Inpatient feeding audit by Wildbore Vetstop

RCVS Knowledge Quality Improvement Award Champion 2025

Wildbore Vetstop

Introduction

Wildbore Vetstop is a small animal hospital providing 24-hour inpatient care. The team conducted an audit to investigate the use of feeding plans, Resting Energy Requirements (RER) calculations, inappetence rates and interventions, and the types of food offered to inpatients. Data was analysed from hospital records both before and after additional team training. The actions implemented included a presentation, distributing owner questionnaires, the creation of guidance documents and amended hospital sheets. The audit achieved several targets, such as the improved creation and use of feeding plans and the documentation of the interventions to resolve inappetence, as well as improvements in the number of patients having their RER met, and a greater awareness of the patient's usual diet.

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?

The topic chosen was feeding plans and nutritional interventions for inpatients.

b. Why was this topic chosen?

Nutrition is a vital part of patient recovery and often overlooked when planning treatment for inpatients. It is difficult to ascertain if and when feeding interventions are needed if RER has not been assessed. This topic was chosen to highlight areas for improvement to improve

patient care, aid recovery, and allow continuity within the team. It was also an inclusive topic as all team members had the opportunity to be involved through speaking to owners, making feeding plans, and planning interventions.

2. Selection of criteria

Criteria should be easily understood and measured.

a. What criteria was used?

All inpatients hospitalised for over 24 hours were included in the audit to assess:

- how many had feeding plans and if their RERs were calculated
- how long patients had been inappetent and what interventions for inappetence were recorded

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?

The initial audit aimed to identify areas of improvement and show where further action would be beneficial through highlighting the amount of inappetence seen and evidence how many patients were meeting their RER.

Targets were to ultimately increase the number of patients meeting their RER; increase the numbers of patients with feeding plans and recorded interventions; increase history taking and recording of the patient's usual food; and reduce the number of inpatients being offered only chicken.

b. What evidence was used to define the target?

Knowledge gained from team members completing a medical nursing certificate and research of veterinary articles highlighted that patients should meet at least 85% of their RER, or a suitable lower amount if inappetent, whilst hospitalised. Interventions should be considered if they are not expected to meet this for three days. Lower percentages of target RER may be calculated based on the level and duration of inappetence.

Nutrition is a vital part of patient health and recovery, and evidence suggests early intervention is beneficial. Complete diets are beneficial for the patient and diets such as chicken only do not provide a balanced diet.

4. Collect data

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

a. When was the data collected?

Data for the first initial audit cycle to establish the current situation was collected in February 2024.

b. What data was collected?

Retrospective data was collected from inpatient records and calculated as percentages of patients who:

- had a feeding plan
- met, partially met, exceeded or did not meet their RER
- were offered only chicken
- presented with inappetence
- had inappetence for at least 3 days
- had recorded interventions
- had records of their usual diet

c. Who collected the data?

The data was collected by a registered veterinary nurse (RVN).

d. How was the data collected?

The data was collected retrospectively through looking at hospital sheets and clinical records from November 2023.

e. Results:

The full results can be seen in **Appendix 1**

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?

The initial target of gathering evidence to show areas requiring improvement was successfully met. The audit highlighted that feeding plans and RER calculations were not being carried out in all cases and subsequently showed that a large proportion of inpatients were not meeting their RER.

The audit provided evidence that we were seeing inappetence as a presenting sign on a regular basis and this regularly exceeding three days in duration. This indicated a need for interventions to encourage feeding.

It also showed we recorded the patient's usual diet and interventions in some cases but there was room for improvement in both areas. Additionally, the audit evidenced that chicken was being offered as a sole diet to almost a quarter of inpatients.

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.

a. What changes were introduced?

A practice meeting was held to present the audit findings to the whole team, alongside research into the importance of nutrition. This data we discussed where we could improve, and the changes we would make:

- An owner questionnaire was introduced to gather more information about inpatient's usual routines and food.
- The hospital sheets were amended to include RER calculations and feeding plans to act as reminders and aid recording this information.
- A poster displaying the RER calculation and common calorie contents of foods was created and displayed in the food preparation room to make planning easier and quicker.
- In house team training was provided and Standard Operating Procedures (SOPs) for feeding tube placement and management were created and placed alongside the tubes in theatre to aid understanding.

b. What was the overall action plan?

The action plan was to make feeding plans and interventions more user-friendly and to be taken more seriously as part of a holistic approach to treating inpatients.

c. When was a re-audit planned?

A re-audit was planned for August 2024 to assess the efficacy of these interventions.

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.

a. When did the re-audit take place?

The second re-audit cycle was carried out in September 2024, looking at the hospital records for August 2024.

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

The same data was collected as the first cycle, consisting of the percentages of patients who:

- had a feeding plan
- met, partially met, exceeded or did not meet their RER
- were offered only chicken
- presented with inappetence
- had inappetence for at least 3 days
- had recorded interventions
- had records of their usual diet

c. Who collected the data?

The data was collected by the same RVN as the first audit for continuity.

d. How was the data collected?

The data was collected retrospectively through looking at hospital sheets and clinical records.

e. Results:

The full results can be seen in **Appendix 1**

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

Targets were met in a range of key areas, including:

- Reducing chicken being offered as a sole diet – reducing from 24% to 5%
- Recording the patient's usual diet in more cases – increasing from 58% to 89%
- Recording interventions in more cases – increasing from 50% to 92%
- Creating more feeding plans – increasing from 3% to 53%

A small improvement was seen for patients meeting RER for the whole duration of their stay (increasing from 9% to 16%). A more significant improvement was seen for patients who either fully or partially met their RER for at least one day during their hospitalisation, increasing from 9% to 32%. However, the overall number of patients not meeting their RER

remained largely unchanged, decreasing only slightly from 48% to 47%. It was thought this minimal change could be attributed to individual patient variability in their conditions and severity of inappetence. Owner consent was needed for some interventions, such as placing feeding tubes, which was not always possible or appropriate to obtain.

It was thought that human factors may also be a factor, as each audit cycle involved differing team members. Intervention type and time before intervention was implemented were not analysed closely enough, which could have impacted the results on the level of inappetence seen despite improvements in the use of feeding plans.

g. Were any further changes implemented?

After discussing these results with the team, a lack of confidence in creating feeding plans and placing tubes was identified. A step-by-step guide on feeding plans and feeding tubes was created and circulated to all team members, with further in-person training provided where needed.

At the time of submission, consideration was given to engaging an external speaker to provide training and demonstrations of feeding tube placement to help build confidence further.

Two nurses have also completed additional nutrition courses to gain further knowledge to share with the team.

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?

Several nurses were involved in planning stages of the audit. A practice meeting was held where the initial first audit results were discussed and actions decided on and implemented. All members of the team were involved in prospectively recording the data needed for the second re-audit cycle.

b. How were the team involved?

The data collection and analysis of this audit was carried out retrospectively by members of the nursing team. The whole team were involved during implementation of the changes, although led by several of the nurses, it was important to keep the wider team updated with progress so that everyone, including vets, patient care assistants and front of house client

care teams were able to become involved through speaking to owners, making feeding plans, and planning further interventions, such as team training and resource development..

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

Support was needed by some members of the nursing and care assistant teams to help them fully understand how to create feeding plans. This was provided by spending time going through examples together and adapting the hospital sheet to enable ease of use. Guidance documents such as the calorie poster and feeding tube SOPs were created to encourage and aid the creation of feeding plans and placement of feeding tubes where required.

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

Time was a large barrier to the creation of feeding plans and maintaining records. This was overcome by delegating tasks or adjusting the time points in which they were carried out to ease conflicting priorities at busy times.

Changes were not implemented until Mid-July and then re-audited in August. This did not allow much time for behavioural changes to embed and new habits to form, and for team members to become more confident through experience. However, this will be something we can work on over time with additional practice and encouragement. Another barrier was incomplete record keeping and food not being measured. This was addressed at the practice meetings by discussing the importance of accurate records.

e. What was the impact of the project?

Most excitingly, a small improvement was seen in meeting RERs, whether in full for the duration of their hospital stay or partially during their stay. More data would be required to conclusively evidence that better planning results in better nutritional outcomes, but this is an encouraging correlation. Anecdotally, more conversations have taken place about nutrition amongst the team, and clinical records indicate more emphasis has been placed on the length of inappetence and offering interventions sooner during vet-owner conversations. Our next steps are a greater focus on earlier interventions to try to reduce the number of patients not meeting their RER.

Appendix 1

Inpatient feeding audit results November 2023 and August 2024

Percentage of all inpatients (%)	November 2023	August 2024
Normal food known	58%	89%
Feeding plans/ RER calculation	3%	53%
Known inappetence on admit	42%	68%
Inappetence = or >3 days	27%	21%
Offered chicken only	24%	5%

Percentage of inappetent patients (%)	November 2023	August 2024
Recorded interventions (including maropitant)	50%	92%
Feeding tubes placed	0%	8%
Feeding tubes offered	0%	15%

Resting Energy Requirements (%)	November 2023	August 2024
Under	48%	47%
Exceeded	9%	0%
Met fully during stay	9%	16%
Met partially during stay (= or >1 day)	0%	16%
Unable to assess on any day based on records*	33%	21%

*For 11 inpatients (33%) in November 2023 and 4 inpatients (21%) in August 2024, food was not measured or recorded fully to allow any daily RER assessments to be made. For an additional two longer stay inpatients in August (10.5%), food was measured most of the time allowing most days to be assessed in full but not every day during their stay. The days which could not be fully assessed were excluded. Both patients were included in the partially met category as they had each met an appropriate RER for at least one day and not met RER on at least one other day out of the data available for analysis.

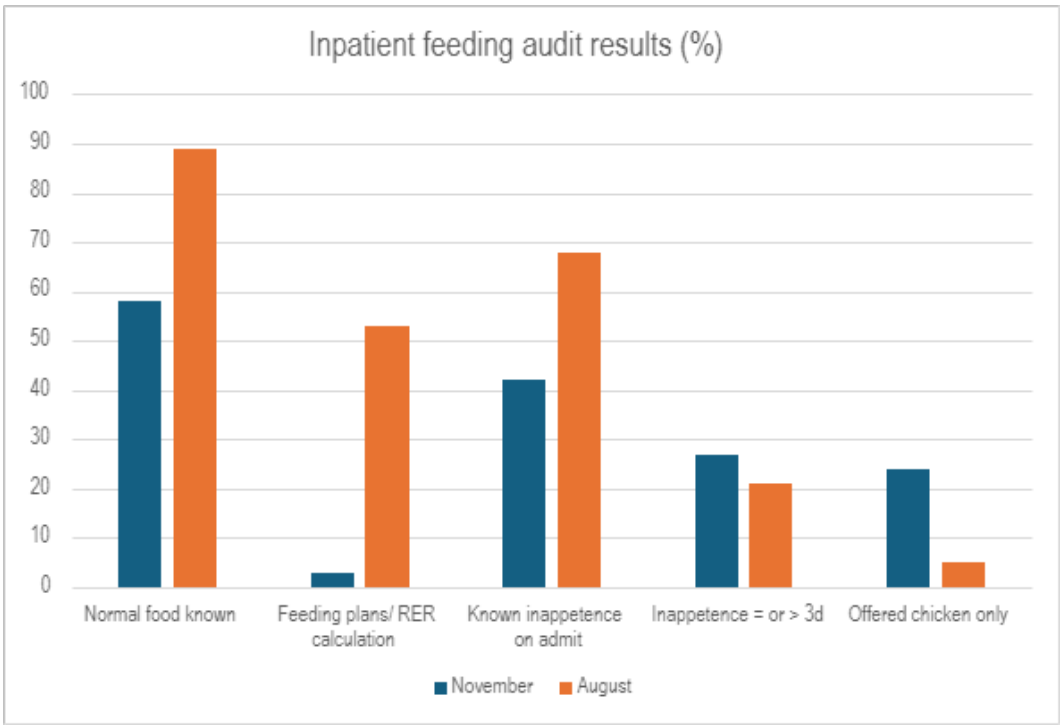

Figure 1: Comparison of audit data cycle 1 in November 2023 and cycle 2 in August 2024for all patients meeting inclusion criteria

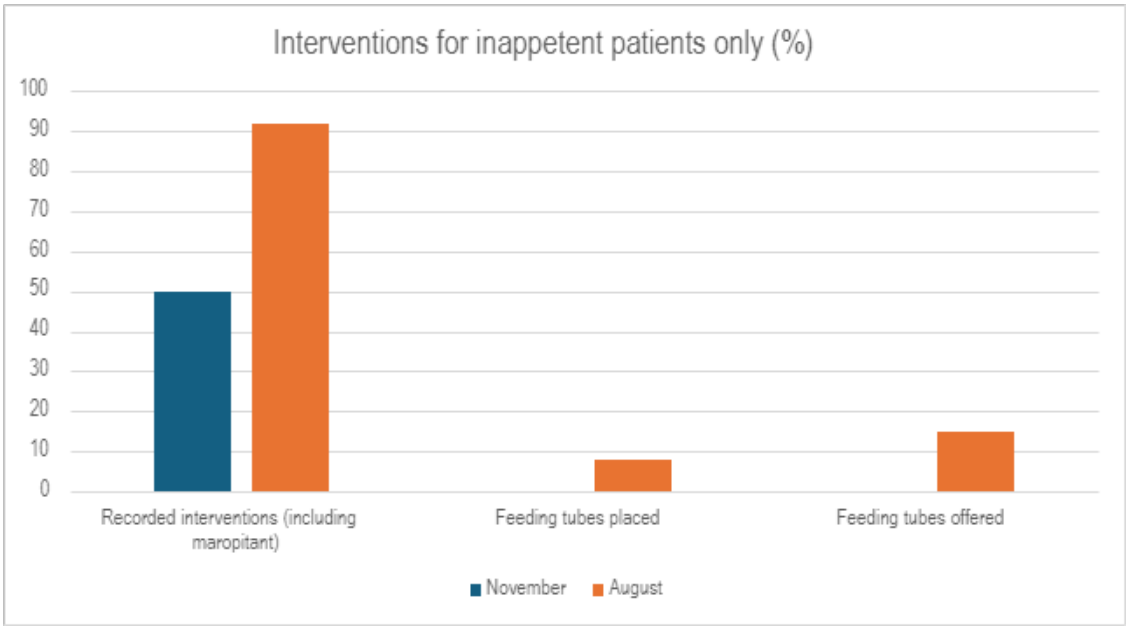

Figure 2: Percentages of inappetent patients with recorded interventions

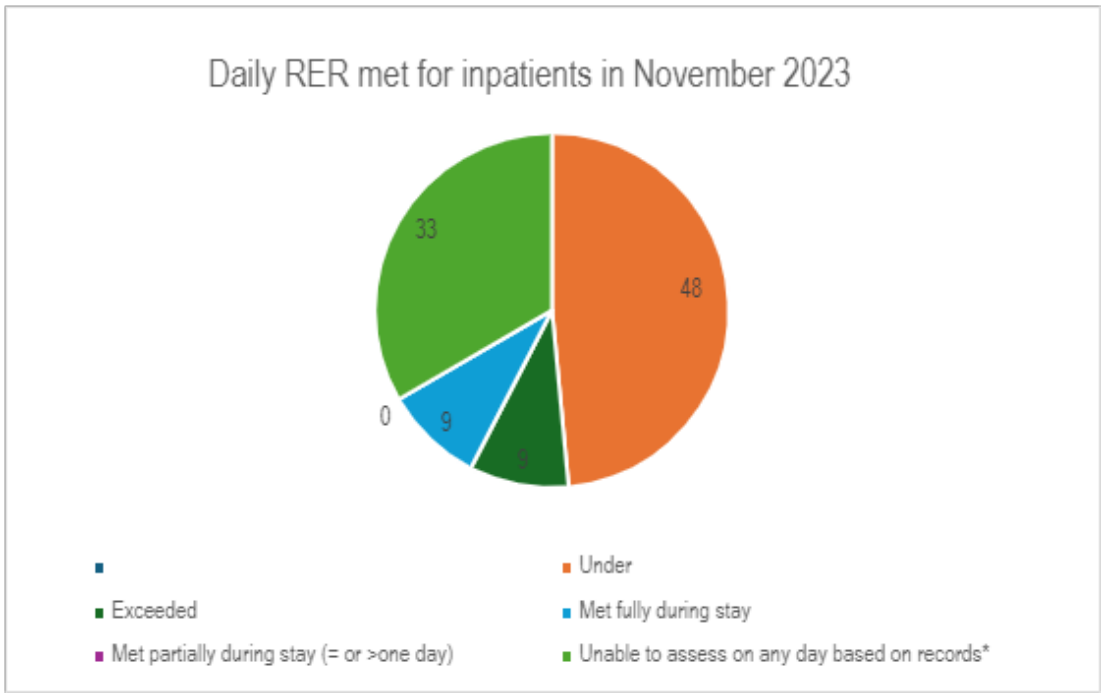

Figure 3: Percentage of patients meeting daily RER in November 2023

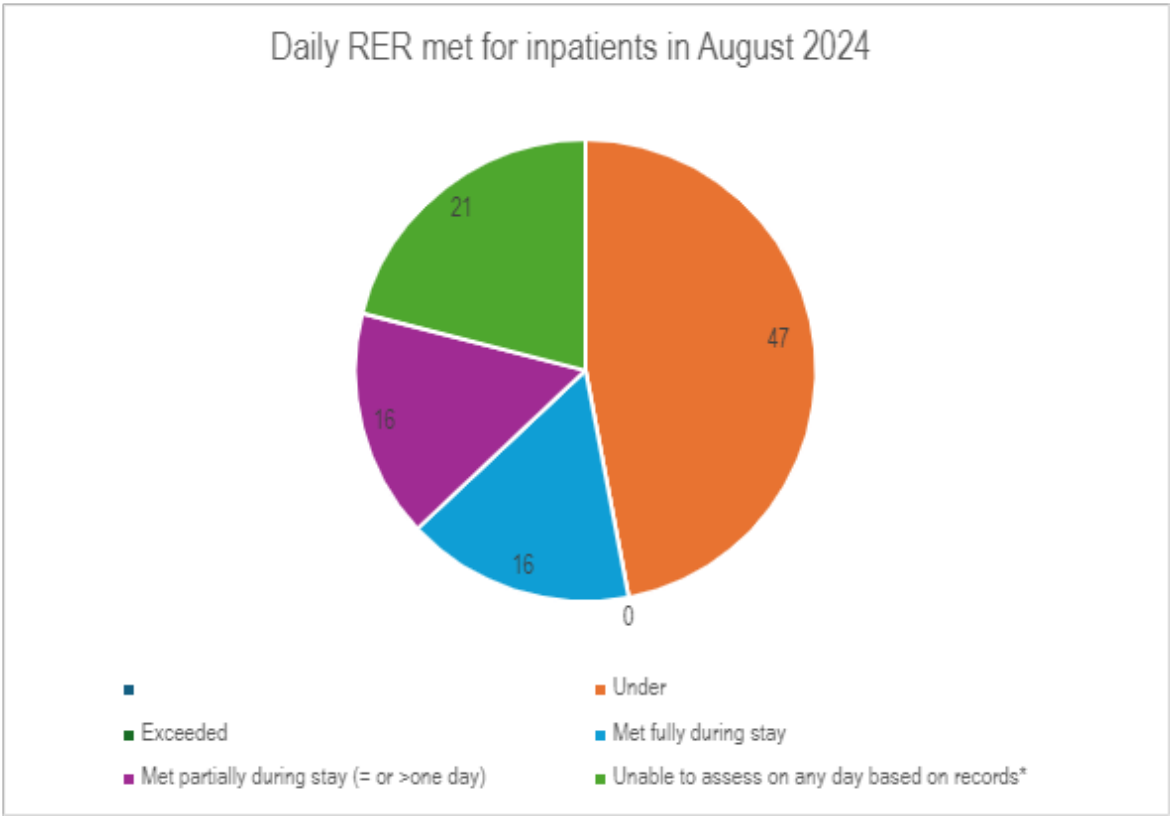

Figure 4: Percentage of patients meeting daily RER in August 2024

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.

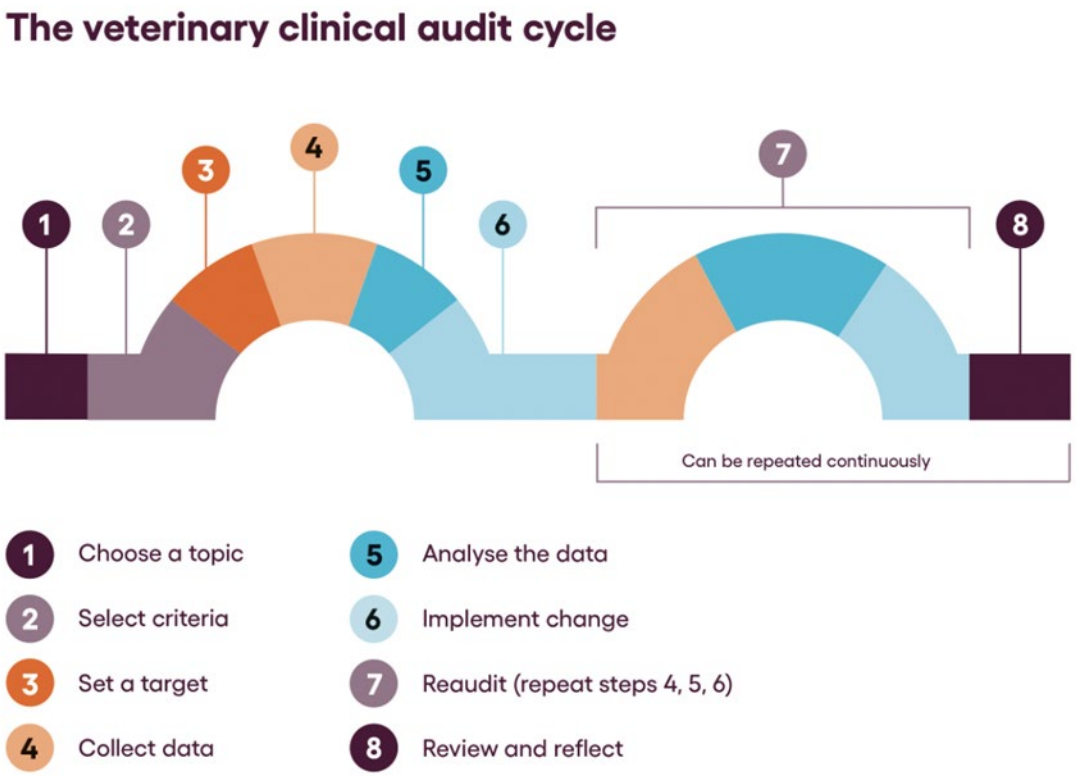

Figure 5: The Veterinary Clinical Audit Cycle by RCVS Knowledge. Available from www.rcvsknowledge.org. Developed by the Royal College of General Practitioners www.rcgp.org.uk/qi-ready

References

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