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World Organisation for Animal Health (OIE)

OIE activities on rabies: PVS, vaccine banks and the OIE twinning

OIE Global Conference on Rabies Control: with the support of WHO and FAO
“Towards Sustainable Prevention at the Source”
7-9 September, 2011, Incheon-Seoul, Republic of Korea
Approach

- Introduction
- Performance of Veterinary Services (PVS)
- Vaccination
- ‘Twinning’
- Conclusions
Introduction (1/3)

- Discussions so far have dealt with:
  - Global situation, science, economics, rabies control, standards, stakeholders

- OIE emphasises the importance of control and eradication at source, primarily dogs:
  - Using tools such as vaccination, education, stakeholder engagement
Introduction (2/3)

- A key direction of the OIE 2011-2015 Strategy is ‘One Health’ to support the reduction and management of risk at the animal/human/ecosystems interface.

- And strategic objectives relating to:
  - Good governance and capacity building of veterinary services (VS) and
  - The development and implementation of scientifically based standards.
OIE strategies support immediate actions, a staged approach, as well as facilitating long term maintenance and improvements to rabies control programs.

- That is sustainability.

The presentation will focus on only 3 components of OIE work.

- PVS, vaccination, and ‘twinning’
One of the main levers for providing practical help to strengthen VS is to put in place sound governance, structural and procedural arrangements.

- Using the PVS Tool, PVS Gap Analysis (GA), and PVS follow-up

The PVS Tool is a mechanism to evaluate performance of VS and promote a culture of awareness.

- And sustained interactions with the public/private sectors
The OIE-PVS Tool (2/15)

Evaluation of the Performance of Veterinary Services

a tool for Good Governance of Veterinary Services

Objective: 120 Countries

This global tool provided by the OIE will have a great impact on the promotion and improvement of Veterinary Services worldwide
OIE PVS Tool: Structure (3/15)

4 Fundamental Components

- Human, physical and financial resources
- Technical authority and capability
- Interaction with stakeholders
- Access to market

5 Levels of Advancement:

- Level 1 = No compliance;
- Level 5 = Full compliance with OIE standards

A higher level assumes compliance with all preceding levels.

46 Critical Competencies, included in the 2010 edition:
- management systems;
- animal welfare;
- And evaluation of the performance of Aquatic Animal Health Services

(as part of a PVS evaluation of Veterinary Services, or as an independent exercise).
Critical competencies (4/15)

I. HUMAN, PHYSICAL AND FINANCIAL RESOURCES

1. Professional and technical staffing of the Veterinary Services
2. Competencies of veterinarians and veterinary para-professionals
3. Continuing education
4. Technical independence
5. Stability of structures and sustainability of policies
6. Coordination capability of the sectors and institutions of the Veterinary Services
7. Physical resources
8. Funding
9. Contingency and compensatory funding
10. Capability to invest and develop
The GA is a follow-up activity to analyse the results of the evaluation

- And helps identify priorities for action and prepare investment programs for national/international support

- PVS follow-up evaluation missions help assess progress post investments
• OIE facilitation to countries to transform results of Gap Analysis into Veterinary Services (VS) Strategic Plans
• Pilots in Vietnam and Philippines under the AusAID Programme for Strengthening Veterinary Services (PSVS)
Source: www.greenwichmeantime.com
The OIE collaborates with governments, stakeholders and donors.

The OIE PVS Pathway (9/15)

« Diagnosis »
- PVS Evaluation
- PVS Gap Analysis

« Prescription »
- Incl. VS Strategic Priorities
- Public / Private Partnerships
- Veterinary Education
- Laboratories
- PVS Pathway Follow-Up Missions

Specific Activities, Projects and Programs

« Treatment »
- Veterinary Legislation
The OIE PVS Pathway today (10/15)

- **PVS**
  - 217 Certified Experts
  - 105 Missions done

- **Legislation**
  - 31 Certified Experts
  - 20 Missions done

- **PVS Gap Analysis**
  - 81 Certified Experts
  - 38 Missions done
## PVS Evaluation Missions

### State of play (11/15)

<table>
<thead>
<tr>
<th>Region</th>
<th>OIE Members</th>
<th>PVS Evaluations requests received</th>
<th>PVS Evaluations missions implemented</th>
<th>Reports available for (restricted) distribution to Donors and Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>52</td>
<td>50</td>
<td>45</td>
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<td>Americas</td>
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<td>22</td>
<td>20</td>
<td>16</td>
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<tr>
<td>Asia, the Far East and Oceania</td>
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<td>18</td>
<td>15</td>
<td>11</td>
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<td>Europe</td>
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<tr>
<td>Middle East</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>178</strong></td>
<td><strong>116</strong></td>
<td><strong>104</strong></td>
<td><strong>77</strong></td>
</tr>
</tbody>
</table>

*As of 26 August 2011*
Overview of PVS Evaluation missions (12/15)
# PVS Gap Analysis Missions

## State of play (13/15)

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*As of 26 August 2011*
Overview of PVS Gap Analysis missions (14/15)
Given VS are at the front line of animal health including zoonotic activities ongoing improvements can support sustainable rabies prevention and control systems.

PVS components will continue to be expanded to cover new areas e.g. wildlife management services relevant to animal health, a Pilot on ‘One health’

And PVS follow-up activities will ensure countries are up-to-date with the newest developments.
Rabies Vaccine Bank (1/6)

- Successful rabies control/eradication requires management at the animal source
  - Focus on containment and eventual eradication especially in dogs
  - Using vaccination tools
  - And multi sectoral/disciplinary coordination
- Baits, if successful, could improve vaccine coverage in certain situations
Rabies Vaccine Bank (2/6)

Rabies vaccination

Credits: BAI, Philippines
Would there be value in establishing Rabies Vaccine Bank(s)?

- OIE has initiated the establishment of Vaccine Banks for AI and FMD
- OIE is developing an EU funded Rabies Vaccine Bank
  - And a pilot activity from its Bangkok Office
Vaccines would comply with international standards
- and be provided by OIE to partner countries
- for emergency/other uses

Leverage to support vaccine supply by others is an objective
The next steps are that OIE will

- Establish the Rabies Vaccine Bank after finalizing form, vaccine requirements, criteria for use and modus operandi
- Discuss with partners potential pilot program objectives, expected benefits and methodologies
Stop Transboundary Animal Diseases and Zoonoses (STANDZ) Initiative

- The new AusAID funded STANDZ Program (2011-2016) will have a ‘One Health’ activity to support countries in the development and establishment of cross sectoral control strategies for rabies.

- STANDZ will be managed by the OIE Sub Regional representation in Bangkok and will operate in ASEAN countries but with close linkages to ASEAN plus 3 and the HPED Program.
Twinning is integral to capacity building for VS and has the objective of

- Improving expertise and diagnostic capacity in countries, meeting OIE Standards, and in the case of some, becoming OIE Reference Laboratories (RL) and Collaborating Centres (CC)

- Twinning provides a link between RL or CC (the Parent) and laboratory or institution (the Candidate) in a country
Twinning (2/12)

- OIE RLs are designated to pursue technical and scientific issues relating to a named disease or topic
  - And function as centres of expertise and standardization of diagnostic techniques
- OIE CCs operate as centres of research, expertise, standardization, and dissemination of techniques in their sphere of competence
  - And propose or develop procedures to facilitate the harmonization of standards
World Distribution of the OIE-Reference Laboratories

List of OIE Reference Lab.: http://www.oie.int/eng/OIE/organisation/en_listeLR.htm

- 187 OIE Ref. Labs.,
- 36 Countries,
- 100 Diseases,
- 161 experts,
OIE Reference Laboratories for Rabies (7)

- Centre of Expertise for Rabies CFIA/ACIA (CANADA)
- Agence nationale de Sécurité Sanitaire de l'Alimentation, de l'Environnement et du Travail (Anses) (2) (FRANCE)
- Institute for Epidemiology, Friedrich-Loeffler Institut (GERMANY)
- Onderstepoort Veterinary Institute (SOUTH AFRICA)
- Virology Department, Animal Health and Veterinary Laboratories Agency (UNITED KINGDOM)
- National Center for Zoonotic, Vector-borne & Enteric Diseases Centers for Disease Control and Prevention (USA)
World Distribution of the OIE- Collaborating Centres

List of OIE CCs: http://www.oie.int/eng/OIE/organisation/en_listeCC.htm

✅ 35 Collaborating Centres,
✅ 20 Countries,
✅ 33 Topics,
✅ 35 experts,
OIE Twinning: a valuable tool for regional development
Trevor Drew, Tony Fooks & Judy Stack
Veterinary Laboratories Agency, United Kingdom

What is “OIE Twinning”?
The World Organisation for Animal Health (OIE) Reference Laboratories (RL) and Collaborating Centres (CC) provide a global service, providing member states with expertise and diagnostic capacity concerning diseases important to trade of livestock and livestock commodities. OIE aims to enhance regional representation and development by establishing new RLs elsewhere in the world.

A key objective is sustainable capacity building.
- Links are made between existing OIE RL or CC with a Candidate Laboratory (CL)
- Knowledge and skills are exchanged allowing the CL to develop capacity and expertise for a disease or topic that is a priority in its region.
- Eventually the CL will be able to provide support to other countries and may apply to become an OIE RL or CC.

Examples of planned activities under the scheme
- We are privileged to have a twinning project currently running with the Changchun Veterinary Research Institute (CVRI), Jilin, P.R. China, on classical swine fever (CSF) and rabies.
- The Chinese government is investing heavily in redevelopment of CVRI and other institutes, in addition to activities for specific diseases, the Twinning project includes input to the following perspectives:
  - Facilitate design
  - Research and development

Classical Swine Fever
Pig production in China provides a primary source of protein, as well as fulfilling an important societal role, providing a source of additional income for pork farmers. Despite high vaccination coverage, subclinical disease occurs both in the village and commercial sector.

Brucellosis
We are currently working closely with the Hendrik Veterinary Control and Research Institute (HVCR) in Tswaung on brucellosis. Brucellosis is one of the most important zoonotic infections worldwide, causing abortion, ill-thrift, infertility and mortality in livestock. It is also associated with impacts on human health, both economic, social and public health consequences.

The Twinning project includes the following objectives to enhance the diagnostic capacity of HVCR:
- Preparation of National & Working Standard labs to improve & monitor the quality of diagnostic tests.
- Application of molecular techniques to obtain more detailed epidemiological information.
- Antigen production.
- Exchange of material and complex tissue culture technologies.
- We have already held two meetings where we spent valuable time in each other’s laboratories, exchanged presentations on the skills within both institutes and examined artificers and reference sera according to OIE manual of Diagnostic tests & vaccines.

Future Activities
Twinning with the Brucellosis group of the Central Veterinary Research Laboratories, Pretoria, South Africa is in the early stages of development. Future OIA objectives for Twinning are to establish the Hendrik Veterinary Laboratory as a regional centre for Anaplasmosis and Newcastle Disease diagnostics and to establish OIE Antigen Laboratory and Newcastle Disease Reference Laboratory at the Onderstepoort Veterinary Laboratory in South Africa.

http://www.oie.int/en/support-to-oie-members/laboratory-twinning/
- Germany with Turkey
- South Africa with Nigeria
- UK with China
Twinning (8/12)

- Implementation of diagnostic testing for rabies
- Validation of in-house diagnostic tests for rabies
- Participation in proficiency schemes and ring trials for internationally approved diagnostic tests for rabies
- Epidemiological surveys of rabies in humans and animals
- Development of oral recombinant vaccines for dogs
- Evaluation of the vaccination coverage in community-owned dogs
- Studies of vaccine-elicited immunity in community-owned dogs
- Assessment of rabies vaccine quality for animal use

Source: Veterinary Laboratories Agency
OIE Laboratory Twinning Project
Germany – Turkey
Achievements

Thomas Müller
Conrad Freuling
Achievements

- Phylogeny of RABV from Middle East
Achievements

- harmonisation & standardization of specific rabies diagnostic SOPs (2009)
- Movement to new diagnostic facilities (BSL 3)
- 1st Turkish national FAT ring trial (2009)
Achievements

- Initiation of bat rabies surveillance in Turkey 2010
Conclusions (1/2)

- The 3 activities described seek to provide examples of short, medium and long term support
  - The PVS by strengthening national veterinary services which can provide a buffer between animal source of the disease and human infection
  - The OIE Rabies Vaccine Bank by piloting/leveraging vaccination in cooperation with partners
  - Twinning arrangements to enhance the skills and knowledge of scientists and technicians in developing and in transition countries
Conclusions (2/2)

- OIE activities are global public goods, that is goods whose benefits extend to all countries, people and generations
  - By recognizing the global public good argument and implementing OIE good governance arrangements sustainability of rabies activities can be realized.