



REPORT: REGIONAL CONFERENCE ON VETERINARY PARAPROFESSIONALS IN ASIA

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Acronyms

AVBC	Australasian Veterinary Boards Council
AVTA	African Veterinary Technicians Association
AMR	Antimicrobial Resistance
APS	Ajeevika Pashu Sakhies
AVSF	Agronomes et Vétérinaires Sans Frontières
BYP	Base year prices
BVS	Bachelor of Veterinary Science
CAHW	Community Animal Health Worker
CEO	Chief Executive Officer
CLC	Community Livestock Centre [Bangladesh]
CLDDP	Grameen Bank/UNDP/FAO Community Livestock and Dairy Development Project [Bangladesh]
CLO	Community Liaison Office
CTEVT	Council for Technical Education and Vocational Training [Nepal]
CVO	Chief Veterinary Officer
DADF	Department of Animal Husbandry Dairying and Fisheries [India]
DAFF	Department of Agriculture, Forestry and Fisheries [South Africa]
DAWR	Department of Agriculture and Water Resources [Australia]
DLD	Department of Livestock Development [Thailand]
DLTE	Department of Learning and Teaching Enhancement [Nepal]
DLS	Department of Livestock Services [Nepal]
DLS	Department of Livestock Services [Bangladesh]
DLSO	District Livestock Service Offices [Nepal]
DTRA	Defense Threat Reduction Agency [United States]
DVM	Doctor of Veterinary Medicine
FAO	Food and Agriculture Organization of the United Nations [UN]
FMD	Foot and Mouth Disease
GALVMed	Global Alliance for Livestock Veterinary Medicines
GDP	Gross Domestic Product
GON	Government of Nepal
HBL	Hester Biosciences Limited
HPAI	Highly Pathogenic Avian Influenza
IIAD	Institute for Infectious Animal Diseases
IVFA	Indonesia Veterinary Faculty Association
IVMA	Indonesia Veterinary Medical Association
JSLPS	Jharkhand State Livelihood Promotional Society
JT	Junior Technician [Nepal]
JTA	Junior Technical Assistant [Nepal]
KVB	Kenya Veterinary Board [VSB]
LBVD	Livestock Breeding and Veterinary Department [Myanmar]
LFA	Livestock Farmer Assistant
LMIS	Labour Management Information System [India]
LOA	Level of Advancement
MAFF	Ministry of Agriculture, Forestry and Fisheries [Cambodia]
MAIL	Ministry of Agriculture, Irrigation and Livestock [Afghanistan]
MCI	Medical Council of India
MoLD	Ministry of Livestock Development [Nepal]
MSc	Master of Science
MRP	Mutual Recognition Program

MVC	Myanmar Veterinary Council
NAQIA	National Agricultural Quarantine and Inspection Authority [Papua New Guinea]
NARC	Nepal Agricultural Research Council
NDoH	National Department of Health [Papua New Guinea]
NEVLA	Nepal Paraveterinary and Livestock Association
NGO	Non-Governmental Organisation
NVC	Nepal Veterinary Council
OIE	World Organisation for Animal Health
PhD	Doctor of Philosophy
PNG	Papua New Guinea
PPR	Peste des petits ruminants
PVS	Performance of Veterinary Services [OIE]
RI	Republic of Indonesia
ROI	Return on Investment
RUA	Royal University of Agriculture [Cambodia]
SDC	Swiss Agency for Development and Cooperation
SGP-PPR	Sheep and Goat Pox – Peste des Petits Ruminants
SPS	Sanitary and Phytosanitary Standards [WTO]
TBD	To Be Determined
ToT	Training of trainers
SPC	Secretariat of the Pacific Community
UEMOA	Union Economique et Monétaire Ouest Africaine
UK	United Kingdom
UN	United Nations
USA	United States of America
UVB	Uganda Veterinary Board [VSB]
UVS	University of Veterinary Service [Myanmar]
VA	Veterinary Assistant
VAHW	Village Animal Health Worker
VCI	Veterinary Council of India
VF	Veterinary Feldsher
VFU	Veterinary Field Unit [Afghanistan]
VMP	Veterinary Medicinal Product
VPH	Veterinary Public Health
VPP	Veterinary Paraprofessional
VPS	Veterinary Public Health [Australia]
VS	Veterinary Services
VSA	Veterinary Statutory Authority [Australia]
VSB	Veterinary Statutory Body
VSFI	Vétérinaires Sans Frontières International [Veterinarians Without Borders]
WAHIS	World Animal Health Information System [OIE]
WHO	World Health Organization [UN]
WTO	World Trade Organization [UN]

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Preface

The Regional Conference on Veterinary Paraprofessionals in Asia took place in Bangkok, Thailand from 6 to 8 December 2017. It was organised by the World Organisation for Animal Health (OIE) and the Global Alliance for Livestock Veterinary Medicines (GALVmed), in close collaboration with the Thai Department of Livestock Development (DLD), with the financial support of the Defense Threat Reduction Agency (DTRA). The Conference was developed in an effort to increase understanding of the scope and current situation of Veterinary Paraprofessionals (VPP), the needs of Veterinary Services (VS) for VPPs in the Asia region as well as to review OIE work on minimum competencies for VPP and options for regulating VPP in delivery of quality Veterinary Services which are appropriate to individual countries' contexts.

The Regional Conference on Veterinary Paraprofessionals in Asia featured presentations from representatives of Veterinary Authorities, Veterinary Statutory Bodies (VSB) and educational institutes, as well as experts on the activities of VPP from international and regional organisations. The regional conference aimed to: increase understanding of OIE's conception of the scope of VPP as stipulated in the OIE Terrestrial Code and with reference to the OIE Performance of Veterinary Services (PVS) tool and the importance of VPP in the global development field in terms of the delivery of quality veterinary services; review the current situation of VPP in Asia, notably their training, qualification, roles, status and the challenges they are experiencing; review the realities of the needs of the veterinary services in the field in Asia and discuss how best VPP may contribute to the delivery of quality veterinary services in cooperation with other cadres of actors, notably veterinarians and Community Animal Health Workers (CAHW); review the on-going OIE work of identifying minimum competencies for the three streams of VPP: animal health, veterinary public health and laboratory diagnosis, and developing guidelines on core training curricula from the viewpoint of regional applicability; and explore options for recognising, accrediting and regulating VPP in the delivery of quality veterinary services that are appropriate to individual countries' contexts.

The Conference brought together 94 participants. Following three days of informative presentations and productive discussions, the Conference participants adopted a number of recommendations, both to the Veterinary Authorities of OIE Member Countries and to the OIE, for the purpose of improving the contribution of the VPPs to the Veterinary Services for efficient implementation of national Animal Health and Veterinary Public Health policies and programmes.

This report has been prepared in an attempt to record the Conference proceedings as clearly as possible. The OIE hopes this will not only help the participants recall the discussions to better apply them in concrete activities, but also help stakeholders who were not at the Conference, including stakeholders in other regions, to share in the enthusiastic discussion.

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CONFERENCE REPORT

OPENING SESSION

Lois Muraguri, Director Policy and External Affairs, Global Alliance for Livestock Veterinary Medicines (GALVmed)

All livestock keepers deserve access to quality, safe, efficacious veterinary products and sustainable Veterinary Services: from the backyard poultry farmer with five chickens to the commercial poultry farmer. In the past, provision of veterinary services to farmers, particularly those in rural areas, was made by the public sector in many developing countries. That model fell apart with the decline in public spending. Other challenges compounding the problem include insufficient numbers of veterinary professionals trained and the lack of commercial incentives for private veterinarians' investments in servicing rural areas. In some countries, private veterinarians are virtually non-existent. The sum total of these challenges is that there is insufficient or inadequate provision of veterinary services, especially in remote and rural areas.

This unmet need is currently being met by VPP, CAHW and other actors. This variety of service providers is met with varying degrees of acceptance across countries. In some, they are recognised by law; in others, they are tolerated, while in others, they are banned and downright illegal. The international standards of the World Organisation for Animal Health provide for the operation of VPP under the responsibility and direction of veterinarians.

GALVmed's work has been supportive of this area:

- In 2013/2014, GALVmed commissioned studies to understand policies on VPP and other actors in 14 countries; these studies confirmed the inconsistencies between policy and practice within countries and inconsistencies in legal recognition across the actors in different countries;
- In 2015, GALVmed convened a continental inaugural VPP meeting alongside OIE and African Veterinary Technicians Associations (AVTA) in the OIE Africa Region;
- GALVmed was represented in the OIE *ad hoc* Group on Veterinary Paraprofessionals;
- GALVmed has been working with Veterinary Council of India and with the Department of Learning and Teaching Enhancement (DLTE) in Nepal to advance progress in clarifying the roles of different actors;
- GALVmed Africa – AVTA and other statutory bodies e.g., Kenya Veterinary Board (KVB), Uganda Veterinary Board (UVB) to define the roles of VPP; and
- GALVmed has been working with on-the-ground delivery partners on innovative models that ensure sustainable delivery of animal health services in the current reality of few veterinarians in project areas.

A spot-check on GALVmed-supported projects in 2015 revealed that less than 1% of delivery personnel were veterinarians. Our interactions with other implementing partners corroborate this; they, too, face similar challenges, particularly in remote areas.

There is an urgent need for pragmatic and innovative models of veterinary service delivery that ensure livestock keepers have access to the quality services and products they deserve. In defining the limits of authority and clarifying the roles, all actors need to be taken into account as well as the challenges in implementation and enforcement and compliance with laws and regulations. The needs of individual countries and contexts must also be taken into account. We hope that the dialogue begun at this conference will move us closer towards achieving this goal with respect to this region.

Matthew Stone, Deputy Director General, World Organisation for Animal Health (OIE)

On behalf of the Director General of the World Organisation for Animal Health, Dr Monique Eloit, I welcome you to this conference.

The OIE values partnerships. The partnership between scientific disciplines is central to One Health. Veterinary services typically consist of multiple partnerships with all participants and stakeholders, all of whom play an important role in delivering a comprehensive and efficient service as a national and global public good. Our partners in this event, and in this important work programme include GALVmed, Defense Threat Reduction Agency of the United States Government and the Department of Livestock Development of the Government of Thailand.

Veterinarians, veterinary paraprofessionals and other professions work in partnership to deliver a comprehensive veterinary service, with clear roles, responsibilities and authorities. A competency framework addressing key roles in this system is an essential tool. That is why the OIE developed the Day 1 Competencies and Model Curricula for veterinarians, and that is why we initiated this work programme to produce a similar fit-for-purpose framework for veterinary paraprofessionals.

Working for the OIE, we quickly learn that fit-for-purpose takes many and varied forms across the veterinary services of our Members, and this is probably even more pronounced once we start examining specific activities and roles for VPP. Lifting this up to the level of the three categories of VPP that we have focussed on to date was a defining moment, since it provides a common perspective that we can use to understand the existing diversity. The three categories of VPP roles identified as the basis for the competency framework are: animal health, veterinary public health and laboratory.

The conference has five objectives:

- Increase understanding of how VPP can contribute to VS as described in the OIE *Terrestrial Code* and with reference to the OIE Tool for the Evaluation of PVS and the importance of VPP in the global development field in terms of the delivery of quality veterinary services;
- Review the current situation of VPP in Asia, notably their training, qualifications, roles, status and the challenges they are experiencing;
- Review the realities of the needs of the VS in the field in Asia and discuss how best VPP may contribute to the delivery of quality veterinary services in cooperation with other cadres of actors, notably veterinarians and CAHW;
- Review the on-going OIE work of identifying minimum competencies for the three streams of VPP, and developing guidelines on core training curricula from the viewpoint of regional applicability; and
- Explore options for recognising, accrediting and regulating VPP in the delivery of quality VS that are appropriate to individual countries' contexts.

I hope the Conference also serves to learn more about the diversity of veterinary services and to expand our horizons about future possibilities to innovate within VS, since that is what we surely must continue to do to serve our governments, our animal owners and the public.

At this stage, I would like to close with a brief thank you to the Conference Steering Committee and the OIE *ad hoc Working Group* and Sub-Groups on VPP that have worked hard to bring us to this point. It is vital that we contribute fully and freely to honour their work.

**Wacharapon Chotiyaputta, Director, Division of International Livestock Cooperation,
Department of Livestock Development**

It is my honour and privilege to join the opening session of the Regional Conference on Veterinary Paraprofessionals in Asia this morning. So, on behalf of the Department of Livestock Development, I would like to extend my warmest welcome to all of you who are attending to this important conference.

As you may know, Thailand had the honour to host the 4th OIE Global Conference on Veterinary Education in June 2016, which included the situation of veterinary paraprofessionals in various regions, and it provided a set of recommendations including the need to identify the minimum competencies for various categories of veterinary paraprofessionals and developing guidelines on core training curricula. This regional conference aims to accomplish that goal for veterinary paraprofessionals in Asia, and provide an opportunity for GALVmed, its partners and all the other relevant organisations to increase their understanding of the status of Veterinary Paraprofessionals in the region.

On behalf of the Department of Livestock Development, I would like to thank the OIE and GALVmed in their capacities for organising this conference, as well as providing technical and financial support. We are deeply honoured to have the privilege of hosting this very important event; be assured that the Department of Livestock Development will continue to provide support and collaborations for any upcoming activities or events.

Lastly, I would like to wish this conference fruitful outcomes, and hope that all of you will have a pleasant stay in Thailand. Again, I would like to reiterate that I'm very glad to meet you; welcome you to the Regional Conference on Veterinary Paraprofessionals in Asia.



SESSION 1: PRESENTATIONS FROM KEY PARTNERS

Overview of the Global Alliance for Livestock Veterinary Medicines (GALVmed)

Lois Muraguri, Director, Policy and External Affairs, GALVmed

Livestock is an intrinsic part of small-scale agriculture and of critical importance to the livelihoods of millions of individuals and families. For smallholder farmers, livestock is often their most valued possession. Mortality rates, for many of the livestock diseases in Africa and Asia, are high, e.g., mortality following peste des petits ruminants (PPR) exceeds 70%. These diseases represent catastrophic losses for smallholders. Effective vaccines and medicines for livestock offer return on investment (ROI) for the smallholder and the donor that few other farming inputs can match. GALVmed's vision is to see such livestock vaccines and medicines in widespread, sustainable use by smallholders. GALVmed's work can best be understood in two strands: Product Development – where a new/improved product (a vaccine, therapeutic or diagnostic) is needed to meet the specific needs of smallholders, and Market Development – using the inherent commercial value of these products to make them widely available to smallholders.

The majority of our funding goes into product development, where the focus is largely on vaccines. We work across five species—cattle, sheep, goats, swine and poultry—and 13 diseases. The sheep and goat pox (SGP) SGP-PPR vaccine dossier, prepared by Medical Council of India (MCI), has been submitted to Uganda, Kenya, Tanzania and Union Economique et Monétaire Ouest Africaine (UEMOA), and the product has been sold in at least three countries.

GALVmed has been working on harmonisation of requirements for registering vaccines. A Mutual Recognition Procedure (MRP) which allows countries to recognise dossier applications submitted by other countries, is now in place in East Africa. The MRP saves time by allowing countries to use their resources more efficiently and increases the likelihood for sustainable supply of quality, registered vaccines. One company has already submitted a dossier under the novel MRP system.

In market development, our ultimate objective is simple: to transform the usage of essential animal health products by smallholders. GALVmed's work began with small-scale pilot projects and now has sufficient traction to start scaling up to commercial market initiatives with vaccine manufacturers who want to target the smallholder sector. To date, the households reached and estimated value of livestock disease mortalities averted is significant.

Underpinning product and market development activities is our policy work. The streams of work include recognising and clarifying the role of service providers such as veterinary paraprofessionals, the creation of industry associations for the private sector, and harmonising the requirements for the registration of veterinary medicines.

Going forward, product development work will incorporate a wider range of diseases through development of vaccine combinations, which contribute to disease control in the absence of reliable diagnostic capabilities. For market development, we aim to establish, through commercial partners, large-scale distribution networks, including some of the largest manufacturers in the animal health industry as well as smaller distributors who can operate profitable marketing channels in rural Africa and Asia.

At the heart of GALVmed's *modus operandi* is partnerships – all our work is done through partners – several hundred of them from academia, industry, non-governmental organisations (NGO), expert consultants and the public sector.

World Organisation for Animal Health (OIE)

Matthew Stone, Deputy Director General

The need to fight animal diseases at the global level led to the creation of the Office International des Epizooties, OIE, in 1924. In 2003, the Office became the World Organisation for Animal Health but kept its historical acronym, OIE. The OIE is the intergovernmental organisation responsible for improving animal health worldwide and is recognised as a standard setting organisation by the World Trade Organization (WTO). In 2017, the OIE had a total of 181 Members and maintains permanent relations with 71 other international and regional organisations and has Regional and sub-regional Offices on every continent. The OIE Delegate of each Member Country come to Paris each May to attend the World Assembly of Delegates and vote on newly developed international standards.

The OIE's mandate is to improve animal health, animal welfare and veterinary public health worldwide. The OIE fulfils this mandate through different core missions: developing international standards on animal health and welfare; sharing reliable information on the animal disease situation worldwide in real time; collecting, analysing and disseminating veterinary scientific information worldwide; and developing international solidarity to achieve better control of animal diseases in the world.

In order to prevent and control animal diseases, including zoonoses, ensure the sanitary safety of world trade in terrestrial and aquatic animals and animal products, and improve and secure animal welfare by appropriate risk management, the OIE develops international standards on animal health and welfare. These standards are prepared and updated by recognised scientific experts and are adopted at annual General Sessions through voting by the World Assembly of Delegates of the OIE.

As a result of increased trade and travel in the era of globalisation, infectious diseases can spread more quickly than ever before and up-to-date information on disease occurrence is vitally important. Effective surveillance and enabling early detection of these diseases at their source in animals is therefore crucial so that they can be quickly controlled, thereby protecting animal and human populations. Since its creation, one of the OIE's historic missions has been to ensure transparency and improve knowledge of the global animal disease situation, including zoonoses. This mission is fulfilled on a daily basis thanks to a unique tool, the OIE World Animal Health Information System (WAHIS) that helps to establish trust through transparency and communication.

The OIE collects and analyses the latest scientific information on the prevention and control of animal diseases. This information is then made available to Members so that they can apply the most effective methods. The work of the OIE is supported by a worldwide network of expertise in animal health, veterinary public health and animal welfare, including a wide array of national Focal Points, expanding expertise of the OIE Reference Centres and diverse scientific expertise in the form of *ad hoc* and Working Groups. Permanent exchange of information and the constant strengthening of the scientific and technical competencies of the members of these networks all help to ensure the scientific excellence of the OIE worldwide.

The OIE supports its Members and works to ensure the capacity and sustainability of Veterinary Services in line with the OIE's intergovernmental standards, notably by acting on the quality of the national Veterinary Services, diagnostic laboratories and veterinary education. To help Members deal effectively with health threats, the OIE provides support through a range of programmes, notably within the framework of the PVS Pathway, aimed at strengthening national animal health systems through systematic assessments during in-country missions.

OIE standards on the quality of veterinary services, veterinary legislation and Terrestrial Code definitions related to veterinary paraprofessionals

David M. Sherman, Chargé de Mission, World Organisation for Animal Health (OIE), Paris, France

The OIE 6th Strategic Plan for 2015-2020 adopted by its Member Countries in May 2015 has three Strategic Objectives. One of the several outcomes expected under Strategic Objective 3: Ensuring the Capacity and Sustainability of Veterinary Services is “a better definition of the role of paraprofessionals and non-veterinary specialists, including their education and training.”

The OIE recognises and supports the varied and important roles that veterinary paraprofessionals can and must play in the effective delivery of national veterinary services. OIE also recognises that the training, activities, registration and regulation of veterinary paraprofessionals must conform to established standards.

The standards of the OIE are found in the Terrestrial and Aquatic Animal Health Codes and the Manuals for Diagnostic Tests and Vaccines for Terrestrial and Aquatic Animals. Standards on the quality of veterinary services, veterinary legislation and definitions related to veterinary paraprofessionals are included in the *Terrestrial Animal Health Code*. These standards, as they pertain to veterinary paraprofessionals, will be reviewed during this presentation.

The OIE recognises and supports VPP recognition by veterinary statutory bodies and its standards state that VPP recognition should be linked to qualifications by Veterinary Statutory Bodies (VSB); and that effective legislation should be enabling and supportive and fair.

SESSION 1 DISCUSSION

At the conclusion of Session 1, the audience was provided the opportunity to ask questions regarding the work and missions of GALVmed and the OIE as related to veterinary paraprofessionals (VPP) in Asia. The following is a summary of the key points presented during this discussion:

- One Health as an approach is critical for veterinarians, physicians, VPP and CAHW. The OIE competencies and curricula address the importance of VPP in their role to address One Health topics such as food safety, zoonoses, antimicrobial resistance, etc.
- While CAHW play a critical role at the field level, the OIE is challenged to develop guidance for their level due to the broad and varied training and supervision of CAHW which is not easily formalised at the government level. Each country is responsible to review training and create mechanisms of continuing education and development for CAHW, according to the specific country's context.
- Aquatics often operate under a separate Competent Authority from veterinary services in many countries, making linkages between the sectors difficult. However, the OIE recognises the importance of aquaculture to economic development and will discuss with the Aquatic Code commission as well so that aquatic paraprofessionals are considered in regards to the minimum competencies for veterinary paraprofessionals.



SESSION 2: COUNTRY TESTIMONIES: PERSPECTIVES FROM VETERINARY AUTHORITIES

Challenges & opportunities for VPP in delivery of veterinary services in Vietnam

Nguyen Thi Thu Hong, Do Huy Long and Phung Thi Thao

In Vietnam, there are about 10,000 Community Animal Health workers, 10,000 veterinary paraprofessionals who provide services for animal health, and 3,627 VPP who sell veterinary drugs. The training duration for VPP vary from 6-12 months to three years. Veterinary paraprofessionals play important roles in Vietnam, especially when outbreaks occur. Under the direction of the veterinary authority, CAHW guide animal owners on vaccination, cleaning and disinfection, culling and compulsory slaughter, participate in vaccination, sampling, diagnosis and treatment and they also report the disease situation to the veterinary authority in a timely manner. CAHW also perform slaughter controls and veterinary hygiene inspection at small slaughterhouses at the commune level. Additionally, other types of VPP are available, at the request of the veterinary authority, when outbreaks occur.

As a consequence of the privatisation process in Vietnam, VPP are now engaging in areas which were formerly under state veterinary services: they can participate in vaccination and laboratory diagnosis. However, they are also facing many difficulties: lack of continuous training, working in remote areas, low income from non-remunerative practices and lack of unions or associations to protect their interests and rights when encountering accidents in practice.

Apart from giving VPP continuous training, it is recommended that the government should modify policies to provide better incentives for CAHW and provide equipment and protective tools for VPP working in remote bordering areas and islands.

Challenges & opportunities for VPP in delivery of veterinary services in Afghanistan

David M. Sherman, Chargé de Mission, World Organisation for Animal Health (OIE), Paris, France, made on behalf of Jahangir Miakhail, OIE Delegate for Afghanistan, Acting Director General, General Directorate of Animal Health and Production, Ministry of Agriculture, Irrigation and Livestock, Kabul, Afghanistan

Prior to 1979, Afghanistan had a functioning government veterinary service that provided both clinical and regulatory services to the nation. However, that system was totally disrupted and degraded by the Soviet invasion and the decades of fighting that followed. During that period, in an effort to fill the void, a number of donor agencies and non-governmental organisations (NGO) began to train VPP who could provide clinical and preventive services to farmers and herders.

Following the defeat of the Taliban in 2001 and the formation of a new government, the government veterinary services began to reorganise and received considerable technical support through donor-funded projects to resume its regulatory functions. However, by this time, clinical veterinary service delivery to farmers and herders at the local level by VPP working in the private sector had become well established. By 2006, the government adopted a policy to allow clinical service delivery to remain privatised. Hundreds of VPP now provide clinical services via veterinary field units at district and sub-district levels throughout the entire country.

More recently, the government has recognised that the presence of a cadre of VPP working at the local level throughout the country also represents a useful resource for the government veterinary service. In 2010, in a pilot programme, the government engaged private sector VPP to provide disease reports for disease surveillance purposes. In 2012, a sanitary mandate scheme was established to engage VPP to conduct serosurveillance and vaccination for a national brucellosis control programme. In 2016, a sanitary mandate scheme was initiated for the VPP to participate in the national control effort for PPR in the context of the joint FAO/OIE Global Strategy for the Control and Eradication of PPR.

In Afghanistan, war created an opportunity for the development of a cadre of VPP to deliver much-needed clinical veterinary services to farmers and herders in the private sector. Over time, government recognised the value of the presence of these VPP throughout the country and has reached out to them to establish public-private partnerships which are strengthening the national veterinary services and improving efforts at disease reporting, surveillance, control and prevention.

Challenges & opportunities for VPP in delivery of veterinary services in the Pacific Islands

Ilagi Puana, Secretariat of the Pacific Community (SPC)

Animals are an important part of agricultural production systems in the Pacific. They are an important source of food, income and other social benefits, and they meet a number of traditional needs. There are more than 13 million farm animals in the Pacific, but there are less than 100 qualified veterinarians, who cannot serve the millions of animals on the thousands of inhabited islands in the region. A chronic shortage of qualified veterinarians has prompted the need for a regional VPP capacity building programme in the Pacific Island region which serves as a medium- to long-term veterinary service strategy supporting livestock production in the region.

The veterinary paraprofessional training module is designed and based on a non-residential maximum use of in-country facilities and in-country trainers, and minimum disruption of work-related activities. So far, a total of about 500 VPP have been trained in 16 of the 23 Pacific Island countries since its inception in 2003. The major challenges include: inadequate qualified in-country trainers and a lack of in-country and SPC budgetary support to the training programme. The high cost of printed training materials and lack of resources is a real challenge. However, the training has provided opportunities for some participants to advance to veterinary-related studies overseas and in some countries, upgrading of job classification and job opportunities. In fact, many VPP have been taken up by private sector employment, mainly in the poultry, cattle, dairy and pork industries.

Apart from animal health services, VPP are also involved in meat inspection services including export facilities. Disaster response is an area in which VPP could be engaged in the Pacific Islands due to the potentially high risk of natural disasters in the region.

Challenges & opportunities for VPP in delivery of veterinary services in Mongolia

Otgontugs B., Lecturer, School of Veterinary Medicine, Mongolian University of Life Sciences, Ulaanbaatar, Mongolia

In April 2016, the Swiss Agency for Development and Cooperation (SDC) commissioned a project team to assess the needs and supply of veterinarians and VPP in Mongolia to help the government and educational establishments to make informed decisions on future policies and programs of veterinary services. The team consulted widely with stakeholders, and data was collected from a variety of sources including official statistics, publications and reports, workshop participants, stakeholder consultations and surveys of veterinary service providers, university alumni and a mission to two regional polytechnic/vocational colleges. The evaluation found that strengthening veterinary education is important, especially given the increasing number of animals and the rapidly changing context in Mongolia, where there is an increasing need to improve animal health in support of efforts to diversify the economy and realise potential for the export of livestock and animal products.

In Mongolia, during the 1990s, there was transition from the central planning to the free market economy. The livestock sector was privatised in 1992 and the veterinary services in 1999, respectively. During the socialist period, the VPP, including veterinary feldshers (VF) and sanitary technicians were supervised by veterinarians. However, due to the lack of veterinarians to work in the private services covering the whole territory of Mongolia, the VF were permitted to work as fully-qualified veterinarians without supervision. Currently, almost equal numbers of veterinarians and VF work in the rural private veterinary services.

The draft Animal Health Law, currently submitted to the Parliament, describes two categories of veterinary service providers: a veterinarian and a veterinary technical paraprofessional. Therefore, the establishment of a VSB is necessary to clarify the roles and responsibilities for veterinary service provision throughout the system. In the future, it is expected that veterinarians will require a five-year bachelor's degree in Veterinary Science and that technicians, including diploma holders from vocational colleges as a VF, will be required to work under the direction of a veterinarian. The VSB should also be responsible for determining the future for those VFs, who are currently licensed to carry out the same roles as fully qualified veterinarians. This is an issue under active discussion and outside our powers to influence. It is proposed that veterinarians and currently licensed VFs consider practice as one group reflecting their age of retirement and opportunities for alternative career pathways.

The veterinary technical paraprofessionals can obtain future three-year diploma level trained VF and shorter term trained sanitary technicians, who will both play important roles in rural veterinary practices.

Challenges & opportunities for VPP in delivery of veterinary services in Myanmar.

Hnin Thidar Myint, Livestock Breeding and Veterinary Department, Myanmar

The Republic of the Union of Myanmar borders with India, Bangladesh, China, Laos and Thailand, having potential of exporting livestock and livestock products to neighbouring countries. Livestock Breeding and Veterinary Department (LBVD) is the organisation with powers given by Ministry of Agriculture, Livestock and Irrigation for the purposes of veterinary services, animal health and livestock development. Also, LBVD is the agency that enacts laws and regulations with respect to those activities. Myanmar Veterinary Council (MVC) is the Veterinary Statutory Body responsible for registration of professional veterinarians and veterinary auxiliaries under the Myanmar Veterinary Development (MVD) law.

Historical records from AD 1044 state that healers were assigned to the horses of The King's army. Formal education started in 1874 with the establishment of a veterinary school in Yangon. In 1890, two-year veterinary assistant (VA) courses started, and all graduates were eligible to work in the public sector. The first Veterinary College was established in 1932, and a four-year veterinary science programme started in 1957 which has been expanded to a 6-year programme when the Institute of Animal Husbandry and Veterinary Science was established in 1964. Currently, University of Veterinary Science (UVS) provides Bachelor's, MSc and PhD degrees. The first batch of Animal Science students will graduate in 2018. Two-year VA courses were terminated in 1975, and all VA retired from Public Sector as of 2015.

While LBVD has offices down to the village tract level of each township in Myanmar with assigned veterinarians, CAHW are important stakeholders for LBVD in terms of animal health care, reporting and communication of disease incidence, surveillance and extension of veterinary services to farmers. They are resident persons and chosen by the community as their leaders regardless of education status or income. Recently, CAHW are specially trained for collection of Livestock Baseline Data nationwide, which is part of the plan of LBVD for January 2018.

LBVD, with the support of FAO under the FAO-LIFT project, set regulations on CAHW that are guidelines for selection, training, accreditation and registration of CAHW. A Core Group composed of representatives from MVC, LBVD and UVS approved the "Regulation of CAHW" in July 2017, and LBVD is authorised to develop selection and accreditation, registration and de-registration procedures according to the Regulations. MVC shall endorse those procedures, and training curriculum will be developed by LBVD in collaboration with UVS.

Currently, the FAO project collects daily records from 293 CAHW from 32 townships via tablets to understand the role and situation of CAHW, and to provide comments and recommendations on implementation plans that LBVD is designing. Pilot activities on selection and accreditation of existing CAHW will follow in project areas in the Central Dry Zone, to be supportive for preparation of training of trainers (ToT) and training curriculum for CAHW.

Challenges & opportunities for VPP in delivery of veterinary services in Indonesia

Putratama Agus Lelana, Indonesian Veterinary Medical Association

The scope of National Animal Health System in Indonesia covers 17,000 islands (6,000 inhabited), 34 provinces and more than 400 districts, 7,160 sub-districts and 80,000 villages. Animal health services carried out by the animal health post are noted in 3,444 sub-districts (48%) and 1,456 villages (4.9%). Animal health services are performed by 1,201 veterinarians and 3,236 VPP.

The Law of Animal Health and Livestock No.18/2009 and No.41/2014 states that the animal health workforce in Indonesia consists of veterinarians (general and specialist), Bachelor in Veterinary Science (BVS) and VPP, graduated as a diploma or alumni of senior vocational high school. The Government Regulation No.3/2017 of Veterinary Authority states that BVS and VPP should work under veterinary supervision.

The VPP education is delivered by seven of 11 veterinary schools, and four polytechnic schools, usually over a three-year period. VPP in Indonesia are trained in specialised post-secondary programmes, but those currently working as VPP also have received training in non-veterinary science in senior high school.

The government training programme for VPP, generally conducted by training centres, belongs to the Ministry of Agriculture of the Republic of Indonesia (RI); such as Cinagara Animal Health Training Center, Batu Animal Husbandry Training Center and Kupang Animal Husbandry Training Center. Most of the training participants are not new graduates, but workers that have been involved in veterinary paraprofessional activities in the private and public sectors. The training activities are also performed by the institution unit of animal health services, as well as Indonesian Veterinary Medicine Association (IVMA).

The alumni profiles of training participants of Cinagara Animal Health Training Center are as follows:

1. Paramedic Assistant of Veterinarians (14 days) 5,250 persons;
2. Animal Disease Prevention (7 days) 3,150 persons;
3. Meat Inspector/Keurmsesteer (10 days) 600 persons;
4. Halal Slaughtering for Poultry and Ruminants (7 days) 450 persons;
5. Technical Assistant Reproduction (14 days) 300 persons;
6. Cattle Pregnancy Examiner (14 days) 300 persons;
7. Artificial Insemination (for Inseminator Candidate) (21 days) 2,550 persons;
8. Butcher (14 days) 330 persons;
9. Animal Welfare (7 days) 30 persons; and
10. Food Safety (7 days) 210 persons.

Based on the large population of Indonesia, the high demand of animal protein, an imbalanced supply and the threat of diseases and zoonosis, the need for veterinarians, VPP and community animal health workers is high. There should be systematic programmes to increase the number and quality of animal health human resources, deliver national policy in animal health education and training and strengthen the skills, teamwork, supervision, organisation, network and supporting devices in animal health services.

To manage the registration and membership of VPP, IVMA serves as the Veterinary Statutory Body. IVMA collaborates with Indonesia Veterinary Faculty Association (IVFA) as a producer of veterinarians and VPP. This situation gives good opportunities to develop education for increasing the need for qualified veterinarians and VPP in Indonesia. Finally, this situation created a strategic and professional atmosphere to support the Veterinary Authority in conducting animal health services in Indonesia.

SESSION 2 DISCUSSION

At the conclusion of Session 2, the audience was provided the opportunity to ask questions regarding challenges and opportunities for veterinary paraprofessionals (VPP) in the delivery of veterinary services in Asian countries. The following is a summary of the key points of this discussion:

- There is great variability in VPP training in Asia, and without a Veterinary Statutory Body in each country, it is difficult to provide regulatory oversight and to demonstrate the adequacy of a VPP training programme.
- Further clarification of training requirements is needed to establish consistency across Member Countries' training programmes.
- Countries have differing regulations concerning the prescription of antibiotics by VPP. For instance, it is forbidden for VPP to write antibiotic prescriptions in Indonesia, while in Mongolia herders may purchase their own antibiotics directly from veterinary wholesalers. In Afghanistan, VPP administer antibiotics, as this is considered a better option than having farmers directly purchase sub-standard or counterfeit medicines from untrained sellers in the bazaar, which is otherwise common.



SESSION 3: WORKING GROUP SESSION

Linking Veterinarians and Veterinary Paraprofessionals: How to Go About It in Compliance with OIE Standards

In this working group session, conference participants discussed how best to address the following Conference Objectives:

- **Conference Objective #3:** “review the realities of the needs of the veterinary services in the field in Asia and discuss how best VPP may contribute to the delivery of quality veterinary services in cooperation with other cadres of actors, notably veterinarians and CAHW”
- **Conference Objective #5:** “explore options of recognising, accrediting and regulating VPP in the delivery of quality veterinary services that are appropriate to individual countries’ contexts”.



SESSION 3 WORKING GROUP DISCUSSION

On realities of existing relationships between VPP and veterinarians and CAHW:

- Relationships between veterinarians and VPP vary greatly between countries and in public vs. private veterinary services;
- The position of VPP can be weak when VPP are perceived as threats by veterinarians.

On strengthening relationships between VPP and veterinarians and CAHW:

- Countries should work on recognising and regulating the VPP profession by VSB;
- There is a distinct need to clearly define the role of VPP and their relationship with veterinarians.

On examples of best practices of healthy relationships between VS cadres:

- In Nepal, all VPP, even those working in the private sector, work under the supervision of veterinarians;
- In Afghanistan, the cadre of VPPs is productively engaged with the government veterinary service in national disease control programmes through formal sanitary mandates.

On innovative ways to address issues with veterinarian supervision of VPP:

- Mobile technology to connect veterinarians with VPP, such as apps, forums, email, social media and video conferencing;
- Incentivising private vets to participate in VPP supervision.
- Standardise education and competencies to prevent overlap of roles.

SESSION 4: COUNTRY TESTIMONIES: REGULATORY AND ADMINISTRATIVE FRAMEWORKS

Delivery systems in rural and poor settings: policy perspectives

Mamta Dhawan, GALVmed

India has the world's highest livestock population at about 512.05 million and livestock plays an important role in Indian economy. The livestock sector contributes 4.11% Gross Domestic Product (GDP), and 25.6% of total Agriculture GDP comes from livestock alone. It provides livelihood to two-thirds of the rural community and about 20.5 million people depend on it. The majority of the farmers in India maintain mixed farming systems, i.e., a combination of crop and livestock where crop residues and household waste is fed to poultry and livestock and manure from them is used for fertilising the fields.

In India, provision of veterinary services is a public function. The central government's Department of Animal Husbandry Dairying & Fisheries (DADF) under the Ministry of Agriculture advises state governments/union territories in the formulation of policies and programmes in the field of Animal Husbandry, Dairy Development and Fisheries. However, it is the state government that is responsible for providing veterinary services to livestock rearers. The state governments have Animal Husbandry departments with institutions like veterinary hospitals, dispensaries, poly-clinics, diagnostic laboratories etc., managed by veterinarians and VPP. However, given the vast areas, huge population of livestock and ongoing budgetary constraints, most state governments are finding it extremely difficult to provide these services to all livestock keepers. There is a dearth of veterinarians and VPP leading to a vacuum that has left it up to private and non-state actors like artificial insemination workers, vaccinators and community animal health workers etc., to step in.

Livestock policy of India in 2013 clearly states the intention of the government to continue with curative service delivery but with part cost recovery. It empowers states to formulate secondary legislations under Contagious Diseases in Animal Act (2009), whereby state government can notify agencies and individuals competent to vaccinate.

The discussion on the administrative framework focuses on existing public and private individual actors and institutions, which can complement each other to deliver veterinary products and services to marginalised livestock keepers. The emergence of new institutions like Agriculture Skill Council of India, which is providing certified vocational and skill training courses for VPP and CAHW, is a step in the right direction.

The legal framework has defined minor veterinary services that can be delivered by paraprofessionals under Section 30 of Veterinary Council of India (VCI) Act that makes it mandatory for them to work under the supervision of a veterinarian. As per law, one can only obtain a stationary drug license with obligatory engagement of a trained pharmacist. This legal condition seriously limits the scope for doorstep veterinary drug delivery by private VPP and CAHW.

CAHW play an important role in combatting infectious diseases, providing extension services, performing grassroots surveillance and in increasing productivity of the livestock and poultry leading to improved livelihoods of livestock keepers. A key reason for the OIE to come into existence was the need to fight animal diseases at global level as it is the apex body responsible for improving animal health worldwide. Since national governments take cues from OIE, it is important that OIE recognises the role of CAHW and acknowledges their existence. They need to be brought under the purview of a statutory body and undergo standardised trainings. In India, the Veterinary Council of India or any other recognised body should intercede and see how VPP can be mainstreamed.

Veterinary Statutory Bodies in Asia and Pacific Region: Focus on VPP and Staffing of Veterinary Services

Ronello Abila, OIE Sub Regional Office

The VSB is an autonomous regulatory body for veterinarians and veterinary paraprofessionals. The policy and the objectives of the veterinary statutory body, including details of its power and functions, should be defined, notably with regard to: the licensing or registration of veterinarians and VPP to perform the activities of veterinary medicine/science; the minimum standards of education (initial and continuing) required for degrees, diplomas and certificates entitling the holders thereof to be registered or licensed as veterinarians and veterinary paraprofessionals; the standards of professional conduct and competence of veterinarians and veterinary paraprofessionals and ensuring that these standards are met.

The veterinary statutory body should be able to demonstrate that it has the capacity, supported by appropriate legislation, to exercise and enforce control over all veterinarians and VPP subject to its authority. These controls should include, where appropriate: compulsory licensing or registration; participation in the definition of minimum standards of education (initial and continuing) for the recognition of degrees, diplomas and certificates by the Competent Authority; setting standards of professional conduct and competence; and investigating complaints and the application of disciplinary procedures.

The veterinary statutory body should be able to demonstrate autonomy from undue political and commercial interests. The composition of the veterinary statutory body, including the organisation represented in it, should be detailed and descriptions of the composition, rules and conditions for membership, including duration of appointment and representation of interested third parties, public and private, should be available.

Where applicable, the implementation of regional agreements for the recognition of degrees, diplomas and certificates for veterinarians and VPP should be demonstrated. Detailed information should be available on disciplinary procedures regarding the conducting of enquiries into professional misconduct, transparency of decision-making, publication of findings, sentences and mechanisms for appeal. Additional information regarding the publication at regular intervals of activity reports, lists of registered or licensed persons including deletions and additions, should also be taken into consideration.

Information regarding income and expenditure, including fee structure(s) for the licensing or registration of persons should be available, as well as the transparency of the administration of training programmes and continuing professional development for veterinarians and veterinary paraprofessionals. Documentary evidence should be available to demonstrate compliance with initial and continuing education requirements, including with OIE recommendations.

The ASEAN VSB Network was established in 2016 with the following objectives: to create a regional forum for the National VSB of ASEAN Member States and equivalent authority (where a National VSB does not exist) for the purpose of sharing information, knowledge and experiences related to the policies, authority and functions of the National VSB; to promote collaboration between ASEAN Member States in supporting the development/establishment of fully functioning National VSB in Member States currently without VSB or where VSB are being developed; to mutually support the implementation of international standards related to VSB in ensuring the capacity of National VSB in promoting good veterinary governance within a country; to harmonise the National VSB best practices and operational guidelines, thereby facilitating transboundary mobility of veterinarians / veterinary paraprofessionals between ASEAN Member States without prejudice to personalities, religious beliefs, socio-cultural and even political diversities; to create links with VSB/VSB authorities or relevant institutions in other regions for the purpose of exchanging expertise, thereby improving the regional capacity of National VSBs for compliance with international standards.

Regulatory and administrative challenges and opportunities for VPP

*Thanee Pak-uthai, Secretary of Association of Veterinary School of Department of Livestock Development
Alumni Under Patronate of HRH Princess Soamsawali Mahidol*

Responsibilities of VPP: Divide into Two Functions

The first type includes VPP officials of Department of Livestock Development. They are authorised to carry out the responsibilities of the DLD such as disease monitoring and surveillance, animal vaccination, disease prevention and control, food inspection, laboratory technician, animal husbandry, artificial insemination and livestock extension services.

The second type includes VPP working in the private sector. They are authorised to carry out certain veterinary tasks with authorisation from the Veterinary Council.

Regulatory and Administrative Frameworks

The Veterinary Council is established under the Veterinary Profession Act, B.E.2545 (2002). The veterinary practitioners are divided into two categories: The first category of veterinary practitioners is a person who received a doctorate of veterinary medicine (DVM). The second category of veterinary practitioner is a person who has some knowledge in the veterinary profession by receiving a degree in non-veterinary medicine or a certificate from a school certified by the veterinary council and passed the examination under the veterinary regulations. For the renewal of the license as a second-category veterinary practitioner (every 5 years), the person must be trained in related topics from the institutes certified by the Veterinary Council. The person shall be practiced in all respects, except for some special diagnoses and treatments, such as diagnosis by using internal cameras, diagnosis and treatment of radiation, bone surgery, etc.

Challenges

Officials of the Department of Livestock Development (DLD) are working in District Livestock Offices (about 1 person per district), in which they are facing a problem with high workloads. The number of the students in the veterinary school of the Department of Livestock Development who work for DLD will decrease every year. In 2023, the last group of them will retire.

Opportunities

Thailand has 5,726 veterinarians and will add nine educational institutes at the present and more in the near future. Only 14.65% of these veterinarians work for DLD, therefore DLD can add more VPP and employ temporary workers to assist VPP and veterinarians to work on simple tasks.

Regulatory and administrative challenges and opportunities for VPP in Nepal

Ram Prasad Mehata, President, Nepal Para Veterinary and Livestock Association (NEVLA), Kathmandu, Nepal

There are about 57,784 veterinary personnel in Nepal. Of this total number, more than half constitute the CAHW who are self-employed in the rural areas of the country. The VPP comprise about 46 percent of veterinary personnel, while livestock development officers and veterinarians constitute 0.4 percent and 1.8 percent, respectively. Unlike the CAHW, other technicians are working in the government sector, private sector, NGO, vocational schools or foreign employment.

The regulatory framework to govern the veterinary service delivery in Nepal is scattered among different policies, acts and regulations. Some of these include the National Agriculture Policy, Poultry Production Policy, Rangeland Policy and Dairy Development Policy, the Civil Service Act, Food Act, Feed Act, Animal Slaughterhouse and Meat Inspection Act and their respective regulations. The Ministry of Livestock Development (MoLD) regulates all matters related to veterinary services in Nepal. Under the Ministry there are different tiers of organisations at the central (i.e. department, programme directorates, central laboratory, veterinary epidemiological unit, national mission programmes), regional (i.e. regional directorates), district (i.e. district livestock services offices, farm centres) and local level (i.e. local livestock service offices). The Civil Service Act and Regulation regulates the VPP employed in the government sector but there is no specific legislation to regulate the VPP working in the private sector and with NGO. The Nepal Veterinary Council (NVC) is the sole veterinary statutory body in Nepal, but it governs the regulation of veterinarians and there is no separate body to regulate VPP. There is no representation of VPP in the NVC which has created a big gap in the delivery of quality veterinary services in the country.

The main challenges of VPP in Nepal are: no legal basis of the activities being conducted by them, no legal protection mechanisms, poor job security for VPP working in the private and NGO sectors, fewer opportunities for skill and career development and a huge gap between the services provided and the incentives for providing these services. To address these challenges, NEVLA is working with the MoLD and other stakeholders to form a separate council for VPP. NEVLA has also been advocating for more opportunities for higher education and skill development trainings and institutionalisation of a performance-based incentive system. As Nepal is undergoing the state restructuring process and federal government will soon be in the country, challenges are many and so are the opportunities for the VPP.

Regulatory and administrative challenges & opportunities for VPP in Vanuatu

Valerie Kalopong, Biosecurity Vanuatu

Vanuatu is an island nation country situated in the western side of New Caledonia and Fiji in the South Pacific Ocean. It has 84 islands which are grouped into six provinces. There are six Veterinary Officers in the country, of which three are government officials employed under the Department of Biosecurity, Ministry of Agriculture and three own a private veterinary clinic situated in Port Vila, Capital of Vanuatu.

There are 24 VPP in the country that underwent training conducted by the Secretariat of the Pacific Community in 2005, 2013 and 2016. The course content covers animal health services, animal public health and diagnostic dimensions. Vanuatu has no VSB, but all trained VPP are employed under the department of Biosecurity and Livestock of the Ministry of Agriculture.

There is no specific legislation which covers the VPP, but certain Acts which define the duties of an animal health profession, such as the Animal Importation and Quarantine Act, Disease Control Act, Meat Industry Act and Prevention of Cruelty to Animals Act.

With the increase in VPP in the country, good surveillance can be done to define the status of animal health services in the country. Thus, there are fewer cases of food-borne disease, less chance of zoonotic disease outbreaks and improvement in the abattoir hygiene and operations. Certain challenges faced by the country in terms of market access to meet certain criteria require internal and external trainings to upskill VPP and improve standards. Globalisation is also an issue due to the increase of trans-boundary disease incursion (e.g., HPAI, Foot and Mouth Disease (FMD) etc.) and there are the climate change impacts which can contribute to the food security (e.g., reduced livestock population and productivity).

The way forward for Vanuatu is to set up a laboratory facility via donors or twinning with regional labs (e.g., Australia). Continuous audits and training is required by identification and attendance of relevant trainings in the future. Finally, different government policies must be harmonised, in order to act appropriately on cyclone resistant infrastructure and preparedness.

Africa's experience in setting up VPP associations

Benson Ameda, President, Africa Veterinary Technicians Association (AVTA)

The Africa Veterinary Technicians Association (AVTA) was founded in 2013 to promote and defend the interests of all VPP, with a special interest in the animal resource industry in Africa. This was after realising that a gap existed at regional and continental levels in regards to advocacy for the veterinary paraprofessional profession. AVTA is further expected to promote and improve the animal resource industry through its services.

The membership of the Association is drawn from recognised national veterinary paraprofessional associations in African countries. The associations must be private organisations funded mainly by subscriptions of their members and partnerships. However, there are provisions for non-veterinary paraprofessionals to be admitted as members with no voting rights.

The term veterinary paraprofessional means a person who, for the purposes of the Terrestrial Code, *“is authorised by the veterinary statutory body to carry out certain designated task (dependent upon the category of veterinary paraprofessional) in a territory, and delegated to them under the responsibility and direction of a veterinarian”*. They offer a wide range of services in the livestock sector with a lot of dedication irrespective of the environmental and geographical conditions. They are deployed both in the public and private sectors in areas of disease control, public health, animal welfare, extension services, artificial insemination, training and research institutions.

Despite the key role veterinary paraprofessionals play in the society, most countries have not recognised them in legislation governing veterinary services. In addition, lack of standardisation in training, intimidation, discrimination and restricted employment opportunities are some of the challenges facing the veterinary paraprofessionals.

To address the above challenges, AVTA is focusing on four thematic areas that impact on the performance of VPP. Areas with key interest are policy and legal frameworks, capacity building and welfare of members, standards, ethics and regulations, and finally, data banks and information management.

While ensuring compliance with international standards, AVTA is guided by the fact that there is urgent need to encourage effective and sustainable livestock development. It is in the interest of the Association that a stable public-private-partnership for growth is promoted. However, success will be realised depending on collaborations and partnerships with other sectors' institutions and stakeholders.

SESSION 4 DISCUSSION

At the conclusion of Session 4, the audience was provided the opportunity to ask questions regarding the regulatory and administrative frameworks in countries in the Asia region. The following is a summary of the key points presented during this discussion:

- OIE has a programme to support the set-up of Veterinary Statutory Bodies. There are also twinning opportunities (such as in veterinary education or lab) with countries who already have VSB and can share their experience.
- Best practice is to have one regulatory body or association for both veterinarians and veterinary paraprofessionals (VPP). Ensuring that there is effective engagement, sense of ownership and buy-in to governance approaches and outcomes from both sectors is the key to making such arrangements successful. Otherwise, it is understandable that either group would prefer separate associations and/or regulations.
- Disaster management was identified as an important topic of training for VPP.
- The situation regarding CAHW varies between countries, as does their link to the official Veterinary Services. The activities and quality of work performed by CAHW can be regulated via supervision by veterinarians working with NGO. CAHW are often trained by NGO and while NGO are linked with local governments, the local governments are not directly responsible for the CAHW. As a result, specific information about CAHW is not always available and their status remains variable.

SESSION 5: ROUND TABLE DISCUSSIONS: PERSPECTIVES FROM THE FIELD

Overview of on-going field activities in Asia

Katinka de Balogh, Senior Animal Health and Production Officer, FAO Regional Office for Asia and the Pacific

In the 1930s, the Rural Reconstruction Movement in China pioneered village health workers called “barefoot doctors” (Chinese: 赤脚医生; pinyin: chìjiǎo yīshēng). These were generally farmers with minimal basic medical and paramedical training working in rural villages in China, bringing health care to rural areas where urban-trained doctors would not settle. They promoted basic hygiene, preventive healthcare and family planning and treated common illnesses. Since the Alma-Ata Declaration on Primary Health Care in 1978, the World Health Organization launched the “Health for all by 2000” campaign and promoted preventive care at the community level. In the animal health field, rinderpest eradication developed further the concept of CAHW as important agents in assisting with vaccination campaigns against rinderpest, as well as assisting with the search for last cases of the disease through the application of participatory epidemiology. Furthermore, at the community level, farmers often trust more alternative treatments delivered by traditional healers over government services.

While developing the concept of CAHW it is important to carefully consider selection criteria. Normally, CAHW need to be farmers that are used to handling animals, are socially accepted by their communities, have sufficient time and dedication as well as a certain literacy. Also, with regards to gender, the training of female paraprofessionals needs to be considered, especially in communities where women are caring for livestock.

The Food and Agriculture Organization of the United Nations (FAO) has a wide range of projects that work closely with veterinary paraprofessionals as well as CAHW. Examples from FAO projects in Myanmar, Mongolia and Afghanistan were presented to illustrate the work of CAHW overall with regards to vaccinations, disease recognition and reporting (surveillance), animal treatments, advice (e.g., nutrition, hygiene, good practices, biosecurity) as well as selling of veterinary drugs and other inputs (e.g., against parasites, antibiotics) and their role during and after emergencies. A One Health example was provided from West Africa during the Ebola outbreaks when FAO trained animal health and extension workers on human health messaging and the delivery of disinfectants and other inputs, as they normally were trusted by the communities when health workers were considered as “messengers of bad news”.



Reality-check: GALVmed

Rahul Srivastava

India, the world's second-most populous country, is home to over 1.3 billion people, 512 million livestock and more than 1 billion poultry in a much-diversified ecosystem spread across 3.3 million km². These interconnected systems of human, animal and environment are under tremendous pressure to increase livestock production for a growing human population in this developing economy. While the organised livestock sector has experienced rapid growth, additional focus should be placed on the informal livestock sector, where around 70 million rural smallholders own livestock. The informal sector cannot be transformed into large organised farming due to lack of resources and low land-holdings, so the informal smallholder livestock sector will remain in place for the foreseeable future, requiring veterinary product-service support from private and government agencies.

As per the Veterinary Council of India, there are currently 63,000 registered veterinarians against the requirement of 123,000. The manpower forecast of Agrawal et al. 2013 for 2020 showed a gap of 60% undergraduates, 49% post graduates and 78.7% diploma holders/veterinary paraprofessionals. This gap seriously compromises veterinary service delivery to smallholder farmers with backyard poultry, small ruminants and pigs in rural and tribal areas. The supply-demand gap in veterinary service provision needs appropriate allocation of tasks, coordinated efforts between veterinarians and veterinary paraprofessionals by regulation, addition of CAHW and social innovation to serve the unorganised livestock farmers in rural and tribal areas.

GALVmed's partnership with the private vaccine manufacturing company, Hester Biosciences Limited (HBL), brought efficiency in the development of appropriate vaccines for backyard poultry, the establishment of reliable supply chains, and supporting extending veterinary services to remote areas. This partnership thus far has served 944,882 smallholder farmers in Odisha, Chhattisgarh and Jharkhand. Next, GALVmed and HBL partnered with Jharkhand State Livelihood Promotional Society (JSLPS) where GALVmed provided technical expertise on backyard poultry management, HBL ensured vaccine supply and necessary input for cold chain to the Ajeevika Pashu Sakhies (APS) (Friends of Animals) of JSLPS, who are women working in rural areas. This innovative public-private partnership trained 750 APS who extended animal health services in rural areas and performed 995,700 Newcastle disease vaccinations in backyard poultry and 76,000 PPR vaccinations in backyard goats. In addition, GALVmed and HBL collaborated with Pathe Pathshala (Peoples University on move) to train 111 women on base year prices (BYP) economics, poultry diseases and clinical signs, preventive vaccination, cold-chain issues, vaccination skills, and deworming. Finally, GALVmed and HBL partnered with Birsa Yuva Seva Samiti which is an NGO in Jharkhand providing mobile-veterinary-ambulatory services. In 10 months, the team vaccinated backyard poultry against Newcastle disease (120,300 birds), Fowl Pox (15,033 birds) and dewormed 10,694 birds. Deworming of 2,977 cattle, 13,227 goats and 2,500 pigs were performed in the project area. Large ruminants were vaccinated against Haemorrhagic septicaemia and Black Quarter (2,759 cattle) and small ruminants were vaccinated against enterotoxaemia (646 goats) and PPR (17,510 goats).

Experiences with these social innovations for appropriate product development, reliable supply chain for smallholder livestock farmers, capacity building of community animal health workers and efficient partnership between veterinarians and paraprofessionals reveal that a holistic approach encompassing goal-oriented responsibility distribution, efficient implementation and collaboration among various stakeholders will ensure safe, sufficient livestock production in sustainable ways without compromising animal welfare in organised and unorganised sectors of any developing nation.

Reality-check: Hester Biosciences

Rajiv Gandhi

Facilitating mass access to veterinary products at the grassroots level by various government and non-government organisations has always been a challenge, especially in rural and tribal areas of India. Low access to the Newcastle disease vaccine for poultry has led to high mortality in backyard poultry farms. An assessment of the situation revealed that a reliable supply of Newcastle disease vaccine and the access to the last-mile-veterinary-services delivery could be one of the factors that could help backyard farmers to improve their livelihood. A thermo-tolerant Newcastle disease vaccine in smaller dose sizes was therefore considered as an appropriate solution to the problem of last-mile-service delivery in difficult geographies where cold-chain infrastructure is available in a compromised form in rural and tribal parts of India. GALVmed in partnership with Hester Biosciences Limited, Ahmedabad developed this thermo-tolerant Newcastle disease vaccine in 50 & 100 dose pack sizes, which could withstand up to 40 degrees centigrade temperatures for a few days.

The next challenge was to ensure a sustainable supply of this vaccine. The GALVmed-Hester partnership started working on the establishment of a distribution channel in Odisha and two other states in India. For the first time, a private organisation was involved in creating a distribution network with 3 distributors, 33 stockists and over 153 retailers covering totally 42 districts of Odisha (10 districts), Chhattisgarh (16 districts) and Jharkhand (16 districts). The newly recruited Hester's backyard veterinary team of 24 motivated individuals managed this distribution. Odisha is a state where various national and international development organisations are working towards livelihood improvement for tribal people. The GALVmed-Hester mass access initiative for thermo-tolerant Newcastle vaccine was considered as an intervention address the unreliable low supply of the vaccine. The initiative included other poultry vaccines and medicines, as well as large animal vaccines and medicines, which, until now, were completely ignored by all commercial distribution channels.

The GALVmed-Hester partnership also involved additional local veterinary professionals, adopting a hybrid approach where a reliable supply chain of vaccines and other veterinary products was ensured the newly-created commercial distribution channel partners and last-mile-delivery efforts were coordinated by veterinarians, para-veterinarians and community animal health workers from government and development organisations. In Odisha, Hester's team of one area manager, 5 sales representatives and 998 additionally Hester-trained vaccinators worked in 10 districts, making vaccines and health products available through Hester's distribution partners comprising of one distributor, five stockists and 21 retailers. Cold chain management training was given to the vaccinators, the distributor and to the stockists, along with the necessary cool boxes, thermometers and refrigerators wherever needed.

Collaboration with non-government organisations like PRADAN and Pathe Pathshala in Odisha created awareness at the community level via regional language communication tools including posters, pamphlets and video shows with pico-projectors at community level.

A total of 71,426,104 Newcastle vaccine doses have been delivered to the 851,197 households in Odisha, Chhattisgarh and Jharkhand by the end of partnership in June 2017. As of October 2017, Hester has served 944,882 smallholder households and is continuing to increase its reach, making the initiative the world's biggest backyard animal immunisation and access to animal health products project. Hester is committed to pursue this activity to serve the backyard and smallholder sector as an independent business division, after completion of a successful GALVmed-Hester partnership project.

Reality-check: Grameen in Bangladesh

Mohammad Ehsanul Bari, Grameen Krishi (Agriculture) Foundation, Grameen Bank Complex, Bangladesh.

Over the ages in Bangladesh the role of VPP in livestock is undeniable. These VPP are providing treatment and medical care to the livestock in the remote rural areas of Bangladesh. They are known to the rural people as livestock's doctor. At present, there are two veterinary field assistants and one artificial reproduction worker employed in most of the upazilas. For these, the shortage of livestock worker is at the field levels; the number of service provides are insufficient compared to the requirement.

During the present Government term under Department of Livestock Services (DLS), the task of establishing of 12 diploma institutes for training field workers is underway, in order to increase the number of such workers.

In order to provide required veterinary services for the livestock in Grameen, CLDDP projects have set up six Community Livestock Centres (CLC), six sub-centres and 48 service points at unit levels depending on areas and cattle population. The CLC are well equipped. Community Liaison Office (CLO)/ Livestock Farmer Assistants (LFA) have been rendering their services in the service points as per a weekly mobile health care schedule. Health care facilities are provided mostly at farmer's houses. Grameen is maintaining the Animal Health Record with vaccination and treatment records.

For the country's livestock developments, more workshops need to be held for future development of livestock veterinary services. Inadequate veterinary services are one of the major obstacles for livestock development in Bangladesh. The ratio of veterinarians to farm animals and birds was estimated at 1.0 per 1.4 million and only 15-20% of farm animals receive routine vaccination. Private sector investment in the animal health sector remains low and is expanding gradually.

Policy framework for Veterinary Services and Animal Health:

1. Soft loans would be provided to accelerate the development of private veterinary services;
2. Community-based veterinary services would be developed through special projects;
3. Mobile veterinary services will be provided by DLS;
4. An autonomous Quality Control Agency would be established to ensure quality of veterinary drugs, vaccines, feeds, feed ingredients and breeding tools and materials;
5. Capacities of disease investigation network of DLS would be strengthened for disease surveillance, quarantine services and emergency planning to manage major disease outbreaks including Avian Influenza and other emerging diseases; and
6. Promote and encourage private sector to set-up compliant veterinary diagnostic centre, clinics and hospitals to cater the needs of the farmers and other beneficiaries.

Reality–check: Role of VPP in food safety and veterinary products

*Nigani Heni, National Agriculture Quarantine and Inspection Authority (NAQIA)
Papua New Guinea*

The world is facing a silent global emergency called Antimicrobial Resistance (AMR), an emergency that affects public health and welfare, food security, animal health and welfare, the environment and the economy. It is a global threat that could reverse the triumph of modern medicine, veterinary science and agriculture productivity.

The use of veterinary medicines and pharmaceuticals is important in the health and welfare of pets and food producing animals. However, the irrational use of such can lead to high residues of chemicals in meat and the development of drug resistance, which ultimately can have adverse impacts on human health.

These veterinary medicines and pharmaceuticals are important tools for animal health and welfare; they include veterinary medicinal products (VMP) such as vaccines, antimicrobials (antibiotics and antiparasites) analgesics/anaesthetics, and also include products such as diagnostic kits. VMP promote animal health and welfare, contribute to food security and safety, and therefore impinges on public health and human welfare.

However, the imprudent and irresponsible use of veterinary medicines and pharmaceuticals may pose potential dangers. It is by ensuring the responsible, rational and prudent use of these invaluable VMPs in animals that we will be able to safeguard their efficacy, and avoid the pitfalls of abuse, reductions in efficacy and/or drug resistance.

Papua New Guinea's (PNG) statutory veterinary authority, the National Agriculture Quarantine and Inspection Authority (NAQIA) took stock of what veterinary medicines and pharmaceuticals are used in the animal and livestock sector in PNG in partnership with the National Department of Health (NDoH) and other relevant stakeholders, state agencies and peers in the veterinary sector. A questionnaire form was used in solicitation of relevant information in this National Baseline Survey. It was an integrated monitoring and surveillance done in collaboration with animal industry stakeholders targeting the participants who import, distribute, dispense or use the VMPs with the following objectives:

1. To take stock of veterinarian medicines and pharmaceuticals that are in use in animals and livestock industry in PNG;
2. To establish what medicines and pharmaceuticals are imported, stored and distributed in PNG, their quantities and volumes, their dispensation to end users and their application; and
3. To use the results of the survey to guide NAQIA on fulfilling its roles and formulating policies that enable safe, responsible and rational procurement, distribution and use of VMPs.

Reality-check: summary of survey on local animal health systems

Herve Petit, Agronomes et Vétérinaires sans Frontiers

Although carried out by Agronomes et Vétérinaires Sans Frontières (AVSF), the present study was conducted in collaboration with all members of VSF-International (VSF-I), in the interests of the latter. The present study is based on a survey aiming to describe the proximity of animal health systems in different countries. It was performed from January to June 2017 at AVSF headquarters as the internship topic of Margot Galière, a French veterinary student, thanks to funding granted by France Vétérinaire International, a semi-public organisation of veterinary expertise. 29 countries where at least one member of the VSF-I network is active were surveyed. Two questionnaires were sent to each country, to the Chief Veterinary Officer and the local VSF team. Questions focused on all actors of proximity animal health, investigating for each of these categories: regulatory framework, population, training, public vs. private activity, income sources, structuration and quality of service. 22 responses were received from 19 VSF teams and only three Chief Veterinary Officers, covering 19 countries.

Overall, results show a huge variety of situations. As for graduated veterinarians, training curricula are available in nearly all countries, although the number of these professionals remains very limited. While always being represented in the public sector, in particular at the highest hierarchical levels, they do not always exist in the rural private sector and, when being present, their exact number is rarely known.

VPP are usually trained for two to four years, but sometimes less (down to 45 days). One can often find two to three different categories in a same country, and their denominations are highly variable (inter- and intra-country). Their exact number is rarely known, but much higher than veterinarians in general (three to five times in average). Their activity is regulated by the VSB in 50 % of the countries. They are generally found in both the public and private sectors, possibly being self-employed in the latter.

CAHW are present in all surveyed countries, with highly variable naming. Their exact number is rarely known, but often high (over 1000 for 11 countries). Their regulatory status is highly variable: official (seven countries), informal (six countries), none (six countries). Official/informal status generally goes along with harmonised training and/or authorisation to practice, but not necessarily official control of their activity. Their income sources are highly variable (also depending on legal status), being paid by farmers (17 countries), but also State (nine countries), NGO (eight countries) and/or private veterinarians (six countries). CAHW are structured into associations in eight countries where they have an official or informal status.

Several lessons can be learnt from these results. First of all, graduated veterinarians always appear to be in limited numbers, insufficient to secure a proximity animal health service network by their own. VPP complete some of this need, but not always and everywhere. CAHW exist in all developing countries, often for many years and are now fully part of the rural fabric. Providing adequate training, they can ensure animal health services and surveillance where nobody else does. Being farmers themselves, they are fully embedded in their community, which is a crucial factor of stability in such poorly attractive areas where they act. Moreover, this makes their motivation double, as their skills can benefit both their clients and own livestock production. Last but not least, it makes it easier for them to reach financial self-sufficiency for themselves and their families, as they do not entirely depend on their animal health activity but can also rely on their farm production. However, the huge variability of their status, training and supervision is a major factor of risk regarding the quality, efficiency and security of their interventions. Official definition of their status, duties, rights and limits at national level represents the first step towards adequate training curricula and relevant supervision, as vital conditions to secure their activity.

SESSION 6: TRAINING OF VETERINARY PARAPROFESSIONALS IN ASIA AND PACIFIC

Becoming a veterinary para-professional in India

Miftahul Islam Barbaruah

India is a union of states and veterinary service is a state subject in India. Many states are promoting further decentralisation of veterinary service to local self-governments. With an estimated 120,098 veterinary personnel (68,098 veterinarians and 52,000 veterinarian paraprofessionals) as of 2012, India ranks 4th amongst countries in South Asia in terms of veterinary personnel per square kilometre. A government-sponsored report projects the need for VPP to be 0.1 million by 2020.

The key issues of veterinary service delivery in India can be discussed in terms of 5 As: Availability, Accessibility, Acceptability, Adequacy and Affordability. Too many non-state actors are active in veterinary service delivery in India. They are neither recognised nor registered and monitored officially by the national- and state-level statutory body constituted as per the Indian Veterinary Council Act. The available VPP courses include long duration (one to two years) diploma courses such as veterinary/livestock development assistant and veterinary laboratory technology. The short duration (35-45 days) courses such as CAHW or livestock service providers (LSPs) are mostly managed by private but often facilitated by government programmes. VPP training is in-service (i.e. after selection to government service) in some states where as in other states there is no job assurance for VPP trained under public funded institutions. Vocational private are active in some states. The entry requirement varies from state to state.

Following a GALVmed supported advocacy programme in the year 2013-2014, the government has recognised that VPP qualification should be based more on output of learning and learning outcome than on input and identified the need for harmonised standard curriculum for all states tailored to private sector requirement, as well as a system that facilitated private sector participation in development of National Occupational Standards, training and engagement of skilled VPP.

During the year 2015-2016, the Agriculture Skill Council of India (ASCI) decided to align VPP courses to National Skill Qualification Framework (NSQF) as notified by the Government of India. Now, more than 100 countries have or are in the process of developing their national qualification frameworks. The regional qualification frameworks are fast emerging to ensure workforce mobility within specific regions. Based on NSQF, India has declared the first version of the National Occupational Standard (NOS) and Qualification Pack (QP) for various categories of VPP including CAHW. As of now, in India there are four qualification packs for both long-term and short-term training of VPP. The trainees under the new system not only get a proper certificate but also the much-needed recognition through registration at Labour Management Information System (LMIS). For a smooth transition to the new system, ASCI is focusing on quality certification of VPP training of trainers and master trainers. Attempts are being made to work jointly with universities and government VPP schools to align old curriculum to declared occupational standards. To ensure international mobility of trained VPP, India has recently developed transnational standards for animal health workers.

Between 2015 and 2016, 16 certified private training providers trained a total of 11,578 animal health workers across 17 states. During the 2017, 12 certified training providers from five states have trained 1,806 Animal Health Workers. There is limited success of training for long-term courses due to more stringent infrastructure and quality requirement for training providers and the fact that such courses are not supported yet under government skilling programme.

The training of veterinary para-professionals in Nepal

Sima Sah, Veterinary Coordinator, MAMTS

The training programme for VPP is conducted under the Council for Technical Education and Vocational Training (CTEVT), regulated by Ministry of Education. CTEVT, through its constituted and other affiliated schools has been running various courses on about 54 Junior Technical Assistant (JTA) programmes and only seven JTA programmes all over Nepal, which is very few in comparison to other technical education. Short term training programmes like CAHW are also carried out under National Skill Test Board. VPP are in close contact with the farmers of Nepal so there is high demand for VPP and such training in Nepal. Fiscal policy of Government of Nepal, 2015 has announced the requirement of one village Development Committee and one Veterinary Junior Technician (JT). This policy adds 3,157 more VPP in the National Veterinary Service.

VPP in the form of CAHW have long been recognised as a means of increasing the availability and affordability of private animal health services to traditional and small-scale livestock keepers in Nepal.

VPP play an important role in the national animal health programme and extend the reach of veterinary services to the poor, marginalised and needy communities of the rural and remote areas. From 1957-1987, the Department of Livestock in collaboration with Institute of Animal Science, trained JT and JTA but after 1889, CTEVT provided VPP continuously. The JTA programme is 18 months duration and the JT programme is three years long which produces more than 1,000 JTA per 18 months and about 280 JT per three years. After completion of this programme, VPP are able to handle the basic (preventive and curative) animal health care and some livestock extension services. The training curricula is designed under the direct involvement of skilled veterinarians and modified according to the needs assessment. The main aim of this review of this article is to identify the strengths, weaknesses and opportunities of the training programme. Primary and secondary information has been collected from CTEVT, Department of Livestock Services (DLS), Nepal Veterinary Council (NVC), District Livestock Services Office (DLSO) and NEVLA.

Nepal Government has given high priority to the agriculture sector. Most of the NGO are working in agro-livestock sectors and need agro-veterinary technicians. CTEVT has been conducting an annex programme in most high schools and currently, Nepal Government is going to launch two levels for agro-veterinary technicians in academically potential high schools from class nine. Potential fields are available for veterinary clinical practice. For graduates, employment opportunities will be seen in Government of Nepal (GON), Nepal Agricultural Research Council (NARC), NGO, livestock and pharmaceuticals industries, development banks and commercial farms.

Due to the lack of proper monitoring and supervision of training institutes, challenges, retention issues and registration policy of VPP, the popularity of this training among Nepalese is not as satisfactory as required, so it is time to move forward and modify according to the demand. Training curriculum should be revised and implemented periodically to cover overall aspects of modern livestock farming including animal health and husbandry practices, extension education, social mobilisation, community development, etc. in order to produce middle-level first-hand technical manpower required in private and government livestock sectors and dairy industries which ultimately help to improve livestock economy and national Gross Domestic Product (GDP).

The training of veterinary paraprofessionals in Afghanistan

Raymond Briscoe, Executive Director, Dutch Committee for Afghanistan Livestock Programs

VPP play a key role in private sector clinical service delivery at the community level to the livestock owners of Afghanistan by performing most of the veterinary interventions in the country. They work in a Veterinary Field Unit (VFU) which forms part of a much larger VFU network nationwide. The VPP working in a VFU is selected from their own community, preferably with a grade 12 education, approved by the local and central government institutions and trained for six months at one of the training centres. Following graduation, they are supplied with a start-up kit which contains a set of instruments, a motor bike and a solar powered refrigerator. They charge a fee per service, and the model provides a quality, affordable, accessible and sustainable service.

The selection of VPP and establishing a VFU are very important; the VFU needs to meet the needs of the local community and have sufficient livestock to sustain the business when work commences upon graduation of the trainee selected. There are criteria in place for selection.

The training curriculum has been refined and upgraded since first being introduced in 1988 and has been approved by the Ministry of Agriculture, Irrigation and Livestock (MAIL). Registration of the training centre in Charikar is currently ongoing through the Ministry of Education. The curriculum is student focused, practical and relevant to the country context.

There is a need for a VSB for the regulation of animal health professionals and VPP which hopefully will be established in the near future. In the meantime, graduates of the training centres are licensed by MAIL; at present there are over 800 active VPP in the country working in VFUs. They are being monitored by our own veterinarians on a monthly basis, and also through participatory monitoring by public sector veterinarians. Following graduation and after a short time working in their communities, the VPP are given a choice of refresher courses (one to two-week duration on different topics) based on need to help improve their skills and expand their range of services. Business skills are also taught and priority is given now to extension work to help integrate the VFU staff member into the community. Farmers' groups are formed, both male and female, through which extension messaging flows. This creates awareness in livestock owners, and a demand for service from the VFU.

The network of VFU provides a valuable resource to the Animal Health Authority, and now some are being contracted by the public sector (Sanitary Mandate Contracting Scheme) to carry out disease reporting, investigation and surveillance. Recently, through the FAO/OIE global programme for the control and eradication of PPR, vaccination campaigns were being carried out through the VFU.

The training of veterinary paraprofessionals in Cambodia

Vutha Pheng

The veterinary and veterinary paraprofessional positions are very popular in Cambodia, however, training establishments have been providing varying levels of trainings for VPP. Veterinarians hold 4-year Bachelor of Science degrees in animal production and health or animal sciences and veterinary medicine. The Royal University of Agriculture (RUA) is the only institution providing the DVM degree in Cambodia. Village veterinarians, or village animal health workers (VAHW), receive three to nine months of training. These VAHW often serve roles as VPP at the community level.

VPP hold two-year diplomas or associate's degrees in animal health and production. VPP work in private clinics, the pharmaceutical industry, the animal feed industry, public health and extension, NGO and livestock institutions. Technical supervision is provided by the three training institutions for VPP under the umbrella of Ministry of Agriculture, Fisheries and Forestry (MAFF). MAFF monitors and provides approval on any academic activities at these institutions, to include strategic planning, facility improvement and maintenance, curriculum development and/or revision, capacity building of teaching staff and teaching quality and collaborations with all stakeholders (public, private and NGO).

There is no VSB in Cambodia, meaning that there is no clear definition for either veterinarians or VPP in terms of their roles, qualifications and duties. Therefore, graduates from bachelor's degrees in animal fields are implementing an unlimited scope of tasks from farm to table, including decision making, animal care consultation, blood sampling and diagnosis and animal raising, selling and slaughtering.

A PVS gap analysis was performed in 2011 which identified the following priorities for the veterinary profession in Cambodia: 1) set up Veterinary Statutory Board to establish standards; 2) define veterinarians and veterinary para-professionals; 3) define roles and qualifications required and 4) address standards of veterinary and paraveterinary education.

For VPP, the PVS analysis demonstrates the need for competency in: 1) active and passive surveillance; 2) disease control through vaccination programmes; 3) parasite prevention and control programmes; 4) abattoir inspections for public health purpose; 5) ante and post mortem (microbiological/ toxicological control); 6) extension service; 7) reproduction record and improvement; 8) minor surgery; 9) laboratory diagnosis and quality assurance; 10) quarantine and border security; 11) risk analysis; 12) disease control and eradication; 13) detection and emergency response; 14) inspection veterinary medicines and biological residue; 15) identification and traceability and 16) animal welfare.

In conclusion, training establishments play vital roles to improve competency of day-one graduates in veterinary paraprofessionals for efficiency and effectiveness of veterinary service performance. A lack of a VSB has prevented any regulation of roles, duties, and assignments for veterinarians vs. VPP. Finally, continuous education is needed to improve VPP capacity and to help them become recognised VS providers.

The training of veterinary para-professionals in Australia and some countries in the region

Rowland Cobbold, School of Veterinary Science, University of Queensland

Although the context for the use of veterinary paraprofessionals differs from that of other countries in the Asia-Pacific, VPP contribute very effectively to the mission of protecting Australia's National Veterinary Services, as defined by the OIE. Maintenance of Australia's biosecure status and protection of its agricultural (particularly meat) export industries are key in this respect.

Australia employs VPP across a wide variety of roles within the animal health, laboratory and veterinary public health (VPH) categories. Because of this, and because VPP are not ostensibly registered with a Veterinary Statutory Authority (VSA), it is often difficult to identify VPP as a distinct professional group. The Animal Health category primarily comprises veterinary nurses/technologists and stock inspectors. The former typically work in the private sector, the latter in the public sector, being employed by mainly by State Departments of Agriculture. Most Laboratory VPP also work for State Departments of Agriculture, Health or Environment. VPH VPP are primarily engaged as meat inspectors, employed by the Commonwealth Department of Agriculture and Water Resources (DAWR). Apart from meat inspectors, it is difficult to ascertain reliable numbers of VPP, due to their disparate identities and employment locations.

Training requirements for VPP vary according to role. Veterinary nurses must gain a Certificate IV as a minimum qualification, whereas Veterinary Technologists require a three-year bachelor's degree (usually a BVetTech). Many Laboratory VPP qualified with a one- to two-year Diploma, although they are increasingly being replaced by bachelor's-qualified (i.e., three years of training) Professional Officers. Meat inspectors must be qualified with a minimum of a Certificate III in Meat Processing (meat safety) to be engaged by DAWR in export certified abattoirs, although qualifications up to graduate diplomas are common.

University programmes (typically Level 7 bachelor's qualifications and higher) are regulated by the Federal Government via the Australian Qualifications Framework. Level 1-6 qualifications are vocational programmes, provided via Registered Training Organisations, which are quality-regulated by the Australian Skills Quality Authority. Whilst veterinarians provide large amounts of direct input into veterinary qualifications, input into design and management of VPP curricula is typically less, and variable. Most of the input comes in the form of work experience-based veterinary exposure, undertaken as part of their training. Beyond veterinarian control of VPP training curricula, there is input and influence from the veterinary profession and associated industries, such as professional bodies, various laboratory standards and regulatory agencies related to veterinary public health activities.

With the exception of federally engaged meat inspectors and veterinary nurses in Western Australia, there is no requirement for VPP to be registered with a VSA. This is in contrast to veterinarians, whose training must be accredited with the Australasian Veterinary Boards Council (AVBC) in order for them to be registered with respective State or Territory VSAs. This was noted in the recent OIE PVS Report for Australia. 91% of the document's critical competencies were rated at Level of Advancement 4 or 5, however recommendations included: formal definition, registration with a VSA, authority of VPP and standardisation and accreditation of VPP training requirements.

Australia relies on well-qualified and actively engaged cadres of VPP. Although VPP are not universally registered with a VSA, they contribute effectively to Australia's animal health, laboratory and VPH missions. Australia also engages positively with its neighbours in Southeast Asia and the Pacific on curricular advancement and is well positioned to partner further with them to mutually optimise VPP training and roles in the region.

SESSION 6 DISCUSSION

At the conclusion of Session 6, the audience was provided the opportunity to ask questions about the training of VPP in Asia and the Pacific. Many of the questions in this discussion were regarding specific countries' training programmes; the following is a summary of the key points presented during this discussion:

- It is important to remember that an association of VPP and a statutory body are different and separate entities. A VPP association is purely a professional organisation interested in promoting the interests of its membership, while a council or statutory body will register veterinarians and VPP and regulate the requirements and conduct for each cadre in the public interest, although the particular situation in each country may vary. Therefore, an association should not register or regulate VPP in any way, as this is the role of the statutory body.
- In India, the Veterinary Council Act must be consulted regarding any establishment of a new training institute.
- In Nepal, VPP are offered annual refresher training to better align their knowledge and skills with the needs of the communities in which they work.
- The training centre in Afghanistan has four trainers which can train 15-20 students per cohort. This is sufficient for current needs.



SESSION 7: OIE AD HOC GROUP ON VETERINARY PARAPROFESSIONALS: COMPETENCIES AND CORE CURRICULUM

Evolution of the OIE work on Veterinary Education and Veterinary Paraprofessionals

Jennifer Lasley, Chargée de Mission, Programmes Department, OIE

In October 2009, the OIE organised the 1st Global Conference on Veterinary Education, “Evolving Veterinary Education for a Safer World,” in Paris, France. The Conference addressed inequalities and shortcomings in veterinary curricula worldwide and identified the need for the development of minimum competencies expected of all graduate veterinarians in all countries in both private and public components of the VS. In response to the recommendations adopted at the Conference, the OIE convened an *ad hoc* Group on Veterinary Education in 2010 which published the “Day 1 Competencies for veterinarians”. Next, the OIE published the Guidelines of Veterinary Education Core Curriculum. Importantly, the Day 1 Competencies are not compulsory but rather general guidance for OIE Member Countries. The minimum competencies are described as those needed by graduating veterinarians to be adequately prepared to participate in National Veterinary Services (both public and private sector) at the entry level. The second tangible product of the *ad hoc* Group was OIE Model Core Curriculum. This document serves as a companion to Day 1 Competencies and provides guidance on how Member Countries can translate Day 1 competencies into training curriculum. The OIE Model core curriculum identifies 21 distinct subjects as well as the expected sequence in the curriculum, the Day 1 Competencies addressed by each course, and the description of the course.

Several recommendations of the 4th Global Conference on Veterinary Education are relevant to the continued evolution of the OIE’s work on VS. First, to develop or modernise veterinary legislation so that both veterinarians and veterinary paraprofessionals are regulated in compliance with OIE standards and to ensure that legislation covers their responsibility. Next, that Member Countries ensure that Veterinary Statutory Bodies are established or refined in line with the OIE’s definition, noting their important function of registration or licensing of veterinarians and VPP, and imposing a minimum requirement for continuing education as a condition of renewal of licensure of veterinarians and VPP. Then, to maintain a comprehensive understanding of both the roles of and responsibilities borne by VPP in the VS of their country and also their professional training opportunities nationwide. Finally, that the OIE should expand its work on the quality of VS to better cover the issue of VPP working in the veterinary domain. These recommendations led to two regional conferences on VPP and an initiative to develop minimum competencies and core training curricula for VPP, mirroring the approach taken in the work the OIE has done for veterinary education.

A new *ad hoc* Group on VPP was created and its first meeting was held in November 2016, with technical support provided by the Institute for Infectious Animal Diseases of Texas A&M University, USA, an OIE Collaborating Centre for Biological Threat Reduction, and the home of the OIE US liaison office. The Group has identified three tracks of VPP: animal health, veterinary public health and laboratories. Two meetings of the Core *ad hoc* Group have been held, and their work has been presented to the Specialist Commissions in February and September 2017. The experts have determined the spheres of activity, learning objectives, and competencies of the three tracks as presented in the draft Minimum Competencies for Veterinary Paraprofessionals and this document has been presented to OIE Members for review and comments. In parallel, a global analysis of existing curricula for the three tracks has occurred, which has informed the development of the core curricula to achieve the minimum competencies for VPP. Once the draft Core Curricula is developed, it will be reviewed by Member Countries and refined according to their comments.

Global Analysis of VPP from WAHIS, PVS Pathway, and VPP Curricula

Heather Simmons, DVM, MSVPH, Associate Director, IIAD

The OIE, in conjunction with the Institute for Infectious Animal Diseases of Texas A&M AgriLife Research, has conducted an in-depth analysis of WAHIS data, the PVS Tool, and VPP curricula from around the globe. The results of this analysis have facilitated the development of guidelines on VPP competencies and recommended curriculum and has provided a means for systematic examination of the VPP profession on a global scale.

For the WAHIS analysis, the OIE sent questionnaires to 31 Member Countries from the five OIE Regions, who employ VPP classified in the following occupational categories: 1) animal health and welfare activities; 2) community animal health workers; 3) veterinary public health activities, and 4) other. The survey included questions over the roles, recognition, and training/education of VPP in the country, and asked the respondent to identify an expert on VPP. The survey response rate was 77%, with representation from all regions. Survey results yielded the following key points:

- VPP participate in both public sector (100%) and private sector (96%) Veterinary Services;
- Clinical care is more recognised in the private sector (92%), while animal disease control activities, including surveillance and vaccination are more prominent among VPP working in the public sector (96%);
- Veterinary public health activities were least likely to be addressed by the private sector (33%);
- 50% of responding OIE Member Countries do not have a mechanism to register VPP; and
- 83% of respondents have an accrediting body to certify VPP curricula and/or facilities.

Therefore, while most VPP engage in public and private sector activity, private sector VPP do not generally engage in public health or disease surveillance activities, and many are not registered in their counties, constituting notable gaps in the VPP profession.

Next, the investigators conducted an analysis of the PVS Evaluations for critical competencies I -1B (adequacy of VPP staffing) and I -2B (VPP skills competency). Countries were assigned a Level of Advancement (LOA) between 1 and 5, serving to indicate the level of compliance with OIE standards. For Competency I – 1B, approximately 41% of the 130 initial PVS Evaluations occurred for an LOA of 2 or 3, meaning that VPP staffing is usually appropriate for clinical and administrative activities or of undertaking professional/technical activities for veterinary services. For Competency I-2B, approximately 61% of the 130 initial PVS Evaluations occurred for an LOA of 2 or 3, meaning that the training of veterinary paraprofessionals is of a variable standard (LOA 2) or a uniform standard (LOA 3) and allows the development of only basic competencies. For the 33 follow-up assessments, no net change for the sample was observed. Thus, while many countries meet some of the OIE standards for these competencies, there still exist countries with LOA which indicate little or no compliance with OIE standards.

Last, the investigators conducted systematic qualitative analysis of OIE Member Country curricula for VPP, which compared educational programme data against the VPP Competencies document developed by the OIE *ad hoc* Group on VPP. The analysis sought to understand the degree to which specific Spheres of Activity and Competencies from the OIE Competencies Document are addressed by a sample of VPP training programmes within OIE Member Countries. Animal Health/Veterinary Public Health curricula were examined separately from Laboratory curricula. For the AH/VPH track, the 19 programmes analysed covered an average of 8.7 of the 13 Spheres of Activity for VPP, while the Laboratory track sample (n=6) addressed an average of 8.2 of the 11 Spheres of Activity. Thus, the analysis shows that, while VPP training programmes are addressing the majority of spheres of activity deemed important by the OIE *ad hoc* Group, there is room for improvement to make VPP training programmes more comprehensive and aligned with the OIE guidelines that will be highlighted in the Competency Document and the Curricula Guidelines.

Preliminary OIE Competencies for VPP

David M. Sherman, Chargé de Mission, World Organisation for Animal Health (OIE), Paris, France

The 4th OIE Global Conference on Veterinary Education, (22-24 June 2016, Bangkok) provided a set of recommendations to both OIE Member Countries and the OIE. Among these, the Conference participants recommended the OIE “consider expanding its work on the quality of Veterinary Services to better cover veterinary paraprofessionals working in Veterinary Services, by identifying minimum competencies for various categories of veterinary paraprofessionals and developing guidelines on core training curricula.”

The opportunity to implement this recommendation was realised in 2016 when the OIE received financial support from the United States Government to develop internationally standardised minimum competencies and core curricula for veterinary paraprofessionals in alignment with the OIE intergovernmental standards, guidelines and recommendations. To achieve these objectives the OIE convened the *ad hoc* Group on Veterinary Paraprofessionals, which held its first meeting on 22 – 24 November 2016.

The *ad hoc* Group approached its work by first developing the minimum competencies, reasoning that the core curriculum would be developed so as to deliver the knowledge, skills and abilities required to achieve the minimum competencies identified. The *ad hoc* Group also recognised that veterinary paraprofessionals were utilised over a broad range of circumstances in the veterinary domain. As such, minimum competencies were developed for three different tracks of veterinary paraprofessionals – the animal health track, the veterinary public health track and the laboratory diagnostic track.

Once fully completed, the VPP competency and curricula guidelines will be published on the OIE website.

Preliminary Core Curriculum for VPP

Johan Oosthuizen, President, South African Association of Veterinary Paraprofessionals, Pretoria, South Africa

The Veterinary Paraprofessionals Competencies and Curricula project was planned in accordance with the OIE 6th Strategic Plan for 2016-2020. The outputs of this *ad hoc* Group will serve to provide OIE Member Countries and their VSB with general guidelines for expected competencies and curricula which they can then apply to the various categories of VPP that they recognise as eligible for registration in their respective countries.

The objectives of the project are to:

1. Undertake a thorough analysis of the existing VPP categories and their related curricular requirements;
2. Define OIE Recommendations on the Competencies of VPP in different standardised categories to assure National Veterinary Services of quality recognised by the World Assembly of National Delegates of the OIE;
3. Define OIE Guidelines on the minimum curricular requirements for VPP for the main categories of VPP that exist, in scope and level of qualification and that it be recognised by the World Assembly of National Delegates of the OIE;
4. Undertake consultation with relevant stakeholders on the role of VPP globally; and
5. Advocate for the implementation of OIE Recommendations and Guidelines relating to VPP in all OIE Member Countries through engagement with national Veterinary Services and VSB.

Given the OIE mandate and the definition of VPP from the OIE *Terrestrial Animal Health Code*, the *ad hoc* Group focused its work around the tasks as outlined: taking a broad view by developing standardised minimum competencies and potentially core curricula for Animal Health, Veterinary Public Health VPP and Laboratory VPP. It is, however, recognised that globally there are many different designations of VPP, a variety of expected skills and a wide range of training programmes.

The Group discussed existing curricula based on several basic questions, including how they are developed, where they are used and what methods are used for their delivery, and developed a list of existing and accessible curricula to be analysed and reviewed by IIAD to facilitate the Group's future study. Members were requested to follow-up on missing information relevant to their expertise as well as provide any further curricula examples to assist in moving forward on the analysis of curricula.

SESSION 7 DISCUSSION

At the conclusion of Session 7, the audience was provided the opportunity to ask questions regarding the work of the OIE ad hoc group on VPP in the development of competencies and core curriculum. The following is a summary of the key points presented during this discussion:

- Once complete, VPP competency and curricula guidelines will be published on the OIE website, and while OIE will make efforts to ensure the practical use of the document via support and communication to regional and national bodies, VPP associations of Member Countries are encouraged to disseminate the guidelines on their website and to their governments.
- While the core curricula seem advanced, those concerned that standards will be set too high must remember that the guidelines are intended to be comprehensive for a broad range of professions. A particular VPP programme, depending on the competencies required, does not necessarily need to include all of the courses. Early stage programmes would only require the early stage curriculum. A programme's coursework would depend on the country's specific needs, as well as the number of credits delivered by a given programme.
- The OIE's role is not to provide prescriptive and uniform requirements, but rather to provide evidence- and science-based guidelines to Member Countries on how to best develop the workforce needed to provide a quality Veterinary Services. Each country should examine carefully the Competencies document and determine appropriate entry qualifications. Any VPP will need basic literacy, mathematics, but the guidelines are flexible in order for the Member Countries to adapt VPP profiles and competencies to their needs. Each country should decide about specific entry requirements, categories, course length, progression, and continuing education.

SESSION 8: WORKING GROUP SESSION

Role of VPP to Ensure Prudent Use of Antimicrobials

In this working group session, conference participants discussed how best to address the following Conference Objectives:

- **Conference Objective #2:** “review the current situation of veterinary paraprofessionals (VPP) in Asia, notably their training, qualification, roles and status, and the challenges they are experiencing”
- **Conference Objective #4:** “review the ongoing work of identifying minimum competencies for the three streams of VPP, animal health veterinary public health and laboratory diagnosis and developing guidelines on core training curricula from the viewpoint of regional applicability”.



SESSION 8 WORKING GROUP DISCUSSION

On challenges to controlling effective use of antimicrobials in the veterinary sector:

- Regulation of antimicrobial use is lax or not enforced in many countries;
- Antimicrobials are readily available over the counter and their use is encouraged to prevent or control disease;
- There is a general lack of awareness of the dangers of antimicrobial resistance.

On whether VPP should be able to prescribe and use antimicrobials:

- When veterinarians are not present in an area, VPP should be able to use antimicrobials to ensure livestock owners have access to essential medicines for animal health and welfare;
- VPP should be subject to regulated training and conditions for antimicrobial use, such as consultation with veterinarians, required education or certification, signing an oath/agreement, mandated reporting and surveillance, etc.

On the role of VPP to promote prudent use of antimicrobials and surveillance of resistant bacteria:

- VPP have influence over animal producers and are well-poised to educate them on the dangers of AMR in animal as well as human populations;
- VPP can play role in AMR surveillance as they are enmeshed in communities and are at the closest level to the farm.

On sensitising VPP to the risks of antimicrobial resistance due to improper use and storage of antimicrobials:

- VPP and veterinarians need more education on the dangers of AMR;
- Alternatives to antimicrobials need to be considered in parallel.

SESSION 9: BUILDING CONSENSUS AND RECOMMENDATIONS ON THE WAY FORWARD

During Session 9, a preliminary list of recommendations was presented to participants. Points raised during group discussion were considered in the drafting of the final conference recommendations, which are presented below:

Recommendations: Regional Conference on Veterinary Paraprofessionals in Asia

6–8 December 2017, Bangkok, Thailand

CONSIDERING

1. the definition of Veterinary Services in the OIE Terrestrial Animal Health Code (Terrestrial Code) includes veterinary paraprofessionals, who should be approved to deliver any delegated functions performed in accordance with OIE standards;
2. the provisions of Section 3 of the Terrestrial Code related to the fundamental principles of quality of Veterinary Services, which therefore apply to veterinary paraprofessionals, in particular:
 - Chapter 3.1. that stipulates that the Veterinary Services retain ultimate responsibility for the application of these principles, even when the responsibility for establishing or applying certain animal health or animal welfare measures is exercised by an organisation other than the Veterinary Services;
 - Chapter 3.2. on the Evaluation of Veterinary Services, in particular Article 3.2.5 that highlights that the functions of various categories of personnel should be described in detail, including the appropriateness of the application of qualified skills to the tasks undertaken by Veterinary Services;
3. the provisions of the Chapter 3.2. of the Terrestrial Code, in particular Article 3.2.12 in which the role of the veterinary statutory body should be (1) to license or register veterinarians and veterinary paraprofessionals, (2) to set the minimum standards of education, and (3) to set the standards of professional conduct and competence of veterinarians and veterinary paraprofessionals;
4. the success of the Continental Conference for Veterinary Paraprofessionals, jointly held by the OIE, GALVmed and AVTA in Pretoria (South Africa) in 2015, where participants, while noting that veterinary paraprofessionals are not always under the regulation of Veterinary Statutory Bodies, confirmed the importance of veterinary paraprofessionals in the delivery of Veterinary Services in many countries and recommended the OIE to consider developing minimum competencies and core training curricula for veterinary paraprofessionals; and
5. the recommendations of the fourth OIE Global Conference on Veterinary Education, held in Bangkok (Thailand) from June 22 to 24, 2016, in particular those concretely referring to veterinary paraprofessionals, including the recommendation that the OIE identify minimum competencies for various categories of veterinary paraprofessionals and develop guidelines on core training curricula.

RECOGNISING

1. the crucial role of the veterinary paraprofessionals working in animal health, veterinary public health and laboratories, as part of the Veterinary Services, for efficient implementation of national Animal Health and Veterinary Public Health policies and programmes;
2. the diversity of categories of veterinary paraprofessionals working in animal health, veterinary public health and laboratories and the need for harmonisation in particular with regard to qualifications relative to their scope of work, duties or tasks;
3. the work which the OIE has already done on developing expected competencies for veterinary paraprofessionals in animal health, veterinary public health and laboratory diagnosis as recommended

both at the Continental Conference for Veterinary Paraprofessionals in Pretoria and the Global Conference on Veterinary Education in Bangkok;

4. the need for Veterinary Statutory Bodies to comply with OIE standards (Chapter 3.2., Article 3.2.12.) through the application of an appropriate statutory framework;
5. the important roles played by veterinary paraprofessionals, among others, in contributing to food safety, improved livelihoods and biothreat reduction, as well as promoting prudent and responsible use of antimicrobials in animals in light of growing concerns about the global threat of antimicrobial resistance;
6. the important contributions community-based animal health workers could make, especially in remote territories and in poor communities, to the delivery of a variety of services under the responsibility of the Veterinary Services; and
7. the need to deal with the impediments to the delivery of veterinary services in all corners of Member Countries and the need to improve working relationships between veterinarians, veterinary paraprofessionals and other actors such as community-based animal health workers, while taking into account the business interests and livelihoods of all these various actors to ensure the sustainability of the Veterinary Services delivery model.

PARTICIPANTS RECOMMEND:

To the Veterinary Authorities of the OIE Member Countries to:

1. address the shortcomings highlighted in PVS pathway mission reports regarding the critical competencies related to human resources, particularly veterinarians and veterinary paraprofessionals;
2. facilitate and, where possible, harmonise the legislative framework for the establishment and management of Veterinary Statutory Bodies where these do not exist or do not comply with OIE standards, or to update such frameworks for better recognition of the issues related to the tasks undertaken by veterinary paraprofessionals as an integral part of Veterinary Services, noting that having a single statutory body covering both veterinarians and veterinary paraprofessionals is preferable in order to facilitate true partnership;
3. support the veterinary paraprofessionals to establish independent national, regional and/or sector-wide associations, able and competent to represent the profession(s) in the Veterinary Services;
4. take into account their expectation that the National Veterinary Statutory Body will define conditions and admission criteria for initial as well as continuing education for veterinary para-professionals;
5. mobilise Veterinary Educational Establishments to develop or support the development of the required training opportunities for veterinary paraprofessionals working in animal health, veterinary public health and laboratories, to which there may be further contribution by Veterinary Associations, especially regarding continuing education;
6. consider, in line with Resolution #39 of the 85GS of the OIE, the establishment of public-private partnerships involving training, recruiting and enabling veterinary paraprofessionals, in an effort to reinforce fruitful collaborations of the various stakeholders from both public and private sectors, at country level, thus resulting in further strengthening of Veterinary Services;
7. ensure veterinary paraprofessionals have adequate competency regarding use of veterinary products in accordance with OIE recommendations in situations where they have a role in prescribing or administering veterinary products, notably antimicrobials;
8. have a clear understanding, if relevant for the country, of the roles of community-based animal health workers in veterinary service delivery as well as the particulars of their training; and
9. take necessary steps for the enactment and enforcement of required legislation that will ensure the implementation of these recommendations.

To the OIE to:

1. continue to support the OIE Member Countries involved in the OIE PVS Pathway for the implementation of the recommendations, notably in relation to Critical Competencies I-1, I-2 and I-3 which concern human resources of both veterinarians and veterinary paraprofessionals, made through the OIE PVS missions;
2. continue to advocate that donors allocate funds for the continuation of the PVS Pathway in a long-term sustainable framework;
3. complete the ongoing work on veterinary paraprofessionals in developing expected competencies for veterinary paraprofessionals in animal health, veterinary public health and laboratory diagnostic tracks adaptable to the needs of individual countries and to develop guidelines on core curricula for each of the tracks, all of which will be made available on the OIE website and actively promoted;
4. consider conducting pilot projects in selected Member Countries in the region involving all relevant stakeholders, including veterinary paraprofessionals and their educators, as well as the private sector (producers associations, industry, etc.), to ensure the applicability of the set of expected competencies and guidelines to be developed; and
5. advocate, within the OIE, FAO and WHO tripartite framework and other international forums, the need for veterinary paraprofessionals to address, and their significant role in addressing, antimicrobial resistance by promoting prudent and responsible use of antimicrobials in accordance with national legislation.



**Regional Conference on Veterinary Paraprofessionals in Asia
6–8 December 2017, Bangkok, Thailand**

Day 1: Wednesday 6 December 2017 – Presentation of key concepts, standards and regulations		
08:00–09:00	Registration	[OIE Bangkok admin rep]
Time	Opening Session	
09:00–09:30	Lois Muraguri Director Policy & External Affairs, Global Alliance for Livestock – Veterinary Medicines (GALVmed) Matthew Stone Deputy Director General of the World Organisation for Animal Health (OIE) Wacharapon Chotiyaputta Director, Division of International Livestock Cooperation, Department of Livestock Development, Thailand	
09:30–09:40	Group photograph	
Session 1: Presentations from key partners		
Chair: Hirofumi Kugita Rapporteurs: Jennifer Lasley		
09:40–10:00	Overview of the Global Alliance for Livestock Veterinary Medicines (GALVmed)	Lois Muraguri GALVmed
10:00–10:20	Overview of the World Organisation for Animal Health (OIE)	Matthew Stone OIE
10:20–10:50	OIE standards on the quality of veterinary services, veterinary legislation and Terrestrial Code definitions related to veterinary paraprofessionals	David Sherman OIE
10:50–11:10	Questions and answers	
11:10–11:40	Morning break–Coffee/Tea	
Session 2: Country testimonies: perspectives from veterinary authorities		
Chair: Ronello Abila Rapporteurs: Ian Dacre		
11:40–12:00	Challenges & opportunities for VPPs in delivery of vet services in Indonesia (TBC)	(TBC)
12:00–12:20	Challenges & opportunities for VPPs in delivery of vet services in Vietnam	Thi Thu Hong Nguyen Vietnam
12:20–12:40	Challenges & opportunities for VPPs in delivery of vet service in Afghanistan	David Sherman on behalf of Jahangir Miakhail OIE Delegate, Afghanistan
12:40–13:40	Lunch	

13:40–14:00	Challenges & opportunities for VPPs in delivery of vet services in the Pacific Islands	Ilagi Puana Secretariat of the Pacific Community SPC
14:00 –14:20	Challenges & opportunities for VPPs in delivery of vet services in Mongolia	Odontsetseg Namsraijav Mongolia
14:20–14:40	Challenges & opportunities for VPPs in delivery of vet services in Myanmar	Hnin Thidar Myint Myanmar
14:40–15:10	Discussion	
15:10–15.30	Afternoon Break Tea/Coffee	
Session 3: Working Group Session: Linking veterinarians and veterinary para–professionals how to go about it in compliance with OIE standards.		
Chair: Lois Muraguri Rapporteurs: TBD		
15:30–17:00	Working group discussions	Working Groups
17:00–18:00	Feedback session from the working groups	Rapporteurs (from the Working Groups)
19:00	Welcome cocktail reception hosted by OIE and GALVmed	
Day 2: Thursday 7 December 2017 – Regulation and representation of veterinary para–professionals		
08:30–08:45	Recap of Day One	GALVmed/OIE
Session 4: Country testimonies: Regulatory and administrative frameworks		
Chair: Lois Muraguri Rapporteurs: Isabelle Dieuzy-Labaye		
08:45–09:00	Delivery systems in rural and poor setting: policy perspectives	Mamta Dhawan GALVmed
09:00–09:20	Veterinary Statutory Bodies in Asia and Pacific region: focus on VPPs and staffing of veterinary services	Ronello Abila OIE Sub–Regional office
09:20– 09:35	Regulatory and administrative challenges and opportunities for VPPs	Thanee Pak-uthai Association of Veterinary School of Department of Livestock Development Alumni, Thailand
09:35–09:50	Regulatory and administrative challenges and opportunities for VPPs in Nepal	Ram Prasad Mehata Paraveterinary and Livestock Association Nepal
09:50–10:05	Regulatory and administrative challenges & opportunities for VPPs in Vanuatu	Valerie Kalopong Biosecurity, Vanuatu
10:05– 10:25	Africa’s experience in setting up VPP associations	Benson Ameda Africa Veterinary Technicians Association
10:25–10:40	National VPP association	(TBC)

10:40–11:00	Discussion	
11:00–11:30	Morning break–Coffee/Tea	
Session 5: Round table discussion: perspectives from the field		
Chair: Matthew Stone Rapporteurs: Jessica Cargill-Schumann		
11:30–11:50	Overview of on–going field activities in Asia (TBD)	Katinka de Balogh FAO RAP
11:50–12:00	Reality–check: Heifer International	Keshav Sah
12:00–12:10	Reality–check: GALVmed	Rahul Srivastava GALVmed
12:10–12:20	Reality–check: Delivery systems in rural and poor settings–marketing perspectives and vaccination of poultry in Odisha	Rajiv Gandhi Hester Biosciences
12:20–12:30	Reality–check: Grameen in Bangladesh	Ehsanul Bari
12:30–12:40	Reality–check: The Brooke’s experience in the region	Sirjana Nijjar
12:40–12:50	Reality–check: Role of VPPs in food safety and veterinary products	Heni Nigani Papua New Guinea
12:50–13:00	Reality–check: summary of survey on local animal health systems	Hervé Petit Vétérinaires sans frontières
13:00–13:30	Discussion	
13:30–14:30	Lunch	
Session 6: Training of veterinary para–professionals in Asia and Pacific		
Chair: David Sherman Rapporteurs: TBD		
14:30–14:45	Becoming a veterinary para–professional in India	Mifhatul Islam Barbaruah India
14:45–15:00	The training of veterinary para–professionals in Nepal	Sima Sah Nepal
15:00–15:15	The training of veterinary para–professionals in Afghanistan	Patrick Briscoe, Dutch Committee for Afghanistan
15:15–15:35	The training of veterinary para–professionals in Cambodia	Vutha Pheng Cambodia
15:35–15:55	The training of veterinary para–professionals in Australia and some countries in the region	Rowland Cobbold, Australia
15:55–16:30	Discussion	
16:30–	Afternoon Tea/Coffee and end of the day	
19:00	Gala dinner hosted by DLD	

Day 3: Friday 8 December 2017 – The future of the profession, consensus and conclusions		
08:30–08:45	Recap of Day Two	GALVmed/OIE
Session 7: OIE ad hoc Group on Veterinary Para–professionals–Competencies and Core Curriculum Chair: Tomoko Ishibashi Rapporteurs: Jessica Cargill-Schumann		
08:45–08:55	Evolution of the OIE work on Veterinary Education and Veterinary Paraprofessionals	Jennifer Lasley, OIE
08:55–09:20	Global Analysis of VPPs from WAHIS and PVS Pathway, and VPP Curricula	Heather Simmons, IIAD
09:20–09:40	Preliminary OIE Competencies for VPPs	David Sherman, OIE
09:40–10:00	Preliminary Core Curriculum for VPPs	Johan Oosthuizen, Chair OIE ad hoc Group on VPPs
10:00–10:30	Discussion	
10:30–11:00	Morning Break Tea/Coffee	
Session 8: Working Group Session: Role of VPPs to ensure prudent use of antimicrobials Chair: Matthew Stone Rapporteurs: Tomoko Ishibashi		
11:00–12:30	Working Group Discussions	
12:30–13:15	Feedback session from the working groups	Rapporteurs (from the Working Groups)
13:15–14:15	Lunch	
Session 9 : Building consensus & recommendations on the way forward Chair: David Sherman Rapporteurs: TBD		
14:15–14:45	Recap & Discussions	Chair
14:45–16:15	Presentation of draft recommendations & feedback from participants	GALVmed/OIE
16:15–16:30	Closing ceremony	Matthew Stone Lois Muraguri Host TBD



**Regional Conference on Veterinary Paraprofessionals in Asia
Bangkok, Thailand, 6-8 December 2017**

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Regional Conference on Veterinary Paraprofessionals in Asia

6–8 December 2017, Bangkok, Thailand

CONSIDERING

1. the definition of Veterinary Services in the OIE *Terrestrial Animal Health Code (Terrestrial Code)* includes veterinary paraprofessionals, who should be approved to deliver any delegated functions performed in accordance with OIE standards;
2. the provisions of Section 3 of the *Terrestrial Code* related to the fundamental principles of quality of Veterinary Services, which therefore apply to veterinary paraprofessionals, in particular:
 - Chapter 3.1. that stipulates that the Veterinary Services retain ultimate responsibility for the application of these principles, even when the responsibility for establishing or applying certain animal health or animal welfare measures is exercised by an organisation other than the Veterinary Services;
 - Chapter 3.2. on the Evaluation of Veterinary Services, in particular Article 3.2.5 that highlights that the functions of various categories of personnel should be described in detail, including the appropriateness of the application of qualified skills to the tasks undertaken by Veterinary Services;
3. the provisions of the Chapter 3.2. of the *Terrestrial Code*, in particular Article 3.2.12 in which the role of the veterinary statutory body should be (1) to license or register veterinarians and veterinary paraprofessionals, (2) to set the minimum standards of education, and (3) to set the standards of professional conduct and competence of veterinarians and veterinary paraprofessionals;
4. the success of the Continental Conference for Veterinary Paraprofessionals, jointly held by the OIE, GALVmed and AVTA in Pretoria (South Africa) in 2015, where participants, while noting that veterinary paraprofessionals are not always under the regulation of Veterinary Statutory Bodies, confirmed the importance of veterinary paraprofessionals in the delivery of Veterinary Services in many countries and recommended the OIE to consider developing minimum competencies and core training curricula for veterinary paraprofessionals; and
5. the recommendations of the fourth OIE Global Conference on Veterinary Education, held in Bangkok (Thailand) from June 22 to 24, 2016, in particular those concretely referring to veterinary paraprofessionals, including the recommendation that the OIE identify minimum competencies for various categories of veterinary paraprofessionals and develop guidelines on core training curricula.

RECOGNISING

1. the crucial role of the veterinary paraprofessionals working in animal health, veterinary public health and laboratories, as part of the Veterinary Services, for efficient implementation of national Animal Health and Veterinary Public Health policies and programmes;
2. the diversity of categories of veterinary paraprofessionals working in animal health, veterinary public health and laboratories and the need for harmonisation in particular with regard to qualifications relative to their scope of work, duties or tasks;

3. the work which the OIE has already done on developing expected competencies for veterinary paraprofessionals in animal health, veterinary public health and laboratory diagnosis as recommended both at the Continental Conference for Veterinary Paraprofessionals in Pretoria and the Global Conference on Veterinary Education in Bangkok;
4. the need for Veterinary Statutory Bodies to comply with OIE standards (Chapter 3.2., Article 3.2.12.) through the application of an appropriate statutory framework;
5. the important roles played by veterinary paraprofessionals, among others, in contributing to food safety, improved livelihoods and biothreat reduction, as well as promoting prudent and responsible use of antimicrobials in animals in light of growing concerns about the global threat of antimicrobial resistance;
6. the important contributions community-based animal health workers could make, especially in remote territories and in poor communities, to the delivery of a variety of services under the responsibility of the Veterinary Services; and
7. the need to deal with the impediments to the delivery of veterinary services in all corners of Member Countries and the need to improve working relationships between veterinarians, veterinary paraprofessionals and other actors such as community-based animal health workers, while taking into account the business interests and livelihoods of all these various actors to ensure the sustainability of the Veterinary Services delivery model.

PARTICIPANTS RECOMMEND:

To the Veterinary Authorities of the OIE Member Countries to:

1. address the shortcomings highlighted in PVS pathway mission reports regarding the critical competencies related to human resources, particularly veterinarians and veterinary paraprofessionals;
2. facilitate and, where possible, harmonise the legislative framework for the establishment and management of Veterinary Statutory Bodies where these do not exist or do not comply with OIE standards, or to update such frameworks for better recognition of the issues related to the tasks undertaken by veterinary paraprofessionals as an integral part of Veterinary Services, noting that having a single statutory body covering both veterinarians and veterinary paraprofessionals is preferable in order to facilitate true partnership;
3. support the veterinary paraprofessionals to establish independent national, regional and/or sector-wide associations, able and competent to represent the profession(s) in the Veterinary Services;
4. take into account their expectation that the National Veterinary Statutory Body will define conditions and admission criteria for initial as well as continuing education for veterinary para-professionals;
5. mobilise Veterinary Educational Establishments to develop or support the development of the required training opportunities for veterinary paraprofessionals working in animal health, veterinary public health and laboratories, to which there may be further contribution by Veterinary Associations, especially regarding continuing education;
6. consider, in line with Resolution #39 of the 85GS of the OIE, the establishment of public-private partnerships involving training, recruiting and enabling veterinary paraprofessionals, in an effort to reinforce fruitful collaborations of the various stakeholders from both public and private sectors, at country level, thus resulting in further strengthening of Veterinary Services;

7. ensure veterinary paraprofessionals have adequate competency regarding use of veterinary products in accordance with OIE recommendations in situations where they have a role in prescribing or administering veterinary products, notably antimicrobials;
8. have a clear understanding, if relevant for the country, of the roles of community-based animal health workers in veterinary service delivery as well as the particulars of their training; and
9. take necessary steps for the enactment and enforcement of required legislation that will ensure the implementation of these recommendations.

To the OIE to:

1. continue to support the OIE Member Countries involved in the OIE PVS Pathway for the implementation of the recommendations, notably in relation to Critical Competencies I-1, I-2 and I-3 which concern human resources of both veterinarians and veterinary paraprofessionals, made through the OIE PVS missions;
2. continue to advocate that donors allocate funds for the continuation of the PVS Pathway in a long-term sustainable framework;
3. complete the ongoing work on veterinary paraprofessionals in developing expected competencies for veterinary paraprofessionals in animal health, veterinary public health and laboratory diagnostic tracks adaptable to the needs of individual countries and to develop guidelines on core curricula for each of the tracks, all of which will be made available on the OIE website and actively promoted;
4. consider conducting pilot projects in selected Member Countries in the region involving all relevant stakeholders, including veterinary paraprofessionals and their educators, as well as the private sector (producers associations, industry, etc.) to ensure the applicability of the set of expected competencies and guidelines to be developed; and
5. advocate, within the OIE, FAO and WHO tripartite framework and other international forums, the need for veterinary paraprofessionals to address, and their significant role in addressing, antimicrobial resistance by promoting prudent and responsible use of antimicrobials in accordance with national legislation.