



Part 5

Infection Control

Auditing

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RCVS Knowledge's mission is to advance the quality of veterinary care for the benefit of animals, the public, and society.

We meet this mission by championing the use of an evidence-based approach to veterinary medicine, inspiring a culture of continuous quality improvement in practice, and making our resources available to the profession and wider public.

We are a separate organisation to RCVS.

www.rcvsknowledge.org



Part 1
**Infection control and
biosecurity during COVID-19**

Alan Radford BVSc BSc PhD MRCVS
Tim Nuttall BVSc BSc CertVD PhDCBIol MRSB MRCVS
Pam Mosedale BVetMed MRCVS




Part 2
**Infection control
Organisms of concern &
modes of transmission**

Dr Tim Nuttall BVSc BSc CertVD PhD CBiol MRSB MRCVS
Pam Mosedale BVetMed MRCVS



Part 3
**Infection Prevention and
control policies and
procedures in routine practice**

Liz Branscombe DipAVN(Surgical) RVN
Pam Mosedale BVetMed MRCVS



Part 4
**Infection control
Disinfectant types**

Sairéad Wild RVN
Pam Mosedale BVetMed MRCVS

Infection control and biosecurity: Auditing infection control measures

Pam Mosedale BVetMed MRCVS

Chair RCVS Knowledge QI Advisory Board

Clinical Advisor Bella Moss

Lead Assessor RCVS Practice Standards Scheme

Session will cover

- What is audit & how can it be useful in infection control
- Auditing cleaning protocols
- Auditing hand hygiene
- Surveillance
- Audit of post operative complications
- Benchmarking
- Significant events in infection control
- Audit of AMR

What is quality improvement ?

Quality Improvement (QI) is, "the combined and unceasing efforts of everyone...to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning)"¹

Batalden PB and Davidoff F. 2007. What is "quality improvement" and how can it transform healthcare? *BMJ Quality & Safety* 16:2-3

Quality Improvement tools

- Guidelines & protocols
- Checklists
- Clinical audit
- Benchmarking
- Significant event auditing

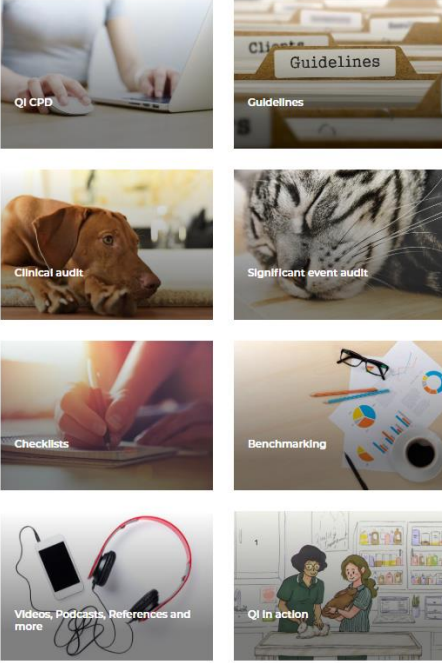
Home / Quality Improvement / Resources

Resources

We've been working with our Quality Improvement Advisory Board to develop resources for busy veterinary teams to make a start with continuous quality improvement in their practice.

We hope that these tools, which include courses, guides and case examples, will help veterinary teams to embed evidence-based veterinary medicine into an afternoon's consultation in a manner that supplements and supports clinical decision making.

We are constantly adding more resources. If you would like to stay up-to-date with new tools as they become available, please [let us know](#).



QI CPD

Guidelines

Clinical audit

Significant event audit

Checklists

Benchmarking

Videos, Podcasts, References and more

QI in action

What is clinical audit ?

A process for monitoring and assessing clinical care with the view to identify and action areas for improvement.

Clinical audits allow for a collection of data in a specific area of your practice.

Understanding the performance of your practice is critical

If you don't measure it, you don't know what needs to improve.

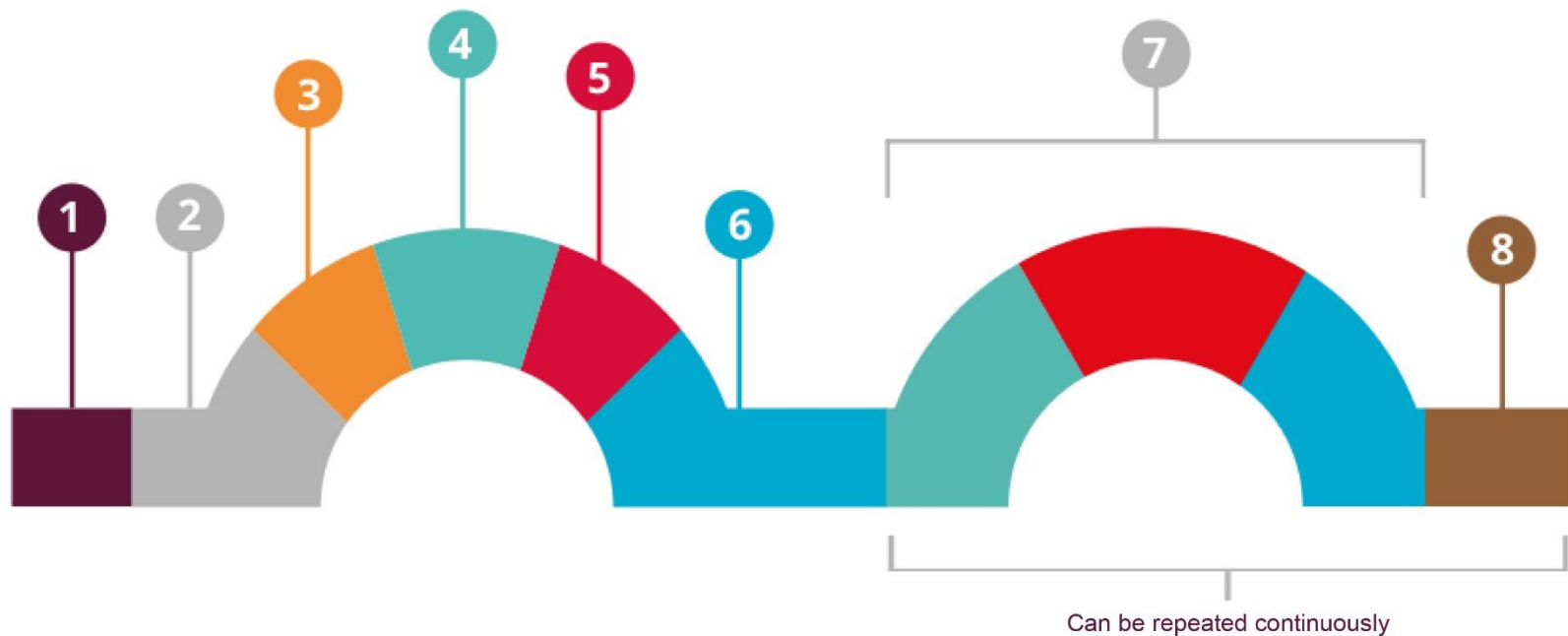
Clinical audit can assess many areas, such as process, outcome and performance.

How is audit relevant to infection control?

- Provides real data for the practice about areas where infection control is working well and areas that need improving
- Improves biosecurity, outcomes & patient & team safety
- Encourages the incorporation of **EBVM** into practice



The Veterinary Clinical Audit Cycle



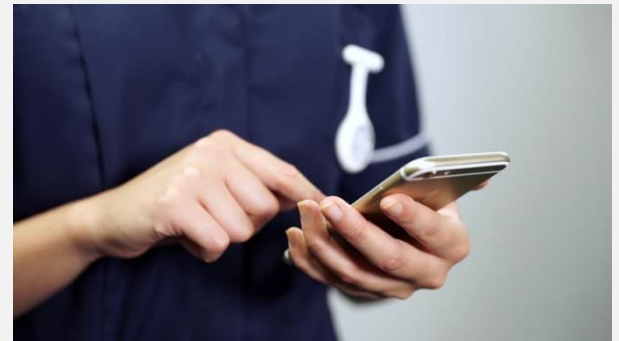
- 1 Choose a topic
- 2 Select criteria
- 3 Set a target

- 4 Collect data
- 5 Analyse the data
- 6 Implement change

- 7 Reaudit (repeat steps 4, 5, 6)
- 8 Review and reflect

Auditing Cleaning protocols / Checklists

- Protocols
- Checklists - laminated
- Audited



Bella Moss self audit tool

- All areas of practice
- Scored
- Overall hygiene score



www.thebellamossfoundation.com/practice-hygiene-self-audit/

Infection Control Guideline App



Download App

Hand hygiene audit – By observation of team members

Thanks to VetsNow Glasgow & Gillian White RVN

Key moments

- before patient contact
- after patient contact
- before aseptic task
- after exposure to bodily fluids
- after exposure to patient surroundings





Hand hygiene Audit Complied – Yes / No

Reasons for non compliance

- Jewellery watches not removed
- Sleeves not rolled up
- Soap applied before hands wet
- Insufficient time spent on hand washing
- Hand gel used when hands should have been washed
- Taps turned off with hands rather than elbows
- Hands not washed after gloves removed
- Bin operated by hand when disposing of towels

Results

January-March: 81% average

April-June: 80% average

July- September: 72% average

July – September

Hospital refurbishment

Actions

- WHO hand washing signage at sinks and hand washing stations
- Water and soap dispensers automatic - reducing contamination from touching taps and pumps
- More pedal bins
- More access to antibacterial hand rub (Sterilium®)

Re audit results

- October – December 75%

Client reassurance

Hand hygiene

Spire Regency audits hand hygiene compliance quarterly.



In quarter 3 2019 we scored 95%.



Spire
Regency Hospital

Active surveillance

Monitor efficacy of environmental cleaning:

- Swab cultures
- Surface hygiene monitoring with Adenosine tri-phosphate (ATP) monitor to detect residue of organic material
- Fluorescent markers

See Infection control 3

Passive Surveillance

1. Audit surgical site infections
2. Audit post discharge complications
3. Monitor antimicrobial use and patterns
4. Monitor results of bacterial culture testing & antimicrobial sensitivity testing

Audit of post operative complications of routine neutering procedures

Group 0: Lost to follow-up (when follow-up was expected)

Group 1: No complication reported

Group 2: Complications noted but no treatment required

Group 3: Complications noted but only medical treatment was required

Group 4: Complications noted and surgical treatment was required

Group 5: The animal died

National Audit for Small Animal Neutering

Post-operative complication rates in feline, canine and rabbit neutering

- More than 15% of all cases (n=36,301) suffered an abnormality related to the operation, with around half of these requiring medical treatment or surgical intervention
- 75% of neuters were complication-free.
- In cats and dogs, spays suffered a higher incidence of complications than castrates. However, the reverse was seen in rabbits
- Spayed and castrated cats suffered fewer complications than dogs.
- Thirty-five animals died as a result of a neutering procedure, including one rabbit.
- In dog spays, at least 25% of operations resulted in some form of complication (including fatality).
- Over 3,000 cases were lost to follow-up.

RCVS Knowledge. (2019). *Latest neutering complications released*. Available: <https://knowledge.rcvs.org.uk/news-and-events/news/latest-neutering-complication-rates-released/>. Last accessed 14th April 2020.

Comparing results to Benchmark

	Branch 1	Branch 2	Branch 3	Benchmark
No abnormality	77.4 %	72%	78%	82%
Abnormal no treatment	11.5%	12.8 %	10.4%	9.5%
Abnormal medical treatment	10.5%	14%	11.6%	7.5%
Abnormal surgical treatment	0.6%	1.2%	0%	1%
Death of animal	0 %	0%	0%	0.1%

Other case examples

– Knowledge Award 2020 Champion Auditing post operative complication –

- Louise Northway: assessing hygiene & post op care guidelines cut complications by half

– Knowledge Award 2020 Champion practice hygiene audit –

- Vale Vets: hygiene audit by questionnaire & self assessment

Client reassurance - Informed consent

Surgical site infection

Nationally, approximately 5% of all patients who undergo surgical procedures develop a surgical site infection.

In November 2019, our Surgical Site Infection rate was 0.9%.



Spire
Regency Hospital

Significant Event Audit

A significant event is an event thought by anyone in the team to be significant in the care of patients or the conduct of the practice

Michael Pringle Professor of General Practice, University of Nottingham

Qualitative rather than quantitative form of audit - still needs a **structured framework**

An opportunity to learn from a single event

SEA: What happened?

“Barney” crossbreed – had a non-healing wound following orthopaedic procedure. The wound was swabbed but the first swab was never sent to the lab. When it was swabbed again MRSP was cultured.

Over the next few weeks there were 4 more cases of MRSP in animals that had been in patients at the practice.



SEA: Gather the information and the team to discuss in a meeting

Meeting - non-threatening, open, fair & honest,

not to apportion blame,

but to encourage reflection & improvement

Looking at practice systems & procedures rather than individuals

SEA: What happened?

First swab not labelled, left in fridge & not recorded in lab book. No one realised it had not been sent off until owners rang for result.

Barney kept in as could not keep dressing on at home - before results received for second swab staff were unaware of the MRSP; the practice was very busy so he was moved between at least 3 different kennels

Once result received it was not communicated to nursing assistants for another 24 hours.

No label on kennel re isolation or hygiene precautions to start with until moved to isolation.

No one was sure exactly which kennels Barney had been in.

SEA: Why did it happen?

Poor communication between Vets, RVN & Kennel assistants

No labelling for isolation / hygiene precautions

No lab log to follow lab samples through system & alert vet that results had arrived (or been lost)

No kennel log to know which kennels Barney had been in

No protocols for handling or nursing MRSP cases

No one responsible for infection control in the practice & team training

Biosecurity policy not updated & not known to most team members

Significant Event Audit may lead to...

Identifying **CPD / Training** needs

Writing new **guidelines / protocols**

Modifying existing **guidelines / protocols**

Undertaking further **audits**



SEA is about addressing systems, not about blaming individuals. It helps ensure negative outcomes don't reoccur, and positive outcomes do!

What has been changed?

Hygiene protocols & practice biosecurity policy updated

Infection control group or individual

Team training on biosecurity

Culture & sensitivity of all samples sent away by practice monitored, including audit of AMR in practice culture results

Audit of routine neutering procedures

Practice antibiotic prescribing policy reviewed regularly

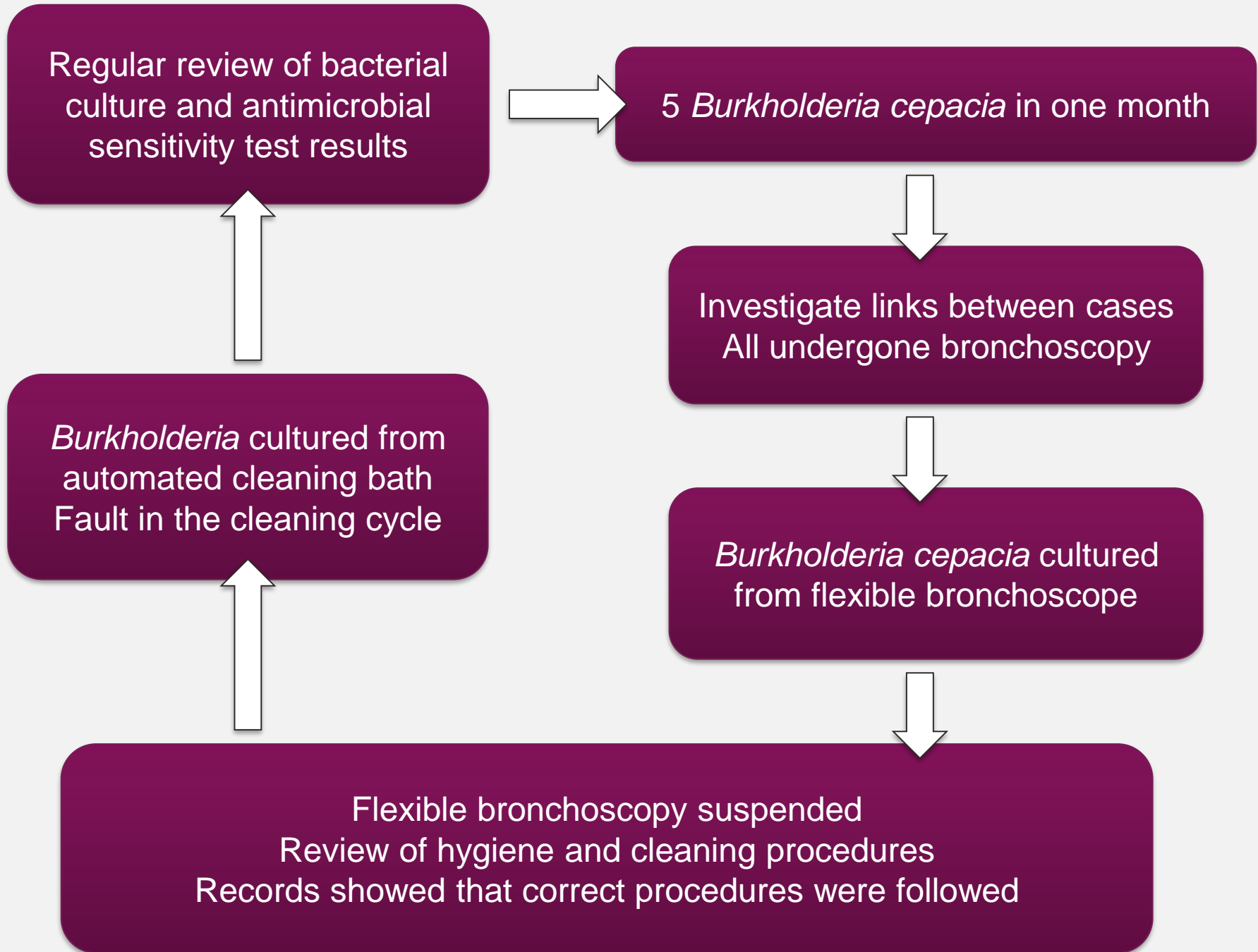
A kennel log started

A lab log started

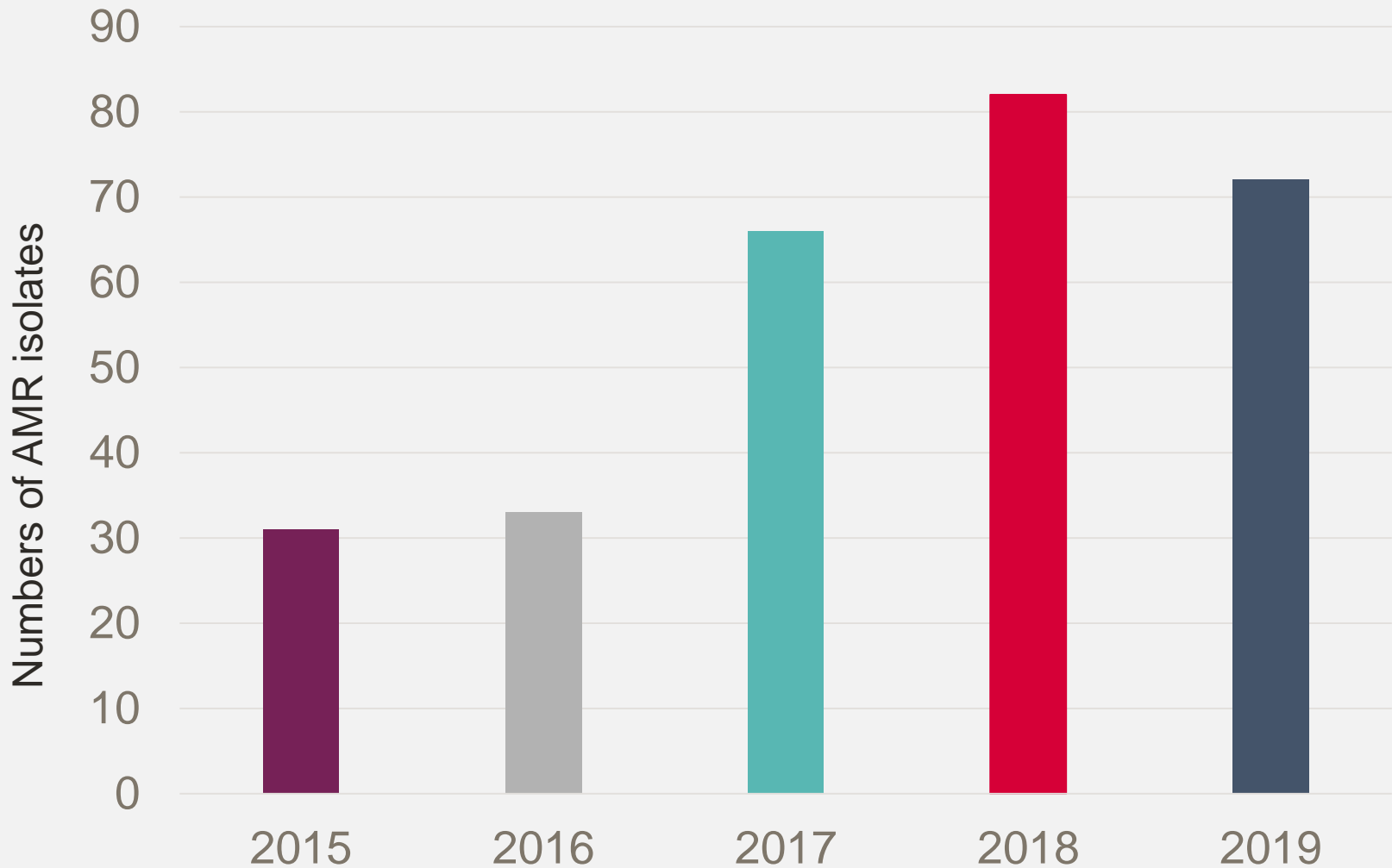
Cleaning schedules regularly audited

Passive Surveillance

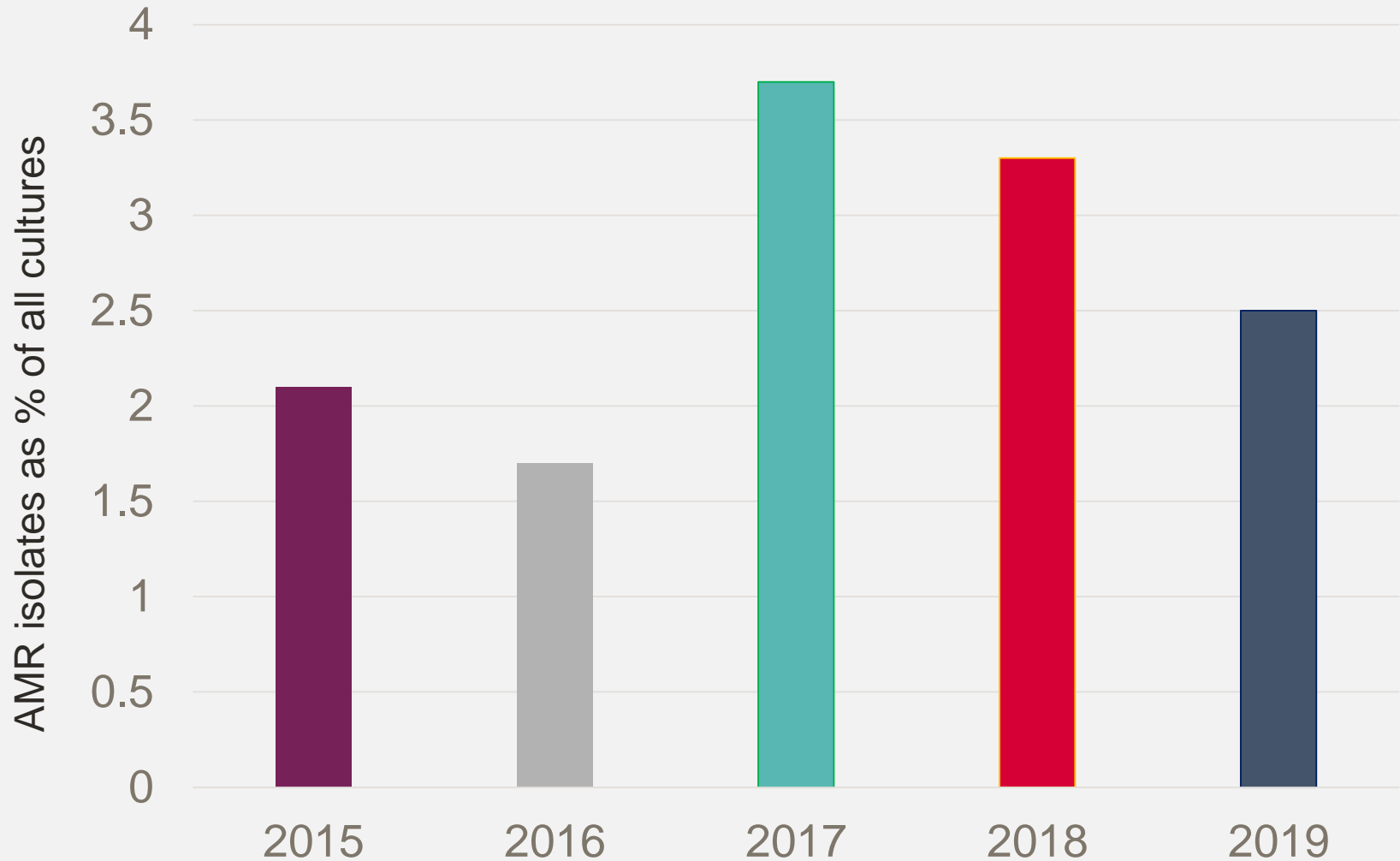
1. Audit surgical site infections
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AMR bacteria isolated in 2015-2019

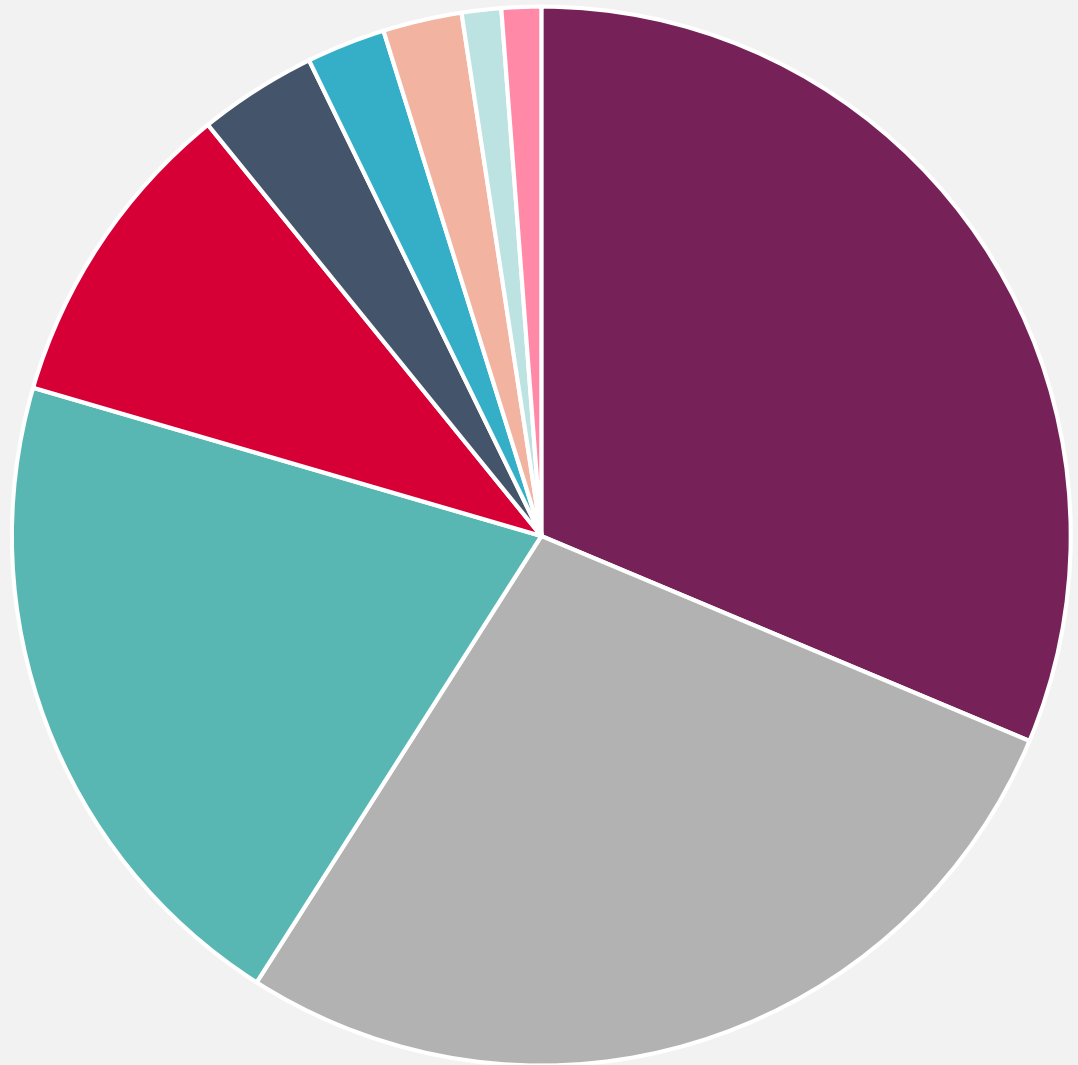


% AMR bacteria isolated in 2015-2019



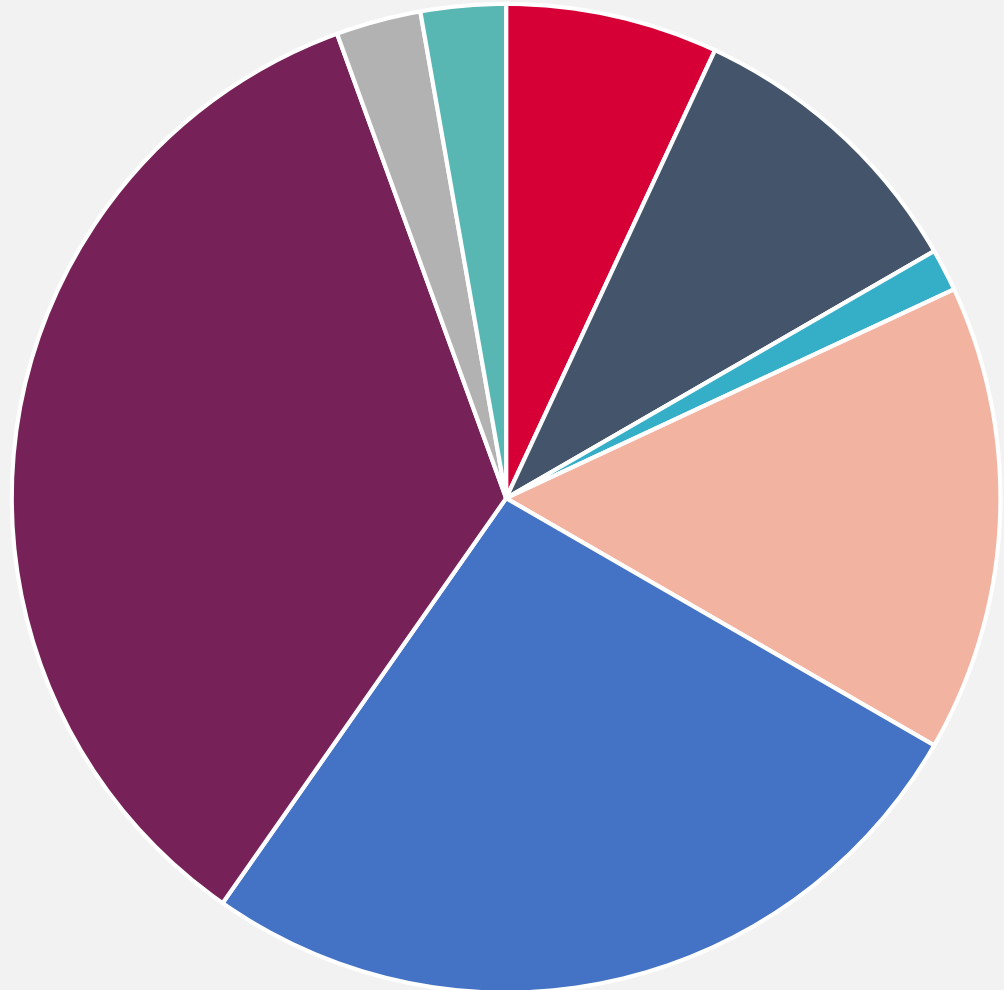
Where are the infections?

- Urine
- Wound
- Skin/ear
- Respiratory
- O-tube
- Bile
- GIT
- Peritoneal
- Blood



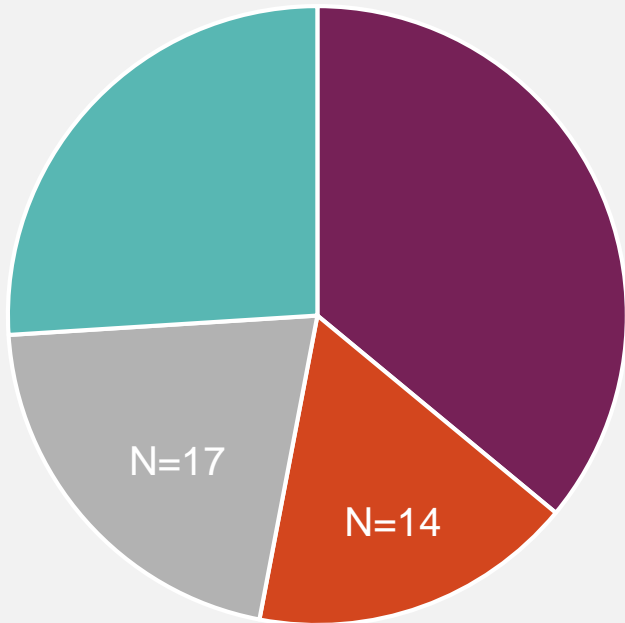
What are there?

- MRSA
- MRSP
- MRSS
- MRSE
- ESBL
- AmpC
- Morganella
- Other



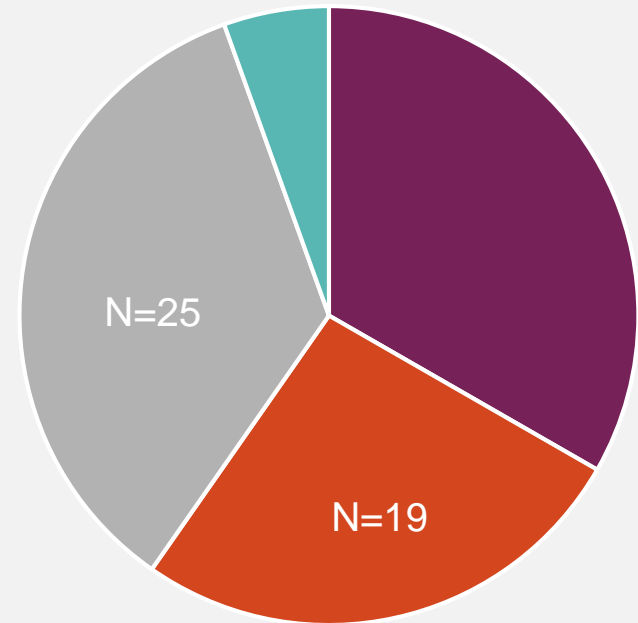
ESBL & AmpC Gram negative bacteria are more prevalent

2018



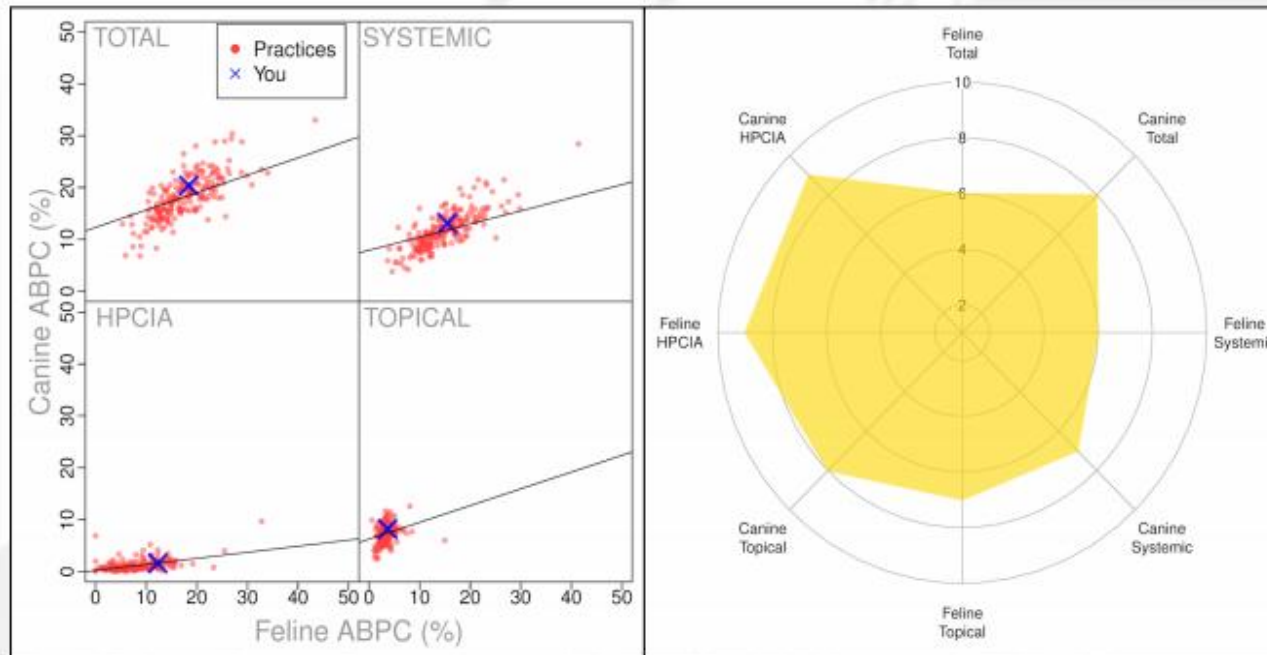
■ MR Staphylococci ■ ESBL ■ AmpC ■ Other

2019



■ MR staphylococci ■ ESBL ■ AmpC ■ Other

How frequently do you prescribe antibiotics?



The graph above left displays the percentage of canine and feline consultations where at least one antibiotic was prescribed (ABPC) by your practice (blue cross), compared with every other practice that has submitted data (red points). We have summarised antibiotics prescribed based on route of administration (systemic, topical) and 'HPCIA', otherwise known as 'highest priority critically important antibiotics'. If you would like to know more about HPCIA's please refer to the box below.

The graph above right displays your antibiotic prescription frequency for dogs and



Thank you

Access the entire infection control webinar series at

www.rcvsknowledge.org/qi/infection-control

Questions? Email: ebvm@rcvsknowledge.org