

Hypertension: Enhancing the identification and treatment of at-risk patients

RCVS Knowledge Quality Improvement Award Highly Commended 2024

Clinical Leadership Team, CVS (UK) Ltd.

Introduction

Hypertension is a common condition in cats and dogs; it can occur primarily or secondarily to an underlying condition. Hypertension has been shown to have an overall prevalence of 24% in cats over 9 years old^{1,2}. Furthermore, the prevalence of hypertension increases if an underlying disease is present (e.g. 10-80% in patients with chronic kidney disease (CKD))³.

The International Society of Feline Medicine (ISFM) recommend that cats aged between 7-10 years have at least annual blood pressure (BP) monitoring and older cats have at least biannual screening. Animals with any predisposing disease (e.g. renal disease, cardiac disease, endocrine disease) should have regular screening; and any animal on anti-hypertensive medication, or on any medication that can cause secondary hypertension, should have regular BP assessments.

Blood pressure monitoring is a low-cost and readily available diagnostic tool in practice. It is beneficial to detect hypertension at the earliest opportunity to ensure care can be established quickly, with ongoing monitoring to guide treatment and optimise outcomes for our patients.^{1,5,6}

Aims of the clinical audit

This project aimed to support our overarching goal of recommending the best possible clinical care every time by helping practices adapt their systems to make BP recommendations more easily and consistently and ensure appropriate patients had a fair opportunity for screening.

Individual practices were able to set targets that were achievable for the patients they see, but nationwide we set the ambitious aim to increase the percentage of cats ages 7 years and over receiving annual BP screening to 10%.

Actions

To establish the baseline, retrospective data was collected for the 12 months between July 2021 – June 2022, revealing:

- Just 1% of animals aged 7 and above had an annual BP screening.
- The average number of blood pressure measurements billed for was just 3 per site per month (more could have been taken but not charged for), with a range of 0-56 per month per site.
- The size of the veterinary practice did not influence the number of blood pressure measurements taken.

Driver diagrams and feedback sessions were used to identify the barriers to providing BP screenings and in-person CPD days were held to encourage further learning by sharing ideas and potential solutions, including:

Barriers:

- Confusion around pricing.
- Confusion and lack of confidence around equipment use.
- Lack of equipment and time.

Activities:

- Laminated BP forms acting as a reminder, easy access and promoting sustainability through minimisation of waste.
- Team competitions.
- Weekly updates at clinical rounds.
- Client information leaflet and BP screening invitation placed within prescription bags for patients that have hyperthyroidism or CKD.
- A targeted email marketing campaign, noted on the patient record, allowed follow-up when the patient was next seen.
- Having all necessary equipment in one container; and a dedicated set for consulting areas.
- A review of the equipment available in practices to identify where new equipment was required and enable appropriate equipment to be purchased.
- Some practices elected to offer free of charge BP measurements for senior cats at routine appointments, such as vaccinations.
- Clarity and guidance around charging were provided.

A central online Knowledge Hub was created to provide practices with a range of support materials and resources:

- A practice pack containing the project framework and planning documents.
- Clinical guidelines and supporting documents on underlying diseases, and how to perform, record and appropriately charge for screenings.
- BP screening equipment list.
- Online CPD webinars and courses.
- A new client resource pack, including a BP diary and information leaflets.
- Social media and email templates.
- Access to Hub Clinical Leadership (HCL) team and Operational Support Managers (OSM) mentoring to help facilitate the project.
- A central space for sharing interim results and a discussion forum to share learning.

Within each practice, a 'hero' and 'sidekick' were nominated to champion the project and be a central point of contact to ensure streamlined communication.

Practices were given the autonomy to design their strategies to fit their settings following a 'Plan, Do, Study, Act' (PDSA) cycle, as shown by the RCVS Knowledge Clinical Audit Cycle. Each team created SMART goals action plans, and a review template listing the project aims, outcome measures, and actions needed by who and by when was designed to allow easy ongoing data collection.

Results

A number of QI projects run simultaneously within the CVS Group of practices, and practice teams are able to choose the ones that resonate the most with them. For this initiative, practices were able to choose to run it as their primary project (referred to as 'focus sites') or secondary to other ongoing activities (referred to as 'non-focus sites').

During the 2022 – 2023 re-audit phase comparing the post-intervention prospective data with the previous 12 months:

- An additional 5,984 BP screenings were performed in the focus sites, equating to a 110% increase.
- A 79% increase in BP screenings was seen at non-focus sites

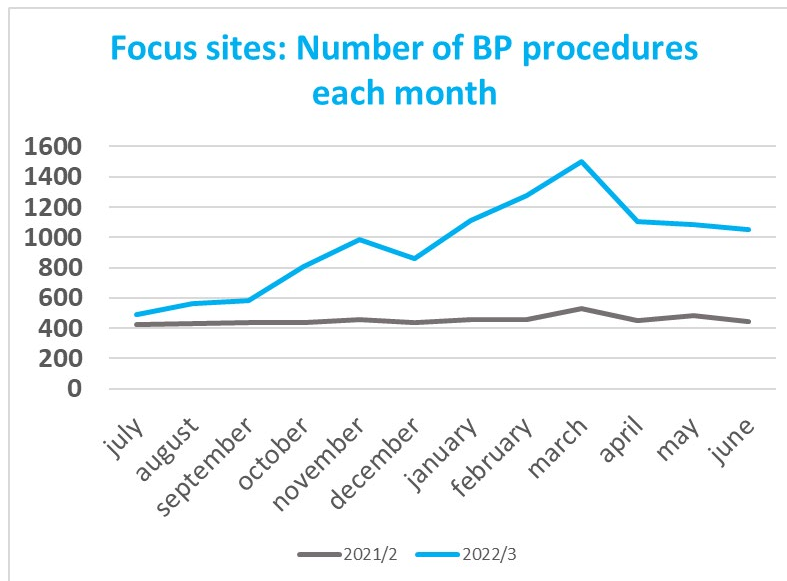


Figure 1: Number of BP screenings recorded per month in 2021 – 2022 and the re-audit phase 2022 – 2023 in focus sites.

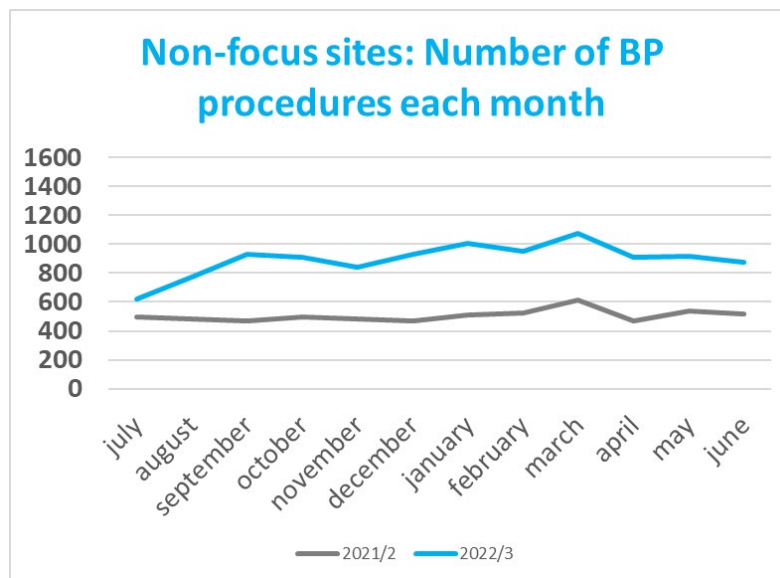


Figure 2: Number of BP screenings recorded per month in 2021 – 2022 and the re-audit phase 2022 – 2023 non-focused sites.

The percentage of cats 7 years old or older that had an annual BP recorded also increased

- From 2.24% to 5.18% at focus sites
- From 1.92% to 2.57% at non-focus sites
- Over 20% of sites achieved a 7% or greater increase, with the top site achieving a 23% screening rate.

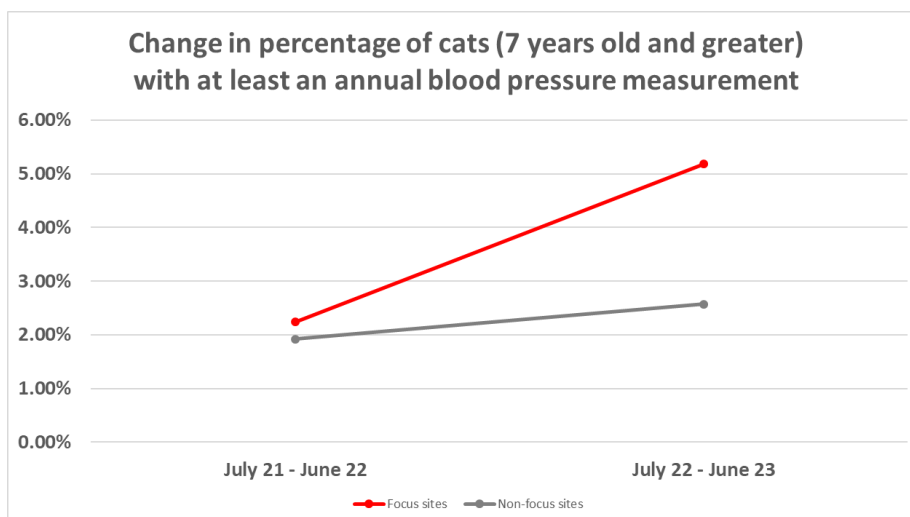


Figure 3: Increase in the percentage of cats 7 years or older having annual BP screening in focus sites (red line) and non-focus sites (grey line)

In the 2022 – 2023 re-audit phase, 303 more patients (a 34% increase) were prescribed anti-hypertensive medication in focus sites, when compared to non-focus sites, demonstrating targeted screening and early identification benefitted patients.

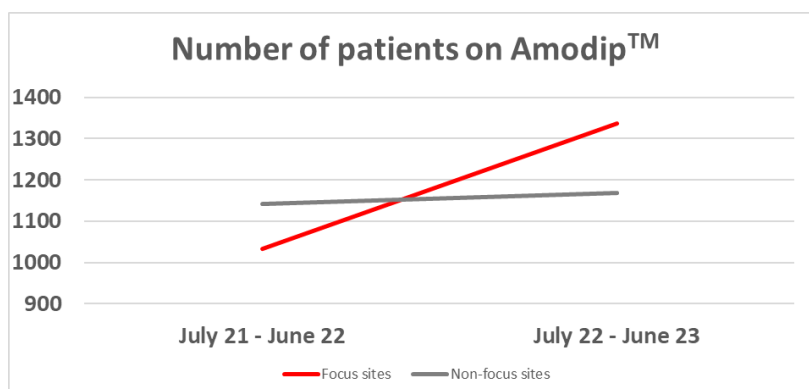


Figure 4: Increase in number of patients on anti-hypertensive medication for focus sites (red line) and non-focus sites (grey line).

Furthermore, patients receiving anti-hypertensives were more likely to have an annual BP screening, in part this may be due to the earlier identification, indicating improved ongoing monitoring.

Impact of intervention

A data-led benchmarking, reflection and educational support framework such as this, is a useful tool to make evidenced-based changes.

Through the process, it was very apparent that practice input and communication were critical to success. We utilised multiple channels to facilitate communication both with teams and the wider hypertension community that developed as part of this process. Sharing of barriers, ideas, challenges and progress helped lighten the workload, supported the development of others and was inspirational for all teams involved.

Crucially, practices were encouraged to identify the unique barriers they faced and the resources they needed to overcome them. They were given autonomy to design their approach and set their targets to benefit the patients, clients and teams in their specific setting. ‘Work as imagined’ is often very different to ‘work as done’ – and therefore guidance (rather than protocols), continued support and autonomy were needed for success.⁷

The Hub Clinical Leadership (HCL) team and Operational Support Managers (OSM) acted as mentors to the practice ‘hero’ and ‘sidekick’, to ensure the task was not overwhelming and made more achievable. They aided practices in the delivery of their project, answering any queries, providing training, listening to feedback, encouraging shared leadership, recognising and celebrating small wins during the process and motivating ongoing review through clinical audit.

This approach evoked shared leadership, ensuring that changes made were meaningful and long-lasting. An openness to trial and error was important, to allow the creation of tailor-made solutions that were functional – ultimately, making it easier for individuals to deliver the best possible care; increasing colleague, patient and client satisfaction.

Further reaching impacts included improved confidence in recommending and performing BP screening across both the vet and nurse teams, embedding this skill within a practice for the long term, aiding further in practice development and patient, client and colleague benefits. In many cases a different approach to workflows and systems of work had to be considered to ensure that BPs could be brought into daily use; utilising a QI framework allows mechanisms to be extrapolated across other areas, achieving far-reaching impacts.

Removing hierarchies, promoting shared leadership and encouraging feedback empowered change to remove the daily niggles that get in the way of doing a good job; we know that this is incredibly important for team morale, wellbeing and the best possible patient care. [8,9](#)

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

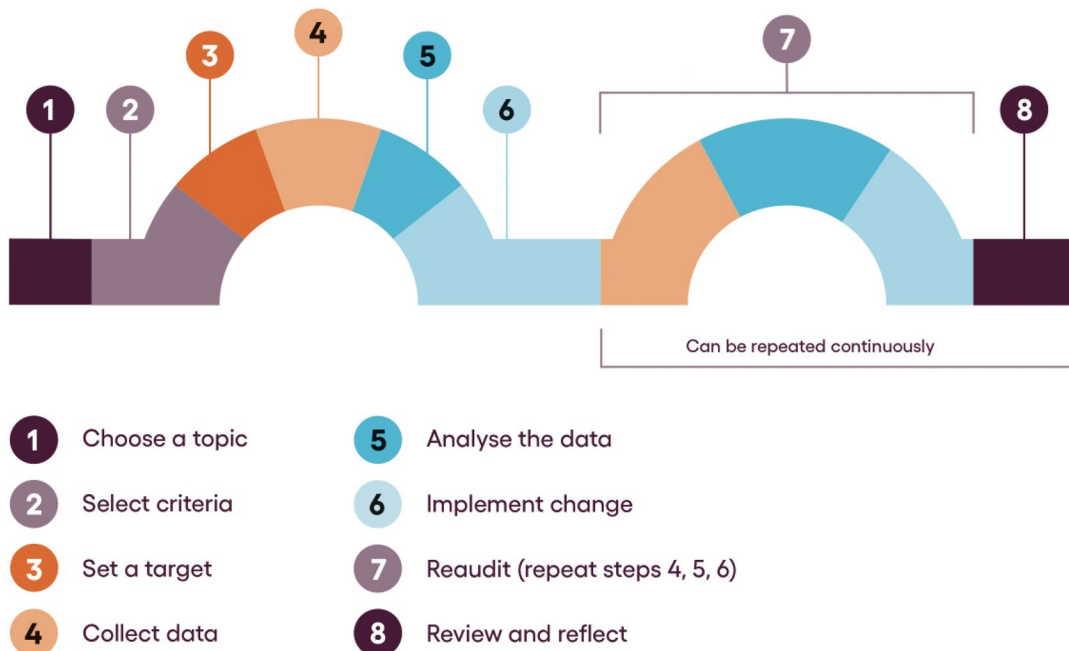


Figure 5: The Veterinary Clinical Audit Cycle by RCVS Knowledge. Available from www.rcvsknowledge.org. Developed by the Royal College of General Practitioners www.rcgp.org.uk/qi-ready

1. Choose a topic relevant to your practice

The topic should be amenable to measurement, commonly encountered and with room for improvement. The CVS Clinical Leadership Team undertook retrospective and prospective data collection to quantify the number of patients receiving blood pressure screenings to enhance the identification and treatment of hypertension.

2. Selection of criteria

Criteria should be easily understood and measured. All feline patients aged 7 years and over were included in the audit, as well as all patients of any age presenting with underlying disease or on medication which could affect hypertension.

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. Practices were given the autonomy to set their targets applicable to their patient groups, and a nationwide target was set to increase the percentage of annual BP screenings performed in cats 7 years and older to 10%.

4. Collect data

Identify who needs to collect what data, in what form and how. Retrospective data was collected over 12 months via the practice management system to establish the baseline.

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. Retrospective data collection established the baseline of 1% of animals aged 7 years and older received annual BP screenings, with a range of 0-56 BP procedures, an average of 3 per month per site. Driver diagrams and feedback sessions identified a lack of confidence, time and equipment and confusion around pricing were the main barriers to providing screenings.

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 project online Knowledge Hub housed a variety of resources, supporting guidelines and documents, with assistance available via a discussion forum and mentoring programme. Practices were encouraged to become familiar with resources and given the autonomy to create bespoke action plans, including practice protocols, client information and CPD for veterinary teams.

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. Each practice nominated project champions to drive a second 12-month prospective data collection period to assess the improvements following interventions. All data was collected via an Audit Review template documenting the aims, outcome measures, actions taken and results.

8. Review and reflect

Share your findings and compare your data with other relevant results. This can help to improve compliance. Monthly reports on progress were released centrally via an online Knowledge Hub for all teams taking part in the audit. Annual results were summarised and delivered to all practices through the CVS QI Report. The project has been continued, and there is continued momentum towards the nationwide 10% goal.

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