

Improving patient safety through reporting incidents, learning and implementing change

RCVS Knowledge Quality Improvement (QI) to Lead Organisational Change Award Champion 2025

Linnaeus Medical Quality Team



Introduction

The Linnaeus Medical Quality Team project was to promote and facilitate reporting of safety incidents and near misses by practice teams, encouraging and supporting local learning and improvement.

The aim of this ongoing project is to improve patient safety across the group. It began in 2019 following the launch of the VetSafe reporting system by the VDS which was made available to all practices in the group. Patient safety champions were identified in practices and provided with training and the tools to help them support reporting in their setting. Reporting and reviewing rates were monitored so targeted support could be provided and learning shared. The aggregated data was used to understand risks to patients at a group level implement guidance and actions that improve patient safety.

1. Choose a topic relevant to your practice

The topic should be amenable to measurement, commonly encountered and with room for improvement.

a. What topic was chosen?

Improving patient safety by implementing incident reporting and learning leading to changes at local practice level as well as group level.

b. Why was this topic chosen?

The safety of patients is fundamental to the provision of high-quality healthcare. Our aim was to create a culture in which veterinary teams could openly report incidents, learn from them and make changes as a result. We also wanted to be able to share learning on a larger scale so all our practices and the wider profession could benefit.

2. Selection of criteria

Criteria should be easily understood and measured.

a. What criteria was used?

We measured the percentage of practices reporting at least one incident per quarter, and the percentage of reports that had a significant event audit (SEA) review. We also looked at learning shared, and Quality Improvement (QI) initiatives launched as a result of learning from patient safety event reports.

3. Set a target

Targets should be set using available evidence and agreeing best practices. The first audit will often be an information-gathering exercise, however, targets should be discussed and set.

a. What target was set?

- 100% of practices reporting in each quarter.
- An SEA review rate of 80%.
- Learning and case examples shared quarterly.
- One group wide patient safety QI initiative launched each year.

b. What evidence was used to define the target?

There was no evidence from the veterinary literature about expected reporting rates, so we set our target as 100% engagement with a goal of year-on-year improvement. The

work of Amy Edmondson¹ showed that the best performing teams submit the most safety reports.

An 80% review rate was chosen because this is where the learning happens, so we wanted the majority of reports to be reviewed. The goals for sharing learning and creation of QI initiatives were based on what was felt to be achievable.

4. Collect data

Identify who needs to collect what data, in what form and how.

a. When was the data collected?

Continuous collection from 2019 onwards via electronic incident reporting system.

b. What data was collected?

The number of reports and number of reviews as a total for the group and by practice. The incident data collected included the incident type, severity, location, species, and the practice details.

c. Who collected the data?

Automated system with reports submitted by all members of practice teams. The Quality Team collected data on number of reports, percentage of practices reporting and review rates.

d. Results:

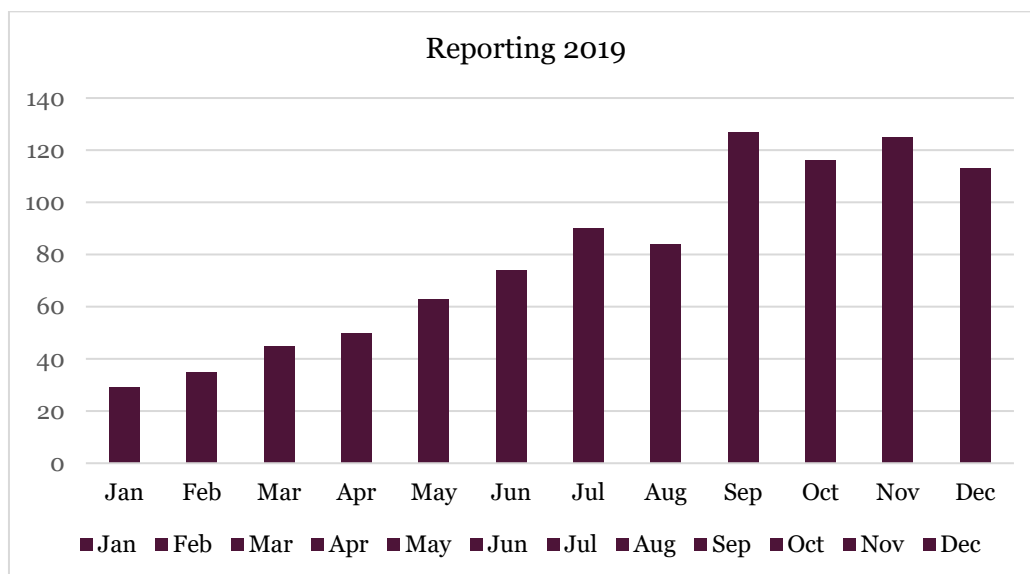


Figure 1: Month by month reporting numbers for 2019 for the group showing a steady increase from when the concept of patient safety incident reporting was first introduced.

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 the discussion from the entire team to identify.

c. Was the target met, if not, why not?

Targets were not met in 2019. At the end of the year 86% of practices were reporting, with 55% of reports reviewed and at this stage there was no organisational sharing of learnings. Patient safety incident reporting was an entirely new concept to the majority of practice teams and there was a high level of apprehension about reporting errors and patient harm. There were also issues around awareness of and access to the reporting system and uncertainty about what should be reported.

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.

1. What changes were introduced?

Increased reporting and reviewing were supported by the creation of a patient safety champion role in each practice with training provided in the form of webinars, virtual training days, drop-in sessions and guidance documents. We also provided training for all team members on how and what to report and provided every practice with a set of VetSafe contributory factors cards to assist in their team discussions and reviews.

Reporting and reviewing data were shared regularly and senior leadership talked about and celebrated good performance. Learning in the form of case stories and safety tips were shared in a monthly all staff newsletters.

2. What was the overall action plan?

The plan was initially to focus on increasing reporting levels across the group so that all practices were contributing to a representative data set on patient safety. We also needed to upskill the patient safety champions in conducting good reviews (SEAs) so that learning and appropriate local changes would happen. The other area of focus was understanding organisational risk by analysing the large-scale data, sharing our learning and designing QI initiatives informed by the data.

3. When was a re-audit planned?

Continuous data collection with an annual organisational review.

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.

a. When did the re-audit take place?

At the end of each calendar year from 2020 onwards

b. What data was collected for the re-audit?

The data collected was the same as for the first audit cycle:

- Number of reports and number of reviews as a total for the group and by practice.
- Incident data including type, severity, location, species, practice.

c. Who collected the data?

The automated system with reports submitted by all members of practice teams was utilised to collect the data. The Quality Team collected data on number of reports, percentage of practices reporting and review rates.

d. Results:

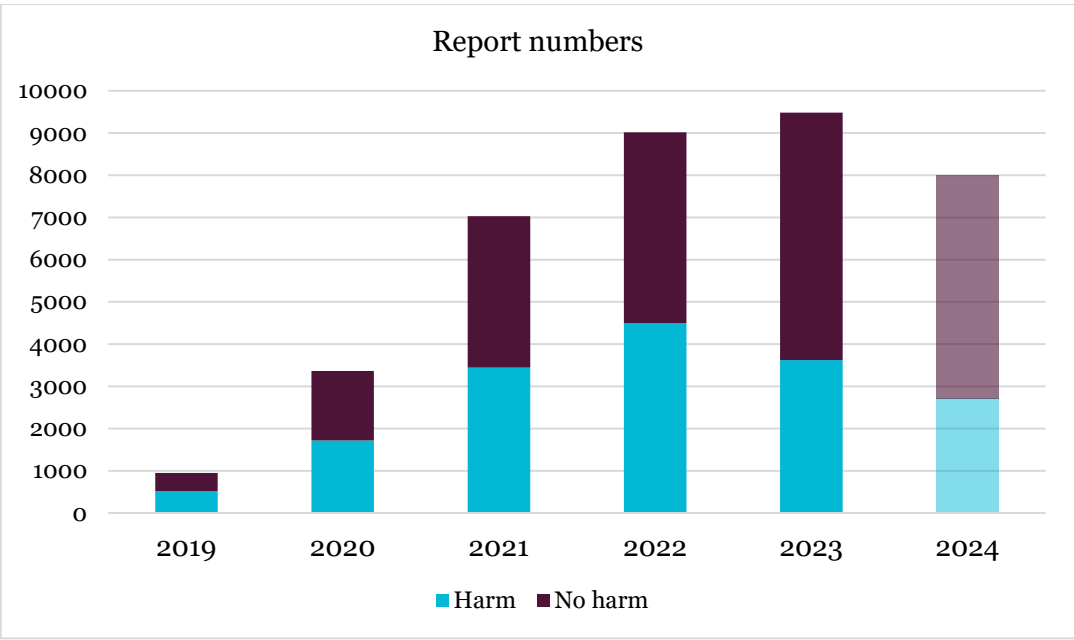


Figure 2: Number of reports in total, split by number of reports involving some harm to the patient (purple shading) and number of reports where the incident was a near miss or caused no harm (blue shading). This shows increased reporting and the increasing proportion of reports of near miss/no harm events. 2024 is included but did not have data for the full year at the time of submitting.

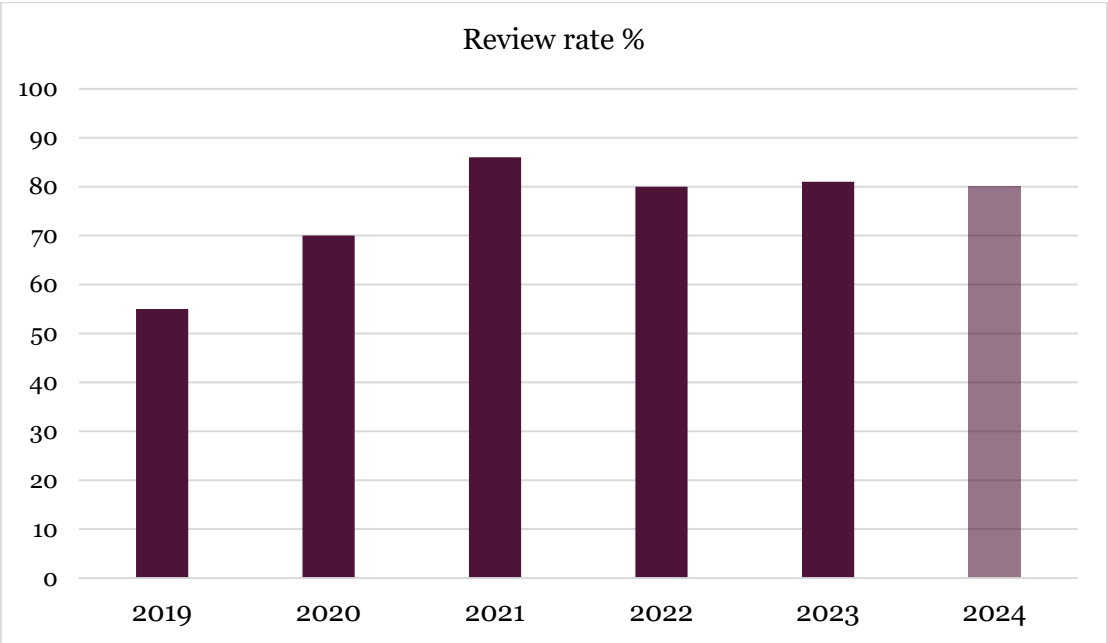


Figure 3: The percentage of submitted reports that had a review (SEA) recorded within the system. This has remained consistently high over time. 2024 is included but did not have data for the full year at the time of submitting.

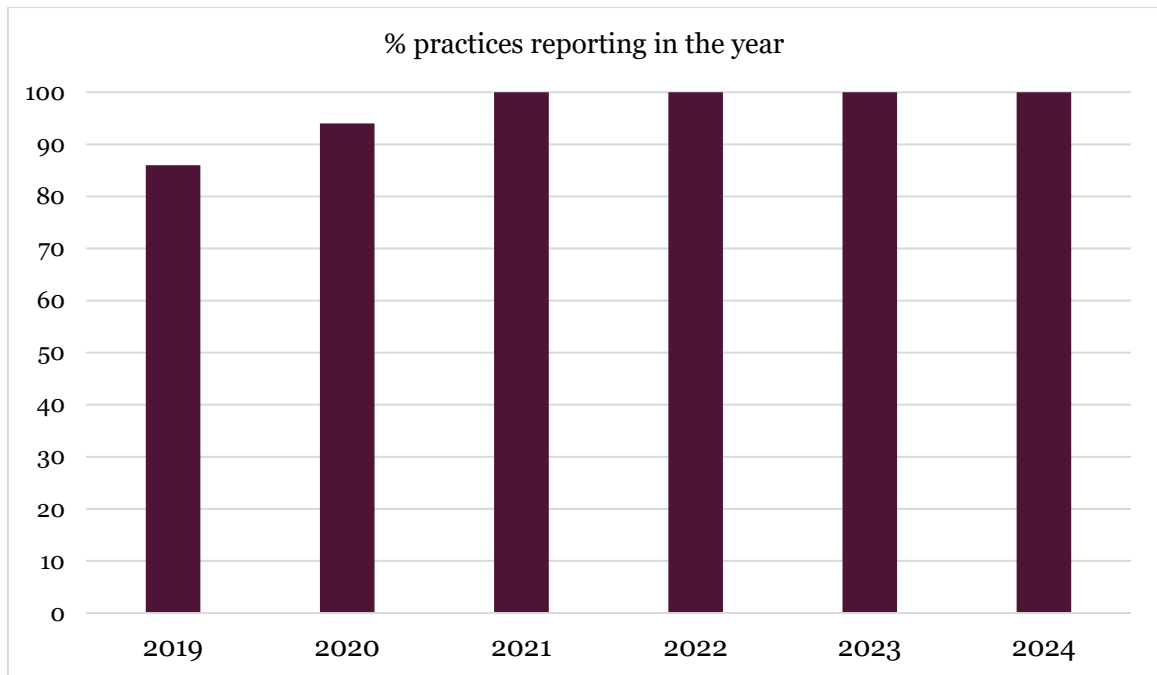


Figure 4: Percentage of practices in the group that reported during the given year. This figure has been 100% since 2021 showing continued high engagement of all practices over time. New practices are included in the data from 12 months after acquisition.

e. Was the target met, if not, why not?

Yes. 100% of the practices have been reporting (figure 4) and review rate has been 80% or more since 2021 (figure 3). We have launched at least one group wide patient safety initiative every year. To sustain these figures has involved leadership input to maintain at least one patient safety champion in each practice to lead the initiative. As new practices have joined the group, patient safety event reporting is part of their induction process, and tailored support from the Quality team is offered.

f. Were any further changes implemented?

The creation of a bespoke reporting system to make the process of reporting and learning easier and to support global learning and change. This launched in May 2024 and replaced VetSafe as the group reporting system.

Setting up of a cross functional patient safety committee for the group for the purpose of assessing the data to identify the most significant risks and prioritise actions accordingly.

8 Review and reflect

Share your findings and compare your data with other relevant results. This can help to improve compliance.

a. At what stages were the team involved?

This project was reliant on the input from practice teams from across the group in submitting and reviewing reports which form the basis of the project. This happened from the beginning of the project and continues on an ongoing basis.

b. How were the team involved?

All roles in practice, including non-clinical roles, have been involved in submitting reports. The patient safety champions supported and encouraged reporting and then reviewed the incidents. Other team members have been involved in the implementation of local and central initiatives. Meaningful change has only happened because of the engagement and action of the teams.

c. Did the team need any support? How was this given?

Support was available in various ways depending on what was needed by local teams:

- Initial training at the start of the project and for new employees and new practices as part of the induction process.
- Targeted support from the quality team for teams struggling with reporting or reviewing.
- In person support to run Morbidity and Mortality Rounds (M&Ms) and SEA meetings.

d. What barriers did the project face, and how were they overcome?

A cultural barrier to reporting error was overcome by encouraging and rewarding reporting and teaching practice leaders how to respond appropriately when things go wrong.

To overcome the barrier of time pressures and availability of the reporting system, shortcuts to the system were placed on all practice computer home screens, and teams were advised of the option of reporting via an app.

Some individuals struggled to know what should be reported which was helped by posters and guidance resources explaining typical incidents that could happen in different areas of the practice (e.g. 'What to report in the wards')

e. What was the impact of the project?

There have been far reaching impacts in various areas:

Patient outcomes:

Improving patient outcomes by making care safer is the ultimate goal of this project. Measuring safety in healthcare is notoriously difficult because we are trying to measure things (patient harm) that didn't happen as a result of the changes implemented. Despite this we have been able to show some significant improvements in specific areas.

- Following reports of several patients being discharged from practices with IV catheters still in place we ran a 'Red bandage' campaign to promote the use of red bandages on limbs when a catheter was in. All staff were empowered to 'stop the line' if a patient was leaving the building with a red bandage on. Prior to the campaign there were on average 9 reports of this type of incident each month. This reduced to two per month on average after three months, against a background of increasing reports overall. We also had more reports of 'near misses' where someone had spotted the bandage before the patient left, suggesting increased awareness of the issue.
- Burns from warming equipment were a problem with 30 reports of patient burns in 2020-2021. Certain types of equipment were implicated in many of the cases. As a result, we created evidence-based guidelines including an equipment guide and a protocol for safe use of warming equipment, backed up with training sessions. In 2022-2023 only 15 cases were reported, even with increased awareness of the issue and increased reporting overall.

As well as this the data show that over time, particularly in 2023 and 2024 (see figure 2) there has been an increase in the proportion of near miss and no harm events reported. This suggests two things, firstly that the culture of reporting has been truly embedded within the practices and teams are using the system to raise concerns about safety even when a patient wasn't harmed, and secondly that the changes put in place to detect and mitigate harm are working – fewer errors reach the patients to cause harm.

Guidelines and tools:

As well as those mentioned above, analysis of the data has led to creation of (among others):

- Anaesthesia equipment safety guides

- Dispensing protocol
- Medicines safety posters
- Corneal ulcer prevention guidance
- Fluid therapy safety checklists
- Local changes and QI projects

Apart from central initiatives, there have also been many examples of local QI work in practices resulting from learning from patient safety incidents. These have included:

- Audits of perioperative temperatures following reports of hypothermia
- Audit of IV catheter complications
- Clipper rash audit
- Surgical safety checklist implementation and audit
- Dispensary reorganisation
- Warning labels for IV fluid lines
- Changes to sedation protocols

Training:

We have improved awareness and knowledge of patient safety with monthly lunchtime virtual meetings focussing on one safety topic open to all team members to attend. These meetings allow teams to hear about what the data tells us about what is happening in our group and why. There is then a chance to learn from experts how to avoid similar incidents with an opportunity to ask questions and share experiences.

This patient safety learning has also informed other training offerings produced over the past 5 years including our dispensing course, anaesthesia courses, CPR training, and dentistry training.

Culture change:

Open discussion and sharing of incident stories have produced a shift towards a more open, transparent and learning focussed culture. This has been helped by the consistent message from senior leadership that we are committed to having a 'Just Culture'. Involvement of all job roles means that this is an area where everyone has a voice and something to offer towards a shared goal of improvement.

Wellbeing:

Improved staff wellbeing comes from working in a more open culture where people do not have to feel ashamed of making a mistake and know they won't be punished for admitting to one. Because of this we can offer support when people have been involved in a serious incident as we know how devastating that can be.

Learning:

As a result of the focus on patient safety we have learned a huge amount about the nature of medical error and harm in the veterinary profession. We are committed to sharing that learning internally and with the wider profession.

f. What surprised you about this audit?

The time it takes to implement and embed change in a large organisation was a surprise as things moved slower than we hoped especially at the start.

Communication was another area where we were surprised when we thought an initiative had been communicated and later found teams had not heard about it. This led a to rethink of our communication strategy – the more methods of communication the better!

The extent of the culture change that came from supporting reporting within a psychologically safe space. We did not expect the change to be so complete with all practices embracing a reporting culture.

g. If this audit was done again, what would be done differently?

To fully appreciate the impact of this project, defining measures for success could have been outlined prior to the launch. To ensure ongoing learning, collaborating with stakeholders in the business and the operational teams from the beginning to embed the project into the business strategy may also have been helpful in planning for sustainment. With an appreciation of the difficulties in being able to measure quality, a practice culture survey prior to and after implementation of the project would have been useful to be able to demonstrate the change in culture.

h. What consideration has been given for Human Factors?

The Human Factors approach is key to the success of this project. It is firstly used in facilitating the ease of use of a reporting system by making access to the site visible via desktop icons and the use of the app, and by providing training in a variety of formats

to account for personal preference. This reduces the reliance on individuals to locate and navigate the reporting system themselves.

The purpose of reporting is to identify learnings and areas of improvement. The reporting software has a systems-based approach incorporated into its functionality to consider the factors that come into play when an error arises. This guides people to look at more than just the actions of the person involved when considering why a mistake occurs and to take a more holistic, open-minded approach. Patient safety champions were trained to perform reviews using this approach for effective outcomes. This leads to being able to put system-based improvements into place to reduce error, rather than focusing on changing the behaviour of individuals, ultimately moving away from a culture of blame.

As group insights identified organisational risk, centrally produced initiatives were based around human factors by looking at where a system could be changed to reduce error. This included:

- Only using red bandages to secure intravenous catheters to provide a visual reminder to people.
- Producing checklists for teams to use to reduce reliance on individuals remembering all the checkpoints.
- Recommending a technical fix of a safety valve on anaesthetic equipment to prevent barotrauma, eliminating the need for a person to remember to check and open a valve.

Ultimately, human factors are integral to this project and are used throughout to ensure success.

Summary

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.

A 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 ongoing 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 practices, 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 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 practice.

The veterinary clinical audit cycle

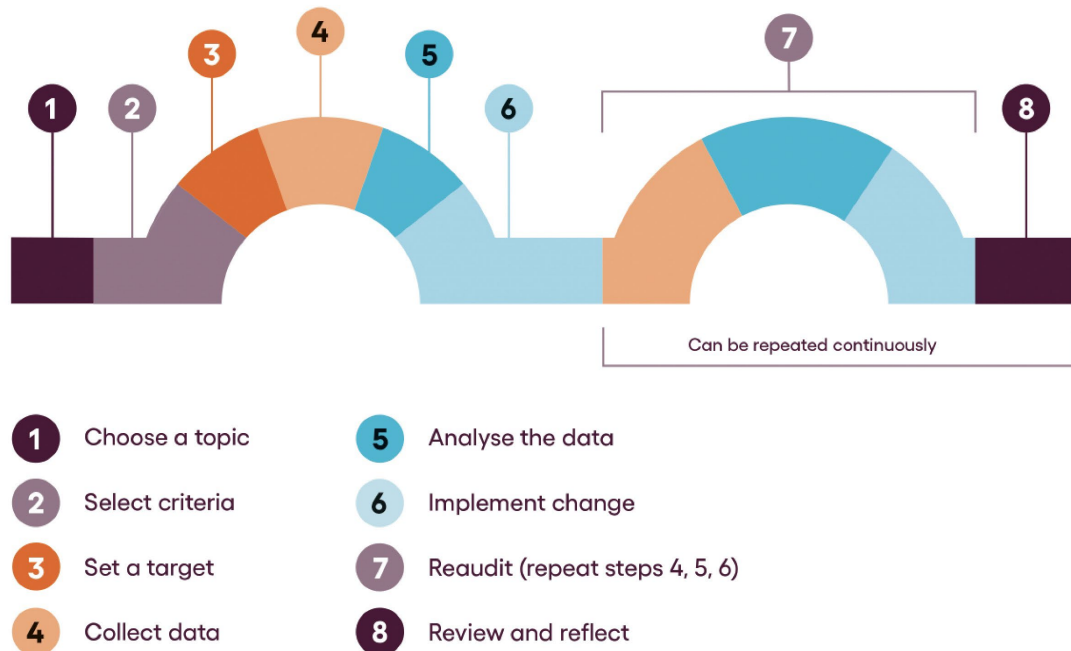


Figure 5: The Veterinary Clinical Audit Cycle by RCVS Knowledge. Available from www.rcvsknowledge.org. Developed by the Royal College of General Practitioners www.rcgp.org.uk/qi-ready

References

1. Edmondson, Amy C. *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*. Hoboken, NJ: John Wiley & Sons, 2018.



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