

QI

Quality Improvement 2024 Report

Vetsafe

A campaign to encourage colleagues to learn from mistakes

Equine

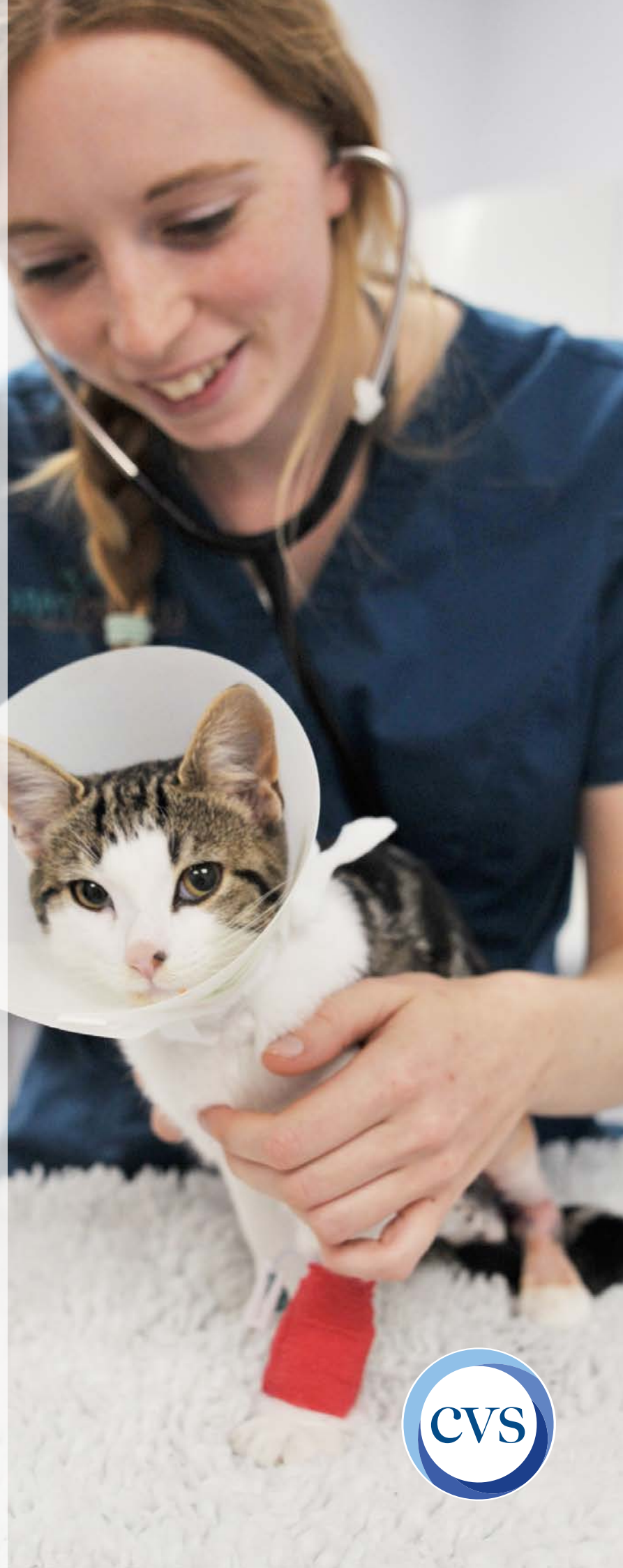
Developing a worm risk assessment

A One Health Approach

Quality Improvement in CVS Farm

Graduate Day

Do recent veterinary graduates just want to specialise?



Introduction

Everyone starts somewhere when it comes to improvement. The most successful and sustained changes often begin at a local level—within your own team, practice, or community.

The key is simply to start. You don't need a perfect plan before taking that first step; what matters is having the courage to begin.

If you are new to quality improvement and are looking for some tips, each of our articles specifically include a few of the important steps of the quality improvement process that you can use to help you get started.

We talk about why we care about the projects. One of the best ways to build momentum is to focus on what you truly care about. When the change you're working towards matters to you, it's easier to stay motivated and inspire others to join you.

We describe how we did the work.

Understanding exactly what you are trying to improve is a critical step. This clarity will help you choose the right approach and measure progress effectively. Inviting diverse perspectives and including people who are already doing the work is vital in shaping the design of any improvement project, as it provides a fuller picture of the current situation and guides you toward meaningful change.

We reflect on what we learned. Reflection and learning are the engines of sustained improvement. By regularly pausing to consider what is working well and what could be better, we can make adjustments, avoid persisting with ineffective approaches and reduce frustration and disengagement from the team.

This process helps us build on our successes, understand the reasons behind them, and embed those lessons into future actions. It also encourages collaboration, as feedback from colleagues and clients directly shapes the next steps.

In this report you'll read about how teams have identified the need for improvement, for example through analysing the requirements of the RCVS Practice Standard Scheme or addressing One Health risks in antibiotic and anthelmintic prescribing.

Gaining insights into feedback helped speed

the ProVet rollout and avoid risks to patient safety as well as influenced the Learning and Development team to make meaningful changes that helped people better access learning and our new graduates feel more prepared.

To bring it all together, your top tips to get started are:

- Identify the need for change and why it matters, to you and your team
- Work to understand what needs to improve. Invite diverse perspectives to help you understand how best to approach it and create a plan of action together
- Reflect and act on what you learn along the way. Gain feedback on how it's going to shape how you progress.

I hope these practical steps and the lessons we share with you in this report help you to get started and sustain your own improvement journey. With time and with practice, it gets easier and the more we talk with each other about how to improve, it becomes part of our shared culture.

Every success and failure is an opportunity to learn and improve. Every improvement, no matter how small, moves us forward. Small steps taken with purpose, create the momentum for lasting change.



A handwritten signature in black ink that reads "Angela Rayner". The signature is fluid and cursive, written on a yellow background.

Angela Rayner, Director of Quality Improvement

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Vetsafe

A campaign to encourage colleagues to learn from mistakes

We introduced a group-wide campaign to encourage colleagues to talk more openly about mistakes. The campaign involved CVS' network of 400+ Clinical Improvement Advocates, who are trained to support their practice in continuous clinical improvement.

We care: "Our aim is to improve psychological safety when things don't go to plan", said Angie "When mistakes happen, this can have a serious impact on wellbeing for those involved. Colleagues can suffer long-term effects such as anxiety, depression, or a loss of confidence. By making it a positive learning experience we aim to improve team wellbeing and encourage teams to record incidents and conduct learning reviews; leading to improved patient safety and team wellbeing."

Learning reviews attempt to identify the multiple factors that contribute to an

adverse event or near miss as opposed to only focusing on human error. They support teams in discussing how to approach learning from and improving after an adverse event. We aim to create an environment where similar adverse events are less likely to occur, because we've learned from them, and to foster a culture where adverse events are viewed as opportunities for learning and growth.

How we did it: "Our campaign involved a series of steps that were led by our clinical improvement team and our network of advocates", said Angie. "We encouraged every practice to hold interactive team meetings to explore adverse event case studies and the factors that contributed to them. These meetings are a space for honest conversations without fear of blame or judgement."

To build trust, we shared a series of short films that were made by senior colleagues who shared their experiences of adverse events and reflected on what they learned and how it helped them grow professionally. The aim was to encourage teams to talk openly.

We developed and shared a guide to learning reviews to encourage colleagues to complete a learning review after an adverse event and to record these on VetSafe, the Veterinary Defence Society's confidential adverse event recording platform. VetSafe records are reviewed by the central Quality Improvement Team and analysed for trends, with learnings disseminated as appropriate, to help improve patient safety locally within practices and group-wide.

We also engaged leadership teams, for example at the annual company's leadership conference, about developing a culture of learning from mistakes. Our guest speaker at the conference was Matthew Syed, who writes about human performance and is known for his book *Black Box Thinking: Why Most People Never Learn from Their Mistakes--But Some Do*.

We engaged our clinical improvement advocates with regular updates on our progress, listened and responded to their challenges, and shared their stories of learning and success."

During 2024, the monthly number of VetSafe reports received increased nearly four times on average from 61 to 216. The number of practices reporting through VetSafe increased on average from 22 to 102.

We also surveyed our colleagues about psychological safety with 78.04% feeling safe to speak up about concerns and 78.79% feeling that if they made a mistake at work, it will not be held against them. Some 74.72% said that there is a culture of continuous improvement in their team.

These results help us understand where we are starting and we will continue to ask these questions to ensure we are improving rather than having unintended consequences of our work.

Our learning: Angie said, "We are on a mission to learn from mistakes and whilst we have seen positive outcomes, this is about developing a leadership culture that truly lives and breathes our values. We want every CVS practice team to use VetSafe and utilise learning reviews to determine how to best move forward from an adverse event. Accomplishing this will be a multi-year mission."

CVS Values's aim to promote a culture that fosters learning and psychological safety:

- **Just culture** - we foster a fair and impartial environment, where colleagues feel empowered to voice their concerns and learn without fear of bias or reprisal.
- **Accountability** - We encourage leaders and teams to take ownership and be honest, with clear expectations and a shared sense of purpose with every colleague understanding the significance of their contributions
- **Teamwork** - We prioritise trust and cooperation; our colleagues work together to achieve collective goals and provide the best possible care for animals.
- **Inclusive leadership** - We believe in open and inclusive discussions by actively seeking diverse perspectives, embracing challenge, and valuing contributions that enrich our decision-making processes.
- **Systems Thinking** - We recognise that all outcomes stem from the complex interaction between behaviours and processes. By taking this understanding into our problem solving we can learn more effectively.



AMS

Using quality improvement to develop CVS' Antibiotic Stewardship Programme

In 2024, there were approximately 35,000 fewer prescriptions of highest priority critically important antibiotics (HPCIA) compared to our benchmark in 2021.

We care: "We want to protect public health while balancing our primary responsibility for animal welfare," said Angela Rayner Director of Quality Improvement.

"Our focus remains on reducing the misuse and overuse of antimicrobials in the battle against antimicrobial resistance (AMR)."

CVS' approach to Antimicrobial Stewardship has been to create a culture where quality improvement can flourish by empowering practice teams with the data and knowledge they need to make changes in their practice. We also listen to colleagues who are on the frontline to guide what we do: what is going well and the challenges they face, to help shape the work.

The AMS programme started in earnest with the implementation of a digital dashboard in July 2021. This enabled practice teams to reflect on their prescribing patterns, alongside current prescribing guidance, to determine if changes could be made.

A clinical audit toolkit was created for practices to guide the improvement process and Regional Clinical Leads, who are senior vets, provided their ongoing support to teams.

This sparked many improvement projects involving both HPCIA and Non-HPCIA prescriptions, led by local teams. Examples included reducing the use of Cefovecin in cat bite abscesses and Metronidazole in acute diarrhoea cases.

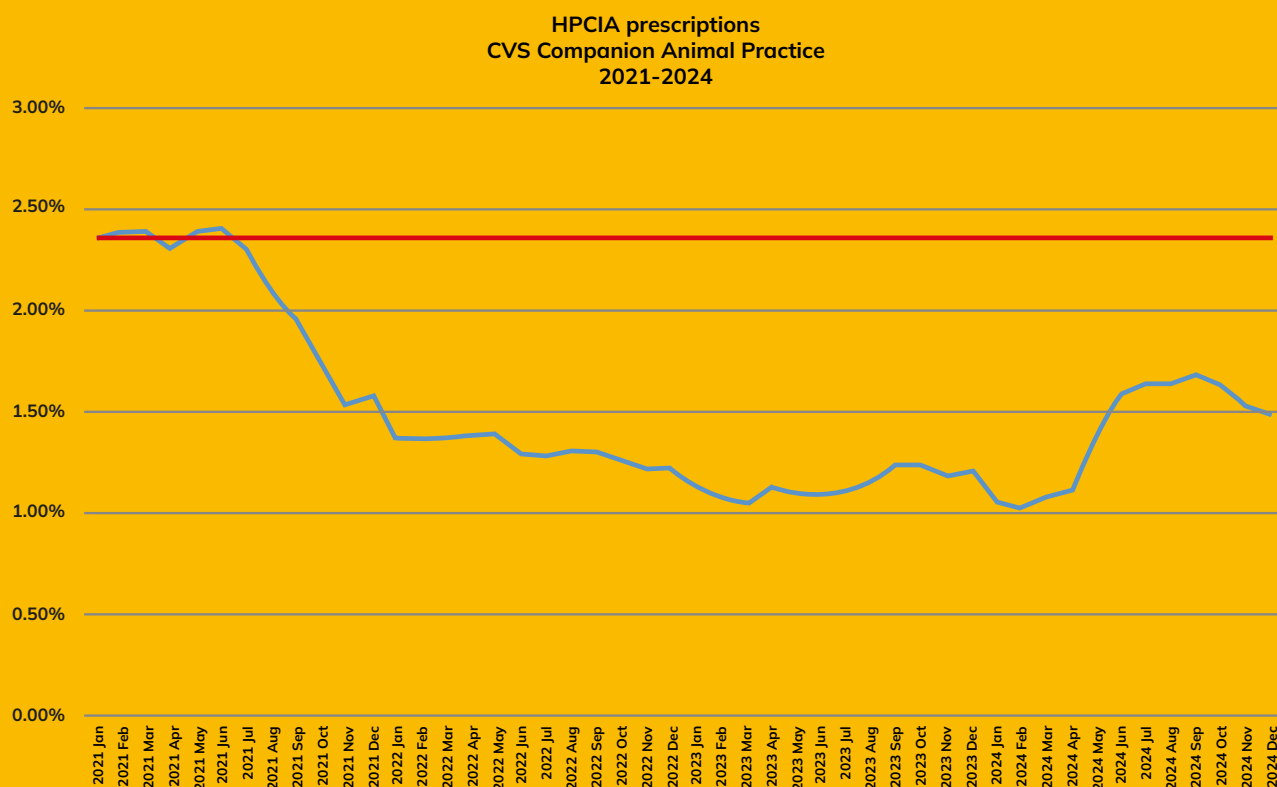


Figure 1: Graph of highest priority critically important antibiotic prescriptions as a percentage of total consultations from 2021-2024. The top red line demonstrates the CVS benchmark.

When the new practice management system was implemented, the digital dashboard was out of action between the months of April - August 2024. During this period, there was an increase in the number of HPCIA prescriptions as a percentage of total consultations. This may be due to the loss of access to prescribing data and pressures created by rapidly implementing a new practice management system.

How we did it: Taking forward our AMS Strategy

To build on our work, an Antimicrobial Stewardship Strategy Day was held towards the end of 2023 which gained the views of 30 colleagues representing all roles in practice, who worked to prioritise 49 areas identified for improvement from survey data. For further detail, visit our 2023 QI report.

They identified three focus areas for the AMS strategy moving forward:

- Collating and generating the evidence to support responsible prescribing and infection control processes

- Cultivating a culture, where tidiness, cleanliness and hygiene is an important part of everyone's role in infection control to reduce the risk of hospital acquired infections
- Supporting client education and communication of AMS processes or practice policies

In August 2024, we took these priorities to practice meetings across our regions and asked teams to identify their own projects for their team, suitable for where they were on their AMS journey and supports the strategy. Some projects are already underway such as the Glo Germ project discussed elsewhere in this report. Other local projects include:

- Improving the use of in-house cytology to direct appropriate prescribing
- Not keeping HPClAs in stock or labelling the bottles to ease their identification
- Improving practice infection control measures
- Reviewing practice prescribing guidelines for all species
- Improving hand hygiene
- Improving client education on AMS topics

Case study

Ian Southern MRCVS, Clinical Director and Clinical Improvement Advocate in Region C15, led the region's AMS focus, which resulted in an overall decrease in antibiotic prescriptions over and above what was seen in the wider companion animal division as a whole. (Figures 2 and 3) Ian describes his approach:

"Having attended a few CPDs and meetings on AMS, I felt that for many people we became bogged down in detail. My aim was to deliver simple, bite-sized reminder foci every couple of weeks. Punchy, broad-based messages, leaving the clinical decision up to the clinician.

One week we looked at *Staphylococcus pseudintermedius* as a commensal in dogs and the effect of using antibiotics on this population. Another week we discussed protecting the gut biome and showed evidence of the ramifications far beyond the gut of antibiotic therapy. Another week we looked into all the reports of severe human infections where the source of infection could be traced to their pets. There were many more.

All these communications just one to two pages and could be put up on the clinical notice board. It is important also to celebrate success with everyone, so I send the prescribing data as soon as I receive it. The regular communication as well as the content, is what keeps reminding colleagues to keep responsible prescribing in mind"

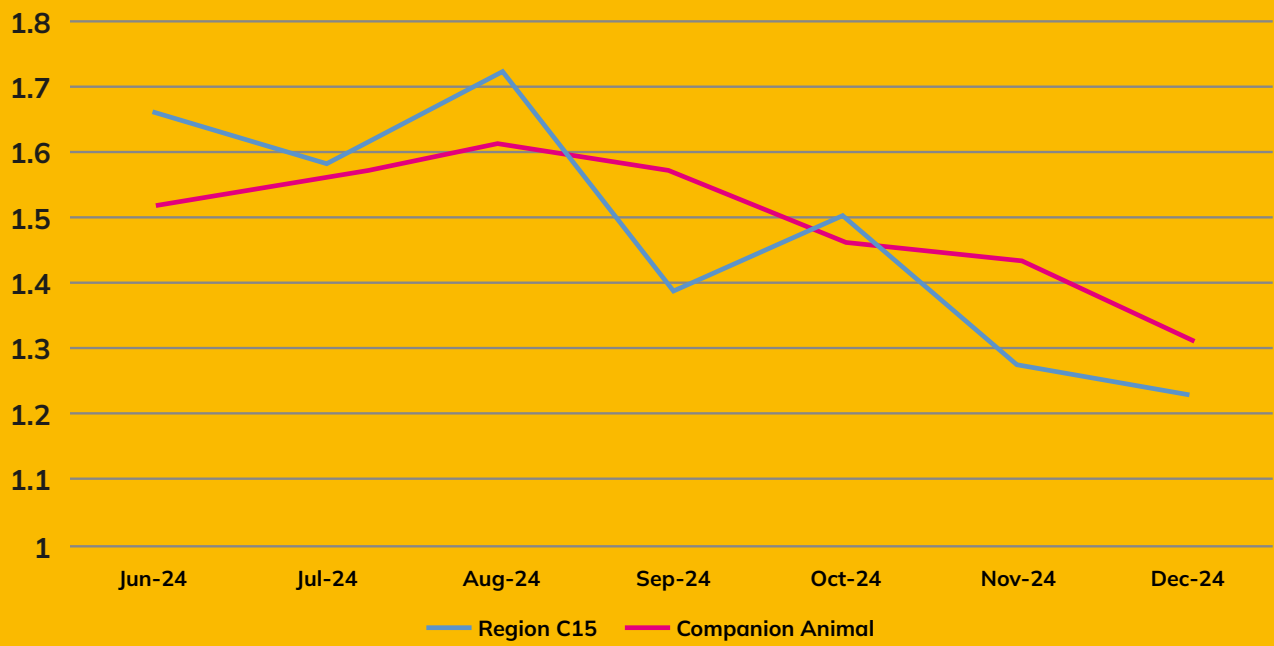


Figure 2: Region C15 HPCIA prescriptions reflected as a percentage of total consultations vs companion animal division results

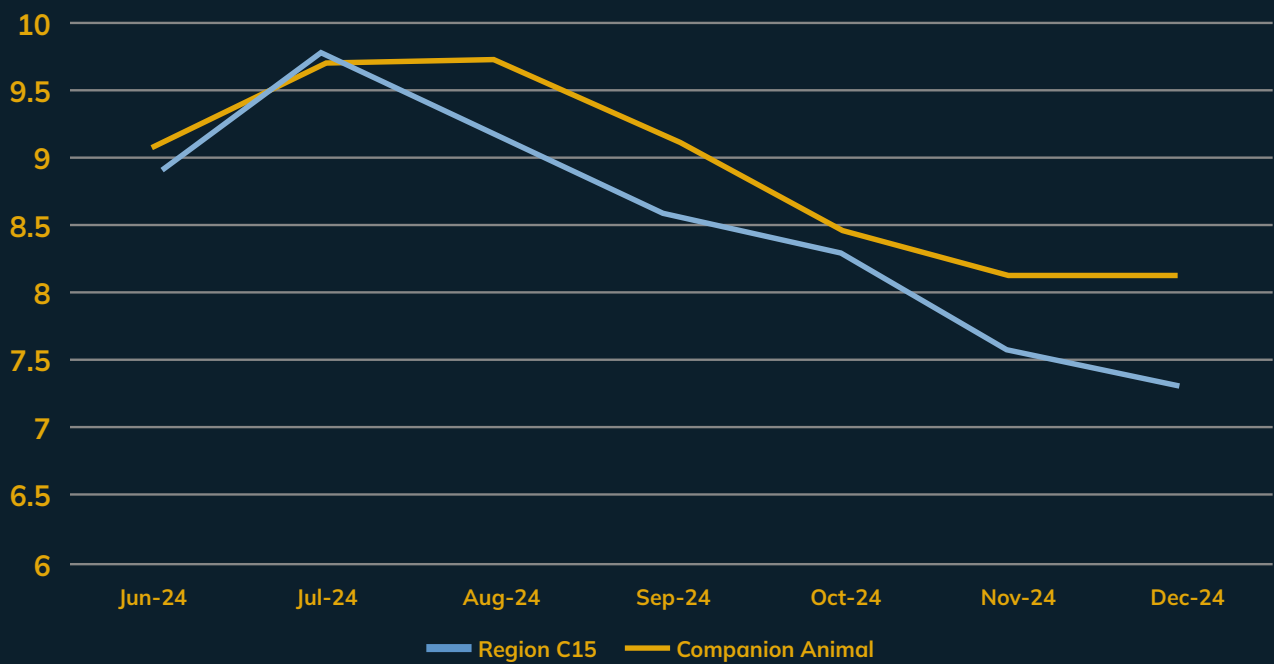
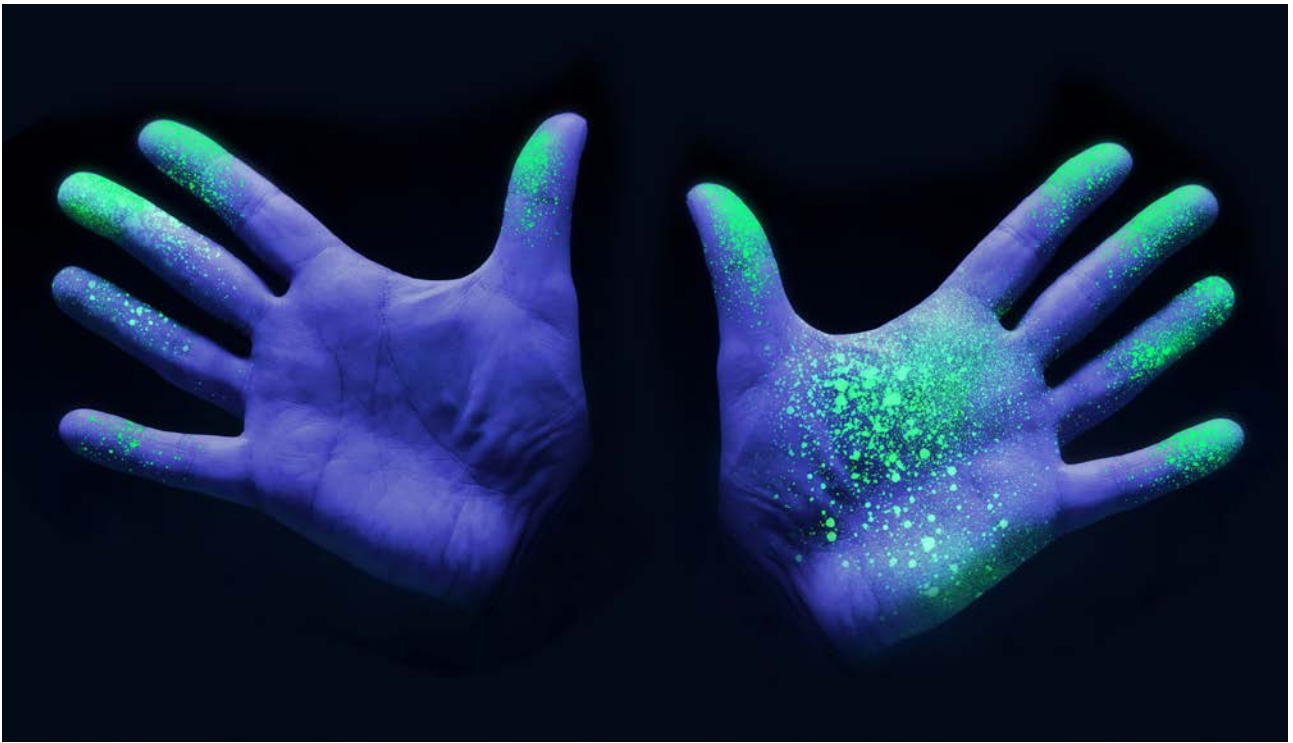


Figure 3: Region C15 Non-HPCIA prescriptions reflected as a percentage of total consultations vs companion animal division results



Glo Germ

Shining a light on cleanliness

A project tests the Glo Germ product's ability to engage veterinary colleagues with infection control

We care: "We are determined to play our part in the battle against Antimicrobial Resistance," said Chief Veterinary Nursing Officer Tara Ryan

"The occurrence of hospital acquired infections (HAIs) in the veterinary profession is an understudied area, but it is accepted as a contributor to antimicrobial resistance (AMR)."

The battle against HAIs requires strong infection control prevention measures. Infection prevention and management interventions is listed as the first focus area in the UK government's 2024-2029 Antimicrobial Stewardship Action Plan.

CVS' Antimicrobial Stewardship Strategy has three focus areas of which one is: Cultivating a culture, where tidiness, cleanliness and hygiene is an important part of everyone's role in infection control

Our practice teams told us that they liked to have a tool to help them improve their day-to-day infection control methods. However current methods available, such as environmental swabbing, are most appropriately used when investigating a particular infection or outbreak rather than for routine monitoring purposes.

To meet this challenge, we decided to test Glo Germ, a product developed to visually simulate the spread of germs. Under an ultra-violet (UV) spotlight, Glo Germ lights

up areas that have escaped the attention of everyday cleaning processes.

How we did it: “The product was trialled initially in six CVS practices and was found to improve engagement with infection control processes, leading teams to change what they were doing to improve their cleaning protocols.

“In Phase 2, we are using a randomised cluster trial with 60 practices across our companion animal division.”

The 3 trial groups are split into:

- Control – This group has received no guidance or support. They will be made aware that they are included in the study and asked to complete a survey each month throughout the study period.
- Low Intervention – This group has received an email highlighting to them that there is an infection control pack available on our learning platform Knowledge Hub to support them. Engagement with this resource requires self-directed learning and review. They will complete a survey each month throughout the study period.
- High Intervention – This group will have an introductory video call to discuss the Glo Germ trial. Infection control packs including the Glo Germ product and hand hygiene kits will be posted out to them. They will have well-advertised ongoing support from the project leads. They will complete the survey each month throughout the study period.

We want to establish whether Glo Germ helped improve engagement with infection control, and adapted the tool provided by the Bella Moss Foundation (BMF), a charity that advocates for infection control education and antimicrobial stewardships within the veterinary profession. The BMF hygiene self-audit tool was created to

support practices with monitoring and measuring hygiene standards in practice. It incorporates regular room-by-room assessments using a scoring system.

We will report our findings on Phase 2 next year and develop a quality improvement plan to action them.



Using feedback to make learning easier to find

The New Learning Hub Experience on Knowledge Hub

CVS Knowledge Hub is our learning management system, which can be accessed by every colleague. With search functionality limited, we wanted to make finding the right training course easier.

We care: “We want colleagues to find relevant training in just a few clicks and for each role to have a space where they feel at home on the platform and could easily explore learning opportunities,” said Jon Forrester, Head of Learning Design,

Knowledge Hub has learning opportunities for vets, nurses, patient care assistants, receptionists, support office, managers and senior leaders. The breadth of these roles meant that categorising training for everyone in one place was difficult.

As a result of colleague feedback, we have now developed 18 Learning Hubs, with content suitable for everyone.

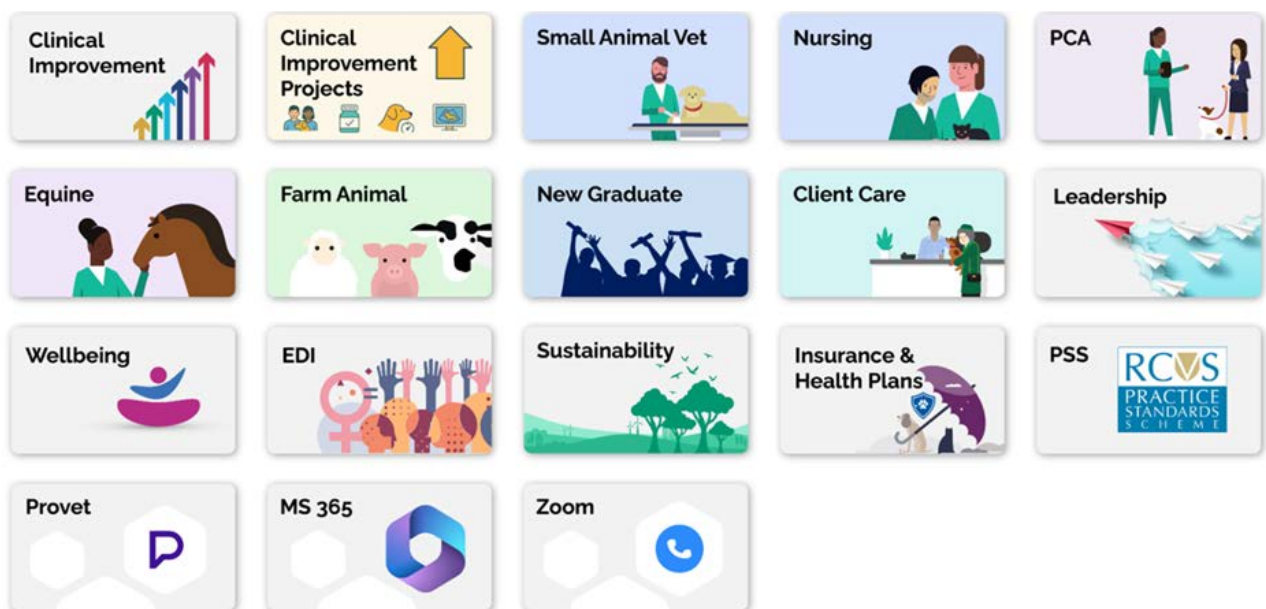


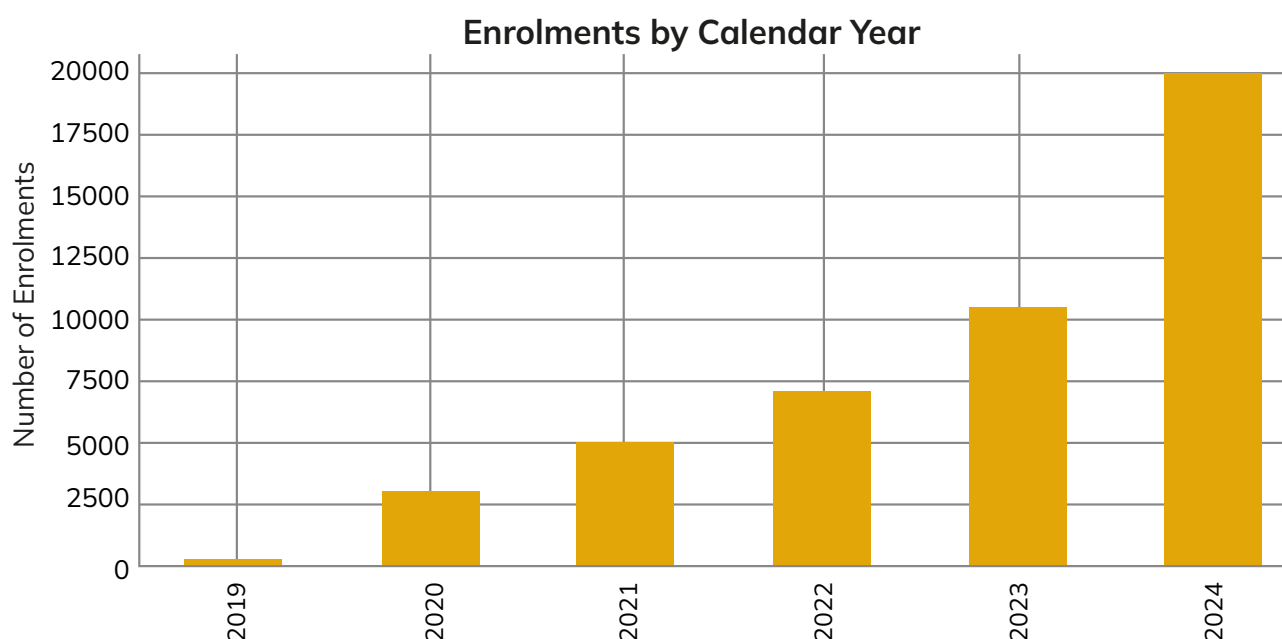
Figure 5: Our Knowledge Hub learning platform

Our learning: “Many colleagues reached out to our Learning, Education, and Development team, expressing difficulty in finding training,” said Jon.

“We gathered feedback, both from individual learners and from leadership to find out

how to make it easier to access. We also received requests from various committees and teams for better categorisation of content, which led us to develop the idea of role-specific Hubs.”

We received positive anecdotal feedback, with colleagues often expressing surprise at the amount of content available to them. We are also seeing increased requests for additional Hubs, showing that the concept is well-received and valued across the organisation. Voluntary enrolments (non-mandatory) outperformed projection in 2024 by 60%, following the instruction of the Learning Hubs.



How we did it: “The creation of each Hub was a collaborative effort. The consistent team included the Head of Learning Design and Technology, our Learning Technologists, and our Quality Assurance Editor. For each specific Hub, we partnered with relevant stakeholders; such as the nursing education leads for the Nursing Hub, HR for the Leadership Hub, and various committees for the Wellbeing and EDI Hubs,” said Jon.

“Our goal is to create an environment where colleagues visit the Knowledge Hub because they want to learn, not just because they have to complete mandatory training. We aimed to boost engagement and make the platform a place for exploration and discovery.”

Continuous improvement relies on access to knowledge. By providing an extensive library of learning content, we empower our colleagues to grow, improve, and explore new opportunities. This not only enhances their current role but also supports their career progression and fosters a culture of continuous learning and improvement. We responded to feedback to improve how the content is presented and have seen significant improvements in our colleagues accessing learning.



Graduate Scheme

Graduates feedback on what would improve their programme

We care: “Because the first few months and years as a vet can have a huge bearing on where they go with their career for the rest of their life. We believe we have a moral obligation to help make sure these new vets have positive experiences, to ensure their longevity in the industry they once dreamed of being part of.” said Hannah Spooner, New Graduate Programme Lead.

The CVS New Graduate Programme (NGP) forms the first two years of a newly graduated vets life with CVS.

The large majority of their learning takes place in practice, but this is supplemented

with advisor support, internal CPD courses and tutor groups, all organised by NGP team.

The NGP starts with a 4 week onboarding phase, which includes an online preparation week and a residential training week, before landing in practice for induction and orientation weeks.

Then over the next two years they receive 13 CPD courses covering a wide range of topics, as well as one careers day, a five day ‘Elective’ and quarterly tutor groups. The courses are a mixture of wet labs, in person days and online distance learning.

Our learning: “When we asked for feedback, cases and interactivity are the most commonly asked for ‘add’ and ‘keep’

and adding more of these this year has been a big improvement". said Hannah.

"Moving forward, an emerging trend is the questions asked by graduates at courses are becoming less clinical and more communications based,

Rather than asking 'What would I do clinically in this case?'. Graduates are now asking 'How do I say this to an owner?', 'What do I say to an owner who declines aural cytology?', 'How do I recommend x-rays to an owner?'.

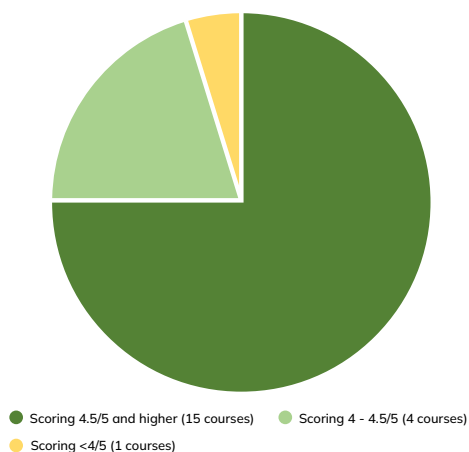
This evidence guides us to know how to improve, change and adapt our courses to the needs of young vets.

So far this academic year 2024/25, the majority of our courses have either improved or stayed high in their overall feedback score.

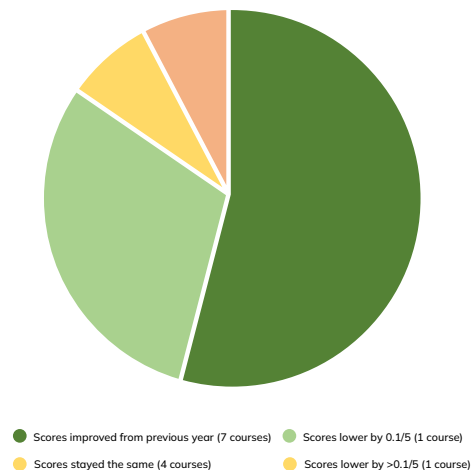
Based on the feedback, we have added more case based scenarios and interactive course participation, using real life general practitioner cases and voting methods such as Slido.

As a result of the feedback about adding communication content, this year we will add in sections to all our courses to help graduates form a toolbox of phrases from experienced GP practitioners, of how to manage conversations with clients with confidence.

Overall feedback scores for 2024-25 NGP courses & tutor group sessions



Overall change in feedback scores for NGP courses 2023-24 to 2024-25



How we did it: At the end of each course and tutor group, feedback is gathered using a mixture of numerical and thematic data collection.

Graduates score out of five, the course over all, the delivery, the facilities, the usefulness for clinical practice, and add comments on the 'one thing' they would keep, add or remove.

This, along with other factors such as feedback from line managers and larger company initiatives, forms the basis for how we develop and improve our courses. Once we make changes, we revisit our measures and take stock of subsequent feedback to see how we have progressed.

All of these changes would not be possible without the course leaders, many of whom are dedicated GP practitioners with a passion for helping the next generation, and our Pastoral Support Vets Jennifer Clarkson MRCVS and Heather Lucas MRCVS, who head up the quarterly tutor groups.



Careers Day

Supporting graduates with making the right decisions about their careers

An improved Graduate Programme Careers Day shows how data needs to be interrogated carefully to understand what new vets appreciate as they plan their careers

A careers day for new vets planning their next steps after completing the graduate programme in CVS has been improved after listening carefully to attendees.

We care: “We want our graduates to be aware of the full range of opportunities as they plan their careers,” said Hannah Spooner, CVS Graduate Programme Lead.

Our careers day is planned after listening carefully to feedback from our graduates. In 2024, organisers found a disconnect between what graduates believed they

were interested in pursuing before they attended the careers day in 2023 and what they said afterwards.

Our learning: “There was a disparity between what graduates say they want to find out (where specialisation, certificates, residencies and internships were the highest scorer) and what they actually valued the most on the day (which included the variety of opportunities, and general practitioner (GP) progression within CVS,” said Hannah.

The revised 2024 careers day aimed to listen to their feedback and open their eyes to the range of opportunities and perks available within CVS as a vet in general

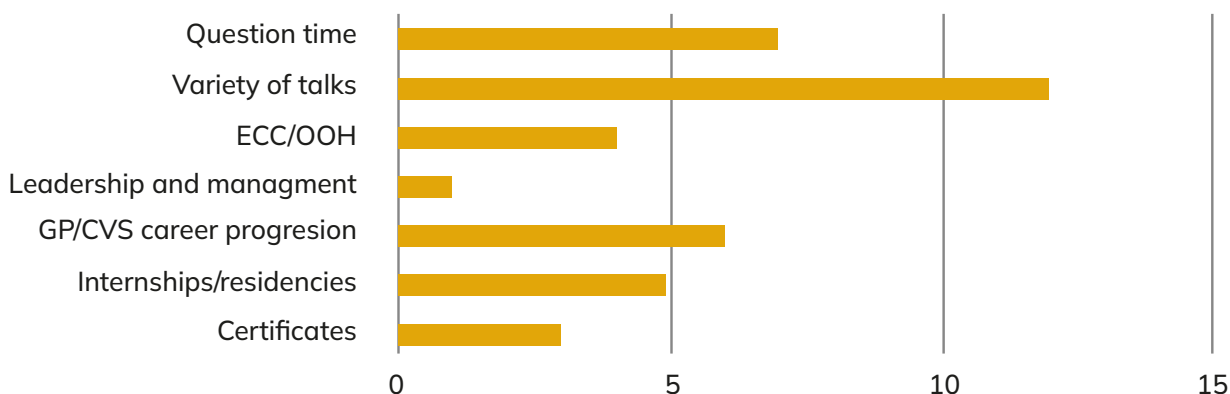
practice as opposed to succumbing to the pressure to do a certificate and specialise.

Hannah Spooner, CVS Graduate Programme Lead, reviewed the survey

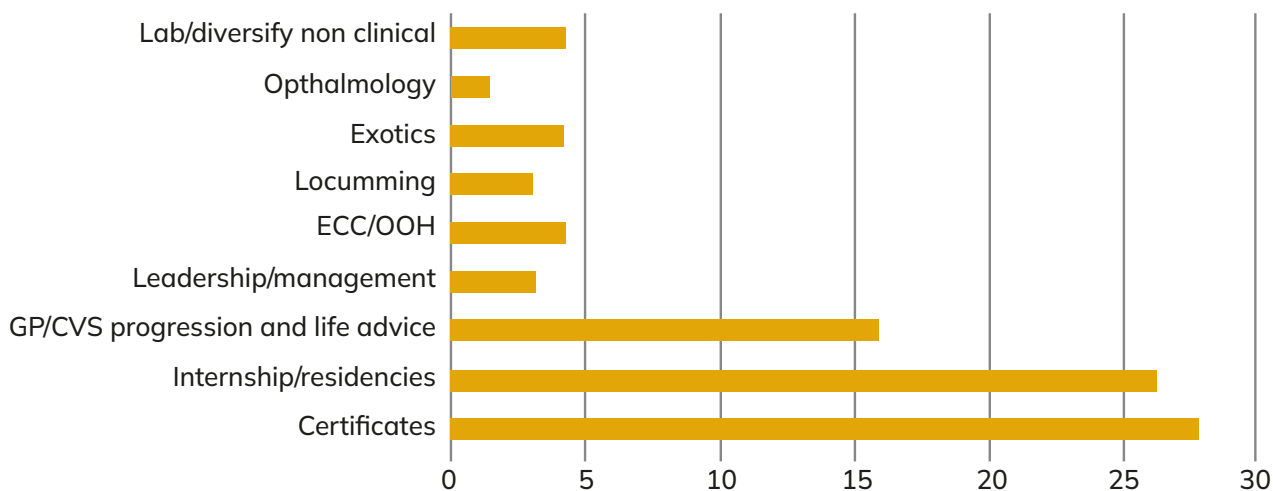
results on the previous careers day with other members of the team.

As a result, the Careers Day was redesigned with an increased variety

One thing they would keep from 2023 (No. of votes)(31 answered)



What one question you would like to ask at careers day? 2025 (77 answered)



of topics (including travel/neuter clinics, pathologist service, exotics, and general practice) as well as more opportunities to ask questions to a panel or individually. Talks by certificate providers were cut from two to one.

Hannah said: “The survey results show many of our graduates may not know the options to them, apart from doing a certificate, and appreciate finding out about those other options.”

“Showing the range of opportunities, outside of doing a certificate, also reflects

where the need is greatest amongst the profession and our company.”

The careers day was also moved to earlier in their graduate programme to enable it to be more influential for their career.

In response to the changes, overall satisfaction score increase from 4.1 to 4.7 based on 52 responses.

“Participants appreciated the variety of speakers, the short trailer style talks, the honesty of people’s career journeys and the focus on general practice”, Hannah said.



Farm

Quality Improvement in CVS Farm

Throughout 2024 Quality Improvement in the farm division has had a focus on One Health initiatives aiming to involve vets at all stages of their careers in fostering a culture of continuous improvement.

The Farm QI team met at Dyfed Vets in South Wales and enjoyed a farm visit to a modern, progressive zero grazing dairy farm which embraced the latest technology.

We shared results from ongoing campaigns, discussing new campaigns such as Failure of Passive Transfer (FPT) in calves particularly beef suckler calves and the risk factors involved.

The Farm QI group has changed some ways of working:

- Increased involvement to two vets from each practice,
- CVS' Learning, Education and

Development team are now represented, as are the Axiom Labs Division

- We are engaging colleagues across all the CVS farm practices with the aim of sharing ideas and experiences. This includes monthly online meetings and biannual in-practice meetings of QI leads.

QI leads and their practices are encouraged to take an active role in the three ongoing campaigns; Calf Respiratory Disease, Dairy Mastitis and Ovine Parasites.

Each of these have proved successful with 106 farms tested for calf respiratory disease pathogens, over 300 cows with mastitis have been tested for milk culture and sensitivity and over 1000 faecal egg counts were submitted in 2024.

CVS Farm improves testing and treatment of calf respiratory disease

We care: Steven said: “We wanted to reduce disease incidence and therefore have a positive impact on animal welfare. Long term this project will improve herd health and welfare and productivity, as well as reduce the avoidable use of antibiotics.”

CVS Farm is delivering a project to improve the use of diagnostic testing of respiratory disease in calves. Bovine Respiratory Disease (BRD), or pneumonia, is the most common cause of morbidity and mortality in young cattle. It costs the UK cattle industry £50 million a year[1]. With the high cost of BRD on UK farms, as well as its obvious effects on animal welfare, there is an industry wide push to reduce its incidence.

BRD is caused by a complex interaction between viruses, bacteria and mycoplasma pathogens, many of which live harmlessly in the respiratory tract of healthy cattle as commensals. The disease is usually triggered during or following a stressful period by a viral infection and a subsequent infection of the airways with opportunistic bacteria. This combination of stress factors and infectious agents makes young cattle especially vulnerable^[2].

How we did it: Steven explains: “We want to reduce the level of pneumonia through increased use of nasopharyngeal swabbing, serology testing and tailored farm management protocols.

Within two years, the use of nasopharyngeal swabbing by vets on farm has increased by almost 100%, by helping to remove barriers to a thorough veterinary investigation into the causal organisms of calf pneumonia.”

During the CVS Farm project, a mixture of agents have been identified from the samples analysed by CVS Labs using an eight-pathogen multiplex test. These have included; Mycoplasma (37%), IBR (6%), P13 (12%), Coronavirus (38%), Histophilus (48%), RSV (30%), Mannheimia (64%), and Pasteurella (94%).

The results of each farm's respiratory pathogen tests have been presented to each farmer and discussions held on taking a more preventative approach. These have included conversations on biosecurity, immunity, housing, environmental management, vaccination and treatment protocols. Through this process, CVS Farm vets have gained greater understanding of problems specific to each client - enabling the production of bespoke action plans.

Our learning: Steven said: “Even though it's been just over two years, our programme is already yielding meaningful data. We are using this information to help each farm successfully implement a range of measures to help prevent and vaccinate against pneumonia and to reduce antibiotic use.

The respiratory pathogen results have also enabled CVS Farm vets to target the right vaccine to the right farm to cover the key risk periods for those animals. All vaccinations have been timed in relation to peaks in clinical cases and pre-stress periods – such as weaning, group movements or transport to ensure animals are protected against the correct pathogen effectively. Our vets tell us that by taking this preventative herd health measure, they can treat cases appropriately and have prescribed fewer antibiotics to treat respiratory infection in the past year.

Dairy cow mastitis campaign starts to yield results

Introduced in July 2023, CVS Farm's dairy cow mastitis campaign – in operation across 15 of its farm practices UK-wide - aims to improve the role of farm vets in dairy cow mastitis decision-making.

Bovine mastitis is an inflammatory response of the udder tissue in the mammary gland caused due to a physical trauma or microorganism infections. It is considered the most common disease leading to economic loss in the dairy industry due to reduced yield and poor quality of milk^[ii].

We care: Steven said: “Our Farm practices want to provide practical and effective day-to-day care in cases of bovine mastitis.

We also want to reduce unnecessary use of antibiotics, helping to safeguard against antimicrobial resistance and aiming to improve the health, welfare and productivity of cows on dairy farms.

CVS' Farm Vets started to introduce the new dairy cow Mastatest quality improvement project in July 2023. The group has now run nearly 700 clinical samples and 150 high cell count milk samples. From clinical case samples tested so far, 34% had no bacterial growth or E.coli infection. It is likely that these cows would go on to self-cure without the need for antibiotics.

The campaign relies upon each set of Mastatest results being sent quickly to CVS' vets and their farmers. Treatment plans can then immediately be actioned. A live online dashboard also allows both parties to view summary data across all samples tested.

Our learning: Steven said: Data from the campaign has revealed that approximately 30% of the Mastatest submissions have identified either no bacteria or bacteria which do not benefit from antibiotic use.

By looking at the results of Mastatest antibiotic sensitivity testing, in 16% of cases, practices have been able to move away from broad-spectrum category C antibiotics to narrow spectrum category D penicillins, to further improve antibiotic stewardship.

The rapid Mastatest technology and support we've set up in every practice is proving to quickly result in the right treatment for individual cases of mastitis.”

As a result of this learning, farmers have been encouraged to treat affected cows with Non-Steroidal Anti-inflammatories (NSAIDs) while awaiting their Mastatest results, then use the results to administer an appropriate treatment for their cow's mastitis - where over 1 in 4 cases do not actually need antibiotic therapy.^[i]

How we did it: The project uses Mastatest technology in all 15 farm practices, who are able to perform in-house milk sample culture and sensitivity in 20-24 hours, to identify if pathogens are present and which, which antibiotics are suitable for treatment if any, and helps inform management decisions.

Previously, a major barrier has been the need to send milk samples off to a lab, resulting in a turnaround time of 48 hours or more, resulting in a delay in treatment and negative impact on cow welfare.

[i] Roberson JR. Establishing treatment protocols for clinical mastitis. Vet Clin North Am Food Anim Pract. (2003) 19:223–34, viii. doi: 10.1016/s0749-0720(02)00071-3 [DOI] [PubMed] [Google Scholar]

[ii] Bovine mastitis: risk factors, therapeutic strategies, and alternative treatments — A review - PMC (nih.gov)

[iii] An Investigation of the Impact of Intramammary Antibiotic Dry Cow Therapy on Clinical Coliform Mastitis - ScienceDirect



Equine

Quality Improvement in Equine – developing a worm risk assessment tool

CVS Equine's most significant work in 2024 was the development and adoption of a worm risk assessment tool for veterinary colleagues to use to support strategic and effective endoparasite control in horses.

We care: "This project aims to reduce anthelmintics ('wormers') use in horses and aims to help both reduce the risk of anthelmintic drug resistance in horses and to reduce the environmental toxicity of the drug excreted by the horse after

treatment," said Charlotte Sinclair, CVS Equine Development Lead

The new 'What's Your Worm Risk' risk calculator was co-created by CVS Equine and Professor Jacqui Matthews of Austin Davis Biologics.

Our learning: "The tool is underpinned by current research and recommendations," said Charlotte. "It calculates the likely level of risk based on widely accepted principles of equine

worm infections and, depending on horse-specific input, it will classify the risk of worm infection in an individual horse as low, moderate or high.”

The assessment tool looks at horse level factors - such as age and previous worm egg counts, along with management factors - such as field size, stocking density, dung removal, co-grazing with other animals and diagnostic testing.

It calculates the likely level of risk based on widely accepted principles of equine worm infections integrated with horse-specific input such as age and previous worm egg count results as well as management factors such as field size, pasture hygiene and co-grazing with other species.

Previously it has been recommended that all adult horses are treated in the winter for small redworms using moxidectin. If a horse is deemed 'low risk' then worming with anthelmintics (including the use of moxidectin in the autumn/winter) may be omitted. This then has the effect of reducing the overall use of moxidectin in the equine population.

The risk assessment tool has to date been used by CVS Equine practices during Autumn 2024 in over 2,000 cases.

Colleagues were engaged through a webinar for vets as well as more specific engagement for CVS' QI leads at every equine practice.

The focus was then on owners on CVS' Horse Health Plan and owners that were therefore committed to preventative healthcare for their horse.

How we did it: “By engaging the whole team we were successful in engaging clients. We have been really inspired by the way owners have engaged and wanted to make a difference. They have been guided by us but we have to

acknowledge it's a monumental shift for them,” said Charlotte.

This tool will support prescribers across our practices when considering wormer use and how to apply best practice parasite control.

To access the Worm Risk Assessment visit <https://www.whatsyourwormrisk.com/>

An update on our study of Equine Pastern Dermatitis

CVS Equine practices have undertaken a collaborative clinical study to gather further information about the clinical signs and aetiology of Equine Pastern Dermatitis.

It is expected that the results will help inform equine clinicians and owners how they can better treat and manage these cases in the future.

Equine Pastern Dermatitis (EPD) (also known as “mud fever”) is a common skin disease of the pasterns that can have several different underlying causes, including bacterial infection, parasite (mite) infestation, fungal infection (ringworm) and inflammation of the blood vessels in the skin (vasculitis). The disease can prove difficult to treat.

EPD is often associated with chronic wetting of the skin of the lower limbs from rain and mud. Cases tend to occur more often in winter, and on white rather than pigmented limbs. The most frequent clinical signs include redness of the skin, hair loss, crusting and oozing of serum. The lesions are painful, and some horses may show lameness on the affected limb(s).

Despite being a common disease, very little research has been undertaken into EPD in the UK. In addition, numerous different treatments are currently used for EPD, for which there is not always robust clinical evidence.

Involving 20 practices, starting in 2022 and continuing into early 2024, samples have been collected from over 70 cases from

horses that have been diagnosed by EPD throughout the UK.

Full blood profiles have been assessed, in addition to bacterial culture analysis of the lesions, PCR analysis for dermatophytes (ringworm fungi), microscopy for ectoparasites (mites) and skin cytology. An owner questionnaire has also been completed to gather information on EDP management, with supporting photographs taken. Each horse's lesions have been graded, and descriptive data relating to the lesions were recorded.

Data collection was completed in 2024. A full report comes next and a quality improvement project to implement the findings. This work is a great example of the synergy between research and quality

improvement and how one supports the other.

Charlotte Sinclair, CVS Equine Development Lead, said:

"We want to be able to offer the best treatment and management advice for horses suffering this condition. But research into this condition has been sparse, and the evidence-base for the range of treatments offered has been similarly lacking.

Our 20 practices are therefore collaborating on a two year project, which will see us review and analyse over 70 equine cases. We really hope that our work will lead to significant improvements in treatment and preventative healthcare for horses prone to this painful disease."





Companion Animal

Engaging our practices with projects to improve how we manage health conditions

We care: “Our aim throughout these clinical projects is to share training and support and encourage discussion and learning so that we can improve the confidence of our clinicians. This enables us to improve outcomes for our patients and alleviate suffering” said Lizzie McLennan-Green, Companion Animal Veterinary Director.

Our clinical improvement projects are run every year to improve the way we diagnose, treat and manage health conditions whilst supporting our aim to promote good antimicrobial stewardship. After first introducing these projects in 2020, we decided to bring a new offering in 2024, where practice teams could choose to participate in one or several of them.

How we did it: Each project was supported by clinicians with a special interest in that topic, alongside CPD and additional resources required to undertake the work. Practice teams chose which topic(s) they were interested in and were encouraged to design their own plan to implement the changes they identified were needed to improve.

Where data was collected to demonstrate progress, this was shared with the teams on a regular basis so they could reflect on if their changes had been effective. As teams were testing their ideas, they shared their learnings with the wider groups so all could benefit from their experience.

Case study: Antimicrobial stewardship project

How we did it: this was a clinician-led improvement project across 21 UK companion animal veterinary practices (19 first opinion practices, 1 out-of-hours provider and 1 mobile unit) that aimed to reduce use of 'Category B' critically important antibiotics (CIAs) through a clinician-led improvement intervention. A 12-month improvement project (October 2023 to September 2024) was undertaken in a region of practices. The project consisted of quarterly meetings with practice leads where changes implemented were shared and monthly CIA prescribing data was discussed. Sites were encouraged to review their CIA use but had autonomy of the interventions made locally. No targets for improvement were set.

The interventions varied between sites and developed over the 12-month period. Interventions included whole team discussions, removing drugs from pharmacies, using client education materials, and implementing visual triggers next to CIAs in pharmacies.

Our learning: The region's CIA prescribing significantly reduced from 1.43% to 1.06% of total consultations over the 12-months ($p < 0.001$). No decrease was demonstrated across the wider consolidated group (1.18% to 1.19%; $p = 0.34$).

Our 2024 Clinical Improvement Projects

Obstructive Airway Syndrome in Brachycephalic Patients

The aim was to improve the quality of life and alleviate suffering for patients with clinically significant obstructive airway syndrome focusing on accurate diagnosis, utilising a functional grading system, and recommendation for further investigation or treatment. We covered conservative,

medical, and surgical treatments, in-practice care of brachycephalic patients and client education surrounding the issues faced by these breeds.

Osteoarthritis Management

Osteoarthritis affects around 40% of dogs and cats of all ages and managing it proactively can significantly reduce suffering and slow its progression. This project used owner questionnaires to identify and monitor the impact of lameness on patients' quality of life. It highlights the significance of the entire clinical team in patient management, supporting vets and nurses to reach a diagnosis in every lame case, engage with owners and provide appropriate medication, surgical intervention, nursing care and physiotherapy to enhance the quality of care for lame patients. The project also aimed to develop and deliver nurse-led mobility clinics, which adopt a multifactorial approach to case management.

Cardiology

The goal of this project was to improve identification and treatment of cardiac disease in our patients and to provide exemplary support to the owners of these patients. Through training and support, we aim to improve vet confidence to work up heart murmurs, arrhythmias, and other heart disease symptoms, to perform echocardiography and to treat and monitor effectively. We also aimed to give nurses the confidence to run cardiology clinics in parallel to veterinary monitoring and treatment.

Diabetes Mellitus

Diabetes Mellitus (DM) is a common medical condition that affects around 0.26-1.33% of dogs and 0.43-1% of cats. Early identification of diabetic patients and prompt implementation of therapy,

along with close monitoring, are crucial to achieving the best possible outcomes, including potential remission. Concurrent diseases such as urinary tract infections and thyroid disease can also affect DM, so their identification and treatment are important for better control of the condition. The goal of this project is to improve clinical confidence in diagnosing, treating and monitoring diabetic patients, incorporating a diabetes clinical scoring tool.

Dermatology

Dermatological cases represent over 20% of all consultations in first opinion small animal practice in the UK, and pruritus is represented as one of the leading dermatological symptoms for many cases seeking veterinary care, particularly in canine companions. Diagnosis and management of pruritic skin disease can be frustrating for the veterinary team, the owner, and the patient. The aim is to bring together a systematic approach to pruritis cases, based on best available evidence to improve clinician confidence, patient outcomes, and client satisfaction.

Ophthalmology

The goal of this project was to develop the confidence and knowledge of the team in how to approach and manage eye cases, so each patient receives a full assessment of their ocular disease and the most informed clinical decision is made leading to appropriate treatment.

Feline Hypertension

The goal of this project was to enhance clinician and nurse confidence in performing blood pressure monitoring and increase awareness of patients who would benefit. The focus was to encourage teams to create and implement a system in their practice that allowed for better screening and monitoring of feline hypertension,

which enabled identification of potential health risks which could be managed proactively.

Dentistry

The aim of this project is to empower teams to confidently recommend and perform local anaesthesia in veterinary dentistry, providing the best possible standard of care and welfare for our patients.

Antimicrobial Stewardship

The aim of this project was to improve antimicrobial stewardship through focused CPD and reflection on practice-level antimicrobial prescribing guidelines and data-led patterns. There was a focus on three key conditions: cat bite abscesses, acute diarrhoea in dogs, and otitis externa, which are common drivers of inappropriate antimicrobial prescribing in small animal practice.



Using the Practice Standards Scheme to drive improvements

Every CVS practice is accredited through the Practice Standards Scheme (PSS) but why does that matter?

We care: “If we carefully analyse the reports from these rigorous four-yearly assessments it helps us to identify where action needs to be taken to improve clinical standards and initiate clinic-specific or group-wide improvements,” said Clinical Services Manager, Carlos Matos.

Here is some of what we have done.

Property Management

- When a property issue is identified, it is now dealt with through a structured approach that quickly ensures that repairs and maintenance are carried out.

Medicines Compliance and Management

- **Batch Number Recording:** Inconsistencies in batch number recording were identified, a critical legal requirement. Through targeted communication and training, practices have improved compliance, ensuring records are maintained accurately and consistently.
- **Provision of Summary of Product Characteristics (SPC), Datasheets, and Client Leaflets:** To enable clients

to be provided with easy access to information, QR codes have been integrated into medicines labels using our practice management system Provet. Clients can scan the QR code and access important product information.

- **Medicines Temperature Monitoring:** Temperature control in the practice remains a high-priority action nationwide and our colleagues are checking every day the locations where medicines are kept against the recommended minimum and maximum temperatures. We are exploring whether automated systems can simplify this task. We have them in some practices and we have updated our central Standard Operating Procedure (SOP) to reflect this. Ongoing evaluations aim to refine these processes further.
- **Controlled Drugs Compliance:** Legal adherence in controlled drug (CD) management has been reiterated by creating comprehensive resources for clinics. The CVS Annual controlled drug audit has been instrumental in pinpointing areas requiring targeted support, ensuring robust compliance across the organization.

- **VMR Changes:** The Veterinary Medicines Regulations (VMR) have been updated, for example with the “under care” guidance. We have made extensive use of different communication channels to brief practices and answer their questions so they they have adapted to updated requirements.

Sustainability

- **Waste Survey:** A waste survey was developed to encourage clinics to reflect on their practices and identify opportunities for improvement. This has facilitated actionable steps towards more sustainable waste management.
- **Guidance for PSS Sustainability Criteria:** As sustainability is a relatively new area of the PSS, clear guidance has been provided on our Practice Standards Hub on our Knowledge Hub platform to help clinics navigate and meet these standards effectively.

How we did it: “We go through every assessment report and record each outstanding item across our group, which allows us to identify trends. We then focus our efforts on the top three areas where actions are required to meet the standard. We also provide practices with individual support to help them meet the requirements,” said Carlos Matos Clinical Services Manager

“Addressing issues identified in the Practice Standards Scheme with a systems-thinking approach, has enhanced the standard of care in individual practices and the organisation as a whole. The PSS provides a helpful framework that we use to improve our processes to meet our legal obligations as well as a driver of continuous improvement.”



Implementing a new practice management system in six weeks

Following a cyber incident in 2024, a new cloud-based Provet practice management system was introduced into CVS practices at breakneck speed.

The Practice Management System is an essential part to our veterinary team's daily workflow and the priority throughout was the wellbeing of our colleagues, patients and clients.

We care: "Since it utilises one database, Provet Cloud enables broader and faster access to case records," said Graham Dodds, Director of Innovation.

"This will enable simpler internal referrals and drive collaboration across the Group, driving better clinical outcomes for our patients. Provet Cloud also works on tablets and mobile devices, so clinicians can access the system securely on the move or beside patients. Integration with internal and external laboratories and other diagnostic technologies will further aid our clinical teams, ensuring a single source of access to all clinical information.

Client reminders can be automated and bespoke, while online appointment booking, payments and other tasks have been made accessible to pet owners."

The implementation was supported with training and education as well as proactively seeking feedback from users, listening, and acting quickly to make improvements

How we did it: "A Provet Army of about 500 volunteers provided support on the ground following the 'go live' for each practice," said Veterinary Director Elizabeth McLennan-Green

"They in turn were supported by the implementation team and these Provet Champions were updated with weekly emails to share with their teams. We also listened carefully to problems during the rollout. Daily calls with management teams provided the topics that were causing the most difficulty. Listening and responding quickly to challenges, then retesting with our solutions in place provided the process needed to keep the rollout moving."

The aim of the training programme was to equip our veterinary teams with the skills that would enable them to continue to look after patients safely and serve clients effectively. It had to be accessible and had to give thousands of users the practical skills to navigate the system. Given the

time constraints, the roll-out team had to establish the minimum knowledge needed to use the system and a programme to share this knowledge.

The initial period of listening was followed by a series of surveys starting in June 2024 which showed that administrative colleagues (head receptionists, practice managers, practice directors) were generally more confident with the system than client-facing colleagues (receptionists, vets, nurses).

We then adapted to feedback. Given the project did not have a clear roadmap a focus was put on listening and responding quickly, retesting and moving forward. For example, the 'Go Live' training document was rewritten three times in response to what we heard.

There is now an extensive suite of training designed to support the ongoing learning needs of our colleagues which will continue to be adapted as we move through the more advanced stages of implementation.

Our learnings: "The outcome of this activity was that over two thirds of the estate were migrated to Provet in six weeks. There were, of course, learnings

including the amount of focus needed for challenges that arose, including printing labels in practice which led to difficulties in the first two weeks of rollout," said Elizabeth.

"We also learned to actively watch out for factors that affected patient safety. The rollout was suspended for a period of time when a higher occurrence of medication errors were reported via VetSafe. We took this very seriously and resolved the issue before work resumed.

More resource could also have been focused on helping colleagues manage their mistakes. For example, helping them with how to 'unarrive' an accidentally arrived patient or how to 'undecease' a pet accidentally marked as deceased."

Alongside the central Clinical business systems team there is a six strong Provet operation support (POSM) team who are in the field to support practices as they migrate through the next phases. We continue to act on the feedback from our colleagues, who are using ProVet every day, to develop and evolve how we use ProVet to help us learn and give care to our patients and clients.



2024 RCVS Knowledge Award Winners

We encourage our colleagues to apply for the RCVS Knowledge QI Awards to recognise and celebrate the incredible work they had already achieved. It is a chance to showcase their dedication, creativity, and impact — and to ensure their successes were shared with the profession. Here are the teams who were recognised.

Champions

Antimicrobial Stewardship

The Award winner is CVS South 4 Region.

- **CVS South 4 Region** used 'Plan, Prevent, Protect' to devise strategies to reduce antibiotic use, including team training and guidance documents. The team achieved an impressive 70% reduction in the use of long-acting antibiotics in the treatment of bite wounds and superficial skin infections in cats, without compromising patient welfare. This improved their overall responsible use of Highest Priority, Critically Important Antibiotics (HPCIA), achieving a 65% reduction in their average use.

Quality Improvement

The Award winners are Group Hub Clinical Leadership Team (CVS UK Ltd), White Lodge Veterinary Surgery and Yorkshire Vets.

- **Group Hub Clinical Leadership Team, CVS (UK) Ltd** For carrying out a clinical audit into blood pressure in cats on a national scale. The team created a wide range of guidance documents and provided team training. The nationwide initiative led to an increase in blood pressure monitoring, enabling earlier identification and treatment of hypertension in cats aged 7 years or older.
- **White Lodge Veterinary Surgery** Picking up an RCVS Knowledge Award for the second year in a row after winning an Antimicrobial Stewardship Award in 2023, the team looked at pain-scoring in bitch spays. Team training and updating pain management protocols enabled them to both improve their pain scores

and reduce the number of dogs requiring rescue analgesia to just 10% of patients.

Highly Commended

Antimicrobial Stewardship

- **Orchard Veterinary Surgery** for their clinical audit to identify where improvements could be made to their responsible use of antibiotics, and introduction of Antibiotic Rounds discussing cases where antibiotics had been prescribed. The team developed strategies based on 'Plan, Prevent, Protect' to responsibly reduce the use of Highest-Priority, Critically-Important Antimicrobials (HPCIA), resulting in a 76.6% reduction in HPCIA use

Quality Improvement

- **Francesca Pritchard (nee Beorby)** from Putlands Veterinary Surgery for her audit on hypotension in dogs and cats under general anaesthesia. Sharing and discussing the baseline data as a team led to a new pre-medication protocol and a second audit to assess the outcome showed a reduction in the number of patients becoming hypotensive.

One to Watch

Antimicrobial Stewardship

- **CVS Equine** for their audit across a number of practices within the group to assess their antibiotic use in equine first-opinion practice. The baseline data they collected allowed the team to quantify the type and frequency of antibiotics that were prescribed to raise awareness of responsible antibiotic use.

Quality Improvement

- **Integrated Care Council, CVS**, for the development of an organisational clinical governance framework. The framework was designed to identify what matters to frontline teams and provide support and guidance for improvement activities.

