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# CMU-UMN

## Veterinary Education Twinning Project

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### ***Veterinary Student Exchange # 2***

The second veterinary student exchange occurred July 7-25, 2014. A group of UMN and CMU faculty members and students completed the veterinary public health clerkships at both schools in order to compare the teaching methods and coverage of OIE Day 1 competencies. Five UMN veterinary students, along with UMN assistant professor Dr. Larissa Minicucci and Veterinary Public Health resident Dr. Jim Lee, traveled to Chiang Mai University (CMU) in Thailand to participate in their three week long Veterinary Public Health clerkship. Clerkship activities included a visit to a bee farm, a visit to a slaughter house where participants performed food quality and safety tests in the laboratory, and a review of epidemiologic case studies involving zoonotic and foodborne diseases. An active learning exercise involving the application of Hazard Analysis and Critical Control Points (HACCP) to the production of pizza and kang-som-gung (shrimp sour curry) emphasized the importance of this systematic approach to food hygiene. Taking the public health rotation at each other's school provided the students a wonderful opportunity to learn about VPH in both countries, experience different teaching methods, and get to know each other and their cultures. After the exchanges, the students provided feedback on the best practices observed at each school and opportunities to strengthen coverage of the OIE Day 1 competencies. CMU faculty members who taught later clerkships noted numerous positive changes in the students who participated in the student exchanges. One of the UMN students decided to pursue a Master in Public Health degree after completing the exchange. The next bilateral student exchange between CMU and UMN is scheduled for July-September 2015.



*At beekeeping center that breeds bees suited to tropical climates and develops good agricultural practices for honey production in Thailand. July 2014*

*Assuring high quality National Veterinary Services through the alignment of veterinary educational curriculum with OIE recommendations on competencies of graduating veterinarians is the overarching objective of this OIE sponsored Twinning Project.*

## Veterinary Student Exchange # 2 continued



#1 Visit to the Thai Elephant Conservation Center. The center houses a government owned elephant hospital providing services to government and privately owned working elephants.



#2 CMU and UMN veterinary students work together performing food quality and safety tests in the laboratory at CMU.



#3 UMN Resident Jim Lee driving a water buffalo at a Conservation Center which is an educational site that demonstrates traditional rice planting techniques and Water Buffalo management.

### Strengthening risk communications knowledge and skills

Risk communication was the subject of a 3 day workshop in August 2014 delivered to veterinarians working in government, industry and academia. The workshop focused on OIE competencies related to the risk communication as a critical component of risk analysis and the importance of interacting with public and private sectors concerning veterinary issues of national importance. The 29 participants included veterinary faculty teaching staff, graduate students, mid-career professionals from the Thailand Department of Livestock Development, and veterinarians working for multinational food companies. Participant feedback was overwhelmingly positive, with requests for more risk communications training.

### Master Degrees and Residencies Review Completed for OIE Advanced Competencies

The Master in Veterinary Preventive Medicine (MVPM) degree and the Veterinary Public Health (VPH) Residency programs at CMU, and the VPH Residency including Master in Public Health (MPH) degree and the dual DVM/MPH degree programs at UMN were mapped against the eight OIE Advanced Competencies. Course syllabi, residency projects, Master's projects, and field experiences were reviewed in addition to completing individual interviews of faculty members and alumni from the programs. The major difference in the Master's programs was more research in the CMU's Master program and more courses in UMN's program. CMU's veterinary public health residency program is quite new compared to UMN's residency which was established in 2002. Preliminary mapping indicates strengths and opportunities for improvement in the two schools' programs. For example, CMU's programs cover the International Trade Framework competency very well whereas UMN could add more of this competency into their program. Likewise, UMN's programs cover Risk Analysis well and CMU could add more of this competency into their program. This mapping exercise will help inform the next curriculum development workshop that will be held during the Global Health Institute at Chiang Mai University in February 2015.

## Leveraging Faculty Exchanges – a Success Story

Chiang Mai University lecturer Dr. Terdsak Yano had a very clear plan for what he wanted to accomplish during his April-May 2014 faculty exchange at the University of Minnesota:

- Participate in the International Conference on One Medicine One Science
- Talk with teaching staff who teach pig production and transboundary animal diseases
- Visit the veterinary diagnostic laboratory and learn about the potential use of telepathology
- Develop plans for a 'Farm-to-Table' experiential learning field course for Thailand
- Observe infection control within the veterinary teaching hospital

By the end of his three and a half week exchange, he had met or exceeded all of his objectives. His days were filled with observation of teaching approaches, interaction with teaching staff and students, and review of UMN facilities and programs.

Faculty exchanges are more than just educational tours. Dr. Yano's plan and his commitment to follow-up demonstrates a great success story. He was able to share what he observed with colleagues back at CMU and draft a new educational module for the swine rotation that incorporated OIE competencies on emerging/re-emerging infectious diseases and transboundary animal diseases.

The draft module was refined during the August faculty workshop at CMU where Dr. Yano received constructive feedback and gathered additional ideas. Class lecture time was reduced by capturing the lectures on a YouTube video for students to review before coming to class. A "flipped classroom" approach used class time for a debate, a learning game, a mind mapping exercise, and a problem based learning case to increase student engagement. Teams of students also were assigned the task of creating their own 3 minute YouTube videos to teach important concepts.

Working with his Swine Clinic colleague, Instructor Panawat Yamsakul, the new module was delivered to veterinary students in October 2014. Student feedback was positive overall – they liked the in-class activities. Their feedback suggested that class time involve a mixture of lecture time and active learning.

The faculty exchanges continue to motivate Dr. Yano. Recently he joined UMN Professor Dr. Scott Wells in a week-long 'Farm-to-Table' experiential learning field course that included early and mid-career veterinary and public health professionals. Based on this experience, Drs. Yano and Wells will collaborate in February 2015 to deliver a similar 'Farm-to-Table' course in Thailand.

Dr. Yano's experience demonstrates how faculty exchanges can directly influence the veterinary curriculum and the teaching methods. Key to his success was the plan made before the exchange and the commitment to translate what he learned into new teaching modules after the exchange. He also demonstrated the willingness to critically assess the new approach and adapt it based on student feedback.



*Dr. Yano (in orange tee shirt) experienced an active learning approach through the 'Farm to Table' educational program. Brahman cattle in background.*

### **Veterinary Education Twinning's aims and objectives: Chiang Mai University (CMU) and University of Minnesota (UMN)**

Our principal objectives are to:

- Strengthen effective veterinary services by aligning veterinary education within the framework of the OIE PVS pathway
- Improve the veterinary workforce by ensuring that new veterinary graduates demonstrate compliance with OIE Recommendations on the Competencies of Graduating Veterinarians ('Day 1 Graduates') to assure the high quality of national Veterinary Services (Day 1 competencies)
- Deliver continuing professional development for veterinarians working in both public and private components of National Veterinary Services in order to advance knowledge and skills as outlined in the advanced competencies developed by OIE
- Promote the One Health approach for interdisciplinary collaboration in addressing health issues at the human, animal, and environmental interface

## Stimulating Course Modifications and New Teaching Approaches

Educating future veterinarians is the most important responsibility of the teaching staff at the veterinary faculties at Chiang Mai University (CMU) and University of Minnesota (UMN). Faculty teaching staff take this responsibility seriously so change can be difficult when suggestions are made to incorporate new educational modules or new approaches to student learning. The DVM curriculum mapping done in 2013-2014 identified several gaps related to the OIE recommended Day 1 competencies such as animal welfare and emerging infectious diseases. Moving from recognition of the gaps to changes in courses was the objective of the Curriculum Development Workshop held in Chiang Mai August 6-8, 2014. A cross section of CMU teaching staff joined five teaching staff from UMN to brainstorm ideas and draft new educational modules in the areas of animal welfare, emerging infectious diseases and trans-boundary animal diseases. In addition, representatives from the other Thai veterinary faculties participated as a way to spread the benefits throughout the country.



*Drs. Jeff Bender, Will Hueston and Scott Wells of UMN with Dr. Khwanchai Kreausukon of CMU. August 2014*



*Team building exercise focused on speed and collaboration at the Curriculum Development Workshop. August 2014*

Presentations on teaching styles and the outcomes of the curriculum mapping set the stage for the workshop. A special highlight was a presentation from six of the CMU and UMN veterinary students who had just completed a pair of 3 week student exchanges, one at each university. They shared their observations on the teaching they observed as well as their evaluation of the degree to which the OIE recommended Day 1 competencies were covered in the current curricula. Their presentation generated considerable discussion among the participants, as it was the first time many of the teaching staff heard a review of the entire curriculum generated by students rather than faculty members. Work groups were created for each of the three themes: animal welfare, emerging diseases, and trans-boundary animal diseases. Each work group developed a teaching module focusing on the OIE recommended Day 1 core competencies. Next they shared their teaching module with the larger group and listened to constructive feedback.

A field trip to a pig farm on Day 2 of the Workshop provided a new venue and stimulated discussion about how field studies can be integrated with the classroom time. Based on this experience and the feedback received from faculty peers, each workgroup revised their modules for presentation the last day.

A real time evaluation using hand-held electronic clickers wrapped up the workshop, providing participants immediate visualization of their collective assessment of the program and its impact on them. Feedback was very positive:

- All the participants found the workshop useful
- Almost all will use what they learned in their teaching (95%)
- Group discussions were considered the most beneficial part of the workshop
- While some felt they could use the modules developed in the workshop, most felt that they would need considerably more time to develop new modules for their classrooms
- All would recommend that their colleagues participate in a teaching workshop