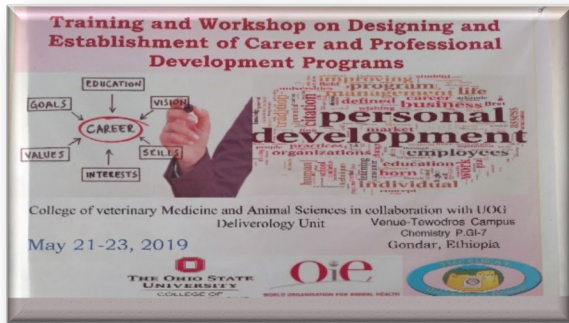


University of Gondar The Ohio State University OIE Veterinary Education Twinning Program

3rd Report

Reporting period:
07/01/2017 – 05/31/2019



*Advancing Veterinary Medicine
Education in Ethiopia*



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

UoG-OSU Veterinary Education Twinning Program

It has been two exciting years for the University of Gondar College of Veterinary Medicine and Animal Sciences (UoG-CVMASc) and The Ohio State University College of Veterinary Medicine (OSU-CVM) Veterinary Education Twinning Program. Through the continued support of the World Organisation for Animal Health (OIE), this first-of-its-kind program has continued to set the standard for professional veterinary education in East Africa. Program accomplishments have attracted the attention of the Ethiopian Professional School System and will serve as a model for curriculum evaluation and revision for other schools throughout the country and region.



Ethiopia has one of the largest livestock animal populations in Africa, which demands strong Veterinary Services

The primary focus and overarching goal of this twinning program has been the implementation of the harmonized curriculum that was developed by the UoG-OSU Twinning Team using the OIE Model Core Veterinary Curriculum and OIE Day 1 Competencies for Graduating Veterinarians. The work done by the OIE and the UoG-OSU Veterinary Education Twinning Program is designed to increase the number of competent, newly-trained veterinarians in Ethiopia which is critical for the well-being of the country’s human and animal populations.

Ethiopia is the second most populous country in Sub-Saharan Africa and its large population is heavily reliant upon agriculture. The agricultural sector accounts for 47% of the country’s Gross Domestic Product and 85% of the country’s workforce. Graduating veterinarians who are prepared to optimize veterinary services and animal health in the country will help to stabilize food security and food safety, providing a mechanism for securing the overall wellbeing of the country. Additionally, with transboundary animal diseases and global scale epidemics at the forefront of the world’s concerns in today’s age of globalization and rapid travel, strengthening Ethiopia strengthens us all.

Table of Contents

- **Major Accomplishments** **Page 3**
- **Curriculum Implementation** **Page 4**
- **UoG-OSU Twinning Action Plan** **Page 8**
- **Faculty Exchange and Faculty Development** **Page 10**
- **Veterinary Preventive Medicine Rotation and Farm to Table** **Page 16**
- **Continuing Education - One Health Summer Institute** **Page 18**
- **The Ripple Effect, Future Plans, Breaking News** **Page 21**

University of Gondar - The Ohio State University OIE Veterinary Education Twinning Program Major Accomplishments 2017 - 2019

1st

OIE Harmonized
Veterinary Curriculum
implemented in Africa
launched in 2017



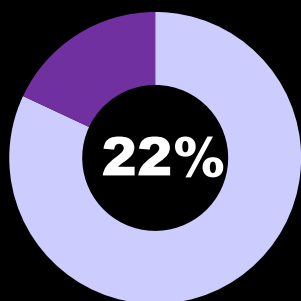
All 12

veterinary schools in
Ethiopia have participated
in one or more of the OIE
Twinning activities

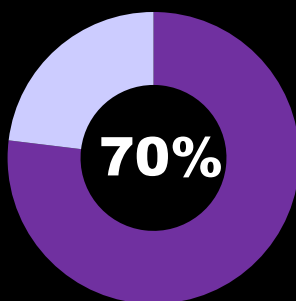
The Veterinary Curriculum at the UoG is seen as a
Model Curriculum in Ethiopia

95

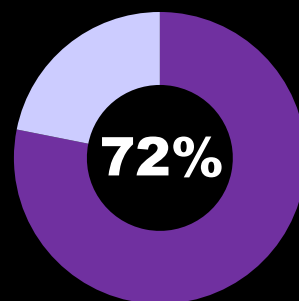
future veterinarians have started under the
new model curriculum at the University of
Gondar College of Veterinary Medicine and
Animal Sciences (UoG-CVMASc)



of Courses in the
UoG-CVMASc
Curriculum were
modified to fulfill OIE
Day 1 Competencies



of the Faculty at the
UoG-CVMASc have
obtained certification on
Teaching Methodology
and Pedagogy



of the students
currently participate
in 2 Veterinary Clubs
created under the
OIE Twinning Program



132

Academic Staff from the UoG and other
universities have been trained in CE courses
sponsored by the OIE Twinning program

23%

of CE course participants were from other
academic institutions and veterinary
schools across Ethiopia

16



UoG Veterinary students
participated in the
Veterinary Preventive
Medicine Rotation in Ohio

Curriculum Implementation

Activity 3.3. Task 1, Stage 3

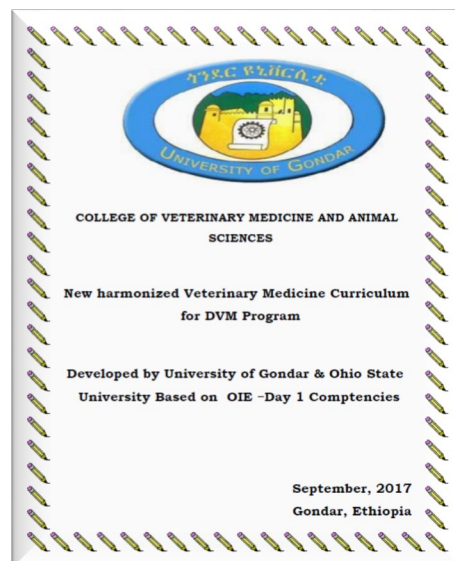
NEW OIE HARMONIZED CURRICULUM IMPLEMENTATION

The 2017-2018 academic year saw the implementation of the new OIE Harmonized Curriculum after a very laborious evaluation and approval process (see timeline next page). This curriculum is the first of its kind in Ethiopia and Africa at large. On September 2017, 53 first-year students started their veterinary degree program as the first cohort to go through this revised curriculum. As of May 2019, 95 veterinary students, divided among two cohorts, have initiated their veterinary education under the new Curriculum with a third cohort preparing to begin this coming fall. The first class of veterinarians to be fully trained under the OIE Harmonized Curriculum will graduate in 2023.

➤ Characteristics of the new OIE Harmonized Curriculum

This section highlights the most significant changes and characteristics of the newly harmonized educational program under the OIE guidelines as well as the timeline of its design, review and implementation. A total of 5 courses misaligned according to the OIE Core Veterinary Curriculum were relocated in the new curricular matrix as follows:

Course	Previous Location	New Location
Animal Welfare	5 th Year	3 rd Year
Introduction to Statistics	5 th Year	2 nd Year
General Pathology	3 rd Year	2 nd Year
Systemic Pathology	3 rd Year	2 nd Year
Communication and Writing skills in English	1 st Year	These skills were incorporated in multiple courses in the curriculum



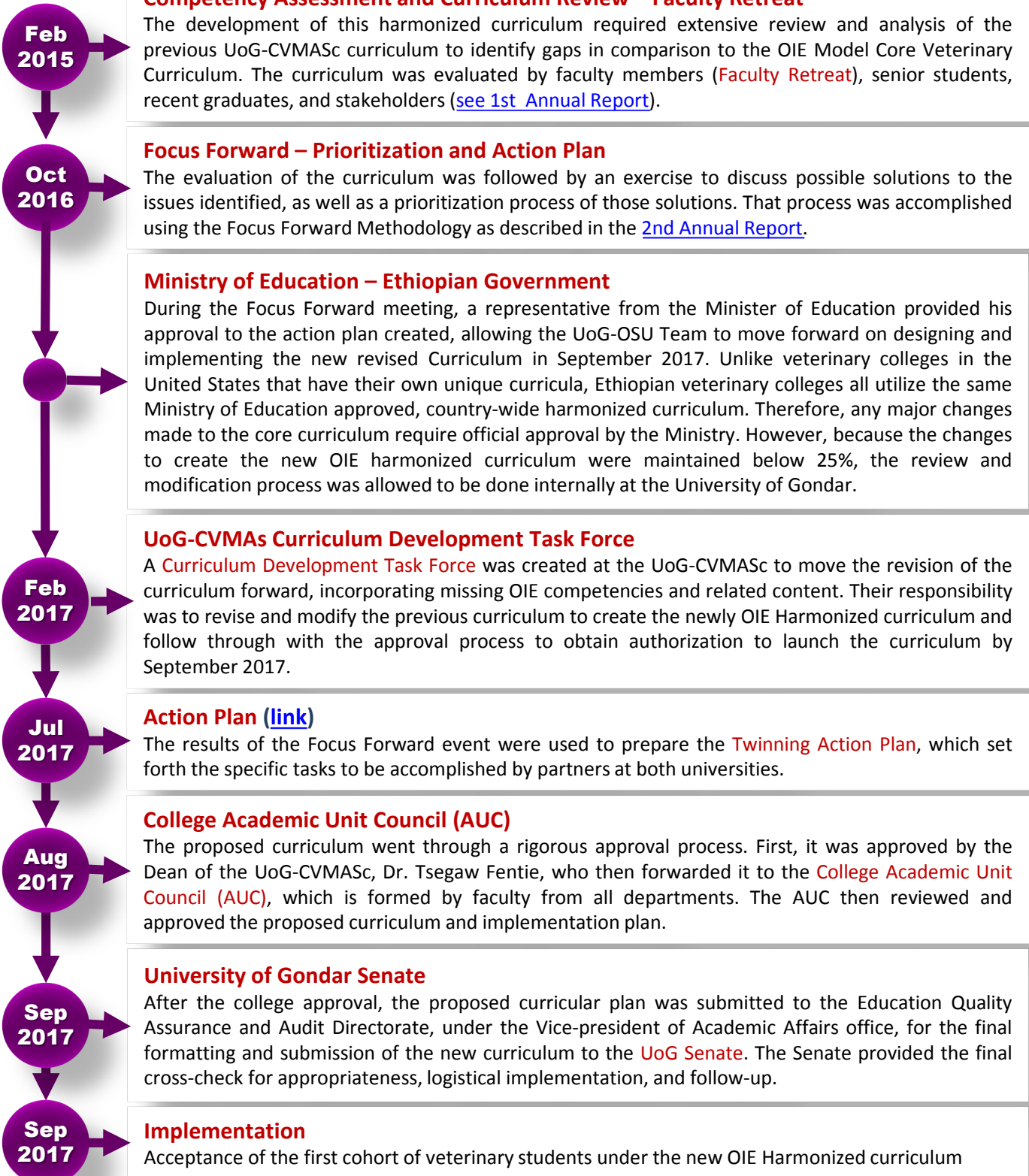
Additionally, 22% of the courses from the old curriculum (13 courses out of 60) were modified to include missing OIE competencies or expand upon competencies already in the curriculum that needed reinforcement (such as Risk Analysis and Health Certificates). Modifications ranged from adding a few new chapters or modules to completely redesigning the course. The list of the modified courses is presented below and details of such changes are provided in pages 6 to 9.

Modified Courses in the new OIE Harmonized UoG Veterinary Curriculum

Veterinary Preventive Medicine **	Veterinary Ethics and Jurisprudence
Veterinary Public Health- I **	Animal Welfare and Behavior **
Veterinary Public Health – II **	Clinical Practices-I
Animal Health Economics	Clinical Practices-II
Veterinary Epidemiology **	Clinical Practices III
Pharmacology and Therapeutics – I	Clinical Practices- IV
Pharmacology and Therapeutics - II	

** Courses that have gone through significant redesign and update

Implementation Timeline



➤ New Content Development

As mentioned before, modifications ranged from just adding a few new chapters or modules, to major redesign. An example of a small change was the addition of the topic related to “drug withdrawal times” to the course “Veterinary Pharmacology and Therapeutics I”. In contrast, major restructuring was applied to the Veterinary Epidemiology and the Veterinary Public Health Courses (I & II). These courses were significantly redesigned to include three OIE Day 1 Competencies not covered in the old UoG Veterinary Curriculum (General Certification, Inspection and Certification Procedures, and International Trade Framework).

Another example of new content development was in the Animal Welfare course. During the Curriculum evaluation, current students and recent graduates indicated that they did not feel competent managing animal welfare related issues in common or routine situations. The plan for addressing this deficiency was to incorporate practical, reality-based scenarios covering common welfare related issues into the curriculum. The groundwork for developing these scenarios began in 2017 when Dr. Katy Proudfoot delivered a workshop on Animal Welfare at the UoG-CVMASc (see page 18). Work on this course will continue summer 2019 when Dr. Monique Pairis-Garcia delivers a hands-on training workshop to further assist in the continued development of the Animal Welfare course.

In addition, a brand new course, named One Health, will be part of the new curriculum to cover multiple OIE competencies and topics not included in the current courses. This new course will be delivered in the fifth year of the curriculum before students enter their professional rotations in the sixth year. This has been designed as a capstone course to bring together all the concepts and elements associated with the OIE Day 1 Competencies.



Students attending the Veterinary Pharmacology and Therapeutic I Course, which has been updated to include and expand OIE Day 1 related topics



Dr. Achenef Melaku, UoG Twinning Coordinator, delivering a class to 3rd year veterinary students. He indicated that although these students are still under the old curriculum, they are also benefiting from the changes generated by the twinning program as his class (as well as 12 others) has already incorporated significant changes ahead of the arrival of the students under the newly OIE Harmonized Curriculum



It is important to highlight that all these modified courses and teaching tools designed for the new curriculum have also been implemented for current cohort students who started under the old curriculum. This is relevant as the students that are currently in the last years of their training under the old educational program are still taking full advantage of the changes generated by the OIE Twinning program.

➤ More than just courses and content!

Changes in the new curriculum are not exclusively associated with academic and knowledge based content. Pedagogical and new teaching tools were added to improve the delivery of veterinary education. For example, the Veterinary Epidemiology course has been updated to include case studies, group projects, video scenarios, and student reflection assignments.

Guest lectures, seminars, and talks from major government agencies that form part of the Veterinary Services in Ethiopia, such as the Ministry of Livestock and Fisheries, have also been incorporated into the new curriculum. For example, an official representative from the Ministry of Agriculture recently delivered a talk about animal health information systems currently used in the country to 45 senior students and 3 faculty members involved in the Veterinary Epidemiology Course. This speaker also delivered a seminar on employment opportunities, challenges to veterinary medicine in the country, and the future direction of the profession. These seminars and talks are designed to cover very specific gaps identified during the evaluation of the old curriculum, such as lack of knowledge and understanding of the structure and function of the Veterinary Services in Ethiopia. They are designed to specifically target graduating veterinary students as well as members of the different veterinary clubs.



Dr. Hailu Kinde (University of California) and Dr. Moges W/Meskel (University of Georgia) are Ethiopians by birth who gave an inspirational talk to over 250 veterinary students and faculty in March 26, 2019. Each presenter discussed their humble beginnings, how they learned the value of hard work early in life, and how each found their passion in a career oriented toward helping farmers.

Other News

New Veterinary Library

The UoG opened a new Veterinary Library to offer dedicated service to Veterinary Students. This three-story facility provides students with access to the latest references books and digital media. The students have access to 250 computers with internet connection that puts the world at their fingertips. Multiple areas are available for studying which provides a conducive environment for learning. These new spaces and access capabilities are expected to help improve the learning process while also increasing student motivation.



The new 2550 square meters Veterinary dedicated library at the UoG

Action Plan Execution

Activity 1.4 Task 1, Stage 2

Action Plan – From an idea to execution and change

The UoG-OSU Twinning Action Plan serves as a roadmap detailing the work needed to accomplish the objectives of the OIE Twinning program. The designed plan has a total of 32 action items, which account for the needs of both the country and the veterinary students. It focuses on curriculum changes that will have the greatest local, national, and international impacts. Action items address curriculum development and updates, student professional development, and career advancement.

Over the past two years, **36.7% of the action items have been completed, 28.6% are in progress, and 34.7% are to be implemented.** This section will discuss some important action items that have been completed to date or are currently in progress.

Action Items 1A / 2

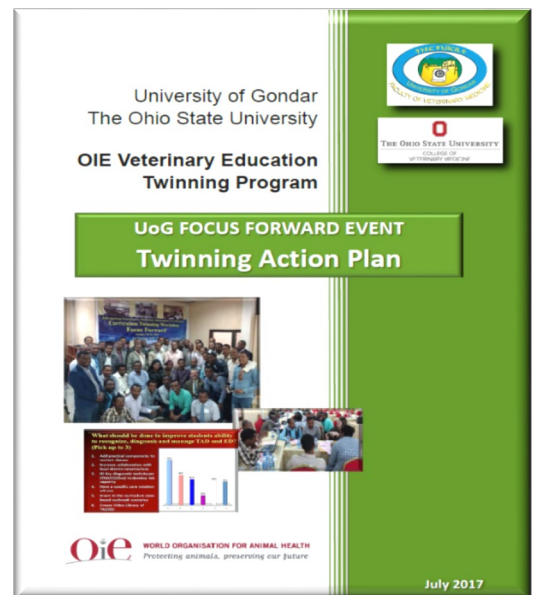
The Veterinary Preventive Medicine 4th year course (VETm5233) has been updated to include 2 additional sections covering **Zoonosis and Environmental Hygiene**. Coursework has also been updated to include discussion of **Inspection and General Certification** at the end of the Zoonosis component of VETm5233, as well as in the Veterinary Public Health 5th year course (VETm4172). These changes fulfill Action Items 1A and 2, which address the OIE Day 1 Competencies 2.10 and 3.2.

Action Items 6A / 6B

UoG-CVMASc Faculty incorporated new course material on appropriate **Drug Withdrawal Periods** in food-producing animals. Instructors have also included material on **Drug Residue Testing** in milk, including antimicrobial drugs, into the 4th year Veterinary Public Health II (Vetm4172) course. Residue testing in meat will be included in the near future. A long-term goal for this course is to include a laboratory component that provides hands-on residue testing experience.

Action Items 8A / 8B

The topic **Outbreak Investigation and Management Strategies** has been incorporated into the 5th year Veterinary Epidemiology course (Vetm5232) to fortify Day 1 competencies at the UoG. Additionally, OSU partners are developing a new course on Outbreak Investigations and Management to train veterinary students at UoG-CVMASc, other Ethiopian Veterinary Schools, and private practitioners. The goal is to strengthen disease recognition and management skills to improve outbreak response, and in the long run to safeguard the animal agriculture sector in Ethiopia.



➤ Continued on the next page...

Action Items 9/10/11

Certain courses offered at UoG-CVM met the desired OIE Veterinary Education Core Curriculum guidelines but were not presented in the OIE recommended sequence. Action items 9, 10, and 11 were created to address this discordance. The **Animal Welfare** course (Vetm5202) which was previously taught during the 5th year has been moved to the 3rd year of the curriculum. The Introduction to Statistics course (Vetm5221) has been moved from the 4th year to the 2nd year of the curriculum. The relocation of these courses earlier in the curriculum enables students to carry knowledge gained forward through the rest of their coursework as well as into their careers.



Action Item 13

Veterinarians are indeed responsible for ensuring that diseased animals are not permitted to travel inside or outside of the country to reduce disease spread beyond their region or their borders. Many countries have established **Health Certificates and General Certification Procedures** (Competencies 2.10) to provide veterinarians the regulatory authority needed to fulfill this role. There are currently no local regulations for this process in Ethiopia. However, it is still important for students to obtain these skills based on international best practices. Rabies Health Certificate procedures have been incorporated into the 4th and 5th year curriculum to introduce students to these regulatory concepts. Health Certification procedures for additional diseases will be adapted for UoG-CVMASc students and included in the curriculum at a later date.

Action Items 12A/12B

Today we live in a global community where individuals are capable of traveling across the globe in less time than the incubation period for many different diseases. This can result in spread of disease between countries, otherwise known as **Transboundary Animal Diseases**. Veterinarians must be trained to recognize and report these diseases to protect people and animals in their country. To improve OIE Day-One competencies of recognition of these and other emerging diseases (2.4 and 2.5), lessons discussing these topics have been incorporated into the 5th year Veterinary Preventive Medicine course (Vetm5233).



Action Item 17

The Focus Forward Event highlighted that UoG students are not sufficiently competent in the **Organization of Veterinary Service** (3.1). To address this, case-based material covering the laws and regulations that provide governmental veterinary services with their authority has been added to the 5th year Ethics and Jurisprudence course (Vetm5202).

Faculty Exchange and Faculty Development

Activity 2.1 Task 2, Stage 4

Faculty Exchange

In March 2018, Dr. Tsegaw Fentie, Dean of the UoG-CVMASc, traveled to Columbus, OH, as part of the Faculty Exchange program sponsored by the OIE Twinning program. He attended classes and other academic activities to gain ideas and experiences that would allow him to generate the educational material needed (based on the Action Plan) and improve teaching content and delivery in Gondar.



Dr. Tsegaw Fentie and Dr. Armando Hoet, UoG-OSU OIE Twinning Team Leader, discussing implementation of the different items as part of the Action Plan

Dr. Fentie met with faculty responsible for teaching Epidemiology to both professional and graduate students at OSU-CVM and College of Public Health. They discussed teaching methodology and student assessment methods. During his visit, Dr. Fentie incorporated what he learned into the Epidemiology curriculum for students at UoG-CVMASc. Dr. Fentie updated the UoG Veterinary Epidemiology course syllabus to include case studies, group projects, video scenarios and reflections. These changes are designed to increase practical learning beyond didactic teaching methods.

Dr. Fentie also met with multiple officials and administrators such as OSU-CVM Dean, Dr. Rustin Moore; OSU-CVM Associate Dean for Research, Dr. Pat Green; the Chair of the Department of Veterinary Preventive Medicine, Dr. Thomas Wittum; the Director of the Office of Career Management & Professional development, Miss Amanda Fark; and the Chair of the Department of Animal Sciences, Dr. John Foltz; among many others. Dr. Fentie also actively participated in the USDA training for National Veterinary Accreditation to learn about the process that veterinary students follow in the USA to be accredited by the USDA.



Deans, Tsegaw Fentie, UoG-CVMASc, and Rustin Moore, OSU-CVM, sharing experiences in regard to the Veterinary Curriculum



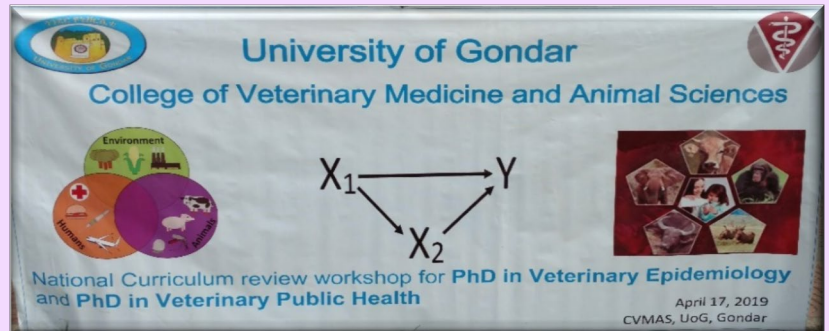
Dr. Fentie shared his experience and collected information with the UoG-CVMASc faculty at large upon his return to Gondar (see left picture). Dr. Fentie expressed that this visit was extremely valuable as it allowed him to see firsthand how best to develop and revise the necessary courses. Dr. Fentie was also able to obtain relevant information regarding the design of a new PhD program (see next page).

➤ Continued on the next page...

Development of a PhD Program at UoG-CVMASc

During his visit, Dr. Fentie gathered valuable information for the development of a PhD program in One Health at the UoG-CVMASc. This program is being designed to train graduates to achieve a high level of scholarly competence in Veterinary Epidemiology and Public Health.

The program will include course work in advanced epidemiology and biostatistics, experience in the classroom and laboratory, a dissertation, and an oral defense. Additionally, students will have the opportunity to study at other veterinary and medical schools in Ethiopia.



This past April 19, 2019, a review workshop took place at Gondar (see picture above) to finalize the details of the PhD programs in Veterinary Epidemiology and veterinary Public Health. It is expected that the College will be accepting the first cohort of doctoral students in 2020.

Washington DC. Public Health Policy Trip



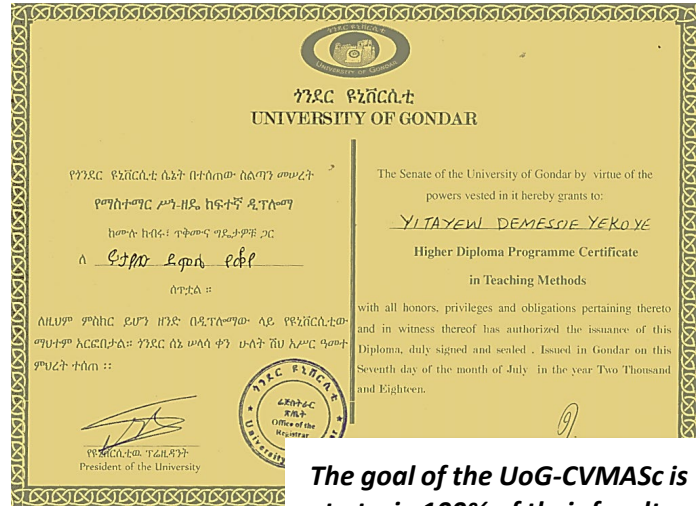
Dr. Tsegaw Fentie shared details of the UoG-OSU OIE Twinning Program with the U.S. Surgeon General Vice Admiral Jerome Adams at Washington DC

In March 2018, Dr. Fentie participated in a three-day Public Health Policy Trip to Washington, DC. In this experiential activity organized by the College of Public Health and the OSU Office of Federal Relations in Washington, the participants met with lawmakers and high-level officials such as Ohio Senator Rob Portman, U.S. Surgeon General Jerome Adams, and American Public Health Association executive Director George Benjamin, to name a few.

Participants in this trip engaged in face-to-face discussions with policymakers on important policy issues such as health disparities, the opioid crisis, gun violence, health policy, and veterinary public health (One Health). Dr. Fentie also had the opportunity to discuss the objectives and accomplishments of the OIE Twinning Program with these officials.

➤ Faculty Certification on Teaching Methodology

Since the implementation of the OIE Twinning program in 2015, over 40 faculty at UoG-CVMASc have participated in a one-year advanced training program to attain a **Higher Diploma for Teaching Methodology**. The UoG-CVMASc Administration has spent significant resources to increase the number of its faculty with this certification, resulting in an increase from 17 faculty trained (34%) before 2015 **to 57 (70%) trained by May 2019**. This represents a 3-fold increase. This professional training program focuses on pedagogical and teaching techniques and is designed to help faculty increase student engagement with the educational material, improve curriculum delivery, and augment student knowledge retention.



The goal of the UoG-CVMASc is to train 100% of their faculty and instructors by 2020

Program Restructuring



The original Twinning Program Proposal, approved by OIE, indicated the project would reach completion in May 2018. However, changing and expanding project priorities and the reality on the ground (i.e. political unrest, limited online connectivity) prevented full implementation of the program in this initial time frame. The twinning partners and OIE agreed that an extension of the endpoint for completion was required. The new completion date is set for December 2019.

This extension was requested primarily for the completion of the following activities: Activity 1.5/2.1: UoG Faculty Development and On-site Training, more specifically Curriculum Development (Task 1, Stage 2) and Faculty Development (Task 2, Stage 4). These activities are critical to this program as they provide teaching tools and pedagogical techniques needed by faculty to implement the OIE harmonized curriculum.

The on-site Faculty Exchange Training in Columbus was discontinued in April 2018 [due to logistical issues]. The UoG-OSU Twinning Team developed a plan to encompass un-addressed topics. Key faculty and staff from OSU will travel to Ethiopia to deliver courses and/or instructional activities in a variety of disciplines associated with the OIE’s Veterinary Core Curriculum and Day 1 Competencies. In addition to providing continuing education, OSU faculty and staff will work with UoG faculty to develop lecture material and instructional techniques to fulfill the needs described in the Action Plan.

Student Training and Development

Activity 2.3, Task 2, Stage 5

Career and Professional Development Center

One of the major challenges identified by the Curriculum evaluation and assessment of Day-1 Competencies was the lack of motivation, proactiveness, and confidence described by the UoG veterinary students. Two reasons provided for this lack of motivation and negative outlook towards the veterinary profession were: 1) Students without a passion for veterinary medicine are assigned to pursue a DVM degree by the Ministry of Education (veterinary medicine was not in their top three choices during the university admission process). 2) Students are not aware of relevant career paths to follow post-graduation. These issues are indeed major educational road blocks for students.

The UoG-CVMASc created a Career and Professional Development Center to help students address these issues. Dr. Askale Abrhaley was appointed as head of the Professional Development Program for the college to lead this effort. This program is being developed to offer student support services that include career counseling and job placement assistance.



Some of the activities already offered to the UoG students are seminars about job searching and application, how to prepare a CV/resume, and professional behavior and communication. **The UoG-CVMASc was the first college at the UoG to create this type of program**, and Dr. Askale has been asked on multiple occasions to share her experience with other professionals at the university. She also helped coordinate the development of the Veterinary Student Clubs.



Dr. Askale (left picture) was one of the UoG veterinary students that participated in the 1st edition of the OIE sponsored Veterinary Preventive Medicine Rotation and Farm to Table Program in Ohio. Dr. Askale was hired by UoG in 2018 based on her excellent academic performance and the experience she gained during the Twinning Exchange. She has been placed on an academic path to become a full faculty member after further training. Dr. Askale's hire is an important step toward improving the diversity of Veterinary faculty and will serve to demonstrate a potential career path for female students in the College. Dr. Askale is expected to further advance the Professional Development Program upon completion of her additional academic training in Addis Abba.

Dr. Atnaf Alebe will be overseeing the program while Dr. Askale is in training. Dr. Atnaf is also a young female faculty who recently worked with Amanda Fark, the Director of the Office of Career Management & Professional Development at the OSU-CVM, to develop a roadmap for the next two years. This plan include additional activities to incorporate more UoG-CVMASc alumni as mentors and contributors in the professional development of veterinary students.

Student Clubs – First Steps

Active, student-led clubs are an important part of the overall strategy to increase participation and engagement of the UoG veterinary students. Two student clubs were created in 2018 as a direct action of the OIE Twinning Program. Both clubs were created and are led by students who participated in the OIE Twinning Veterinary Students Exchange program.

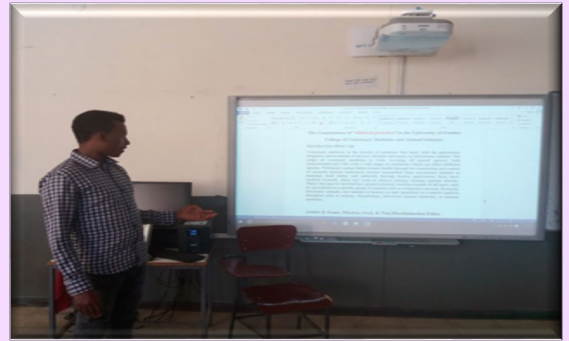
The first of these clubs is the Veterinary Public Health Club. Today there are over 66 members, representing 26% of the students in the DVM program. These students are actively involved in multiple extracurricular activities such as rabies prevention in the community, which encompasses vaccination and awareness campaigns. Club members also regularly visit elementary and high schools throughout the city of Gondar to educate students about Rabies. This is critical as young children are the most common victims of this deadly disease. They also educate students about veterinary medicine as a potential career path in the hopes of inspiring the next generation of motivated veterinarians (see picture below).



The second club, the Veterinary Clinical Medicine Club (right picture), currently has 116 members. These student clubs serve as a place for students to share different views and experiences in the profession, as well as to interact with subject matter experts who they invite for seminars and short talks. The students have reported that these activities have helped them to increase their clinical skills outside the classroom (see next page for details).

Step Number 1...

During the first meeting of the VPH Club, the team of coordinators introduced 2nd, 3rd, 4th and 5th year veterinary students to the club's constitution and policy developed by the OIE Twinners (UoG veterinary students that participated in the OSU Student Exchange Program) (see picture below).



An annual plan for the club was also presented to the attendees, which discussed the general details of the planned activities and the future direction of the club. Their Club's slogan:

“Day One Competent Vets!!”

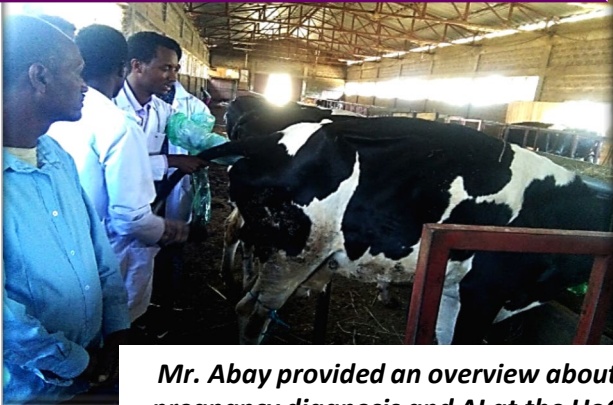


➤ Continued on the next page...

Student Clubs - Activities

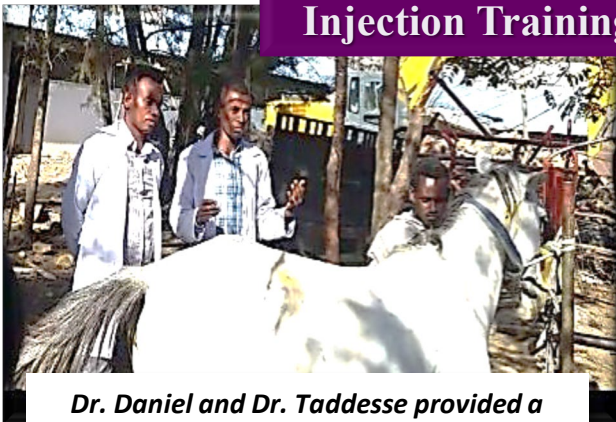
In addition to the community oriented activities described in the previous page, the clubs have also hosted activities designed to enhance students' skills in areas where they feel less competent or proficient. Here are some examples of the events that the students have organized:

Pregnancy Diagnosis and Artificial Insemination Training



Mr. Abay provided an overview about pregnancy diagnosis and AI at the UoG Dairy Farm to Club Members

Case Handling and Injection Training



Dr. Daniel and Dr. Tadesse provided a short training about equine handling and different injection techniques.

Sampling Techniques



Pathology lab assistant, Mr. Birhanu, showcased different types of sampling techniques. This allowed students to observe and practice techniques such as blood collection

Introduction of Clinical Instruments and Equipment



Veterinary student Demir Abebe described and demonstrated how to use the different clinical instruments and equipment frequently used during clinical examinations

“Day One Competent Vets!!”

Veterinary Preventive Medicine Rotation and Farm to Table

Activity 2.3, Task 2, Stage 5

Ten UoG students were selected to travel to Columbus, OH in April 2018 as the 2nd cohort of students to attend the Veterinary Preventive Medicine Rotation and Farm to Table (F2T) at The Ohio State University College of Veterinary Medicine. These students were chosen based on their academic performance, letter of intent, and a live Skype interview.



The OIE Twinners visited over 20 different locations across the State, from the Animal Disease Diagnostic Laboratory, the official veterinary lab in Ohio (top picture), to one of the largest dairy farms in the State (lower picture)

During this visit, UoG students were also tasked with continuing the work of the first cohort regarding the development of veterinary clubs. This involved finalization of the Veterinary Public Health Club constitution and the creation of a Food Animal or Clinical Club. These activities were developed to increase student engagement with their profession and provide them with an understanding of the potential that their veterinary career holds.



The students participated in multiple hands-on activities and training including a necropsy lab focused on poultry diseases

This two-week academic program focused on Veterinary Preventive Medicine, Population Medicine, and Food Animal Production, including Food Safety. The UoG students participated in the fourth year Preventive Medicine Clinical rotation with the OSU students, which included attending lectures on topics such as Animal Welfare, Disease Prevention/Control/Eradication, and Rabies. They also participated in the development and delivery of group project presentations and went on farm visits throughout the state of Ohio to study different production systems. Students were encouraged to express their ideas and they were given the opportunity to participate in active learning sessions, which have been shown to increase student engagement with material being taught.



Visiting the largest auction barn in Ohio to understand the commercialization of livestock in the USA, including the movement and spread of diseases in these high-risk populations

➤ Continued on the next page...

The Ohio Farm to Table (F2T) program provided multiple opportunities for the students and visiting faculty to interact and learn directly from producers, veterinarians, regulatory officials, and quality assurance personnel among others, literally from Farm to Table:



Visiting the largest supermarket in Ohio to learn about food safety and quality assurance at the consumer interface



Dr. Gustavo Schuenemann explaining Dairy production systems and good management practices



Learning about gnotobiotic animals at the Food Animal Health Research Program in Wooster Ohio



A stop at a feedlot to learn about beef production, including antimicrobial use



The OIE Twinning seed is already germinating!!



Of the 16 OIE Twinners who participated in the two editions of the UoG-OSU student exchange program, 10 have already graduated. Of those, 5 have been incorporated as young lecturers and instructors at the UoG-CVMASc or other Ethiopian veterinary schools, where they will receive further training to become full professors in the years to come. Therefore, their experiences gained during the OIE Twinning program will be passed along to the next generation of veterinary students through their teaching.

Continuing Education - One Health Summer Institute

Activity 3.2, Task 2, Stage 4 – Faculty Development

2017 Summer Institute

Two major continuing education courses targeting specific Day 1 Competencies were delivered during the One Health Summer Institute in 2017. These courses, sponsored under the OIE Twinning Program, were identified by the UoG and boundary partners during the Focus Forward event as priority topics.

Animal Welfare – July 2017

Dr. Katy Proudfoot hosted a two-day workshop at the University of Gondar, helping to establish and further strengthen the foundations of animal welfare in the country. A total of 25 faculty, practicing veterinarians, and government officials participated. The majority of professionals were from Ethiopia, and one attendant was from Kenya.

Foundational information on the fundamentals of animal welfare was provided during this workshop. The best and most constructive component of the workshop, as indicated by the participants, was the very intense group discussions that aided in translating the information provided for application in Ethiopia. This was important as much of the welfare research that lends to the overall basis of knowledge is more representative of Western human-animal interactions.

Discussions also focused on specific scenarios, such as interacting with the feral dog population in Ethiopia, and how these could be included to adequately address animal welfare in veterinary school curricula. Some challenges to welfare progress in Ethiopia noted during these discussions were economics and practicality, such as when human welfare and animal welfare may come in conflict, and different philosophical views (specifically in the case of euthanasia). All the educational material and instructional tools used in the workshop were provided to the main instructors of animal welfare at the UoG to include in their regular classes.

Risk Analysis – July 2017

Dr Armando Hoet delivered a five-day long course, in which the participants reviewed the functions and roles of intergovernmental organizations (FAO, OIE, WTO, WHO) in regards to global trade of animals and animal products, including international rules and regulations on import/export such as: *Codex Alimentarius* and the Sanitary and Phytosanitary (SPS) agreement. During this training, Dr Hoet provided an introductory level description and application of the principles, concepts and methods applied in Risk Analysis on import and export of livestock products and live animals. The participants applied throughout the course the OIE tool “Import Risk Analysis for Animals and Animal Products.”. The hands-on instruction was complemented with relevant table top exercises for Ethiopia, group discussions, flip-the-classroom methodology, and real-time polling systems to allow the direct interaction of the participants. In total, 35 professionals from the UoG, other veterinary schools across Ethiopia, and several representatives from the Ministry of Agriculture attended this training course. All the course material and exercises were provided to the Faculty at Gondar to be incorporated in classes for Veterinary students.

2018 Summer Institute

Numerous CE opportunities relevant to OIE Day 1 Competencies were provided to UoG faculty through the **2018 One Health Summer Institute**, among them:

Vaccines and Impacts on Animal and Human Health

Modeling Foodborne and Zoonotic Disease

Molecular Epidemiology, Diagnostics, and Genetic Engineering

One Health Leadership Workshop

Participatory Epidemiology Application in Field Work

Concepts of Economics and Epidemiology in Agricultural Development

Vector Ecology and Disease

One Health Epidemiology of Foodborne and Zoonotic Diseases

Rabies Project Activities and Animal Handling

2019 Summer Institute

Career and Professional Development in Veterinary Medicine May 20-24, 2019

Amanda Fark, the Director of the OSU-CVM Office of Career Management & Professional Development, delivered the first interactive workshop on Career and Professional Development targeting Veterinary Students in Ethiopia. Ms. Fark is a nationally recognized expert in this field. She has developed the first and largest program of its kind in a veterinary school in the USA, and works very closely with the American Association of Veterinary Medicine Colleges (AAVMC) and other Colleges across the USA.

Some of the topics covered were:

- how to build a Career & Professional Development Program for students,
- how to engage faculty & staff,
- curriculum of professional development programs,
- integration into professional curriculum,
- program logistics from admission to graduation and personnel needed,
- mentorship,
- how to build external relationships with alumni and employers, among many others.



Daniel Worku Demissie, UoG Career Service Center Coordinator, indicated his appreciation for the highly professional and invaluable training provided indicating that "such a well-planned training will have a great impact in helping to strengthen our newly created UoG Career Service Center"



➤ Continued on the next page...

A total of 39 attendees actively participated in this workshop, including faculty and staff at the University of Gondar - College of Veterinary Medicine, Animal Sciences and other professional programs (i.e. Medicine, Nursing, Social Work, Engineering), as well as representatives of six veterinary colleges throughout Ethiopia: Wollo, Bahir Dar, Haramaya, Hawassa, Wollega, and Samarra Universities (see picture). This workshop was designed to address Action Plan items 22B, 22C, and 24.



Representatives from 6 Veterinary Schools across Ethiopia, plus UoG-CVMASc, attended the Professional Workshop

While developing this report, two additional OIE Twinning-sponsored CE courses will be offered during the 2019 One Health Summer Institute. These courses are designed to cover specific items of the Action Plan.

Animal Welfare, Productivity, and On-Farm Assessment **June 11-13, 2019**

Dr. Monique Pairis-Garcia, Assistant Professor of Animal Welfare and Behavior at OSU, will deliver a three-day, hands-on workshop on Animal Welfare. Dr. Pairis-Garcia will discuss the role of animal welfare in production medicine with an emphasis on the OIE Standards on Animal Welfare. This training will include on-farm welfare assessments at a Dairy Facility, Small Ruminant Farm, the cart-horse association in Gondar, and a local commercial poultry farm. This workshop is designed to prepare and guide faculty to address OIE Action Plan items 9 and 15. Attendance at this workshop will be offered to faculty, staff, and students at the UoG-CVMASc as well as other veterinary professionals throughout Ethiopia and east Africa.

International Dairy Certificate Program **June 17-21, 2019**

Dr. Gustavo Schuenemann, Professor and Dairy Extension Veterinarian at OSU-CVM, will deliver a week-long workshop on Dairy Herd Risk Assessment. Dr. Schuenemann will discuss identification of herd performance problems, development of effective herd health protocols with a focus on the proper use of antimicrobials drugs as described in the OIE Standards, and development of a 'preventive system-in-place' that can be used in cattle and goat farms nationwide to decrease the use of antimicrobials. This workshop is designed to prepare faculty to address OIE Action Plan items 4B and 5B. Attendance at this workshop will be offered to faculty and staff at the UoG-CVMASc as well as other veterinarians and practitioners in Ethiopia.

The Ripple Effect

➤ National Outreach - Amplification of the Impact

In Ethiopia there is a standardized national veterinary curriculum delivered country-wide in all veterinary schools, which is administered by the Ministry of Science and Higher Education (MoSHE). Therefore, any major changes to this MoSHE-approved core curriculum require support from all veterinary schools and all other institutions related to veterinary services in the country. Consequently, a major outreach effort was implemented to influence the Ethiopian national curriculum, which entailed sharing the lessons learned, best practices, and the curricular changes and tools developed at UoG by the OIE Twinning team. These steps were taken with the hope that such changes, based on the OIE Day-1 Competencies, could be fully and readily adopted by all veterinary schools in Ethiopia, amplifying the impact of the OIE Twinning program.

4th OIE GLOBAL CONFERENCE ON Veterinary Education

RECOMMENDATIONS (IN SUMMARY FORM)

VETERINARY AUTHORITIES OF OIE MEMBER COUNTRIES

- FURTHER encourage Veterinary Education Establishments to implement DAY 1 competencies + Model Vet Core Curriculum + Principles
- ENCOURAGE VEEs to update curriculum
- ENCOURAGE VEEs to evaluate + study innovative teaching methods

TO THE OIE TO:

- CONTINUE TO SUPPORT the OIE member Countries to improve the quality of their veterinary SERVICES; notably: VLSP VE training; VSB support
- CONTINUE to Advocate for donors to provide support
- CONTINUE efforts to inform countries + VEEs about harmonizing education regionally & globally
- CONSIDER expanding VC to better coordinate + harmonize professional & guidelines on core competencies
- CONSIDER developing support other than training for OIE DAY1/VEE
- INPUT will be accepted until July 7
- the ACCREDITATION QUESTION was interesting & will follow it closely

ALL PARTIES

to promote the VALUE of the VETERINARY Profession to society.

- 350 people, 93 countries
- showing the DIVERSE Commitment in the AREA
- enhance public, animal Health
- fighting DISEASES: Needs: Usual + occasionally + special + Professionals
- Jordan is willing to host next
- we are here to improve education... and identify how competencies face the FUTURE
- we are a UNENDING FUTURE CONFERENCES!

CLOSING:

With great thanks - EDUCATION IS A MAIN OIE INTEREST - & WE NEED COLLABORATORS to achieve our GOALS!

WE ARE HERE TO IMPROVE EDUCATION... and identify how competencies face the FUTURE

WE ARE A UNENDING FUTURE CONFERENCES!

OIE WORLD ORGANIZATION FOR ANIMAL HEALTH
Preserving animals, preserving our future

4th OIE Global Conference on Veterinary Education:
Implementing OIE guidelines to ensure the excellence of the veterinary profession
"Learning today, preserving our future" Bangkok (Thailand) 22-24 June 2016

LIVE GRAPHIC RECORDING
Sam Bradd | Drawing Change

This pathway encouraging Veterinary Education Establishments to implement OIE Day-1 Competencies and incorporate the core veterinary curriculum in their institutions was one of the major recommendations of the 4th OIE Global Conference on Veterinary Education

As part of this effort, Dr. Tsegaw Fentie, Dean of the UoG-CVMASc, presented the OIE harmonized curriculum on two occasions in the **Ethiopian Veterinary Education Forum**. This forum is an official, national event that is attended by all veterinary school Deans in Ethiopia (see map), the Federal Veterinary Services Director, the Ethiopian Veterinary Association Manager, federal and regional laboratories representatives, research institute representatives, and delegates of the Ethiopian Veterinary Association, among others. The first presentation took place on September 5, 2017 and the second on July 15, 2019. This biannual forum provides a stage to share academic experiences, faculty networking, and to discuss challenges confronted by veterinary education in Ethiopia. During the 2019 event, Dr. Tsegaw presented the final UoG new OIE Harmonized curriculum to all the Deans of Veterinary Schools in Ethiopia. In his presentation he emphasized the major revisions and additions to the old curriculum. After this event the UoG also shared a digital copy of the revised curriculum to all the colleges in the country.



➤ Continued on the next page...



In addition to these and other presentations in different forums, both locally and nationally, the UoG faculty developed an article describing some of the revision process and changes implemented to their curriculum, which was published in the Ethiopian Veterinary Association Annual Bulletin (2019). This publication is accessible to over 1500 members in the country.

At the time of the final production of this report, Dr. Tsegaw indicated that all the veterinary schools are interested in harmonizing their curriculum at the national level, and 7 veterinary schools (currently there are 13 veterinary schools in the country) have already started to incorporate some of the changes highlighted in the UoG new curriculum, especially those that actively participated in the development of this curriculum through the Faculty Retreat and the Focus Forward events sponsored under the OIE twinning program (see picture).



Deans from the College of Veterinary Medicine at Wolaita Sodo, Mekele, Jimma, Wollo, and Haramaya Universities who participated in the Faculty Retreat to assess the UoG Veterinary Curriculum



Currently the Ministry of Science and Higher Education (MoSHE) is creating a new educational road map which involves the revision of curricular programs of all careers, including veterinary education, in Ethiopia. As part of this revision and creation of a new national curricula to be implemented in 2020, the

MoSHE wants to incorporate new “common courses” in the first year of all professional programs (including veterinary medicine). At this time, all the Deans of the 13 veterinary schools agreed to meet in the coming months to establish a curriculum taskforce to revise and harmonize the DVM curriculum at the national level, specifically on how to accommodate both the MoSHE’s common courses and the OIE competencies incorporated in the UoG curriculum.

Ethiopian Veterinary Schools that have participated in UoG-OSU OIE Twinning Activities



AAVMC Assessment Tool for AMR Learning Outcomes

Dr. Armando Hoet presented the Evaluation Tool for OIE Day 1 Graduating Veterinarian Competencies to members of the Association of American Veterinary Medical Colleges (AAVMC), the Association of Public and Land-grant Universities (APLU), the Food and Agriculture Organization of the United Nations (FAO), and other organizations during a meeting focused on Antimicrobial Resistance in April 2017. This Evaluation Tool was developed for the assessment of proficiency of veterinary students to the OIE Day 1 Competencies. After the event, the AAVMC asked the team to adapt this tool to evaluate the recently released AAVMC/APLU Antimicrobial Resistance Learning Outcomes; this tool is currently under development. This demonstrates the impact of the OIE twinning program far beyond a single country or topic area.

ICOPHAI

In November 2017, Dr. Tsegaw Fentie , Dean of the UoG-CVMASc, and Dr. Seleshe Nigatu , Director of the UoG Veterinary Public Health Program, participated in the 4th International Congress on Pathogens at the Human Animal Interface in Doha, Qatar. They provided an update on the UoG-OSU Twinning Program in a working group at the congress, sharing the work that has been done and the methodology implemented in the curriculum evaluation and development of the Action Plan. Over 250 professionals from across 30 countries attended this meeting and several representatives from multiple veterinary schools showed interest in our twinning experience.

USDA Foreign Agricultural Faculty Exchange Program

Dr. Seleshe Nigatu and Dr. Achenef Melaku, OIE Twinning UoG Coordinator, attended a 4-month long Faculty Exchange program in Iowa in the fall of 2018 and 2017, respectively. This program is designed to enhance the teaching ability of agricultural educators from institutions of higher learning in developing countries. Both, Drs. Melaku and Nigatu shared their experience and activities done under the OIE twinning program with their respective cohorts, which included scholars from countries such as Kenya, Tanzania, Ghana, Uganda, Nigeria and the USA, among others (see picture below).



Future Plans and Incoming Activities

Assessment of Curriculum Implementation

(Task 1, Stage 3, Activity 3.3)

This activity will provide the metrics needed to determine the impact of the OIE Twinning Program at the University of Gondar and throughout Ethiopia. In May 2019, the Evaluation Phase, as described in the Action Plan, started. Dr. Armando Hoet, the OIE UoG-OSU Team Leader, traveled to Gondar to work on the development of an evaluation strategy and application of the [Evaluation Tool for OIE Day 1 Graduating Veterinarian Competencies](#). The plan is to apply an assessment similar to the one performed at the beginning of the Twinning program to obtain metrics that measure the short-term impact of the interventions and changes made to the curriculum, the courses, and the other elements included in the action plan.

Evaluation Tool for OIE Day 1 Graduating Veterinarian Competencies

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 recognizing 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 72% 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 2: Overall Assessment of a Epidemiology Competency, ranked from High (H), Moderate (M), Incompetent (I), Not-Competent (N) or Not in the Curriculum (N/A) by faculty, students, and stakeholders.

Faculty

Competency Level	Percentage
High (H)	10%
Moderate (M)	62%
Incompetent (I)	18%
Not-Competent (N)	10%
Not in the Curriculum (N/A)	0%

Students

Competency Level	Percentage
High (H)	13%
Moderate (M)	64%
Incompetent (I)	15%
Not-Competent (N)	8%
Not in the Curriculum (N/A)	0%

Stakeholders

Competency Level	Percentage
High (H)	13%
Moderate (M)	64%
Incompetent (I)	15%
Not-Competent (N)	8%
Not in the Curriculum (N/A)	0%

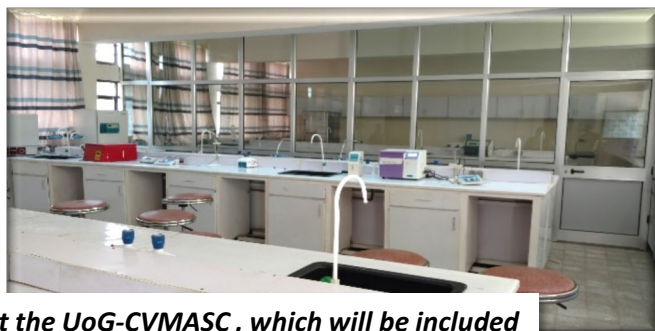
Diagnostic Tests

Competency Level	Percentage
High (H)	13%
Moderate (M)	64%
Incompetent (I)	15%
Not-Competent (N)	8%
Not in the Curriculum (N/A)	0%

Figure 2: The competency level of the average UoG DVM graduate for appropriately using epidemiological tools to evaluate screening/diagnostic tests.

Development of a Service Laboratory Proposal

The UoG faculty is currently developing a Service Laboratory Proposal aimed at developing a service oriented diagnostic laboratory targeting specific needs of the producers and the government in the region. The goal is to repurpose some of the current laboratory spaces at the Veterinary School to provide basic diagnostic services on mastitis, an abortion panel for livestock (based on PCR detection and serology), and a diagnostic panel for avian diseases (based on PCR detection). This proposal will pursue funds to restructure the physical space and obtain some basic equipment and reagents to perform these well standardized and validated tests, at low cost and high reliability. The launching of the different services (Mastitis, Livestock Abortion Panel, and Poultry Infectious Diseases Panel) will be done in three phases starting with the Mastitis culturing panel. The long-term goal is that this service diagnostic lab will be self-sustaining financially, while simultaneously generating data and knowledge to be used for research purposes and teaching.

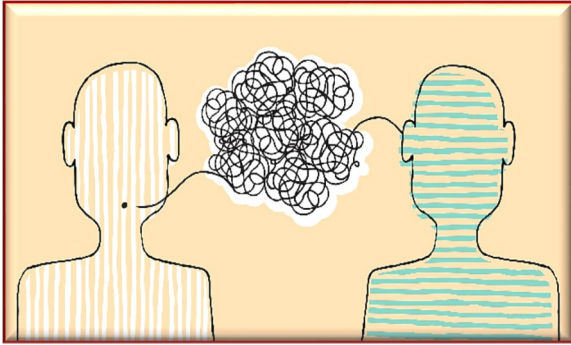


New Veterinary Public Health laboratories at the UoG-CVMASC, which will be included in the Service Laboratory Proposal to provide basic diagnostic services to the region

Challenges

Roadblocks due to Online Communication

A major externality, which has been reported in previous instances, is the difficult communication through online tools such as Skype. This is due to unstable and frequent electric and internet shortages in Gondar. Phone lines are the preferred backup method when there are internet issues,



but they can also be unreliable. In addition, this form of communication is not well aligned with sharing of audiovisual materials between partners, which makes the flow of information and ideas challenging.

This communication issue has frequently resulted in the delay in the execution of action items, along with some miscommunication issues that translate to inaccuracies when developing materials, reports, and action items that create frustrations for the team members. Nevertheless, because this is an issue that escapes the influence of the OIE Twinning Team, the commitment is to always work around this shortcoming and place measures/interventions to minimize the impact of this roadblock: extended timelines, backup plans, and additional check points to prevent inaccuracies.

BREAKING NEWS!!

Bill and Melinda Gates Foundation

The UoG-OSU Twinning team recently learned that the Gates Foundation will fund the adaptation of the Evaluation Tool to Assess OIE Day 1 Competencies into a self-assessment instrument. As part of this investment the current tool used in the Twinning program will be modified for use on a digital platform and provide additional guidance (e.g., captioned video) so other veterinary schools can use the tool on their own to self-assess their programs. The newly adapted Evaluation Tool will be pilot-tested in different colleges in Ethiopia, as well as Cambodia. The Evaluation Tool will allow faculty and administrators to determine specific strengths and gaps or areas for improvement at their institution. This recent development shows once again the impact that the OIE Twinning program has had on veterinary education in Ethiopia, generating best practices that will be spread around the world. Details of this expansion of the UoG-OSU Twinning program, which also includes the preparation of online Day 1 competencies instructional material, will be provided in the next report.



Report prepared by

UoG Team

Dr. Tsegaw Fentie

Dr. Achenef Melaku

Dr. Seleshe Nigatu

OSU Team

Dr. Armando Hoet (Team Leader)

Dr. Emily Feyes

Dr. Ross Coniglio

Dr. Wondwossen Gebreyes

Dr. Jeanette O'Quin

Dr. Jason Stull

Dr. Amanda Berrian



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future