



# NEWSLETTER

## PAKISTAN SOCIETY OF ANAESTHESIOLOGISTS KARACHI - CHAPTER

Volume: 26  
Issue 01, March 2023

**Pakistan Society of Anaesthesiologists  
Karachi - 2022-2023**

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### EDITOR'S NOTE

This issue of newsletter is dedicated to 41st Annual PSA Karachi, conference; with the theme of **“Peri operative Anaesthesia Care: Medicolegal Implications”**.

Patient safety is the prime goal of anaesthesia. But due to multiple factors Medicolegal problems are increasing day by day. Our utmost aim is to provide safe anaesthesia to all surgical population and improve the safety standards at par to international standards despite of having limited resource and make our anaesthesiologist to aware of the problems and implement safe practices. We have included many articles related to safe practices throughout perioperative care in this issue.

I hope anaesthesia fraternity will be benefitted from this newsletter.  
Suggestions are always welcome to improve the quality of this newsletter.

**Prof. Zahid Akhtar Rao**  
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### Anesthesia Practice and Safety Standards

Anesthesia an inherently complex and potentially dangerous specialty is a vital component of “Basic Health Care” and safe anesthesia means safety of patients of almost all specialties, since today apart from surgical procedures done in operating room, minimally invasive procedures are done under anesthesia by physicians & interventional radiologists in non-operating room areas known as NORA.

While the global initiatives make anesthesiology a leader in improving patient care in the developed world by implementing steps that reduced anesthesia related mortalities by 50 times, the lower and middle income countries are still struggling to make a worthwhile impact.

The issue remains far from being resolved in Pakistan and a lack of will can be sensed as the reason. Pakistan needs to declare a state of health care emergency to reduce anesthesia related mishaps, most of these being totally preventable.

We need to replace the old time concept of anesthesia being a minor unimportant specialty by Anesthesia being “Comprehensive perioperative care” commencing in the preoperative period and concluding once the patient is discharged from PACU/ICU.

Research convincingly reveals that 66% of all the sentinel events result from human error in the “To err is human report” by the Institute of Medicine in United States. Studies also prove that for a mishap to happen at least there are 8-10 holes in the barriers which could have prevented the event. If these get aligned the event occurs following the “Swiss Cheese Model”.

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From those involved in making policies like the ministry of health, PMDC, CPSP, to those responsible for their implementation, like the Health Care Commissions, Hospital owners, Surgeons and anaesthetists everyone has an obligation to ensure that the right of the patient is respected and they be provided with quality and safe anesthesia. Hospital owners should not be allowed to compromise on standards of equipment or adequate staffing of the OR, HDU and ICU. Surgeons should not undermine the role of anaesthetist and must ensure his/ her involvement from the preoperative period who should explain, counsel, optimize and share the plan with the patient.

Pakistan Society of Anaesthesiologists can play an active role in sensitizing all quarters from authorities to media and patients and have implementable solutions and suggestions to improve the present unacceptable state.

WHO WFSA in their landmark publication in 2010 state that 1/3 of the whole disease burden is surgical meaning, TB, HIV & Malaria, put together and that surgery cannot be safe without safe anesthesia.

They identified lack of access to appropriate facility as the prime cause of death in the lower and middle income countries and that access can be improved if health care facilities are categorized in level 1,2,3 and the scope of surgery be identified as well at each level. Each level should have minimum mandatory standards of monitoring, equipment and human resource identified in adequate numbers for that level

Level 1- Minor surgeries only, some may require anesthesia. Recognition and referral to proper facility should be possible

Level 2 All Bell weather surgeries.

Level 3 Reserved for specialty anesthesia, complex surgeries, education and research.

One death due to negligence and apathy is one too many and we should do all that is in our power to prevent it.

#### **Prof. Saeeda Haider**

Chair, Clinical Service Line

Anesthesiology, Critical Care & Pain Management.

### **ANAESTHESIA PATIENT SAFETY: Steps to improve perioperative patient safety**

WHO defines patient safety as “The prevention of errors and adverse events to patients associated with health care”. What does perioperative safety mean? Peri-operative period covers preoperative assessment and planning, intraoperative management, maintenance and emergence, as well as postoperative care. In terms of elements of safe care these can be translated into standards, adequacy of workforce, training, medication, equipment, availability of data, resources, and a quality culture. Anaesthesia was one of the first medical specialties to focus on patient safety. Several milestones have been achieved so far which include improvements in delivery systems and equipment maintenance, standardization of syringe labels, extension of training programs, improvement in reporting systems, and implementation of performance standards, however things are not uniform globally. Morbidity and mortality is still several folds higher in Lower and Middle Income Countries (LMICs). A recent publication in Anesthesia Analgesia (Warner M, Arnal D, Cole DJ et al. Anesthesia Patient Safety: Next Steps to Improve Worldwide Perioperative Safety by 2030. Anest Analg, April 2022, www.anesthesia-analgia.org) focused on some of the existing anaesthesia patient safety issues. These were; implementation of national or international standards, support appropriate numbers and distribution of workforce, access to appropriate equipment and drugs, databases to track safety outcomes, use of safety checklists, prevention of deaths due to perioperative deterioration, safety research and establishing the culture of safety.

In 2018 WHO-WFSA published a set of standards that are applicable worldwide for safe practice of anaesthesia. These standards cover professional aspects, facilities and equipment, medications and intravenous fluids, monitoring and conduct of anaesthesia (Gelb AW, Morriss WW, Johnson W, et al. World Health Organization World Federation of Societies of Anaesthesiologists (WHO-WFSA) International Standards for a Safe Practice of Anaesthesia. Can J Anesth. 2018;65:698-708). These standards are divided in three categories, “the highly recommended” or mandatory, “recommended” and “suggested”. Highly recommended are applicable to level 1 facility, recommended+ highly recommended to level 2 and suggested +recommended +highly recommended for a level 3 or tertiary care facility. In Pakistan we have not officially endorsed and adopted these standards as yet.



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Another issue is the anaesthesia workforce. There is no available detailed data on the anaesthesia workforce in the country. We have recently conducted a survey on assessment of anaesthesia workforce in District and Taluka hospitals in Sindh province. Only 54 (77%) hospitals had a full time anaesthesia physicians. There is a need to obtain similar data in the other provinces. There is also a need to evolve a joint strategy with the government on short and long term basis.

Improvement in anaesthesia safety also requires investment in education, training and retention of the workforce. Regarding medication WHO provides a list of essential medications. Again we lack data on shortage of anaesthetic drugs. We conducted a survey on medication shortages which was published recently in Canadian Journal of Anaesthesia (Malik M, Khan F A. Anesthetic drug shortages in Pakistan: a multi-centre nationwide survey. *Can J Anesth/J Can Anesth*. <https://doi.org/10.1007/s12630-022-02381-3>). Approximately 50% (122/246) of anesthesia practitioners in Pakistan reported anesthetic drug shortages. Fifty-seven percent of respondents mentioned using an inferior drug that may have significantly affected the delivery of anesthetic care. Equipment shortages and maintenance is another issue. In another survey conducted with the help of WFSA, we mapped the anaesthetic services for maternal and child health in the teaching institutions of Pakistan (Khan FA, Haider S, Abbas N et al. Challenges of Pediatric Anesthesia Services and Training Infrastructure in Tertiary Care Teaching Institutions in Pakistan: A Perspective From the Province of Sindh. *Anesth Analg* 2022; 134:653). There was lack of basic and resuscitation equipment in several of the hospitals. Pulse oximeters and capnometers were available in all private hospitals but in only 86% and 44% of the government hospitals, respectively.

There are several other initiatives that can be taken in improving patient safety in our country. We need a cultural change in our work with emphasis on safety. Low cost quality initiatives should be introduced. In addition we need to collect baseline data and information on infrastructure. Collection of data on perioperative safety issues e.g. analysis of perioperative deaths, intraoperative cardiac arrests, and perioperative critical incident monitoring do not require a substantial investment.

We need to have a strong Pakistan Society of Anaesthesia (PSA) Center, with representation from all regional branches. A National Quality & Safety Committee should be part of this that meets regularly. This is much easier in this digital age. PSA also needs to endorse guidelines so that standardization of care takes place. They should organize ongoing activities to emphasize patient safety. One of their important role is liaising with the government and also increasing professional self-esteem.

Use of WHO safe Surgery Checklist has been shown to increase patient safety. Safety committees need to be established at hospital & department level. Safety curriculum needs to be introduced in training of anaesthesiologists and patient safety to be included as part of our anaesthesia meetings. In addition Quality Improvement (QI) projects to be introduced as an alternative to dissertation in the local fellowship examinations.

In conclusion our ultimate goal is to improve the outcome of our patients. Although measures to improve patient safety and implementation and organization of QIC activities does have an additional cost but this should not be used as an excuse for maintaining status quo.

There are many simple measures that are not too expensive. But all this requires commitment, dedication, change in behaviour and practice of not just anaesthesiologists but also by organization, patients, policy makers and other providers.

#### **Fauzia A. Khan**

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### **Documentation of Anaesthesia Care: What to Document?**

Accurate and thorough documentation of anaesthesia care is an integral part of a patient's journey in the hospital and considered a basic responsibility of anaesthesiologist. It is a clinical, scientific, legal, and administrative document that captures the patient's response to anaesthesia and surgery by recording the physiological changes, the procedures details, pharmacological interventions performed, and any key event happened, in a succinct form. There is no other clinical discipline or setting in which such a comprehensive physiological and pharmacological data collection is performed during patient care.





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The first documentation of anaesthesia care was devised by Cushing and Codman in 1894 by using observed respiratory rate and palpated pulse rate in the first anaesthesia record. Based on this early collection of anaesthesia record, the importance of documentation of anaesthesia care was further emphasized by Lundy in 1924. In Pakistan, there was no evidence of anaesthesia record keeping or documentation in early 1950's however the importance of observing and recording the variations in heart rate, BP (blood pressure) and respiratory rate was realized, and anaesthesia documentation began in late 1950's.

Currently numerous professional bodies including American Society of Anesthesiologists (ASA), the Australian and New Zealand College of Anaesthetists (ANZCA), and Canadian Anesthesiologists' Society (CAS) have emphasized the importance of maintaining an adequate, accurate, and legible anaesthetic record. It is utmost important to remember that the lack of clear and adequate documentation has not only the medico-legal implications but can also potentially affect the quality and safety of patient care e.g., documentation of an unexpected difficult airway event or an allergic reaction happened during peri-operative anaesthesia care.

Despite the presence of international guidelines, there are significant deficiencies in the documentation of perioperative anaesthesia care even in the high-income countries (HIC). The inadequate documentation has been shown although in all cases but is especially true in emergency surgeries and for patients having regional anaesthesia only. There is a shortage of quality studies on peri-operative documentation in anaesthesia care in modern literature. This may be due to the exhaustive nature of the process which involves ample data collection and collation of all clinical parameters to come up with any meaningful conclusion. There is a book titled as "Medical Records for Attorneys" by Laurence M. Deutsch "who summarizes the legal importance of anaesthetic documentation . . . if there is a crisis in the operating room, one can generally say that the anaesthetist is responsible, as a matter of general protocol. In such case, the quality of the anaesthesia record will likely be the most critical documentary evidence in the case.

Anaesthesia care is a continuum including three general phases: Pre-anaesthesia care, intra-operative anaesthesia care and post-anaesthesia care. As per the consensus guidelines, anaesthesiologists should ensure the accurate and thorough documentation in all three phases of anaesthesia related care. In specific circumstances e.g., emergency surgery or rapidly developing critical events, an anaesthesiologist may be in conflict between a primary obligation to ensure patient safety and best clinical care, and simultaneous medical record documentation. In these circumstances, attention to clinical care remains the primary obligation. Medical record documentation should be provided as soon as appropriate primary clinical care is given. In the current literature, there are significant gaps in documentation of both the pre and intraoperative records. Some current audits of intraoperative records have also highlighted similarly significant deficiencies.

It is currently recommended that before anaesthesia is administered, a pre-anaesthesia documentation should be signed by a physician anaesthesiologist. Additionally, there are a few things must be documented as follows:

- Discussing the patient's medical history, detail medication history, any prior experiences with anaesthesia and surgery or any hospitalization.
- Examining a patient's physical health for risk assessment.
- Ordering any tests and consultations that are necessary prior to anaesthesia care.
- Ordering any medications, NPO, and others for pre-operative anaesthesia care.
- Obtaining and documenting consent from the patient before anaesthesia care is administered.

During the intra-operative anaesthesia care, there are two standards. The first standard is the qualified anaesthesia personnel need to be present in the room while all types of anaesthetic care is delivered (general, regional, and monitored anaesthesia care). The second standard is that qualified personnel should constantly monitor a patient's circulation, temperature, ventilation, and oxygenation during the administration of anaesthesia. As with anything, adherence to these standards should be documented. Intravenous fluids: type, volume, time, blood loss, and output should be recorded periodically according to patient condition and surgical procedures. The documentation of Intra-operative medication for anaesthesia, analgesia and others like antibiotic and vasopressor should also be done.





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Standards for post-operative care demands that patients should be admitted to a post-anaesthesia care unit (PACU) or another equivalent recovery area. (Unless an anaesthesiologist ordered to do otherwise e.g., ICU or HDU). The Anaesthesiologist is responsible for the patient until a PACU can take over. It is not the responsibility of the anaesthesiologist to document the patient's condition throughout the PACU stay or when leaving the PACU.

It has also been emphasized that the documentation should be legible to someone other than the writer. Documentation of anaesthesia care is transitioning from the handwritten record to an automated, electronic medical record (EMR) to provide a legible record, limit variability in the documentation of information, and provide greater access to information to optimize patient outcomes. The anaesthesia documentation is a permanent record of the events of peri-operative care, which enables essential pre-anaesthesia assessment and intra-operative planning. However, across the world, anaesthesia documentation has been found incomplete and contain incorrect entries, missing data, incomplete descriptions and conflicting information. Common anaesthesia record documentation errors include:

- Documenting the surgical procedures section of a patient's anaesthesia record before the surgery is completed.
- Incomplete/missing information regarding vital signs, details regarding adverse events, data for quality reporting and other documentation requirements during different phases of anaesthesia, specially regional anaesthesia or peripheral plexus block.
- Lack of clarity in the documentation stating about the postoperative pain management.

In conclusion, the anaesthesia documentation is the main record of pre and intra and post-operative course of anaesthesia administration. The documentation and the record of what happened many years after the occurrence of an incident is the legacy of anaesthesiologist. Remember; It can be your best ally or your worst enemy. A sloppily anaesthesia documentation indicates a sloppy anaesthesia care, even if that is not true.

#### **Remember;**

Documentation compliance is more than just an expectation it is a necessity.  
If it wasn't documented, it wasn't done.

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### **Medicolegal Issues in Anaesthesia Local Perspective**

The goal of anaesthesiologist is to provide the most effective preoperative, intraoperative, and postoperative care to meet the demands of all patients undergoing surgery. Anaesthesiology is one of the most "high risk" specialties exposed to claims of negligence, malpractice and lack of competence.

In Pakistan, most anaesthesiologists are working in much less than ideal, even compromised, conditions and hence are more liable to be incriminated in medicolegal claims. In many situations one anaesthesiologist is managing more than one operating rooms at a time, and hence become more vulnerable to face litigations. Risk of such legal implications increases further when a young anaesthesiologist working in a remote area is brought under moral pressure by the surgical team and/or hospital administration by declaring him/her as a "sole life saver" and is made to provide anaesthesia care for a high-risk surgical procedure.



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Medicolegal aspects of the routine surgical activity are different from one country to another since the judicial system is different, but there are many issues that are common.

In developed countries common claims under anaesthesia include dental damage, awareness during anaesthesia, death under anaesthesia, epidural anaesthesia, inquests, joined with surgeons, nerve palsies, postoperative complications, lack of informed consent etc. In our country, however, only the serious issues are brought to the court.

Following local real case scenarios shall be discussed during the presentation:

#### Scenario 1:

Surgery was performed for an emergency lower section cesarian section, The patient had only one functioning kidney, whose ureter was damaged during surgery. The patient later developed kidney failure and was referred to the Urology Tertiary Care Institute where the urologist repaired the damaged ureter. The patient was not informed of the risk of bladder or uterine injury prior to surgery, and the unanticipated damage to the patient's ureter caused them to suffer from kidney failure. As a result, they had to be referred to a specialist institute for treatment. The patient however, recovered later on and went home with normal renal function tests.

#### Scenario 2:

A four-and-a-half-year-old girl with a fractured elbow underwent surgery under general anesthesia. The patient was handed over to a PG resident anesthesia. As soon as the induction was over, the anesthesiology team changed. There was a sudden decrease in blood pressure and bradycardia, which lasted for around 20 minutes. A straight line pulse oximetry was noted, and atropine 1mg was given by the resident. The resident called consultant in-charge of the case for help, the consultant arrived and found the patient's pulse less with severe bradycardia. CPR was started and adrenaline 1 mg was given. ROSC was achieved after 45 seconds. Upon completion of a surgical procedure and termination of anesthetic delivery, the patient did not wake up for 30 minutes, and suddenly had a generalised tonic clonic seizure with upward rolling of the eyes. As a result, the patient was reintubated, ventilatory support started, and moved to the PACU. Neurology and pediatric consultations were done. EEG done the following day showed generalized seizure activity. Both cerebral hemispheres were damaged by ischemic injury on the CT scan. After 48 hours, the patient's pupils became unresponsive to neurological examinations carried out 12 hours apart, which confirmed brain stem death. She was disconnected from the ventilator after 72 hours.

#### Scenario 3:

During a road traffic accident, a young man sustained facial injuries and a fracture of the left humerus. On arrival, he received treatment, but since there were no orthopedic surgeons in the area, he was referred to another city where an orthopedic surgeon performed the operation within 24 hours of the RTA. When the surgeon removed the plates after 6 weeks, the patient was found to have loss of sensation and motor activity of the operated limb, which, obviously, affected his quality of life greatly. Seeing the damage already done, no other surgeon agreed to perform any further surgery.

#### Scenario 4:

A gynaecologist performed dilatation and curettage under "local anaesthesia". During the procedure she asked operating room attendant to give Phenergan injection intravenously. The operating room assistant picked up an ampoule, injected the medicine and left the room. The patient arrested after a while. She was resuscitated by the anaesthesiologist ROSC was achieved. Later on, it was found out that that the injection given was "Pavulon (Pancuronium) and not the Phenergan. The patient could never recover neurologically and remained in a vegetative state for a long time.

#### Scenario 5:

A case report published in Ayub Medical College journal in 2011, that highlighted the practice where patients and attendants are not informed of medical errors that happen inside the operating room. In such a case a female was operated for adenocarcinoma of uterus in a private hospital. During the procedure a bladder injury happened that was repaired by the urologist, but postoperatively the primary surgeon did not inform the patient or attendants about the injury. Later on, the patient developed renal issues and was referred for the follow-up care.

#### Scenario 6:

A lady was given expired anesthetic medication intrathecally for sub-arachnoid blockade during emergency lower section cesarean section. Upon arriving at the ward after the operation, the patient suddenly developed tonic-clonic seizures, which eventually compromised her airway, resulting in her death.



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#### Scenario 7:

A shortage of anesthetic and lifesaving drugs has occurred in the government and private hospitals of major cities throughout Pakistan. The news is reported by reputable newspapers. Patient care during intraoperative care can be severely affected by such conditions, but still the surgery needs to be performed as a life-saving procedure or as part of increasing quality of life. What should be the response of an anaesthesiologist working alone in remote areas?

Almost all of the above-mentioned cases were presented and discussed in different local courts. The possible reasons of implications of anaesthesiologists in each case shall be discussed during the presentation to highlight critical issues.

#### Summary:

In above mentioned cases anaesthesiologists were questioned about; lack of informed consent, questionable qualification of the anaesthesiologist, inability to convey the critical incidents to patients' attendants that happened during the surgery, negligence in monitoring, improper data recording, delay in response to monitor alerts, not following ACLS guidelines during CPR, accidents due to look alike sound alike (LASA) drugs, use of expired drugs, absence of anaesthetist from the operating room, doubt about ulnar nerve injury due to improper positioning, trying to cover up mistakes, and reluctance by the hospital administration to provide required data to cover the anaesthesiologist's mistakes. Unfortunately, these are not the only untoward incidents that can happen. Dental damage, awareness during anaesthesia, dural puncture during epidural anaesthesia (especially if the patient was not informed preoperatively), epidural hematoma and abscess, inquests, etc. are the other commonly known litigations happening in other countries. One has to remember that the problem happens when you least expect it. If you fail to prepare yourself for any possible untoward incident, you prepare to fail.

#### Take Home Messages:

1. Take every case as if you are preparing to answer all the questions that might be asked by the court if anything goes wrong.
2. Make sure that you are "legally competent" to provide anaesthesia care to the patient you are planning to.
3. Take a separate "informed-consent" for anaesthesia and make sure all possible outcomes and alternate options are discussed and understood by the patient, his/her next of kin and its evidence is duly recorded. For the purpose I would like you to go through the guidelines published by some international organisation of repute e.g. "AAGBI-Consent for Anaesthesia 2017", published by Association of Anaesthetists of Great Britain and Ireland, available at [www.aagbi.org](http://www.aagbi.org).
4. ALWAYS check your anaesthesia machine, intubation equipment, availability of difficult airway management trolley before the procedure. Make sure that either you yourself fill all the drugs and label the syringes with designated colour code and name, or at least you see the assistant filling them in front of you.
5. ALWAYS follow the WHO Surgical Safety Checklist.
6. NEVER leave the operating room from induction of anaesthesia till recovery of the patient if you are not being assisted by a legally and professionally competent assistant.
7. NEVER be reluctant to ask for the available help.
8. ALWAYS make SOPs, protocols and job descriptions of your department in the form of clear written instructions, in compliance with international standards, guidelines and protocols.

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Shahab Naqvi





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### Unsafe Practices in Anaesthesia: How to avoid?

Patient safety is defined as “the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare”. The concern for patient safety was initially raised by in National Institute of Health report that estimated more than 150000 patients are harmed and more than 40000 die in the US each year. More recent estimates place this risk ten times higher. 20% of surgical and 34% of ICU patients are harmed due to the process of care, and 50% of these events are preventable.

The specialty of anaesthesia has been at the forefront of designing and adopting safe care delivery systems, resulting in a tenfold decrease in anaesthesia-related mortality during the last three decades. Although death directly attributed to anaesthesia is rare, rate of errors, near-misses and harm to the patient remains significant even in high-income countries, and this risk is significantly higher in low-middle-income countries. National audits, mostly conducted in developed countries, have identified that unsafe practices persist because they are one's functional response to psychological factors, professional values, and organisational pressures.

#### Practices that compromise patient safety

Common individual and team practices that foster an unsafe environment include:

- Working beyond one's limits of competence.
- Casual attitude to risk, failure to seek or follow advice from a colleague
- Failure to take and document a comprehensive history, undertake appropriate pre-operative investigations, request previous patient records
- Wrong interpretation of clinical findings/test results
- Failure to formulate an anaesthetic plan, backup plans, and discuss with the team members
- Lack of clarity in team structures, incomplete or inadequate briefing and handovers/poor or non-existent debriefing, poor or dysfunctional communication especially between specialities.
- Inadequate procedures for equipment checks.
- Failure to pause and reassess in case things are not working.

#### Institutional practices that foster an unsafe environment include

- Production pressure with greater emphasis on efficiency than safety.
- Failure to provide appropriate oversight and supervision where needed.
- Reluctance to undertake a formal analysis of adverse events/learn from errors
- Inadequate systems of communication
- Highly mobile working arrangements leading to difficulties in communication
- Equipment shortages and inadequate maintenance of equipment
- Unwillingness to invest in training of workers
- Heavy personal work-loads/lack of time to undertake thorough assessments

#### Why do unsafe practices persist?

Buezkom and colleagues have identified latent risk factors in categories that are shown in the table. Unsafe practices will persist as long as these issues remain unresolved.

Latent risk factors	Issues
<ul style="list-style-type: none"> <li>·Equipment, design, and maintenance</li> <li>·Staffing Communication</li> <li>·Training</li> <li>·Teamwork and team training</li> <li>·Procedures Situational awareness</li> <li>·Incompatible goals</li> <li>·Planning and organization</li> <li>Housekeeping</li> </ul>	<ul style="list-style-type: none"> <li>·Availability, functioning, standardization design, and maintenance of machines</li> <li>·Adequate staffing, skills Work-directed communication, openness, interrelation, atmosphere</li> <li>·Training for machines, procedures, team training</li> <li>·Team performance</li> <li>·Presence of protocols, adherence to protocols</li> <li>·Awareness of present situation, own tasks, and future developments Balance between goals and safety Process of care</li> <li>·Hygiene</li> </ul>



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Four central concepts are proposed to explain why unsafe practices persist.

- “Vulnerable system syndrome”. Proposed by Reason, this identifies an organizational culture that is based on denial, blame and pursuit of productivity rather than safety and excellence.
- “Migration of boundaries” explains why competent, well-meaning individuals continue to work around the established boundaries of safe practice. This attitude is hastened by the system's need for increased performance and workers' search for individual benefits.
- “First-order problem solving” is a concept that explains why a system that rewards the workers for finding readily available (first-order) solutions without addressing underlying causes allows the problems to recirculate within the system.
- “Relational coordination” highlights the importance of relationships between team members in ensuring a safe environment. Teams keep on changing, resulting in lack of coordination between team members.

#### How can we make Anesthesia safer?

Anesthesia team works in conjunction with other teams in a complex, stressful environment where the chances of errors are high; the focus has shifted from fixing responsibility on and penalising individuals at the forefront to designing systems where chances of errors are minimised.

Safety-I approach relied on incident reporting to identify flaws in the system. This approach has more recently been criticized because it assumes the systems are either stable or unstable with a linear cause-and-effect model. Safety-II approach is based on the assumption that healthcare systems like anaesthesia are variable and flexible; this approach, instead of looking at what goes wrong, focus on how the system works right and how people adjust to change as more complexity is introduced. The system relies on continuous adjustment in the face increasing complexity.

Defining best practices and implementing the protocols. Implementing protocols is a challenge; whereas nurses are more receptive, doctors are reluctant to follow the protocols and find them a threat to their professional competence. It is important that a buy in is created among all users.

Teamwork and Team-based training is the key to safe perioperative care environment. The focus has shifted to simulation-based training as increasingly complex interventions are introduced in healthcare to increase the margin of safety to the patients.

#### Further reading

1. Ten years of the Helsinki Declaration on patient safety in anaesthesiology. *Eur J Anaesthesiol* 2020;37:521-610
2. Production pressure, Medical errors and Pre Anesthesia Checklist. *M.E.J. ANESTH* 20 (5), 2010
3. Human factors in preventing complications in anaesthesia: a systematic review. *Anaesthesia* 2018, 73 (Suppl. 1), 1224
4. Five System Barriers to Achieving Ultrasafe Health Care. *Ann Intern Med.* 2005;142:756-764.
5. Patient safety: latent risk factors. *British Journal of Anaesthesia* 105 (1): 529 (2010)

**Dr. Arshad Taqi**  
(Koul Associates Lahore)

### **Role of Anesthesiologists in Enhanced Recovery After Surgery (ERAS) (Time to change Practice)**

#### Introduction:

Enhanced recovery after surgery (ERAS) is a well-established evidence-based model of care which is intended to reduce the impact of surgery, reduce the stress response and safely reduce the length of inpatient stay for surgical patients. It includes aspects of the preoperative, intra-operative and postoperative care of patients undergoing surgery during the hospital stay. The enhanced recovery involves a well-coordinated team to provide the best care to the patients (1-3). This pathway was first used by Prof. Henrik Kehlet in the 1990, for patients undergoing colorectal surgery on the basis of a standardized peri-operative care protocol during the entire hospitalization (2,4). Established and implemented in daily practice by a multidisciplinary team including surgeons, anesthesiologists, nurses, dietitians, physiotherapists and administrative staff (5). Anesthesiologists play a key role in the ERAS pathway and many components are to be dealt with by them (6,7).



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**ERAS covers the entire Perioperative period which means**

- Pre-operative
- Intra-operative
- Post-operative

**ERAS is a “Bundle Therapy Program” all components need to be followed.**

ERAS Key Components Linked to Anaesthesia		
Active patient involvement		
Pre-operative	Intra-operative	Post-operative
Pre admission counseling, optimisation and education	Multimodal pain management strategy avoid long acting opioids	Encourage early oral intake
Avoid mechanical bowel preparation (FOR BOWEL SURGERY)	Surgical technique: Minimally invasive approach is preferred	Early mobilization
Reduce Preoperative fasting	Short acting anesthetic agents	Use of chewing gum
Pre operative carbohydrate loading	Thoracic Epidural and Nerve blocks	Define discharge criteria
Avoid Pre anesthetic sedatives	Active warming	Regular Audit
Prophylaxis against thromboembolism	Use of multimodal anti-emetic prophylaxis Avoidance or Early removal of drains and nasogastric tubes	
Pre emptive oral analgesia		
Antibiotics prophylaxis and Skin preparation		
Pre-warming		
Use of Goal directed Perioperative fluid administration		

**Implementation of ERAS program** in the General surgery (Colorectal Surgery) have been expanded it to gynaecology, Obstetrics (cesarean section), urology (Radical cystectomy), orthopedics (arthroplasty)<sup>8</sup>

#### Alternative term use

1. Enhanced recovery after surgery (ERAS),
2. Enhanced recovery program (ERP)
3. Fast-track surgery,
4. Optimized peri-operative care (OPC)
5. Accelerated recovery program
6. Multimodal care plans

#### Benefits of ERAS:

- Improved patient experience
- Improved clinical outcomes
- Reduced recovery time after surgery and early rehabilitation
- Reduced length of stay in hospital
- Reduced waiting time for the patients
- Increased bed capacity for hospital
- Helps to meet quality and operational standards
- Cost effective

#### Conclusion:

Anesthesiologist has the most important role to play with the surgeon in the formulation and implementation of ERAS protocols at the hospital level. The way forward is to conduct audits and bring it in routine practice to familiarize all personnel involved in the perioperative care of the patient, better cost-effective patient care as well as facilitating hospital admission and discharge policy.

ERAS is a multimodal perioperative bundle care that utilizes Evidence Based Medicine to improve patient outcome.





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#### References:

1. Kehlet H, Wilmore DW. Evidence-based surgical care and the evolution of fast-track surgery. *Ann Surg.* 2008 Aug;248(2):189-98. PubMed PMID: 18650627.
2. Fearon KC, Ljungqvist O, Von Meyenfeldt M, Revhaug A, Dejong CH, Lassen K, et al. Enhanced recovery after surgery: a consensus review of clinical care for patients undergoing colonic resection. *Clin Nutr.* 2005 Jun;24(3):466-77. PubMed PMID: 15896435.
3. Sjetne IS, Krogstad U, Odegard S, Engh ME. Improving quality by introducing enhanced recovery after surgery in a gynaecological department: consequences for ward nursing practice. *Qual Saf Health Care.* 2009 Jun;18(3):236-40. PubMed PMID: 19468009.
4. Lassen K, Soop M, Nygren J, Cox PB, Hendry PO, Spies C, et al. Consensus review of optimal perioperative care in colorectal surgery: Enhanced Recovery After Surgery (ERAS) Group recommendations. *Arch Surg.* 2009 Oct;144(10):961-9. PubMed PMID: 19841366.
5. Spanjersberg WR, Reurings J, Keus F, van Laarhoven CJ. Fast track surgery versus conventional recovery strategies for colorectal surgery. *Cochrane Database Syst Rev.* 2011 (2):CD007635. PubMed PMID: 21328298.
6. White PF, Kehlet H, Neal JM, Schrickler T, Carr DB, Carli F, et al. The role of the anesthesiologist in fast-track surgery: from multimodal analgesia to perioperative medical care. *Anesth Analg.* 2007 Jun;104(6):1380-96, table of contents. PubMed PMID: 17513630.
7. Carli F, Baldini G. Fast-track surgery: it is time for the anesthesiologist to get involved! *Minerva Anestesiologica.* 2011;77(2):227-30.
8. Pasternak, Scott MBA, M.Div, BSN, RN, CCRN; Schwab, Nathan BSN, BBA, RN, CCRN, CFRN; Thun, Vickie MS, RN, FNP-BC Author Information *Nursing Critical Care* 13(4):p 40-45, July 2018. | DOI: 10.1097/01.CCN.0000532368.48473.17

#### Dr. Vinod Kumar

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The Indus Hospital Karachi

**41<sup>ST</sup> PSA - Annual Conference**  
PAKISTAN SOCIETY OF ANAESTHESIOLOGISTS KARACHI

**Pre-Conference Workshops**

Date / Day / Time	Topic	Institute	Organizer	Contact Person for Registration
23/2/2023 Thursday 8:45 - 11:15 am	Emergency Front of Neck Access Saving Private Ryan	AKUH	Dr. Ali Asghar	Ms. Hina Pirwani 021-34862897
3/3/2023 Friday 9:30am-12:30pm	Airway Management (Basic and Advanced)	FRPMC	Dr. Zahid Rao	Dr. M. Najamuddin 0332-0330508
4/3/2023 Saturday 12:00 - 2:30 pm	Ultrasound Guided Upper Limb Blocks	JPMC	Dr. Shahmilla Raza	Dr. Saleh Buzdar 0300-8968187
6/3/2023 Monday 9:30 - 11:30 am	Upper Airway Ultrasound in Airway Management	NICVD	Dr. Rabia Iqtidar	Ms. Asif 0315-2672061
7/3/2023 Tuesday 9:30am-12:30pm	Anaesthetic Emergencies Simulation Training	DUHS-CHK	Dr. Farjad Sultan	Mr. Tariq 0300-2133442
7/3/2023 Tuesday 9:00am-12:00pm	Airway Management	SCH	Dr. Nasir Khoso	Dr. Huda Taqdees 0331-0380586
8/3/2023 Wednesday 9:00am-12:00pm	Crisis Management in Anaesthesiology	AKUH	Dr. Asiyah Aman	Ms. Hina Pirwani 021-34862897
8/3/2023 Wednesday 3:00 - 5:00 pm	Front of Neck Airway Access (Percutaneous Tracheostomy / Cricothyroidotomy)	SIUT	Dr. S.M. Abbass	Dr. S.M. Abbass 0333-1318838
8/3/2023 Wednesday 9:30am-1:00pm	Challenges of One Lung Ventilation	SMBBIT	Dr. Sidra Javed	Ms. Sana 0342-4908398
9/3/2023 Thursday 9:00am-4:00pm	Boutique Workshop on Ultrasound Guided Truncal Blocks	TIH	Dr. Talal Ahmed	Mr. Burhan 0331-2205579
10/3/2023 Friday 9:30am-12:30pm	Research Methodology and Synopsis Writing	FRPMC	Dr. Zahid Rao	Dr. M. Najamuddin 0332-0330508

**B. BRAUN**  
SHARING EXPERTISE

#### Scientific Program 41<sup>st</sup> Annual Conference - PSA Karachi

11<sup>th</sup> - 12<sup>th</sup> March 2023  
Saturday, Sunday  
Karachi Marriott

Theme: Perioperative Anaesthesia Care : Medicolegal Implications

#### Day 1. Saturday 11<sup>th</sup> March 2023

- Inaugural Session 09:00 - 11:00 am
- Session-I 11:30 - 12:30 pm  
International Anaesthesia Standards: Where Do We Stand
- Session-II 12:30 - 1:30 pm  
Panel Discussion  
Medicolegal issues in Anaesthesia: Local Perspective
- Session-III 01:30 - 3:30 pm  
Emerging Trends in Anaesthesia
- Lunch 03:30 - 4:30 pm

#### Day 2. Sunday 12<sup>th</sup> March 2023

- Session-IV 08:30 - 09:45 am  
Meet the experts at Breakfast Session  
Group Photo
- Session-V 10:00 - 11:10 am  
Standardizing Care for Different Patient Population
- Session-VI 11:10 - 12:00 pm  
Pro and Con Session
- Session-VIIa 12:30 - 02:30 pm  
Resident's Free Paper Contest  
Poster Competition
- Session-VIIb 11:00 - 01:00 pm  
Parallel Paramedic Session  
Panel Discussion
- Session-VIII 02:30 - 03:30 pm  
Business Session
- Lunch 03:30 - 04:30 pm





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### Glimpse of Pre-Conference Workshops



Emergency Front of Neck Access  
at AKU on 23<sup>rd</sup> February



Airway Management Workshop  
at FRPMC on 3<sup>rd</sup> March



Ultrasound Guided Upper Limb Blocks  
at JPMC on 4<sup>th</sup> March



Role of Upper Airway Ultrasound in  
Airway Management at NICVD on 6<sup>th</sup> March



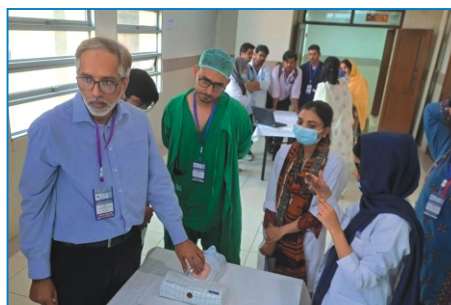
Simulation training Workshop at SIM Lab  
DUHS by Dept. Of Anaesthesia CHK on 7<sup>th</sup> March



Airway Management Workshop  
at South City Hospital on 7<sup>th</sup> March



Challenges of One Lung Ventilation  
at SMBBIT on 8<sup>th</sup> March



Front of Neck Airway Access  
at SIUT on 8<sup>th</sup> March



Boutique Workshop Ultrasound Guided  
Truncal blocks at Indus Hospital on 9<sup>th</sup> March



Point of Care Ultrasound at JPMC on 4<sup>th</sup> March



Airway Management at Fazaia Ruth Pfau  
Medical College on 28<sup>th</sup> Oct.2022