



INTRODUCTION AND WELCOME

Prof Louis Nel welcomed the participants, particularly those who were new to the PRP, and set out the vision for the meeting: to determine how the international stakeholders can best support the Global Framework for the Elimination of Canine Rabies. The framework, agreed at the Global Meeting in December 2015, consists of 5 pillars, which form the basis of the agenda of this meeting.

PILLAR 1 SOCIAL-CULTURAL

PILLAR 1 Session I : World Rabies Day

The theme for WRD 2016 is “*Rabies: Educate. Vaccinate. Eliminate.*” This will be the 10th WRD.

Deepa Balam presented a brief history of and outline of a plan going forward for WRD. WRD was developed as a neutral platform to raise awareness, build political will and mobilize resources and its role is recognized in the global framework.

Sarah Jayme presented a variety of WRD activities from the Philippines, including a coordination of messaging across ASEAN, mass media efforts and recognition in the school calendar of events.

Liz Davidson presented GARC’s ideas for supporting the campaign in 2016, including regional awards to recognise rabies prevention efforts, encouraging countries to endorse the 2030 goal and more integration with Facebook.

Key points from the discussion were:

- All PRP organizations (not just the tripartite and GARC) are encouraged to promote their own rabies related activities through press releases to increase media exposure for rabies around WRD.
- Local affiliates including vets and technicians were mentioned as potential audiences, and using activities such as the Philippines’ quiz bee to engage zoonotic centres in Latin America was suggested.
- One way to motivate rabies champions may be to offer prizes which include travel to rabies-related meetings. Donation of PRP members’ frequent flyer miles as a means to cover transport to a meeting for this purpose was suggested.
- Promotion of WRD activities within organizations is a good way to boost morale. Representatives of industry described internal and external activities (in the form of press releases, tapping into social media) to promote WRD. However, there is under-reporting of these activities to GARC. A close-to-the-date communication by GARC to industry partners could enhance engagement in WRD activities and reporting.
- The official standing of WRD as a U.N. recognized day should be followed up on.
- Strategic partnerships with other programmes (e.g. dengue), or structures could be built. In Brazil, PAHO will approach the network of over 200 zoonoses control centers to promote WRD.
- Latin American partners conducted a successful photograph contest last year. PAHO will engage with all partners again to plan the same or other activities.
- The concept of bringing two countries together to exchange experiences without an international organisation presence was discussed, as that could be more effective.

PILLAR 1 Session II: GARC Education Platform (GEP)

Sarah Jayme presented an update on the Rabies Educator Certificate (REC), which in just a year has produced over 1000 graduates, worldwide. It is a good One Health tool for professionals and there are many examples of it ‘training the trainers’ from GARC and other PRP members. The talk highlighted both the institutional-level success and successes at the community level where the course material is saving lives and ensuring the wellbeing of companion animals

Daniel Stewart presented the progress of the newer Animal Handling and Vaccination Certificate (AVC) which was launched in December 2015 and covers all that animal vaccinators need to know. It should include a practical component, but can be used offline as well as online. Having a certificate at the end of the course increases its uptake.

Andre Coetzer presented the plans for further additions to the GEP; courses for non-professional community workers, who could become rabies focal people, and medical professionals. All new course material is being developed with the help of panels of global experts in order to ensure the relevance of the material covered. All of the secondary GEP courses will require the REC as a pre-requisite.

Key points from the discussion were:

- Partners are encouraged to promote the use of the REC in their projects where it is helpful.
- Opportunities to reach out into other networks (e.g. nurses) should be investigated.
- The REC has been used successfully as a pre-test for program participants.
- The AVC course is not restricted to vets and could be considered a prerequisite for training paravets for rabies vaccination programs.
- We should be promoting access to PrEP for vaccinators taking part in AVC practical sessions.
- The medical professional course will also deal with situations where complete PEP may not be available.
- GEP graduates can be approached as potential organisers of WRD events, and WRD will be used to promote the GEP.

PILLAR 1 Session III: Other support packages

Beryl Mutonono-Watkiss presented the World Animal Protection educational activities, designed for many different types of stakeholders, and made their educational products available to the group for use. World Animal Protection also has much experience with approaching governments.

Paola de Benedictus talked about the education and training activities carried out by the IZSve, particularly through the RESOLAB program to support surveillance capacity. The program has been running since 2010 and includes several subnetworks including one dedicated to rabies. Specific diagnostic labs have been supported with funding and training.

Abdul Rahman announced a new World Veterinary Association position statement, encouraging vets to help raise awareness and join the rabies elimination effort, and supporting the adoption of OIE guidelines. The WVA has announced a proposal for new community-based rabies programmes for WVA member countries, and letters have been sent to 16 member countries inviting them to submit a proposal.

Key points from the discussion were:

- Between the partners we already have a lot of high quality educational materials, which do not need to be replicated. There is a role for GARC in collating these resources and making them accessible.
- Many other support packages were mentioned including: PAHO has a smart phone app for doctors and health staff, covering PEP; the FAO has a Technical Cooperation Programme in Bali, to vaccinate dogs; CDC has a Collaborative Investigation programme and Field Epidemiology Training Programme; the WHO has training workshops with the Institut Pasteur; World Animal Protection trains people in advocacy for national control programmes.
- GARC should facilitate the sharing of information within the PRP, and among different laboratory networks.
- There is a gap in packaging and marketing information towards policymakers and the media.

PILLAR 2 TECHNICAL

PILLAR 2 Session I: Health Economics Analysis

Stephanie Shwiff presented the BioEcon model, which aims to support program implementers by predicting the impact and costs of rabies control. The model is an individual based stochastic simulation written in R, being parameterised with South African data and has recently been simplified and updated with a more user-friendly web interface even accessible by mobile phone.

Katie Hampson presented several modelling efforts to support countries in the final phase of rabies elimination. These include criteria for identifying different rabies endemic states, consideration of surveillance sensitivity and ways to maximise vaccination coverage as well as when modelling to support when rabies vaccination efforts can be relaxed. One conclusion was that old guidelines on random sampling effort for effective surveillance are not helpful at all, and targeted sampling of suspect dogs is more useful.

Jesse Blanton presented the RabiesEcon model, an Excel based tool for policy and funding decision-making. Although it has some limitations, and should not replace surveillance and monitoring, the model can provide useful guidance. It also highlights the most critical data that countries need to collect. It will be published shortly.

Key points from the discussion were:

- There will soon be several models available and there is a need to guide users through which model is most suited to which applications, also considering the quality of data available.
- We need to compare how different models differ for the same program scenario.
- We should consider how the model outputs can be translated into policy recommendations.

PILLAR 2 Session II: Support and Development of National Plans

Emily Pieracci described a zoonotic disease prioritization tool that CDC has recently been using in country workshops. Over a three day period, a multi-sectoral stakeholder group defines criteria for importance and then uses data to rank diseases and establish a top 5 list of priorities. The process results in cross-sectoral agreement and better follow through. The exercise has been carried out in 4 countries to date, and rabies has been in the top 5 every time and first priority twice.

Chari Amparo presented a history and development of the SARE tool, which has been refined with a monitoring and evaluation checklist used to give clear indication of the current capabilities and the areas that need to be prioritized. Emily Pieracci then presented a SARE report generation tool that has been used in country workshops to summarise the outcomes of the exercise and encourages the country to set short, medium and long term goals for future progress.

Gilberto Montibeller presented a Strategic Tool for Rabies Managers being developed with PAHO. A multi-criteria decision making process uses quantitative and qualitative data to assess 11 categories of capability in rabies control and helps program managers set up a portfolio of actions to optimally utilize available resources. It will be implemented as a google doc tool for countries to use.

Key points from the discussion were:

- Rabies is already considered as a priority by the three main international organizations concerned (WHO, OIE and FAO) and this message is repeatedly conveyed to their Member Countries
- The OIE World Assembly of 180 Country Delegates will discuss a resolution to formally adopt the Global Framework for dog mediated rabies elimination and to encourage countries to develop national and regional strategies to eliminate dog-mediated rabies by 2030
- These tools provide the link between science and policy making
- The costs of disease control at country level should play a part in discussions and workshops on disease prioritization.
- There is currently not a clear link between capability assessment and health outcomes.
- The OIE also has a disease prioritisation tool.
- Although the government needs to own the process of prioritisation, other stakeholders should also be involved.

PILLAR 2 Session III: Dog vaccine requirements are fundamentally linked to country-level plans.

Alasdair King spoke about the constraints of vaccine production for companies and how planning is absolutely critical. Different routes of supply (e.g., direct orders, via vaccine banks, emergency) have different advantages/disadvantages to customers and the manufacturer. As well as profits, companies value the social responsibility of supporting disease elimination, but too many hurdles will limit participation.

Joanne Maki pointed out that global vaccine availability affects countries' choice and the effective use of vaccine in communities. There is a need to build confidence in decision makers to select a good quality vaccine.

Ad Vos observed that where vaccination is not applied correctly, the disease persists and asked what the role of PRP members should be in assessing these situations. In Europe there are formal assessments of program effectiveness. With rabies vaccine bank donations there is an opportunity for formal reporting or assessing the effectiveness of the programmes where vaccine is used.

Key points from the discussion were:

- Forecasting of vaccine supply (in terms of the number of doses x probability of ordering) is critical.
- The program modelling tools could have a role to play here, in predicting vaccine required and budgets necessary for a multi-year program.
- Off label use of vaccines is a serious constraint for countries.
- The vaccine bank mechanism is now at a stage to introduce more accountability and data collection.
- Countries and donors may prefer to combine vaccination campaigns across a number of diseases, and not just focus on rabies.
- Centralized purchases (e.g. PAHO revolving fund) can incorporate technical cooperation requirements in the tender specifications to leverage industry capabilities to help officials' trainings, vaccination promotion (e.g. around WRD activities), follow-up of vaccine coverage and others.
- Other disease decision tools could be modified for rabies, such as this one for FMD - <http://www.emergence-msd-animal-health.com/FocusOn.aspx>
- Country data for vaccine requirements and forecasts should be collected on a website, which would provide an opportunity to collect data about national programmes.
- The Blueprint could add resources about how to forecast requirements.

PILLAR 3 ORGANISATIONAL

PILLAR 3 Session I: Regional Coordination

Nicolette Wright provided an update of PARACON activities, including the workshop-driven meeting in June 2015 that brought together over 30 countries and introduced them to the GEP, blueprint and SARE tool. The PARACON epidemiological bulletin is being designed, based on the District Health Information System 2 (DHIS2) platform, which is open source and web-based and allows data visualisation including GIS, charts and pivot-tables. It is being adopted by many governments as their official Health Information System software. The bulletin will be beta tested at the PARACON 2016 meeting being planned.

Cindy Grasso described the history of the MEEREB network, its diverse nature and geographic spread. It needs to be able to support members to move from baseline assessments through to action plans, incorporating international support. A new website with country reports will be launched soon.

Sarah Jayme presented recent developments following the ASEAN regional strategy. There has been an emphasis on promoting the integrated bite case management model, examples of country collaboration on training on dog handling. Challenges remain in poor surveillance and reporting being delayed and to different authorities.

Gyanendra Gongal presented on how rabies is becoming more of a priority for the SE Asia region. The Strategic framework is based on prevention, promotion and partnership. An overview of the regional situation included; the phase out of NTV in all countries apart from Mongolia, helped by the use of ID regimen for CCV; a rise in PEP usage; wide variation in vaccine cost; initiation of dog vaccination programmes (Thailand and Philippines); the value of country to country learning in building trust and new technology in promoting MDV; a belief that rabies cases have fallen in India and Bangladesh; Central Asia remains a neglected area.

Victor Del Rio showed that controlling the tail of an epidemic is hard, and that Latin America has repeatedly missed elimination deadlines. Not all countries are reporting to the SIRVERA database, so other sources are being used for the hotspots remaining. SIRVERA is being improved and mapping of data will be publically accessible. There are benefits of regional coordination, e.g., standardization of procedures and intercountry support. The use of surveillance maps of hotspots has increased policy makers' commitments. Katie's team

work has delivered evidence of the importance of inter-country collaboration in the control of rabies in the American region.

Key points from the discussion were:

- Efforts are needed to harmonise the approach across regions, and tools such as the SARE can do this.
- There has been enormous progress in phasing out NTV across Asia.
- Country-to-country learning and support can be very valuable and there are clear benefits of networks, especially related to surveillance and advocacy.

PILLARS 4 & 5 POLITICAL and RESOURCES

PILLARS 4 & 5: Session I: Call for Action for Rabies Elimination by 2030

Louise Taylor presented information collated from the partners about ongoing projects to support country control efforts. This included individual country engagements, Vaccine bank recipients and network activities. Information was displayed on a Google Map.

Jessie Blanton presented the importance of setting rabies as a priority disease at the country level, not just individual ministries. The Global Health Security Agenda is an opportunity, with many countries committing funding, and one of the action packets is focused on zoonotic diseases.

Kim Doyle presented the development of the end rabies now (ERN) campaign to increase the visibility of rabies and support public affairs efforts. The ERN campaign has been delivered in the last year and is a year-round advocacy effort with celebrity endorsement, simple messaging and country-specific information which belongs to all partners.

Presenting on behalf of Spring Gombe, Kim Doyle added that we need to build on the prioritization results to impact policy and implementation, and to engage more governments, donors, professionals and networks (e.g. WASH) in the 2030 deadline. Rabies will be positioned in the One Health context, and the strategy for 2016 will include efforts at the WHA and OIE general assembly, and focus on PARACON and other regional networks to build endemic country capacity and momentum towards elimination.

Key points from the discussion were:

- Louise will share links to the project information and Google map. Partners are invited to review the information and suggest corrections and additions.
- All partners are encouraged to contribute material for the ERN campaign.
- The ERN is not intended as a fundraising campaign, it focuses on awareness and public affairs.
- We should consider launching the ERN campaign in endemic country settings.
- ERN can be used to promote significant progress (e.g. RIMSA meeting outcomes?)
- Not all WHO regions are invested in rabies as a priority; we need to work on that.
- There is still a possibility of a side meeting focussed on rabies at the World Health Assembly
- The OIE has drafted a resolution to the World General Assembly to adopt the Global Framework for dog-mediated rabies elimination. This will increase visibility to Chief Veterinary Officers.
- There is a demand from many stakeholders and potential donors to link the control of several diseases together at the community level, which should be explored more fully for rabies. Also it may be possible anchor rabies to issues such as wound washing and child violence.
- Corporate responsibility is increasingly influencing the actions of the private sector and we can approach businesses in this regard.
- Social media, particularly with images is becoming a very powerful form of communication.

PILLAR 4 & 5 Session II: Global strategy planning

Henk Jan Ormel outlined the structure of the FAO and its remit to fight poverty, hunger and care for the earth and how it works with OIE and WHO to raise awareness of rabies. As rabies impacts livestock and food security, FAO has a strong interest in it. Maps were used to illustrate the geographic connections between rabies risk, climate change, population growth and rapid urban growth issues. There's a need to broaden the

rabies story out to include these issues, and to wildlife and livestock impacts to attract more media attention to the disease.

Jakob Zinsstag presented his planned project for GAVI to assess the burden of rabies in West Africa more accurately. His group has developed methods to assess the effectiveness of MDV and identify reasons for poor coverage, is using a lateral flow test for rabies diagnosis in rural areas, is working in a number of African countries now and will be hosting the upcoming PARACON meeting in Abidjan, Cote d'Ivoire.

Alain Dehove presented information on the OIE vaccine bank mechanism. This started four years ago with 50,000 doses and is reliant on donor funds being available. To date, the current OIE vaccine bank has managed to provide 15.5 million doses and further scaling up is possible. Its operation covers Africa and Asia, and the donation/purchasing mechanisms were described. A new call for tender recently selected two manufacturing companies, and the new mechanism is expected to handle orders for up to circa 15million doses a year.

Bernadette Abela-Ridder described the first stages of the WHO and OIE-led rabies business plan. It will serve as a reference document for donors and countries implementing elimination plans and will address specific questions posed by GAVI regarding benefits of dog vaccination programs. It will incorporate human and animal components, but treat them separately for different audiences. It will use data from single countries and cluster countries as a means to expanding elimination efforts. The plan will incorporate training, capacity, awareness, logistics and RIG supply. The WHO Strategic advisory group of experts (SAGE) on which GAVI relies will soon have a working group on rabies and nominations are invited. The group will review the WHO Vaccine position paper. GAVI's investment in rabies would be a game changer, so we need to support their calls for better information. Data will be utilized from Jakob's work in Africa and for Asia, better burden data is being collected through collaboration with CDC.

Key points from the discussion were:

- We should promote rabies as a winning game in the One Health field. Funders like to do things that are possible and to finish off diseases.
- The DRIT still has a role in widening diagnostic services, and there are several options for the required antibody. The OIE require a dossier of information to consider the validation of the DRIT diagnostic test through its procedure.
- The lateral flow tests are extremely useful in the field, but there is concern that available tests are not accurate enough. There will be papers published on this shortly.
- The business plan will be ready by December next year for GAVI's consideration. It requires a dossier of evidence and will mention tools and other mechanisms available to support countries.
- There is a need to build infrastructure for dog vaccine as well as human vaccine distribution.
- GAVI will only consider human vaccination by the ID route and the business plan will promote this. There is a real need to have this use on the label, and support countries to change policy.
- The UN Millennium Development Goals should be emphasized when promoting rabies prevention to key audiences. <http://www.unmillenniumproject.org/goals/>

MEETING CLOSE

Louis Nel closed the meeting with the observation that the PRP is a diverse group, but it has a common objective of rabies elimination and a shared path to go forwards towards it. The PRP is quite unique in the way it comes together voluntarily to help move the agenda forwards. All participants were thanked for their vigorous participation and wished a safe journey.