

# University of Gondar The Ohio State University OIE Veterinary Education Twinning Program

2<sup>nd</sup> Annual Report

Reporting period:  
07/01/2016 – 06/31/2017

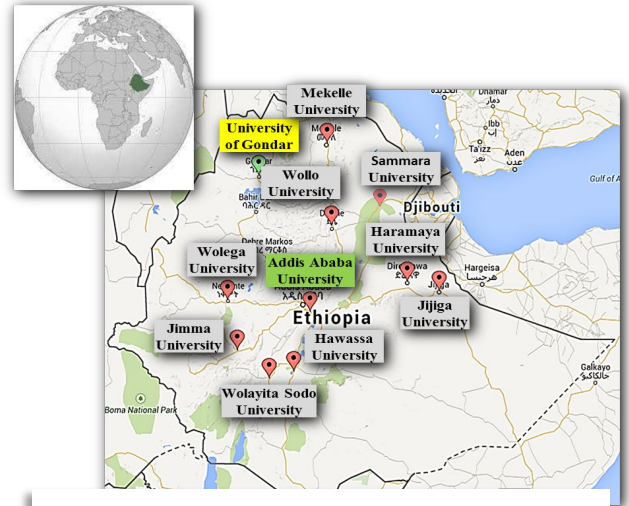


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# UoG-OSU Veterinary Education Twinning Program

To achieve a more even distribution of veterinary education resources in developed and developing countries, while promoting the “One Health” philosophy, the World Organization for Animal Health (OIE) created the Veterinary Education Twinning Programme. This program helps veterinary schools to implement a series of recommended competencies that graduating veterinarians must fulfill as they enter their first day of work. The goal of the OIE Day-1 Competencies is to ensure that young veterinary professionals can support their country’s National Veterinary Services. In addition, the OIE developed a Model Core Veterinary Curriculum that provides guidelines on how to build a strong veterinary curriculum.

In June 2015, OIE supported the establishment of the University of Gondar (UoG) and The Ohio State University (OSU) Educational Twinning Program. Since then, the Program has systematically revised and enhanced the UoG College of Veterinary Medicine and Animal Sciences (UoG-CVMASc) core veterinary curriculum. This report summarizes the year 2 activities for this program and the big impact of the Twinning program thus far.



*There are eleven veterinary schools in Ethiopia graduating over 300 veterinarians every year who will become the next generation of professionals to support their country’s veterinary services*

## UoG–OSU Veterinary Education Twinning Program Objectives:

- Strengthen Ethiopia’s Veterinary Services by aligning the DVM curriculum with the OIE Day-1 Veterinary Competencies and OIE guidelines on Veterinary Education Core Curriculum
- Develop a uniform assessment tool to identify training gaps in veterinary education
- Increase the number of competent, newly-trained veterinarians whose education fulfills the OIE Day-1 Competencies to promote and protect the health of people, animals, and the environment
- Provide continuing education and professional development opportunities to improve the current veterinary workforce

## The four objectives are been accomplished by:

- Assessing UoG’s current DVM degree program curricula and teaching capacity in relation to the OIE’s Day-1 Competencies and Veterinary Education Core Curriculum
- Prioritizing the identified gaps in the veterinary curriculum, pedagogy, and other academic areas to create a comprehensive action plan to best address these areas



- Developing courses, pedagogical tools, and training programs to fulfill Day-1 Competencies
- Faculty and student exchanges for training, collaborative research, educational material development, and direct participation in projects
- Cross-twinning workshops to promote international collaboration and share educational models
- Establishing long-term continuing education and professional training programs



# Focus Forward Meeting

Activity 1.4 Task 1, Stage 2

## UoG Focus Forward Meeting – Advancing Veterinary Medicine Education in Ethiopia

On October 28-29, 2016, the University of Gondar – College of Veterinary Medicine and Animal Sciences and The Ohio State University Twinning Team organized a one-and-a-half day event using the Focus Forward methodology in the capital of Ethiopia, Addis Ababa.

The main goal of this event was to analyze, together with the UoG boundary partners and stakeholders (i.e. government officials, policymakers, professional associations, etc.), the identified gaps and deficiencies in the UoG Veterinary Curriculum, and to discuss and prioritize potential solutions. Then with the purpose of increasing the level of proficiency on OIE Day-1 competencies on UoG veterinary graduates, these potential solutions were used to develop an Action Plan to improve the UoG veterinary curriculum. Among the proposed solutions were creating new courses targeting missing competencies, as well as developing content for current courses using experiential learning techniques such a flipped classroom, case studies, problem-based teaching, etc. It was also proposed to increase the involvement of government agencies and the private sector through seminars, experiential opportunities and mentoring programs.



The Focus Forward event was attended by 51 participants (left picture), including the General Manager of the Ethiopian Veterinary Association, the Director of the Ministry of Livestock and Fishery, seven Deans of Veterinary Schools across Ethiopia (in addition to the Dean from the UoG-CVMASc), approximately 90% of the UoG faculty involved with delivering OIE Day-1 Competencies, as well as other guests from Ethiopian higher education and OSU personnel. The Director for Higher Education within the Ministry of Education, who manages the entire Ethiopian Veterinary Curriculum, also attended this event.

The Focus Forward methodology is based on presenting a set of problems to a diverse group of participants, highly knowledgeable in the subject, who are then asked to analyze specifically identified problems so they can provide innovative or forward-thinking solutions. The participants are subsequently tasked with prioritizing which problems and/or solutions will be addressed based on their own needs and reality.

*Dr. Achenef Melaku, Dean of the UoG-CVMASc, is welcoming the participants to the Focus Forward event and describing the main goal of this one-and-a-half day event sponsored by OIE under the UoG-OSU Twinning program.*



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## Program Structure and Dynamics of the Event

### Day 1

During the first day of the event, the Twinning team presented the recognized gaps (see next page) identified during the Curriculum Mapping and OIE Day-1 Competency Assessment of the UoG veterinary curriculum. After presenting these results, different boundary partners or stakeholders, along with UoG-CVMASc faculty and students, were grouped in small (6-7 person) discussion groups in a workshop style format. They were then asked to brainstorm and share ideas and strategies on how to improve or solve the identified gaps in regards to the OIE Day-1 Competencies in the UoG professional curriculum. Each group had one facilitator from the OIE Twinning Team to moderate and document such discussion. This face-to-face format allowed for a very healthy, but heated, debate and exchange of ideas. The methodology employed to collect potential solutions is described in the final UoG Focus Forward Event Twinning Action Plan document (see page 7).



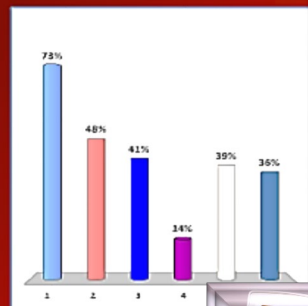
### Day 2

The second day was focused on presenting the suggested solutions provided by the attendees so all participants could discuss and prioritize them. At each session, a summary of the problem(s) to be addressed was presented, immediately followed by the list of potential solutions provided by the working group. The moderator described each solution based on the comments or information obtained the day before. The floor was then opened for further clarification or prior discussion by the attendees. Once there was consensus (after a prudent amount of time for exchange of ideas and opinions), an assembly vote was called, asking them to prioritize and select the top solution(s) displayed to be undertaken by the UoG-OSU Twinning team. At this point, each participant voted using their own unique Clicker®, which is an electronic polling system to anonymously register individual votes and display the collective results instantly to the audience (as seen in the screen-shot image on the right). During this prioritization vote the attendees selected the best solutions, providing a clear mandate and a list of prioritized actions for the Twinning team to pursue.



#### What should be done to improve students ability to recognize, diagnosis and manage TAD and ED? (Pick up to 3)

1. Add practical components to current classes
2. Increase collaboration with local district veterinarians
3. ID Key diagnostic techniques (TAD/ED/Zoo) to develop lab capacity
4. Have a specific core rotation off-site
5. Insert in the curriculum case-based outbreak scenarios
6. Create Video-Library of TAD/ED





## Identified Curricular Gaps and Limitations

As indicated previously, the first full day focused on describing the highest priority gaps or limitations of the current veterinary curriculum at UoG. This day was divided into 4 sessions, in which the different identified gaps and problems were grouped around a common theme, further dividing them into several topics:

### SESSION 1: CURRICULAR MAPPING

#### TOPIC 1: MISSING COMPETENCIES

- ▶ **GAP:** Three OIE Competencies Missing in the UoG Veterinary Curriculum
  - General Certification Procedures (2.10)
  - Inspection and Certification Procedures (3.2)
  - International Trade Framework (3.7)

#### TOPIC 2: OIE MISSING CONTENT

- ▶ **GAP:** Major OIE Missing Content in the UoG Veterinary Curriculum
  - Risk analysis
  - Drug withdrawal times and drug residues (including testing and impact)
  - Environmental health and biological waste management
  - Outbreak investigation and outbreak management

#### TOPIC 3: COURSE MISALIGNMENT

- ▶ **GAP:** Courses are taught in a different sequence than proposed by OIE
  - Animal Welfare (currently in the 5<sup>th</sup> year => ideally 1<sup>st</sup> or 2<sup>nd</sup> year)
  - Biostatistics (currently in the 5<sup>th</sup> year => ideally 1<sup>st</sup> or 2<sup>nd</sup> year)
  - English (Communications) (currently in the 1<sup>st</sup> year => ideally across the program)

### SESSION 2: OIE SPECIFIC COMPETENCIES

#### TOPIC 1: INFECTIOUS DISEASES RELATED COMPETENCIES

- ▶ **GAP:** Low levels of confidence and proficiency across Transboundary Animal Diseases (2.2), Emerging and Re-emerging Diseases (2.4), Zoonotic Diseases (2.3) and Disease Prevention and Control Programs (2.5) in regard to:
  - How to identify or recognize infectious diseases, especially Transboundary Animal Diseases (TADs) and Emerging Diseases (EDs).
  - How to select the proper diagnostic technique(s) and how to interpret its(their) results.
  - How to identify proper therapeutic approaches and interventions to manage outbreaks by TAD and ED.

#### TOPIC 2: REGULATORY MEDICINE RELATED COMPETENCIES

- ▶ **GAP:** The average graduate is not sufficiently competent in regard to General Certification Procedures (2.10) to determine if an animal is healthy and how to generate a health certificate.
- ▶ **GAP:** The average graduate is also unsure of the proper authorities to report an incident event or outbreak of a TAD/ED to, as well as the proper chain of reporting.

#### TOPIC 3: GENERAL COMPETENCIES

- ▶ **GAP:** The students and recent graduates did not feel competent managing animal welfare related issues in common or routine situations.
- ▶ **GAP:** The recent graduates were also identified as insufficient or not competent in:
  - Proper use of veterinary products, especially in regard to withdrawal times,
  - Drug residue testing,
  - Issuing of Health Certificates,
  - Mobilization permits.
- ▶ **GAP:** Identifying up-to-date information regarding subjects related to OIE Competencies.

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## SESSION 3: OIE ADVANCED COMPETENCIES

### TOPIC 1: ORGANIZATION OF VETERINARY SERVICES

- ▶ **GAP:** The average graduate is not sufficiently competent in Organization of Veterinary Services (3.1), specifically as it relates to the organization of veterinary services in Ethiopia.

### TOPIC 2: MANAGEMENT OF CONTAGIOUS DISEASE

- ▶ **GAP:** The average graduate is not sufficiently competent in regulatory components related to Management of Contagious Disease (3.3), specifically in how to respond to outbreaks of contagious diseases (including TADs and EDs), such as:
  - Movement Control and Quarantine,
  - Traceability,
  - Humane Euthanasia,
  - Carcass Disposal,
  - Disinfection and Sanitization,
  - Zoning and Compartmentalization Principles.

### TOPIC 3: INTERNATIONAL TRADE FRAMEWORK

- ▶ **GAP:** The average graduate is not sufficiently competent in laws and regulations for international trade of animals and animal products.
- ▶ **GAP:** The average graduate is not sufficiently competent in regard to international intergovernmental agencies and their roles and responsibilities.

## SESSION 4: HUMAN FACTOR AND INFRASTRUCTURE

### TOPIC 1: STUDENTS

- ▶ **GAP:** Lack of motivation, proactiveness, and confidence were described by the students as major road blocks in their education. Some of the reasons provided were:
  - Students are assigned to the DVM degree although this is not their professional passion (veterinary medicine was not their first or second choice).
  - There are no clear career paths post-graduation – they have difficulty identifying relevant career options.
  - Presence of a strong hierarchical teaching structure, which discourages student participation.

### TOPIC 2: TEACHING

- ▶ **GAP:** Some of the issues identified, by both students and faculty, that are interfering with an effective teaching and learning environment are:
  - Pedagogy or instructional method problems (from course design to class delivery and evaluation).
  - Teaching methods are heavily classroom-based.
  - Insufficient experience (especially by young faculty) in certain subjects.
  - Unenthusiastic students with little motivation to learn.

### TOPIC 3: INFRASTRUCTURE

- ▶ **GAP:** Many of the OIE Competencies are primarily theory-based teaching, especially those with a clinical component. Some of the reasons listed are:
  - There are no diagnostic or service laboratories at the university and the teaching laboratories are largely didactic due to limited resources.
  - There are no (or are very limited) field diagnostic tests (i.e. CMT) for practice and teaching purposes, as well as limited supplies and materials for field training (i.e. sample collection).
- ▶ **GAP:** One recognized gap that was present across the majority of competencies was insufficient or lack of competency among new graduates' capacity to identify updated national and international sources of information relevant to Day-1 Competency subjects.

# UoG-OSU Twinning Action Plan

## Action Plan Document

After the Focus Forward event, the UoG-OSU Twinning team had multiple in-house and online meetings to further analyze, in detail, the participants' comments and their votes. At this time, the team discussed the potential application and feasibility of the top 2 to 3 suggested solutions selected by the audience. An Action Plan was prepared targeting the main identified priorities to provide a framework for addressing the detected curriculum needs. This plan takes into account the reality and needs of the country and students. It also focuses on solutions that are feasible under the OIE Twinning program and would have the greatest local, national and international impacts.

Both the OSU team and the recently created UoG DVM Curriculum Review Taskforce reviewed and edited multiple versions of the Plan. The final approved Action Plan was designed to address the identified gaps (based on their relevance and prioritization) with defined action items and timelines for implementation. This plan was approved by both the UoG-CVMASc and their OSU partners.

The developed Action Plan provides a strategy to update the current UoG veterinary curriculum, including minor content revisions for current courses as well as the inclusion of new content on specific core competencies. The Action Plan also calls for the development of several new courses, a laboratory-twinning project, and the design of an institutional structure to provide a sustainable, extended curriculum revision and update (see creation of UoG-CVMASc Curriculum Review Committee in page 10). The laboratory-twinning proposal to be submitted to OIE and other potential funding agencies would be prepared between the UoG-OSU partners in 2018.

In total, there are 32 action items that are focused on harmonizing and improving the UoG veterinary curriculum with the OIE Model Core Veterinary Curriculum, while at the same time fulfilling and improving the level of proficiency of the UoG veterinary graduates on the OIE Day-1 Competencies.


This plan is essential, as it would be the UoG-OSU Twinning team's guide to allocating resources, as well as providing specific goals and metrics applicable for the remainder of the Twinning program. The Focus Forward methodology applied, as well as the Final UoG-OSU Twinning Action Plan, is included in one single document which can be accessed at:



<http://vet.osu.edu/education/veterinary-public-health-program/international-projects>.

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The Ohio State University

**OIE Veterinary Education  
Twinning Program**

**UoG FOCUS FORWARD EVENT  
Twinning Action Plan**



**Methodology and Final Product**

In the following pages, the methodology applied in the Focus Forward event will be described in detail with the hope that other Colleges of Veterinary Medicine in Ethiopia or other countries could use this methodology to evaluate their own veterinary curriculum. The Focus Forward method is based on presenting a set of problems to a diverse group of participants, highly knowledgeable in the subject, who are asked to analyze the specific identified problems so they can provide innovative or forward-thinking solutions. The participants are subsequently tasked with prioritizing which problems and/or solutions will be addressed. These solutions were used to develop and implement an Action Plan to improve the veterinary curriculum at the UoG, with the purpose of increasing the level of competency of UoG-FVM Day-1 graduates.

**Program Structure and Dynamics of the Event**

**Day 1 - Gaps Description and Solution Identification**

The event was held off-campus over one and a half days (see program in Appendix A). The first full day was focused on describing the highest priority gaps or shortcomings of the current veterinary curriculum at the UoG. Concurrently, the participants worked in groups (workshop-style) to brainstorm and identify potential solutions to the previously discussed problems. This first day was divided into 4 sessions (see Appendix B), in which the different gaps and problems were grouped around a common theme. Each session was further divided into several topics as summarized in this table:

Main Themes	Topics		
Curricular Mapping (Session 1)	OIE Missing Competencies	OIE Missing Content	OIE Course Misalignment
OIE Specific Competencies (Session 2)	Infectious Diseases Related	Regulatory Medicine Related Competencies	OIE General Competencies
		Management of Contagious Disease	International Trade Framework
		Teaching Issues	Infrastructure

**Session 1  
Curricular Mapping**

**Missing Competencies**

► **GAP:** Three OIE Day-1 Competencies were identified as missing during the curricular mapping of the UoG College of Veterinary Medicine curriculum:

- General Certification Procedures (2.10)
- Inspection and Certification Procedures (3.2)
- International Trade Framework (3.7)


Action Item	Description
<input type="checkbox"/> 1. Revise current courses to incorporate missing Day-1 Competency (2.10) General Certification Procedures to an existing class(es).	Two courses will be revised to incorporate the missing content: A. Theory concepts will be incorporated into the 4 <sup>th</sup> year Veterinary Preventive Medicine (Vetm5233) course. B. Practical elements will be incorporated into the 4 <sup>th</sup> and 5 <sup>th</sup> year clinical practices: Clinical Practice I (Vetm524), Clinical practice II (Vetm525), Clinical practice III (Vetm524), and Clinical practice IV, Vetm524.
<input type="checkbox"/> 2. Revise current courses to incorporate missing Day-1 Competency (3.2) Inspection and Certification Procedures to an existing class(es).	Theory concepts will be incorporated into the 4 <sup>th</sup> year Veterinary Public Health I (Vetm4173) and II (Vetm4172) courses.

**UoG-OSU Twinning Program  
UoG Faculty Exchange Plans**


Topic	Action Item Covered	Eligible Candidates	Timeline	Comments
#1	Development of new "One Health" course.	TBD	Spring 2019	
#2	Update Animal Welfare course.	Faculty teaching the Animal Welfare (Vetm5202) course.	Spring 2019	
#3	Update Veterinary Epidemiology course.	Faculty teaching the Veterinary Epidemiology (Vetm5262) course.	Fall 2018	This faculty will be expected to also design and develop, in association with the OSU faculty, the new Summer Continuation Education course on Outbreak Investigation and Management.
#4	Update Veterinary Preventive Medicine course.	Faculty teaching the Veterinary Preventive Medicine (Vetm5233) course.	Spring 2018	
#5	Update Veterinary public health II course.	Faculty teaching the Veterinary Public Health II (Vetm4172) course.	Fall 2018	This faculty will be expected to also be involved in supporting the VPH student club. The faculty is also expected to help with the development of the laboratory twinning proposal.
#6	Update Animal Health Economics course.	Faculty teaching Animal Health Economics (Vetm5286) course.	Fall 2018/Spring 2019	This faculty will require a specialized education at OSU in the subjects or topics of interest are covered across multiple classes and courses.
#7	Update Ethics and Jurisprudence course.	Faculty teaching Ethics and Jurisprudence (Vetm5202) course.	Fall 2018/Spring 2019	This faculty will require a specialized education at OSU in the subjects or topics of interest are covered across multiple classes and courses.
#8	Update Pharmacology and Therapy I and II.	Faculty teaching Pharmacology and Therapy I (Vetm3322) and II (Vetm3323) courses.	Fall 2018/Spring 2018	This faculty will require a specialized education at OSU in the subjects or topics of interest are covered across multiple classes and courses.
#9	Create Teaching Pedagogy and Methodology course for UoG staff.	Faculty in charge of the Quality Assurance Program at the UoG-FVM	TBD	This faculty will be expected to lead the implementation of Action Item #21, #23, #24, #25, #26, #27, and #28, as well as collect the metrics associated to these five items.

# Sharing Methodology to Expand Outreach

The University of Gondar Faculty of Veterinary Medicine Curriculum Mapping and OIE Day-1 Competency Evaluation Report, as well as the Evaluation Tool for OIE Day 1 Graduating Veterinarian Competencies, were shared with all the participants of the Focus Forward event. These documents describe in detail the methodology applied on identifying the gaps and deficiencies of the UoG-CVMASc Curriculum discussed during the Focus Forward. These two documents can be accessed at: <http://vet.osu.edu/education/veterinary-public-health-program/international-projects>





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OIE Veterinary Education  
Twinning Program

University of Gondar, Faculty of Veterinary Medicine  
Curriculum Mapping and OIE Day-1  
Competency Evaluation Report

WORLD ORGANISATION FOR ANIMAL HEALTH  
Protecting animals, preserving our future

Table 1: Coverage of Specific OIE Competencies in the UoG Veterinary Curriculum

OIE Day 1 Competencies that should be Covered	OIE Day 1 Competencies Actually Covered in UoG Curriculum
Epidemiology (2.1)	Yes
Transboundary Diseases (2.2)	Yes
Zoonoses (2.3)	Yes
Emerging and Re-emerging Diseases (2.4)	Yes
Disease Prevention and Control Programs (2.5)	Yes
Food Hygiene (2.6)	Yes
Veterinary Products (2.7)	Yes
Animal Welfare (2.8)	Yes
Veterinary Legislation and Ethics (2.9)	Yes
General Certification Procedures (2.10)	No
Communication Skills (2.11)	Yes

Table 2: Coverage of Advance OIE Competencies in the UoG Curriculum

OIE Day 1 Competencies that should be Covered	OIE Day 1 Competencies Actually Covered in UoG Curriculum
Organization of Veterinary Services (3.1)	Yes
Inspection and Certification Procedures (3.2)	No
Management of Contagious Diseases (3.3)	Yes
Food Hygiene (3.4)	Yes
Application of Risk Analysis (3.5)	Yes
Research (3.6)	Yes
International Trade Framework (3.7)	No
Administration and Management (3.8)	Yes

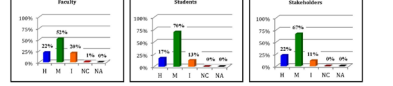
### Specific Competencies: OIE Day 1 Competency: 2.1 Epidemiology

An understanding of epidemiology will allow veterinarians to study the factors that affect the health of animal populations and use this information to make scientifically sound judgments for preventive medicine and veterinary public health. To be competent in epidemiology, a new veterinary graduate needs to grasp the general principles of descriptive epidemiology including measuring and describing disease occurrence and spatial distributions. Day 1 veterinary graduates should be aware of the disease control applications of epidemiology such as disease surveillance, evaluating and interpreting screening or diagnostic tests, and understanding risk factors. Lastly, a veterinarian competent in epidemiology should know the steps of a basic outbreak investigation.

**Results:**

- More than 73% of the faculty, students, and stakeholders considered the average Day 1 University of Gondar DVM graduate to be competent (highly or moderate competent) in epidemiology based on the current needs of the country.

Figure 1: Overall Assessment of 2.1 Epidemiology Competency ranked from High (H), Moderate (M), Insufficient (I), Not-Competent (NC), or Not in the Curriculum (NA) by faculty, students, and stakeholders.



Nevertheless, 77.8% of the faculty still estimate that the average UoG DVM graduate is insufficiently competent in using epidemiological tools to evaluate screening/diagnostic tests.

Figure 2: The competency level of the average UoG DVM graduate for appropriately using epidemiological tools to evaluate screening or diagnostic tools as ranked by the faculty.

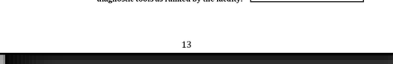


Table 3: Summary showing percentage of each surveyed group ranking UoG DVM recent graduates as highly or moderately competent in each one of the Specific OIE Day 1 Competencies


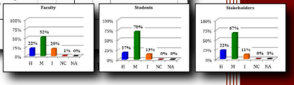

OIE Day 1 Competency	Faculty	Students	Stakeholders
Epidemiology (2.1)	73.6%	87%	88.9%
Transboundary Diseases (2.2)	76.7%	48%	83.3%
Zoonoses (2.3)	72.2%	67%	77.8%
Emerging and Re-emerging Diseases (2.4)	73.4%	36%	72.2%
Disease Prevention and Control Programs (2.5)	73.6%	52%	72.2%
Food Hygiene (2.6)	78.2%	79%	77.8%
Veterinary Products (2.7)	71.9%	47%	94.7%
Animal Welfare (2.8)	67.6%	46%	68.4%
Veterinary Legislation and Ethics (2.9)	58.7%	34%	61.1%
General Certification Procedures (2.10)	52.6%	21%	72.2%
Communication Skills (2.11)	77.9%	48%	66.7%

Table 4: Summary showing percentage of each surveyed group ranking UoG DVM recent graduates as highly or moderately competent in each one of the Advanced OIE Day 1 Competencies

OIE Day 1 Competency	Faculty	Students	Stakeholders
Organization of Veterinary Services (3.1)	45.8%	13%	82.4%
Inspection and Certification Procedures (3.2)	60.4%	19%	50%
Management of Contagious Diseases (3.3)	61.4%	36%	79.0%
Food Hygiene (3.4)	67.7%	32%	58.8%
Application of Risk Analysis (3.5)	45.3%	44%	58.0%
Research (3.6)	61.8%	66%	61.1%
International Trade Framework (3.7)	36.3%	32%	50.0%
Administration and Management (3.8)	75.3%	71%	76.5%

University of Gondar-The Ohio State University  
OIE Veterinary Education Twinning Program

## Evaluation Tool for OIE Day 1 Graduating Veterinarian Competencies

### WORKSHOP FORMAT INSTRUCTIONS

In the following format, all OIE Day 1 Competencies are reviewed by the participants in 4 thematic sections (see page 8), which are distributed during a one-day long workshop (see model agenda on page 9).

PRE-ACTIVITY
The use of this Evaluation Tool in the Workshop format requires some basic logistical preparation by the Coordinator(s) before its use: A. Read and familiarize yourself with the Evaluation Tool. B. Select and instruct group facilitators. C. Reserve appropriate meeting location and assign groups. D. Organize participant's packages. E. Organize day activities (Agenda) and plan post activity "Evaluation."
FACILITATOR'S INSTRUCTIONS

In this format, all the participants will be distributed among small groups to which a Facilitator will be assigned. Ideally, each Facilitator should be highly familiarized with the OIE Day 1 Competencies and the institution to be assessed. However, to minimize any bias the facilitators should not belong to the institution being considered. This professional level individual will help moderate the conversation among the group members, and encourage participation and timely progression through the Evaluation Tool. The facilitators leadership role should include such activities as providing examples for various evaluation points as necessary to foster participation.

- It is recommended to distribute the Evaluation Tool in advance to allow Facilitators to familiarize themselves with them.
- A brief, but essential meeting with the coordinators and Facilitators should take place before the event. This meeting will allow them to discuss the exercise and the main expectations.



THE OHIO STATE UNIVERSITY  
COLLEGE OF VETERINARY MEDICINE

### FINAL ASSESSMENT OF EPIDEMIOLOGY

	Not in Curriculum	Highly Competent	Moderately Competent	Insufficiently Competent	Not Competent	Not Sure	Comments
In conclusion, is the average Day 1 DVM graduate competent in the Epidemiological Principles applied to veterinary preventive medicine and public health?							

**\*Definitions:**  
 DVM: Doctoral graduates of the veterinary medicine program  
 Not in Curriculum: This topic is currently not covered in the veterinary curriculum.  
 Highly Competent: The average new DVM graduate is very knowledgeable/skilled about the topic and is able to perform the task/activity without additional support or guidance.  
 Moderately Competent: The average new DVM graduate is knowledgeable/skilled about the topic and is able to perform this task/activity with some support or guidance.  
 Insufficiently Competent: The average new DVM graduate is aware of the topic but is unable to perform the task/activity without substantial assistance.  
 Not Competent: While this topic is covered in the DVM curriculum, the average new DVM graduate is unaware of the topic and is unable to perform this task without further training or education.  
 Not Sure: Do not know how the average DVM graduate is able to perform this competency.

### Evaluation of OIE Day 1 Competencies Session 1: Epidemiology and Food Hygiene

Day 1 Competency: 2.1 Epidemiology		Measuring Occurrence		Comments				
a.) General Principles of Descriptive Epidemiology		Measuring Occurrence						
Measuring Disease	Measuring Occurrence							
is the average Day 1 DVM graduate able to:		Not in Curriculum	Highly Competent	Moderately Competent	Insufficiently Competent	Not Competent	Not Sure	
Measure and describe disease? (i.e. calculate morbidity and mortality rates, attack rates, etc.)								
Calculate and describe disease occurrence? (i.e. incidence and prevalence)								
Describe the difference between the various temporal and spatial distributions of disease? (i.e. endemic, sporadic, and epidemic)								



## Focus Forward – Regional Impact

Since the inception of the UoG-OSU Twinning Program, its leadership has included a diverse group of partners and stakeholders in all the programs activities. This has included other regional colleges of Veterinary Medicine and Health sciences, as well as major regional and national stakeholders and boundary partners, in all major activities and events to increase the regional impact of the program.

Deans, representatives of professional associations and different governmental agencies have directly participated in the evaluation of the veterinary curriculum (Faculty Retreat), the analysis of deficiencies/weaknesses and prioritization of solutions (Focus Forward event), and the preparation of the Action Plan. The experience and opinions of these individuals have helped shape the final products (such as the Curricular Mapping Report and the Action Plan) as well as the strategies that the UoG-OSU team will implement in the next stages of the Twinning program.

Because of this outreach effort, it is expected that the methodology and final product(s) from this process of evaluation, assessment, and development of a new OIE Harmonized curriculum will be used as a national model in Ethiopia.



*Deans, or their delegates, from the College of Veterinary Medicine at Addis Abba, Samara, Jigjiga, Mekelle, Jimma, and Haramaya Universities actively engaged in the workshop style event as well as the selection and prioritization of the potential solutions to improve the UoG-CVMASc Veterinary Curriculum*

Seven out of the eleven colleges of Veterinary Medicine in Ethiopia participated in the Focus Forward Event (see side picture). During this event we shared with them the results from the curricular mapping and OIE Day-1 Competency assessment. They were also exposed to new approaches on how to evaluate their own academic programs using the OIE Guidelines on Veterinary Education Core Curriculum and the OIE's Day-1 Competencies.



*Mr. Adamu Gnaro (from left to right), Director for Ethiopia Higher Education, Dr. Armando Hoet, UoG-OSU OIE Twinning Project Leader, and Dr. Achenef Melaku, Dean of UoG-CVMASc*

The Director for Higher Education from the Ethiopian Ministry of Education, Mr. Adamu Gnaro, indicated how pleased he was with the Focus Forward event. In his closing remarks, he stated “[they] will apply this experience not only with the incoming revision of the veterinary curriculum in 2017, but across the educational sector at large.” He also indicated that he enjoyed the process employed to identify problems and prioritization of solutions.

# Curriculum Development

## Task 1, Stage 2

### Creation of the UoG-CVMASc Curriculum Review Committee

In response to the discussion at the Focus Forward event, the UoG-Faculty of Veterinary Medicine created a permanent, high-level working group: the *UoG-CVMASc Curriculum Review Committee*.

This committee has the responsibility of transforming the curriculum and harmonizing it with the OIE ideal core veterinary curriculum to fulfill the Day-1 Competencies. They have already obtained permission from the Ministry of Education to proceed with some changes in the UoG veterinary curriculum to fix gaps and weaknesses identified during the OIE Twinning program.

**Currently they are preparing a new, OIE-Harmonized, UoG veterinary curriculum to be launched later in 2017.**

This committee has already presented their work and accomplishments in multiple forums, including the 2<sup>nd</sup> Institutional Annual Conference on Quality Education (see lower right picture). At this conference the team presented the methodology implemented during the evaluation of the veterinary curriculum, as well as the identification and prioritization of solutions. The objective of this outreach is to provide a road map for other health science colleges, such as Medicine, Nursing, and Pharmacy, to help them evaluate their own curriculum and harmonize it with international standards.



UoG-CVMASc Curriculum Review Committee



### Creation of the Professional Student Development Office

One of the most important identified gaps, contributing to the lack of motivation of the student body, was the lack of opportunities for veterinary students after graduation. With no clear vision on how they could become part of the veterinary services of their country, the students were not fully embracing and engaging with the veterinary curriculum. This severely affected their motivation and prevented them from performing optimally on Day-1 competencies.

Therefore, the UoG-CVMASc Dean's Office, led by Dr. Tsegaw Fentie, is diligently working to create a Professional Student Development Office. The office will help students develop as professionals as they progress in the veterinary curriculum. This office will also work to facilitate job placement, career advancement, and provide advice to the new graduates from the UoG. Finally, it is expected for this office to provide administrative and logistical support to the students clubs.



# Veterinary Preventive Medicine Rotation and Ohio Farm to Table

## Activity 2.3 Task 2, Stage 5

Six of UoG's top 5<sup>th</sup>-year veterinary students, along with UoG faculty, were hosted at OSU for two weeks in October 2016. This activity is expected to foster at the UoG in-house discussion and promote support at the student-body level for the necessary changes and enhancement of the curriculum proposed by the Twinning program. This was the first planned student exchange in which these UoG students and faculty participated in a one-week Veterinary Preventive Medicine Rotation in Columbus as well as the Ohio Farm-to-Table program.

## Veterinary Preventive Medicine Rotation

During this activity, the visitors participated in regular veterinary preventive medicine classes, in which they directly interacted with OSU senior veterinary students and professors. They were exposed, from the classroom to the field, to advanced teaching and communication styles applied at The Ohio State University. They were able to observe first-hand how classes and educational material is presented and how students and faculty interact at their partner institution.

The visiting scholars were able to experience several didactic classes, commercial animal operations, and a poultry necropsy wet lab. These activities allowed them the opportunity to experience the lectures and hands on application of preventive medicine principles across multiple species and commercial animal industries with varying environmental and productions goals. The lectures attended included Animal Welfare Programs, Poultry Medicine, Exotic and Wildlife Population Medicine and Conservation, Prevention Control and Eradication in Swine Populations, Ruminant Population Medicine, Food Safety Principles, Production Animal Data Analysis, and Small Animal Shelter Medicine. They were able to participate in data analysis sessions, tour a slaughter house and meat processing facility, visit multiple animal shelters, and explore the Columbus Zoo and Aquarium. The zoo visit was a highlight for many of the students as they were able to interact with multiple zoo veterinarians and animal care technicians at one of the United States biggest and often cited best zoos. The students also participated in a poultry necropsy session. A great benefit of the visiting scholars attending the OSU rotation was the natural mixing of ideas and intermingling of students. UoG and OSU students both gained a new perspective on global veterinary issues. They also appreciated the different teaching styles and student perspectives from each of the schools.

The exchange visitors visited all the different services and facilities associated with teaching and training of veterinary students at OSU, discussing in the process ideas to be implemented or applied at the UoG.



*UoG-CVMASc Exchange Students and Faculty Mentor at Sisson Hall, home of the first and oldest Veterinary Preventive Medicine program in the USA established on 1934*



*Dr. Jeannette O'Quin, team leader of the OSU Veterinary Preventive Medicine Rotation, is teaching a class on Shelter Medicine, focused on outbreak investigation*



*Dr. Jeffrey Lakritz, head of the Food Animal Medicine section at the OSU Veterinary Medical Center, is describing an emergency dairy cow caesarian section procedure*

➤ Continued on the next page...



## Ohio Farm to Table (F2T)

Following the Preventive Medicine Rotation, the UoG students (and their mentor) participated in a one week Ohio Farm to Table program. The F2T program included visits to farms, slaughterhouses, processing plants, markets/consumer purchase points, and other relevant locations throughout the state of Ohio. During this program the visitors were exposed to multiple veterinary concepts associated with food production principles and population medicine applied throughout the food supply chain and veterinary medicine at large. Particular focus was placed on food production and food safety, humane handling, and veterinary public health principles, all major Day-1 competencies: <https://vet.osu.edu/about-us/news/farm-table-program-ohio>.



*Dr. Mohammed El Gazzar (second from right), Assistant Professor and Poultry Extension Veterinarian in the Department of Veterinary Preventive Medicine at OSU preparing to enter an Ohio broiler house with the UoG visitors*



*Dr. Armando Hoet (on top far left), Director of the Veterinary Public Health Program at OSU, discussing Dairy production during a farm visit with the students*

*Dr. Ross Coniglio (center), VPH Resident discussing intensive broiler production, marketing, and regulation with the exchange visitors from the UoG*



*UoG exchange students visiting the largest commercial food chain in Ohio to learn about food commercialization and safety*



*The head master of the largest auction company in Ohio is describing the commercialization and movement of food animals, from rabbits to cattle, to the exchange visitors*



*UoG visitors discussing feedlot productions systems with Dr. Juliet Hanson, Veterinarian in Charge of the Ohio Agricultural Research and Development Center (OARDC)*

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## Ripple Effect

Upon their return to the UoG, the exchange students shared their experiences in an open seminar (see pictures below). They shared with their peers the different teaching methodology and faculty-student interactions experienced during their VPM rotation. They also reviewed the details related to population medicine and food production observed during the Farm to Table program.

One of the many positive outcomes of this exchange program is that one of the six participating students was recruited by the UoG to participate in a faculty training program. She is currently pursuing a Masters Degree and further training to become an instructor and eventually a full Faculty at UoG-CVMASc. She has been officially designated as the faculty mentor who will help to support and strengthen the established student clubs.

These exchange students helped to trigger a process to improve student motivation and involvement in their training, which hopefully will trigger a ripple effect that will consolidate the positive impacts made during this Twinning Program on the future of veterinary education in Ethiopia and the country veterinary services.



## Creation of UoG Veterinary Students Academic Clubs

One of the largest identified gaps was the low motivation of the UoG veterinary students. Therefore, one of the suggested recommendations was to encourage the creation of student driven clubs. These clubs could increase student motivation and involvement in their own education, while increasing the number of opportunities for extracurricular training and education necessary to cover some of the OIE Day-1 competencies.

These type of academic-focused, student driven clubs do not currently exist at the UoG. Therefore, during their visit, the UoG exchange students met with several leaders of student clubs at OSU (see picture below) to learn how these groups work and the benefits of these clubs. Among the benefits discussed were the acquisition of leadership experience and organizational abilities, as well as to acquiring new professional skill sets.

Upon their return to Gondar, the visitors worked with their peers to create two new student clubs: one focused on *Veterinary Public Health* and the second on *Farm Animal Medicine* club. These clubs have been organized, selected their student officers, and are currently creating their constitutions. The officers have also prepared advertising materials to distribute to other students in the college and other professional programs.

These clubs have been approved by the College and are moving forward for final recognition by the UoG Senate. It is expected that the second group of exchange students will help to further develop and consolidate these groups.





# Upcoming Activities

## One Health Summer Institute (Activity 2.2: Task 2, Stage 4) – “Risk Analysis” and “Animal Welfare” Courses

In June 2017, The Ohio State University-Global One Health initiative (GOHi) will launch its sixth edition of the One Health Summer Institute. As part of this program, OSU Faculty will deliver two continuing education courses in key areas that were identified as priorities for the OIE Twinning program.

### International trade and Introduction to Risk Analysis

This course will be focused on Risk Analysis. Through this continuing education course Dr. Armando Hoet will train faculty and advanced graduate students from Colleges all over Ethiopia and East Africa on the use of the methods described in the OIE Handbook on Import Risk Analysis for Animals and Animal Products.

### Animal Welfare

Dr. Katie Proudfoot, Assistant Professor and Extension Specialist on Animal Welfare & Behavior at OSU, will deliver the second course on Animal Welfare. This is a major Day-1 Competency that is needed at the UoG-CVMASc to fulfill the standards set by OIE.

Details of these courses sponsored by the Twinning program can be found at:

<https://globalonehealth.osu.edu/projects/summer-institute>



## UoG Faculty Development and On-site Training (Activity 1.5: Task 1, Stage 2: Curriculum Development / Task 2, Stage 4: Faculty Development)

As part of the Action Plan, specific courses and subjects with major needs were identified as priorities and needed to be included within the UoG Faculty Development program. For that purpose, a detailed UoG Faculty Exchange strategy has been developed to target courses and subjects that require the greatest interventions and changes.

Starting Spring 2018, a total of 9 faculty members from UoG will travel to OSU, for periods of 6 weeks, to participate both in experiential training and in course and material development.

Topic	Action Item Covered	Eligible Candidates	Timeline	Comments	
#1	Development of new "One Health" course.	#7 and 18.	TBD		
#2	Update Animal Welfare course.	#9 and 15.	Faculty teaching the Animal Welfare (Vetm5202) course.	Spring 2019	
#3	Update Veterinary Epidemiology course.	#4, 8, 12a, 14, and 15	Faculty teaching the Veterinary Epidemiology (Vetm5232) course.	Fall 2018	This faculty will be expected to also design and develop, in association with the OSU faculty, the short Summer Continuing Education course on Outbreak Investigation and Management.
#4	Update Veterinary Preventive Medicine course.	#1, 12b, and 13	Faculty teaching the Veterinary Preventive Medicine (Vetm5233) course.	Spring 2018	
#5	Update Veterinary Public Health II course.	#2, 6 and 22	Faculty teaching the Veterinary Public Health II (Vetm4172) course.	Fall 2018	This faculty will be expected to also be involved in supporting the VJES student club. This faculty is also expected to help with the development of the Laboratory Twinning proposal.
#6	Update Animal Health Economics course.	#3, 19, and 20	Faculty teaching Animal Health Economics (Vetm5234) course.	Fall 2018/ Spring 2019	This faculty will require a specialized rotation at OSU as the subjects or topics of interest are spread across multiple classes and courses.
#7	Update Ethics and Jurisprudence course.	#17 and 19	Faculty teaching Ethics and Jurisprudence (Vetm5202) course.	Fall 2018/ Spring 2019	This faculty will require a specialized rotation at OSU as the subjects or topics of interest are spread across multiple classes and courses.
#8	Update Pharmacology and Therapy I and II.	#5	Faculty teaching Pharmacology and Therapy I (Vetm3121) and II (Vetm3122) courses.	Fall 2018/ Spring 2018	This faculty will require a specialized rotation at OSU as the subjects or topics of interest are spread across multiple classes and courses.
#9	Create Teaching Pedagogy and Methodology course for UoG staff.	#21, 23, 25, and 26	Faculty in charge of the Quality Assurance Program at the UoG-FVM	TBD	This faculty will be expected to lead the implementation of Action Item #21, #25, specifically item 9, and #26, as well as collect the metrics associated to these line items.



## 2<sup>nd</sup> Veterinary Preventive Medicine Rotation and Ohio Farm to Table (Activity 3.1: Task 2, Stage 5: Student Training)



The internal process to select the next cohort of UoG exchange students is in progress. Twelve highly accomplished students were interviewed and six were selected to visit Columbus in the 2<sup>nd</sup> edition of the exchange program, which will take place April 2018.

The expectation for this cohort is that, through their experiences garnered during this exchange component of the OIE Twinning program, they will be able to reinforce the activities initiated by the first group. They will further develop the newly established student clubs and partake in the direct enhancement of the UoG veterinary curriculum. All of which has been aligned with the OIE Day 1 Competencies and the Model Core Veterinary Curriculum.

## Challenges

### Roadblocks due to Online Communication



- As was reported in previous instances, communication through online tools such as Skype still remain difficult due to unstable and frequent shortages in the connection systems in Ethiopia.
- Phone lines are the preferred backup method when there are internet shortages, but they can also be unreliable. In addition, this form of communication is not well aligned with the sharing audio-visual materials between partners, which makes the flow of information and ideas problematic.
- To address these difficulties, the partners used different ways to manage such communication limitations. Advanced planning, multiple back-up meeting dates, and frequent use of email have allowed the partners to overcome instances of failed connection

## Leadership Change at UoG

### New OIE contact at UoG

Finally, we would like to highlight some changes in the leadership at the UoG-CVMASc. Dr. Tsegaw Fentie (first left in side picture), the Ethiopian lead for the OIE Twinning program, has become the new UoG-CVMASc Dean. Because of his new responsibilities, the UoG-CMVASc has designated Dr. Achenef Melaku, former UoG Dean, as their point of contact for the OIE Twinning program. Dr. Achenef is an excellent selection as the OSU counterpart for the OIE Twinning program as he has been with the program since its inception.



# Major Accomplishments (So far!!)

Below is a summary of the major accomplishments obtained by the end of the second year of the UoG-OSU Veterinary Educational Twinning Program:

- ❑ ***Creation and validation of a novel Evaluation Tool to assess OIE Day-1 Graduating Veterinarian Competencies***, allowing for the identification of curricular and training gaps in veterinary education programs. This is a tool that can be utilized by any College of Veterinary Medicine (CVM) throughout the world to assess Day-1 Competency proficiency.
- ❑ ***Successful assessment of the UoG-CVMASc curriculum*** utilizing the OIE Model Core Veterinary Curriculum and the Day-1 Competencies as major guidelines. This review enabled the recognition and prioritization of curricular and educational gaps to be addressed during the Twinning Program.



- ❑ ***Effective identification and prioritization of forward-thinking solutions for each curricular gap***, in cooperation with multiple partners and stakeholders during the Focus Forward Meeting.
- ❑ ***Achieved national impact*** by actively involving the majority of the Ethiopian Veterinary Schools and other boundary partners in the development and decision making process used during the assessment phase of the OIE UoG-OSU Twinning Program. This includes the subsequent nationwide sharing of evaluation tools, reports, and the methodology applied.

- ❑ ***Development of a customized Action Plan*** outlining specific steps to implement solutions in the enhancement and harmonization of the UoG-CVMASc curriculum with international standards.
- ❑ ***Establishment of a UoG-CVMASc Curriculum Review Committee*** with the mandate to develop a newly revised UoG-CVMASc DVM curriculum (to be launched in Fall 2017), aligned with the OIE Day-1 Veterinary Competencies and OIE guidelines on Veterinary Education Core Curriculum.
- ❑ ***Successful execution of the first UoG student exchange, triggering the creation of student clubs***, which will empower the UoG students to improve their own education experience.



# Advancing Veterinary Medicine Education in Ethiopia



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