SAFE ANAESTHESIA LIAISON GROUP

PATIENT SAFETY UPDATE

October 2017–September 2018

PUBLISHED NOVEMBER 2018

LEARNING POINTS FROM REPORTED INCIDENTS

October 2017–September 2018

This document aims to achieve the following:

- Outline the data received, the severity of reported patient harm and the timing and source of reports
- Provide feedback to reporters and encourage further reports
- Provide vignettes for clinicians to use to support learning in their own Trusts and Boards
- Provide expert comments on reported issues
- Encourage staff to contact SALG in order to share their own learning on any of the incidents mentioned below.

The SALG Patient Safety Updates contain important learning from incidents reported to the National Reporting and Learning System (NRLS). The Royal College of Anaesthetists (RCoA) and the Association of Anaesthetists would like to bring these Safety Updates to the attention of as many anaesthetists and their teams as possible. We would like to encourage you to add this update to the agenda of your next morbidity and mortality meeting and we would also like to hear your feedback on learning points.

We welcome feedback from M&M meetings on how the Patient Safety Update has informed action can be sent to SALG at SALG@rcoa.ac.uk

Complications of neuraxial block

There were a number of reports where patients had developed spinal cord pathology following neuraxial block. Causation was not always clear, but these remind us of the need for care during insertion of neuraxial blocks. They also remind us of the need for protocols for post-monitoring of motor and sensory function in these patients and protocols for investigation and referral where problems occur. Organisations should ensure that systems are in place to ensure the complications of neuraxial blockade are detected as promptly as is possible to give the best possible chance of successful treatment.

- **Case 1** – A patient had epidural for analgesia for oesophagectomy and post-operative checks revealed complete motor block to both legs. Infusion was stopped as per protocol but patient had loss of sensory and motor function below T5, lasting 10 hours after infusion was stopped. MRI appearances were suggestive of partial thoracic spinal cord transection, presumably due to thoracic epidural anaesthesia. It is not stated whether the epidural was put in with the patient awake or not.
- **Case 2** – A thoracic epidural was inserted at the end of a laparoscopy, which had been converted to laparotomy. Insertion required the attendance of a second anaesthetist but there were "no particular difficulties and no complication experienced". There was a persistent weak right leg from the first evening. The reporter said they were "falsely reassured by partial return of sensation when epidural stopped". Again, it is not clear whether the epidural was placed with the patient still anaesthetised or after they had woken.
- **Case 3** – A patient underwent anaesthesia for anterior resection surgery for bowel cancer, with a thoracic epidural being placed. In recovery the patient could not move their legs. MRI of the spine was undertaken to rule out spinal haematoma and the epidural catheter was removed. MRI suggested syrinx but no evidence of haematoma or cord damage. The following day the patient still had weak legs,weakness in their right hand, and pain in their right thigh. The MRI was repeated to include their head and neck and consultant neurological opinion. It was thought that the patient had spinal infarction from C4 to T11.
- **Case 4** – An elderly patient was anaesthetised for an urgent relook laparotomy on a CEPOD list. Epidural was "performed after multiple attempts". On the first post-operative day, the pain team noticed persistent motor block and stopped the epidural. On the second post-operative day, there was still motor block bilaterally and an urgent MRI showed an epidural haematomal. The patient was transferred for urgent evacuation, which was done on the following afternoon. The patient is "recovering slowly".
- **Case 5** – A patient had undergone anaesthesia for diaphragmatic hernia repair, which had included difficult insertion of an epidural. On administration of an epidural bolus, they became hypotensive requiring treatment with metaraminol and ephedrine. Following this, they developed a dense sensory and motor block. MRI showed epidural haematoma from T2 - T4 and neurosurgical transfer was effected.

These cases should remind us that spinal cord catastrophes can happen in all manner of ways. There is not always a history of grossly difficult anaesthesia and there may even be no causal link in some cases. This is all the more reason for having clearly defined pathways for monitoring of neuraxial function in all patients who have had neuraxial blocks, with a clearly defined referral pathway when abnormality is detected and with a clear, agreed minimum timescale for investigation and referral for specialist opinion or treatment. Presence of some normal signs or function should not provide false reassurance in the presence of the abnormal. Where surgery is indicated, outcome is clearly related to speed of access to treatment.

LEARNING POINTS FROM REPORTED INCIDENTS

The Association's guidelines on immediate post-operative recovery[1] state:

> *"Considerations after spinal and epidural anaesthesia include… details of any continuous infusions, degree of motor block and the time of anticipated motor and sensory recovery."*

These lessons and more featured in NAP3,[2] now almost a decade old; perhaps it is time to re-learn them. The Association of Anaesthetists has in development specific guidelines on neurological monitoring practice after obstetric neuraxial block.

References

1. Association of Anaesthetists of Great Britain and Ireland. Post Anaesthesia Recovery. 2013 (bit.ly/2zXplgB).
2. Royal College of Anaesthetists. National Audit Project 3: Major complications of central neuraxial block in the United Kingdom. NIAA, 2009 (www.niaa.org.uk/NAP3_home?newsid=464#pt).

Epidural insertion technique

- An epidural was inserted, using a 16 gauge Tuohy needle and loss of resistance to saline technique. After uneventful insertion of the catheter, but with the needle still in place, saline was injected via the catheter testing for a falling meniscus. Increased resistance to injection was encountered, so the operator "… decided to withdraw the catheter to reinsert… while pulling back, inadvertent breakage of catheter happened… catheter got cut below 5 cm mark".

This uncommon complication is a very clear reminder that the epidural catheter should not be withdrawn through an in-situ Tuohy needle. The angle of the needle tip and its sharp cutting edge mean that shearing off of the catheter end is a real risk. Best practice is to remove the needle and catheter in unison before withdrawing the catheter. This patient was left with a retained foreign body.

Anaphylaxis

Three reports of anaesthesia-related anaphylaxis were received, all implicating teicoplanin in their aetiology:

- **Case 1** – The daytime duty anaesthetist was called to an arrest in a patient who had had a spinal anaesthesia for a total knee replacement. "… teicoplanin in a 100ml bag of saline just finished. Patient developed a cough and very soon followed by respiratory distress. They became unresponsive, apnoeic and suffered cardiovascular collapse. Asystole and PEA. CPR was commenced and resuscitation took place for one hour. Intubated at some point during CPR. LUCAS [chest compression system] was put on until return of spontaneous circulation was established…"
- **Case 2** – "Suspected anaphylaxis to teicoplanin antibiotic prophylaxis given for elective orthopaedic arthroplasty. [There was] loss of cardiac output post anaesthetic induction, intubated and 2x cycles CPR. Output returned".
- **Case 3** – A patient undergoing hip hemiarthroplasty had a general anaesthetic and a regional block and developed severe hemodynamic instability after having antibiotics (teicoplanin and gentamicin) and tranexamic acid: "…needed multiple boluses of adrenaline to stabilise… The surgery was expedited… patient taken to the ITU… became severely shocked and unresponsive to escalating doses of vasopressors and inotropes and died in the ITU few hours later."

This serves as a reminder for clinicians to be familiar with the key findings and recommendations of NAP6.[3] Clinicians need effective local systems for responding to cases of anaphylaxis. This includes having readily available drugs, protocols, cognitive aids and personnel to deal with the acute event, backed up by robust systems to ensure mast cell tryptase assay, referral to investigative services and follow up. In keeping with these three case reports, antibiotics were the commonest cause of perioperative anaphylaxis in NAP6 and teicoplanin was the commonest causal agent in that group. One of the recommendations includes advice that perioperative antibiotics should be administered as early as possible, and where practical at least 5–10 minutes before induction of anaesthesia.

3. Royal College of Anaesthesits. Anaesthesia, Surgery and Life Threatening Allergic Reactions: Report and findings of the Royal College of Anaesthetists' 6th National Audit Project- perioperative anaphylaxis. NIAA, 2018 (www.nationalauditprojects.org.uk/NAP6home).

Prone position

- A patient underwent prolonged spinal surgery in the prone position and was hypotensive for long periods during surgery. Post-operatively they developed an acute kidney injury possibly, acute hepatic ischaemic injury and possible ischaemic bowel on CT scan. They required treatment in ICU with inotropes and at the time of writing the outcome was unknown.

The prone position is fraught with danger and all of the complications suffered by this patient are recognised complications.[4] It is not clear whether the hypotension was intended and controlled or unintentional and/or unrecognised, but it could have been implicated in the aetiology of these complications. Careful positioning is required in the prone position to avoid pressure on visceral organs, impairment of blood flow or venous return and compartment syndrome.

Reference

4. Felix, B.; Sturgess, J. 'Anaesthesia in the prone position'. Continuing Education in Anaesthesia, Critical Care and Pain, 14(6), 291-297 (2014) (https://academic.oup.com/bjaed/article/14/6/291/247907).

Nasogastric tubes

NHS Improvement has issued a number of alerts over recent years to highlight the dangers of unrecognised misplacement of nasogastric (NG) tubes, a Never Event, most recently in 2016[5] (and previously in 2011, now archived[6], yet cases still occur.

- **Case 1** – A nightshift ICU trainee reviewed a patient and asked for their NG feeding to be stopped as the NG tube was likely in the bronchus. The patient had been fed via the tube for some hours after the NG tube placement X-ray had been reviewed by the daytime trainee. It was documented in patient notes that NG tube was in the right place and could be used.
- **Case 2** – An ICU patient was reviewed because of low saturations and decreased tidal volumes. On performing tracheal suction, feed was aspirated. The previous CXR was reviewed and showed two NG tubes in place. A Ryles tube could be seen below the diaphragm but the feeding tube was seen in the left main bronchus. The CXR had been reviewed and documented prior to starting feed. The patient was fed for 7 hours at a low rate before this incident.

The alerts on NG tube misplacement are quite explicit. The first line test for correct NG tube placement is pH test of aspirate. Chest x-ray is a second line test and very clear instructions are given as to how the x-ray is to be requested, reviewed and documented before NG feeding can start. The 2011 alert makes a requirement that: "Any individual involved with nasogastric tube position checks has been assessed as competent through theoretical and practical learning". It is not clear that this requirement was adhered to in these cases and the 2016 alert states: "Examination of these incident reports by NHS Improvement clinical reviewers shows that misinterpretation of x-rays by medical staff who did not appear to have received the competency-based training required by the 2011 NPSA alert is

the most common error type". Organisations and individuals alike have a responsibility to ensure the provisions of the alerts are followed.

Reference

5. NHS Improvement. Patient Safety Alert: Nasogastric tube misplacement, continuing risk of death and severe harm, July 2016 (http://bit.ly/2A181N6).
6. National Patient Safety Agency. Reducing harm caused by misplaced nasogastric feeding tubes in adults, children and infants, March 2011 (http://bit.ly/2Tr1lB2).

Tracheal extubation

This can be as challenging a part of the anaesthetic as tracheal intubation. Particularly at early stages in training, knowing when it is safe to extubate and how precisely to do it can be hard to fathom. The knowledge and skills underpinning safe tracheal extubation, including assessment of neuromuscular blockade, are assessed as part of the Primary FRCA curriculum.[7]

- A report was received from an operating department practitioner (ODP). A patient had uneventful general anaesthesia, including tracheal intubation, for minor surgery. At the end of the operation, the anaesthetist asked for the tracheal tube cuff to be deflated. The ODP raised concerns because "the patient was not showing signs of being ready". The anaesthetist extubated the patient's trachea anyway and the patient became very cyanosed, with pulse oximetry showing 25%. The ODP gave the anaesthetist the anaesthetic circuit, which was applied to the patient and then called for help. Assistance arrived, disagreement within the team ensued and eventually the patient's trachea was reintubated. Further desaturation occurred and the report suggests that the airways and tracheal tube were blocked with secretions. The patient was transferred to ICU for ongoing care.

A number of learning points emerge. The first perhaps is the importance of team working. Modern thinking advocates a flattened hierarchy where the opinions of all team members should be treated with equal respect. In this case the ODP raised valid concerns and it is not clear that these were given adequate credence by the anaesthetist. All healthcare workers can benefit from team training, whether it be to learn to make their voice better heard or to learn to listen more effectively. This case also serves as a useful point to highlight the Difficult Airway Society (DAS) guidelines on tracheal extubation[8], which provide a structured approach to extubation in ordinary and extraordinary circumstances. It is not clear that any structured approach was followed in this case and it is easy to speculate on a better outcome if this had been the case.

References

7. Royal College of Anaesthetists. CCT in Anaesthetics, Annex B- Core level training (2nd Edition), August 2010 (www.rcoa.ac.uk/CCT/AnnexB).
8. Difficult Airway Society, DAS Extubation Guidelines (www.das.uk.com/content/das-extubation-guidelines).

Machine checking and more besides

- **Case 1** – A patient's oxygen saturation dropped during pre-oxygenation but rose again with deep breathing. After induction of anaesthesia with propofol and facemask ventilation, there was no improvement in saturation. A supraglottic airway was inserted and adequate chest expansion was easily achieved, with capnography trace but without improvement in saturation. The patient "looked blue" and while help was en route the trachea was intubated. Despite good chest expansion and presence of expired carbon dioxide, there was no improvement in saturation. When help arrived, ventilation was switched to a self-inflating bag with auxiliary oxygen and the situation quickly resolved. The reporter stated "… air (sic) button was lit on anaesthesia machine and was on 100% and nitrous oxide button was not lit. There was no audible alarm for low oxygen. Oxygen analyser showed delivery of only nitrous oxide… I checked the machine before starting the case and it was checked in the morning [automated self-check]". The patient was transferred to ICU for ongoing care and it is not stated whether they came to any harm.
- **Case 2** – A patient aspirated during induction of anaesthesia. The anaesthetist explains: "There was a lack of any emergency equipment… no transducer sets… no arterial lines… no oro-pharyngeal airway… no paediatric suction catheter… I spent most of the time sending staff to other areas to fetch these and in an emergency situation it was not safe…"
- **Case 3** – Inhalational induction of anaesthesia was taking place with a 3 yr old child, using an Ayers T-piece connected to the accessory common gas outlet (ACGO) of the anaesthetic machine: "The child seemed to take a long time to go to sleep and when I tried ventilating with the T -there was no gas in the system. I noted that the switch by the ACGO was still on the main machine and not to the common gas outlet. I should have checked before the case started but overlooked this on this occasion. I was working with an agency ODP [operating department practitioner] who had never done any paediatric cases in this hospital and was unfamiliar with using the ACGO outlet on the machine. There was a student ODP who says she had no experience of paediatric cases…"

All three cases share the same themes: they remind us that situational awareness and awareness of the limitations of one's environment (including the people working in it) are key attributes of any anaesthetist. The anaesthetist shares responsibility for ensuring that their entire environment is suitably equipped for the clinical activity planned, which extends to task and team management. These topics are covered in the curriculum of the University of Aberdeen and Scottish Clinical Simulation Centre's Anaesthetists' Non-Technical Skills ('ANTS') courses.[9]

Checking the anaesthetic machine should need no promotion here. As well as using the machine's own self-test program, it is vital to perform a manual check, as per the checklist contained in the Association of Anaesthetists' Checking Anaesthetic Equipment 2012.[10] This includes a check before each case. This often overlooked, but we would all do well to reflect on this. Unintended changes may be made to machine's settings or configuration without the knowledge of the anaesthetist, or settings from the previous case may be unintentionally left.

It is not clear exactly what caused the machine in case 1 to behave in this way and it has not been possible to ascertain whether it was reported to MHRA, but reporting equipment issues such as this, is important. It is often overlooked in a busy list but it is necessary if lessons are to be learned. As well as local reporting, serious events like this should be reported via the MHRA Yellow Card system, which is online and easily accessed.[11] That all clinicians actively report faults is a vital element in the feedback loop that protects patients and drives better equipment design.

Part of situational awareness is having in mind any number of 'escape plans' for if things go wrong. In case 1, when unexpected and unremitting desaturation occurred, it is possible that use of a cognitive aids such as the Association of Anaesthetists' Quick Reference Handbook[12] would have led to resolution sooner. We need to learn to recognise when we are in situations that are amenable to this kind of help.

Case 3 highlights again the absolute importance of the machine check and how a disaster can unfold when changes have been made between cases. The reporter correctly identifies their own omissions in checking, but there is also the significant question at organisational level around the choice of an unfamiliar agency ODP and the placement of a trainee ODP with them.

Finally, case 3 also resurrects the argument about the wisdom or otherwise of having an ACGO on anaesthetic machines. Opinions vary, articles have been written [13] and MHRA has issued an alert[14] but two things are certain: problems of this kind continue to occur in machines so equipped and while ACGOs exist, heightened clinician awareness, combined with strict machine checking are at the heart of prevention.

References

9. AaE: Anaesthetists' Non-Technical Skills (ANTS) (bit.ly/RCoANTS)
10. Association of Anaesthetists of Great Britain and Ireland. Checking Anaesthetic Equipment. 2012 (http://bit.ly/1MwWVNT).
11. Yellow Card. Medicines and Healthcare Products Regulatory Agency (https://yellowcard.mhra.gov.uk/).

12. Association of Anaesthetists of Great Britain and Ireland. Quick Reference Handbook. 2018 (www.aagbi.org/qrh).
13. Meek, T. Response to coroners report to prevent future deaths. Anaesthesia News. Association of Anaesthetists of Great Britain and Ireland, Feb 2018 (http://bit.ly/2TrxPLe).
14. Medicines and Healthcare Products Regulatory Agency. Medical Device Alert MDA/2011/108: Auxiliary common gas outlet (ACGO) for anaesthetic machine - no fresh gas flow to patient with wrong setting. December, 2014 (http://bit.ly/2DMF5gk).

Anaesthesia for hip fracture surgery

A number of reports were received reminding us all that this group of patients are at high risk of adverse events:

- **Case 1** – A 95 year old patient with a background of extreme frailty and other co-morbidities underwent revision hip hemiarthroplasty. Anaesthesia was femoral nerve block, spinal and general anaesthesia with supraglottic airway. Within 1-2 minutes of cement introduction, patient lost cardiac output, developing into full cardiac arrest.
- **Case 2** – A patient was listed for reduction of dislocated hip. After intravenous induction of anaesthesia, the patient vomited and tracheal intubation was performed. Oxygenation remained problematic. CXR in theatre demonstrated left lower lobe opacity +/- collapse and dilated loops of bowel. Transferred to ICU for ongoing care.
- **Case 3** – A patient underwent hip hemiarthroplasty under general anaesthesia. Following cement introduction and placement of the prosthesis the patient's blood pressure dropped significantly. The hip was reduced and wound closure began, but the patient continued to deteriorate and had to be placed supine for CPR. A 'do not attempt resuscitation' order was in place before the operation and: "…once reversible causes had been excluded and patient had not shown any signs of improvement a decision was made to stop resuscitation. It is thought that the patient suffered a catastrophic event at the time of the cement implantation (either a massive embolus or cement implantation syndrome)."

These cases remind us that this group of patients are increasingly older, more frail and at higher risk of complications. The International Fragility Fracture Network has just published a consensus statement on the principles of anaesthesia in these patients.[15] Key recommendations include that anaesthesia is key to their multidisciplinary care and that anaesthesia (and surgery) should be undertaken by appropriately experienced clinicians. The risks associated with cement pressurisation in hip hemiarthoplasty are well recognised (so called 'bone cement implantation syndrome') and measures to reduce the risk have been published.[16] This group of patients are anecdotally at higher risk of aspiration and airway control is a suitable topic for local protocols.

References

15. White, SM.; Altermatt, F.; Barry, J. et al. International Fragility Fracture Network Delphi Consensus Statement on the Principles of Anaesthesia for Patients with Hip Fracture. *Anaesthesia*, 73: 863-874 (2018) (https://onlinelibrary.wiley.com/doi/pdf/10.1111/anae.14225).
16. Association of Anaesthetists of Great Britain and Ireland. Reducing the risk from cemented hemiarthroplasty for hip fracture. 2015 (http://bit.ly/2zXqJoV).

Wrong site block

- An elderly frail patient was listed for right-sided dynamic hip screw on a weekend trauma list. Before turning the patient for spinal anaesthesia, ultrasound guided fascia iliaca block in supine position was performed: "Verbal check with ODP that the operative side was the right side. Groin exposed and block then inadvertently performed on the left side. This was appreciated on turning the patient in preparation for the spinal. Spinal performed with good block resulting. Informed patient of error in recovery and apology given. Seen again the following day, doing well, no complaints."

This is a current topic of interest following the recent Healthcare Safety Investigation Branch (HSIB) report on the subject.[17] The report highlights the current difficulties in ensuring a robust systematic barrier preventing wrong site peripheral regional nerve block. SALG has promoted the "Stop Before You Block" initiative but it is clear that a problem remains. Following HSIB's recommendation in their report, the Royal College of Anaesthetists has agreed to evaluate the current practices used to reduce wrong site block incidents and to consider how safety initiatives to reduce wrong site blocks can be standardised in anaesthesia training and practice. This work will involve SALG and topic experts.

Reference

17. Healthcare Safety Investigation Branch. Investigation into administering a wrong site nerve block I2017/004, September 2018 (www.hsib.org.uk/investigations-cases/administering-wrong-site-nerve-block/).

Retained object

- An ICU patient with community acquired pneumonia, sepsis and multiorgan failure required tracheostomy. Percutaneous tracheostomy was performed with some difficulty by one experienced consultant assisted by another and an experienced middle grade anaesthetist. The first attempt was unsuccessful: "… initial puncture and guidewire insertion were performed under bronchoscopic visualisation. Dilation was then performed and insertion of tracheostomy tube. Ventilation at this point could not be achieved and the respiratory tract could not be visualised with bronchoscopy via the tracheostomy". The tracheostomy was removed and ventilation re-established via the orotracheal route. Although abandonment of the

procedure was considered, a second attempt by the other consultant, using a second tracheostomy set, proceeded uneventfully. The reporter stated "It is unclear whether a bronchoscopy was performed following the second successful attempt". Days later, the tracheostomy was unintentionally dislodged and was re-sited, again uneventfully via the existing tract by the second consultant. A bronchoscopy undertaken following this procedure revealed a foreign body in the left bronchus. It was subsequently removed using a bronchoscope and was identified as the insertion cannula from a percutaneous tracheostomy set. The reporter adds: "It is presumed that the foreign body was retained from the [first, difficult] tracheostomy… due to the difficulties encountered during that procedure."

Although prevention of the retained object Never Event[18] is more commonly associated in our minds with surgery or with guidewire retention, here is an unexpected culprit. We are rightly fixated on surgical counts and on ways to ensure and document guidewire removal, but the National Safety Standards for Invasive Procedures (NatSSIPs) are quite clear that invasive procedures such as tracheostomy are equally subject to the requirement for local counting and reconciliation procedures which are consistent across all areas of practice.[19]

References

18. NHS Improvement. Never Events Policy and Framework, January 2018 (http://bit.ly/2DMp3mw).
19. NHS Improvement. National Safety Standards for Invasive Procedures, September, 2015 (http://bit.ly/2DKnBBh).

Full stomach

- A patient was admitted for elective revision of a prolapsed intestinal stoma. The patient was known to have a history of intestinal failure secondary to severe gut dysmotility for which there had been numerous previous surgical procedures and was dependent on total parental nutrition. The patient denied any history of reflux and had had a previous uneventful anaesthetic. The report states: "On induction of general anaesthesia, the patient suffered aspiration of gastric contents into the lungs and developed a profound systemic inflammatory response to the subsequent pneumonitis with severe hypoxia and hypotension… [the patient] was treated with maximal respiratory and cardiovascular support but failed to respond to all maximal medical therapy…". The patient was deemed unsuitable for extra-corporeal membrane oxygenation and subsequently died.

The report authors correctly identify the lesson here: gut motility disorder should be taken to imply full stomach, with the usual precautions being taken. This could be reflected in local policies for induction of anaesthesia as well as in local fasting policies.

An uncommon complication of intubation

- A patient was admitted with meningitis and mastoiditis. After mastoidectomy, the patient was admitted to ICU and took several weeks to regain consciousness, when it became clear that the patient was unable to close their mouth. Initially dislocation was discounted, but subsequent review of several CT scans by maxillo-facial surgeons revealed that "…the dislocation is visible in all of these scans but was not reported. Patient is awaiting consultant review but it is unlikely that his jaw will be easily reducible after such a long period of dislocation."

This is a life-changing injury for the patient. Problems with mandibular joint function will become obvious very quickly when a patient is woken normally after general anaesthesia, but this serves as a lesson to those of us whose patients conclude their theatre journey on ICU. Although this is a evidently rare complication and there is no literature on this specific problem, its consequences are severe, so perhaps mandibular joint integrity should be a subject of review at transfer to ICU and of periodic documented review during the ICU stay.

Emergency department airway management

- A severely unwell patient in emergency department (ED), with resuscitation needed admission to ICU. The anaesthetic team wished to transfer the patient without intubation, stating 'we don't have the correct machines here.' The nursing staff and ED consultant expressed concerns that this was an unsafe transfer and "… ED consultant tried to intervene for intubation several times". The patient was transferred to ITU with oxygen saturations of 83% dropping further on transfer and they had a cardiac arrest and died on arrival on ICU.

A Difficult Airway Society commissioned expert group has published Guidelines for the management of tracheal intubation in critically ill adults[20], which addresses all aspects of the process in diverse locations. It is quite clear:

"Moving patients with borderline respiratory function may precipitate complete respiratory failure: ideally the team should come to the patient in an adequately equipped critical care environment, in preference to transferring the patient to an operating theatre for airway management."

However, many ED resuscitation rooms no longer have anaesthetic machines. There are rare circumstances when transfer out of the ED for airway control is legitimately indicated. Acute epiglottitis is an example, where

inhalational induction of anaesthesia may be the preferred method, and in an ENT theatre staffed, equipped and prepared for immediate emergency tracheostomy. This story illustrates the importance of having an agreed local protocol covering all eventualities as well as the possible benefits of emergency department and anaesthesia clinicians developing and practising working together. NAP4 highlighted the need for a suitably stocked difficult airway trolley in all necessary areas that conforms to a local if not national standard.[21]There is also a strong argument for having standardised trolley for equipment for the non-difficult intubation.

References

20. Higgs, A.; McGrath, BA.; Goddard, C. *et al*. Guidelines for the management of tracheal intubation in critically ill adults. *British Journal of Anaesthesia*, 120(**2**):323-352 (2018). (https://bjanaesthesia.org/article/S0007-0912(17)54060-X/pdf).
21. Difficult Airway Society. Setting up a difficult airway trolley (DAT (https://das.uk.com/content/difficult_airway_trolley).

An exciting new initiative: SALG Safety Scholars

in partnership with the Beth Israel Deaconess Medical Centre, USA

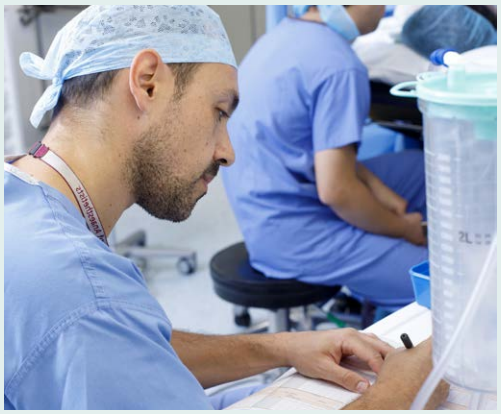
The Safe Anaesthesia Liaison Group has announced an exciting new programme of fellowships for anaesthetists interested in patient safety.

In collaboration with the Association of Anaesthetists and the Royal College of Anaesthetists, the Safe Anaesthesia Liaison Group (SALG) are offering a unique programme of formal training through Harvard Medical School that aims to develop international expertise in perioperative quality and safety.

This program is open to current anaesthetic trainees, and is endorsed by the American Board of Anesthesiologists (ABA). Successful candidates will receive official letters from the ABA in support of their visa application, where necessary.

Further details of the programme and application process are available on the SALG website: **www.salg.ac.uk/salg/salg-bidc-fellowship**

The closing date for applications is 31 January 2019.



INCIDENT DATA SUMMARY

October 2017–September 2018

Figure 1 – Degree of Harm (actual incidents)

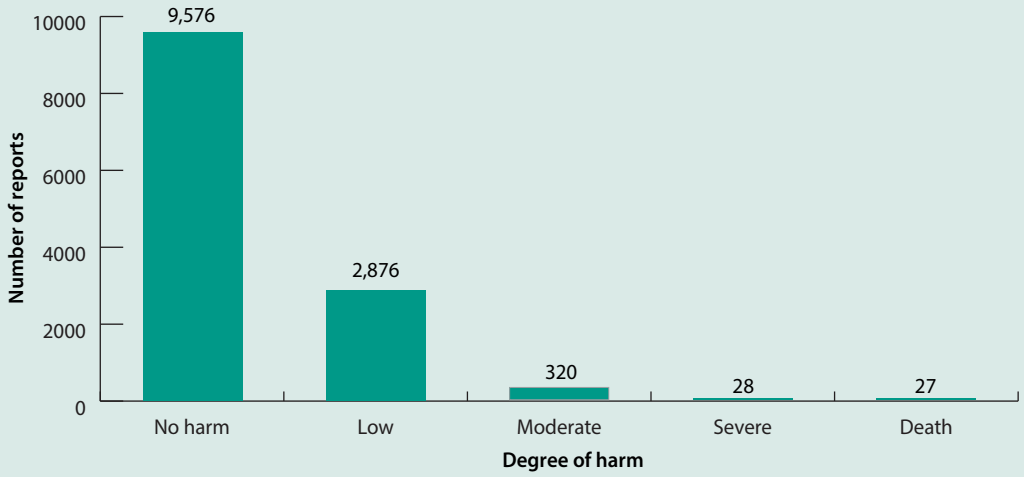


Figure 1 shows the degree of harm incurred by patients within the anaesthetic specialty during the period October–December 2017. 27 deaths were reported though LRMS and none via the anaesthetic eForm.

Figure 2 – Incidents by incident type

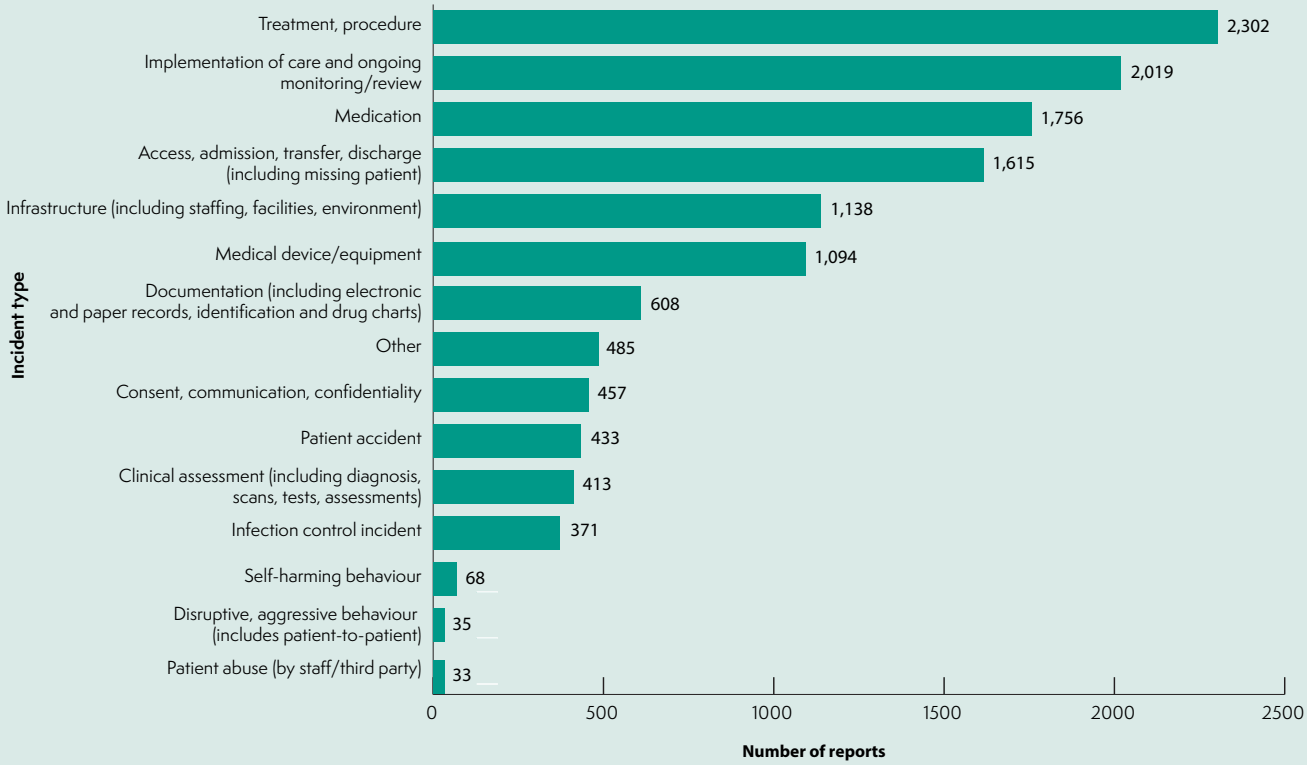


Figure 2 shows the type of incidents that occurred within the anaesthetic specialty that were reported using LRMS or the anaesthetic eForm for the period October–December 2017. The categories were determined at local level.

INCIDENT DATA SUMMARY

October 2017–September 2018

Figure 3 – Degree of Harm (actual incidents)

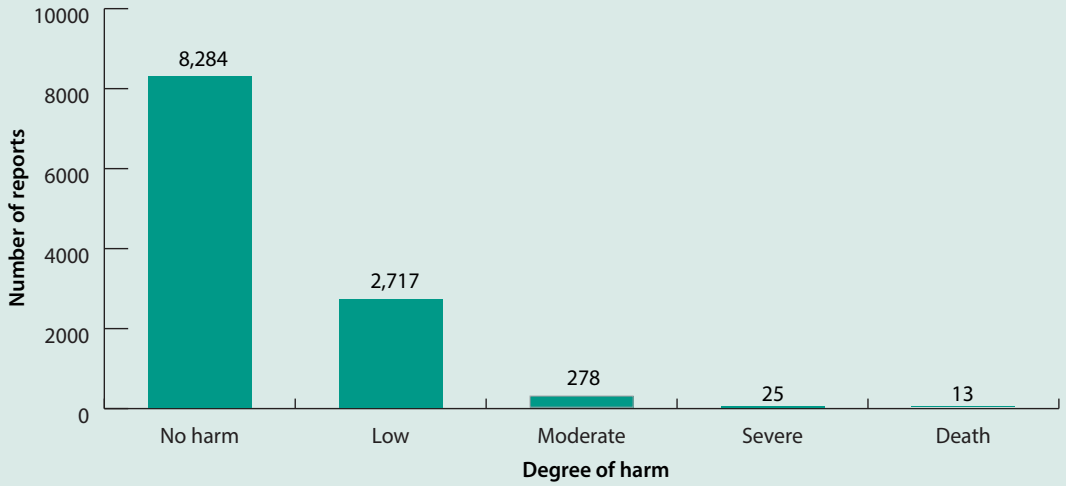


Figure 3 shows the degree of harm incurred by patients within the anaesthetic specialty during the period January-March 2018. 13 deaths were reported though LRMS and none via the anaesthetic eForm.

Figure 4 – Incidents by incident type

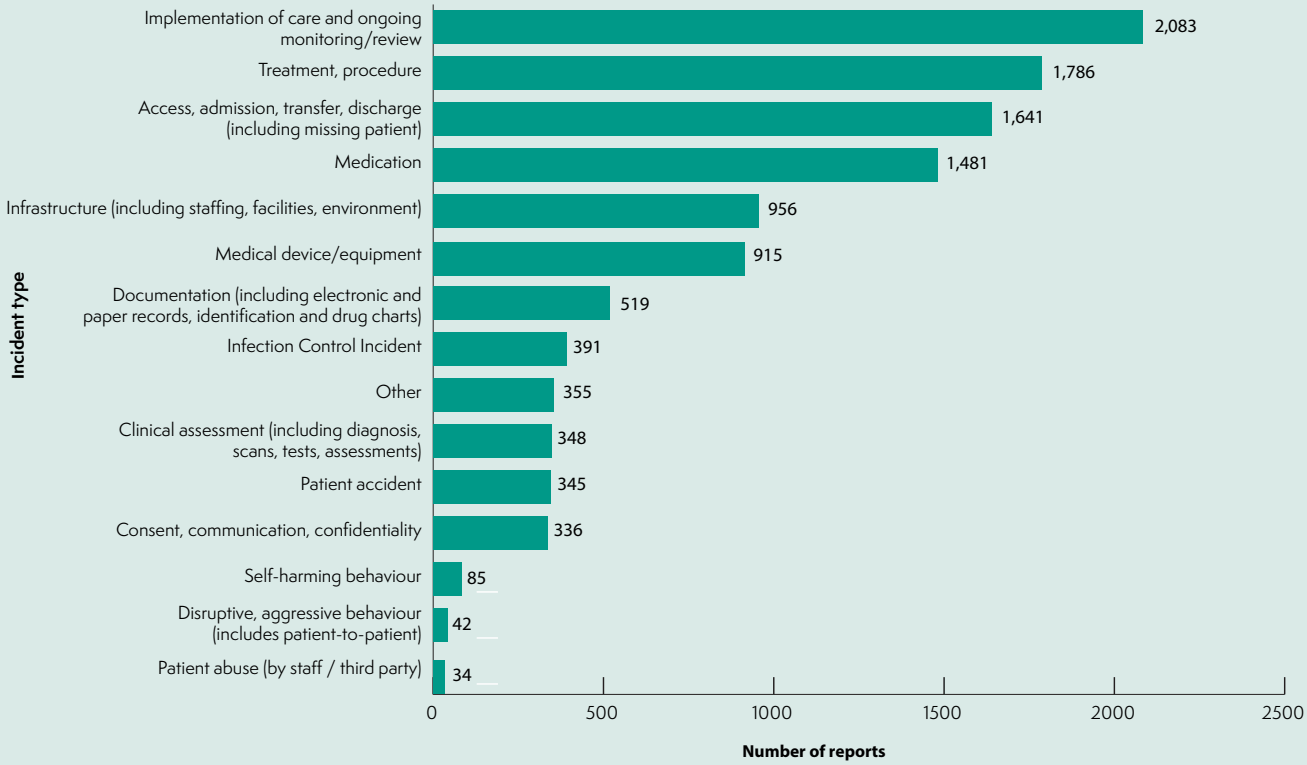


Figure 4 shows the type of incidents that occurred within the anaesthetic specialty that were reported using LRMS or the anaesthetic eForm for the period January-March 2018. The categories were determined at local level.

INCIDENT DATA SUMMARY

October 2017–September 2018

Figure 5 – Degree of Harm (actual incidents)

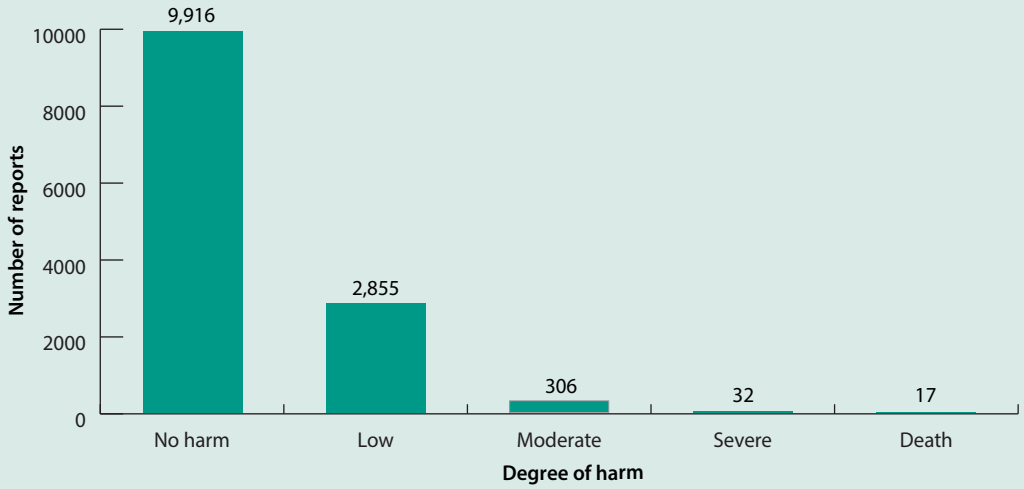


Figure 1 shows the degree of harm incurred by patients within the anaesthetic specialty during the period April-June 2018. 17 deaths were reported though LRMS and none via the anaesthetic eForm.

Figure 6 – Incidents by incident type

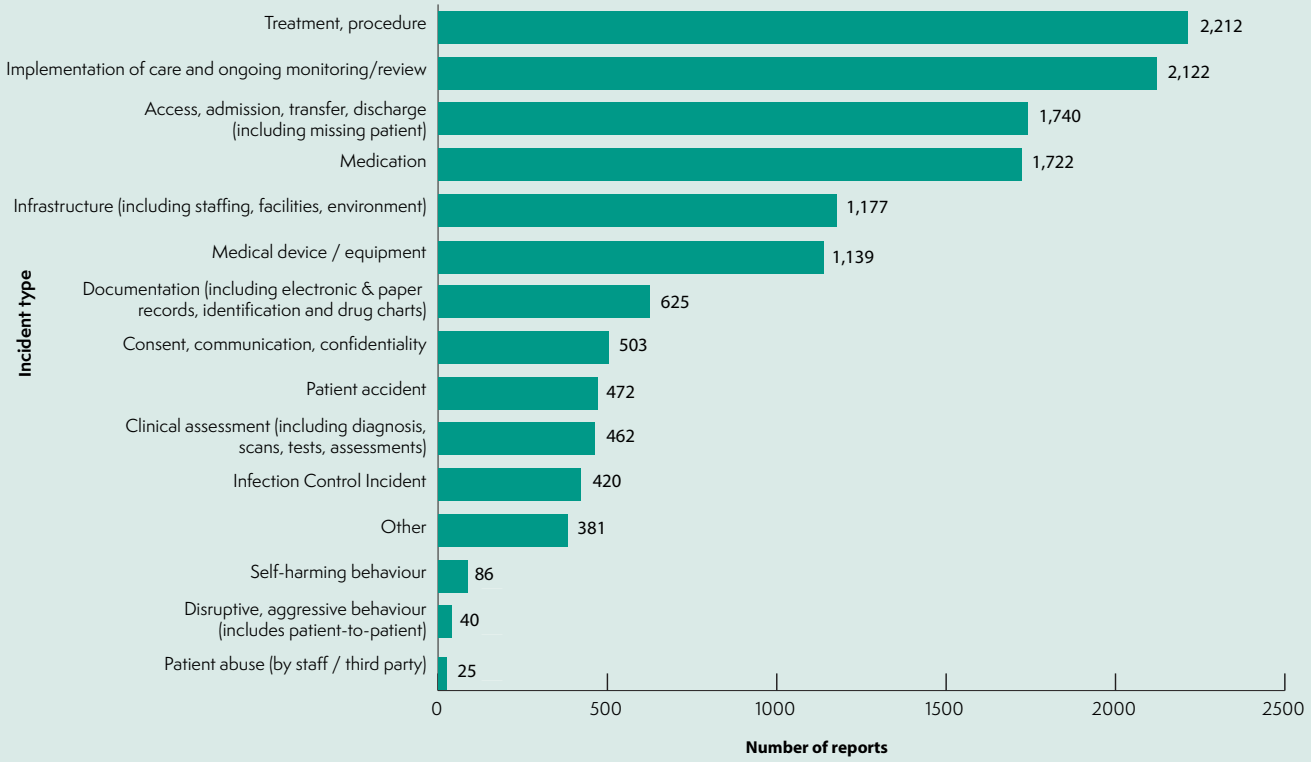


Figure 2 shows the type of incidents that occurred within the anaesthetic specialty that were reported using LRMS or the anaesthetic eForm for the period April-June 2018. The categories were determined at local level.

INCIDENT DATA SUMMARY

October 2017–September 2018

Figure 7 – Degree of Harm (actual incidents)

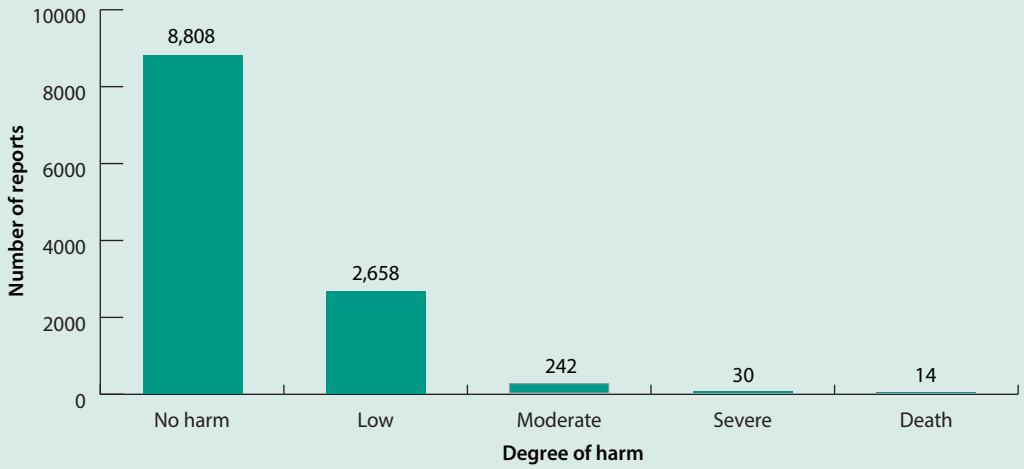


Figure 1 shows the degree of harm incurred by patients within the anaesthetic specialty during the period July-September 2018. 14 deaths were reported though LRMS and none via the anaesthetic eForm.

Figure 8 – Incidents by incident type

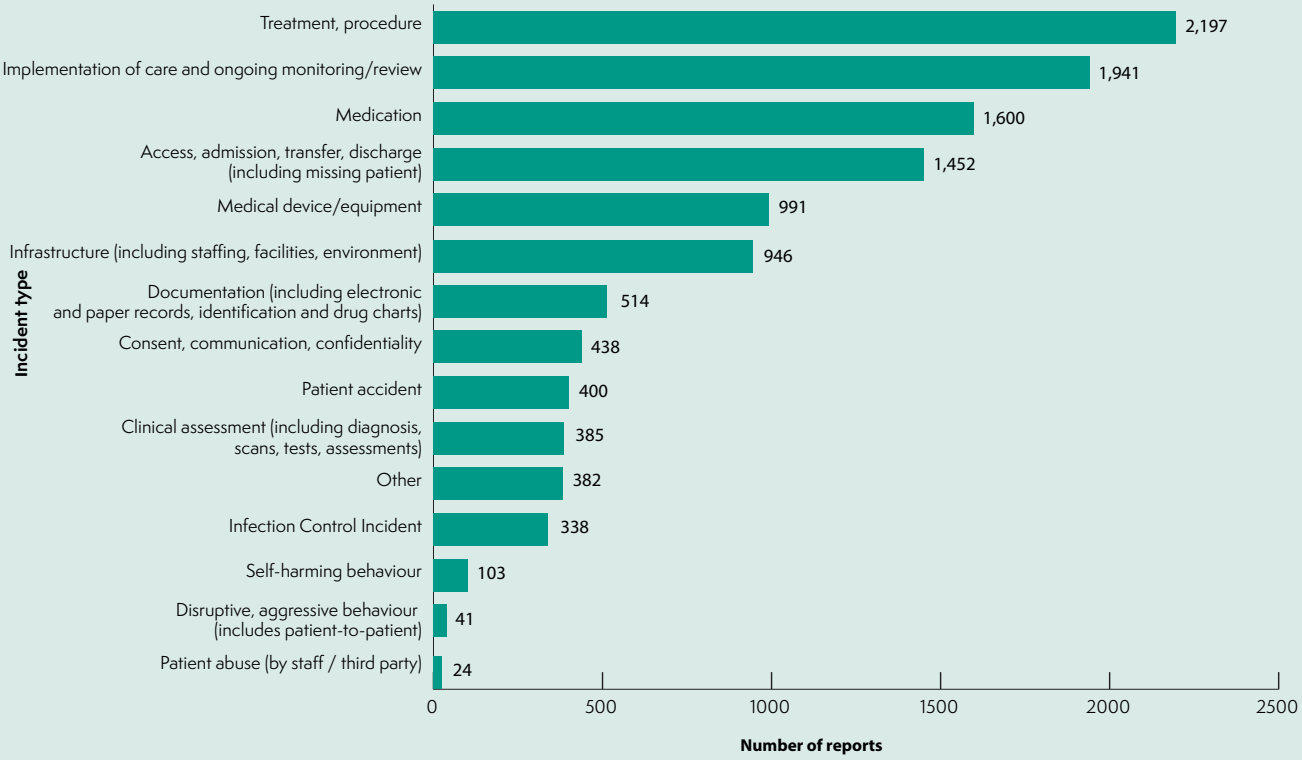


Figure 2 shows the type of incidents that occurred within the anaesthetic specialty that were reported using LRMS or the anaesthetic eForm for the period July-September 2018. The categories were determined at local level.

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Correct as at November 2018