Rationalizing antibacterials

Fergus Allerton, of the Willows Veterinary Centre and Referral Service, introduces the new PROTECT poster, launched to coincide with World Antibiotic Awareness Week (12–18 November).

Amid increasingly apocalyptic warnings as to the threat posed by antimicrobial resistance (AMR), it is disconcerting that >30% of antibacterial prescriptions by doctors are deemed unnecessary.¹ Antibacterial use (both appropriate and inappropriate) imposes a powerful selection pressure on bacteria and is the primary driver of antibacterial resistance. Eliminating unnecessary use in people and animals is, therefore, essential to safeguard this invaluable resource.

Antibacterial stewardship

A key component in the fight against AMR is the adoption of antibacterial stewardship initiatives in both human and animal healthcare. These schemes encourage responsible use of antibacterials and have been shown to decrease antibacterial prescription rates in hospitals without negative effects on patient outcome.² Within the veterinary sector, the 'Responsible Use of Medicines in Agriculture (RUMA) Alliance' has successfully documented dramatic reductions in total and highest priority critically

important antibacterial (HPCIA) use: a feat that was recognized by Public Health England at its annual awards in June this year.

Several initiatives have been developed with a focus on antibacterial use in cats and dogs including Ceva's GRAM book, Bayer's Diagnosing Infections guide and the Federation of Companion Animal Veterinary Association's (FECAVA) recommendations. PROTECT was first launched in 2012 as a joint initiative by SAMSoc (the Small Animal Medicine Society) and the BSAVA. The poster promoted the creation of a practice-specific policy for empirical antibacterial use and suggested suitable antibacterials for the most commonly encountered infectious conditions. BSAVA PROTECT remains the most frequently cited resource for compiling practice antibacterial policies in the UK³ and has been translated into multiple languages for distribution around the world.

Poster updates

The redesigned poster has several new features and is supported by a concurrently-launched non-prescription form (details below). The poster revision has been possible thanks to the conscientious input from more than 30 veterinarians from academia, government agencies, industry and private practice. The recommendations reflect the latest literature on antibacterial use as well as consensus statements from ACVIM and ISCAID. Each section represents several months of careful deliberation by dedicated groups of first-opinion practitioners and specialists from the relevant disciplines. Nevertheless, it is important to recognize the paucity of high quality data pertaining to antibacterial use in small animal patients; some questions concerning therapy duration or the optimal first-line antibacterial can only be answered on the basis of expert opinion.

The addition of ME to the acronym

Among the many changes to the poster, the acronym has been extended with the addition of two letters to PROTECT ME – mirroring BEVA's equine equivalent scheme. The newly introduced **M** stands for Monitor and the **E** relates to Education. Tracking your antibacterial use helps gauge habits within your practice and can facilitate assessment of any changes

Follicular conjunctivitis in a 10-year-old Jack Russell Terrier.

A 4-year-old Domestic Shorthair cat with bilateral caudal ulcerative stomatitis.
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in policy. Target antibacterial prescription rates cannot be easily defined; however, by using a national benchmarking scheme (such as the free service My Savsnet AMR), comparison of your antibacterial use with veterinary practices across the country is possible. Monitoring culture results so that the bacteria most frequently cultured by your practice can be identified, is also advocated. Future studies will look to evaluate any correlation between levels of antibacterial use, patient outcome and incidence of multi-resistant infections.

When not to prescribe

An important aspect of PROTECT ME is to highlight situations where antibacterial use is not indicated. Data from UK practices suggest that antibacterials are prescribed in nearly 50% of first visits for acute diarrhoea, 20% of first consultations for acute vomiting and more than 40% and 50% of consultations for respiratory disease and pruritus, respectively.⁴ Given the prevalence of these clinical signs, it is likely that these consultations account for the majority of antibacterial use in veterinary practice. Consequently, this is where the greatest reduction in antibacterial use could be achieved. Hopefully, the PROTECT ME poster will act as a reminder to carefully consider the requirement for antibacterials prior to their use and will discourage unnecessary administration.

What to prescribe

An advantage of empirical decision-making is that patients can quickly receive therapy but there is no substitute for performing cultures. A new 'culture icon' has been included in the poster to emphasize those conditions where culture is critical to guide antibacterial therapy. Culture results can also facilitate de-escalation and transition to narrower-spectrum antibacterials.

The World Health Organization (WHO) and European Medicines Agency (EMA) have devised classification systems for antibacterial medications in terms of their importance to human health. The HPClAs, a group which includes fluoroquinolones and third generation cephalosporins (e.g. cefovecin), should be used ONLY where there are no alternatives or where the response to alternatives is expected to be poor. It is important to remember that PROTECT ME is an advisory poster. Other countries in Europe (France and Germany) have recently introduced a legislation

limiting the use of HPClAs without supportive culture results. It remains to be seen if a legally-restrictive approach is more effective (in terms of animal health and antibacterial use metrics) than a persuasive approach.

A further reason to avoid unnecessary antibacterial usage is the potential for side effects. A table of important adverse effects has been included and introduces specific at-risk groups for some well-recognized adverse events. When selecting any treatment, the potential for negative consequences must be carefully weighed against the anticipated benefit and the choice adapted accordingly.

QR codes and Antibiotic Guardians

This year we have also included QR (Quick Response) codes for each section. Scanning the QR code with your smartphone, using one of the many free QR code reader apps that are available, will direct you to specific pages in the BSAVA Library providing extra details about the antibacterial recommendations on the poster. These pages, together with other supporting material, can be found at www.bsavalibrary.com/PROTECTME.

The poster now also includes a box to nominate a practice Antibiotic Guardian (terminology to match the national antibiotic guardian scheme). By making a public commitment to certain behaviours, it becomes more likely that these will be followed through; we encourage everyone to visit the antibioticguardian.com website and make an appropriate pledge. The role of the practice Antibiotic Guardian is to establish the practice's antibacterial policy using the recommendations from PROTECT ME (tick the preferred boxes), to monitor its implementation and how well the policy is observed by practice members, and to adapt the practice approach accordingly.

The non-prescription pad

Alongside the PROTECT ME poster, a pad of non-prescription forms is also being launched. This form can be presented to the client at the end of the consultation to support a decision not to provide antibacterial medication. Doctors and vets

often report a perceived pressure from patients/clients to prescribe antibacterials while, conversely, some owners feel that unnecessary prescription is driven by the veterinarian.⁵ Delayed and non-prescribing strategies have been evaluated in human healthcare with findings suggesting they reduce antibacterial use.^{6,7} The non-prescription form will also help inform owners as to the importance of appropriate use and improve AMR literacy. An example of the form is enclosed with this issue and a PDF is freely available via www.bsavalibrary.com/PROTECTME. A limited number of printed pads are available on request – send your name, address and membership number to **PROTECTME@bsava.com** during November to claim your FREE pad. Copies will then be available from the BSAVA shop.

It often seems easier to recommend withholding antibacterial medication for someone else's case. Applying the same objectivity to our own patients and avoiding defensive prescribing of unnecessary antibacterials may help preserve the efficacy of existing medications. It is hoped that the revised PROTECT ME guidelines can help achieve two important objectives, namely a reduction in overall antibacterial use and improved antibacterial use while optimizing the outcome for dogs and cats in our care. ■

A NOTE ON TERMINOLOGY

Does antibacterial = antimicrobial = antibiotic?

There are subtle but important differences in these terms principally relating to their spectrums of activity (target microorganisms). The word antibacterial indicates a medicine used to treat infections of bacterial origin. However, in everyday vernacular the term antibiotic (a medication with activity against bacteria, fungi and parasites) is more familiar and has been incorporated into the non-prescription pad and the Antibiotic Guardian section.

Your complimentary copy of the poster and sample non-prescription sheet are included with this edition of *Companion*. Please send any enquiries to **PROTECTME@bsava.com** or visit www.bsavalibrary.com/PROTECTME

References and further reading are available at www.bsavalibrary.com and in *e-Companion*.