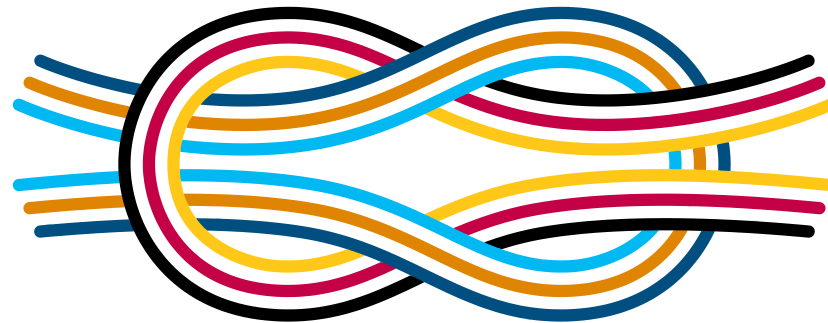




Federal Ministry
of Health

Federal Ministry
of Food
and Agriculture



G20 GERMANY 2017

Meeting of the Public Health and
Veterinary Public Health Institutes of the G20

Workshop Rational Antibiotic Use
Rex Horgan and Susan Hopkins

Terminology: types of Antibiotic use ?

- Rational/ irrational
- Responsible/ irresponsible
- Appropriate/ inappropriate
- Judicious/ injudicious
- Optimal/ sub-optimal
- Prudent/ imprudent
- Necessary/ unnecessary, stewardship etc.

What are the core elements of rational (prudent) antibiotic use ?

- Consensus that prudent use is a more appropriate term, use may be "rational" from an economic or scientific standpoint but problematic or imprudent as regards AMR
- Use of antibiotic growth promoters in animals and most preventive/prophylactic treatments are not considered prudent (also in humans use can be reduced e.g. in dentistry, focus more on hygiene)
- Use antibiotics only if necessary, in the amount that is necessary, only for as long as is necessary
- Seek to avoid or limit mass medication/group therapy of animals: e.g. by administering to smaller treatment groups of ill animals rather than entire groups of animals on farm etc.
- We did not consider in detail alternatives to antibiotics, infection prevention measures, biosecurity , vaccination, animal genetics/productivity, phytotherapy etc. (Infection Prevention is subject of WS1)

What are the core elements of prudent antibiotic use ?

- Principle of prudent use is to maximise the benefit to the patient or animal while minimising the potential adverse consequences (AMR, side-effects etc.)
- Need to consider alternatives to antibiotic use e.g. vaccination, improving animal husbandry, phytotherapy etc.
- Administer antibiotics for the shortest period possible, try to use narrow-spectrum drugs rather than broad-spectrum ones
- Preventive use of antibiotics is usually quite limited in humans, can be common in food-producing animals

What are the core elements of prudent antibiotic use ?

- Should be based on clinical examination/diagnostic tools or tests by a trained practitioner (capacity differences G20 countries versus LDCs)
- Should be based on prescription only, by a trained practitioner
- Use of authorised products only (potential "cascade"/off-label use in animals, especially in minor species, and humans)
- Aim for evidence-based guidance with specific rules for CIAs
- Evidence base in animals, scoring/diagnostic tools more in humans
- Ensuring access/availability, esp. for older and narrow-spectrum drugs

What are the core elements of prudent antibiotic use ?

- Strict respect of the prescription by the animal owner or keeper or by the human patient/carer
- Recognising the level of risk we are willing to tolerate for the patient or animal if not treated with antibiotics
- Benefit-risk evaluation: risk of giving or not giving antibiotics...
- Recognising that antibiotics are a rare resource, their use needs to be sustainable
- Public health and antibiotic efficacy are linked to use of antibiotics in both humans and animals (plus environmental aspects, One Health)

Success stories prudent Ab use

- Some national examples: France, Netherlands, Germany, UK, Spain (colistin), find a balance between mandatory regulations and voluntary incentives (public/private)
- Involvement of stakeholders, mobilisation of farmers, vets, doctors etc.
- Effective communication campaigns, raise awareness, use of social media
- Monitoring and benchmarking of antibiotic use, use of targets
- Publication of antibiotic use/sales data: motivates stakeholders to act, role of farm assurance schemes etc.
- Careful preparation of initiatives, evaluation of potential economic impacts etc.

Success stories prudent Ab use

- Stewardship tools: for GPs, hospitals, vets: information leaflets to give to patients, delayed or back-up prescriptions etc.
- Impact of prudent use seen in AMR monitoring and antibiotic use data
- Positive feedback on successes achieved to maintain progress
- Consider not just the quantity of antibiotics used in animals/humans but also the quality of prescribing: use of broad vs narrow-spectrum antibiotics, combination products, CIAs
- ((Totally antibiotic-free production of animals: potential animal health/welfare risks, a marketing gimmick which may mislead consumers if misused ??))

Obstacles to prudent Ab use

- Availability, cost and time required for diagnostic tests (often prescriptions for antibiotics are reimbursed but not costs of diagnostic tests...)
- Access to older and narrow-spectrum antibiotics (e.g. benzyl penicillin)
- Behaviour/culture among patients, farmers: expect to receive or use Abs (e.g. dry cow treatments), competition between prescribing doctors/vets (1-1 relationship)
- Internet sales of medicines/antibiotics potentially less regulated
- Financial incentives for antibiotic prescribing and use (doctors +vets) from pharma.
- Laboratory quality assurance: if tests not accurate, esp. important for LDCs

Obstacles to prudent Ab use

- Proper disposal of antibiotics (use of left-overs by patients, farmers)
- Farm profitability, animal productivity, financial viability of farms+vet practices
- Supply of antibiotics without prescriptions
- Differing rules internationally, potential competitive distortions

Obstacles to prudent Ab use

- Difficulties in establishing breakpoints
- Zinc oxide in pigs: potential environmental consequences of alternatives to antibiotics...
- Animal genetics, high productivity, predisposition to certain diseases
- Differing perceptions between human/vet domains: potential blame-game, need for equitable treatment between vets, farmers and doctors
- Appointment time pressure on GPs, seeking to avoid necessity for repeat visits, budget limitations
- Risk of losing the motivation and cooperation of stakeholders over time

What is impact of lab diagnostics on prudent use of Abs?

- Acquiring appropriate samples can be challenging (e.g. respiratory tract infections in humans)
- Cost and time considerations for lab tests and to receive results
- Usefulness of selective reporting of antibiograms
- Impact of mandatory rules/legislation requiring antibiograms for use of CIAs (animal + human)
- Central collation of data would facilitate country antibiograms
- Funding and support for sentinel surveillance in human medicine

How to better integrate outpatient sector in prudent use?

This can involve GPs, outpatient departments, doctors in hospitals

Use electronic prescriptions, scan centrally (will diagnosis be included)

Requirements for data to be shared from insurance providers (easier if a public system rather than private)

Use tv, mass media awareness campaigns to better integrate activities: e.g. the message "Antibiotics are not automatic"

World Antibiotic Awareness Week, European Antibiotic Awareness Day...