretary to Government
Health & Family Welfare Department

PART 2 — HOSPITAL SOP FOR HANDLING OUTLIER EVENTS

Standard Operating Procedure (SOP)

Management of Healthcare Outlier Events

Applicable to:

- Medical Colleges
- District Hospitals
- Taluk Hospitals

Immediate Clinical Response (Golden Hour)

Priority: Patient safety

Actions:

1. Stabilise patient
2. Call senior consultant
3. Arrange ICU / referral if required
4. Preserve evidence (equipment, drugs, documentation)
5. Do not alter records retrospectively

Notification Chain

Within 2 hours:

- Duty doctor → Unit head
- Unit head → Medical Superintendent
- Superintendent → DME (if major event)

Violence events → Police immediately

Family Communication

Designated senior doctor:

- Explain medical condition honestly
- Avoid speculation or blame
- Provide empathy and reassurance
- Document counselling

Incident Documentation

Complete Incident Report Form including:

- Timeline
- Clinical details
- Personnel involved
- Equipment used
- Contributing factors

Event Classification

Levels:

Level 1 — Near miss

Level 2 — Minor harm

Level 3 — Serious harm

Level 4 — Death / sentinel event

Root Cause Analysis (Within 72 Hours)

RCA Team:

- Independent senior clinician
- Nursing representative

- Administrator
- Biomedical engineer (if relevant)

Focus questions:

- What happened?
- Why did it happen?
- What system factors contributed?
- How to prevent recurrence?

Staff Debrief and Support

Provide:

- Psychological support
- Non-punitive discussion
- Learning session

Healthcare workers are often “second victims.”

Corrective Actions

Examples:

- Protocol modification
- Checklist implementation
- Equipment replacement
- Additional staffing
- Training sessions

Reporting to Authorities

Send report to:

- DME / DHS
- Health Department (if major)
- Legal cell (if required)

Media Management

Only authorised spokesperson communicates externally.
No individual staff should engage media directly.

Follow-Up Monitoring

Track:

- Recurrence
- Compliance
- Patient outcomes

Review after 30–60 days.

PART 3 — Flowchart

Event Occurs → Stabilise Patient → Notify Authorities → Communicate Family → Report →

RCA → Corrective Action → Monitoring → Learning Dissemination

PART 4 — Key Principles to Emphasise

1. Patient safety first
2. Transparency
3. System learning
4. Staff protection
5. Prevention focus

"Outlier events should be managed through scientific investigation and systemic correction rather than reactive blame, thereby strengthening public trust and healthcare safety."

CONCLUSION

Near-miss events and medical errors represent critical learning opportunities within healthcare systems. Although they may not always result in patient harm, they highlight underlying system vulnerabilities, gaps in clinical practice, and areas requiring urgent attention. This booklet has compiled a series of real-world scenarios encountered across departments, emphasizing that errors are rarely due to a single individual but often arise from a complex interplay of human factors, communication breakdowns, system inefficiencies, and procedural lapses.

A recurring theme across these cases is the importance of effective communication, whether during handovers, interdepartmental coordination, or patient interactions. Many near misses could have been prevented through structured communication tools, timely escalation, and clear documentation. Similarly, adherence to standard protocols and checklists has emerged as a cornerstone in preventing avoidable errors, especially in high-risk and routine procedures alike.

Another key learning point is the significance of vigilance and reassessment. Clinical deterioration, procedural complications, and unexpected outcomes often provide early warning signs. Recognizing and acting upon these signs promptly can prevent progression to adverse events. The cases also underscore the need for strong foundational clinical skills, including proper assessment, procedural competence, and decision-making.

Importantly, this booklet highlights that even seemingly simple or routine tasks—such as catheterization, wound dressing, or drug prescription—carry inherent risks if performed without due diligence. Therefore, cultivating a culture of attention to detail and accountability is essential at every level of healthcare delivery.

From an institutional perspective, the role of training, supervision, and system support cannot be overstated. Continuous medical education, simulation-based training, regular audits, and the implementation of standard operating procedures are vital in reducing errors. Equally important is fostering a non-punitive reporting culture, where healthcare professionals feel encouraged to report near misses without fear, thereby enabling collective learning and system improvement.

Ultimately, patient safety is a shared responsibility. It requires coordinated efforts from clinicians, nurses, technicians, administrators, and policymakers. By learning from near misses and transforming them into actionable improvements, healthcare systems can move closer to the goal of delivering safe, effective, and patient-centered care.

This booklet serves not only as an educational resource but also as a reminder that every error prevented is a life potentially saved. Continuous reflection, learning, and system strengthening are the keys to minimizing risks and enhancing the quality of care in our institutions.

Directorate of Medical Education
Medical College P.O
Thiruvananthapuram
PIN – 695 011
Kerala, India

2026