

Pet birds, aviary species & backyard chooks

With Professor Bob Donely

Management and Antimicrobial Stewardship for common disease presentations

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See his full profile here: <https://small-animal.hospital.uq.edu.au/profile/4/professor-bob-donely>



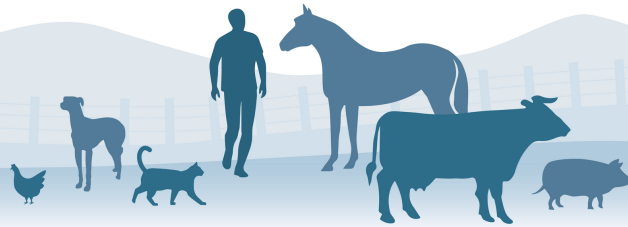
Listen to our podcast with Professor Bob Donely here: https://soundcloud.com/amr_vet_collective/pet-birds-aviary-species-and-backyard-chooks-with-professor-bob-donely



Common disease presentations

The most common presentation for companion and aviary birds, as well as backyard poultry, is 'ADR' – Ain't Doing Right. This reflects the Masking Phenomenon, the instinctive behaviour of prey species to hide (mask) signs of illness from real or potential predators. Most sick birds are inappetent, fluffed up (to conserve body temperature), lethargic (to conserve energy), and have their eyes closed – regardless of the clinical problem.

It is only by careful examination and the appropriate use of diagnostic testing (clinical pathology, imaging, etc.) that a diagnosis may be made. Unfortunately, some clients may be unwilling to invest money in this process, leading many vets to assume all bird owners are not prepared to do anything expensive. Consequently, these vets have not seen the need to invest in acquiring the skills and knowledge that are required to service these clients and their birds. The result is a tendency to 'try some antibiotics' and send the bird home.



What to do first for a sick bird

Before considering therapy for a sick bird, consideration should be given to stabilising the patient. Many sick birds are hypothermic, hypoglycaemic, hypoxic, hypovolaemic, and often in pain. These problems must be addressed before starting any medication. Supportive care for the sick bird should include:

- **1. Warmth** – raising the bird's ambient temperature into the low 30OCs using heat lamps or brooders i.e., active warming, rather than passive warming .
- **2. Fluids** – once warmed the bird should be given 10% of its bodyweight in fluids each day, divided into 2-3 doses, until rehydrated.
- **3. Nutrition** – tube feeding with parrot hand-rearing formula or even pureed baby food can provide a bird with the energy and protein it needs to repair and heal. This should be done 2-3 times daily via crop gavage unless the bird is readily eating.
- **4. Analgesia** – through the judicious use of opioids and/or NSAIDs should be given in all situations where the bird may be in pain.



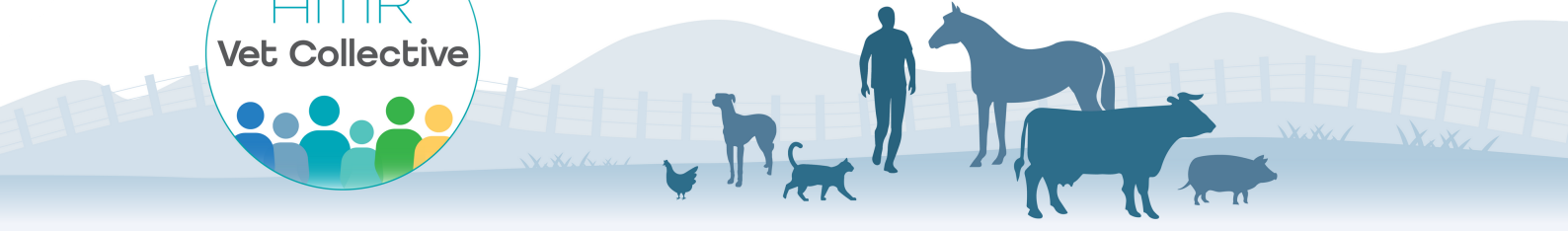


Inappropriate use of antimicrobials

What constitutes the inappropriate use of antimicrobials?

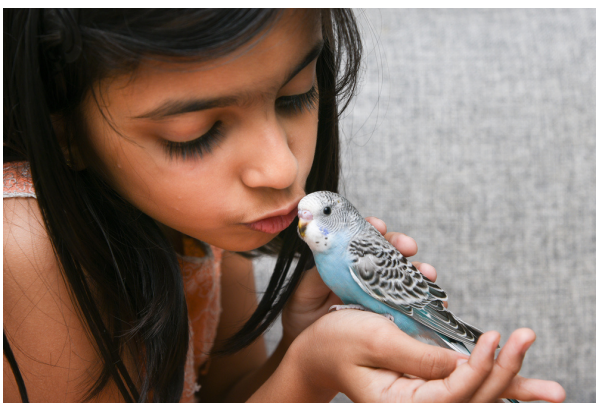
There are several issues to be considered:

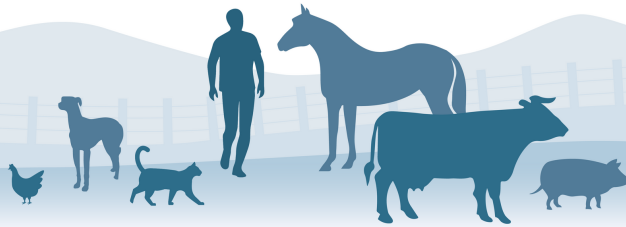
- **1. The use of antimicrobials when they are not indicated.** Examples of this have included the administration of antibiotics to a lame bird (that had a closed femoral fracture); the use of antibiotics in cases of sterile yolk-induced peritonitis; the use of antibiotics in neonatal chicks with crop stasis, without first investigating the cause; and the use of any antimicrobial without evidence of infection e.g., cardiac disease.
- **2. The use of an inappropriate antimicrobial.** In birds with gastrointestinal candidiasis, the use of an antibiotic can exacerbate the infection to the point of death. The prophylactic use of antibiotics in aviary birds is a common problem, with some vets recommending the administration of enrofloxacin or doxycycline for 1 day each week as part of a health program. Another example is the use of an antibiotic such as enrofloxacin as a first line drug of choice.
- **3. The use of an incorrect dose rate.** The rapid metabolic rate of birds, combined with variable drug bioavailability, means that much higher dose rates and dosing frequency are used in birds compared to mammals. Drug formularies are available online (e.g., Veterinary Information Network) or in many avian medicine textbooks. These should be consulted before prescribing a medication.
- **4. The use of an inappropriate route of administration.** A bird that is presented inappetant and not drinking is highly unlikely to benefit from in-water medications. Likewise, the use of drugs that are poorly absorbed from the GI tract (e.g., oxytetracycline) should not be given as oral medications. Drugs known to be unstable in water (such as enrofloxacin) should not be dispensed for in-water medication.



Inappropriate use of antimicrobials continued...

- **5. Failure to observe drug withholding periods in poultry.** The Australian Pesticide and Veterinary Medicines Authority, at this time, makes no distinction between commercial and backyard poultry. This means that the use of antimicrobials in backyard poultry must adhere to their guidelines.
 - a. Drugs such as enrofloxacin and metronidazole are banned and cannot be used.
 - b. Withholding periods must be advised to the owner. If not available, the veterinarian must suggest a reasonable time such as 2-4 weeks, based on knowledge of the drug's pharmacology e.g., lipophilic drugs will be retained in ovarian follicles (yolk is fat) for longer periods than lipophobic drugs.
- **6. The use of topical antimicrobial ointments, especially those containing a steroid.** Ointments and creams, especially oil-based products, when applied topically are often groomed through the feathers by the bird, damaging them and removing their insulative and water-proofing properties. Avian skin is so thin that topically applied steroids are rapidly absorbed systemically. As birds are exquisitely sensitive to the adverse effects of steroids, their use should be avoided systemically or topically.





Recommended resources:

Online:

- Veterinary information Network - Avian resources and discussion board.
- CVE Avian Medicine Time Online

On your practice bookshelf:

- Avian Medicine and Surgery in Practice: Companion and Aviary Birds, Second Edition
- Pathology of Australian Wildlife

