Clinical Audit Case Example: The use of vetAUDIT in first opinion practice

Section A: The eight stages of a clinical 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.

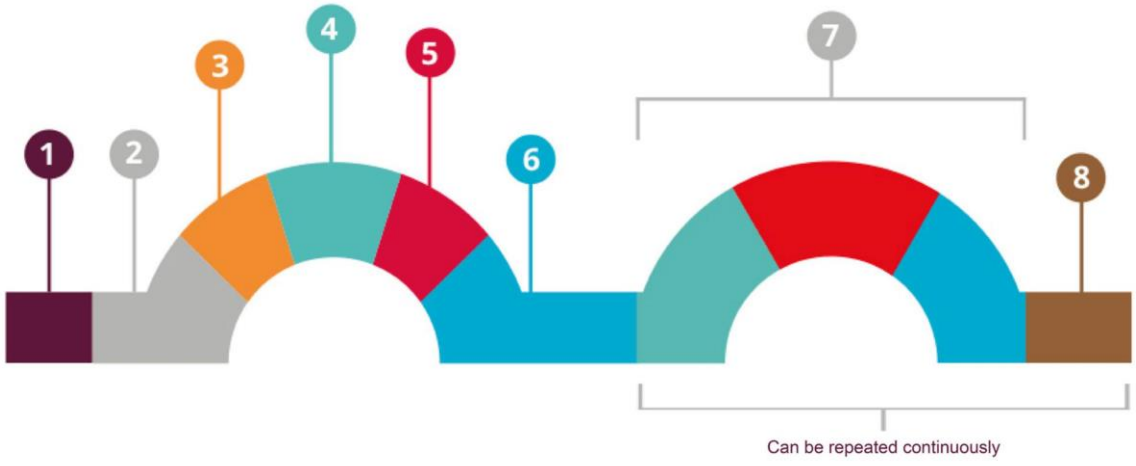
It is used:

- ⇒ 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 wherein 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 practice team had heard of vetAUDIT at a CPD, and performed a baseline audit to compare against the national benchmark.

2. Selection of criteria

Criteria should be easily understood and measured. Post-operative complications for dog and cat neuters were to be recorded.

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 performed to obtain information on the current standard (benchmark) of the practice.

4. Collect data

Identify who needs to collect what data, in what form and how. Post-operative complications were recorded at the patient's post-operative check. This data was then pulled from the system and recorded on the vetAUDIT spreadsheet.

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. The initial audit results showed that post-operative complications for bitch spays and dog castrates were higher than the national benchmark.

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. Members of the team undertook further training on hygiene methods and post-operative care instructions were altered.

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, then 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 was regularly repeated, which showed improvement in the rates of post-operative neutering complications.

8. Review and reflect

Share your findings and compare your data with other relevant results. This can help to improve compliance. The findings are reported to the team on a regular basis.

Clinical Audit Case Example: The use of vetAUDIT in first opinion practice by Louise Northway RVN

Section B: Clinical audit in practice, using post-operative neutering complications as an example

Name of initiative: Post-operative neutering complications
Initiative start date: October 2017- present & ongoing
Submitted by: Louise Northway CertVNECC NCert(Anaesth) RVN

Introduction

In 2017, ahead of our practice standards inspection, I took on the role of Clinical Nurse Lead. Part of my role was to review how the team was doing and to start auditing various areas of the practice. One of my vet colleagues had heard about vetAUDIT and recommended I use the RCVS Knowledge vetAUDIT spreadsheet to help us review the incidences of complications in our routine, elective neutering patients.

Aims

When you work in a busy practice, as an individual, you may only see one complication per day, but if everyone in your team sees a complication for one patient each day, then you may have a bigger problem than you initially perceive. I would honestly say that this was the eye-opener for me when I completed my first few months of audits. The team were equally surprised. The main aim of the audit was to get baseline numbers to see how we were doing as a practice. After that, it was a case of ensuring we were improving.

Actions

Every other week I spend half a day inputting data and reflecting on the complications encountered. At the end of every month, a report is issued to the team. The report provides the team with the statistics for that month with a reflective summary, plus information about any investigations or further actions that are underway. The team are all encouraged to feedback their own suggestions and ideas. If there are any complications of significance or an increase in complications, all mitigating factors are reviewed. We undertake significant event audits if we have any patient deaths.

Results

Over the past three years, our audit results have improved month on month, but there is no denying our results have fluctuated depending on the time of year. However, with auditing this pool of patients there are many things which are out of our control i.e. owner compliance with post-op care instructions. It should be noted that any abnormality is recorded as abnormal, even if very minor.

Minor complications found:
Erythema, swelling, minor gastrointestinal disturbance (self-resolving <1 day), suture reactions.

More serious complications found: Seromas, wound break down, wound infections requiring antibiotics, patient suture removal; gastrointestinal upsets which have required medical treatment or hospitalisation, inadequate analgesia, prolonged lethargy, adverse drug reactions.

We had two particularly bad months in the summer of 2018, which led to us looking into adverse drug reactions due to an increased incidence of post-operative vomiting and diarrhoea. This led us down a whole avenue of considerations as to why this was occurring. At this point infection control was also reviewed.

Things we reviewed & reflected on as a team in response to our audit results:

Skin preparation for surgery

To begin with, we reviewed our skin prep and wound management; I organised an evidence-based CPD session on surgical skin preparation for our nursing team. Following this, we adapted our skin-prep technique. We also ordered gentler, small cat clippers to help protect the fragile scrotal skin from clipper rash.

Preventing patient interference

When patients were discharged, we gave owners the options of having either a buster collar or pet shirt. We have found there to be much better owner compliance with the pet shirts. Improved compliance means less licking of surgical wounds and less post-op wound infections, which equals better statistics and, therefore, better treatment!

Post-op gastro upsets

Our audits revealed that sometimes we were seeing our canine patients back 24–72 hours post-op with gastrointestinal upsets.

There are many factors that may cause a stomach upset, so it was important for us to think through what steps we could take to reduce the frequency of this occurring.

For example, when a patient comes in for an operation, we often feed them a different diet to what they normally have. We always ask owners if their pet has a sensitive stomach or if they are on a special diet before we feed them post-operatively. If either of these are the case, we ensure we have some of their usual food available to feed them. We have added this question to our consent form.

Nosocomial infections

Nosocomial infections are obviously not what we want! We ensured that all patients that had diarrhoea and/or vomiting were barrier nursed and isolated from our healthy patients. Due to the risk of salmonella, all raw-fed patients (even healthy ones) are barrier nursed.

Infection control screen

We decided we would start swabbing our practice annually for pathogens, or more frequently if we had an increased incidence of vomiting/diarrhoea or wound infection cases. Within my practice, we appointed two nurses as infection control ambassadors. They went on an infection control CPD day and have since reviewed, audited and updated our infection control protocols.

Why else might they get diarrhoea post-op?

We took a number of factors into consideration. Are they having gastrointestinal hypoperfusion peri-operatively? Is this why we have had a loss in GI integrity? Are we monitoring blood pressure (BP)? If not, why not? We perform blood pressure monitoring in every patient under anaesthesia. NSAIDs can hinder GI blood flow, so we discuss with our vet team when the most appropriate time to administer them is:

- Pre-op if BP is normal?
- Peri-op once you know BP is maintained and stable.
- Post-op once they are awake and BP is normal?
- Post-op once they have eaten?

This is, of course, for our vet team to decide.

Most of our patients now have their NSAIDs administered on recovery; or intra-operatively if they are normotensive and there is minimal risk of further haemorrhage. Pre-emptive analgesia is advantageous, but ensuring normotension is important too. Our team now use a multimodal analgesic approach to include local anaesthesia where possible. Since we have been auditing, the need for BP monitoring equipment has been apparent. Thanks to this audit (and another anaesthesia audit), evidence on the requirement and need for more equipment in practice has been provided; so that every patient can have appropriate monitoring.

Stress

We have taken into consideration that when patients get scared or excited, they can develop diarrhoea due to stimulation of the sympathetic nervous system. This may play a part with our patients too if they are worried or stressed. We reviewed the timings of procedures and tried to ensure that particularly stressed patients had a minimal 'waiting' time ahead of their procedures. Due to the lack of space at the practice, and absence of a separate cat and dog ward, our team are encouraged to keep patients calm using music and calming sprays.

Factors out of our control

We also considered other potential influencing factors that may be more out of our control. We felt that it was worth looking at how we give post-operative information to owners. Do we routinely give written instructions or just talk them through their pet's post-op care? Are our written instructions always provided for owners to refer to once home? We provide owners with so much information, many people may be unable to retain all the post-op information that we take for granted. As a practice, we have always provided a written post-op information sheet to owners; however, we reviewed the information we provided and the discharge appointment.

Home care

There are other things to consider – do the dogs in our practice have a clean, freshly washed bed at home to lay their surgical wound on? Should owners wash their dog's bed prior to their operation? Perhaps they should! We updated our pre-op care sheets to request owners wash their pets bedding pre-op and ensure they are not walked anywhere muddy on the morning of their operation. In addition, we asked for dogs to be given a bath ahead of their operation if they have a particularly 'outdoor' lifestyle.

Resting the 'bouncy dog'

We also always tell owners to rest their dogs – but have you ever tried to 'rest' a young dog? It is hard! We follow up by ensuring we give owners help and advice on how to keep their pets stimulated and occupied during this period. We tell them about interactive feeders and toys which make them use their brain. We can wear them out mentally instead. Otherwise we felt that owners might be tempted to let them run around – and what does that cause? Big swollen scrotums or seromas.

The weather even seems to play a part

Interestingly, in the summer months (April–July), we have more complications than in winter months. Why is this? Because warm and moist weather is a better condition for pathogens? Are owners less likely to rest their dogs because they just want to get outside and enjoy the weather? Quite possibly.

The felines

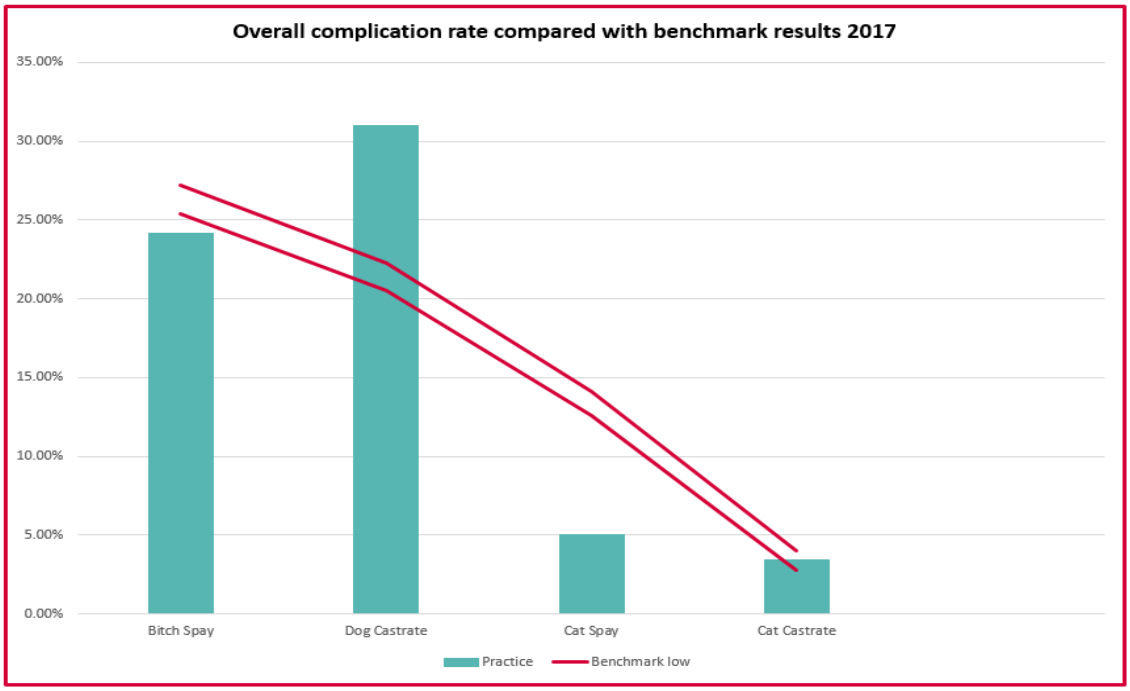
Complication percentages in cats have been far lower than in dogs. Complications we have seen have been:

- Erythema
- Self-suture removal (when skin sutures are used)
- Seroma
- Suture reactions (spays)
- Diarrhoea and/or vomiting.

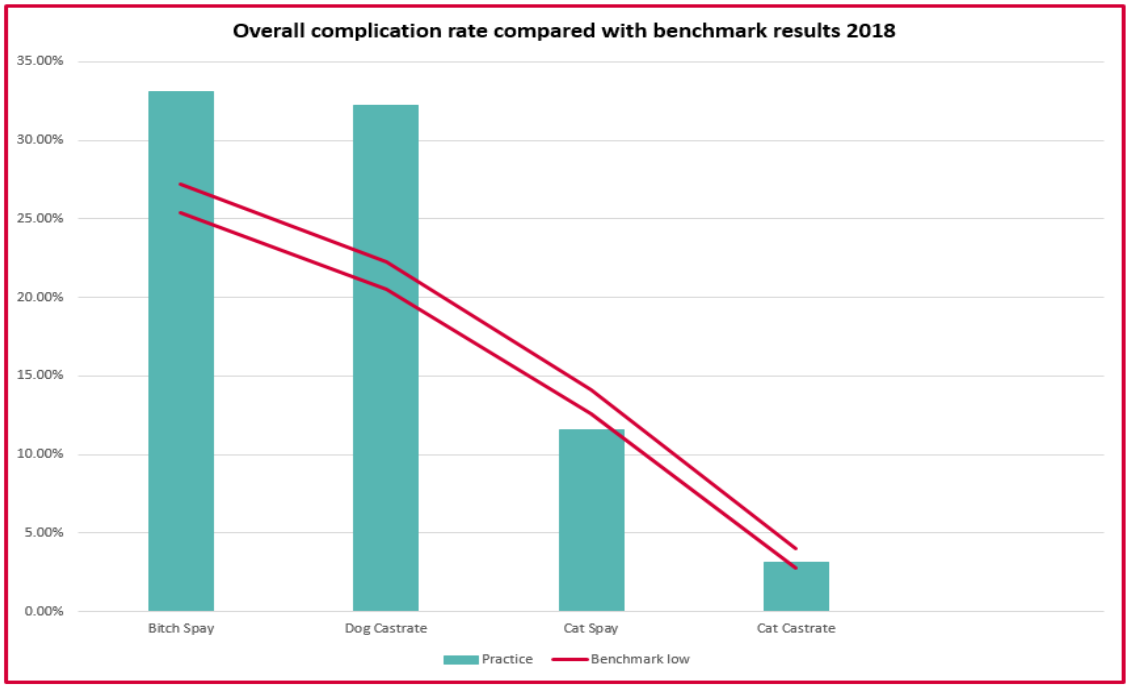
We made key changes after reviewing the above. All cat spays now have intradermal sutures placed, and we find wound interference is far less of a problem. As with our bitch spays, we also offer owners medical pet shirts for the cat spays to go home in. Compliance does seem to be better than when a buster collar is used. However, 'cats being cats' and the sensitive animals that they are (!) means that pet shirts are not always well tolerated either.

Here are our year – to year over all outcomes for 2017, 2018, 2019

2017

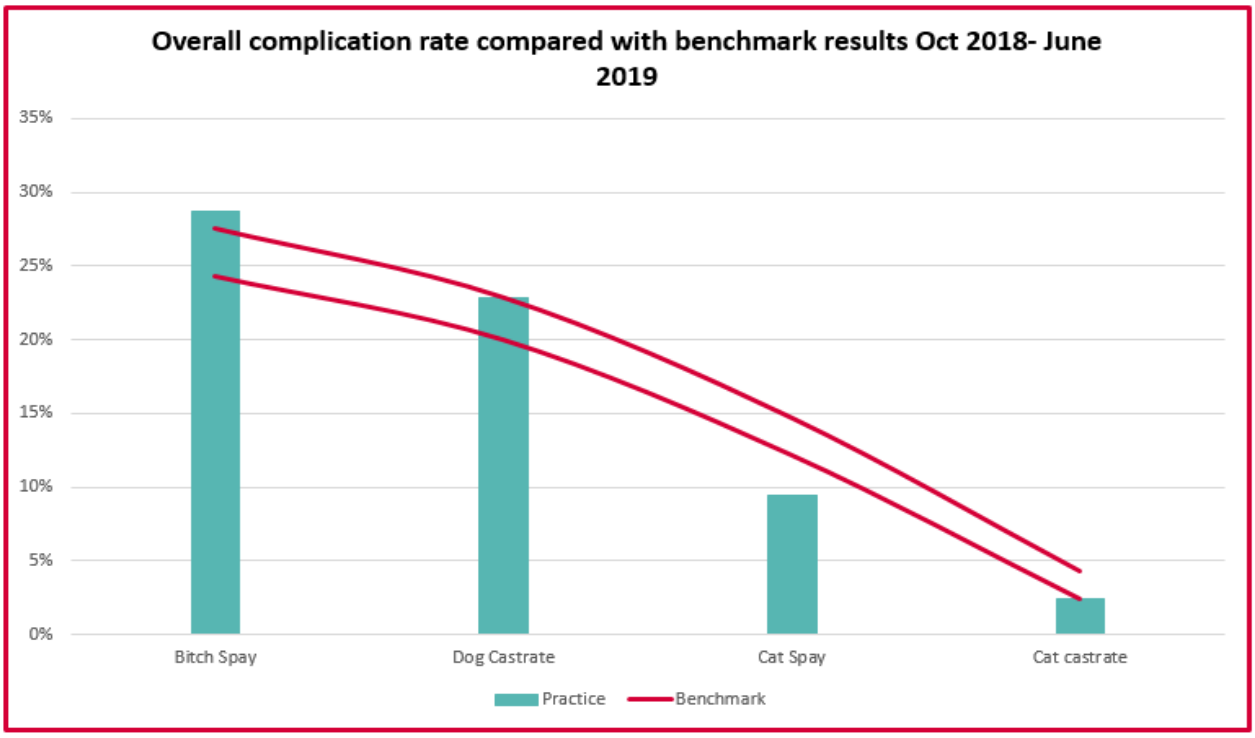


2018



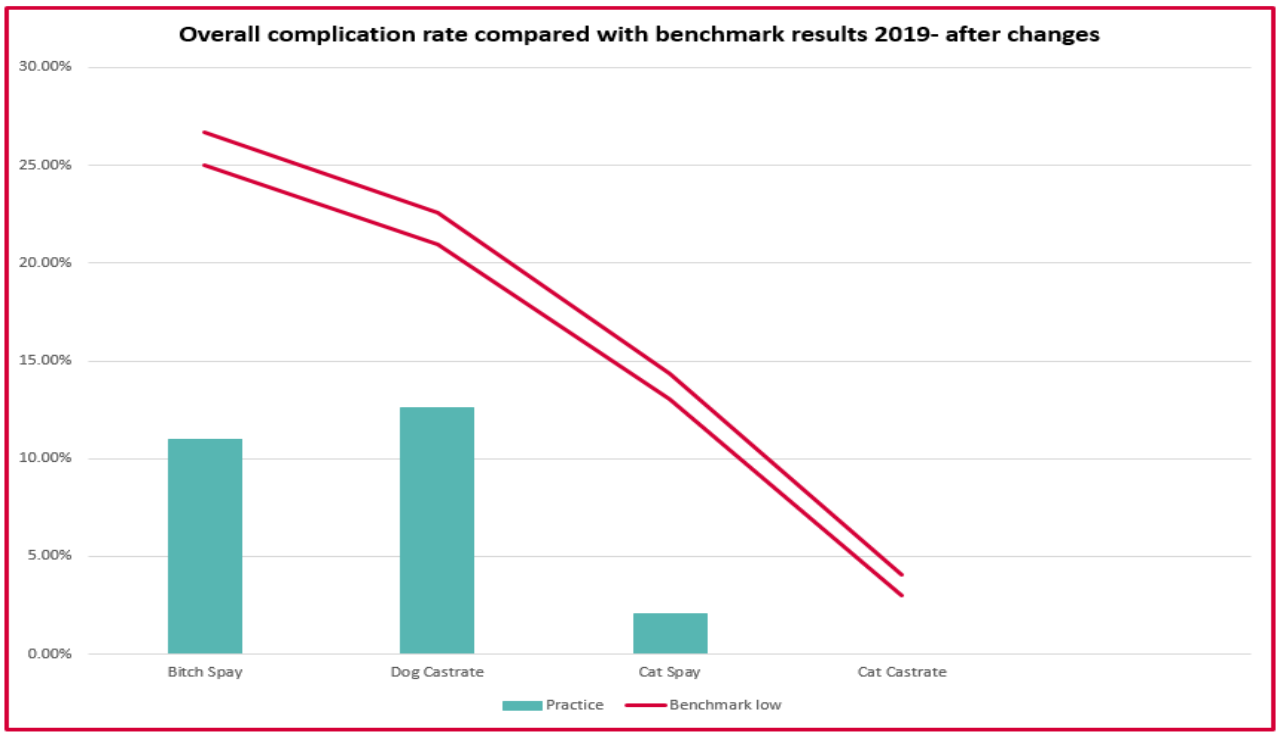
2019 Jan - October

More complications seen during April – June 2019



Impact of intervention

2019 June – PRESENT



Since January 2020, I now audit all patients (all species) undergoing a general anaesthetic or sedation looking for post-op complications.

At the end of the month, the team is still issued a report, again with a reflective summary.

From my spreadsheet, I can see our monthly statistics, and can compare them to RCVS Knowledge's benchmarked figures. Month to month it does vary, and some months are better than others, but the key point that comes through is that it is an ongoing process and the results are influenced by many different mitigating factors. I upload the relevant data from our results to www.VETaudit.org – in doing so we contribute to the national benchmark. It is important to do this in order for us to maintain a realistic view of what the current benchmarks are and how they are changing over time.

It is our job as veterinary professionals to look at how we are doing, refer to evidence and update our systems and work. It promotes reflection and collaboration of ideas; to help improve the level of care we provide to patients.

Louise Northway became a champion for the Knowledge Awards: Quality Improvement in Practice 2019 for her clinical audit on patient trends and complications during anaesthesia. This case example showed her dedication to continuously improving care by undertaking clinical audits; setting and reviewing protocols based on evidence; and instigating discussion and adoption of QI by the entire practice team. Louise, now a two-time champion demonstrates that QI is a continuous cycle of improvement. You can read her case example from 2019 here.

Interested in submitting your own case example? Email us at ebvm@rcvsknowledge.org.