

Significant Event Audit Case Example: Hypertonic saline error

Section A: Case example on the six stages of a significant event audit

A Significant Event Audit (SEA) is a quality improvement technique. It is a retrospective audit, which looks at one case in detail from beginning to end to either increase the likelihood of repeating outcomes that went well or to decrease the likelihood of repeating outcomes that went badly. SEAs may result in further development of guidelines, protocols or checklists and may result in the need for additional clinical audits (process/ structure or outcome). SEAs are conducted by bringing your team and the relevant case notes together to discuss the event. It is important that the event is discussed without any blame – allowing team members to provide honest and constructive feedback on how they contributed to the care process. An SEA is completed in 6 stages. The following points will take you through the steps that this practice took to put an SEA into practise.

1. Identify the significant event

Create a brief description of the event, context and outcome to be discussed in the meeting.

A patient in the hospital was found to have been receiving hypertonic saline instead of isotonic saline. The error was noticed when the patient had started having seizures. Unfortunately despite treatment the hypernatraemia was too severe and the patient died.

2. Collect all the relevant information

Gather all relevant information, such as case files and staff accounts etc., which contribute to the case.

A significant event audit was completed. Information was collected from the team members involved with the patient; the team members working on site; the hospital sheets and records and the veterinary surgeon directly involved.

3. The meeting and analysis

In a team discussion regarding the event, analyse the event and its causes to suggest where changes can be made. Indicate changes that could aid in achieving the desired outcome. It is important to ensure this meeting provides an environment where all staff members are encouraged to speak freely and honestly, for example by using The 5 whys strategy or root cause analysis, plus identifying contributory factors. Any discussion should be kind and constructive.

A meeting was led by the Clinical director and the Nursing manager. The results of the meeting were split into factors that affected the overall results. These were system, human, patient, owner, communication and other. This helps to create a blame-free meeting, looking at all contributions and getting input from all member of the team.

4. Decide what changes need to be made

Confirm which changes should be made, and make a prediction on the effect this will have. It may be that no change is required or there is only a need to disseminate the findings. Where changes are made, they could be in the form of checklists, guidelines or protocols. Following the meeting, a final report detailing the key points raised in stages 1-4 should be written.

Improved organisation to the storage of fluids and obvious identification tags were required and put in place. Further guidelines and protocols about the care of critical patients needed putting together and distributing to all team members.

5. Implement the changes

Develop an action plan. What needs to be done by whom, when and how? Ensure the whole practice team is aware of the changes and what role they play in implementing them. Monitor the changes once implemented and set a time to review them. The length of time required for monitoring will be dependent on the event.

Guidelines and Checklists for patient triage and treating emergency disorders were distributed. A new protocol was issued about the confirmation of fluid type and rate. A CRI calculator was provided for the team to have access to.

6. Review the changes

The team should sit down together to review the changes and discuss what went well and what didn't. You could also share what you have found with clients and the profession. Further audit may be required to monitor the change.

A process audit for the fluid therapy protocol and the triage checklist has been arranged.

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Section B: Significant event audit after the administration of hypertonic saline in error



Title:	Significant event audit for the accidental administration of hypertonic saline
Date of significant event:	02/08/2020
Date of meeting:	06/08/2020
Meeting lead:	Julia
Team members present	The whole practice team; Vets, RVNs, ACAs & Receptionists

What happened?

Ms Anand brought her cat Ryan to see her usual vet out-of-hours, as he had been straining to pass urine and seemed in a lot of discomfort. The Veterinary Surgeon, Julia, diagnosed a blocked bladder and began diagnostic workup and preparing for IV fluid administration. At the same time a dog was rushed in that had been involved in an RTA and there were two additional clients waiting to be seen. The RTA dog was triaged and Julia and the nurse, Clare started IV fluids with an analgesia CRI as she had multiple fractures and was very painful. In the midst of this process Ryan's IV fluids were started along with his analgesia and the team moved on to see the remaining clients whilst continuing the monitoring of the inpatients. The RTA dog developed a pneumothorax and the team were focused on addressing this – when they came to check the inpatients again they found Ryan having seizures. The seizures stopped rapidly and the team were able to draw blood to assess electrolytes, this is when severe hypernatraemia was diagnosed. On reviewing the IV fluids they realised a bag of hypertonic saline had been administered in error.

Tragically, despite rapid and appropriate therapy, Ryan could not be saved. Julia rang Ms Anand with the tragic news.

At the SEA meeting we found out the following

Julia was very stressed about having multiple serious patients to attend to at the one time, in addition to one of the waiting clients being vocal about their discontent. She was intently focused on calculating the CRI for the RTA dog as this is not a process she performs often and was worried about making a calculation error. She was aware of taking a number of different fluid bags out of the cupboard to decide which fluids to put the RTA dog on, but could not recall getting the fluids ready for Ryan the cat. The nurse assisting her could not recall getting the fluids ready for Ryan either, it was unclear who had prepared the bag and attached it. It was clear there had been no discussion or final check of the fluids before administration began as there was a lot going on at once, and both clinical team members were distracted by other patients' needs.

The cupboard where the fluids were kept had become disorganised after multiple team members searching through bags to find what they needed. Clare was not aware that hypertonic saline was something they clinic kept and she had not seen it used before.

The receptionist, Andrew, who is very good at setting client expectations on wait times was away from his desk scanning some paperwork in the office.

Why did it happen?

- System factors:**
- Storage of fluids had become confused.
 - No separation of 'high risk' fluids.
 - No verbal confirmation or double checking of fluid type or rate.
 - Not all of the team were aware of which fluids were stocked and the potential risks.
 - The scanner was situated away from the reception desk so Andrew was unable to mitigate the impact of unhappy clients in the waiting room.
- Human factors:**
- The team were busy dealing with multiple patients at once.
 - Julia was focused on a complex CRI calculation then an unusual and complex procedure.
 - The team were distracted by unhappy clients in the waiting room.
- Patient factors:**
- Ryan already had fluid and electrolyte imbalances from his pre-existing condition and was not a well individual to begin with.
- Owner factors:**
- Mrs Anand works long hours and had not seen Ryan for some time so he was very ill when admitted.
- Communication factors:**
- Lack of communication about the fluids.
 - The communication around the treatment plans for all patients could have been improved with hindsight. Julia was stressed and stopped talking things through with Clare as she usually would have.
- Other:**
- Practice Culture that sorting out the fluid cupboard was 'someone else's job'.

What has been learned?

The whole team were very upset by the incident and the tragic outcome. They discussed how they felt in a brief and all agreed that they must change processes to minimise the chances of this ever happening again. Agreeing the changes made them all feel that at least something positive could be changed for the future. Julia felt that having some additional clinical guidelines and a CRI calculator to hand would have made her less distracted and more comfortable with multiple patients.

At a later meeting they also discussed what went well during the incident – they were honest with Ms Anand who although very upset, was very understanding of the incident and how upset everyone was. She appreciated how candid the team were and that she was informed of process changes for the future. The team also discussed that Ryan's care once the error was identified was immediate, high quality and well-coordinated.

What has been changed?

- CPD/training required:** · None
- New or updated protocols/checklists/guidelines:** · A protocol for verbally confirming fluid type and rate was developed by the team
 · A CRI calculator was sourced and placed on the practice computers for ease of access.
 · A guideline for treating a pneumothorax was drafted by the team
 · A triage/immediate treatment sheet was reviewed by the team and introduced.
- Further audit required?** · Process audit of whether the team were using the fluid protocol they had developed.
 · The team decided to audit the triage sheet at a later date.
- Other:** · The hypertonic saline was wrapped in red conforming bandage as soon as it was delivered, before it was placed in stock. It was kept in a separate cupboard from the other fluids.
 · All team members were made aware of which fluids were kept in stock.
 · A list of 'high risk' fluids and medications was drawn up with special precautions decided for each one and all team members made aware.
 · Organising the fluid cupboard was assigned to a shift duty rota, the team chose baskets for each type of fluid.
 · A hand-held scanner was purchased for reception to Andrew and the other receptionists could be in reception more.

Follow-up date

Today's date: 06/08/2020

Review date: 06/10/2020

Signature:



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