Clinical Audit Case Example: Anaesthesia Audit by Vets Now Macclesfield

Section A: Case example on the eight stages of an anaesthesia audit.

Clinical audit is a process for monitoring standards of clinical care to see if it is being carried out in the best way possible, known as best practice.

Clinical audit can be described as a systematic cycle. It involves measuring care against specific criteria, taking action to improve it, if necessary, and monitoring the process to sustain improvement. As the process continues, an even higher level of quality is achieved.

What the clinical audit process is used for

A clinical audit is a measurement process, a starting point for implementing change. It is not a one-off task, but one that is repeated regularly to ensure on-going engagement and a high standard of care.

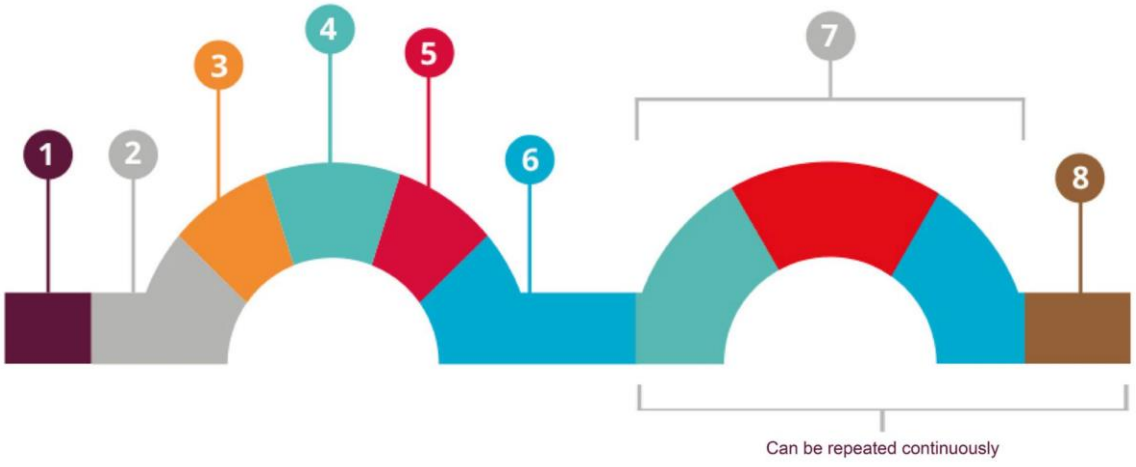
It is used:

- ⇒ To check that clinical care meets defined quality standards.
- ⇒ To monitor the changes made to ensure that they are bringing about improvements and to address any shortfalls.

A clinical audit ensures concordance with specific clinical standards and best practice, driving improvements in clinical care. It is the core activity in the implementation of quality improvement.

A clinical audit may be needed because other processes point to areas of concern that require more detailed investigation.

A clinical audit facilitates a detailed collection of data for a robust and repeatable recollection of data at a later stage. This is indicated on the diagram where in the 2nd process we can see steps 4, 5 and 6 repeated. The next page will take you through the steps the practice took to put this into practise.



1. Choose a topic relevant to your practice

The topic should be amenable to measurement, commonly encountered and with room for improvement. In this case, the topic chosen was general anaesthetics and the completion of anaesthetic monitoring sheets. Although this was the initial topic, it has also identified any training or equipment requirements also.

2. Selection of criteria

Criteria should be easily understood and measured. In this instance, a random sample of general anaesthetic monitoring forms were taken, and from these it was identified what monitoring equipment had been used on the patient, the age of the patient, the procedure performed and any results.

3. Set a target

Targets should be set using available evidence and agreeing best practice. The first audit will often be an information gathering exercise; however, targets should be discussed and set. This audit was initially performed to identify what the current standard (benchmark) was for this practice.

4. Collect data

Identify who needs to collect what data, in what form and how. For this audit, the practice collected data directly from the general anaesthetic sheets. A list of actions were devised, and each sheet checked to see whether these actions had been performed. Sheets were then given a score rating out of three, with three being the highest standard, and zero indicating missing information.

5. Analyse

Was the standard met? Compare the data with the agreed target and/or benchmarked data if it is available. Note any reasons why targets were not met. These may be varying reasons and can take discussion from the entire team to identify. For this audit, further training was required to give team members a clearer understanding of the monitoring of animals under general anaesthetic.

6. Implement change

What change or intervention will assist in the target being met? Develop an action plan: what has to be done, how and when? Set a time to re-audit. As a result of the results from this audit, team members were given further training on anaesthesia and emergency and critical care. This was done in a number of different ways, to appeal to a larger number of people and learning styles. Quiz's, information folders, and teaching, were well utilised. Team members were also involved in the audit meetings to gain a further understanding of the process.

7. Re-audit

Repeat steps 4 and 5 to see if changes in step 6 made a difference. If no beneficial change has been observed them implement a new change and repeat the cycle. This cycle can be repeated continuously if needed. Even if the target is not met, the result can be compared with the previous results to see if there is an improvement. The audit is repeated quarterly.

8. Review and reflect

Share your findings and compare your data with other relevant results. This can help to improve compliance. The practice shares findings and updates to protocols regularly with the team and invites the team to take part in the audit process.

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Section B: Case example on a GA clinical audit.

Name of initiative:	Improving General Anaesthetic Monitoring in an Emergency Setting
Initiative start date:	1/4/17
Submitted by:	Lesley Moore, Principal Nurse Manager
Practice/organisation:	Vets Now Macclesfield

Introduction

Vets Now is a dedicated small animal first opinion out of hours provider with 55 clinics and 3 twenty four hour hospitals in the United Kingdom. The Macclesfield Clinic opened in 2014 and I have been Principal Nurse Manager since September 2016. My role involves managing the clinic and acting as Head Nurse, supporting and leading the RVNs and support staff team. We are a 3 vet, 3 RVN and 3 support staff clinic. We work nights, weekends and Bank Holidays. Many of the cases we see are of an emergency nature. They may require sedation or general anaesthetic. A number of cases are ASA Grade 3 or above. Typical emergency surgeries include GDVs, caesarean sections, urethral obstructions and patients that require exploratory laparotomies (for example, where they have a gastro intestinal foreign body).

When I became Principal Nurse Manager, I saw that the quality of our general anaesthetic / sedation monitoring could be improved via additional training and clinical audit. Vets Now implemented a GA Clinical Audit in April 2017 which we used as a tool to assist us with the training and development of our nursing team in this area. Our key concerns were the lack of uploading of GA forms (therefore we did not know if they had been completed and what the quality of them was), a fairly new nursing team (one of our nurses had been qualified for 2 years and one newly qualified, both had come to Vets Now on the Nursing Edge scheme), training issues mainly related to a lack of knowledge especially around ECG where we quickly established very minimal understanding. Using the clinical audit has enabled us to tailor training on an individual and group basis.

Aims

- Ensure all GA forms are uploaded to our practice management system.
- Improve the quality of completion of GA forms.
- Improve patient care.
- Improve inter-professional learning.
- Tailor training for my nursing team and give them increased confidence around anaesthesia.
- Provide specific training on areas of development – for example ECG and the use of the multi-parameter monitor.
- Ensure early recognition of any problems with a patient under sedation or general anaesthetic.
- Increase confidence within the team.

Actions

Initially it was important for us to be able to collate information to enable us to establish what training would be required. The launch of the quarterly GA audit enabled us to do this. It takes us four – five hours once a quarter undertaking a detailed assessment of a sample of 15 of our GA and sedation forms. It is a comprehensive process with the factors assessed and the marking criteria listed in the next section.

We then undertook the following actions :-

- Tailored individual and team training for our nurses via nurse clubs, one to ones (which we hold with our nurses every four to eight weeks), reflective case discussions on any complex anesthesia and on the job training. This continues to evolve as the nurses develop their knowledge.
- Delivery of this training. The first nurse club that related to anaesthesia related to the MPM, specifically around ECG as this was the weakest area. We were then able to engage the assistance of Synergy CPD to provide some classroom training on the use of the MPM. This was held in July 2018. As a clinical member of the team myself, I also undertook this training earlier in the year.
- Nurses to train the team. At our last nurse club in September, I asked one of our nurses to provide the training. This was done by way of a quiz and included a number of questions relating to anaesthesia. This nurse is currently undertaking the Vets Now ECC Certificate so this enabled her to test her own knowledge, gain confidence and develop her presentation skills.
- Group assessment of GA forms in our quarterly team meetings. We have included support staff in this as it gives them a greater understanding of patient care and has made them feel more engaged in the process. We also provide CPCR refreshers twice a year in these team meetings.
- Creation of a nursing folder which contains useful articles on a wide range of ECC subjects, including anaesthesia. Any memory sticks provided at the various congresses held throughout the year are uploaded onto a specific file on one of our laptops to enable all members of the team to have access.
- The MPM is in the prep area on all shifts. This reminds the team to use it for ALL sedations, general anaesthetics and critical patients.
- We would like to be able to observe our nurses monitoring a sedation or GA however this is difficult given the nature of our clinics (that is, we do not work together on shift and it is impossible to predict when we may get a case). There is nothing we would particularly do differently but as an ongoing audit this is something we are considering as the project evolves further.

Results

A GA audit is available as an excel document alongside this case example (www.rcvsknowledge.org/quality-improvement/tools-and-resources/clinical-audit). Client details have been removed for GDPR purposes. It looks at the following factors:

- Has the chart been completed and uploaded to our practice management system?
- Has the MPM been used?
- Is it clear who the patient is and what procedure we are performing?
- Has the Surgical Safety Checklist been fully completed?
- Have all drugs, dosage, rate and time of administration been noted? Have the ET tube and circuit details been noted?
- Monitoring – MPM used. 5/10 minute observation recording (dependent on GA or sedation), heart rate, respiration rate, temperature, SP02, ETC02 recorded. Comment on ECG trace should also be made.
- Additional Information- Catheter site, fluids and rate, heating devices and position, position of patient. Emergency drugs calculated, which is very important in ECC.
- Comprehensive notes also detailing changes in anaesthetic depths and post-operative instructions.
- Recovery – time of extubation, repeated TPR observations, time back in kennel.

They are marked out of 3. Zero being missing information, 1 basic, 2 contains all relevant details and 3 is considered the highest standard, containing an excellent level of detail (which can sometimes be hard to achieve in an emergency situation).

As can be seen from the clinical audit, q1 and q2 2017, forms were missing (4 not uploaded) and poorly completed. A number of areas, especially relating to monitoring, additional information, notes and recovery were scoring a 1. We observed anaesthetic changes on forms that required intervention which was not happening and quite regularly the MPM was not being used (q1 2017 only 29% on sedations and 63% on GAs). There was no mention or understanding of ECG.

Q1 2018 shows a marked improvement. All forms uploaded for last two quarters and a minimal number of 1 scores. Q1 2018 MPM used on 100% of GAs and 70% of sedations (this is something we continue to work on and discuss and is mainly due to practice layout relating to the location of radiography). Surgical checklists have been fully completed for the last two quarters. For the last three quarters we have scored 3's in 75% of areas we audit and the forms are comprehensively completed.

The project has been a huge success. The standard of completion is now excellent with detailed notes and observations. Our nursing team is now confident in the use of the MPM. From having minimal knowledge of ECG, they can now recognise more complex traces. They have gained confidence and in turn veterinary surgeons have commented on these improvements and have more trust in the nurses monitoring the patient. They are much quicker at recognising trends and potential problems and are able to clear articulate these to the operating veterinary surgeon. Importantly, we have had no patients die under GA / sedation and no significant events relating to GAs or sedations.

Impact of intervention

- Better clinical outcomes.
- Improved data collection.
- Inter-professional learning.
- Improved standards of patient care.
- Increased confidence and skill levels within the nursing team.
- Improved communication within the team.
- Developed my skills in training and as a Head Nurse.