

## Protocol for responsible use of antibiotics

This SOP is intended to ensure that for commonly encountered conditions, appropriate antibiotics and anthelmintics are prescribed considering the current evidence base, and to ensure that highest priority critically important antibiotics (HP-CIA) are only used in exceptional circumstances where there is explicit justification for doing so.

This SOP is relevant to all clinic staff involved in prescribing, dispensing, administering, and monitoring the use of antibiotics in animals.

### Responsibilities:

1. The veterinary surgeons are responsible for prescribing antibiotics and anthelmintics in accordance with the diagnosis (suspected or confirmed) and treatment plan.
2. The RVNs and are responsible for administering antibiotics and anthelmintics as prescribed by the veterinary surgeon.
3. All veterinary staff are responsible for monitoring the animals receiving treatment for any adverse effects or signs of ineffective treatment.
4. Veterinary surgeons responsible for prescribing antibiotics should familiarise themselves with and consult as necessary the 'PROTECT ME' poster principles published by the BSAVA, which are displayed in the dispensary.

### General Principles

#### Antibiotic and Anthelmintic selection and prescription:

- Antibiotics should only be prescribed by veterinary surgeons and only when necessary to treat bacterial infections, or to prevent infection in high-risk situations (for example: peri-operatively where appropriate, or in cases of parvovirus).
- The veterinary surgeon should select antibiotics based on the susceptibility of the bacteria involved, taking into consideration the potential for resistance development.
- Antibiotics should be prescribed at the appropriate dose and duration to achieve effective treatment and minimise the risk of resistance development.
- The use of HP-CIAs should be strictly restricted to cases where no other effective treatment options are available, based on certified culture and sensitivity results from a laboratory, and in consultation with other veterinary colleagues/senior vets with reference to the separate 'Use of HP-CIAs' policy (below).
- The use of anthelmintics should ideally be based on the results of faecal or blood tests to confirm the presence of parasites, however, exceptions are made for 'preventative anthelmintic treatments' which are listed in a later section of this policy.

#### Monitoring response to treatment:

- Both veterinary surgeons and RVNs should monitor animals receiving antibiotics for any adverse effects or signs of ineffective treatment.
- All clinic staff should communicate with the veterinary surgeon if there are concerns regarding any failure to respond to antibiotic treatment.

# STANDARD OPERATING PROCEDURE



- Where there is concern that treatment failure has occurred following antibiotic or anthelmintic treatment a veterinary surgeon should evaluate the case and if appropriate repeat culture and sensitivity testing.
- Adverse reactions should be logged on AIM by adding a 'diagnosis' to the patient file of 'adverse reaction'. These can then be identified using AIM reporting as part of a routine clinical audit.

## Escalation and de-escalation of treatment

- Ideally, treatment should not be started until the results of bacterial cultures and antimicrobial sensitivity tests are available.
- If immediate treatment is necessary, the selection of an appropriate drug should be based on clinical signs and cytology, bearing in mind the most likely organisms and their likely antimicrobial sensitivity patterns in each case.
- When culture results become available clinicians should be prepared to escalate treatment by selecting a higher-tier drug, or de-escalate treatment to a lower-tier drug, as indicated.

## Guidance for commonly encountered conditions

### Otitis externa:

- Swabs to be taken for in house cytology.
- Any sign of bacterial infection should warrant treatment with appropriate first-line antibiotics, or culture and sensitivity testing depending on clinical presentation.
- Treatment should be topical only, good first line drugs include; **polymixin B, fusidic acid, gentamicin.**
- If there is presence of rod-shaped bacteria on cytology, then swabs MUST be taken for culture and sensitivity testing before starting any topical antimicrobial therapy.

### Skin infections/pyoderma:

- Surface pyoderma
  - Topical treatment only; **chlorhexidine, fusidic acid +/- glucocorticoid.**
- Superficial pyoderma
  - Swabs to be taken for in house cytology.
  - Topical treatment only is appropriate but could consider the first-line antibiotics; **clindamycin, cephalexin, amoxicillin/clavulanate.**
  - Culture if rods on cytology or if history of MRSP.
  - Dose at top end of range for better skin penetration.
- Deep pyoderma
  - Culture and sensitivity necessary, initially systemic treatment based on cytology for superficial pyoderma.

### Gastroenteritis/diarrhoea:

- Antibiotics are NOT indicated for:
  - Acute vomiting
  - Acute diarrhoea (unless suspected parvovirus or systemic signs indicating risk of sepsis).
  - Pancreatitis
  - *Most* Campylobacter and Salmonella infections

# STANDARD OPERATING PROCEDURE



- Chronic diarrhoea (unless as part of treatment trial having ruled out other causes).
- For suspected Parvovirus; **amoxicillin/clavulanate, cephalixin, metronidazole**
- When considering antibiotic trial for chronic enteropathy – perform appropriate diagnostics and consider other treatments including *Giardia* treatment, dietary change or prednisolone trial. Antibacterial treatment that could be consider includes **metronidazole**, if used should not exceed 3-4 weeks.

## Respiratory issues/Kennel Cough:

- Kennel Cough and Cat Flu
  - Consult separate protocol/guidance in clinic manual on shared drive
  - ONLY consider antibiotics if clinical signs present >10days and/or the animal is systemically unwell. Consider **amoxicillin/clavulanate** in first instance, **doxycycline** as second line option.
  - **Cefovecin** (Convenia) is NOT to be used for respiratory conditions, in particular cat flu (unless the animal is systemically unwell and only when strictly necessary following culture and sensitivity where proven that other therapeutics would be ineffective).

## Urinary Tract Infections:

- Culture and sensitivity strongly advised in all suspected cases, and necessary in any recurrent or persistent canine/feline urinary tract infections.
- First-line treatments include; **amoxicillin +/- clavulanate, trimethoprim/sulphonamide.**

## Surgery:

- NOT indicated for clean surgical procedures
- Perioperative antibiotics are appropriate for:
  - Prolonged clean surgery (>90mins) or surgery involving an implant.
  - Surgery involving entry into a hollow viscus (e.g. intestinal or urinary tracts).
  - Obvious breaks in asepsis causing contamination of the wound.
  - Debilitated or immunosuppressed patients.
- Appropriate drugs to consider include; **amoxicillin/clavulanate, cefuroxime, cephalixin.**
- Where there is a known or strongly suspected infection (e.g. revision of a wound breakdown) then culture and sensitivity must be performed.

## Use of Highest Priority Critically Important Antibiotics (HP-CIAs)

At Battersea we recognise the importance of preserving the efficacy of antibiotics, particularly those identified as critically important for the treatment of human disease. The European Medicines Agency's (EMA's) list of Highest Priority Critically Important Antibiotics (HP CIAs) has been identified because of degree of risk to human health should antimicrobial resistance develop after use in animals. At present, the list consists of fluoroquinolones (**enrofloxacin, marbofloxacin, pradofloxacin, ciprofloxacin**), 3rd and 4th generation cephalosporins (**cefovecin**), and **colistin**.

- HP-CIAs will only be used as a last resort when no other effective antibiotic options are available.
- Before prescribing HP-CIAs, veterinary surgeons MUST perform culture and sensitivity testing to confirm the need for their use.
  - If URGENT treatment with HP-CIAs is required, samples for culture must be taken and submitted prior to starting these agents, and then therapy adapted following results.

# STANDARD OPERATING PROCEDURE



- We will maintain accurate records of all HP-CIAs prescribed, including the dose, duration, and reason for use.
- We will regularly review our use of antibiotics, including HP-CIAs, to ensure we are following best practices and minimising the risk of antimicrobial resistance.

## **Other relevant information and/or SOPs**

- PROTECT ME principles – BSAVA
- World Health Organisation
- OIE – strategy on antimicrobial resistance and prudent use of antimicrobials
- UK Gov '5-year strategy for AMR'
- NOAH information on AMR

## **Month and Year**

Written by HF – Feb 2023.