

RUMA: Advocating Prudent Use of Antimicrobial Compounds

John FitzGerald

Responsible Use of Medicines in Agriculture (RUMA)
Alliance

Antimicrobial Resistance: A Whole Food Chain
Approach

How should Ireland tackle the problem of AMR?

Dublin

16 December 2014

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Today

- RUMA – an introduction
- Why reduce antimicrobial use
- Antimicrobial use in animals and resistance in humans
- EC regulatory proposals
- Reduction programme options
- RUMA Ireland?

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Who is RUMA?

- RUMA is a unique initiative, involving groups representing all livestock species in the UK, set up in 1997 to promote a co-ordinated and integrated approach to best practice in the use of medicines
- 23 organisations representing every stage of the "farm to fork" process e.g. farmers, vets, pharmaceutical industry, medicine distributors, feed manufacturers, quality assurance schemes, food retailers, trainers
- Independent members with specific expertise including human medicine and observers from Government – VMD (Defra) and FSA
- Full membership list is:

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Who is RUMA? (2)

- Agricultural Industries Confederation
- Animal Medicines Training Regulatory Authority
- British Egg Industry Council
- British Retail Consortium
- City and Guilds Land Based Services
- Dairy UK
- LEAF
- National Farmers' Union
- National Pig Association
- NFU Scotland
- Royal Association of British Dairy Farmers
- Royal Pharmaceutical Society
- Animal Health Distributors Association
- BPEX and EBLEX
- British Poultry Council
- British Veterinary Association
- DairyCo
- Game Farmers' Association
- National Beef Association
- National Office of Animal Health
- National Sheep Association
- Red Tractor Assurance
- RSPCA

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Who is RUMA? (3)

- Total annual income around £21k
- Funded solely by members' annual fees
- Fees increase annually by CPI

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Why reduce antimicrobial use

- **Resistance!**
- Antimicrobial Resistance (AMR) is a complex issue that knows no boundaries
- Impacts on humans and animals and can transfer between them
- Global issue - travel considered an important vector for new human strains, movement of animals, feed and food
- AMR genes pre-exist in the environment: natural response to natural antibiotics produced during inter-species competition
 - Resistant bacteria found in ice caps
- Bacteria cause disease, not resistance but
- Use of antimicrobials or other selective agents (e.g. disinfectants) will select for resistance genes

Why reduce antimicrobial use (2)

- There is a clinical crisis as evidenced by comments by the UK's Chief Medical Officer and Prime Minister
 - antibiotic resistance is one of the greatest threats to modern health and we face a future without cures for infection if antibiotics are not used responsibly
 - return to the medical dark ages

Why reduce antimicrobial use (3)

- There is less surveillance of animal pathogens for AMR than zoonotic pathogens
- Limited surveys indicate no or low levels of resistance in animal pathogens
- Measurement of resistance in animal and human pathogens often different making comparison difficult
- Currently there is no clinical crisis in animal medicine in UK as, apart from isolated cases of swine dysentery, some penicillin resistance in *Streptococcus suis* and some reported resistance to newer antimicrobials in respiratory pathogens of animals, antibiotics continue to work for all animal treatments.

Why reduce antimicrobial use (4)

- Must be no complacency in veterinary medicine
- Do not want to increase the risk of animal use leading to AMR in humans and
- Want to keep antimicrobials effective for treating all animals

Links between animal antibiotic use and human resistance (1)

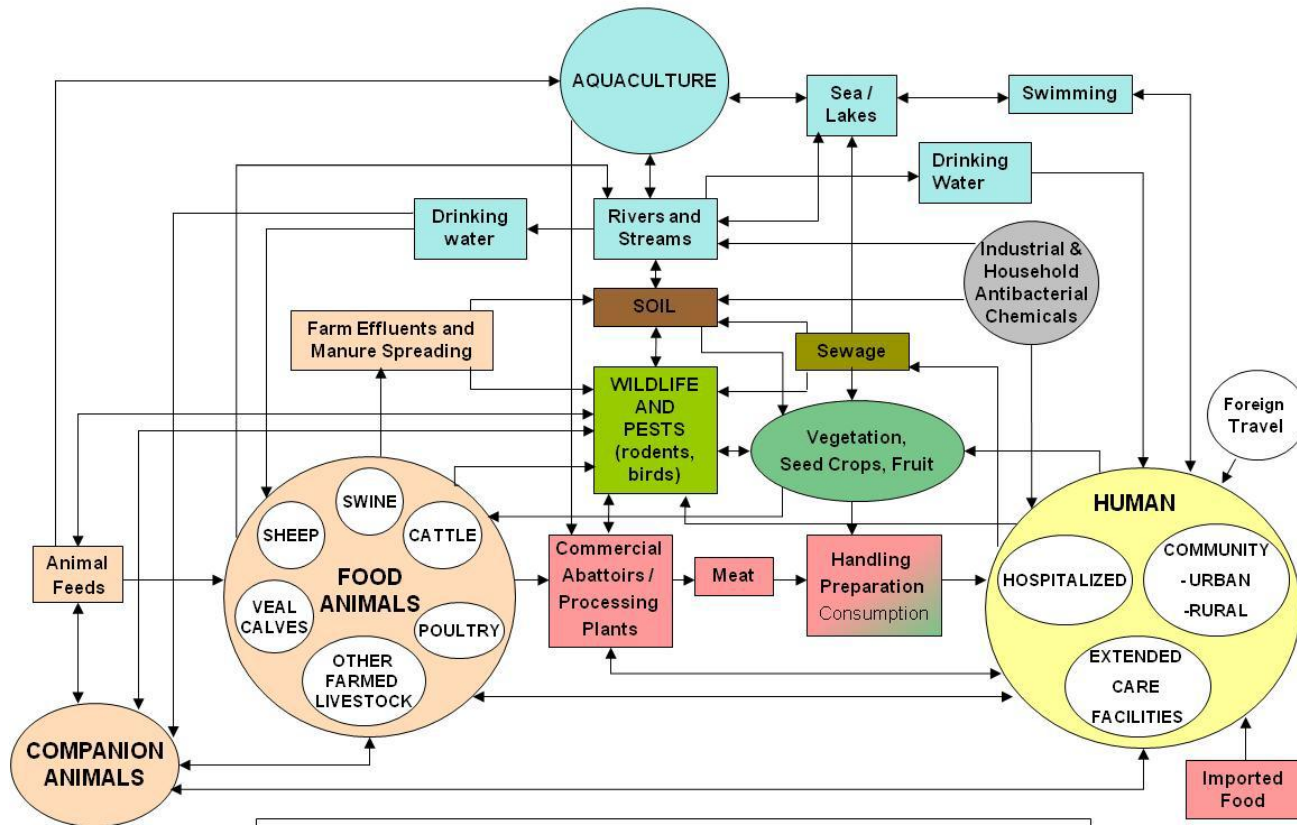
- Possible for resistant bacteria to transfer from animals to humans and vice versa
- Science inconclusive on the extent so jury is out but general consensus is that the problem of antibiotic resistance in humans comes mainly from the over-use and mis-use of antibiotics in human rather than animal medicine
- Many pathways for resistance transfer

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Links between animal antibiotic use and human resistance (2)

EPIDEMIOLOGY OF ANTIMICROBIAL RESISTANCE



after Linton AH (1977), modified by Irwin RJ, modified by Simon AJ and van den Eede C

Links between animal antibiotic use and human resistance (3)

- Antibiotics are used in humans and livestock to treat, control and prevent disease
- To reduce risk of human AMR from animal antibiotic use we need to
 - use antibiotics responsibly in livestock; and
 - minimise/eradicate the possibility of bacterial transfer in food

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

EC Regulatory proposals

Veterinary Medicines

- Measures aimed to tackle AMR
- The quantity of all medicines supplied on a veterinary prescription must be limited to the amount required for the treatment/therapy concerned
- An extra 4 years data protection for products containing new antimicrobial substances
- Require Member States to collect relevant and comparable data on the volume of sales and the use of veterinary antimicrobial medicinal products.
- Allow the Commission to establish rules for the designation of the antimicrobials which are to be reserved for treatment of certain infections in humans
- Allow antimicrobials to be used under the cascade under certain conditions and the Commission, taking into consideration scientific advice of the EMA, to establish a list of antimicrobial medicinal products that cannot be used under the cascade, or which can only be used for treatment under the cascade subject to certain

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

EC Regulatory proposals

Medicated Feed

- Ban the preventive use of medicated feed containing antimicrobials
- Detailed rules on carry-over levels and limits on the quantities allowed under a medicated feed prescription
- Proposals reflect concerns about the suspected (over)use of antimicrobials in animals to prop up poor farm management and even to promote growth (banned in the EU in 2006)
- Ignore the benefits of medicated feed for administering the right dose of antimicrobial to animals with the least stress to the animal and health and safety risks to humans
- Concerns that this ban could be damaging to animal health and welfare

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Reduction Programme Options (1)

- Targets
- Critically Important Antimicrobials
- Responsible Use

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Reduction Programme Options (2)

- **Targets** for amount of antimicrobials used in animals have been set arbitrarily by some countries
- The Netherlands - Ministers set a 50% reduction target from the total use in 2009 by 2013. They have achieved a 57% reduction and Ministers are now talking about a 70% target
- Belgium have just announced a 50% reduction target by 2020
- There is no science to justify the targets
- There has been no monitoring of the effect on animal health and welfare
 - concerns expressed about higher mortality rates, more lesions in abattoirs and black market supply of antimicrobials
- Irresponsible use to meet targets could increase resistance risk!

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Reduction Programme Options (3)

- **Critically important antimicrobials** (CIAs) to human health are generally defined as fluoroquinolones and 3rd and 4th generation cephalosporins.
- General acceptance that these modern antimicrobials, which can be the treatment of last resort for some human infections, should be used sparingly in animals and only where there is a scientific justification to do so.
- CIAs should not be used as first line treatment or as a preventive treatment (apart from dry cow therapy for mastitis where there is no evidence of resistance).
- There is now a move to include macrolides as a CIA. Macrolides have been used for many years in veterinary medicine with little use in human medicine although this is increasing.

Reduction Programme Options (4)

- **Responsible use** means using medicines **as little as possible and as much as necessary**
- Prevention of disease – health planning, vaccine programmes, biosecurity, good hygiene, access to fresh water, ventilation etc
- Right medicine at right time as often as necessary according to the label, use of the cascade by exception – not a substitute for good farm management
- Not always using the newer generation of antimicrobials in cases where the older more conventional products can do the job just as well
- Move away from the use of last resort/human critical antibiotics as frontline, preventive medicines
- RUMA Guidelines – ruma.org.uk

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

What we need to consider

- What we are trying to achieve e.g. simple reduction of numbers to meet numerical targets or less resistance in humans/animals
- Risks of reduced use to e.g. animal health and welfare, food security
- How to measure the success and the wider impacts of the reduction programme

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

RUMA Ireland

- Great idea
- Needs widespread support and commitment
- Happy for you to use RUMA
Guidelines/documents as a starting point
(with appropriate acknowledgement!)
- Good luck

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma

Thanks for listening

Any Questions?

Contact details:

John FitzGerald

RUMA Secretary General

rumasec@btinternet.com

01747 860867

ruma.org.uk

RESPONSIBLE USE OF MEDICINES IN AGRICULTURE ALLIANCE

ruma