



**AVPA CODE OF PRACTICE FOR THE USE OF
ANTIMICROBIALS IN THE POULTRY INDUSTRY**

2021 Edition

**THIS CODE IS ENDORSED BY THE AUSTRALIAN CHICKEN MEAT
FEDERATION, AUSTRALIAN EGGS AND EGG FARMERS OF AUSTRALIA**

TABLE OF CONTENTS

SUMMARY OF KEY GUIDANCE FOR POULTRY VETERINARIANS

INTRODUCTION

**RESPONSIBILITIES OF THE VETERINARIAN IN THE SUPPLY OF A
PRESCRIPTION ANIMAL REMEDY (PAR) ANTIMICROBIAL WITHIN
THE POULTRY INDUSTRY**

**RESPONSIBILITIES OF THE VETERINARIAN IN THE SUPPLY OF A
NON-PAR ANTIMICROBIAL WITHIN THE POULTRY INDUSTRY**

OFF-LABEL USE OF ANTIMICROBIALS

ANTIMICROBIAL PRESCRIBING PRINCIPLES

ANTIMICROBIAL STEWARDSHIP

Appendix 1

Veterinary order for medicated feed

Appendix 2

References for Legislation

SUMMARY OF KEY GUIDANCE FOR POULTRY VETERINARIANS

- **Professional intervention must occur for the diagnosis of disease and for the ordering, storage, supply, use, expiry date, withholding period (WHP) and export slaughter interval, if relevant, of a Prescription Animal Remedy (PAR, Schedule 4 medication) antimicrobial**
- **Veterinary care and supervision of recipient poultry must occur**
- **Veterinarians prescribing PAR antimicrobials must be registered in the jurisdiction in which the poultry to be treated are located**
- **Veterinarians must prescribe and/or supply only PAR (and other) antimicrobials registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA)**
- **Veterinarians should avoid using antimicrobials that are considered highly important by the Australian Strategic and Technical Advisory Group on Antimicrobial Resistance (ASTAG), unless the antimicrobial is shown by antimicrobial susceptibility test results to be the only treatment option**
- **Antimicrobials should only be prescribed when the veterinarian has confirmed that a microbial disease is occurring based on clinical history, clinical signs, post-mortem lesions or other diagnostic testing and the antimicrobial chosen for treatment is likely to be effective, based on past experience or antimicrobial susceptibility test results**
- **Off-label use of antimicrobials can be authorized by a veterinarian only if the antimicrobial is registered in another major food-producing animal species and the veterinarian can justify the withholding period (WHP) that he/she authorises**
- **Veterinarians must be familiar with and adhere to relevant state/territory and federal legislation relating to antimicrobials**
- **Detailed guidelines for disease control and management of antimicrobials are given in the Antimicrobial Prescribing Guidelines for Poultry (2021)**
- **Veterinarians should actively assist poultry company management to implement Antimicrobial Stewardship, as outlined in the Antimicrobial Stewardship documents produced for the chicken meat and the egg industries**

1. INTRODUCTION

1.1 Responsible use of antimicrobials in the poultry industry

The use of antimicrobials in animals and humans is under increasing public and government scrutiny, particularly in food-producing animals, because of the possibility of the occurrence of human health hazards due to antimicrobial residues or antimicrobial-resistant bacteria or resistance genes being transferred to food. Nevertheless, the responsible use of antimicrobials enhances the welfare of poultry. Veterinarians are the trained professionals who are expected to oversee the responsible use of antimicrobials in animals. Veterinarians must adhere to legal requirements specified by the Australian Pesticides and Veterinary Medicines Authority (APVMA) and State/Territory Control of Use and Health Acts in relation to Prescription Animal Remedy (PAR - Schedule S4 medication) antimicrobials and should also take responsibility for the supply and use of non-PAR antimicrobials within the poultry industry.

The Australian Veterinary Association (AVA) Policy “Code of practice for the use of prescription animal remedies (Schedule 4 substances) in the poultry industry” published in January 2005 is an abbreviated version the 2001 Australasian Veterinary Poultry Association (AVPA) Code which is superseded by this Code.

1.2 Organisation of the Australian poultry industry

The Australian poultry industry is structured in a way that differs significantly from that of other livestock industries. This can influence the way veterinary services are provided and the supply of a PAR medication and other antimicrobials.

In the chicken meat industry, a limited number of companies own most of the production phases, including breeding and commercial flocks, hatcheries, processing plants and sometimes feed mills, and these companies employ their own veterinarians or have consultant veterinarians. Some chicken meat companies rely on contract broiler growing and provide veterinary services as part of that contract.

In the egg layer industry, flock ownership is largely restricted to the commercial egg layer producer with poultry being supplied by separate breeding companies. Veterinary services to egg producers may either be obtained from Government veterinarians, poultry company veterinarians or independent consultant veterinarians.

The role of the veterinarian involves flock health management, often necessitating treatment or preventative measures on a flock basis. Practices of PAR and other antimicrobial supply and usage in the poultry industry have legal restraints which are outlined below. Company or consultant veterinarians have a responsibility to ensure their actions maintain the commercial viability of the company for which they work but this should not override their legal obligations as a veterinarian or compromise the health and welfare of poultry under their care.

2. RESPONSIBILITIES OF THE VETERINARIAN IN THE SUPPLY OF A PAR ANTIMICROBIAL WITHIN THE POULTRY INDUSTRY

2.1 Professional intervention

2.1.1 A veterinarian must provide adequate “professional intervention” in disease diagnosis and the ordering, storage, supply, use, expiry date and withholding period of a PAR antimicrobial. Veterinarians have legal obligations under State/Territory and Federal legislation to provide "professional intervention" in the supply of a PAR antimicrobial to stock “under their care and supervision”.

2.1.2 “Professional intervention” can be defined as intervention by a registered veterinarian between the drug wholesaler, premix supplier or feed-mill and the end user of the antimicrobial, in such a way that antimicrobial use is necessary, appropriate and will be used and withheld correctly.

2.1.3 Storage of PAR antimicrobials should comply with label directions and be held in a lockable area overseen by a veterinarian.

2.1.4 The veterinarian’s name must be on the order for the PAR antimicrobial for authorisation of supply.

2.1.5 Each container of the PAR antimicrobial supplied by the veterinarian to the end user must bear labelling as required by the relevant jurisdiction. It is desirable that the PAR antimicrobial be in the labelled container in which it was purchased.

2.1.6 Written instructions as to antimicrobial use must be given to the end user and recorded by the veterinarian with clear details as specified by the relevant jurisdiction which include the date of supply, poultry species, farm name and address, farm manager’s name, shed number(s), name of the active constituent, quantity of antimicrobial supplied, method of administration, dose rate, frequency and duration of treatment, precautions, expiry date and WHP. Batch number is desirable but not mandatory. These instructions can be part of specific disease control literature developed by the poultry company in consultation with a veterinarian and delivered with the PAR antimicrobial by the serviceperson or farm manager to physically administer the PAR antimicrobial. The veterinarian should subsequently verify that his/her instructions were followed.

2.1.7 An antimicrobial must not be supplied after its expiry date.

2.1.8 Veterinarians must keep a record of the antimicrobials held and supplied for a minimum of three years. Any antimicrobial not used as authorised should be returned to the veterinarian’s PAR medication store. Regular stocktakes should be undertaken to reconcile incoming and outgoing PAR antimicrobials and any discrepancies investigated so that corrective action can be taken if required.

2.2 Veterinary care and supervision of recipient stock

2.2.1 The prescribing veterinarian must not only be involved in the supply of a PAR antimicrobial but must also demonstrate due care and supervision of the recipient flock. This care and supervision should be real and not merely nominal. When investigations are undertaken because of alleged improper PAR antimicrobial supply, evidence will be required that the flocks supplied with the PAR antimicrobial are under the care of the veterinarian being investigated.

2.2.2 When accepting the responsibility for the health of the flock in question by the owner, the veterinarian demonstrates care and supervision by at least either:-

- a) **having seen the flock for the purpose of diagnosis or prescription immediately prior to supply; or**
- b) **having visited the farm or other premises on which the flock is kept sufficiently often and recently enough and from personal knowledge, inspection, records and electronic communications to have acquired an accurate description of the current health status of the flock, to enable a diagnosis requiring a PAR antimicrobial to be made.**

2.2.3 Supply in the physical absence of a veterinarian can only be undertaken by an assistant when the veterinarian is involved and is confident by consultation that the correct antimicrobial and dose will be used, based on treatment directions/protocols compiled by the veterinarian. In such circumstances, the veterinarian's responsibility is undiminished. Records must be maintained, and the supply must be accompanied by advice bearing the veterinarian's name.

2.2.4 When dealing with poultry not owned by their employer, veterinarians must practice in their own name. Company veterinarians also must order the PAR antimicrobials they are prescribing and supplying or are responsible for supplying in their own name, even though the company pays for the medications. The veterinarian must always assume responsibility for control of PAR antimicrobials.

2.2.5 Veterinarians have an obligation to point out to their employer any activities occurring within the poultry company that contravene legislation relating to PAR antimicrobials and should make every endeavour to have these activities eliminated.

2.3 Other areas of responsibilities of veterinarians

2.3.1 The veterinarian should be aware of the care and welfare of the poultry flock which is to be treated.

2.3.2 Veterinarians prescribing PAR antibiotics must be registered in the jurisdiction in which the birds to be treated are located.

2.3.3 Antimicrobials should only be prescribed when the veterinarian has confirmed, or is reasonably certain, that a microbial disease is occurring based on clinical history, clinical signs or post-mortem lesions and the antibiotic chosen for treatment is likely to be effective based on past experience or antimicrobial susceptibility test results.

2.3.4 Veterinarians must prescribe and/or supply only PAR (and other) antimicrobials registered by the APVMA.

2.3.5 Veterinarians should avoid using antimicrobials that are considered highly important by the ASTAG (<https://www.amr.gov.au>) unless the antimicrobial is shown by antimicrobial test results to be the only treatment option.

2.3.6 Disposal of antimicrobials and packaging must be as specified on the registered label and in accordance with local government requirements. Improper disposal of antimicrobials can contribute to antimicrobial resistance occurrence in the environment.

2.3.7 Adverse reactions and apparent efficacy failures following medication of antimicrobials must be investigated and reported to the APVMA.

2.4 The PAR antimicrobial supply chain

Veterinarians should carefully analyse the antimicrobial supply chain in which they are involved. They should also check the bona fides of suppliers and persons to be supplied.

The PAR antimicrobial supply chain between manufacturer and end user comprises:-

2.4.1 The wholesaler and the manufacturer - a wholesaler may purchase antimicrobials directly from a manufacturer and subsequently supply to a veterinarian, a pharmacist, another licensed or authorised wholesaler or an authorised receiver such as a feed-mill or premix manufacturer. All wholesalers supplying PAR antimicrobials must be either licensed or authorised to do so. Poultry companies can maintain a wholesale drug operation independent of veterinary involvement but must meet their obligations under State/Territory Health Acts to purchase, hold, record and supply to authorised persons or companies only.

2.4.2 The feed-mill and premix supplier – can be authorised or licensed to receive and hold PAR antimicrobials but cannot supply feedstuffs or premixes containing PAR antimicrobials to an end user except on the written order of the veterinarian supervising the birds to be treated (**see Appendix 1 for recommended format**).

2.4.3 The pharmacist - may only dispense a PAR antimicrobial to an end user on veterinary prescription.

2.4.4 The veterinarian - accepts responsibility for the supply and use of PAR antimicrobials for the animals under his/her care. Veterinarians involved in the supply chain of PAR antimicrobials should continually update their understanding of those individuals or corporate entities that are registered as authorised veterinary wholesalers and ensure that they know that the PAR antimicrobials authorised are correctly registered for sale or use in food-producing animals.

2.4.5 The veterinary assistant is a responsible person nominated by a veterinarian and can administer that antimicrobial to a flock under the directions of the veterinarian. In many instances, the assistant may also be a serviceperson or farm manager. Assistants need not be veterinarians.

2.5 Supply of PAR antimicrobials within a poultry company

2.5.1 There is no distinction between the supply to outside customers of a poultry company or to farms on which the company's own poultry is grown. All are recognised as end users and can only be supplied by a veterinarian (company or consultant). PAR antimicrobials cannot be supplied directly by the wholesale or purchasing section of the company to the end user. They must be supplied to the veterinarian for storage in his secure PAR antimicrobial Medication Store. However, for timely treatment and poultry health and welfare reasons,

there may be occasions when it is appropriate for PAR antimicrobials to be supplied from the wholesaler direct to the farm with the authorization of the prescribing veterinarian. In this case, the antimicrobial packs or the container of antimicrobials must be labelled as required by the relevant jurisdiction.

2.5.2 When supply is made from the wholesale or purchasing section to a company veterinarian, obligations to record transactions must be taken over by the veterinarian at that point. A veterinarian must authorise the purchase of all PAR antimicrobials.

2.5.3 PAR antimicrobials supplied to the company veterinarian must be held physically separated from the wholesale medication supplies of the authorised wholesale/purchasing section of the company. This can be at the same location but must be in a lockable cupboard or room accessible only to the veterinarian or the assistant. Veterinarians are required by law to keep a record of the antimicrobials in their possession.

2.5.4 The use of depots to hold PAR antimicrobial stocks on farms remote from the veterinarian may be permitted if veterinarians can demonstrate they maintain absolute control over these depots. This must be done by limiting access, appointing an assistant to be responsible in his/her absence, maintaining an inventory of stocks in and out, auditing that inventory regularly and ensuring that no supply occurs without the authority of the veterinarian. In addition, PAR antimicrobials held in a serviceperson's car must be limited to those which have been authorised by the veterinarian, should be out of public view in a suitable lockable container and should be stored in accordance with label instructions. The veterinarian remains accountable for the quantity of each PAR antimicrobial in the serviceperson's possession. The antimicrobials held by the serviceperson can only be obtained from a veterinarian's stock and must be correctly labelled as outlined above.

2.5.5 Out-of-state veterinarians supplying PAR antimicrobials must comply with "professional intervention" and "veterinary care and supervision of recipient stock" requirements, as described above, must adhere to relevant jurisdiction legislation and must be registered in the jurisdiction in which the poultry to be treated are located.

2.6 Feed-mills/premix suppliers

2.6.1 Feed-mills and premix suppliers may be authorised or licensed to receive and store PAR antimicrobials and must comply with the conditions attached to the licence. The feed-mill/premix supplier may supply feed/premix in which antimicrobials are incorporated at registered S6 or exempt levels for unrestricted sale without "veterinary intervention". Where the feed/premix contains PAR antimicrobials, including prophylactic PAR antimicrobials, it may only be supplied in accordance with the full written instructions of the veterinarian supervising the poultry to be treated (**see Appendix 1, Veterinary order medicated feed**). Feed-mills/premix suppliers may not, under any circumstances, supply PAR antimicrobials other than those incorporated in feed or premix.

2.6.2 Persons who mix their own feed, who require a PAR antimicrobial for their flock, must acquire the PAR antimicrobial from a pharmacist (on a veterinary prescription), a veterinarian or from a feed-mill/premix supplier as a feed concentrate (in accordance with full written instructions from the veterinarian supervising the birds to be treated). The concentrate may contain a PAR antimicrobial at such a level that it can be further mixed to produce medicated feed containing that drug at a specified therapeutic or prophylactic level.

2.6.3 Veterinarians, including those in the employ of a feed-mill, who have direct supervision of poultry to be treated must comply with the requirements of “professional intervention” and “veterinary care and supervision of recipient stock”, as given above, to be involved in the supply of PAR antimicrobials to the end user. Such supply by veterinarians must be undertaken in their own name and requires the recording of receipt and supply as would normally apply to PAR antimicrobial usage.

3. RESPONSIBILITIES OF THE VETERINARIAN IN THE SUPPLY OF A NON-PAR ANTIMICROBIAL

3.1 Veterinarians are not legally required to be involved in the supply and use of non-PAR antimicrobials.

3.2 However, veterinarians are professionally trained in the diagnosis of microbial conditions and to understand the requirements for antimicrobial use and are usually involved in the decision-making process for use of non-PAR antimicrobials, including prophylactic antimicrobials, in the poultry industry.

4. OFF-LABEL USE OF ANTIMICROBIALS

4.1 Only veterinarians can authorise off-label use of antimicrobials. Off-label use of both PAR and non-PAR antimicrobials by registered veterinarians should be confined to situations where antimicrobials used according to label instructions have been ineffective and where there is scientific evidence, including residue data, supporting the off-label use pattern.

4.2 Control of Use legislation relating to off-label use of antimicrobials currently differs between jurisdictions. Veterinarians should be familiar with the requirements of the jurisdiction in which they are registered to practice. However, all jurisdictions have agreed to “harmonisation conditions” for Control of Use legislation. Agreed conditions include:-

- a) only a registered veterinarian may vary the label instructions for antimicrobial use.
- b) off-label use in poultry flocks will be permitted only if the antimicrobial is registered in another major food-producing animal species.
- c) veterinarians cannot vary label instructions contrary to a “label restraint” for antimicrobial use in poultry, eg. “DO NOT USE in poultry producing eggs for human consumption”.
- d) veterinarians must supply written instructions for use, withholding periods and export slaughter intervals if relevant.
- e) veterinarians may be liable if violative residues occur

5. ANTIMICROBIAL PRESCRIBING PRINCIPLES

5.1 The Australian Veterinary Association document “Antimicrobial prescribing guidelines for poultry” (see <https://onlinelibrary.wiley.com/doi/10.1111/avj.13034> and <https://www.ava.com.au/siteassets/advocacy/antimicrobial-prescribing-guidelines---poultry.pdf>) provides information on the core principles of appropriate use of antimicrobial agents, general approaches to diseases and their diagnosis and on the management and antimicrobial treatment of common poultry diseases.

5.2 Core principles of appropriate use of antimicrobials discussed in detail in the guidelines include:

- a) Pre-treatment principles: disease prevention, professional intervention and alternatives to antimicrobial agents
- b) Diagnosis
- c) Therapeutic objective and plan
- d) Drug selection: justification of antimicrobial use, guidelines for antimicrobial use, critically important antimicrobial agents, culture and susceptibility testing, spectrum of activity and extra-label (off-label) antimicrobial therapy
- e) Drug use: dosage and monitoring responses to treatment regimens, duration of treatment, labelling and instructions, target animals, record keeping, compliance and monitoring responses to treatment
- f) Post-treatment activities: environmental contamination, surveillance of antimicrobial resistance, continuous evaluation and continuous improvement

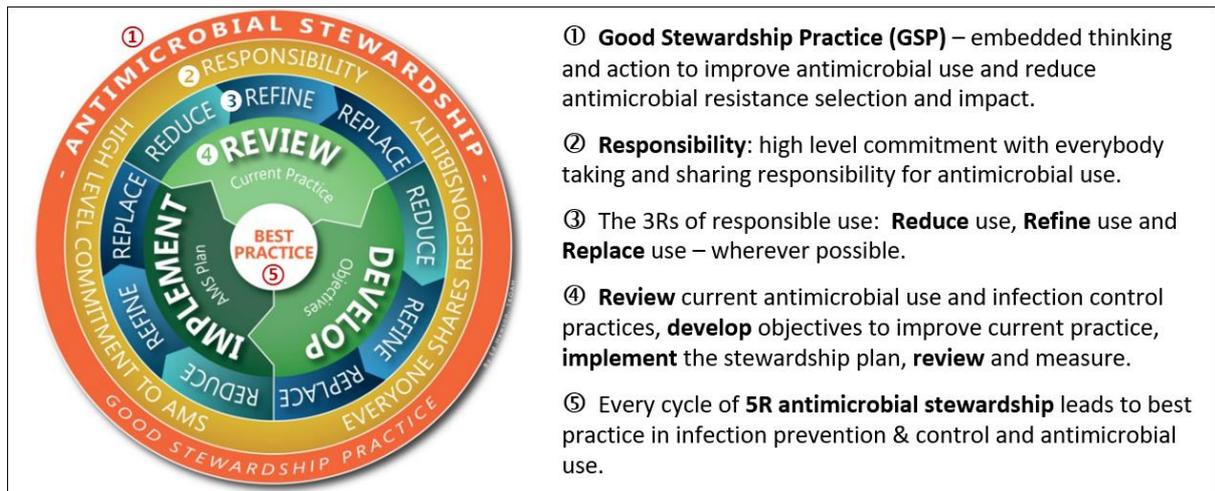
6 ANTIMICROBIAL STEWARDSHIP

6.1 Antimicrobial Stewardship documents have been developed for both the chicken meat industry (<https://www.agrifutures.com.au/product/antimicrobial-stewardship-framework-2/>) and the egg industry (<https://www.australianeggs.org.au/biosecurity>).

6.2 The Australian Chicken Meat Federation (ACMF; <https://www.chicken.org.au>) has included a summary of the Antimicrobial Stewardship Framework on the ACMF website, has supported a project on “Antimicrobial stewardship verification in the Australian chicken meat industry” (<https://www.agrifutures.com.au/wp-content/uploads/2020/08/20-067.pdf>) and is continuing to oversee the implementation of Antibiotic Stewardship within Australian chicken meat companies.

6.3 Australian Eggs (AE – <https://www.australianeggs.org.au>) has supported a project on “Antimicrobial resistance surveillance in Salmonella isolates from environments on Australian commercial egg farms” as a follow-up to the Antimicrobial Stewardship Framework. A short report on the findings of the project is on the AE website (go to For Farmers, Research Program Areas, Food Safety). Additionally, a project on “Chicken Egg Industry Antimicrobial Resistance Survey” supported by AE is in progress.

6.4 A 5R framework captures the definition and goal of Antimicrobial Stewardship as depicted below as in the poultry industry guidelines:



6.5 The 5R core elements of antimicrobial stewardship are:
RESPONSIBILITY
REVIEW
REDUCE,
REFINE and
REPLACE

6.6 Stewardship documents include topics such as measuring the quantity of antimicrobials used, measuring quality by evaluating appropriate use, recommending biosecurity measures, stressing correct diagnosis prior to use, core principles of Judicious Use and alternatives to antimicrobials.

6.7 Veterinarians should assist poultry companies to manage an Antimicrobial Stewardship Plan, to measure the outcomes and develop objectives for continuous improvement.

Appendix 1

VETERINARY ORDER FOR MEDICATED FEED

1. To Feed Miller Name:
Address:

Please provide the following feed for
2. Farmer Name:
Address:
Consign to:
3. Medicated Feed Required
Type of feed (eg pullet grower, broiler starter):
Form of feed (eg pellets, mash):
Quantity of medicated feed (order only as much as required):
Active ingredient:
Active Ingredient Inclusion rate (eg. g/tonne) required:
Product (Trade Name):
Product Inclusion rate (eg. kg/tonne) required
4. Animals to be treated Location:
Species: Type:
Age: Sex: Number:
5. Directions for Use of Medicated Feed on Farm
 - i) Quantity of medicated feed to be given daily:
 - ii) Duration of treatment:
 - iii) Withholding period:
(NB: medicated feed must NOT be fed during the withholding period)
Do not slaughter animals for human consumption until days after their last consumption of medicated feed.
Eggs/milk must not be taken for human consumption until days after the last consumption of medicated feed.
 - iv) Precautions: Ensure that animals or birds other than those specified on this form do NOT have access to this medicated feed.
6. Veterinarian Placing Order Name:
Address:
Telephone No.:
Signature: Date: / /

3 copies: Original - Feed Miller, Copy - Farmer, Copy – Veterinarian

Appendix 2

REFERENCES FOR LEGISLATION

Australian Capital Territory

ACT Medicines, Poisons and Therapeutic Goods Act 2008

ACT Medicines, Poisons and Therapeutic Goods Regulation 2008

New South Wales

NSW Poisons and Therapeutic Goods Act 1966

NSW Poisons and Therapeutic Goods Regulation 2008

NSW Health Guide to Poisons and Therapeutic Goods Legislation for Veterinary Practitioners

NSW Stock Medicines Act 1989

NSW Stock Medicines regulation 2010

NSW Agricultural and Veterinary Chemicals (New South Wales) Act 1994

NSW Agricultural and Veterinary Chemicals (New South Wales) regulation 2015

Queensland

QLD Health Act 1937

QLD Health (Drugs and Poisons) Regulation 1996

QLD Chemical Usage (Agricultural and Veterinary) Control Act 1988.

QLD Chemical Usage (Agricultural and Veterinary) Control Regulation 1999

South Australia

SA Controlled Substances Act 1984

SA Controlled Substances (Controlled Drugs, Precursors and Plants) Regulations 2014

SA Agriculture and Veterinary Chemicals (SA) Act 1994

Tasmania

TAS Poisons Act 1971

TAS Poisons Regulations 2008

TAS Agricultural and Veterinary Chemicals (Tasmania) Act 1994

TAS Agricultural and Veterinary Chemicals (Tasmania) Regulations 2014

Victoria

VIC Drugs Poisons and Controlled Substances Act 1981

VIC Drugs Poisons and Controlled Substances Regulations 2017

VIC Agricultural and Veterinary Chemicals (Control of Use) Act 1992

VIC Agricultural and Veterinary Chemicals (Control of Use) Regulations 2007

Western Australia

WA Medicines and Poisons Act 2014

WA Medicines and Poisons Regulations 2016

WA Veterinary Chemical Control and Feeding Stuffs Act 1976

Veterinary Chemical Control Regulations 2006