These Guidelines have been developed by Irish Farmers and Veterinary Practitioners to guide good practice in the responsible prescribing and use of antibiotics in farm animals, in response to the global societal challenge of antimicrobial resistance.
The responsible use of antibiotics can be defined as using “as little as possible, and as much as necessary”. In order to use as little as possible, it is necessary to reduce the risks associated with disease by implementing good farm management practices including optimum ventilation, stocking densities, nutrition, hygiene, vaccination and parasite control for your personal farm set up.

**Medicines must not be used as a substitute for good farm management**

Antibiotics should be used to maintain animal health and welfare only when necessary. Importantly, they must be used correctly. When using antibiotics, the animal disease should be diagnosed by a vet who prescribes the treatment protocol. Antibiotics should be purchased only from an authorised supplier. The instructions on the veterinary prescription and label must be followed; always administer the correct dose; finish the course as instructed; observe the withdrawal period; and adhere to correct storage and disposal practice.

The “six rights” should be applied in prescribing and using antibiotics:

1. Right veterinary diagnosis
2. Right animal
3. Right antibiotic
4. Right dose
5. Right duration
6. Right storage and disposal

**Critically Important Antibiotics (CIAs)**

Certain groups of antibiotics are considered critically important antibiotics in human health care as they are the antibiotics of last resort to treat disease when other antibiotics have failed. The Department of Agriculture, Food and the Marine have a policy document outlining the conditions under which the Highest Priority Critically Important Antibiotics (HPCIs) should only be prescribed and used.

Given the importance of these Highest Priority CIAs in human health these antibiotics should NOT be used as first line of treatment in animals and they should only be used following veterinary advice, when there are no effective alternative antibiotics available for the respective target species and indication. Restricting the use of these particular antibiotics is vital to keep them effective for future use in human health but also to keep them available and effective to protect animal health and welfare. A list of the Highest Priority CIAs including product names and the relevant Highest Priority CIA category can be found at the back of this document. More advice on the use of HPCIs in animals is contained within the official Department of Agriculture, Food and the Marine (DAFM) Highest Priority CIA policy document available on the DAFM website – www.agriculture.gov.ie
RIGHT VETERINARY DIAGNOSIS
Accurate diagnosis is essential. This allows for proper treatment and the correct choice of antibiotic. Veterinary practitioners are best placed to make this decision.

RIGHT ANTIBIOTIC
Antibiotics should only be used when absolutely necessary, and when the vet has diagnosed that there is a bacterial disease present. The antibiotic chosen for treatment should be effective to treat against the particular bacteria causing the disease. Isolates should ideally be tested for antibiotic resistance in the laboratory to ensure the chosen antibiotic will work.

PURCHASING ANTIBIOTICS
Antibiotics are prescription only medications (POM). A valid veterinary prescription must be issued for the product before purchase. Antibiotics should only be purchased from licensed suppliers.

RIGHT DOSE
The data sheet or summary of product characteristics document will provide information about dose, route of administration, site of administration, duration of administration. It is essential to adhere to the particular instructions provided on the veterinary prescription. If in doubt, ask the vet to clarify the instructions. Animal weights should be estimated as accurately as possible. Administer the dose as accurately as possible using the site recommended.

RIGHT DURATION
Administer the antibiotic for the recommended number of days. Do not stop the course prematurely as this will not fully treat the disease and will potentially drive development of resistance to this antibiotic in the future.

RIGHT DISPOSAL
Do not hoard partly used medicines. Place all out-of-date medicines, containers and application equipment (including needles to a sharps container) in appropriate clinical waste containers when you finish the treatment for which they were intended. Never dispose of such items with domestic rubbish or pour animal medicines down the drain or toilet as this leads to development of resistant bacteria in the environment.

RIGHT STORAGE
It is important antibiotics are stored strictly in accordance with manufacturers’ instructions.

WITHDRAWAL PERIODS
Withdrawal periods must be fully adhered to for all antibiotics and are included on the summary of product characteristics and on your veterinary prescription.

RECORD KEEPING
Always record the identity of treated animals including name of drug, dose of drug, date of treatment, duration of treatment, and withdrawal periods observed. In addition, record any antibiotic sensitivity test results which might be relevant. This may help your vet in making future treatment choices on your farm.
<table>
<thead>
<tr>
<th>Antimicrobial class</th>
<th>HP-CIA category</th>
<th>Active substance(s)</th>
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<tr>
<td>3rd &amp; 4th generation cephalosporins</td>
<td>Category 2</td>
<td>cefovecin, ceftiofur</td>
<td>Convenia, Alfacef, Cefavex, Cefnil, Cefokel, Cefiocyrl, Cemay, Cevaxel, Curacef, Efcur, Excenel, Naxcel, Ceffect, Cefinam, Cefquinome, Cephaguard, Cobactan, Plenix, Qivitan</td>
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<td></td>
<td></td>
<td>cefquinome</td>
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<tr>
<td>Fluoroquinolones</td>
<td>Category 2</td>
<td>enrofloxacin, marbofloxacin, pradofloxacin</td>
<td>Baytril, Doraflx, Enrobackin, Enrocare, Enrodelx, Enrofloxacin Krka, Enro-K, Aurizon, Boflox, Efex, Forcyll, Kelacyl, Marbim, Marbocare, Marbocyl, Veraflox</td>
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<tr>
<td>Polymyxin</td>
<td>Category 2</td>
<td>colistin</td>
<td>Colfive, Coliscour, Colistin APSA, Hydrocol, Sogecoli</td>
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<tr>
<td>Macrolides</td>
<td>Category 1</td>
<td>erythromycin, gamithromycin, tildipirocin, tilmicosin, tulathromycin, tylosin, tylovalosin</td>
<td>Ery throcin, Zactran, Zuprevo, Hymatil, Micotil, Milbotyl, Pulmotil, Pulmoven, Tilmol, Tilmovet, Draxxin, Bilosin, Bilovet, Pharmasin, Tylan, Tylo, Tylosin, Tyloten, Tylucyl, Aivlosin</td>
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