# Significant Event Audit Case Example: An anaesthetic circuit error

## Section A: Case example on the six stages on 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 the 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. A SEA is completed in 6 stages. The following points will take you through the steps that this practice took to put a SEA into practice.

### 1. Identify the significant event

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

The APL valve was found closed on an anaesthetic circuit attached to a patient. This was a near-miss as was rectified immediately.

### 2. Collect all the relevant information

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

The case was reported, and information was gathered from the patient's clinical notes, and the team 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.**

A meeting was held with all team members to discuss the events that may have caused the valve to be closed. These factors were discussed and organised into System, Human, Patient, Owner and other factors.

### 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.**

The team were reminded to use the surgical safety checklist for all procedures.

### 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.**

The team were reminded to use the surgical safety checklist for all procedures.

### 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 audits may be required to monitor the change.**

Further audits on the completion of anaesthesia and surgical safety checklists will take place.

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## Section B: A significant event audit after an anaesthetic circuit error

| | |
|---|---|
| **Title:** | Significant event audit after an anaesthetic circuit error |
| **Date of significant event:** | 17/05/2019 |
| **Date of meeting:** | 05/06/2019 |
| **Meeting lead:** | Veterinary team |
| **Team members present** | The whole practice team |

### What happened?

After inducing anaesthesia in a cat, it was connected to the anaesthetic circuit. After a couple of seconds, the team noticed that the APL valve was closed, this was rectified, preventing injury to the cat through over-inflation of the lungs.

**At the SEA meeting, we found out the following:**

The valve was faulty and would easily close when moved.

### Why did it happen?

| | |
|---|---|
| **Human factors:** | · The circuit had not been checked before induction of anaesthesia. |
| **Other:** | · The valve was faulty and would easily slip closed when the circuit was moved. |

### What has been learned?

The surgical safety checklist includes a section about checking the anaesthetic circuit. This should be completed for every procedure. The team were quick to notice the problem and rectify it before causing injury to the cat.

### What has been changed?

| | |
|---|---|
| **CPD/training required:** | · The team were reminded on anaesthetic circuit checks. |
| **New or updated protocols/checklists/guidelines:** | · The team were reminded to use the surgical safety checklist each time. |
| **Further audit required?** | · Of anaesthesia checklists to take place. |

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## Section C: Examples of sheets used for anaesthesia checks

The following documents were created by The Laurels for the monitoring surgery and anaesthesia. Attached you will find:

1. **Anaesthetic machine daily checks sign off sheet**
2. **Theatre/ GA checklist**

# Anaesthetic Machine Daily Checks Sign off Sheet

| Date Checked: | Name: | Signed: |
|---|---|---|
| 19/9/19 | [redacted] | [redacted] |
| 23/9/19 | | |
| 24/9/19 | | |
| 26/9/19 | | |
| 27/9/19 | | |
| 1/10/19 | | |
| 2/10/19 | | |
| 3/10/19 | | |
| 4/10/19 | [redacted] | [redacted] |
| 6/10/19 | | |
| 8/10/19 | | |
| 9/10/19 | | |
| 10/10/19 | | |
| 14/10/19 | | |
| 15/10/19 | [redacted] | [redacted] |
| 17/10/19 | | |
| 18/10/19 | | |
| 21/10/19 | | |

| [redacted] Veterinary Group | THEATRE/GA CHECKLIST |
|---|---|
| Patient: [redacted] | Date: 12/4/19 |
| Procedure(s): Xray Scan | Vet: Nurse: |

| SIGN IN (read out loud, before induction) | |
|---|---|
| Patient ID and ~~ID collar verified~~ | ✓ |
| Procedure specified/marked | ✓ |
| Consent form checked | ✓ |
| Clinical records checked | ✓ |
| Anaesthetic machine checked | ✓ |
| Intubeaze ready | N/A |
| Monitoring equipment | ✓ |
| Medication | Analgesics: NO<br>Antibiotics: NO<br>Other: NO |
| Known allergy? | NO |
| Difficult airway/aspiration risk | NO |
| Pre anaesthetic bloods checked | ✓ |
| Fluid Therapy | NO |
| Special equipment | NO |
| Laryngoscope | ✓ |
| ASA score | 2 |
| | |
| TIME OUT (prior to first procedure) | |
| Procedure and site | ✓ |
| Introduction of staff (new/inexperienced) | N/A. |
| Particular anaesthetic concerns, e.g haemorrhage | Vet: NO<br>Nurse: NO |
| Medication requirements | NO |
| Confirm sterility of kit | N/A |
| | |

| UT | |
|---|---|
| l procedures complete | ✓ |
| firm instruments, swabs, sharps | N/A. |
| gnificant blood loss documented | N/A |
| Samples taken labelled | ✓ |
| Special risk for recovery | N/A. |
| Hospital sheet/post-operative medications | N/A |
| Equipment problems identified | N/A |

ASA SCORING

Class I

Minimal Risk

Normal healthy animal, no underlying disease

Class II

Slight risk, minor disease present

Animal with slight to mild systemic disturbance, animal able to compensate

Neonate or geriatric animals, obese

Class III

Moderate risk, obvious disease present

Animal with moderate systemic disease or disturbances, mild clinical signs

Anemia, moderate dehydration, fever, low-grade heart murmur or cardiac disease

Class IV

High risk, significantly compromised by disease

Animals with preexisting systemic disease or disturbances or a severe nature

Severe dehydration, shock, uremia, or toxemia, high fever, uncompensated heart disease, uncompensated diabetes, pulmonary disease, emaciation

Class V

Extreme risk, moribund

Surgery often performed in desperation on animal with life threatening systemic disease

Advance cases of heart, kidney, liver or endocrine disease, profound shock, sever trauma, pulmonary embolus, terminal malignancy

"E" denotes emergency