Action and Experience of Containment of AMR in Veterinary Sector

JAPAN

AMR Symposium
- Side event of the 1st G7 Chief Veterinary Officers Forum -
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Policies on AMU/AMR: Risk analysis framework - based on international standards of OIE & Codex -

Cabinet Office

Consumer Affairs Agency

Food Safety Commission (FSC)

MAFF

MHLW

Notify Risk Assessment Recommendation

Request Risk Assessment

Coordinate Risk Communication

Consumers, Producers, Manufactures, etc.
Approval/Designation procedure of veterinary drugs/feed additives

MAFF

Assess efficacy and safety for animals
Animal drug council (veterinary drugs)
Feed council (feed additives)

AMR risk assessment

FSC

Assess safety for humans

MHLW

MAFF

Approval of veterinary drugs
Designation of feed additives
Examples of risk management measures:

**High risk** – Revocation of approval or designation

**Medium risk** – Strict use as a second-line drug, restriction of use

**Low risk/Negligible risk** – Continued monitoring
Policies on AMR – Surveillance and Monitoring -

- **JVARM**: Japanese Veterinary Antimicrobial Resistance Monitoring System
- Since 1999, collecting data on 1) use of antimicrobials estimated based on sales amount and 2) resistance of bacteria isolated from healthy and diseased animals
  - Animal species: cows, pigs, broilers and layers
  - Bacteria: E.coli, Enterococcus, Salmonella, Campylobacter etc.
- Data are utilized in risk assessment and risk

**JVARM has started collaboration with JANIS** (Japan Nosocomial Infectious Surveillance: AMR surveillance for human health sector) in order to establish the integrated surveillance system recommended by WHO based on One Health Approach.

**National Veterinary Assay Laboratory (NVAL)**: the core laboratory in veterinary sector
“Prudent Use Guidelines” were released in 2013 and distributed to veterinarians and livestock farmers.

Fluoroquinolones, 3rd generation cephalosporins should be used as the second-line drug, only if the first-line drug has not been effective.
Adoption of **AMR National Action Plan**, April 5, 2016

**Ministerial Council on the Response to Infectious Diseases that Pose a Threat to Global Society**

Prime Minister Shinzo Abe:

- AMR is a global threat and Japan has determined our first action plan.
- We will advance effective measures for **both humans and animals**.
- I request that **all relevant ministers collaborate closely** to steadily advance the relevant measures.

English version is available at
Goals
1. Awareness and Education
2. Surveillance and Monitoring
3. Infection Prevention and Control
4. Appropriate Use of Antimicrobials
5. Research and Development
6. International Cooperation

Goals 1-5 : in accordance with WHO Global Action Plan

Structure of the National Action Plan

Action Plan
Goal
Strategy
action
action
Strategy
Outcome Indices

Within each strategy
1. Background
2. Policies
3. Actions
4. Related Ministries and Agencies, and Institutions
5. Evaluation Indices
6. References
Action Plan
Goal 1  Awareness and Education

Strategy:
in the fields of food, veterinary care, livestock, fisheries, and agriculture
<For students>
○ Strengthen undergraduate education/National examinations
<For professionals and other workers>
○ Enhance postgraduate educational training/Continuing education

Recent Activities  Awareness and Education

• AMR Awareness Month; November
• National Council on Countermeasures against AMR;
  1st meeting was held on Nov. 1
• Distribution of leaflet
• Contribution to related magazines
• AMR Symposium: Actions for combatting AMR in veterinary sector (Nov. 24)
Action Plan
Goal 2  Surveillance and Monitoring

Strategies:

- Introduce molecular analysis approach to AMR surveillance
- Expand the scope of monitoring in aquaculture
- Establish a monitoring system for companion animals
- Further strengthen integrated monitoring of human and animal health sectors
- Establish integrated One Health surveillance in humans, animals, food, and the environment
Experience
Integration of human and animal data

Trend of % of E.coli resistant to fluoroquinolones

(Data from JANIS and JVARM, 2003-2013)
Action Plan
Goal 3  Infection Prevention and Control

Strategies:
1. Promote infection prevention and control of livestock, aquaculture animals and companion animals:
   o Further develop and use vaccines for livestock, aquaculture animals and companion animals
   o Increase training opportunities for veterinarians and livestock and fishery workers
2. Step up infection prevention and control along the entire food chain:
   o Promote HACCP (Hazard Analysis and Critical Control Point)
Experience: The impact of vaccination
Financial cost due to streptococcal infection in yellowtails

(Data provided by Oita prefecture, Japan)
Action Plan
Goal 4  Prudent/Appropriate use of antimicrobials

Strategy:
Ensure prudent use of antimicrobials for animals in the field of livestock, fisheries and veterinary care

1. Perform risk assessment and implement risk management measures
2. Strengthen a system to promote prudent use of antimicrobials for animals
   o Ensure compliance with the guidelines for the prudent use of antimicrobials for animals
   o Introduce a new system of oversight of experts (vets, aquatic animal health inspectors) for the antimicrobial use in aquaculture
3. Monitor the antimicrobial feed additive use by animal species
Experience: Drop in resistance to cephalosporins upon voluntary withdrawal of ceftiofur in poultry hatcheries


(Hiki et al 2015. Foodborne Pathogens and Disease)
1. Promote research to elucidate the mechanism of the emergence and transmission of AMR and its socioeconomic impact.

2. Promote research on effective public awareness/education on AMR, etc.


5. Promote global research collaboration.
Support international AMR initiatives by FAO, WHO and OIE

- Contribute to the advancement of international measures (i.e. supporting the formulation of action plans in other countries)

In 2016:

- Tokyo Ministerial Meeting on Antimicrobial Resistance in Asia (co-hosted by Japan and WHO)
- G7 meetings across Japan
  - G7 summit in Ise-Shima, G7 Agriculture Ministers’ Meeting in Niigata, G7 Health Ministers’ Meeting in Kobe
- OIE focal point seminar, OIE regional training
Challenges

We continue to strengthen our current activities to **further ensure the prudent use** of antimicrobials and **enhance the collaboration** with the surveillance in the human sector under the concept of **One Health Approach**.

**The lesson from our experience:**
Importance of awareness and understanding of veterinarians and farmers and ensuring more active participation of the prudent use guidelines established in 2013

**New activities:**
- Expansion of the coverage of AMR monitoring including companion animals.
- Further promotion for the involvement of experts when using antimicrobials in aquaculture.
- Molecular analysis approach to the AMR surveillance in cooperation with the human sector.
We are actively engaging stakeholders (farmers, pharmaceutical companies, feed industry, academia, etc.) to formulate more concrete programs and schedules for each animal species.

Based on action programs and schedules, implement measures in cooperation with stakeholders.

Future Action

- 2016
- National Action Plan
- Exchange views with stakeholders
  - Feasibility
  - Challenges
  - Solutions
  - Procedures
  - Goals
  - etc.
- Within one year
- Action programs and schedules for each animal species
  - Pigs
  - Cows
  - Broilers
  - Aqua-culture
  - etc.