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# RESPOND YEAR FOUR QUARTERLY REPORT

EMERGING PANDEMIC THREATS PROGRAM

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# ACRONYMS

AET	Applied Epidemiology Training
AFENET	Africa Field Epidemiology Network
AFRO	WHO – Regional Office for Africa
ANPN	Agence Nationale des Parcs Nationaux
ARO	Alert and Response Operations
ASEAN	Association of Southeast Asian Nations
ATVCO	L'Association des Techniciens Veterinaires au Congo (Association of Veterinary Technicians of Congo)
AU-IBAR	African Union Interagency Bureau for Animal Resources
BVM	Bachelor in Veterinary Science
CAHW	Community Animal Health Workers
CCC	Country Coordinating Committee
CDC	Centers for Disease Control and Prevention
CED	Control of Epidemic Diseases
CMOA	Ministry of Agriculture (DRC)
CMOE	Ministry of Environment (DRC)
CMOH	Ministry of Health (DRC)
COVAB	Makerere University College of Veterinary Medicine, Animal Resources and Biosecurity (Uganda)
DNP	Department of National Parks, Wildlife and Plant Conservation (Thailand)
DoA	Department of Agriculture
DoF	Department of Forestry
DoH	Department of Health
DRC	Democratic Republic of Congo
DTRA	Defense's Threat Reduction Agency
DVO	District Veterinarian Officer
E&E	Ecology & Environment, Inc.

EID	Emerging Infectious Disease
EPT	Emerging Pandemic Threats Program
EZD	Emergency Zoonotic Diseases
FAO	Food and Agriculture Organization of the United Nations
FEAT	Field Epidemiology Association of Thailand
FESC	Field Epidemiology Short Courses
FE(L)TP	Field Epidemiology (Laboratory) Training Program
FETP-V	Field Epidemiology Training Program – Veterinary Component
FOREST	Forest Ecology and Stewardship Training
FUE	Federation of Ugandan Employees
FUS	Fédération Une Santé
IBAR	Inter-African Bureau for Animal Resources
IDSR	Integrated Disease Surveillance and Response
IEM	Institut d’Enseignement Médicale
IGAD	Inter-governmental Agency for Development
INDOHUN	Indonesia One Health University Network
ISTM	Institut Supérieur des Techniques Médicales
ITAV	Institut de Technique Agro-Vétérinaire
ITM	Institut Techniques Médicale
KKU	Khon Kaen University
KKUVMS	KKU School of Veterinary Medicine
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries (Uganda)
MAFF	Ministry of Agriculture, Forestry and Fisheries
MINAGRI	Ministry of Agriculture and Animal Resources
MOA	Ministry of Agriculture
MoAF	Ministry of Agriculture and Forestry
MOF	Ministry of Forestry
MOH	Ministry of Health (Uganda)

MoNRE	Ministry of Natural Resources and Environment
MOPH	Ministry of Public Health (Thailand)
MOU	Memorandum of Understanding
MPH	Master of Public Health
MVPM	Masters of Veterinary Preventive Medicine
MUSPH	Makerere University School of Public Health
MYOHUN	Malaysia One Health University Network
OHCC	One Health Core Competencies
OHCEA	One Health Central and Eastern Africa Network
SEA	Southeast Asia Regional Office
SEAOHUN	Southeast Asia One Health University Network
TRG	Training Resources Group, Inc.
TUSK	Tufts University Science Knowledgebase
UMN	University of Minnesota
UNIKIN	University of Kinshasa
UNILU	University of Lubumbashi
USAID	U.S. Agency for International Development
VMKKU	Veterinary Medicine Khon Kaen University
VMS	Veterinary Medical School
VPH	Veterinary Public Health
WWF-DRC	World Wildlife Fund-Democratic Republic of the Congo
WILD	Wildlife Investigation and Livestock Disease

# EXECUTIVE SUMMARY

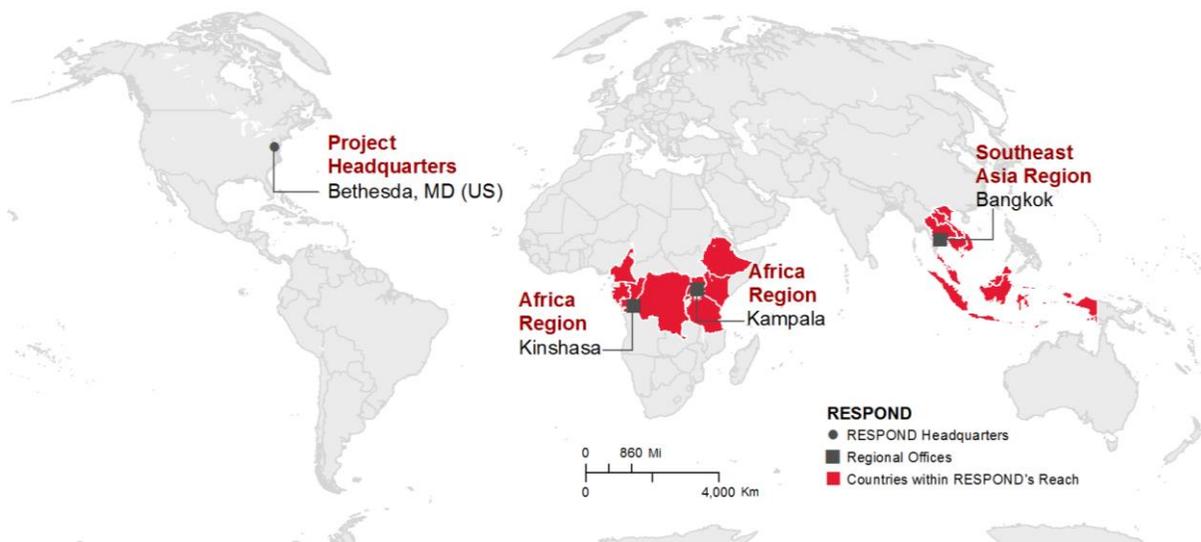
As the project completed Quarter Three of Year Four (April 1 to June 30, 2013), RESPOND continued its support to One Health Central and Eastern Africa (OHCEA) and Southeast Asia One Health University Network (SEAOHUN) in their common missions to strengthen their networks and upgrade training for students and faculty of member institutions. DAI worked closely with OHCEA on the challenges of financial and administrative management of network activities and with SEAOHUN on registering itself as a foundation in Thailand. The University of Minnesota (UMN) and Tufts University continued to work closely with both OHCEA and SEAOHUN to engage with faculty, students and administrators at member faculties.

OHCEA's efforts to enrich the student experience in this quarter included the successful execution of field study opportunities for veterinary, public health and nursing students in Uganda; the formation of the EcoHealth student club in Tanzania; and the approval of a revised Masters in Veterinary Public Medicine curriculum, which added a field epidemiology track. Faculty development activities included the training and discussion around the One Health Core Competencies throughout the region.

With RESPOND support, SEAOHUN conducted pre-service and in-service training, and focused on establishing its National Coordinating Offices (NCOs). In-service training includes a course on participatory epidemiology for participants from throughout the region, courses on outbreak response for health and veterinary services, and disease surveillance. The SEA Office also supported the establishment of the NCOs in Thailand (THOHUN) and Vietnam (VOHUN), provided training on sub-award management for THOHUN and VOHUN, and the steering committees of SEAOHUN member universities reviewed and approved country-level activity proposals. Also in the region but outside the network, Pre-service training is ongoing in the Veterinary Science program at Nabong Agricultural College.

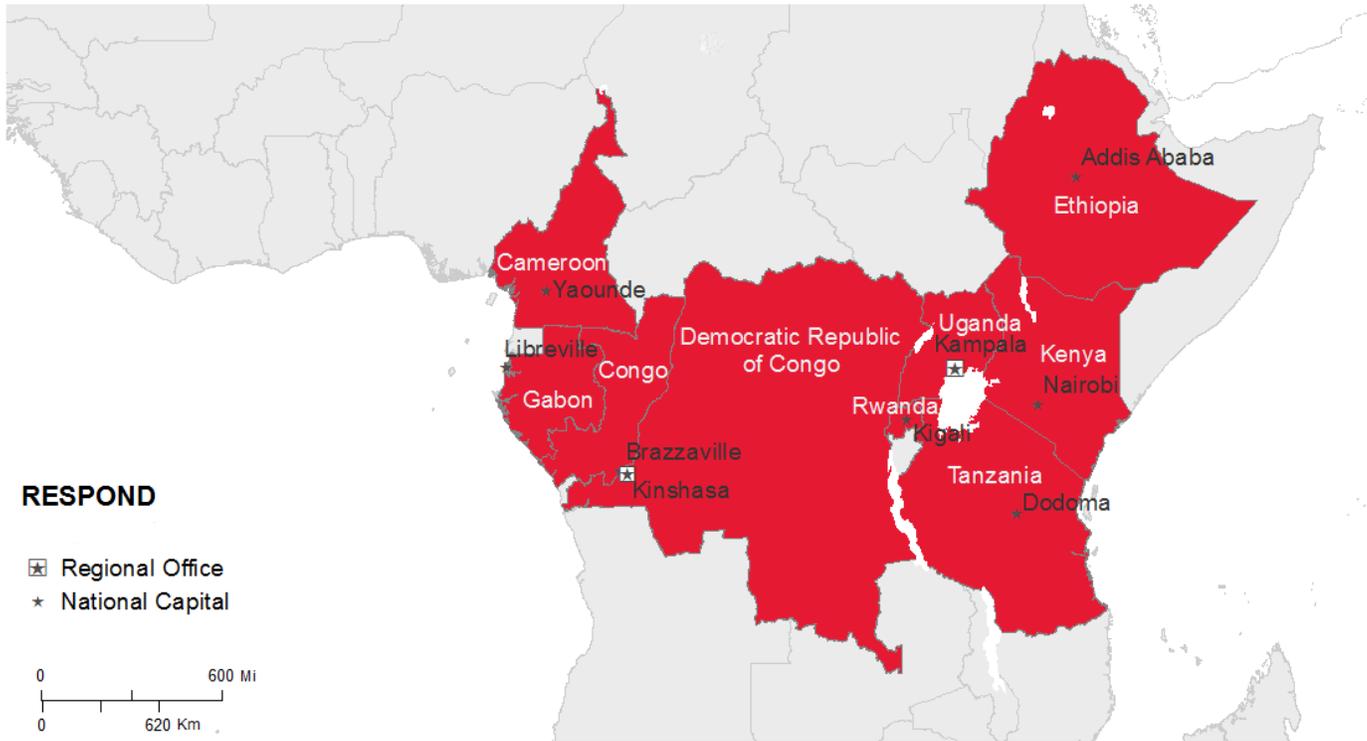
OHCEA and SEAOHUN also engaged in two joint activities; they both sent participants to the University of Minnesota's 2013 Public Health Institute and to Tufts University's Environmental Literary Institute. Both events provided an opportunity for OHCEA and SEAOHUN representatives to deepen their understanding of One Health, and learn ways of incorporating new concepts into coursework at home.

In addition to the network activities, the quarter saw a great deal of activity to prepare for the beta-testing simulation exercise in Uganda, conducted in coordination with WHO AFRO in July.



The global map above displays where RESPOND currently works (in red). RESPOND Regional Hub Offices are located in Kampala (Uganda), Kinshasa (Democratic Republic of Congo), and Bangkok (Thailand), covering two regions considered hot-spot areas for the emergence and re-emergence of zoonotic pandemic threats.

# I. AFRICAN ACTIVITIES

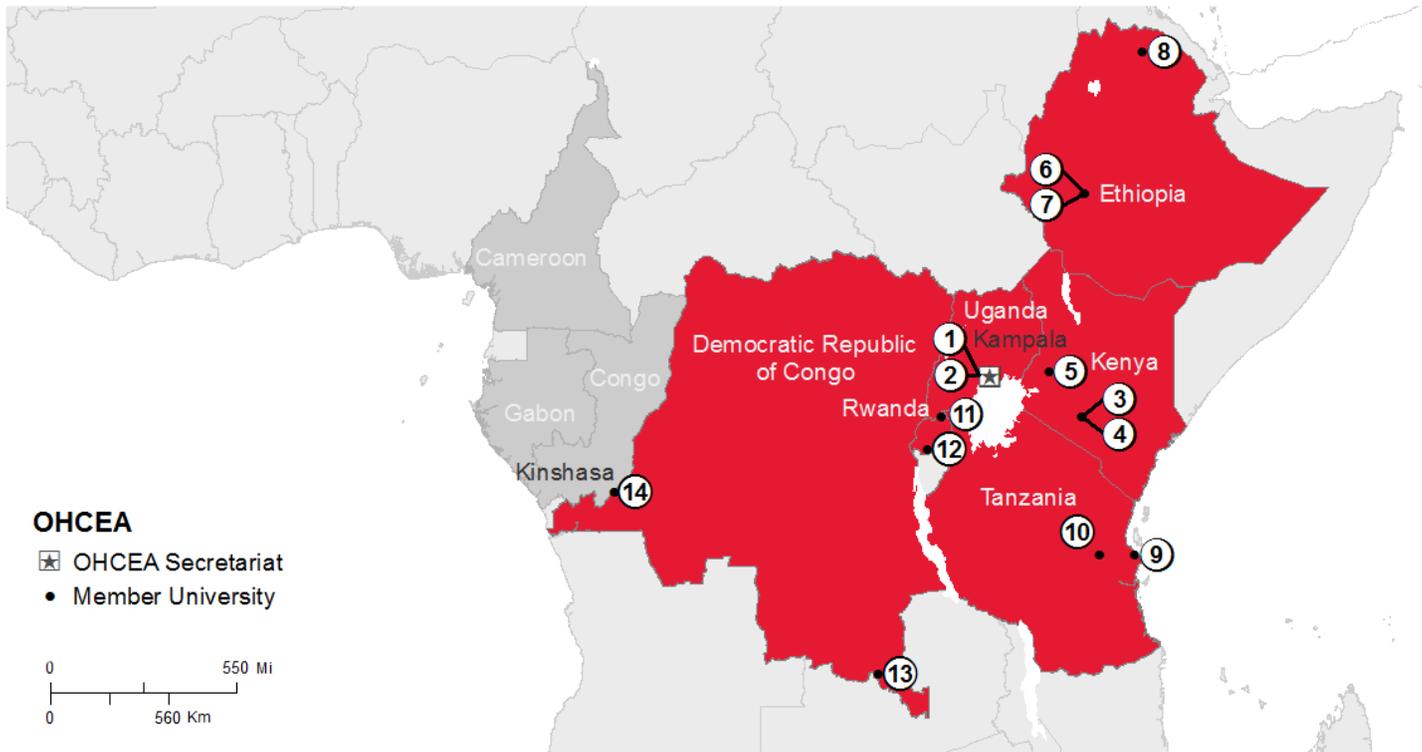


The RESPOND project operates in Eastern, Central and West Africa primarily in the form of support to a network of universities that integrate schools of Public Health and Veterinary Medicine, using the One Health approach to diseases outbreaks in several countries.

OHCEA (One Health Central and Eastern Africa) currently has 14 schools of Public Health and Veterinary Medicine as members, in six countries – Uganda, Tanzania, Rwanda, Ethiopia, Kenya and Democratic Republic of Congo. Its Secretariat is located in Kampala, Uganda, and the regional office in Uganda supports the implementation of activities.

During Quarter 3 of Year 4 (April-June, 2013), RESPOND/Kampala supported OHCEA as it promoted One Health throughout the region, and in collaboration with other key partners, such as WHO-AFRO.

## KAMPALA REGIONAL OFFICE ACTIVITIES



The map above represents the reach of the Kampala Regional Office through OHCEA (One Health Central and Eastern Africa university network).

## MAJOR ACCOMPLISHMENTS

### ENRICHING THE STUDENT EXPERIENCE

*Makerere University commences One Health integrated field studies with veterinary, public health and nursing students* – During April and May, Makerere conducted its trans-disciplinary (One Health) field studies involving 50 veterinary, nursing and public health students and faculty. Starting on April 14th and going until May 11th, the main objective of the field attachment was to expose students to One Health concepts and their practical applications, including : trans-disciplinary and trans-sectoral collaborations ; social skills and teamwork ; effective communication ; factors responsible for disease (animal and human)



occurrence ; principles of disease management ; and leadership. Operating in six teams, each comprised of a mix of veterinary, nursing and public health students ; the student groups were dispatched to four districts of Uganda. The field activities focused on practical site visits, community education and awareness campaigns, home visits, group projects and combined student-supervisor joint discussions and feedback sessions.

The student groups were supervised both by faculty from Makerere University and field-based supervisors in active practice, including District Veterinary and District Health Officers. Jointly supporting these activities, Drs. Hellen

Amuguni (Tufts) and Cheryl Robertson (UMN) participated and facilitated elements of the week-long pre-field orientation, and Dr. Robertson served as a field supervisor for the student group seconded to Bwera, located on the Uganda/DRC border, for their first week of field work. The US university engagement in the program continued during the month of May with the students benefitting from the mentorship of Drs. Cheryl Robertson (UMN) and Jean Mukherjee (Tufts) (pictured).

During their field engagements, the students supported ongoing district health programs and provided services at the health centers and in the communities, including free veterinary services. As a part of their program, the One Health students bridged the connection to wildlife with field events taking place in Queen Elizabeth and Lake Mburo National Parks. Students at the latter were joined by RESPOND's USAID AOTR Rob Henry. These field trips included visits to and sharing with communities within and adjoining the parks on their health challenges. In support of the month long activity, the students and their supervisors initiated a Facebook group named, *Pioneer One Health Field Attachment Team*, to coordinate their discussions during and after the field experience. With the completion of the field attachment period, students prepared and submitted individual (based on profession) and group reports to their supervisors.

While this experience was piloted at Makerere University, it served as a valuable learning experience for future One Health projects at Makerere and other OHCEA member universities. Plans are already underway to roll this model to other institutions, starting by implementing cross-disciplinary student field attachments in Tanzania and DRC in September.

*Students Engaged in One Health* – In Tanzania, there was excitement and student engagement in Tanzania with the membership of the Tanzania EcoHealth Students' Club, which was formed with OHCEA support in November 2012, growing to 430 members drawn from the studies of nursing, wildlife science, veterinary medicine, laboratory science, environmental science, animal science, molecular biology, public health, and medicine. Members of the EcoHealth Students' Club come from the OHCEA member schools (Sokoine and Muhimbili Universities) and beyond, with students joining from the University of Dodoma's College of Health and Allied Sciences and St. John's University of Tanzania's School of Nursing. In April, the club launched their own website : [www.tehsc.org](http://www.tehsc.org) and on April 19th, representatives from the club presented at the Second One Health Conference that SACIDS and the National Institute for Medical Research organized.

In May, the Rwanda One Health Student Club held a launch ceremony at Umutara Polytechnic. Dr. Katey Pelican (UMN) was the guest of honor and Prof. Mdegela Robinson (Sokoine University of Agriculture) was the keynote speaker. The region's first One Health student logo was also launched at the event.

*New program ! Masters in Veterinary Public Medicine, Field Epidemiology Track – Ratified by Makerere University Senate* – On April 24th the Makerere University Senate formally approved the revised Masters in Veterinary Public Medicine (MVPM) curriculum, adding the field epidemiology track that was developed cooperatively with a RESPOND grant to AFENET, and with continued funding from OHCEA. In addition to the ratification, the second cohort of 12 students has commenced its studies. Funded by OHCEA, there are two students from each of the six OHCEA countries starting the first year of the two year program. As part of RESPOND's support to the MVPM program, Tufts assisted in the refurbishment of a computer lab dedicated to the MVPM program, where students will have permanent internet access and a dedicated study place.

## **FACULTY DEVELOPMENT**

*Development of One Health Core Competencies* – In DRC in 2012 Dr. Aluma Ameri (Tufts), a public health veterinarian and Master Trainer in Participatory Epidemiology (PE) and Dr. Terrence Odoch (Makerere University) presented workshops on PE and risk-based surveillance at OHEA's University of Kinshasa School of Public Health (UNIKIN) and the University of Lubumbashi's School of Veterinary Medicine (UNILU). During

this quarter, as a follow up to those activities, Dr. Diafuka Saila-Ngita (Tufts) in support to OHCEA's DRC faculty, organized a workshop for both OHCEA's DRC member schools and the National Pedagogy University's Faculty of Medicine, the Catholic University of Bukavu's School of Public Health, and ISTM's Kinshasa and Lubumbashi Schools. The purpose of the workshops were to: 1) review PE concepts and techniques and discuss ways to introduce them into epidemiology curricula; 2) identify One Health core competencies to include in epidemiology curricula; and 3) finalize the planned DRC Veterinary Public Health program. In total, 16 faculty members from the DRC schools attended the workshop that was facilitated by Dr. Terrance Odoch, Dr. Aluma Ameri, Dr. Diafuka Saila-Ngita, and Dr. Serge Nzietchueng (UMN).

From June 3<sup>rd</sup>-8<sup>th</sup>, Professors Jessica Paulus and Diafuka Saila-Ngita from Tufts University delivered a workshop on Grant Writing at UNIKIN. Attended by 29 faculty from the University of Kinshasa's Faculty of Veterinary Medicine, and the School of Public Health; and ISTM/Kinshasa; the five-day course strengthened their grant-writing capacity skills to successfully compete for international funding opportunities and built trans-disciplinary and cross-institutional teams of scientists who are committed to working together on One Health oriented research proposals. In addition, the workshop generated the following proposal ideas:

- Initiate a study of malarial resistance in Bonobo primates investigating plan based therapies that may confer resistance to infection
- Investigate the effects of global warming and climate change on the burden of cholera in Kalema, DRC
- Investigate the connections between climate change, livestock/plant production and food insecurity within the DRC
- Administration of nutritional interventions for people living with HIV/AIDS
- Implement environmental management and health communication interventions for cholera control in DRC

During the workshop, participants exchanged contact information and scheduled follow-up meetings for the integrated teams to develop their proposals, with the "Bonobos team" planning to draft an abstract for submission to a fall 2013 primate conference to be held in the DRC.

Professors Steele and Saila-Ngita continued their engagement in the DRC and conducted two Research Methods workshops during June – one at UNIKIN and the other at UNILU. The workshops were attended by 67 faculty members (36 in Kinshasa and 31 in Lubumbashi) from ISTM, UNIKIN, and UNILU. The overall goal for the workshop was to instruct students, develop or redesign courses on research methods, and develop high quality research projects.

In Ethiopia, UMN's Drs. Innocent Rwego and Serge Nzietchueng responded to OHCEA's request to deliver trainings at Ethiopia's member universities, and to continue the development of faculty-to-faculty exchanges through the co-development of teaching materials and the co-mentoring and co-teaching of students (56 at Jimma and 92 at Mekelle) with their Ethiopian counterparts. During their engagements they developed and co-taught at Mekelle and Jimma Universities.

At Mekelle University, Dr. Rwego conducted a course on Wildlife Management with modules on the handling of quarantined animals, the management of wild and captive animals, the management of Ethiopian wildlife resources, the control of diseases and diseases surveillance (15-19 April); while Dr. Nzietchueng delivered a Risk Analysis and Health course to students of a masters program in zoonoses and food safety at the College of Veterinary Medicine (8-20 April).



Tufts faculty present to OHCEA and SEAOHUN faculty at TELI

At Jimma University, Dr. Rwego conducted an Ecology of Wildlife short course with a focus on Ethiopian wildlife, and modules on investigating wildlife health diseases, the promotion of the welfare of wildlife, management of free-ranging and captive wildlife, ecosystem health monitoring, and epidemiology of wildlife related diseases (22-30 April).

In Rwanda, Tuft's Linda Jarvin and Dawn Terkla conducted a Quality Assurance workshop at Umutara Polytechnic from May 30-31<sup>st</sup>. With 31 participants from Umutara, the National University of Rwanda, and the Nyagatare School of Nursing, the workshop provided a structure for assuring an increase of quality programs

from their schools and how to establish related metrics of measurement.

In June, a five-day Grant Writing workshop was conducted at the National University of Rwanda's School of Public Health (NURSPH). Facilitated by Professors Jessica Paulus and John Bynes from Tufts University, the course was attended by 27 participants from Umutara Polytechnic, NURSPH, and OHCEA (the newly hired Grant Development Officer).

Again in June, Professors Helen Amuguni and Melissa Mazan from Tufts University facilitated an undergraduate curriculum review at Umutara from 24-28 June with the objective to incorporate One Health core competencies into the curricula. The workshop was attended by 42 participants from Umutara (with representatives from the veterinary medicine, agriculture, wildlife, engineering, IT, and environment programs) and observers from NURSPH, who are interested in conducting a similar exercise at their school. Faculty were taken through the process of how to design a curriculum, with One Health competencies incorporated at each point. By the final day faculty had developed a draft curriculum, with asset maps and a list of courses. The next step the faculty will take is to develop a final product which they are planning to do during a three day meeting scheduled for the end of July, followed by a course design institute scheduled in August for the courses that are targeted to be included as new curricula for the next academic year that starts in September.

*Assessment of "Twinning" Activities* – From April 12<sup>th</sup>-26<sup>th</sup> Dick Wall (TRG), with the support of RESPOND's M&E Officer, George Bakongo, conducted interviews with students and faculty at the University of Kinshasa's School of Public Health (UNIKIN), the University of Lubumbashi's School of Veterinarian Medicine (UNILU), and the faculty at ISTM/Lubumbashi. Requested by OHCEA, the assessment's main objective was to investigate and write-up findings and lessons learned from the DRC twinning activities implemented by Tufts University from March to September 2012. The assessment revealed that there is general agreement between the medical and veterinary schools that the goals of the twinning exercise addressed real issues; the twinning exercise would strengthen the schools, and permit them to graduate larger numbers of doctors and nurses. It was therefore recommended that USAID/RESPOND and OHCEA continue twinning Tufts and the medical and nursing schools of DRC.

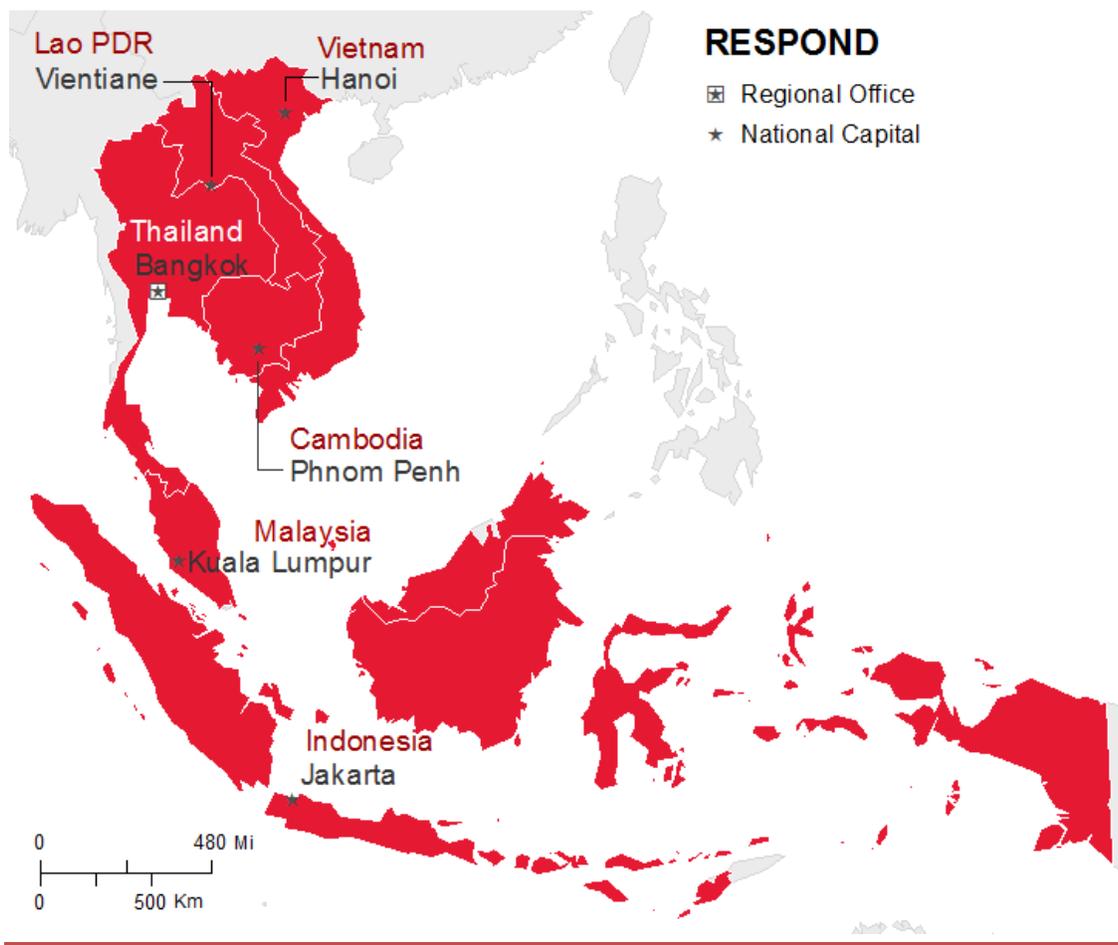
The assessment report was provided to OHCEA to inform and improve the design of their future planned faculty exchanges between OHCEA members and each other and with the US partner universities.

## **CONTINUED SUPPORT TO WHO-AFRO'S OUTBREAK RESPONSE AND PREPAREDNESS PLANNING FRAMEWORK DEVELOPMENT**

During this quarter, RESPOND continued its support to WHO-AFRO in preparation for the beta-testing of the framework in DRC and Uganda. For activities in Uganda, RESPOND worked with WHO-AFRO to integrate comments and feedback from the stakeholder workshop held in March into the final framework; and supported the logistics for implementing the desktop simulation exercise scheduled for July 3<sup>rd</sup>-5<sup>th</sup> in Kampala.

In DRC, RESPOND worked closely in support of WHO-AFRO's preparation for the first round of sensitization meetings with government officials and other key stakeholders that occurred in June. Experts from WHO-AFRO, WHO/DRC, USAID EPT, and TRG conducted interviews from June 3-7 to collect data on outbreak response capacity and procedures in the DRC. In total, 33 national experts, government officials, and academics were interviewed from the public health, agriculture, environment, national defense, and civil society sectors. The information collected will assist in the development of a simulation reflective of DRC's capabilities with regards to the preparation and response to outbreaks.

## II. SOUTHEAST ASIA ACTIVITIES



The map above the Southeast Asia region displays where RESPOND currently works (in red). The stars represent capital cities, and Thailand's capital city, Bangkok, is where the RESPOND Southeast Asia Regional Hub Office is located.

### MAJOR ACCOMPLISHMENTS

#### PRE-SERVICE TRAINING

Training of the first cohort of students in the Veterinary Science program at Nabong Agricultural College (NAC) will be completed shortly, with the ongoing support of VMKKU, and this cohort will graduate with a BVSc in September 2013. The second cohort is still in training, both Nabong and Khon Kaen, and will complete their degrees in September 2014. RESPOND has committed to supporting the program until these two cohorts have graduated, including funds for travel to KKU and for staff from KKU to travel to teach at Nabong.

#### IN-SERVICE TRAINING

*Introductory Training Course on Participatory Epidemiology* – RESPOND provided support to the first of two participatory epidemiology (PE) training modules from June 8<sup>th</sup> to June 12<sup>th</sup>. The module was the result of collaboration between the Faculty of Veterinary Medicine, Chiang Mai University (CMU), the Veterinary Public Health Centre for Asia Pacific (VPHCAP) of CMU, the International Livestock Research Institute (ILRI), GREASE and USAID EPT/RESPOND. Twenty-four researchers participated in the course, which was

conducted in Khon Kaen, Thailand. The collaboration brought together 23 academic researchers from Cambodia, China, Indonesia, Malaysia, Lao PDR, Thailand and Vietnam, and one from the US to work together in applying qualitative PE methods in investigating disease outbreaks in local communities. The training course introduced the trainees to participatory rural appraisal (PRA) techniques and flexible process to collect epidemiological knowledge and intelligence. Applying the PRA tools and techniques helps reduce the limitations in data collection of quantitative epidemiology research and enhances the quality needs assessments to inform efficient intervention programs.

The second module of the training course was completed in July and will be included in the next quarterly report.



*Strengthening Outbreak Response Capacity of Health and Veterinary Services* – RESPOND provided a sub-award to NEIDCO to support “Strengthening Outbreak Response Capacity of Health and Veterinary Services in Selected Provinces, Districts, and Villages of Lao PDR using the One Health Approach.” The activity was conducted in LuangPrabang, Vientiane Capital, and Savannakhet. NEIDCO personnel met with provincial stakeholders to explain the project objectives and to seek support. NEIDCO then tapped national experts to review existing training materials and to identify gaps. These national experts developed new training materials to address disease surveillance, outbreak and response; surveillance and outbreak investigation of zoonotic diseases; risk communication; and echo-health/One Health concept in Laos.

A five-day Training of Trainers was held at Vientiane Province from May 7<sup>th</sup> to 11<sup>th</sup>, 2013 to train 36 public and animal health practitioners from the Department of Communicable Disease Control, Department of Livestock and Fishers, Center for Laboratory and Epidemiology and Center for Health Information and Education in three provinces on the use of the modules.

This was followed by a joint training from June 19<sup>th</sup> to 21<sup>st</sup> at Vientiane for 46 participants from the district offices of the Department of Hygiene and Prevention (DOHP) and the Department of Agriculture of Forestry (Veterinary Division), Center for Animal Lab, and Cross Border Health Office of Vientiane. Follow up activities include trainings for Louangprabang and Savvanakhet District Offices, a public education event in selected villages in August, and a final review meeting in September.

*Building Capacity in Disease Surveillance* – RESPOND provided a sub-award to the Wildlife Conservation Society to support “Monitoring and disease surveillance for the Department of Forestry Protected Area (PA) staff and forestry volunteers in Lao PDR.” To build disease surveillance skills among staff at two of the most protected areas in Laos, Nam Et Pho Louey (NEPL) and Nam Kading (NK), the Wildlife Conservation Society conducted a ranger training at Nam Kading from April 29<sup>th</sup> to May 27<sup>th</sup>, 2013. The ranger training workshops were held at the Bolikhamaxay Agriculture and Forestry Training College, 10 km from Paksan. Two 12-day

training exercises were held starting on April 29<sup>th</sup> and May 16<sup>th</sup>, respectively. Half of the field enforcement staff were trained at each workshop for a total of 51 staff trained. Over three-quarters of the participants worked for the IEWMP or the military. Just over half of the participants were rangers or soldiers serving on patrol teams.



Methods of teaching used during the training included, from left to right, lectures, group learning exercises and practical demonstrations.



### **STRENGTHENING SEA OHUN**

*Establishment of National Coordinating Offices* – The sub-award for the establishment of the National Coordinating Office (NCO) for the Thailand One Health University Network (THOHUN) was approved in May. The sub-award to the Vietnam One Health University Network (VOHUN) was approved in March. Both networks are in the process

of recruiting their respective

Twelve modules were covered during the ranger training including, from left to right, first aid, navigation and wildlife disease monitoring and reporting.

personnel and in establishing their offices. RESPOND assisted both offices in procuring their basic IT equipment. The sub-award approvals for Indonesia and Malaysia are expected to come out in the next quarter. The NCOs are envisioned to provide technical, administrative and secretariat support to the activities the national One Health university networks approve.

*Training on Sub-award Management* – RESPOND’s SEA Grants Manager conducted a two-day training on sub-award management for VOHUN and THOHUN. The training objectives were to: (1) enable the NCOs to translate the sub-award terms and conditions into operational terms; (2) enhance understanding of USAID regulations, and (3) familiarize them with the report requirements. The trainings were reinforced with follow-up email instructions and skype meetings on issues related to the NCO’s activities. Similar trainings will be conducted for MyOHUN and INDOHUN in the next quarter.

*Review and Approval of Activity Proposals by the University Network Steering Committees* – Member universities in Vietnam, Malaysia, Indonesia and Thailand submitted proposals to the respective national university networks for funding under RESPOND. RESPOND allocated money for each network for such activities. The steering committees of the national university networks pre-screened the proposals and gave recommendations on the proposals that they approved for funding.

RESPOND’s focal persons for each country, in collaboration with the NCOs, worked with the proponents of the proposals in finalizing the concept notes and the budgets.

## **CHALLENGES AND PLANS TO OVERCOME THEM**

### **WORKING WITHIN HOST UNIVERSITY STRUCTURES**

The One Health university networks are currently housed at the premises of host universities, and are therefore operating with the host universities' systems. This presents particular challenges:

- The host universities' bureaucracies slow down the networks' operations. All networks experience two-week delays in getting funds out of the accounts that the universities set up for the NCOs. For THOHUN, the Dean for Tropical Medicine will soon delegate authority for the NCO financial transactions to the NCO Coordinator. For MyOHUN, the university created a trust fund for the sub-award where the MyOHUN Coordinator will have complete control. VOHUN and INDOHUN are working within the limitations of their university systems.
- National university networks' identities are sometimes overshadowed by the identity of their host university. The INDOHUN Coordinator has expressed interest in having INDOHUN registered as a foundation.
- The national networks have yet to define how they plan to work with their member universities. RESPOND will work with the national One Health networks to help them define their roles vis-à-vis their member universities.

The NCOs are newly established offices that have no track record yet of managing sub-award activities. Some NCOs may have personnel who have worked in donor-funded projects but have no direct responsibilities for managing these projects to strengthen their capacities to manage the sub-award, RESPOND conducted regular mentoring to the NCO staff on compliance issues.

### **START-UP OF SEAOHUN FOUNDATION**

A substantial level of effort was required for the formation and development of the SEAOHUN Foundation. To move this priority task along as quickly as possible, the Regional Director and Deputy Regional Director are taking the lead for all aspects of the development and registration of the SEAOHUN Foundation in collaboration with a legal team based in Bangkok. In April, the bi-annual Executive Board meeting was conducted early in order to gain early consensus from the Board members on key governance and organizational development issues for the Foundation's registration application.

The SEAOHUN Foundation will be based in Bangkok, Thailand and will serve as the Secretariat for SEAOHUN. The inaugural meeting for the SEAOHUN Foundation Board of Directors (BOD) will be conducted on September 16-17, 2013 in Jakarta, Indonesia. This inaugural meeting is a statutory requirement for the application to the Government of Thailand for NGO/foundation legal status. During this meeting, the BOD will review and decide upon the required (statutory) financial and organizational issues for the Foundation. It is expected that the application for NGO/foundation status will be submitted to the Government of Thailand within 30 days after this inaugural meeting.

# III. JOINT ACTIVITIES

## UNIVERSITY OF MINNESOTA'S 2013 PUBLIC HEALTH INSTITUTE

From May 27<sup>th</sup> to June 13<sup>th</sup> ten faculty members from OHCEA schools and seven faculty members from SEAOHUN attended UMN's annual Public Health Institute (PHI). During PHI, OHCEA and SEAOHUN participants enrolled in short, trans-disciplinary courses that UMN offered in order to broaden their One Health knowledge. Highlights from the PHI include:

- A week-long One Health case study development workshop
- OHCEA and SEAOHUN faculty teaching Summer Public Health Institute students using the One Health case studies in a short course called *International Approaches to Zoonotic Disease Outbreaks: Perspectives from Africa and Southeast Asia*
- One Health field trips, including visits to Minnesota state government agencies and hands-on learning about One Health approaches to food-borne disease outbreaks.
- Facilitating a "disaster camp" simulation exercise run by the US Centers for Disease Control and Prevention and UMN's Medical School
- Co-hosting the EcoHealthNet annual training workshop for graduates

From May 22<sup>nd</sup> to June 28<sup>th</sup> the newest cohort of One Health residents from Makerere University travelled to Minnesota along with its Resident Coordinator, Dr. Andrew Tamale, and Resident Mentor Dr. Sylvia Wanzala. The purpose of the exchange was for the students to participate in UMN's annual PHI and to actively participate in a similar residency program at UMN. In addition to the three weeks of PHI course work, the One Health residents made presentations during the weekly rounds sessions by UMN residents and participated in the week-long Veterinary Public Health rotation for 4<sup>th</sup> year veterinary students.

## TUFTS ENVIRONMENTAL LITERARY INSTITUTE IN MASSACHUSETTS

Twelve OHCEA Deans, Focal Persons and faculty members and seven SEAOHUN representatives traveled to



TELI 2013 Group Photo

the US to attend the 2013 Tufts Environmental Literary Institute (TELI) Workshop. The TELI faculty development workshop continued through May 31<sup>st</sup>, and was intended to enhance faculty environmental literacy, with a goal of assisting participants to incorporate these themes into existing or new courses. The first week of TELI included classroom lectures at the Fletcher School from Tufts faculty of all disciplines, a visit to Boston's Deer Island where the city's sewage is processed, and a visit to the Cummings Veterinary School in western Massachusetts. The second week focused on applying the first week's lessons and experiences to build curricula the OHCEA and SEAOHUN faculty will take back to their respective member universities.



# IV. APPENDICES:

## APPENDIX I: SUCCESS STORIES AND REGION HIGHLIGHTS

There are four success stories from this quarter:

### Africa Region

1. Training Community Animal Health Workers and Village Health Teams with the US Army Civil Affairs Team in Uganda
2. Uganda's Private Sector Embracing the One Health Approach
3. Enriching Student Experiences through One Health Field Attachments

### SEA Region

1. Training for One Health Epidemiological Teams

## SUCCESS STORY – AFRICA REGION

### *One Community, One Voice, One Health*

**April 2013, Kampala, Uganda.** In line with RESPOND’s objective to establish partnerships that institutionalize operational assistance on outbreak response, RESPOND, with funds from USAID/Uganda, provided logistical support to the US Army Civil Affairs Team in training Community Animal Health Workers (CAHWs) and Village Health Teams (VHTs) in Luwero District, Uganda. The training was delivered using the One Health model, under the theme: *“Promoting Partnership through One Health.”* The objective of the training was to increase the awareness and understanding of the veterinary and public health workers on outbreak response, the surveillance and reporting of

animal/human infectious diseases, and the knowledge and ability to reach appropriately should there be an outbreak.

Conducted from April 15<sup>th</sup> to 24<sup>th</sup>, 2013, the training was facilitated by senior students from Makerere University’s Colleges of Health Sciences (CHS) and Veterinary, Animal Resources and Biosecurity (COVAB), the Luwero District Veterinary and District Health Officers, members from the US Army and Uganda Military, and trainers from Africa Field Epidemiology Network (AFENET). The course was implemented through alternating classroom and integrated field exercises, bringing together 20 CAHWs, 18 VHTs and 8 medics and vets from the Ugandan Army.



An all-stakeholders group photo.

health, and nutrition. The participants were also equipped with universal precautions on how to handle the

#### **More details available at the following links:**

<http://www.africom.mil/Newsroom/Article/10763/one-village-one-voice-one-health>

<http://www.hoa.africom.mil/getArticleFresh.asp?art=8577>

<http://www.monitor.co.ug/News/National/Health-teams-get-epidemic-detection-skills/-/688334/1754614/-/m8p6rhz/-/index.html>

For a community that suffered two Ebola outbreaks in less than two years and is prone to human deaths as a result of other zoonotic diseases, this One Health training on how to handle emergencies for disease outbreaks may be the answer. Equally important, the representation and full participation of both veterinary and human health disciplines from all the stakeholders in the training event is a strong indicator of the commitment with which future zoonotic disease outbreaks will be successfully responded to using the One Health model.

## SUCCESS STORY – AFRICA REGION

### *Uganda's Private Sector Embracing the One Health Approach*



Trainers from FUE taking the Peer Educators through the course.

#### **Participating Firms:**

Shoprite Checkers (U) Ltd  
 Entebbe Handling Services  
 InterAid Uganda  
 Uganda Clays Limited  
 Kabale University  
 Mpanga Tea Estate  
 Mental Health Uganda  
 Leaf Tobacco Limited  
 Ex-quisite Solutions Kampala  
 Pace Health  
 Elizabeth Glassier Foundation  
 McLeod Russell Tea Estate  
 Mbarara University of Science and Technology

reach of their peer educators.

This workshop is the first step towards Uganda's private sector becoming a primary partner in implementing One Health.

**April 2013.** Following the successful pilot USAID RESPOND-funded Private Sector Disease Outbreak Response training project implemented through Federation of Uganda Employers (FUE) in 2012, FUE organized its maiden paid-for disease outbreak response peer educators training. The two-day training took place from April 25<sup>th</sup> to 26<sup>th</sup>, 2013 in Kampala and attracted 20 participants from 13 member organizations. Each participant paid a small amount to cover training materials, facilitators' fees and workshop costs. RESPOND-trained master trainers facilitated the workshop.

The training focused on the facts about and updates on disease outbreaks in Uganda, impact of disease outbreaks at the workplace, understanding disease outbreaks and epidemics, the role of peer educators in preventing and responding to disease outbreaks, the risks of disease outbreaks, the epidemic response cycle and transmission of diseases, and actions to take during the different phases of the epidemic cycle. Participants were also trained in how to use the RESPOND-updated Disease Outbreak Response training materials to facilitate further peer education.

With the several disease outbreaks that have occurred in Uganda in the recent past, the private sector companies have realized that disease outbreaks can potentially affect their business operations. They are therefore willing to pay for training of their staff to enable them to mitigate their risks associated with outbreaks. With this in mind, FUE will continue to provide Disease Outbreak Response training to interested companies for a fee. In the future, FUE will be engaging in partnership with the public sector as it reaches out to District Health and Veterinary Officials to broaden the

## SUCCESS STORY – AFRICA REGION

### ***OHCEA: Enriching Student Experiences through One Health Field Attachments***



Makerere University students inspect meat at a local abattoir.

*“When you enter a home you find human beings who need a health worker and animals that need a vet, so the solution to the home’s health challenges calls for a multidisciplinary approach.”*

Patience Akulle, Veterinary Student,  
Makerere University, COVAB

visits, group projects and combined student-supervisor joint discussions and feedback sessions. The students groups were supervised both by faculty from Makerere University and field-based supervisors in active practice, including District Veterinary and Health Officers. They also benefitted from professional guidance from faculty from The University of Minnesota and Tufts University.

During the training, the students supported on-going district health programs and provided services at the health centers and in communities including free veterinary services. With the government extension services almost non-existent, the free services at farm level were greatly appreciated. The One Health students bridged the connection to wildlife with field events in Queen Elizabeth and Lake Mburo National Parks, which included visits to and sharing with communities within and adjoining the parks on their health challenges. The students and their supervisors initiated a Facebook group named, *“Pioneer One Health Field Attachment Team”* to coordinate their discussions during and after the field experience.

Having animal and human health professionals in the field together for four weeks to work together in identifying potential opportunities and community health challenges to address through a multi-disciplinary approach is helping to build the foundation for a more unified health approach.

**May 2013, Uganda.** In order to connect schools of public health and veterinary medicine in Africa to drive transformational change for continuous improvement of health and wellbeing of humans, animals, and ecosystems through multi-disciplinary training, research and community service, the Colleges of Health Sciences (CHS) and Veterinary, Animal Resources and Biosecurity (COVAB) at Makerere University piloted a multidisciplinary (One Health) practicum training for undergraduate students of nursing, environmental health and veterinary medicine. Supported by OHCEA with funds from USAID RESPOND, the field experience took place from April

14<sup>th</sup> to May 11<sup>th</sup>. The main objective of the cross-disciplinary field attachment was to expose the students to One Health concepts and its practical applications including: multi-disciplinary, cross-sectoral collaborations; social skills and teamwork; effective communication factors responsible for disease (animal and human) occurrence; principles of disease management; and leadership.

Working in six teams composed of a mix of veterinary, nursing and public health students, the student groups operated in four districts of Uganda. The field activities focused on practical site visits, community education and awareness campaigns, home

## SUCCESS STORY – SOUTHEAST ASIA REGION

### *Epidemiology Training for One Health Teams Completed*



A One Health team member reports on the results of the field study.

**May 2013, Vietnam.** In May 2013, public and animal health professionals presented epidemiological studies conducted in 15 provinces conducted from January to March 2013 (See Appendix II for abstracts). The studies were presented in three regional workshops organized by the Institute for Preventive Medicine and Public Health (IPMPH) – Hanoi Medical University (HMU). In June, IPMPH organized on national workshop at which nine of the studies were presented. Six of the studies will be published in the Vietnam Journal of Preventive Medicine.

The studies are the culmination of a training project designed to strengthen One Health epidemiological teams in select provinces and districts. The project has been carried out in Vietnam since April 2012 by IPMPH, in cooperation with the General Department of Preventive

Medicine (GDPM) – Ministry of Health (MOH) and Department of Animal Health (DAH) – Ministry of Agriculture and Rural Development (MARD).

The project supports in-service training activities that were designed to enhance the capacity for early identification of outbreak, notifiable disease reporting, disease surveillance, and laboratory diagnostics in order to promptly confirm the source and cause of outbreaks, and to initiate timely response. The main objective of the project is to intensify the delivery of in-service One Health training in order to build outbreak response capacity among preventive medicine staff at provincial and district levels. Participants include both public health and animal health professionals. The project includes: training of trainers; training for provincial One Health epidemiological teams; field studies in the northern, southern and central/highland regions; and experience sharing workshops.

There were a number of positive spillover activities that followed the completion of the training courses, including:

- the public health and animal health officials from Dong Nai Province signed a joint action plan to prevent and control zoonotic diseases in the province;
- the One Health epidemiological team in Ho Chi Minh City partnered with Oxford University Clinical Research Unit to conduct a large scale study. The One Health team from Ho Chi Minh conducted a field study on *Investigating the presence of Streptococcus suis on swine-derived food products sampled at retail distribution facilities in Ho Chi Minh city in 2012.*

## APPENDIX II: EPIDEMIOLOGY STUDY ABSTRACTS

Below follows the abstracts completed at the end of the epidemiology training conducted throughout SEAOHUN member countries. They are translated from the original Vietnamese.

### Presentation 1

#### INVESTIGATING THE PRESENCE OF STREPTOCOCCUS SUIIS ON SWINE-DERIVED FOOD PRODUCTS SAMPLED AT SLAUGHTER HOUSES AND AT RETAIL DISTRIBUTION FACILITIES IN HO CHI MINH CITY, 2012

*One Health Epidemiology Team, Ho Chi Minh City*

#### ASBTRACT

*Streptococcus suis* (*S. suis*) is a common swine pathogen capable of causing diseases in pigs and human with increasing number of cases reported worldwide, especially in South East Asia. *S. suis* infected diseases have caused huge loss to the swine industry and severe effect to public health. Exposure, processing or consuming infected swine products have been reported as a risk factor for human infection. Therefore, this research was carried out to investigate the presence of *S. suis* in swine – derived food products collected at slaughterhouses and at retail markets with the purpose of understanding the infection status of human. A total of 511 tissue samples comprising tonsil, liver, spleen, uterus, lymph nodes and blood were collected from two slaughter house, and 287 tissue samples comprising liver, spleen and uterus were collected from five markets in five districts in Ho Chi Minh City. The infection rate of *S. suis* and *S. suis* serotype 2 were determined by PCR amplifying specific regions of *16S rDNA* and *cps2J* gene. From the products collected at slaughterhouses, the result showed that the prevalence of *S. suis* and *S. suis* serotype 2 in the total of samples were 69% and 15%, respectively. The presence of *S. suis* in swine – derived food products selling at retail markets showed the prevalence of *S. suis* and *S. suis* serotype 2 were 57% and 5%, respectively. From that, these carriers represent a potential source of infection for human, especially slaughterhouse workers in the pig and pork industry and it is necessary to raise a caution for *S. suis* infection through direct contact or oral consumption of infected raw swine products.

### Presentation 2

#### RABIES PREVENTION AND CONTROL ACTIVITIES IN QUANG TRI PROVINCE, 2010 - 2012

*One Health Epidemiology Team, Quang Tri Province*

#### ASBTRACT

The retrospective descriptive study on the situation of rabies prevention and control activities in Quang Tri Province in the period of 2010-2012 was conducted using both quantitative and qualitative methods. The results show the vaccination rates for human per 100,000 people were below the average of national figures (77 per 100,000 in 2010, 84 per 100.000 in 2011 and 86 per 100.000 in 2012). Rabies vaccination coverage for dogs did not meet the national requirement (86.6% in 2010, 87.4% in 2011 and 89.2% in 2012) and Dakrong district was found to have the lowest vaccine coverage (ranged from 7.8% to 16.4% only). Overall, health care and veterinary staff have adequate and precise knowledge on rabies in human and animal. Local activities on rabies prevention and control in humans and animals have been implemented synchronously in line health care and veterinary regulations. However limitations exist including inadequate intersectoral coordination; irregular and ineffective IEC and health promotion activities; insufficient attention on prevention for high-risk groups such as cats/ dogs slaughterers, traders, veterinary staff and rabies vaccinators. It is necessary to have stronger consideration from local authorities on rabies prevention and control and involvement from relevant sectors, departments and associations in

the effort. There is a need to improve knowledge, attitude and practice among local people on rabies prevention and control, their willingness to report on status of domestic animals to enable local management and control of animals with adequate and accurate data. It is important to reach full vaccine coverage for dogs every year. Appropriate funding for rabies prevention and control should be considered by the State; a rabies vaccination scheme should be supported and given actively to health and veterinary staff participating in rabies prevention and control activities.

### **Presentation 3**

#### **DESCRIPTION A DEATH CAUSED BY INFLUENZA A (H5N1), AND KNOWLEDGE, ATTITUDE AND PRACTICE ON PREVENTION OF INFLUENZA A (H5N1) OF COMMUNITY IN THANH TAN, THANH TRI, SOC TRANG, 2012**

*One Health Epidemiology Team, Soc Trang province*

#### **ABSTRACT**

Retrospective medical record of patient who died from infection with influenza A (H5N1) in Soc Trang Province on 23/01/2012 and describes the collaborative activities of public health, animal health and local authorities. A survey on knowledge, attitude and practice (KAP) of prevention of influenza A (H5N1) of 150 households surrounding the death's house showed that:

Diagnosis and therapeutic interventions were still delayed.

Both public health and veterinary health activities on control of outbreak based on their regulations during the outbreak, but these activities were not maintenance regularly; Communication on control and prevention of influenza A (H5N1) is not maintained due to limited funds.

KAP of communities on control and prevention of influenza A (H5N1) in Soc Trang were low. Enhance communication on prevention measures of influenza A (H5N1) in the community is needed. It should be priority on messages on do not slaughter and eat sick poultries. Raising awareness of environmental protection, do not throw sick chickens into surroundings.

### **Presentation 4**

#### **PERCEPTION OF COMMUNITY ON FASCIOLIASIS IN HUMANS AND ANIMALS IN CAT MINH COMMUNE, PHU CAT DISTRICT, BINH DINH PROVINCE, 2013**

*One Health Epidemiology Team, Binh Dinh Province*

#### **ABSTRACT**

A community awareness survey of fascioliasis (fasciola hepatica or liver fluke disease) in humans and animals conducted in 384 people, combined with a survey of the disease prevalence in herds of cattle in Cat Minh commune, Phu Cat District, Binh Dinh Province. The study results show that the rate of people having some understanding about fascioliasis is 26%. One hundred percent (100%) of respondents using well water for drinking and cooking. Twenty-three point two percent (23.2%) of households still do not have toilets. People with habit of soap hand washing account for 80%. Households with regularly consumption of raw vegetables account for 58.4%. Households with adjoining fields and with neighbors who have cattles account for 63% and 70% respectively. Sixtyone point five percent (61.5%) of households breed cattle, of which 49% through grazing pasture, 48% through semi-grazing and 3% having cattle roaming freely outside premises. Cattle feed is mainly reserved rice straws (97%), 100% households use well water for cattle. Ninety-nine point five percent (99.5%) utilize cattle feces to make compost as fertilizer, the remaining 0.5% households allow direct cattle excretion into environment without treatment. The infection rate of liver fluke eggs in cattle was 5.1%. Deworming on herds of cattle done annually has been neglected,

accounts for 46.2% only (109 out of 236 households). There is a need to enhance community education and communication on fascioliasis in order to raise people's awareness on disease risk and impact. This would promote people's good practice on disease prevention, minimizing transmission of disease in community, reducing emergence of cases and gradually stamping out the disease. Households raising cattle are recommended to undergo periodic deworming for their cattle in order to safeguard their healthy life, to improve household income and, at the same time, to minimize circulation of pathogen in surrounding environment.

#### Presentation 5

### KNOWLEDGE ON LEPTOSPIRA AND PREVALENCE OF LEPTOSPIRA IN HIGH RISK GROUP IN DONG NAI PROVINCE, 2013.

*One Health Epidemiology Team, Dong Nai Province*

#### ABSTRACT

**Objective:** Describe the situation of *leptospira* infection in pigs and on the high-risk group of Leptospira infection; describe the knowledge and practice of high-risk group in the implementation of prevention measures for Leptospirose. **Method:** A cross-sectional study was conducted in Dong Nai Province in March 2013 to describe the situation of *leptospira* infection in pigs and on the high-risk group of *leptospira* infection; describe the knowledge and practice of high-risk group in the implementation of prevention measures for *leptospira*. **Results:** The rate of *leptospira* infection in high risk groups 52,27%. *leptospira* infection in pigs is 0%. Swine, lard and pork trade have very limited understanding about Leptospirose, pathogens, clinical manifestations, treatment and practical prevention measures for *leptospira*. The rate of correct knowledge is 2,34%, the correct practice is 1,82%. **Conclusion:** There is statistically significant relationship between education and practice of preventive measures *leptospira* ( $p < 0.05$ ). Between knowledge and practice there is a big gap.

#### Presentation 6

### EPIDEMIOLOGICAL CHARACTERISTICS OF CASES OF HUMAN INFECTION WITH STREPTOCOCCUS SUIIS AND REVIEW ON INTERSECTORAL COLLABORATION IN STREPTOCOCCUS SUIIS PREVENTION AND CONTROL IN HAI PHONG CITY, 2010 - 2012

*One Health Epidemiology Team, Hai Phong City*

#### ABSTRACT

A descriptive cross sectional study of cases of human infection with *Streptococcus suis* and a retrospective review of data on disease outbreaks in pigs from 2010 to 2012 in Hai Phong were conducted. Results show: 48 cases of human infection with *Streptococcus suis* have been reported of which there were no fatal cases. All the cases were tested positive with *Streptococcus suis* and received medical care at the Viet Tiep hospital, Hai Phong. Hundred percents of the cases are above 30 years of age, among which the 50-59 and 40-49 age groups are predominant (38% and 36%, respectively). There is a statistically significant difference between males and females among cases (83.3% versus 16.7%). Most of the cases were related to pig-slaughtering and/or pig trading (56.2%). More cases reported during the months from April through October each year. Thirteen of fifteen districts recorded with human cases. Incidence per 100,000 people was recorded to be higher in rural districts of Vinh Bao, Thuy Nguyen, and An Duong compared to other districts of Hai Phong. Sixtytwo point five percents (62.5%) of cases had history of consumption of raw or not well-prepared pig-products within 7 days prior to onset date. No possible connections that were observed between

disease outbreaks in pigs and cases of human infection with *Streptococcus suis* during the study period. There was an absence of collaboration between public health and animal health sectors in disease surveillance, outbreak investigation and response and risk communication. There is a need to enhance communication on food safety practice. Close collaboration with two-way communication mechanism between department of preventive medicine and department of animal health needs to be reinforced in disease surveillance, outbreak investigation and response in humans as well as in animals. Epidemiological research on possible correlation between disease outbreak in pigs and cases of human infection with *Streptococcus suis* is needed to better provide evidence for early warning of and timely response to disease outbreak.

#### **Presentation 7**

### **RESULTS OF COMMUNICATIONS ABOUT RABIES CONTROL AND PREVENTION AMONG SECONDARY SCHOOL STUDENTS IN XUYEN MOC DISTRICT, BA RIA – VUNG TAU PROVINCE, 2012**

*One Health Epidemiology Team, Ba Ria - Vung Tau province*

#### **ABSTRACT**

Intervention study on control and prevention of rabies on the occasion of World Rabies Day 2012 was implemented on the students of 2 secondary schools in Xuyen Moc District, Ba Ria-Vung Tau Province. Participants filled in questionnaire with 7 variables on control and prevention of rabies without ID. Data analysis was done using SPSS software.

The results showed that there were increased on knowledge and practice for rabies control and prevention after communication ( $p < 0,001$ ). Effectiveness of direct communication was higher than leaflet communication but no significantly.

#### **Presentation 8**

### **SITUATION OF COLLABORATION BETWEEN VETERINARY AND PUBLIC HEALTH IN THE CONTROL AND PREVENTION OF AVIAN INFLUENZA (H5N1) IN CAN THO CITY**

*One Health Epidemiology Team, Can Tho city*

#### **ABSTRACT**

The study aimed to examine the situation of collaboration between veterinary and public health in the control and prevention of avian influenza (H5N1) in the Can Tho city. The results showed that 21.8% Steering Committee has decided to set up (5/66 no veterinary units involved), but 64.4% said there is no memory of the members of the committee; 50.2% is the interdisciplinary coordination; 53.8% have established interdisciplinary epidemic teams, 76.3% have written interdisciplinary steering and guiding, 35.3% plan to coordinate participation monitoring, 58.4% plan to coordinate interdisciplinary, with 87.6% assigning tasks between the two sectors, 27.1% with operating funds. Regarding the coordination of activities in the epidemic, 88.8% have routinely share information when there is no outbreak, 88.8% share and exchange information on avian flu; coordination 45.9% verify suspected cases of human/poultry outbreaks, 39.6% combined outbreak investigation; 57.1% to coordinate epidemic, 71% of communication to coordinate community; 37% distribution training of personnel and Veterinary Medicine; 68.3% coordination reduces the risk of transmission of human and animal diseases in the community.

#### **Presentation 9**

## **EPIDEMIOLOGICAL CHARACTERISTICS OF JAPANESE ENCEPHALITIS B IN SON HA DISTRICT AND KAP OF COMMUNITY IN SON HA COMMUNE, SON HA DISTRICT, QUANG NGAI PROVINCE, 2009 – 2012**

*One Health Epidemiology Team, Quang Ngai Province*

### **ABSTRACT**

Research on "Epidemiological characteristics of Japanese encephalitis B in Quang Ngai province and KAP survey the people in Son Ha commune, Son Ha District" was conducted using a descriptive cross sectional based on data provided by the provincial preventive medicine centre. During the period between 2009 and 2012, there were 10 laboratory confirmed cases of Japanese encephalitis reported in Quang Ngai Province. The youngest case is of 7 months old and the oldest on is 20 years old. All the cases were tested positive with Japanese encephalitis B. Regarding the two clinically recognized cases reported from Son Ha District, although their sub-clinical signs and history of epidemiological factors were not clear but they both have been diagnosed and treated successfully without any sequelae. Review on EPI data showed a gradual increase in vaccination coverage for children less than 5 years of age over the years, which indicates the improvement in people's awareness toward the benefit of vaccination program. However, results from the KAP survey pointed out that people's understanding on JE disease is still limited; their preventive measures mainly rely on JE vaccination under the EPI program provided by local health staff. Promotion on immunization against JE should be further enhanced. Other preventive measures such as control of Culex mosquitoes, surveillance on viral carriers among animals, water and environment sanitation should be promoted to minimize disease vector-host transmission. More in-depth studies on human-animal inter-relationship in JE disease are encouraged.

### **Presentation 10**

## **THE EPIDEMIOLOGICAL CHARACTERISTICS OF THE HUMAN RABIES MORTALITY IN THE BINH THUAN PROVINCE, 2007 -2011**

*One Health Epidemiology Team, Binh Thuan Province*

### **ABSTRACT**

Study aims are to describe epidemiological characteristics of nine cases of death from rabies in Binh Thuan province during the 2007-2011 year period and to explore rabies-related knowledge and practices among 180 households in the neighborhoods of cases of death. Rabies has occurred in six districts of Binh Thuan province and accounts for nine cases of death in 2007-2011. Male cases are likely more than females. Mean age is 25.6 years old. The incubation period for rabies is estimated 113.1 days. The average time it takes from the symptoms of aggressive and hyperactive behaviors until death is 3.55 days. 88.9% rabies cases were caused by dog bites. 66.7% bites located at the palms of hands. Moreover, 55.6% cases were transmitted with only one bite and have clinical symptoms of the furious rabies form. The majority of cases were not given an Anti-Rabies serum (88.9%) and an Anti-Rabies vaccine (88.9%). 55.6% animals accounting for bites were unknown rabies infection. 66.7% of them were under-monitored and 33.3% of them were known in the neighborhood of rabies. Knowledge of rabies and its prevention and control is quite good (93.6 – 99.4%). There were 11.7% respondents have a trust in the credibility of folk treatments and 22.2% respondents perceived rabies with the symptoms of aggressive and hyperactive behaviors can be cured. Prevention and control practices of rabies were not good in terms of the practice of prompt wound treatment (51.1%), active immunization with a rabies vaccine (74.4%), the practice of animal monitor (19.4%) and the practice of informing health professionals and veterinarians.

### **Presentation 11**

## **EPIDEMIOLOGY STUDY OF HUMAN RABIES IN HA NOI FROM 2006 - 2011 AND SOME FACTORS EVALUATION**

*One Health Epidemiology Team, Ha Noi city*

### **ABSTRACT**

Human rabies mortality and proportion of reported cases after exposure with rabies suspected animals has increased in recent years in Hanoi. To propose effective measures on human rabies control and prevention, a retrospective study combined with a cross-sectional study were conducted to describe epidemiologic characteristics of human rabies cases and to identify knowledge, attitude and practices of local people on human rabies control and prevention. 46 human rabies cases were involved in the retrospective study. Most cases distributed in rural districts of Hanoi where bordering provinces with high human rabies mortality. Of 46 cases, most cases were males (73.9%), from 25 years old or above (67.4%) and farmers (43.2%). 71.7% of the cases were bitten by dogs. 98 local people participated in the cross-sectional study, of which only 20,4% of participants knew rabies can transmit by direct contact, 8.2% had adequate knowledge on control and prevention measures and 8.2% sufficiently knew how to deal with wounds bitted by animals. 79.0% of households did not register their dogs at authorities, 23.1% did not vaccinate their dogs, and 22.3% wandered their dogs freely. Knowledge and practices of local people on human rabies control and prevention were quite low. Rabies transmission routes, human rabies control and prevention measures and actions after bitten by suspected animals should be directly communicated to high risk populations. Mandatory measures on dog vaccination and unwandered dograising should be strictly implemented.

### **Presentation 12**

#### **RABIES DEATHS AND KNOWLEDGE, ATTITUDE AND PRACTICE OF RABIES PREVENTION AND CONTROL IN GIA LAI PROVINCE, 2007-2012**

*One Health Epidemiology Team, Gia Lai province*

### **ABSTRACT**

Reviewing of rabies deaths records in Gia Lai during from 2007 to 2012 showed that there were 36 deaths reported in 11/17 districts, of which (91.7%) non-vaccinated. 62.0% reported bitten by dogs. Rabies deaths occurred in all age groups and 55.6% was pupils. Proportion of male was 77.7% and farmers were 38.8%. Rabies deaths were 81% in ethnic groups. A survey of knowledge, attitudes and practices of 180 persons of rabies prevention and control in Gia Lai province showed that sources with knowledge of rabies transmission were dogs and cats (82.3%) and rabies was a dangerous diseases (68.9%). 17.6% of the respondents think of vaccination when bitten by dogs. 11.7% said that rabies can be treat success. The communication channel on rabies that community could access were health workers (55.0%). All dogs were not vaccinated because 31,2% persons did not know about vaccine for dogs, cats, did not know where to vaccine (19.7%) and vaccination positions were far from their houses.

This study showed that community knowledge on rabies needs be improved. There is a need to enhance intersectoral collaboration, especially that of between veterinary and public health in rabies prevention and control. Increase and expand of rabies vaccination points in the remote, poor and low education areas.

### **Presentation 13**

## **RABIES DEATHS AND VACCINATION ON HUMANS, AND DOMESTIC DOGS, AND CATS IN SON LA PROVINCE, 2011-2012**

*One Health Epidemiology Team, Son La province*

### **ABSTRACT**

In recent years, there has been an increase in mortality rates of rabies in Son La province. To determine mortality of rabies from 2011-2012 and influences on the works of vaccination for both human and animals, a retrospective study has been conducted in all of towns and districts within Son La province since the beginning of 2013. Data was collected in fatal case investigation forms, health record books and vaccination history books of those bitted by animals as well as in interviewing involved health professional. The study result indicates that: There were 28 fatal cases of rabies; 8,426 people were vaccinated for rabies. The vaccination rate of rabies was low in Son La province, approximately 172.3/100,000. The majority of people vaccinated are due to animal bites (98.5%). The vaccination rate of rabies in dogs and cats is low, only accounting for 35% of the total in 2012. According to the study result, to reduce the mortality rate of rabies, the rate of rabies-vaccination coverage in human bitted by animals as well as in animals, especially dogs need to be promoted highly.

### **Presentation 14**

## **SITUATION OF KNOWLEDGE, ATTITUDES, AND PRACTICES OF COMMUNITY IN MY LE AND BINH BO COMMUNE, PHU NINH DISTRICT, PHU THO PROVINCE, 2008 - 2012**

*One Health Epidemiology Team, Phú Thọ province*

### **ABSTRACT**

A cross-sectional study on knowledge, attitude and practice (KAP) of the prevention and control of rabies in 250 residents of Binh Bo ward and Le My ward in Phu Ninh district, Phu Tho province was conducted in 2012. To describe KAP of residents and make some recommendations on the prevention and control of rabies in the province in the next time period. The result indicates 96.4% people who have ever heard about rabies and the common transmission mode of rabies virus; 88.8% people know the transmission mode is through the bites and scratches of infected animals; 10% people know the transmission mode is through contacts with saliva from infected animals; 1.2% indicates the mode is through eating infected animals. There were 95.2% indicates the remission source is dogs, 4.8% indicates the source from cats, rats, minks and bats, and 80.8% people knowing that rabies can infected both humans and animals. 83.6% indicates rabies cannot be cured, but there is still 16.4% believe that rabies is difficult to cure. 65.4% respondents are willing to get vaccinated when being bitted by dogs or cats. 10% respondents indicates the need of registering dogs at local authority; 2.4% indicates the necessity of noticing vegetarians when finding out any suspected infected animals, and 10.8% will kill to eat these animals. After being bitted, 92.8% respondents will wash wounds by soaps, 83.2% respondents will go to health care centers for diagnosis and treatment, 2.8% respondents will treat at local healers. In regard to dog and cat management, 38% households commonly cage them, 2% households have dog muzzles, and more than 60% households usually free dogs.

### **Presentation 15**

## **DESCRIPTIVE STUDY ON TRICHINOSIS OUTBREAK IN MUONG LAT DISTRICT, THANH HOA PROVINCE IN 2012**

*One Health Epidemiology Team, Thanh Hóa province*

### **ABSTRACT**

A trichinosis outbreak happened in Muong Lat district, Thanh Hoa province in January 2012. There were 27 people infected trichinosis due to eating uncooked pork, 6 serious cases were referred to upper-level healthcare centers, 4 (+) ELISA cases with trichinosis. Of infected cases, the proportion of male cases (74.1%) higher than female (25.9%), the proportion of cases at 21-39 year old is the highest (62.9%), the majority of cases is working in the agriculture (76%), 62.9% cases having particular symptoms of trichinosis infection. 67% cases have the habit of eating uncooked pork, blood soup (tiet canh) and pig skin salad (nem tinh). Of blood samples taken at the outbreak, 7.4% (18/242) human samples, and 6.7% (3/45) pig samples are positive with trichinosis cysts. Response and outbreak control activities are conducted by both of health and vegetanary sections according to the guidelines of outbreak control in a timely manner in order to control the outbreak completely. Moreover, to control and prevent outbreak, communication and information activities in terms of food hygiene and 'not – to-eat' uncooked pork or other animals were promoted. Surveillance activities at the local and region have been also conducted to detect cases earlier and control them in a timely manner.

### **Presentation 16**

#### **FOOD POISONING AMONG WORKERS AFFTER HAVING MEALS IN A LARGE CANTEEN IN BINH DUONG PROVINCE, 2013**

*Ho Chi Minh Public Health and Hygiene Institute (FETP fellow)*

### **ASBTRACT**

On 10 July 2012, a food poisoning occurred in a large canteen of a company X after lunch. A food catering provided meals for workers of company X. From initial report, 430 workers attended this meal, of which 56 were hospitalized with abdominal pain, diarrhoea, vomiting and nausea. We conducted an investigation to identify implicated food, vehicle, and causative agent. A case-control study was used to identify implicated food. All cases and controls were interviewed face-to-face. Catering facilities and food-handlers were also investigated. Fifty-four cases fulfilled the case definition and 72 controls were randomly selected. There were four kinds of food items served in this meal but only odds ratio (OR) of "soup of pumpkin and minced pork" was statistically significant in multivariate analysis: adjusted OR = 9.30(95% CI 3.19, 27.09). The kitchen did not separate cooked foods from raw foods. A counter was used to prepare for raw foods as well as divide cooked foods. Furthermore, cooked foods were in room temperature about three and a half hours before serving. Four out of fourteen food-handlers were not trained on basic food safety knowledge and did not have health certificates. In conclusion, summary of evidence suggested that "Soup of waxy pumpkin and minced pork" was implicated food. Hospitals should take specimens of patients to isolate causative agents. Food-catering services should serve their cooked foods within two hours after cooking if their foods were kept at room temperature or they have to keep cooked foods in safe temperature until these foods are served.

### **Presentation 17**

## **MANAGEMENT CASCADE OF PATIENTS WITH BOTH TB DISEASE AND HIV INFECTION IN SON LA, 2012**

*Institute for Public Health and Preventive Medicine, Hanoi (FETP fellow)*

### **ASBTRACT**

The study objective was to describe the management cascade of patients with both TB disease and HIV infection in Son La province. Reviewing 191 medical records of patients registering in TB provincial hospital in Son La indicated that, 23/191 (12.0%) TB patients registered at provincial tuberculosis and lung disease hospital in Sonla from 1/1/2012 to 31/10/2012 were confirmed HIV (+) before registration. Of these HIV-TB patients, 11 (47.8%) were referred from HIV outpatient clinics (OPC), 8 of whom had a recorded antiretroviral therapy (ARV) treatment start date. The rate of TB patients screened for HIV was 98.2% (165/168); 4.2% (7/165) diagnosed HIV (+). However, only 1/16 HIV-TB patients (Of total 30 HIV-TB patients minus 3 patients were being in treatment of active TB and 11 patients who were previously referred from OPC equal 16 patients who needed referral to OPC for HIV care and ART treatment) was noted as successfully transferred to OPC. Within HIV system, of 653 HIV patients, 11 (1.7%) had history of TB disease before enrolled in care at OPC. TB clinical screening in the OPC was high (92.5%) at first visit and ranged from 96.3% to 100% at the subsequent re-examinations. Among those screened with TB clinical signs (+), who have one of the four symptoms, cough, fever, night sweats or weight loss, through their re-examination visits, proportions of being tested with x-ray or sputum were low and fluctuated ranging from 28.6% to 100% and 0% to 29.4%, respectively. Overall, among 416 patients with TB(+) diagnosis, 29.1% were prescribed for sputum testing, 75.5% for x-ray, 3.4% were referred to TB facilities for diagnosis and treatment but all these 14 medical records had no information of TB treatment and there was still 12.5% (52/416) had no record of further testing or referral. Of 62 patients who screened TB (+) but X-ray (-) and sputum (-) and should have been referred to provincial TB hospital, only six (9.7%) were referred successfully.

### **Presentation 18**

#### **RETROSPECTIVE REVIEW OF DENGUE OUTBREAK IN WARD 10, DISTRICT 6, HO CHI MINH CITY, APRIL 2012**

*Institute of Hygiene and Public Health, Ho Chi Minh City (FETP fellow)*

### **ABSTRACT**

Three Dengue fever (DF) cases reported from 1 to 15 April 2012 in ward 10, district 6, Ho Chi Minh city were reviewed using retrospective data from hospital to describe their epidemiological characteristics. The results showed that the date of onset from first case to second and third cases were about 10 days apart. The average duration from symptoms onset to hospital admission was 4 days. The ages of the three patients were 11, 14 and 19, of which there were 2 males and 1 female. All cases had high fever and hemorrhagic symptoms, 2 cases were also presented with headache and muscle pain. All cases were tested with normal hematocrit, platelet of <100.000/mm<sup>3</sup> reported in 2 cases. Confirmation tests for DF were not done. Residence of the first case was about 50 meters away from those of the second and third cases. DF outbreak control measures were deployed, however, index of insects were 2 to 5 times higher compared to pre-intervention. A KAP survey was conducted on fifty households around the outbreak premise showed that 94% of people know about DF, however the percentage of cleaning water containers usage at households within last week was low (40%). The current case definition for DF does not include laboratory test results which might pose a burden for preventive medicine system and lead to waste of resources. It is necessary to promote behavior change communication for people to enhance awareness and responsibility

toward dengue prevention and control. Local authorities are encouraged to pay more attention and give timely directive in responding to outbreak and in overall disease prevention and control. Local health authorities need to closely monitor insecticide spray activities. Cleaning up larvae needs to be done actively at household level.

#### **Presentation 19**

### **CHARACTERISTICS OF DEATHS ASSOCIATED WITH INFLAMMATORY PALMOPLANTAR HYPERKERATOSIS SYNDROME IN BA TO DISTRICT, QUANG NGAI PROVINCE, 2011-2012**

*National Institute of Hygiene and Epidemiology, Hanoi (FETP fellow)*

#### **ABSTRACT**

From April 2011 to July 2012, a disease of unknown origin called inflammatory palmoplantar hyperkeratosis (IPPH) syndrome occurred in five communes in Bato district, central Vietnam. To understand the characteristic of the disease, we conducted a retrospective descriptive study in Ba Dien commune in 2012. The results showed that the total 216 cases and 13 deaths reported during 2 years in Ba To district. The case fatality rate was 6%. These 13 fatal cases distributed in all age-groups but more frequently in those more than 20 years of age (38,5%); besides, there were also death case among both children and pupil aged groups. 62,8% of death case were malnourished and depletion when hospitalization. All the death case exceeded the permitted level of both GOT and GPT in blood samples. Further studies on the severe form of IPPH are warranted to help prevention of its re-emergence in the future.

#### **Presentation 20**

### **SURVEILLANCE RESULT OF HOSTS AND VECTORS OF PLAGUE IN GIA LAI AND DAK LAK PROVINCES IN 2012**

*Institute of Hygiene and Epidemiology of Tay Nguyen (FETP fellow)*

#### **ABSTRACT**

Plague is an infectious disease, acute and rapid spread with very high mortality rate, especially plague is classified as quarantine and international declarations. In the plague control and prevention, the regular supervision of the host and vector of plague is very important. Therefore, this study was to assess the monitoring host and vector of plague in two provinces of Gia Lai and Dak Lak Central Highlands region in 2012. Objectives are determine the species composition of host and vector of plague, evaluate host density, and determine the flea index, which infected on plague hosts at research sites. Study method is epidemiological cross-sectional study, study subjects are rodents and fleas collected during the investigation, research time is deployed quarterly in 2012, local research sites in 02 provinces of Gia Lai and Dak Lak. Results show that in Gia Lai province host species of plague is Lat (*Rattus exulans*) 46.9%, shrews (*Suncus murinus*) 47.7%, cotton rats (*Rattus nitidus*) 2% and forest rats (*Rattus Rattus*) 2.7%. In Dak Lak province host species are Lat rats (*Rattus exulans*) 81%, shrews (*Suncus murinus*) 18.3% and cotton rats (*Rattus nitidus*) 0.7%. In Ia Kenh Commune, Dak Doa District, Gia Lai Province in May flea index was 56.8% the highest, and in October flea index was 16.7% lowest. In Ea'Hiao Commune, Ea H'leo District, Dak Lak Province in March has the highest flea index is 18.1% and at August with the lowest abundance index is 6.2%.

#### **Presentation 21**

## **SITUATION OF COMMUNICATION DISEASE IN BAC NINH PROVINCE, 2008-2010**

*Provincial Preventive Medicine Center of Bac Ninh (FETP short course trainee)*

### **ABSTRACT**

Retrospective data of infectious diseases surveillance system of Provincial Preventive Medicine Center of Bac Ninh, the results showed that: Bac Ninh remained achievement on polio and neonatal tetanus. Other prophylactic vaccines diseases in Expanding Program Immunization were still decreased. Respiratory diseases such as mumps, chicken pox, adenovirus were higher in winter and spring seasons. The incidence rate of common influenza was 2876 cases / year / 100.000 population. Diarrhoeal diseases such as acute diarrhea, dysentery bacillus and dysentery amoeba were high with incidence rate of acute diarrhea was 1542 cases / year / 100.000 population

To improve the efficiency of communicable disease, it should be strictly taken 48/TT-BYT circular on report of infectious diseases, performing inter-sectoral coordination in activities on control and prevention infectious diseases, Communication to raise awareness of communities in prevention, early detection and ensure the implementation of preventive measures.

### **Presentation 22**

#### **CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS AMONG HAND, FOOT AND MOUTH DISEASE PATIENTS AT THE HAI DUONG PROVINCIAL CHILDREN'S HOSPITAL IN 2012**

*Hai Duong Preventive Medicine Center (FETP short course trainee)*

### **ABSTRACT**

This study sought to describe some epidemiological and clinical characteristics in patients with hand, foot and mouth disease (HFMD) at the Hai Duong Provincial Children's Hospital, 2012. All HFMD patients were selected in the investigation. We reported HFMD disease mainly in children under 36 months old, sick men more than women, the prevalence of HFMD among children aged between 12 and 36 months was highest. The first symptom was notably fever (73.9%), The most common signs was blisters on the palms (97,3%), the feet (97.5%), the knees (12.6%) and the hips (10.1%); mouth ulcers (72,7%). All most patients was grade 1 (74,0%) and grade 2a, 2b (23,1%). 18,1 percent of the patients has direct contact from person to person, 66,3% in the kindergarten and 4% in the hospital. 3,2% of the patients get HFMD a second time.

