Putting animal health with less AMR in the focus

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Prerequisites

• Reduce the need for treatment through better animal husbandry
• Surveillance of AMU and AMR on farm level and national collection and analysis of data
• Establishing prudent use policies throughout the industry
• No use of antimicrobials for growth promotion and routine prophylaxis
Key fields for research and development

• How to roll out antibiotic stewardship in practice?
• How to make surveillance more cost effective?
• How to treat effectively with less collateral damage (e.g. AMR)?
  • Treatment choices
  • Targeting treatment
• Developing alternatives to antimicrobial treatments?
How to roll out antibiotic stewardship in practice?

• Setting up a legal framework
• Designing „Push and pull factors“ for decision takers / vets
  • For continuous education
  • For following treatment guidelines
  • For considering AMR aspects
  • For prioritizing antimicrobials of minor importance to human medicine
How to make surveillance more cost effective?

• Stop handwriting treatment records (reduce bureaucratic burden)

• Provide feedback to data providers
  • Data in usable fashion
  • Benchmarking / comparing with colleagues
  • Exchange anonymised data with colleagues (Improve benefit to data providers)
How to treat effectively with less collateral damage (e.g. AMR)?

Treatment choices

Is antimicrobial treatment needed?

- Develop tools for decision support integrating information of different sources
- Providing / improving rapid & reliable pen side / point of care diagnostic tools

If needed, optimize cost/benefit ratio

- Providing regional AMR data in a systematic way
- Providing improved treatment schedules/guidelines
- Re-think treatment with respect to exposure of non-target bacteria
How to treat effectively with less collateral damage (e.g. AMR)?

Targeting treatment

- Avoiding/minimizing exposure of non-target bacteria
  - Bringing the drug to the infection site
  - Avoiding contamination of housing environment
  - Avoiding residues in faeces/dung

- Improving treatment protocols for specific diseases
- Targeting treatment to diseased animals
Developing alternatives to antimicrobial treatments

- Use of phages to control endemic pathogens
- Use of non-pathogenic strains to outcompete resistant strains
  - Competitive exclusion
  - Supporting the commensal flora
  - Stabilizing the microbiome
- Design vaccination schedules to reduce specific and secondary infections
Thank you for your attention

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