International Initiatives - Containment of Antimicrobial Resistance from the Food Chain

WHO, FAO, Codex

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Widespread use of antimicrobials in livestock production … not only from therapeutic purposes.

Same classes of antimicrobials are used both in humans and food-producing animals…

The food chain is considered to be an important route for emergence and spread of resistance between humans and animals.

Globalization: food trade and travels – leads to rapid global spread; need for international action.
The five key areas of the WHO global strategy for containment of antimicrobial resistance – Sept 2001

- Rational drug use and regulation
- Infection prevention
- Research and development
- Surveillance
- Agriculture/Animal husbandry
WHO Global Principles for Prevention and Control of Foodborne Antimicrobial Resistance-1

- National and international interdisciplinary cooperation

- Prudent use of antimicrobial agents in all sectors
  - No use of antimicrobial agents for growth promotion
    - EU banned all growth promoters as of January 1, 2006
  - A good regulatory system for approval and licensing
  - Prescription-only
  - Practitioners not having economic profit from prescription
  - Routine prophylactic use of antimicrobials should be never be used as a substitute for health management
  - Accurate diagnosis and antimicrobial susceptibility testing
  - Appropriate antimicrobial product and administration route

- Infection control
  - Successful disease control relies on a holistic approach encompassing hygiene, animal husbandry and management, nutrition, animal welfare, and vaccination
WHO Global Principles for Prevention and Control of Foodborne Antimicrobial Resistance-2

- Antimicrobials identified as critically important in human medicine (WHO, 1998, 2005, 2007) to be used in animals only if justified
  - Fluoroquinolones, 3 + 4 generation cephalosporins

- Monitoring of antimicrobial resistance and antimicrobial usage in human and animals
  - Useful information on prevalence and trends
  - Input for risk assessment and risk management
  - A basis for choosing, implementing and evaluating interventions
The Joint FAO/WHO Food Standards Programme

Consumer protection, fair practices in trade
REQUEST FROM CODEX

- Foodborne AMR in complex and need a multidisciplinary and cross sectoral approach
- Cannot be addressed by none of existing Codex expert bodies and committees
- Requested WHO and FAO to address the issue of antimicrobial resistance arising from use of antimicrobials in food producing animals
- In collaboration with the OIE
Joint FAO/OIE/WHO Expert Consultations on AMR

- Risk Management Options, Oslo, 2004
- Aquaculture, Seoul, 2006
  - Evidence of the link between use of AM in food producing animals and antimicrobial resistance in humans
  - Concept of Critically important antimicrobials (WHO list, OIE list, FAO hosted tripartite CIA meeting in 2008)
  - Establishment of a Codex Task Force on AMR (2007-2010 – Codex guidelines on risk analysis of FAMR; CAC/GL 77-2011)
  - Importance of integrated surveillance
WHO Achievements 1990-2012

- International collaboration established
  - Codex, FAO, OIE, WHO

- 20 expert meetings and consultations


- WHO list of Critically Important Antimicrobials for Human Heath developed and updated every 2 years

- Establishment of an Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR)
Promoting Integrated Surveillance of AMR

Tackling foodborne antimicrobial resistance through integrated surveillance:

- Monitoring Usage in Animals and Human
- Surveillance of AMR in animals, food and humans
- Data analysis/integration to inform policy

- 31 Members, OIE FAO, representatives

- 5 Subcommittees
  - Antimicrobial Usage Monitoring in humans and animals
  - Antimicrobial Resistance Surveillance of foodborne and zoonotic bacteria in animal, food and humans
  - Capacity Building & Pilot Projects
  - Data Management
  - Communication

- Country pilot projects: Colombia, Kenya (with FAO), Cambodia (with FAO)

- Focused GFN/AGISAR research projects: Burkina Faso, Uruguay, Paraguay, Venezuela, Argentina,
Global Foodborne Infections Network (GFN)

A network of professionals working in veterinary, food and public health disciplines committed to enhancing capacity of countries to conduct integrated surveillance of foodborne and other enteric infections, incl. antimicrobial resistance

GFN Steering Committee
Global Foodborne Infections Network (GFN)

- Building Capacity for Integrated Surveillance of Foodborne Diseases (incl. AMR)
- Cross sectoral participation: Veterinary, Food and Public Health sectors
- Multidisciplinary approach: Microbiology and Epidemiology
Global Foodborne Infections Network (GFN)

GFN goals:

1. Strengthen national and regional capacities for surveillance, investigation, prevention and control of foodborne infections including antimicrobial resistance by
2. Fostering partnerships
3. Raising awareness....on benefits of integrated surveillance
4. Generating country and regional data that contributes to a global understanding of foodborne and other enteric infections.

Activities:

- (Inter)national Training
- Post training implementation
  - External Quality Assurance System (EQAS)
  - Country Data Bank (CDB)
  - Onsite Problem Solving
  - Focused Regional and National Projects
  - Reference services
- Communication
AGISAR Country Pilot Projects Objectives

• Supplement the work of AGISAR by providing data from various parts of the world, particularly from developing countries.

• Contribute in strengthening the capacities of countries to establish their own program on integrated surveillance of AMR and antimicrobial drug use.

• Foster communication and collaboration between animal, food and health sectors,

• Increase awareness and commitment among countries to implement strategies for prevention and control of foodborne diseases and containment of AMR.

• Use data generated at country level to influence policy.
Colombia pilot project...now a national integrated program for antimicrobial resistance
- Promote leadership and intersectoral collaboration
- Create and enforce enabling regulatory framework
- Strengthen surveillance and monitoring
- Promote training on prudent use of antimicrobials in food producing animals
- Decrease the need for antimicrobials through better animal husbandry
"In terms of new replacement antibiotics, the pipeline is virtually dry. But much can be done. This includes prescribing antibiotics appropriately and only when needed, following treatment correctly, **restricting the use of antibiotics in food production to therapeutic purposes** and tackling the problem of substandard and counterfeit medicines."

Dr Margaret Chan
Director-General
World Health Organization
More information at:

http://www.who.int/foodborne_disease/resistance

:: General information
:: Codex ad hoc Intergovernmental Task Force of Antimicrobial Resistance
:: List of Critically Important Antimicrobials
:: WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR)
:: Publications
:: Meetings