

30th World Veterinary Congress 2011 Cape Town South Africa – October 2011

Summit on Antimicrobial Resistance.

The Veterinary Perspective on Responsible Use?

Peter Jones: President–Elect, British Veterinary Association

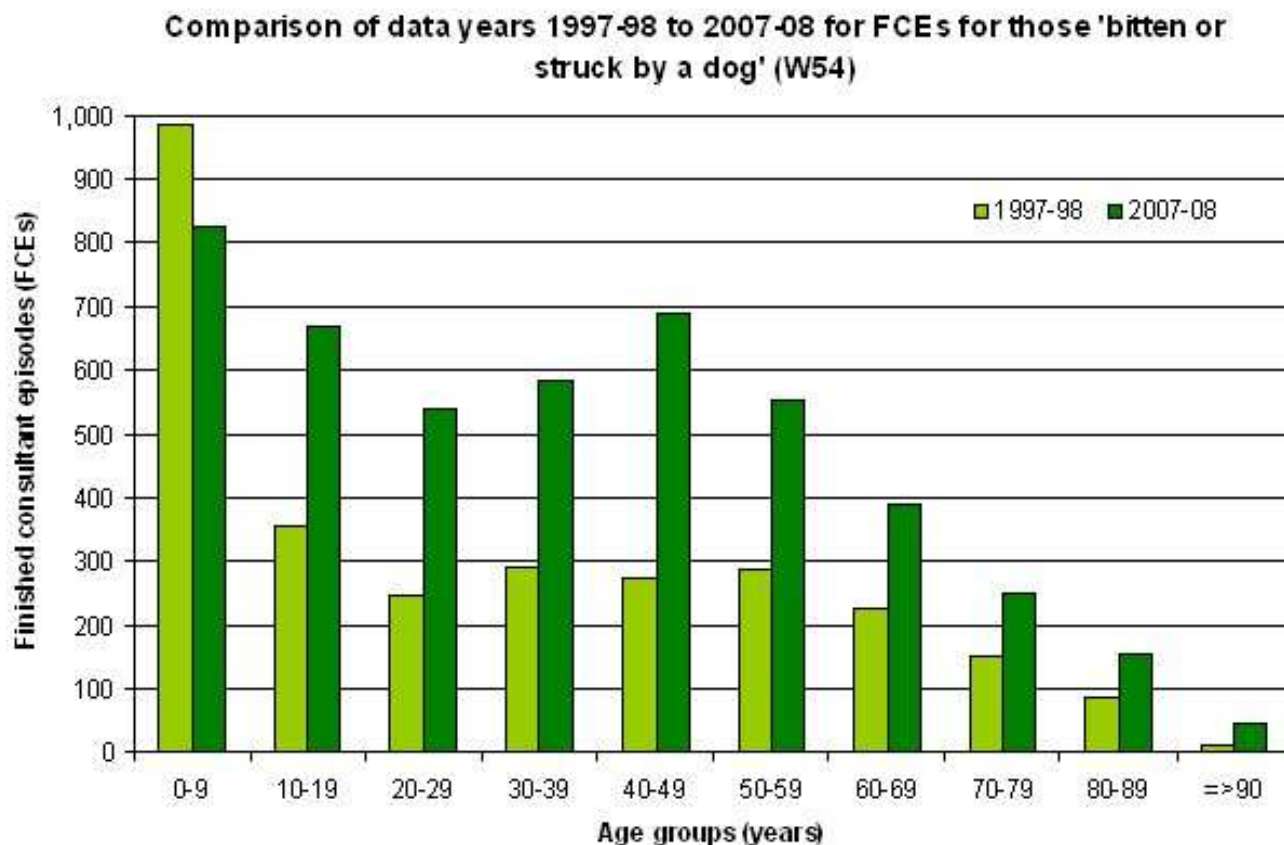
ABSOLUTELY – YES - It's a must



It's 20 years ago this year that the UK government introduced the Dangerous Dogs Act



Comparison of data years 1997 -98 to 2007-08 for FCE's for those bitten or struck by a dog in UK



The statistics on dog attacks in UK

- **For the whole of the UK, in 2005, there were 3,781 Accident & Emergency admissions in hospitals for dog attacks on children in the UK, up 42% from 2,652 in 2004.**
- **More than 100 victims of dog bites are admitted to hospital each week, a rise of 66 per cent in a decade.**
- **Serious attacks on young children by savage dogs soared by 14% in 2009. The dogs mauled 1,942 under-10s so badly they needed hospital treatment.**
- **This very serious rise in the amount of dog bites will hopefully convince ministers to finally overhaul the Dangerous Dogs Act.**
- **Deed not Breed!**

CONCLUSION: Bad law does not solve the problem

Key questions,

1. Has the imposition of legal controls to prohibit the use of veterinary medicines helped in the campaign to minimise antimicrobial resistance?
2. What lessons have we learnt?
3. What is the veterinary profession doing about it?
4. What more do we need to do?

What has happened in Denmark after the growth promoter ban in the nineties ?

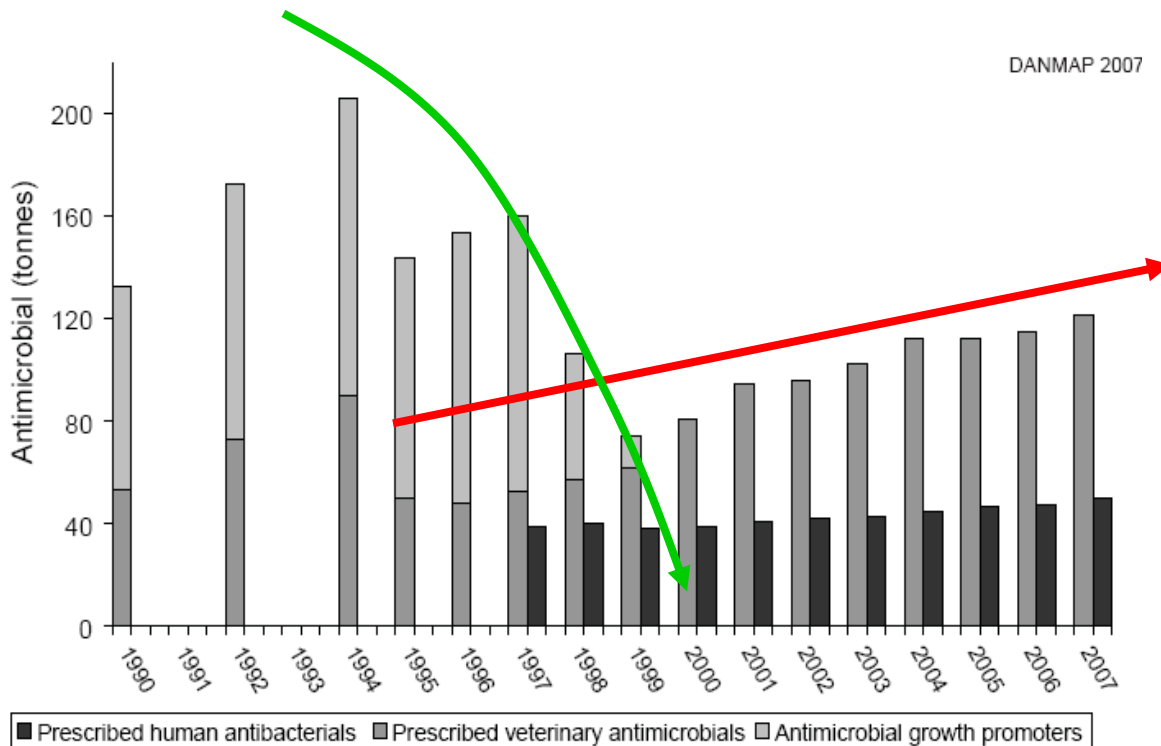
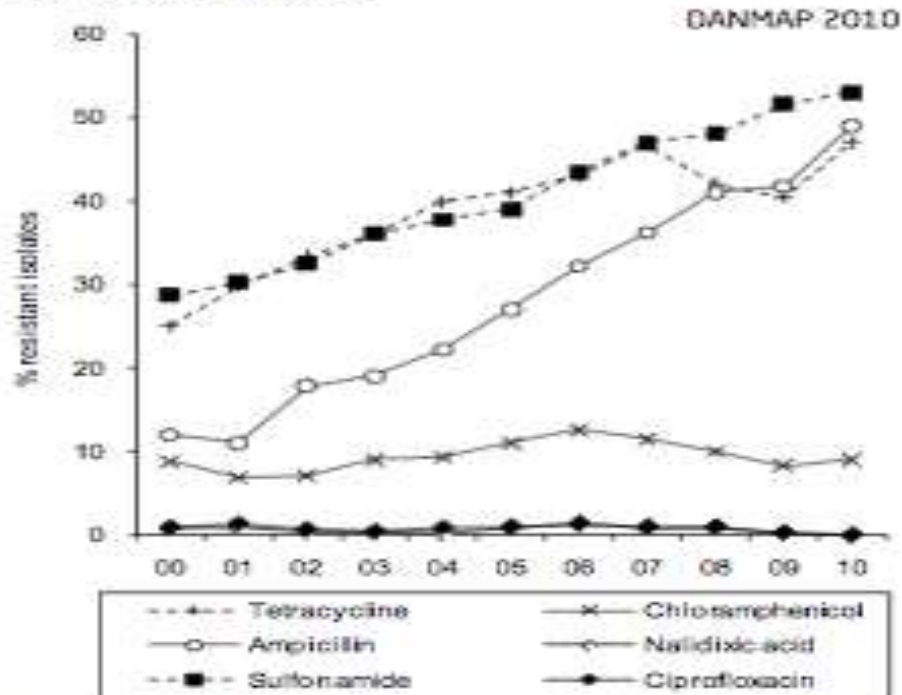


Figure 39. Consumption of prescribed antimicrobials and growth promoters in animal production and prescribed antibacterials in humans, Denmark

Sources: Human therapeutics: The Danish medicines Agency. Veterinary consumption: 1990-2000, data based on reports from the pharmaceutical industry of total annual sales. (Data 1990-1994: Use of antibiotics in the pig production. Federation of Danish pig producers and slaughterhouses. N. E. Rønn (Ed.). 1996-2000: Danish Medicines Agency and Danish Plant Directorate). 2001-2007: Data from VetStat.

What happened to resistance to therapeutic antimicrobials after the GP ban

Figure 6.1. Resistance (%) in *Salmonella* Typhimurium from pigs, Denmark

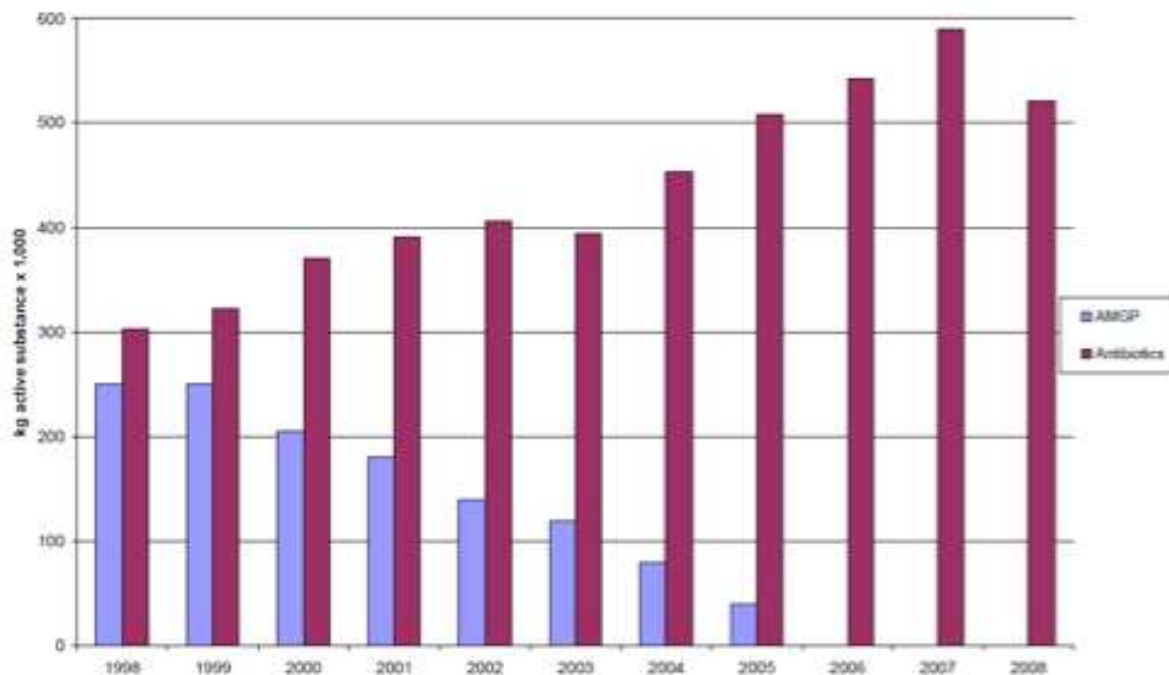


a) The number of isolates varies between years (from 216 to 736)

WHAT HAPPENED IN THE NETHERLANDS AFTER THE GROWTH PROMOTER BAN IN THE NINETEES

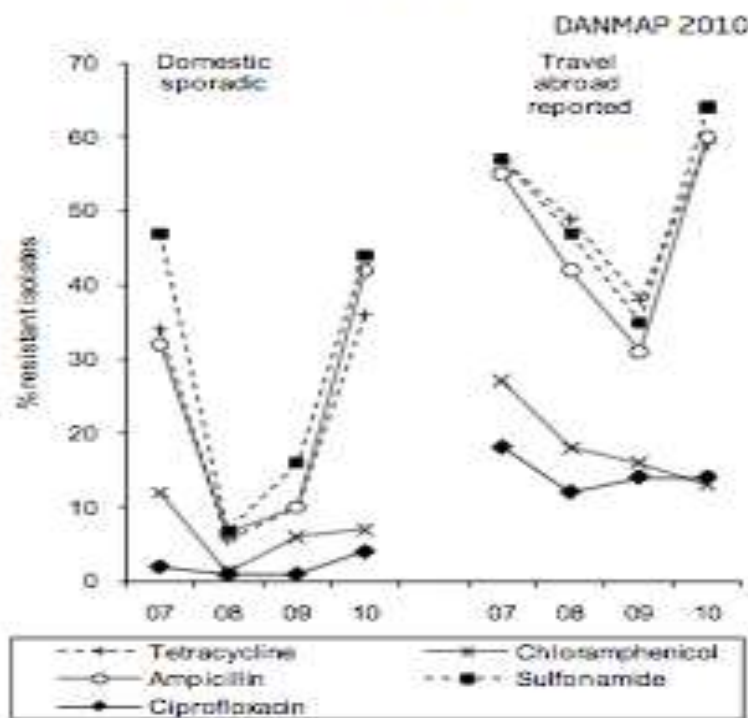
Maran 2008

Figure 3.2 Total sales of antibiotics in the Netherlands, 1998 to 2008.



Outcome of severe restriction on use of fluoroquinolones in Denmark

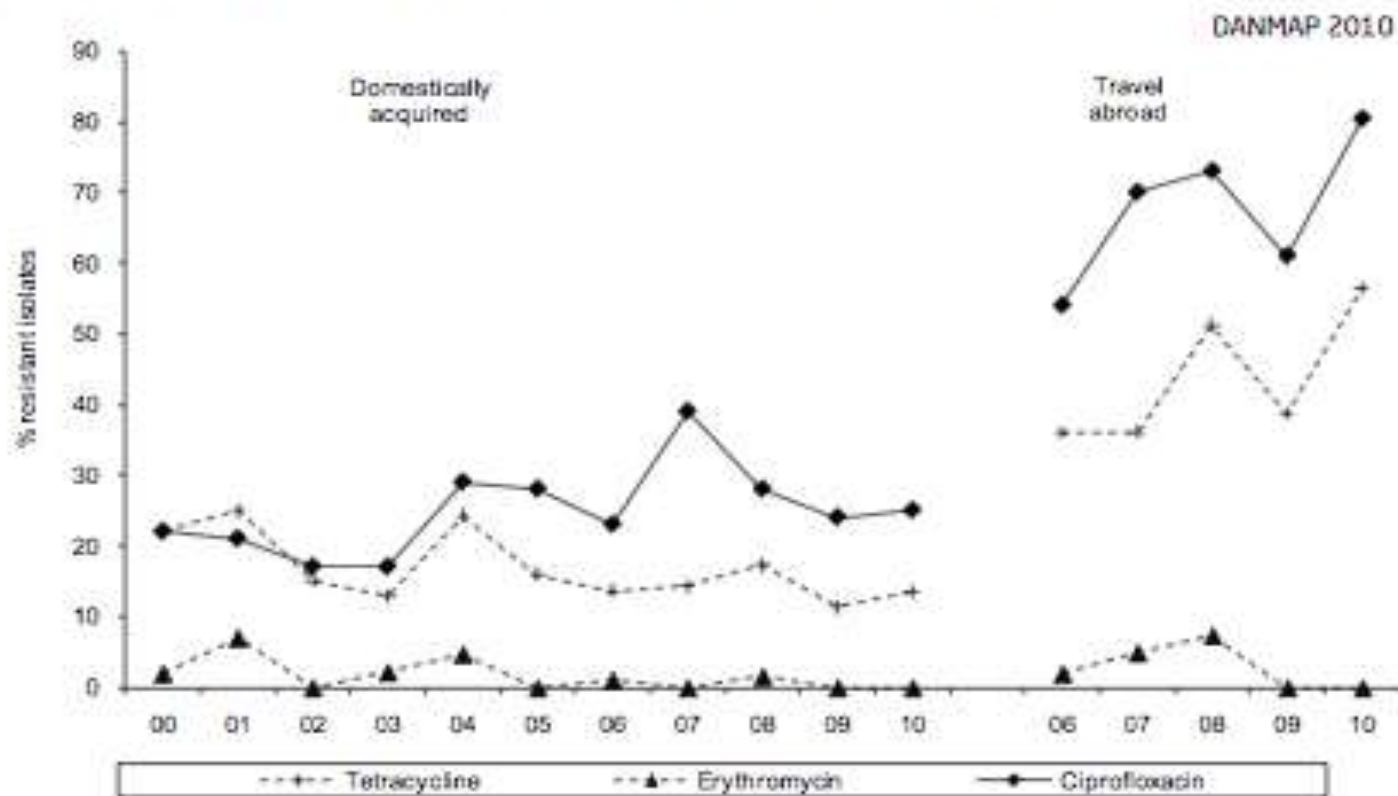
Figure 6.4. Resistance (%) in *Salmonella* Typhimurium^{14b} in human cases acquired²¹ domestically (sporadic) or associated with travel, Denmark



Danmap 2010

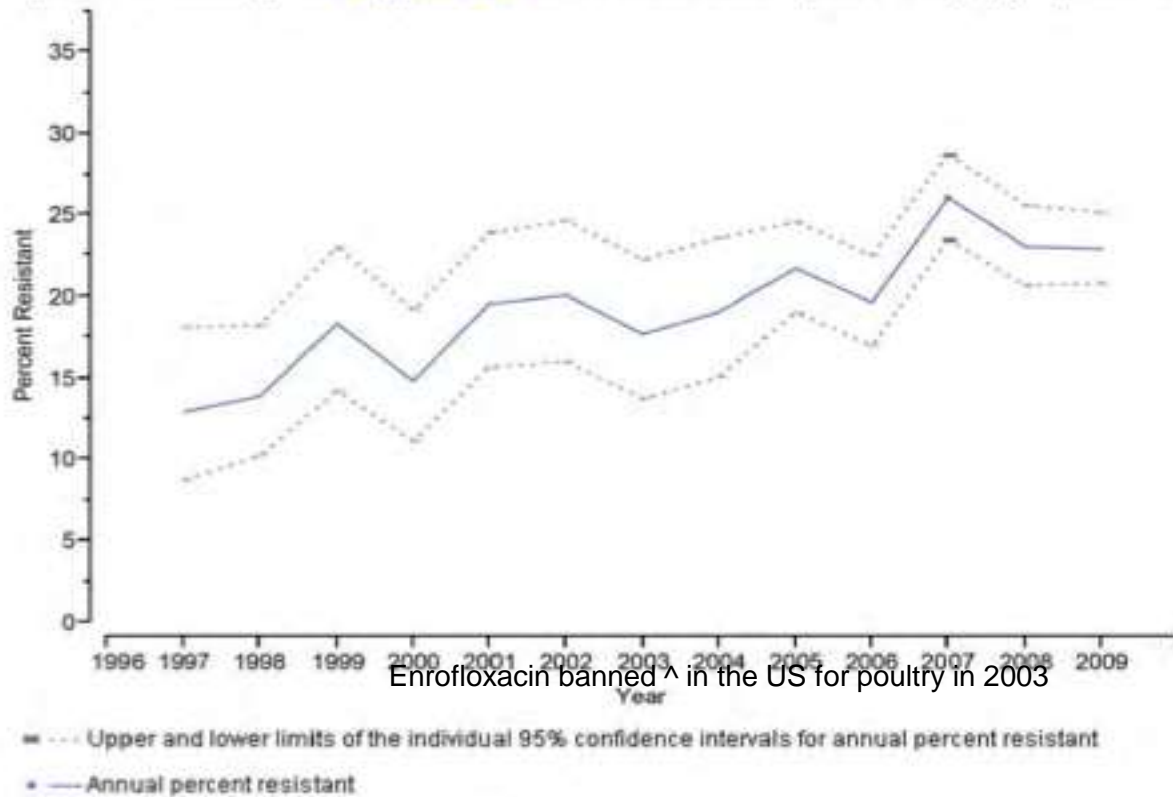
Outcome of severe restriction on use of fluoroquinolones in Denmark

Figure 6.9 Resistance (%) in *Campylobacter jejuni* from human cases, Denmark



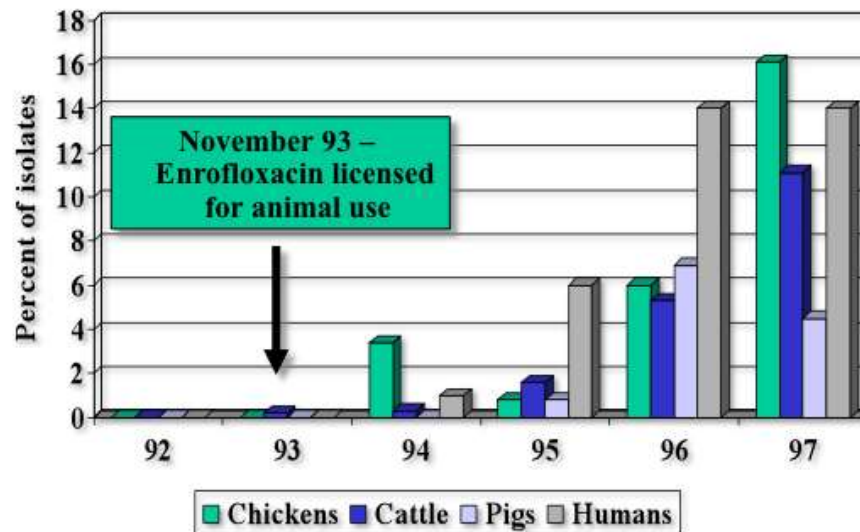
INCIDENCE OF RESISTANCE TO FLUOROQUINOLONES IN CAMPYLOBACTER IN MAN FOLLOWING THE BAN ON ENROFLOXACIN IN THE USA IN 2003

Figure 10. Percentage of *Campylobacter* isolates resistant to ciprofloxacin, by year, 1997–2009



NARMS 2009

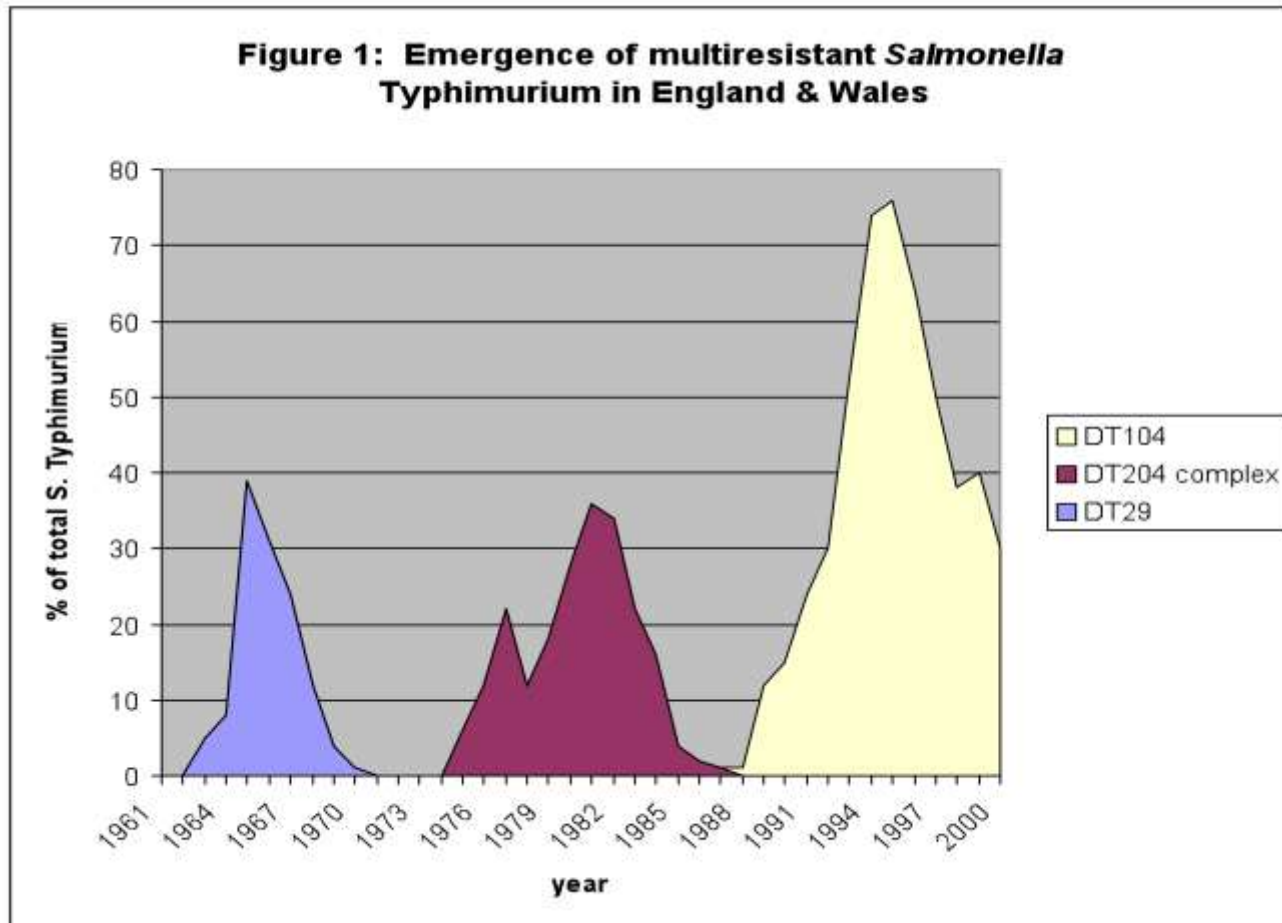
**Enrofloxacin use in animals & Quinolone-resistant
Salmonella Typhimurium DT104 (UK)
(data presented by WHO at TFAMR in Korea)**



What happened after 1997?

- In England and Wales, isolations of multiresistant DT 104 from humans increased from about 200 in 1990 to >4000 in 1996. However, over the last two years there has been a significant decline in isolations, with numbers dropping by 48% in 1998, to 2000.

Threllfall J. J.Antimicrob. Chemother.(2000) 46(1): 7- 10



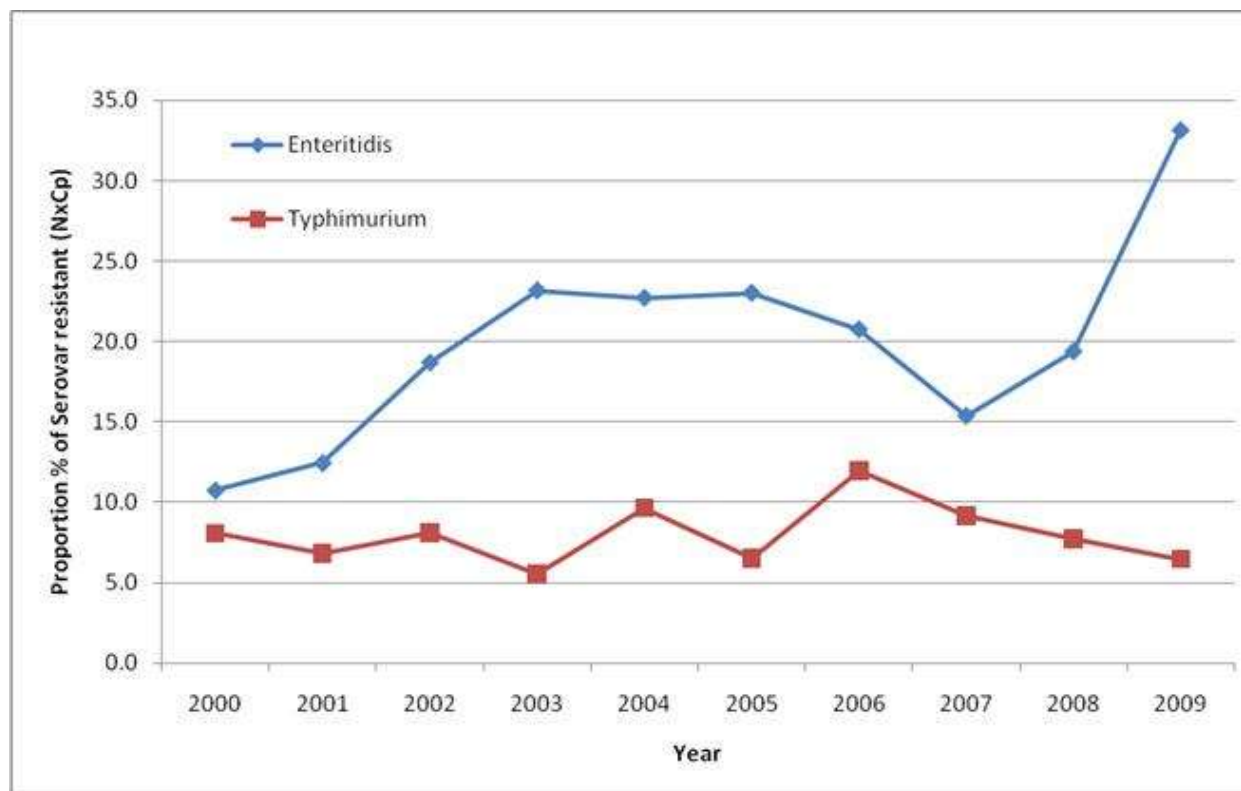
John Threlfall – personal communication

Epidemic *S. Typhimurium*, 1966 - 2008

DT 29:	A, SSu, T:	Plasmid
DT 204/193:	T, Su, CSSuT, AK, G/Ap:	Plasmid
DT 104:	A, C, SSp, Su, T :	Chromosomal
	Nx / Cp _L :	Chromosomal
	Tm :	Plasmid

John Threlfall – personal communication

Salmonella – quinolone resistance, England and Wales, 2000-2009



John Threlfall – personal communication

CTX-M genes in *Salmonella* in Europe, 2009



Serotype	CTX-M	Country	Source
Paratyphi B Java	1, 2	The Netherlands	Poultry
Virchow	2	Belgium, France	Human, Poultry
	3	Turkey	Human
	9	Belgium, France, Spain, UK*	Human, Poultry
	10	Spain	Human
Typhimurium	5	Greece	Human
	6	Greece	Human
	9	UK	Human
	15	France, UK	Human
	57	UK	Human
Enteritidis	14	Spain	Human
	15	UK	Human
	17/18	UK	Human
Mbandaka	3	Poland	Human
Oranienburg	3	Poland	Human
Bovismorbificans	1	Italy	Human
Stanley	17/18	UK*	Human
Kentucky	15	France*	Human
Anatum	15	UK*	Human

Remember Question 1.

Has the imposition of legal controls to prohibit the use of veterinary medicines helped in the campaign to minimise antimicrobials resistance?

2. What lessons have we learnt?

Where else are the pressures coming from?

- There should be a ban on the use of certain types of antibiotics (quinolones and cephalosporins) in animals, in order to protect their activity in humans
 - Sir Liam Donaldson CMO –UK Annual Report 2008
- Restrict or eliminate the use in food-producing animals of antimicrobials identified as critically important in human medicine, especially the use of fluoroquinolones, and third- and fourth- generation cephalosporins
 - WHO World Health Day 2011 Reduce Use of antimicrobials in Food Producing Animals
- Highly effective control option to reduce selective ESBL/AmpC producing bacteria at an EU level would be to stop all uses of cephalosporins/systemically active 3rd/4th generation cephalosporins or restrict their use
 - Scientific Opinion on public health risks of bacterial strains producing extended-spectrum beta-lactamases and/or Amp/C beta-lactamases in food and food producing animals; European Food Safety Authority (EFSA) panel on Biological Hazards. EFSA Journal 2011;9(8):2322
- 12 April 2011: The British Veterinary Association (BVA) and Federation of Veterinarians of Europe (FVE) have successfully seen off an attempt by MEPs to restrict the ability of vets to sell veterinary medicines directly to farmers and other animal owners.
- In order to contain antimicrobial resistance in man the use of 3rd/4th generation cephalosporins and fluoroquinolones in veterinary medicine should be prohibited
 - Health Commission report on antimicrobials resistance in the Netherlands 2011
- “Pets May Carry Bacteria Deadly to Humans”

3. What is the veterinary profession doing about it?

- Lobbying hard against bad law which does not solve the problem
- Challenging misconceptions about the causes of resistance
- Arguing for management of resistance to be based on sound scientific risk assessment: - WVA support at the Codex Task Force on AMR
- Education campaigns to raise awareness and reinforce the crucial importance of responsible use supported by appropriate guidelines
 - **It's not what we use, surely it has to be how we use them**
- Promote stricter conditions in best practice for the use of certain categories of antimicrobials, which have special importance in human medicine (e.g. fluorquinolones and 3rd-4th generation of cephalosporins)
- Encouraging better animal health management on farm to reduce the need for antimicrobials
- Promoting the One Health Concept: healthy animals means healthy food

RESPONSIBLE USE OF ANTIMICROBIALS IN VETERINARY PRACTICE: THE 8-POINT PLAN

1 2 3 4 5 6 7 8

1
Work with clients to avoid need for antimicrobials

2
Avoid inappropriate use

3
Choose the right drug for the right bug

4
Monitor antimicrobial sensitivity

5
Minimise prophylactic use

6
Minimise use perioperatively

7
Record and justify deviations from protocols

8
Report suspected treatment failure to the VMD

- Integrated disease control programmes

- For example, for uncomplicated viral infections

- Identify likely target organisms and predict their susceptibility

- While clinical diagnosis is often the initial basis for treatment, microbiological sensitivity must be determined whenever possible so that a change of treatment can be implemented if necessary

- Use only when animals are at risk and evidence that usage reduces morbidity and/or mortality

- Use only when necessary and supported by strict aseptic techniques alongside written practice guidelines

- Be able to justify your choice of antimicrobial and dose

- This may be the first indication of resistance

- Report through the Suspected Adverse Reaction Surveillance Scheme (SARSS)

- Animal Health and Welfare Planning

- Restrict use to ill or at-risk animals

- Create practice-based protocols for common infections based on clinical judgement and up to date knowledge

- Regularly assess prophylactic use and develop written protocols for when prophylactic medication considered appropriate

- Keep accurate records of treatment and outcome to help evaluate therapeutic regimens

- Isolate infected animals wherever possible

- Advise clients on correct administration of products and completion of course

- Know how antimicrobials work and their pharmacodynamic properties

- Monitor antimicrobial sensitivity trends

- Avoid underdosing

- Use antimicrobials with a spectrum as narrow as possible

SPECIAL NOTE

Fluoroquinolones and third-/fourth-generation cephalosporins:

- Reserve these antimicrobials for clinical conditions that respond poorly to other classes of antimicrobials and where antibiotic sensitivity has been carried out.

- Do not administer systemically to groups or flocks of animals except in very specific situations and special attention should be given to the risk of antimicrobial resistance as part of the benefit/risk assessment.

ANTIMICROBIALS ARE ESSENTIAL FOR THE TREATMENT AND PREVENTION OF INFECTIOUS AND ZONOTIC DISEASES IN BOTH ANIMALS AND HUMANS

EVERY USE INCREASES THE RISK OF DEVELOPMENT OF MICROBIAL RESISTANCE

RESPONSIBLE USE OPTIMISES THERAPEUTIC EFFECTS WHILE MINIMISING RESISTANCE DEVELOPMENT

RESPONSIBLE USE — AS LITTLE AS POSSIBLE.

FOR FURTHER GUIDANCE VISIT

www.bva.co.uk



Practice policy

Practice policy for empirical prescribing (awaiting culture) can optimize therapy and minimize inappropriate use of antibiotics

Preventive prophylaxis

Antibiotics are **not** a substitute for aseptic technique
Antibacterials are only indicated in a few medical cases (immunocompromised patients)

Other options

Empirical antibiotic prescribing due to client pressure, in uncomplicated infections or self-limiting disease by providing symptomatic relief (e.g. analgesia, suppressants)
Histology and culture to diagnose bacterial infection correctly
Surgery and debridement of infected tissue reduces the need for antibiotics
Topical preparations reduces selection pressure on resistant intestinal flora

Properties of bacteria and drugs

Know which bacteria are likely to be cultured, e.g. anaerobic/aerobic, Gram +ve/-ve
Understand the distribution and penetration of antibiotics
Consider any potential side effects

Employ narrow spectrum

Prefer to use narrow-spectrum antibiotics as they limit effects on normal bacteria
Use certain antibiotics as first line only when other agents are ineffective (ideally determined by culture and sensitivity testing)

Culture and sensitivity

Sample promptly when prolonged courses are likely to be needed (e.g. pyoderma, otitis, deep/surgical wound infection) or if empirical dosing has failed

Treat effectively

Use long enough and at a sufficient dose
Stop when stop
Understand when to continue culture after long courses

Are you **PROTECT**ing your antibacterials?

Periodontal disease

Empirical: CR amoxicillin/clavulanate OR ampicillin OR clindamycin OR metronidazole + aspirin/ibuprofen. With or without chlorhexidine mouthwash.

Practice Policy: _____

Respiratory infections

Bacterial pneumonia (including aspiration):

- cats: amoxicillin/clavulanate OR doxycycline
- dogs: ampiclosulicid + metronidazole OR amoxicillin + fluoroquinolone OR ampicillin + metronidazole OR doxycycline OR oxytetracycline

Practice Policy: _____

Bacterial rhinitis, chronic rhinitis and sinusitis: amoxicillin/clavulanate

Practice Policy: _____

Kennel cough: no antimicrobials in mild cases; more severe: amoxicillin/clavulanate OR doxycycline OR oxytetracycline

Practice Policy: _____

Suspected Mycoplasma:

- cats: azithromycin OR doxycycline
- dogs: azithromycin OR doxycycline OR oxytetracycline

Practice Policy: _____

Pyothorax:

- cats: amoxicillin/clavulanate
- dogs: ampicillin + fluoroquinolone OR clindamycin + fluoroquinolone OR metronidazole + fluoroquinolone

Practice Policy: _____

Gastrointestinal infections

Acute diarrhoea with complications: amoxicillin/clavulanate OR 1st generation cephalosporin

Practice Policy: _____

Anal sacculitis: large plus topical instillation (saline or chlorhexidine); amoxicillin/clavulanate

Practice Policy: _____

Confirmed Campylobacter (if clinically significant): enrofloxacin OR erythromycin

Practice Policy: _____

Cholangitis/cholangiohepatitis: amoxicillin OR amoxicillin/clavulanate OR ampicillin OR cefotaxime. Metronidazole may be added in dogs.

Practice Policy: _____

Gastrointestinal bleeding (bacterial translocation): metronidazole + amoxicillin/clavulanate OR metronidazole + 1st generation cephalosporin. Add fluoroquinolones or aminoglycosides to improve Gram -ve cover.

Practice Policy: _____

Suspected Helicobacter: amoxicillin + metronidazole OR azithromycin + incise OR clarithromycin + metronidazole. In combination with bismuth (baiton in cats) OR famotidine OR omeprazole OR ranitidine

Practice Policy: _____

Genitourinary infections

Cystitis: amoxicillin/clavulanate OR trimethoprim/sulfadiazine. Many cats with cystitis do not have bacterial infections – routine antibiotics not required.

Practice Policy: _____

Endometritis/pyometra: amoxicillin/clavulanate OR trimethoprim/sulfadiazine

Practice Policy: _____

Suspected Leptospirosis: ampicillin OR penicillin G, doxycycline for carriers. Antihypertensives treat backwaters but do not address carrier state.

Practice Policy: _____

Prostatitis (acute): fluoroquinolones OR trimethoprim/sulfadiazine. Culture required in chronic cases.

Practice Policy: _____

Pyelonephritis (acute): trimethoprim/sulfadiazine. Culture required in chronic cases.

Practice Policy: _____

Struvite urolithiasis (dog): amoxicillin/clavulanate OR trimethoprim/sulfadiazine

Practice Policy: _____

Orthopaedic infections

Discoepiphysitis/Osteomyelitis: amoxicillin/clavulanate OR 1st generation cephalosporin OR clindamycin. Long courses (5-8 wk) may be needed.

Practice Policy: _____

Septic arthritis: amoxicillin/clavulanate OR 1st generation cephalosporin

Practice Policy: _____

Skin infections

Bites and other traumatic wounds: Limon, debris and lavage. In cat bites amoxicillin first choice, otherwise choice as for Pyoderma. Heavily infected/bite/injury: metronidazole OR amoxicillin/clavulanate + fluoroquinolone are appropriate while awaiting culture results.

Practice Policy: _____

Infected traumatic wound: amoxicillin/clavulanate OR 1st generation cephalosporin

Practice Policy: _____

Pyoderma:

- Empirical choice of antibacterials suitable for surface and superficial pyoderma (if no resistance or treatment failed) but culture required for deep pyoderma.
- Topical: chlorhexidine AND/OR fusidic acid OR mupirocin OR silver sulfadiazine* (Antifungals for concurrent Malassezia often useful)
- Systemic: amoxicillin/clavulanate OR cefalexin OR cefazolin OR cefuroxime (if problems expected with administration/compliance) OR clindamycin OR fluoroquinolones (if others inappropriate). Continue 1 week beyond resolution of clinical signs.

Practice Policy: _____

Pyoderma (idiopathic recurrent):

- Topical therapy important: antimicrobial shampoo/baths, especially chlorhexidine.
- Systemic: Alternatives to antibiotics include immunomodulators (Staph Phage Lysoins, autogenous vaccine). Last resort is pulse therapy 2-3 consecutive days/wk.

Practice Policy: _____

Pyoderma (confirmed MRSA/ MRSP): choice based on sensitivity. If sensitivity not known, use topical chlorhexidine AND/OR fusidic acid OR systemic tetracyclines OR trimethoprim/sulfadiazine.

Practice Policy: _____

Pyogranuloma: as for Pyoderma but culture essential and may need to be repeated. Flammable bacteria: clindamycin OR doxycycline OR trimethoprim/sulfadiazine. Mycobacteria: fluoroquinolones + doxycycline.

Practice Policy: _____

Ear infections

Otitis externa (erythrocytic/serous):

- Topical: fusidic acid OR erythromycin OR gentamicin OR marbofloxacin OR orbifloxacin OR polymixin B/miconazole. (Antifungals to treat concurrent Malassezia will often be useful). Combine with effective antibacterials ear cleaners with a low pH (chlorhexidine, chloroxylenol, isopropyl alcohol, PCMK).
- Systemic: choice as for Pyoderma.

Practice Policy: _____

Otitis externa (suppurative) or otitis media:

- Choice (including ear cleaners) as for erythrocytic/serous OE. Enrofloxacin, marbofloxacin, aqueous gentamicin appear to be safe in the middle ear. Multi-drug-resistant infections: 1% cefazidime OR 2.6% cavitrate/hoarolin OR 0.6% enrofloxacin OR 0.2% marbofloxacin OR 0.1-0.5% silver sulfadiazine (diluted in NaEDTA).
- Systemic: choice as for Pyoderma.

Practice Policy: _____

Eye infections

Bacterial conjunctivitis:

- Topical: ciprofloxacin OR fusidic acid OR gentamicin.

Practice Policy: _____

Suspected Chlamydia:

- Topical: chloramphenicol OR fusidic acid
- Systemic: doxycycline OR enrofloxacin.

Practice Policy: _____

Miscellaneous

Endocarditis: amoxicillin/clavulanate + enrofloxacin OR amoxicillin/clavulanate + metronidazole*

Practice Policy: _____

Mastitis: amoxicillin/clavulanate OR trimethoprim/sulfadiazine

Practice Policy: _____

Suspected Mycoplasma haemofelis (formerly Haemobartonella) (feline infectious anaemia): doxycycline OR fluoroquinolones

Practice Policy: _____

Neutropenia: Mild no antibacterial required. Severe but asymptomatic: trimethoprim/sulfadiazine. Severe and with clinical signs: 1st generation cephalosporin + fluoroquinolone.

Practice Policy: _____

Septic peritonitis: amoxicillin/clavulanate OR ampicillin + ceftazidime OR ampicillin + gentamicin* OR clindamycin + enrofloxacin OR fluoroquinolone + ampicillin. Add metronidazole* if anaerobe suspected.

Practice Policy: _____

Septicemia: ampicillin + ceftazidime OR ampicillin + gentamicin* OR clindamycin + enrofloxacin OR enrofloxacin + ampicillin OR fluoroquinolone + amoxicillin/clavulanate.

Practice Policy: _____



For further information on individual drugs and dosages, see BSAVA Small Animal Formulary, 7th edition.

Surgical prophylaxis

Prophylactic antimicrobial use is not a substitute for good aseptic technique.

- Perioperative antibiotic is appropriate
 - for prolonged surgery (>1.5 hours)
 - for implant introduction
 - where infections would be catastrophic (e.g. in CNS)
 - where there is an obvious break in asepsis
 - for bowel surgery with a risk of leakage
 - for dental procedures where there is periodontal disease
 - for contaminated wounds or pre-existing infection.
- In most cases:
 - intravenous amoxicillin/clavulanate OR first-generation cephalosporin
 - Where anaerobic involvement is highly likely (e.g. periodontal disease)
 - add or substitute metronidazole.
- For significant bowel leakage in an otherwise metabolically stable animal
 - combination may be most appropriate, e.g. ampicillin + aminoglycoside (e.g. gentamicin)
 - if patient volume-depleted, replace aminoglycoside with fluoroquinolone.

Practice Policy: _____

Antibacterials not indicated unless cytology and/or culture is positive

- Cardiorespiratory
 - Chronic bronchitis/allergic airway disease
 - Aspergillosis
 - Congestive heart failure
- Urinary
 - Feline lower urinary tract disease (including struvite urolithiasis)
 - Urinary incontinence
- Gastrointestinal
 - Acute vomiting (uncomplicated)
 - Acute diarrhoea (uncomplicated)
 - Chronic gastroenteritis (unless 4-week treatment trial for antibiotic-responsive diarrhoea)
 - Pancreatitis (uncomplicated)
- Surgery
 - Routine castration and ovariohysterectomy
 - Removal of uninfected skin mass
- Metabolic
 - Polyuria, polydipsia (unless pyogenic focus suspected)
 - Weight loss
- Skin and ears
 - Malessezia dermatitis
 - Non-specific pruritus, scaling, nodules, crusts, etc.

DO NOT USE

There are very strong arguments that antimicrobials with restricted use in human medicine (e.g. imipenem, linezolid, teicoplanin, vancomycin) should **not** be used in animals under any circumstances.

Second and Third Choice Antibacterials

These include: amoxicillin, 3rd generation and 4th generation cephalosporins (except ceftazidime) and fluoroquinolones. These antibacterials should be used only when other agents are inappropriate (e.g. in penicillin-sensitive individuals) and/or ineffective, and culture/sensitivity testing indicates that they will be effective.

Follow the Cascade

Suggested antibacterials are listed in alphabetical order. Order of selection should follow the Prescribing Cascade. The following agents (*) are not authorised as sole agents for systemic use in small animals: aminoglycosides, azithromycin, erythromycin, gentamicin, metronidazole. Metronidazole is authorised for oral use in combination with aspirin/ibuprofen. Oxytetracycline is not authorised for use in the cat.





Building alliances

BVMA Guidelines on the responsible use of antimicrobials in dairy and beef cattle production

Page 1 of 4



Cattle

Responsible use of antimicrobials in beef cattle production

The guidelines assume that the antimicrobial substances available are officially authorised for the purposes for which they are used and that they are lawfully obtained.

This booklet summarises the RUMA guidelines for the responsible use of antimicrobials in beef cattle production.

Antimicrobials have made a major contribution to the welfare of our vital livestock production in cattle.

Produced by the Cattle Working Group of the RUMA Alliance.

The emergence of antimicrobial resistance has prompted extensive research by the pharmaceutical industry and the associated possibility of novel antimicrobial treatments.

September 2004

The Responsible Use of Medicines in Agriculture Alliance (RUMA) has formed to review the use of medicines in agriculture to reduce the risk of antimicrobial resistance.

To this end, RUMA has formed the responsible use of antimicrobials in dairy and beef cattle production working group. This booklet summarises the RUMA guidelines.

For Farmers

THE GUIDELINES

The use of animal medicines carries with it responsibilities. Under UK legislation, all antimicrobials are licensed for specific species and uses.

There is a joint responsibility for the farmer to ensure that the right medicine is used for the right reason. Ultimate responsibility for animal health rests with the farmer.

A product will not be authorised unless it is

Dairy and beef farmers are best placed to judge when and how to use antimicrobials.

<http://www.ruma.org.uk/guidelines/cattle.htm>

BVMA Guidelines on the responsible use of antimicrobials in pig production

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Pigs

Responsible use of antimicrobials in pig production

In order for medicines to be used responsibly they must be lawfully obtained and used in accordance with the label directions or veterinary advice.

Produced by the Pig Working Group of the RUMA Alliance.

June 2004
Updated October 2004

BVMA Guidelines on the responsible use of antimicrobials in poultry production

Page 1 of 4



Poultry

Responsible use of antimicrobials in poultry production

In order for medicines to be used responsibly they must be lawfully obtained and used in accordance with the label directions or veterinary advice.

Produced by the Poultry Working Group of the RUMA Alliance.

June 2004
Updated October 2004

This booklet summarises the farmer's responsibility as part of the RUMA guidelines for the responsible use of antimicrobials in poultry production. They provide quick and easy-to-read guiding principles to poultry producers.

Antimicrobials have made a major contribution to poultry health and welfare for several decades. They are vital medicines for the treatment and control of bacterial infections in poultry.

The emergence of antimicrobial resistance as a serious problem in human medicine has prompted concerns that antibiotic resistance or resistant bacteria from livestock could be passed into the human population (and vice versa). If this occurred the effectiveness of some medical antimicrobial treatments could be compromised.

The Responsible Use of Medicines in Agriculture Alliance (RUMA) is a growing coalition of organisations representing every stage of the 'farm to fork' process. It has been set up to review and provide guidance on the use of medicines in all livestock. As part of this work, RUMA has established practical strategies to reduce the need to use antimicrobials, where appropriate.

To communicate these strategies effectively to the industry, RUMA has produced a comprehensive set of guidelines for the responsible use of antimicrobials in poultry and other livestock production. These give advice on all aspects from application and use, to responsibilities of farmers and veterinarians, to strategies for reducing the need for use. This booklet summarises the responsibilities of poultry farmers.

For Farmers

THE GUIDELINES

Under the RUMA guidelines, poultry farmers must:

- Report therapeutic antimicrobial products as complementary good management practice, vaccination programmes, and site hygiene.
- Draw up a flock health plan that outlines routine preventive treatments (e.g. biosecurity, vaccination and worming programme).

<http://www.ruma.org.uk/guidelines/poultry.htm>

BVMA Guidelines on the responsible use of antimicrobials in sheep production

Page 1 of 1



Sheep

Responsible use of antimicrobials in sheep production

In order for medicines to be used responsibly they must be lawfully obtained and used in accordance with the label directions or veterinary advice.

Produced by the Sheep Working Group of the RUMA Alliance.

June 2003
Updated October 2004

RUMA guidelines for the responsible use of antimicrobials in sheep production have been designed to give you an easy-to-read guiding principles to sheep producers in the UK.

Antimicrobials have, for decades, made a substantial contribution to sheep health and welfare for the treatment of bacterial infections.

The emergence of antimicrobial resistance in human medicine has prompted concerns that antibiotic resistance or resistant bacteria from livestock could be passed into the human population (and vice versa). If this occurred the effectiveness of some medical antimicrobial treatments could be compromised.

The Responsible Use of Medicines in Agriculture Alliance (RUMA) is a growing coalition of organisations representing every stage of the 'farm to fork' process. It has been set up to review and provide guidance on the use of medicines in all livestock. As a result, RUMA has established practical strategies to reduce the need to use antimicrobials, where appropriate.

To communicate these strategies effectively to the industry, RUMA has produced a comprehensive set of guidelines for the responsible use of antimicrobials in sheep and other livestock production. These give advice on all aspects from application and use, to responsibilities of farmers and veterinarians, to strategies for reducing the need for use. This booklet summarises the responsibilities of sheep farmers.

For Farmers

THE GUIDELINES

The use of animal medicines carries with it responsibilities. Under UK legislation, all antimicrobials are licensed for specific species and uses.

All farmers have a responsibility to using the animals under their control. There are responsibilities with their veterinary contact and appropriate antimicrobial use. Stock keepers can play a major role in or responsibilities if properly discharged responsibly used by observing the guidelines.

<http://www.ruma.org.uk/guidelines/sheep.htm>

BVMA Guidelines on the responsible use of antimicrobials in dairy and beef cattle production

Page 1 of 4



Fish

Responsible use of antimicrobials in fish production

The guidelines assume that the antimicrobial substances available are officially authorised for the purposes for which they are used and that they are lawfully obtained.

This booklet summarises the farmer responsibilities section of the RUMA guidelines for the responsible use of antimicrobials in fish production.

Antimicrobials have made a major contribution to fish health and welfare. They are vital medicines for the treatment of bacterial infections in fish.

The emergence of antimicrobial resistance as a serious problem in human medicine has prompted concerns about the potential for emergence of resistant bacteria from livestock to the human population and the associated possibility of this impacting on the effectiveness of medical antimicrobial treatments.

Produced by the Fish Working Group of the RUMA Alliance.

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The Responsible Use of Medicines in Agriculture Alliance (RUMA), a coalition of organisations including agricultural, veterinary, pharmaceutical, retail and consumer interests, has been set up to address these concerns. It aims to review the use of antimicrobials and to establish practical strategies to enable farmers, including fish farmers, to reduce the need for their use.

To this end, RUMA has formulated comprehensive guidelines for the responsible use of antimicrobials in fish production. These give advice on all aspects from application and responsibilities of the farmer, feed manufacturer and veterinary surgeon, to strategies for reducing the need for usage. This booklet summarises the Farmer Responsibilities section of the guidelines.

For Farmers

THE GUIDELINES

The use of animal medicines carries with it responsibilities. Under UK legislation, all antimicrobials are licensed for specific species and uses.

Report therapeutic antimicrobial products as complementary good management, vaccination and general site and farm hygiene. A site and farm health plan should be drawn up that outlines routine preventive treatments (for example vaccination, fungus control, salmonella control etc.). Delay in initiating therapy causes welfare problems and may ultimately lead to increased medicine usage.

A product will not be

Initiate treatment with an antimicrobial medicine, all of which are

<http://www.ruma.org.uk/guidelines/fish.htm>

07/04/2004

4. What more do we need to do?

- Every vet must be made aware of the problem
 - training, education, guidelines: - NO EXCUSE FOR INACTION
- Every vet should be held accountable for which antimicrobial used
 - Clinical governance, health protocols
- Every vet must accept constraints on the use of certain classes of antimicrobials
 - Health planning, sensitivity testing, clinical judgment
- Every professional association must communicate better the need for vet antimicrobials, and always on prescription
 - **ANIMALS NEED MEDICINES TOO – THEY DO!**



Thank you for your attention