

EGERTON UNIVERSITY

Report on Pilot of the short course on: Pandemic Preparedness with a One Health (PPOH) approach

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OPERATIONAL DEFINITION OF TERMS

In this report the following terms are defined as follows:

Flow of Delivery: is the mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity.

Group Discussion: Is a teaching method in which students are divided into groups and they are encouraged to discuss on the subject matter given.

Mode of Delivery: is the way training instructions are delivered to support and enable learning process. These include lecture method, discussion method, demonstration lessons, buzz groups, brainstorming, role plays and videos.

Module: Refers to an instructional unit that focuses on a particular topic. Although the details and activities vary according to the specific context, such as course and student level, most educational modules include information about the topic, focus on student-centered learning activities and culminate in a project for students to demonstrate understanding.

Participant: a person who takes part in or becomes involved in a particular activity

Problem Based Learning (PBL): Problem-based learning is a student-centered pedagogy in which students learn about a subject through the experience of solving an open-ended problem found in trigger material. PBL focuses on students learning in a hands-on way instead of memorizing facts. It also urges students to use high-level thinking skills, which require them to analyze, create, defend, or evaluate.

Simulation: Imitation of a situation or process

Trainee: an individual taking part in a trainee program in this case Pandemic Preparedness with a one health Approach after having graduated from university or college.



LIST OF ACRONYMS

ARC: Agricultural Resource Centre

CMRT: Crop Management and Research Training

EAC: East African Community

PPOH: Pandemic Preparedness with a One Health approach

UN: United Nations

FAO: Food and Agriculture Organization



EXECUTIVE SUMMARY

Egerton University undertook to pilot the short course on “Pandemic Preparedness with a One Health approach” (PPOH) as per the contract signed on 18th -06-2019 with EPOS Health Management. The University undertook to pilot the short course in collaboration with Moi University, as the letter of joint undertaking was signed by the Vice-Chancellor of Egerton University. Moi University was expected to sign their part which has not been done up to date. However, Egerton and Moi University staff went ahead and collaborated during the preparation of the short course and the training. The teams’ main objective as outlined in the contract was, to pilot the Pandemic Preparedness with a One Health approach (PPOH) curriculum and identify its strengths and weaknesses. The specific objectives were:

- To assess the suitability and the wholesomeness of the modules/ Topics for the PPOH in line with all the One Health Core competencies
- To identify the curriculums gaps and weaknesses
- To establish the appropriateness of the teaching materials
- To obtain inputs and experiences of the learners and the lecturers
- To embed the curriculum in the university syllabi for the development of future courses at the two collaborating universities/training institutions.

In pursuit of the objectives above Egerton University carried out the following activities:

Preparation for the PPOH Pilot Short Course

- Developed course information notes that were circulated to the Egerton university management and also Uploaded on the university website.
- The adverts was circulated to all East African Community Partner States Official through the Ministries incharge of EAC and also circulated by EAC Secretariat to all contacts by Email.
- Developed a poster advertising the short course, which was placed on all departmental and faculty notice boards. The university also used whatsapp messages to reach friends and alumni in all the six East African countries. The applicants were provided with application form to fill and were asked to provide evidence of their credentials. The participants were asked to apply by 14th -06-2019 (see advert in the appendix)
- The applications were received and the selection was done in collaboration with Moi University on 15th –June-2019 at Nuru Place Hotel Nakuru.
- There were one hundred and twenty two applicants who qualified, of which only eighteen fully sponsored participants were selected and seven self-sponsored students. Criteria for selection of the eighteen (18) participants were as follows:

Considerations for selection:

Three representatives each from all the six East African countries, that is Rwanda, Burundi, Uganda, South Sudan, Tanzania and Kenya

Eighteen (18) students were sponsored by EPOS Health Management (Read GIZ) i.e. three (3) from each country and seven students were self- sponsored. All the self -sponsored students were from Kenya (See list of participants)

There were thirteen (13) females and twelve Males.

All the students selected had a bachelor’s degree and above.

The class was made up of multi -disciplinary and multi-sectoral participants therefore making the discussions interesting (see attached folder).

- Letters of admission were sent to the participants. Those who were coming from outside Kenya, were asked to send a scanned copy of their passport. The students were sent air tickets and local travel was also organized.
- The participants arrived on 30th June 2019 and were accommodated at the Agricultural Resource Centre (ARC) which is a facility inside Egerton University.
- The facilitators were identified from the Expert Working Group (comprising of lecturers from universities in the six (6) East African countries), Moi University and Egerton University as seen in the list of facilitators provided.
- The lecturers were provided with their respective modules asked to go through, make relevant changes and use the best method that they considered fit to teach a multi-disciplinary, multi -sectoral group of/ trainees
- A teaching schedule (time table) was developed and provided to the lectures (see appendix)

Launch of the PPOH Training

The Deputy Vice Chancellor Academic Affairs (Egerton University) Prof. Alexander Kahi launched the PPOH Piloting training. The Deputy Vice Chancellor said that Egerton is very grateful the Government of Germany and GIZ for their financial support to make the PPOH course a reality. He also thanked EPOS Health Management for choosing to host the first pilot at Egerton University. He gave his commitment that Egerton University provide PPOH training students both in Njoro campus (which is the main campus) and the Nairobi City Campus. He also informed the participants that the department of Applied Community Development (which is housing the programme) will come up with a post graduate diploma, which will be multi-disciplinary.

Activities during training

At the beginning of the training, participants were asked to give their expectations which were recorded (see appendix participants' expectations).

- Facilitators of the PPOH Course were drawn from Egerton University (Kenya, Moi University (Kenya) Juba University (South Sudan) and Makerere University (Uganda).
- During the training, an instrument was developed evaluating the individual unit and participants were asked to fill, to evaluate the content of the unit, relevance of the materials taught to PPOH, the flow of presentation, the mode of delivery and provide any other comments to help in improving the unit.(See attached folder entitled PPOH for all unit.
- Trainees were also given assignments in groups (They were expected to read further on the topics), which they discussed among themselves and presented to the participants and facilitators present. The Problem Based learning (PBL) was used in deliveries for the module
- Every morning before the presentation of the units of the day a representative of the class presented a recap of the previous day's proceedings. The trainees together with the facilitators reacted to the recap.
- Facilitators used lectures, group discussions, videos of things that were happening in the world in relation to their topic, practicals, core teaching (where more than one facilitator handle the topic at the same time bucking one another and handling trainees questions. As a result all the units were quite interesting as seen in the students' comments.

- Simulation, infection prevention and control were added. This made the students understand better the concept of pandemic preparedness as seen in their comments.
- The trainees visited the Egerton University's dairy processing plant. They were also taken for a field trip to Lake Nakuru national park to see the human, animal and environment conflict. In general the Problem Based learning approach was used to ensure the trainees understand and apply the skills and knowledge acquired.
- Further, the trainees were given a lecture by representative from FAO on the WHO/FAO/OIE tripartite initiatives and the Global Health Security agenda (GHSA)
- The trainees at the end of the course received certificates which were signed by the Deputy Vice Chancellor Academic Affairs (Egerton University), Director Research (Egerton University), and the University Team Leader Pandemic Preparedness with a One Health Approach Pilot short course.
- The pilot short course came to a conclusion on 12th -06-2019 at 5.00 p.m. with a cocktail and dinner. This was grazed by the Dean Faculty of Education and Community Studies who represented the Vice chancellor. The facilitators were awarded certificates of facilitation and coordinators were awarded certificates of co-ordination

The Students were given certificate of participation because the time was too short for them to be given written exams, the students were however evaluated through their class participation, group work and assignments.

Challenges

The time allocated to the short course was too short

The finances delayed, resulting in borrowing from other accounts in the university

A large number of trainees (122) applied and qualified for the training but only eighteen were sponsored.

Conclusion

The trainees from the onset had a vision of what they wanted to learn judging from their expectations, the short course put together met their expectations as seen from their evaluation at the end of the training. The allocated time was short as indicated by a majority of the trainees and the facilitators.

Recommendations

There is need for the facilitators to look at the comments given by the students as per unit, and using the provided modules and their additional materials improve the modules.

Next time the short course is offered more time should be allocated preferably three weeks instead of two weeks.

Another short should be organized to take care of the students who qualified but were not sponsored

Budget

The money disbursed before the training commenced USD 24,000 is used up with a number of payments still pending as shown in the expenditure summary and 40% budget in the attached folder.



1.0 INTRODUCTION

The One Health approach is the collaborative, multi-sectoral and multi-professional concept that addresses complex health challenges in an increasingly interconnected and interdependent world. The One Health approach recognizes such challenges for what they are and looks for holistic, multifaceted solutions through collaboration, cooperation and partnerships. One Health promotes closer cooperation in disease management between human, animal and environmental health as well as other sectors relevant for the prevention of and affected by outbreaks of infectious diseases. The ‘Support to Pandemic Preparedness in the EAC Region’ (Pan Prep) project therefore, seeks to institutionalize the One Health approach and to contribute to the development of a workforce that is well grounded in One Health as reflected in Output A, Indicator A.3: A One Health curriculum on pandemic preparedness has been included in the lesson plans of 2 universities/vocational education and training institutions.

The Pan Prep Project is funded by the Germany Government and implemented by GIZ in close collaboration with EAC Secretariat. The project contributes to improving the health of the people in East Africa and aims to institutionalize One Health in the EAC. The multi-sectoral disease management approach has proved crucial in the response to disease outbreaks. Amongst other activities of the Pan Prep project a curriculum on pandemic preparedness using a One Health approach was developed. The curriculum will enable the region to further prepare and train an urgently needed workforce that is able to prevent outbreaks of infectious diseases by using a comprehensive approach and to consider the needs of various stakeholders when mitigating the impact of such outbreaks.

1.1 Development of Pandemic Preparedness with One Health approach (PPOH) Curriculum

The PPOH curriculum was developed by an Experts working Group (EWG). The EWG was drawn from the universities in EAC Partner States. The universities include University of Burundi, Moi University, Egerton University, Nairobi University, University of Rwanda, University of Global Health Equity-Rwanda, University of Juba, Sokoine University of Agriculture, Muhimbili University of Health and Allied Sciences and Makerere University.

The PPOH curriculum was developed in a stepwise process that entailed:

	Activity	Dates	Venue
1.	Identification of University	May to June 2018	N/A
2.	1st Stakeholder workshop	July 30th to 31st 2018	Entebbe, Uganda
3.	1st EWG Meeting	Sept 26 th to 28 th 2018	Arusha, Tanzania
4.	2nd EWG meeting	Nov 6 th to 9 th 2018	Nairobi, Kenya
5.	2nd stakeholders meeting	Dec 10 th to 12 th 2018	Arusha, Tanzania
6.	EWG meeting	Jan 30 th to Feb 2 nd	Arusha, Tanzania
7.	Visit to Universities	Mar 18 th to April 3 rd 2019	All the universities visited
8.	Piloting of the PPOH Course	July 1st to 12th 2019	Egerton University, Kenya

PPOH Curriculum was validated by the stakeholders from the EAC region. It was adopted on the 18th Sectoral Council of Health Ministers during its meeting of March 2019. The Sectoral council other than adoption of the PPOH curriculum recommended that Universities in the region start implementing the PPOH curriculum and that progress reports be submitted in its subsequent meetings.



1.2 Identification and Contracting of Egerton University

Egerton University was identified to Pilot the module. The university undertook to pilot the short course on pandemic preparedness with a one health approach as per the contract signed on 18th -06-2019. The University undertook to pilot the short course in collaboration with Moi University as the letter of joint undertaking signed by the Vice-Chancellor Egerton University. Moi was expected to sign their part which has not been done up to date. However, Egerton and Moi University staff went ahead and collaborated during the preparation of the short course. Juba University and Makerere University also participated in the piloting as facilitators. In addition, One Facilitator was from the United Nations Food and Agriculture Organization (UN FAO).

The trainees were drawn from all the EAC Partner States of Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. A total of 25 trainees undertook the module of which 13 were females and 12 were males. The trainees were drawn from various disciplines. They all had at least a first degree.

Objectives of Piloting for Egerton University in the Contract

The teams' main objective as outlined in the contract was, to pilot the Pandemic Preparedness with a One Health approach (PPOH) curriculum and identify its strengths and weaknesses.

The specific objectives were to:

- assess the suitability and the wholesomeness of the modules/ Topics for the PPOH in line with all the One Health Core competencies
- identify the curriculums gaps and weaknesses
- establish the appropriateness of the teaching materials
- obtain inputs and experiences of the learners and the lecturers
- embed the curriculum in the university syllabi for the development of future modules at the two collaborating universities/training institutions

In pursuit of the objectives above, Egerton University carried a number of activities. The activities undertaken broadly could be categorized as Preparation, Piloting, Evaluation and Report writing:



2.0 PREPARATION FOR PILOTING THE PPOH PILOT SHORT MODULE

In the preparation of the PPOH pilot short course, a number of activities were undertaken as follows:

2.1 Advertisement of short course and circulation

- Developed module information notes that were circulated to the university management and sent to the university website.
- Developed a poster advertising the short module, which was placed on all departmental and faculty notice boards. The university also use what's up messages to reach friends and alumni in all the six East African countries. The applicants were provided with application form to fill and were asked to provide evidence of their credentials. The participants were asked to apply by 14th -06-2019 (see advert in the appendix).
- The Advert was also posted on the Egerton University Websites
- This was in addition to the advert made and circulated by EAC Secretariat, PANPREP project.

2.2 Applications Received and Collated

- The applications were received and the selection was done in collaboration with Moi University on 15th –June-2019 at Nuru Place Hotel Nakuru.
- There were one hundred and twenty two (122) applicants who qualified, of which only eighteen (18) fully sponsored participants were selected and seven (7) self-sponsored trainees. Criteria for selection of the eighteen (18) participants were as follows:

Considerations for selection

- Trainees were from all the six East African countries, That is Rwanda, Burundi, Uganda, South Sudan, Tanzania and Kenya
- Eighteen (18) trainees were sponsored by EPOS that is. three (3) from each country and seven trainees were self- sponsored. All the self -sponsored trainees were from Kenya

There were thirteen (13) females and twelve (12) males. All the trainees selected had a bachelor's degree and above. The class was made up of multi-disciplinary and multi-sectoral participants therefore making the discussions interesting. The list of trainees is hereto attached as **Annex I**



2.3 Admission of Qualified Trainees

- Letters of admission were sent to all the trainees. Those who were coming from outside Kenya, were asked to send a scanned copy of their passport. Trainees were sent air tickets and local travel was also organized.
- The participants arrived on 30th June 2019, transported to Egerton University and were accommodated at the Agricultural Resource Centre (ARC), a facility at the Egerton University Main campus.
- Background of the trainees: Pharmacy, Doctor in General Medicine, Public Health, Community Development, Food Safety , Nutrition and Dietetics , Veterinary Medicine, Natural Resources, Environmental Health, Public Administration, Agricultural Education and Extension, Development Studies, Community Development, Economics and Statistics, Nursing, and Environmental Sciences.

2.4 Identification and Engagement of Facilitators

- The facilitators were identified from the Expert Working Group (comprising of lecturers from universities in the six (6) East African countries) including Moi University and Egerton University as seen in the list provided. The facilitators were drawn from Juba University (South Sudan), Makerere University (Uganda), Moi University (Kenya) and Egerton University (Kenya)
- The lecturers were provided with their respective modules asked to go through, make relevant changes and use the best method that they considered fit to teach a multidisciplinary, multi - sectoral group of participants
- A meeting was held to brief the lecturers/facilitators on the PPOH short course modules, outlining the key expectations on the 27th June, 2019. The PANPREP Pandemic Preparedness and One health advisor from EPOS Health Management was the key facilitator in the meeting of the lecturers / course facilitators The meeting aimed at developing a common understanding and enabling all facilitators to understand the module as outlined in the curriculum
- A list of Facilitators was drawn and is attached as **Annex III**
- The training tried to source expertise and experience from the local environment such as experts from wildlife, tourism and dairy plant in the university

2.5 Teaching Schedule of the PPOH short module

A teaching schedule (time table) was developed by the Module Coordinator in liaison with the PANPREP Advisor on Preparedness and One Health and provided to the lecturers/ facilitators. The teaching schedule is hereto attached as **Annex II**.

3.0 PILOTING OF THE MODULE

The PPOH Short Course was piloted from the 1st to 12th of July, 2019 at the CMRT Complex of the Egerton University Main Campus, Njoro, Kenya. Available rooms for the course, the teaching hall, the Computer Lab with 32 computer sitting and the Egerton University TEEL library.

3.1 Launch of the PPOH Short Module Training

Opening of the training by the Deputy Vice Chancellor Academic Affairs (Egerton University) Prof. Alexander Kahi. The Deputy Vice Chancellor noted that Egerton University is very grateful to the Government of Germany and GIZ for their financial support to make this short course a reality. He also thanked EPOS Health Management for choosing to host the first pilot at Egerton University. He gave his commitment that the university will continue training trainees both in Njoro campus (which is the main campus) and the Nairobi City College on PPOH Short course. He also informed the participants that the department of Applied Community Development (which is housing the programme) will come up with a post graduate diploma, which will be multi-disciplinary. He also added that the university will incorporate One health in some of the existing courses.

3.2 Participants' Expectations at the start of the PPOH

Participants were asked to give their expectations of the PPOH course, which were recorded as follows:

Equipped with more knowledge in Multi-sectoral and Multi-disciplinary Approach to handling disease outbreaks

- Dissemination of multi-sectoral intervention using one health Co-share skills among different sectors
- Infection prevention and control using one health approach.
- To have a clear understanding of nutrition plays a role in pandemic preparedness and even in multi-sectoral approach on the same.
- To relate gender and pandemic outbreak.
- Learn more on how climate change and ecosystem health affect pandemic spread or outbreak
- To know more on how migration, trade relates to pandemic outbreak. Wider knowledge in pandemic preparedness in one health approach.
- Simulation exercises for pandemic preparedness in use of one health approach concepts.
- Ecosystem health and climate change outbreaks understanding.
- Wider knowledge in pandemic preparedness in one health approach. Ecosystem Health and climate change outbreaks understanding.
- Networking with colleagues in this module.
- To learn more ways through which I can help in improvement of policies on infectious diseases.
- To gain and learn more knowledge on how one health approach can be used to prevent pandemic outbreak and preparedness.
- How to prepare and plan the intervention using one health approach.
- How to engage different stakeholders in implementation of inter disciplinary kind of programs.
- Get enough skills in one health approach.

- Learn more about global health security agenda / Achievements. Insights and practicability of one health approach in Kenya
- To appreciate cross cutting issues on zoonotic especially on food chains.
- Gaining innovations in pandemic preparedness using one health approach. Be skilled on how to respond to pandemics in collaborative manner.
- Cross boarder issues about crisis boarder sustainable pandemics preparedness.
- Gain How to use minimal resources available to control and prevent diseases both human and animal diseases.
- Networking with colleagues in this module.
- To learn more ways through which I can help in improvement of policies. Policies on infectious diseases in Kenya.
- Networking with other learners from East Africa involved in managing pandemic diseases.
- Resource mobilization and involving other sectors in managing outbreaks. How to communicate an outbreak and how to communicate crisis
- Learn how to mobilize resources during disease outbreak. Cross-cutting issues on zoonotic and food chains
- Role of government in pandemic preparedness
- To learn more on public health issues affecting both humans and animals

Community Engagement knowledge and practices

- Community preparedness in prevention of pandemic diseases.
- Models/ Mechanisms for community to respond to respond to disease outbreaks. Roles to community after the training.
- How community engagement affects pandemic outbreaks. How community engagement can affect pandemic breaks. How communities can be engaged in control of pandemics. How to involve communities in case of a pandemic.
- Role of communities in the area of zoonotic diseases Community approach to disease outbreak
- To gain skills on community education on emergency responses
- Gain skills on community education on disease control and prevention

Knowledge on disease outbreaks

- Disease outbreak prevention in emergency situations like refugee settlements. How to respond to human based on zoonotic diseases.
- Enhance knowledge and skills in pandemic preparedness and Surveillance. Broaden knowledge on Surveillance and Outbreak investigation.
- Simulation exercises for pandemic preparedness in use one approach concepts. To learn more on this module response.

- Be an expert in one health approach.
- To acquire knowledge that will expand my experiences in outbreak investigation and responses.
- Acquire more skills on pandemic preparedness.
- Gain knowledge and skills needed on pandemic preparedness
- To be equipped with instruments used for control and prevention of disease outbreaks.
- Learning materials in PPOH and enough simulations.
- Get skills related to disease outbreak prevention, mitigation and response specially in the field of:
 - Surveillance and outbreak investigation -Risk management
 - Preparedness planning. Sustainable strategies to control of disease outbreak and control.
- To learn more on disease outbreak response. How to approach a disease outbreak
- How to respond to humans based on zoonotic diseases
- Entrance knowledge and skills in pandemic preparedness and surveillance.
- To gain more knowledge and skills on pandemic responses
- How to respond to zoonotic diseases
- What to do in a disease outbreak occurrence

Others

- What role would we play in our countries and the EAC at large?
- Share experiences across EAC to learn experiences on coordination of various programs.

From the trainees expectations the team saw the need to add two modules,

- i) on infection prevention and control(IPC) and
- ii) Conducting simulation exercises. These were added and taught.



3.3 Mode of Delivery of the PPOH Short Course

The facilitators used combinations of the following modes of delivery to facilitate optimum learning among the trainees: lecture method, group discussion method, demonstration lessons, buzz groups, brainstorming, role plays and videos. This also included the Problem Based Learning approach to help the students to apply the skills and knowledge in One Health.

Further the:

- Trainees were also given assignments in groups (They were expected to read further on the topics), which they discussed among themselves and presented to the participants and facilitators present.
- facilitators also co-taught (where more than one facilitator handled the topic at the same time bucking one another and handling trainee's questions. As a result all the modules were quite interesting as seen in the Trainees' comments.
- Simulation, and infection prevention and control were added. This made the trainees understand better the concept of pandemic preparedness as seen in their comments.
- Every morning before the presentation of the modules of the day a representative of the class presented a recap of the previous day's proceedings. The trainees together with the facilitators reacted to the recap.

3.4 Field Visits

The trainees, as part of the training, made field visits to:

- i. Visit to Egerton University Dairy Processing Plant;**
The Visit to the dairy plant was aimed at quality control and identification of critical control points to ensure that processed foods do not spread diseases.
- ii. Lake Nakuru National park**
The aim was to see the human, animal and environment interactions with a disease control view in a natural ecosystem.

3.5 Evaluation Procedure

- During the training, an instrument was developed evaluating the individual module and participants were asked to fill, to evaluate the content of the module, relevance of the materials taught to pandemic preparedness with a one health approach, the flow of presentation, the mode of delivery and provide any other comments to help in improving the module.

3.6 Certificate Award

- The trainees were awarded certificates of participation with all the modules undertaken listed. The certificates which were signed by the Deputy Vice Chancellor Academic Affairs (Egerton University), Director Research (Egerton University), and the Team Leader Pandemic Preparedness with a One Health Approach Pilot short course and presented to the trainees by the DVC Research and Extension, Prof. Kibor.
- The facilitators were awarded certificates of facilitation and coordinators were awarded certificates of co-ordination. The Dean Faculty of Education and Community Studies presented the certificate

4.0 EVALUATION OF THE PANDEMIC PREPAREDNESS WITH ONE HEALTH MODULE BY TRAINEES AND FACILITATORS

4.1 Evaluation by the Trainees

Each module was evaluated by the trainees. The evaluation instrument was developed to assess individual modules as per: the Content of the module, Relevance of the materials taught and the flow of presentation. The trainees were also asked to freely give their recommendations for improvements of the modules. The items were rated as follows:

- Content of the module (Excellent, Very Good, Good, Fair, Poor, No comment)
- Relevance of the materials taught (Very Relevant, Relevant, Fairly relevant Not relevant)
- The flow of presentation

The tool for trainees to evaluate PPOH is attached as **Annex IV**

4.2 Evaluation by the facilitators

An instrument was also developed and filled by facilitators to evaluate the modules that they had facilitated. The facilitators were asked to give their comments on: the relevance of the Content, flow of the content, modes of delivery used by them to facilitate the module, preferred modes of delivery, reasons for using the modes preferred, challenges in the delivery of the module and their recommendations for improvements of the modules. The tool for facilitator's evaluation is attached as **Annex V**

The facilitators were given freedom to choose the mode of delivery that they thought would be best for delivery of the modules. However, they could only use what was available due to time and financial constraints.

5.0 RESULTS AND DISCUSSION OF THE EVALUATIONS

The results are discussed by module as follows:

PPOH 101: Introduction to Pandemics, One Health and Global Health Security

I. Content

The trainees who responded to the instrument, 87.5% said the content was very relevant and 12.5 % said that it was relevant. There was no trainee who said that the content was good, poor or very poor. The facilitators also said that the content was adequately covered in the module.

Comments by Trainees on content were as follows:

- More time is needed to cover the content, assignments and discussions.
- The skills and knowledge shared in this topic helped change the way I used to know pandemics.
- The concepts were too many leading to confusion
- It would be great if statistics of diseases by country, cross country/ continent was shown
- Helped understand more about one health approach
- Global health agenda dissemination needs more time allocation especially the linkage to IHR helped understand more about one health approach
- More detailed explanation on global health security agenda should be provided.
- More time required in IHR and GHSA, Concept of one health approach history needs more explanations.
- It would be great to show statistics of diseases by country, cross country/ continent Include more detailed explanation on global health security agenda, Give history one health approach
- More time for the module.
- Include statistics of various diseases in selected countries/ across regions/continents
- The skills and knowledge shared in this topic helped change the way I used to know pandemics.

II. Relevance of the module to pandemic preparedness with a one health approach

Seventy five percent (75%) of the trainees said that the module was very relevant and 25% said that it was relevant. None of the trainees said that the module was not so relevant, irrelevant or that they did not know. The facilitators concurred with the trainees that the module was relevant for the short module in Pandemic Preparedness with a One Health Approach.

Comments on Relevance of the module to pandemic preparedness with a one health approach

- The themes expounded in the module are much appreciated.
- The module helped trainees to understand global health security and the use of one health approach.
- It is more relevant as practical aspect in the daily life. Helped understand more about one health approach.
- Module critical for pandemic preparedness plan.

III. The flow of delivery as presented in the module

Sixty two point five percent (62.5 %) of the trainees said that the flow of delivery was very good and 37.5% said that it was good. The facilitators concurred with the trainees that the flow of delivery as presented in the module was good.

Comments on flow of delivery

- Learning materials sharing was a great idea
- The content of each theme in the module was addressed. Learning materials sharing was a great idea
- The flow was good, as the expectations were done from the basic concept building up
- It was easily understandable
- Need more time to take care of the slow and fast learners.

IV. Mode of delivery

Thirty seven point five percent (37.5%) of the participants said that it was excellent, 29% said that it was very good and 21% said that it was good. The facilitators used case scenarios as seen in selected videos, lectures, discussions of cases in class and group assignments. The facilitators said that they preferred these modes of delivery however; they were limited by time and finances.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach were as follows:

- Participatory approach was used which was good. More group discussions are needed
- Exercises and assignments enabled the trainees to become more familiar with the concepts
- Use of Group work was good
- Flow of slides is too quick for one to follow
- Use of participatory approach allowing the participants room to express their views.
- Good participation and discussions
- Use of participatory approach allowing the participants room to express their views.
- More practical exercise is required for more understanding

V. Other recommendations by the trainees to improve the module content and delivery

We should go back to one health approach and emphasize on how one can really use it.



PPOH 102: Surveillance and Outbreak Investigation

I. Content

Ninety three percent (93%) said it was very relevant in the short module on Pandemic Preparedness with One Health Approach and 7% said that it was relevant. The facilitators said that the content was adequately covered.

Trainees' comments on content:

- include outbreak investigation report writing
- More time needs to be allocated for the module
- More time is needed to cover the content, assignments and discussions Well organized
- Content is detailed
- Relevant unit in line with pandemics preparedness

II. Relevance of the unit to pandemic preparedness with a one health approach

Eighty percent (80%) of the trainees said that the module was very relevant for training pandemic preparedness with one health approach and 20% said that it was relevant.

The facilitators said that the content in the module was very relevant for teaching pandemic preparedness with a one health approach, and that epidemiology and outbreak investigation forms part of pandemic preparedness.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Gave broad understanding of the training on Non communicable diseases Emphasis is need on surveillance
- Applicable in real life.
- surveillance is important and relevant

III. The flow of delivery

Sixty eight percent (68 %) said that the flow of delivery was very good, 20% said that it was good and 12% did not respond to the question. The facilitators said that there was smooth flow of content.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- Expand on epidemiology
- Good delivery engaged participants Well organized

IV. Mode of delivery

Thirty six percent (36%)of the participants said that the mode of delivery was excellent, 48% said that it was very good, 4% said that it was good while 12% did not respond to the question. The facilitators used lectures, power point presentation, video clips and engaging trainees in discussions. The facilitators further said they would have preferred to use many case scenarios.



Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Engages participants Interactive
- Excellent mastery of content by trainer

V. Other recommendations by the trainees to improve the module content and delivery

- More time to allow detailed content coverage
- Theory on field work should come before visit such as dairy plant visit.
- Emphasize the need for community mobilization and engagement in surveillance More practical exercise is required for more understanding.
- Increase training time to three weeks
- Increase the scope of case studies, invite guest speakers to share. Include Group Discussions/share slides
- Include Counselling

PPOH 103: Impact of Outbreaks on Other Sectors

I. Content

Eighty six percent (86%) of the trainees said that the content was very relevant to pandemic preparedness with one health and 14% said that the content was relevant. The facilitators agreed with the trainees that the content was relevant for teaching 'Impact of Outbreaks on Other Sectors on pandemic preparedness.'

Trainees' comments on content:

- Easily understood the importance of sharing data Changed perception towards data management Brief and easily understood
- Helps realize how data is very important Add data quality
- Add more time
- Very important in real life
- Information is very sufficient
- The issue of impact has not been adequately handled.
-

II. Relevance of the module to pandemic preparedness with a one health approach

Ninety one percent (91%) of the trainee said that the module was very relevant, while 9% said that it was relevant. The facilitators said that the module was relevant in sensitizing individuals on the 'Impact of Outbreaks on Other Sectors'



Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Helps in minimizing rumors Relevant module materials,
- More time and practicals needed.
- Helps in improving data management skills
- Essential in almost all sectors for development

III. The flow of delivery

Sixty eight percent (68 %) of the trainees said that the flow of delivery was very good and 32 % said that it was good. The facilitators said that the sequencing of the topics in the module was good hence, influencing the flow of delivery.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

Needs more time for facilitation Module was Interesting
Delivery of module was not systemic

IV. Mode of delivery

Fifty eight percent (58%) of the participants said that mode of delivery of the module was excellent, 32% said that it was very good and 10% said it was good. The facilitators had no comment on the mode of delivery.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Group work was helpful Facilitator was interactive
- Illustration and group work was very effective Facilitators engaged participants,
- Effective teaching methodology Interesting

V. Other recommendations by the trainees to improve the module content and delivery

- Need to avail slides for reviewing purposes Add facilitator from media
- Give more examples with real life situations More time is needed for the module
- More practicals are needed for the module.



PPOH 104: Risk and Crisis Communication

i. Content

Ninety percent (90%) of the trainees said that the content of the module was very relevant for pandemic preparedness with one health, 5% said that the content was relevant, while another 5% did not respond. The facilitators said that the content was well covered, however there were limited case examples and video clips to use in the delivery of the module.

Trainees' comments on content

- Module content was not adequate The context is rather shallow.
- The coverage on all sectors was very educational. The multidisciplinary approach is effective.
- Very relevant examples given.
- Very practical in day to day activities.
- Gives justification for the need to strengthen the risk and crisis communication in one approach

ii. Relevance of the module to pandemic preparedness with a one health approach

Seventy seven percent (77%) of the trainees said that the module was very relevant while 23 % said that it was relevant. The facilitators said that the content was very relevant for pandemic preparedness with a one health approach.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- The first part of the module is not about impact and it can be better if to another module.
- The module material was much relevant to my expectations in all that was needed to be discussed.
- Brought out clearly that if one sector is affected by an outbreak then all sectors are affected.
- Binding further for the need of using one health approach as opposed to the tradition where health sector did it all.
- It was enabling us to highlight which sectors to be affected during outbreaks A good module that shows how all sectors will be affected by pandemics

iii. The flow of delivery

Eighty one percent (81 %) of the trainees said that the flow of delivery was very good and 19% said that it was good. The facilitators concurred with the trainees that the flow of delivery was good.



Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

The part focusing on impact flows well.

Was participatory where all sectors were discussed together in the groups Transition from one topic to another was good.

Good flow of delivery

IV. Mode of delivery

Fifty seven percent (57%) of the trainees said that the mode of delivery was excellent and 43% said that it was very good. The facilitators said that the modes of delivery that were available to them and hence they used included case examples, power point presentations, trainees participation and video clips. They said that time allowing they would have liked to engage the trainees in group discussions. They said that they preferred to use the delivery modes discussed because it encourages trainees participation which is very important in adult learning.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

Mode of presentation was mainly through the PowerPoint which is lacking in pictures and figures

Bringing in a facilitator from the wildlife and tourism sector really brought out the impact of outbreaks. Group work was effective.

It was excellent, the module was participatory Group work enabled us to discover new ideas. Needed more time

Methodology used to deliver the module was participatory and I learnt a lot from the module and group discussion.

The module was well done with the facilitator capturing most members on the room but more time should be allocated to the module.

v. Other recommendations by the trainees to improve the module content and delivery

- More time should be given.
- Share with the trainees the presentations done in groups



PPOH 105: Policy, Leadership and Governance

I. Content

II.

Eighty two percent (82%) of the trainees said that content of the Policy, Leadership and Governance module was very relevant and 18% said that the content was relevant. The facilitators agreed with the trainees that the content was relevant.

Trainees' comments on content

- More useful
- Very interesting
- Content was technical
- The content was well built and provided extra knowledge. Brief and understandable

II. Relevance of the module to pandemic preparedness with a one health approach Seventy seven percent (77%) said that the module was very relevant in the training of pandemic preparedness with a one health approach, while 23 % said that it was relevant. The facilitators concurred with the trainees that the module was relevant for the training of pandemic preparedness with a one health approach.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Gives insight on how collaborative efforts can be managed Very wonderful
- The content was well built and provided extra knowledge
- It helps in developing a workable, effective pandemic preparedness plan. It is so handy since governance and policy are guiding principles.
- Plays a big role since it governs every step to be taken
- It had relevance and important in the management of pandemics.
- It is important to have knowledge on the module so that you can influence policy making.

III. The flow of delivery

Eighty one percent (81 %) of the trainees said that the flow of delivery of the module was very good and 19% said that it was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- The flow was good from the basic concepts to the details Good participation of members
- The situations and topic put in context appeared real and understandable. Experienced lecturer

IV. Mode of delivery

Fifty seven percent (57%) of the participants said that it was excellent and 43% said that it was very good

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Participatory approach
- Too much economic terms Very good
- Good delivery with several practical aspects Presenter had presentation skills

V. Other recommendations by the trainees to improve the module content and delivery

- Look at global polies and discuss in the support or contradict with national policies. More time is needed
- Need for lecturer with economic health background.
- It should be more involving other than being too much of a lecture More practical time
- Relevant module
- Emphasis should be on policy making
- Use experience from leaders in authority to be mentors on the topic.

PPOH 106: Partnership and Resource Mobilization

I. Content

Eighty percent (80%) of the trainees said that the module was very relevant, 15 % said that it was relevant, and 5% of the respondents did not respond. The facilitators said that the content was relevant, however it was too wide and should be split into two modules, one on partnerships and one on Resource mobilization.

Trainees' comments on content

- I would like to know whether prevention comes first before mitigation Include content on the dos and don'ts of resource mobilization
- I learnt how resource mobilization is very important
- The principle of effective partnerships and sources of conflicts in partnership was very crucial.
- Comprehensive content with detailed explanations that brought out one health approach.
- Enriched my understanding
- You may add lobbying and organization skills as subtopics Practical sessions would be great if included
- Share guiding materials to learners Very good and relevant content

Relevance of the module to pandemic preparedness with a one health approach

Eighty percent (80%) said that the module was very relevant and 20% said that it was relevant. The facilitators agreed with the trainees that the module was relevant in teaching pandemic preparedness with a one health approach.



Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Relevant as it gives hands on activities that leave everyone ready in case of an emergency.
- It was key to the approach to be taken when working together Participation was good
- Key for implementation of any activity to achieve and develop the community
- Will help guide us to identify partners and resources needed in our country pandemic preparedness plan
- It stipulated well the need of partnership and brought out ways to help mobilize resources to help in pandemic preparedness
- Very good in our settings to ensure collaborative efforts in solving our own problems The unit is quite relevant

III. The flow of delivery

Seventy eight percent (78 %) said that the flow of delivery was very good and 22% said that it was good. The facilitators concurred with the trainees that the flow of delivery was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach.

- It was fast but I picked a lot In case of emergency preparedness Very organized flow
- Great flow indeed
- Good flow, introduction of a topic was leading to the next topic. All questions asked to the lecturer were answered effectively Good engagement of all participants
- Participation was good
- Facilitators were quite informed

IV. Mode of delivery

Sixty percent (60%) of the participants said that the mode of delivery of the module was excellent and 40% said that it was very good. The facilitators said that they used video clips, power point projections, lecture, group discussions and use of alternate facilitators. The facilitators said that they could prefer all the listed modes of delivery but in addition, role play would be useful combined with a trip to an organization/company for students to learn firsthand. The facilitators said that the modes of delivery would help the trainees to internalize the concepts.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- There was participatory approach that involved everyone Learners involvement was really taken into consideration
- The presenter took time to ask questions and most of the answers came from participants therefore good involvement
- The module was well delivered, good understanding of it

V. Other recommendations by the students to improve the module content and delivery

- I suggest that you include content that may help participants know different ways of resource mobilization.
- How can the business factor contribute to smooth partnership especially during a pandemic outbreak?
- Time constraints therefore the course was not exhausted. Learners require to be supported with learning materials
- A split of the topic into: Partnership, resource mobilization. This will help to give more content and insight on both areas.

PPOH 107 Pandemic Preparedness Planning

I. Content

Ninety percent (90%) of the trainees said that the content was very relevant and 10 % said that the content was relevant. The facilitators said that the content had good coverage.

Trainees' comments on content

- The module was very critical to the pandemic preparedness plan
- The preparedness planning was relevant and it has added me with knowledge and skills to do pandemic preparedness plan
- Quite relevant in pandemic interventions
- Module well organized and important aspects well captured
- The content is very relevant and we appreciate because highlighting the core elements of pandemic preparedness plans which will guide us to make our national pandemic plan

II. Relevance of the module to pandemic preparedness with a one health approach

Ninety percent (90%) said that it was very relevant and 10 % said that it was relevant. The facilitators said that the module was very relevant for pandemic preparedness with a one health approach.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- The module is relevant to area of community engagement in preparedness planning Very relevant in health and related sectors to safeguard health of the community
- The module is the backbone of the training
Very relevant enabling us to have knowledge and skills on how to prepare for effective response to pandemic

III. The flow of delivery

Sixty nine percent (69 %) said that it was very good, 14% said that it was good, and 17 % did not respond. The facilitators commented that the module had good flow of content.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

The flow was good as the explanation was done from the basic concept well organized with great participatory forums and group discussions



IV. Mode of delivery

Fifty nine percent (59%) of the participants said that it was excellent, 38% said that it was very good and 3% did not respond. The facilitators said that they used video clips, lecture, power point presentations and case examples as modes of delivery. They said that they preferred case example and video clips as modes of delivery, because they encourage learner participation.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Was delivered nicely
- This was very key given that it is illustrative of a practical situation
- Done via participatory manner and the facilitators were competent with the subject matter
- quite participatory
- It would be better to increase more time to this module

V. Other recommendations by the trainees to improve the module content and delivery

- In table top simulations you may add few visuals as it might add another layer of reaction Visitation to the various facilities for learning purpose (field experience)
- A drill on the preparedness and planning would have helped in grasping the concepts The module is an essential part of practical
- The module was very important, it brings out some essential aspects and standard which are neglected most of the time but are crucial in outbreaks
- More practical sessions on case studies to be done Allocate more time for the module
- There is need to share the presentation slides with the participants for reference and self-studying
- The module seems to be more important in almost all sectors therefore needs practical exercise
- To share the slide to the participants
- Being the practical part of learning more case studies and demonstrations probably simulations will be quite relevant to enhance preparedness in case of real scenarios

PPOH 108 Impact of Outbreaks on Other Sectors (agriculture, tourism and wildlife)

I. Content

Ninety percent (90%) of the trainees said the content of Impact of Outbreaks on Other Sectors (agriculture, tourism and wildlife) module was very relevant and 5% said that the content was relevant, while another 5% did not respond. The facilitators said that the module content to pandemic preparedness with a one health approach was very relevant, they said that the content coverage was good however more needs to be done to improve on the content. The topic is too broad and that the module could be broken into three modules.

Trainees' comments on content Time not adequate.

- The issue of impact has not been adequately handled. The context is rather shallow.
- The coverage on all sectors was very educational. The multidisciplinary approach is effective.
- Very relevant examples given.
- Very practical in day to day activities.



-
- Gives justification for the need to strengthen the one approach Suggested subtopic for gender and outbreaks

II. Relevance of the module to pandemic preparedness with a one health approach

Seventy seven percent (77%) of the trainees said that the module was very relevant while 23 % said that it was relevant. The facilitators agreed with the trainees that the module was very relevant for training in pandemic preparedness with a one health approach.

Trainee' comments on Relevance of the module to pandemic preparedness with a one health approach

- The course material was much relevant to my expectations in all that need to be discussed.
- Brought out clearly that if one sector is affected by an outbreak then all sectors are affected.
- Binding further for the need of using one health approach as opposed to the tradition where health sector did it all.
- It enabled us to highlight which sectors may be affected during outbreaks A good module that shows how all sectors will be affected by pandemics

III. The flow of delivery:

Eighty one percent (81 %) of the trainees said that the flow of delivery was very good and 19% said that it was good. The facilitators said that the flow of the content was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- The part focusing on impact flows well.
- Was participatory where each sectors were discussed together in the groups Transition from one topic to another was good.
- Facilitator quite informed. Good flow of delivery

IV. Mode of delivery:

Fifty seven percent (57%) of the participants said that the mode of delivery was excellent and 43% said that it was very good. The facilitators used lecture, power point presentations, group discussions and video clips. They said that they would have also used case studies and class trips with availability of funds and time. The modes they said they preferred because they increase learner participation and experience.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Mode of presentation was mainly through the PowerPoint which is lacking in pictures and figures
- Bringing in a facilitator from the wildlife and tourism sector really brought out the impact of outbreaks.
- Group work was effective.
- It was excellent, the course was participatory
- Methodology used to deliver the course was participatory and I learnt a lot from the course and group discussion.
- Group works were enabling us to discover new ideas. Need more time



V. Other recommendations by the trainees and facilitators to improve the module content and delivery

- More time should be allocated.
- Share with the trainees the presentations done in groups
- The course was well done with the facilitator capturing most members on the room
- Increase case examples in the module
- Avail more short relevant video clips to motivate learners. Include demonstrations.

PPOH 109: Trade, Migration and Outbreaks

I. Content:

Ninety six percent (96%) of the trainees said that the content of the module was very relevant and 4% said that it was relevant. The facilitators said that the content was relevant for training pandemic preparedness with a one health approach. However, the coverage was too wide and the time too short. Therefore it were better if the module was divided into two that is trade and outbreaks and migration and outbreaks.

Trainees' comments on content

- Very useful in improving livelihood and national economy Captured all information needed.
- Essential for the course
- Relevant in understanding trade/immigration contribute to pandemics
- Statistics (human immigration) among EAC countries be included this will help weigh to pandemic risks.
- Trade and migration is one of the factor that impact our health Had authentic information which helped to understand
- Very important

II. Relevance of the module to pandemic preparedness with a one health approach

Eighty seven (87%) of trainees said that the module was very relevant in the training of pandemic preparedness with a one health approach and 13% said that it was relevant. The facilitators concurred with the trainees that the module was very relevant.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Clear objective
- Relevant as trade and migration are one of the pandemic drivers Backbone in pandemic preparedness
- Important in pandemic preparedness
- Brought real scenarios and handling measure
- Due to porous borders there is high rate of spread of diseases Trade and migration are driving factors for pandemic spread.
- I really understood how trade may contribute to the spread of infectious diseases



III. The flow of delivery:

Seventy eight percent (78 %) of the trainees said that the flow of delivery was very good and 22% said that it was good. The facilitators said that the flow of items within the module was good

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- Facilitator well informed with a lot of diversified information Good starting with basic knowledge build up
- Flow was systematic with main thematic concepts highlighted. Informative and participatory

IV. Mode of delivery:

Eighty five percent (85%) of the trainees said that the mode of delivery was excellent and 15% said that it was very good. The facilitators used video clips, power point, case studies and lectures.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Use of various examples and scenarios as well as videos was quite good. Participatory approach and give chance to trainee to air their views.
- The video clip gave a clear message Very insightful
- Videos were very informative.
- Videos were so handy, brought out reality of the subject matter Lecturer had expertise and experience

V. Other recommendations by the trainees and facilitators to improve the course content and delivery

- More emphasis on international trade restrictions in relation to the diseases outbreak
- Share the information More time.
- More case studies should be included in the module
- More content and data on how trade, immigration facilitated spread of disease.



PPOH 110: Introduction to Ecosystem Health, Climate Change and Outbreaks

I. Content:

Eighty seven percent (87%) of the trainees said the content was very relevant and 13% said that the content was relevant. The facilitators said that the content was relevant; however the title of the module should just be Ecosystem Health, Climate Change and Outbreaks because there is nothing in the module including the purpose that has anything to do with introduction.

Trainees' comments on content

- Very relevant in relation to pandemic preparedness
- Very informing and showing the interdependence between animals, human and environment.
- Clearly elaborates importance of ecosystem in prevention and control of pandemics
- Helps to conserve in which all health aspects are based Articulated well all my expectations from the course.
- Ecosystem unit compounds the epidemiological triad where environment, Human and animal interact.

II. Relevance of the unit to pandemic preparedness with a one health approach:

Ninety one percent (91%) of the trainees said that the module was very relevant in the training of pandemic preparedness with a one approach while 9 % said that it was relevant.

Trainees' and facilitators' comments on Relevance of the module to pandemic preparedness with a one health approach

- Motivated me to be a change agent in the aspect of surrounding climate and environment.
- Brought out the interrelation of human, animals and the environment Relevant in relation to pandemic preparedness.
- Very relevant with real life situation.
- Learnt the interactions of animals, human and environment.
- Facilitated flow of information to the deep sited roots of factor as influencing pandemics.
- Ecosystem plays a big role in disease control and outbreak.

III. The flow of delivery:

Sixty five percent (65 %) of trainees said that the flow of the content was very good and 35% said that it was good. The facilitators concurred with the trainees that the flow of the content was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- Very organized flow
- Very participatory and not boring.
- Delivery flowed leading to topics flowing from one topic to another with an ease. Started with basic concept to allow in-depth understanding.
- Flow was great.

IV. Mode of delivery:

Sixty four percent (64%) of the trainees said that mode of delivery was excellent 27% said that it was very good and 9% said that the mode of delivery was good. The facilitators used power point presentation, demonstrations, lecture and group discussion. They recommended trips and case studies with availability of time and finances.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Very good mode of delivery and videos showing real states of things are in the world
- Helped in giving examples that helped in understanding.
- Relevant real scenarios were handy for understanding.
- Participatory approach and gave chance to trainee to air their views. Demonstrations were used to clearly deliver the message.
- I enjoyed and learnt a lot. The unit was participatory and was very well delivered. Participatory learning through group works.
- Facilitators should keep time.
- Facilitators should engage participants more. There was active participation.

V. Other recommendations by the trainees and facilitators to improve the module content and delivery

- Emphasis on climate change and how it facilitates outbreaks and diseases. More time.
- More time and include more discussions.
- The relationship in one health was not brought out clearly. The course is more useful and need more time
- Demonstrations were used to clearly deliver the message.
- I enjoyed and learnt a lot. The unit was participatory and was very well delivered. Facilitators should keep time.
- More insight into relevance to one health on climate change, pathogens and issue of disposal of pathogenic.



PPOH 111: Fundamentals of infectious diseases

I. Content:

Eighty nine percent (89%) of the trainees said that the content was very relevant and 11 % said that it was relevant. The facilitators said that the content was relevant for the course in general as it captures the most important aspects of infection and intervention. They said that the content is adequate for the course.

Trainees' comments on content

- Very relevant touching many areas that are critical in pandemic preparedness Touched a number of areas in pandemic preparedness.
- So handy as it covered both animals and human health in relation to infection Relevant because it focused on the basic concept of disease transmission.
- Include outbreak investigation report writing

- II. Relevance of the unit to pandemic preparedness with a one health approach:** Eighty nine percent (89%) of the trainees said that the module was very relevant in the training of pandemic preparedness with a one health approach and 11 % said that it was relevant. The facilitators agreed with the trainees that it was relevant.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- Very relevant to the current and existing situation Backbone module in pandemic preparedness.
- Relevant in understanding the disease chain and where it can be broken to prevent and control infections
- Health of animals is directly or indirectly related to human health, therefore when animals or humans are infected, then it is a concern of all sectors.

III. The flow of delivery:

Sixty nine percent (69 %) of the trainees said that the flow of delivery was very good, 28% said that it was good, and 3 % said that it was poor. The facilitators said that the flow of delivery was satisfactory with continuity perfectly done in sequence to allow continuum for sequential understanding.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach.

- Use of visuals examples for demonstrations was very good and highly recommended
- Very organized flow
- The course was not well structured

III. Mode of delivery:

Fifty nine percent (59%) of the trainees said that the mode of delivery was excellent, 38% said that it was very good and 3%.did not respond. The facilitators used face to face interaction, and video clips. In addition to the listed modes of delivery the facilitators would have preferred online videos. The facilitators said that the reason for this was audience engagement.

Trainees' comments on the mode of delivery of the unit to pandemic preparedness with a one health approach

- It was good because we had the opportunity to interact with practical situations of different animal diseases
- It was church based thus not all participants were involved.
- Presentation by 2 speakers made the delivery not monotonous as kept concentration to the diverse aspects presented
- Very broad content
- Done with relevant case study that provided more insight on the subject.

V. Other recommendations by the trainees and facilitators to improve the module content and delivery

- Look at all infectious diseases that are there in EAC detailed that is understand all the signs, symptoms and the vectors.
- More time.
- I recommend the module for this short course
- More equipment for practical purposes by participants Learners require reference materials.
- It was a crucial unit but needs to be connected with IPC for it to be well delivered. Need more cases about infectious disease, prevention and control.
- More time and should be combined with PPOH 102

PPOH 112: Community Engagement and Pandemics

I. Content:

Ninety three percent (93%) of the trainees said that the content of the module was very relevant and 7% said that it was relevant. The facilitators also said that the content was relevant and that the content coverage was good, however community engagement is wide and therefore needs more time.

Trainees' comments on content

- Very relevant content in relation to pandemic preparedness More useful
- The content was well built and provided extra knowledge. Concise and Rich in terms.
- Brief and understandable Very interesting

II. Relevance of the module to pandemic preparedness with a one health approach:

Eighty percent (80%) of the trainees said that the module was very relevant and 20% said that it was relevant. The facilitators concurred with the trainees that the content was relevant.

Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- A backbone to pandemic preparedness course as community engagement in pandemics is key in finding solutions.
- The need for collaboration of different groups in fighting pandemics was well explained.
- Gives insight on how collaborative efforts can be managed.
- It helps in developing a workable, effective pandemic preparedness plan. It is so handy since governance and policy are guiding principles.
- It is important to have knowledge on the course so that you can influence policy making.
- It had relevance and importance in the management of pandemics.
- We learnt the role of community development agents in pandemics, principles of community engagement in planning and implementation phases.
- Plays a big role since it governs every step to be taken

III. The flow of delivery:

Seventy seven percent (77 %) of trainees said that the flow of delivery was very good, 23% said that it was good. The facilitators agreed with the trainees that the flow of the content in the module was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- Good from the basic concepts to the details Good participation of members
- The situations and topic put in context appeared real and understandable Experienced lecturer
- Participants contribution made it interesting

IV. Mode of delivery:

Fifty seven percent (57%) of the participants said that the mode of delivery was excellent and 43% said that it was very good. The modes of delivery used by the facilitators included, video clips, lecture, group discussion and alternate lecturers for various topics. The facilitators said that they would still prefer to use the outlined modes of delivery however with availability of time and funds they would take the trainees to the field to engage with them practically. This they said would help the students to internalize the concepts.

Trainees' comments on the mode of delivery of the unit to pandemic preparedness with a one health approach

Participatory approach used was commendable
An excellent mode of delivery with active participation of participants. Presenter had presentation skills

V. Other recommendations by the trainees and facilitators to improve the module content and delivery

More emphasis on group formation and dynamics for effective community engagement.

More time required

There should be practical involvement with the community to enhance skills. It should be more practical

More time should be allocated

PPOH 113: Gender and Outbreaks

I. Content:

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Seventy seven percent (77%) of the trainees said the content was very relevant. The facilitators said that the content was relevant, useful and well covered.

Trainees' comments on the content

- Content was key for pandemic preparedness with a one health approach The content was rich enough
- It is important to understand the various gender roles in accordance to the community in perspective and how this roles play their part in pandemic preparedness
- It is relevant as it describes the social related aspects

II. Relevance of the module to pandemic preparedness with a one health approach:

Seventy three percent (73%) of the trainees said that the module was very relevant and 23% of the participants said that it was relevant. The facilitators agreed with the trainees that the module was relevant for the training of pandemic preparedness with a one health approach.

Trainees' comments on Relevance of the Module to pandemic preparedness with a one health approach

- Gender development and duties is key in the social setups which is so handy and crucial in this course.
- A very relevant module that explains the relation between gender and exposure to diseases.
- Well explained showing how gender roles impacts/ leads to preparedness of pandemics
- This course is very relevant because we understood how gender differences influence emerging infectious diseases
- Relevant to pandemic preparedness context
- Understanding the gender and their roles helps know how to approach prevention and control of pandemics
- Understanding gender roles is crucial in pandemic prevention and control
- Gender equality and equity brings about understanding of how to minimize unfairness in the community
- This module is relevant to my field of profession in gender sensitivity in community engagements
- The module is relevant as it involves the key stakeholders, that is the social context

III. The flow of delivery:

Sixty nine percent (69 %) of trainees said that the flow of delivery was very good and 31% said that it was good. The facilitators concurred with the trainees that the flow of delivery was good.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- The delivery was flowing from topic to topic and interrelated Quite participatory
- The flow was smooth
- Starts with basic concepts

IV. Mode of delivery:

Fifty four percent (54%) of the trainees said that the mode of delivery was excellent, 25% said that it was very good, and 21% said that it was good. The facilitators used video clips, case studies, lecture and group discussions.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- The video clips and cases were so handy in the module for contextualization. Discussions were so targeting
- An excellent mode of delivery accompanied with participation of members and video clips
- Very organized
- Involving the trainees in the discussion was nice. It enhanced our understanding of the course
- Very Good
- This had practical sessions which enhanced learning because "What I hear I forget, what I do, I know" The video clips were very helpful
- The slides were somehow crowded
- Very well done/ facilitated very relevant, however, more time needs to be allocated for this module
- Very good with visual aspects (video clips) to emphasize and bring the full picture of the context



V. Other recommendations by the trainees and facilitators to improve the module content and delivery

- More discussion time
- Communities of different regions have different cultural, socio-economic norms so open discussion for participants is recommended
- Module is important for preparedness
- Involving the trainees in the discussion was nice. It enhanced our understanding of the course
- More group discussion recommended
- The unit was well presented. I recommend the unit for the short course
- More time should be allocated to this module as well because it's a very rich area that needs more time to be exhaustively elaborated
- Use of more examples in real life situations where diseases have spread more because of gender based issues
- Look further on acts, policies that have been put in place to achieve gender equity and equality
- Discussions time is required as it is an important aspect that each individual lives add in curriculum on gender analysis tools in relation to disease surveillance, response, prevention and control

Infection Prevention and Control (IPC)

I. Content:

Eighty six percent (86%) of the trainees said that the content in the module was very relevant and 14% said that it was relevant. The facilitators agreed with the trainees

Student comments on content

- Certain more practical aspect which is essential in fighting against pandemic threats
- The content was rich with real life situations and enough explanations
- Very relevant and was compounded by the demonstrations on donning and doffing
- The content should also include spraying as part of disinfection
- well organized topics. Very important skill videos and theory very key for effective response

II. Relevance of the module to pandemic preparedness with a one health approach:

Eighty six percent (86%) of trainees said that the module was very relevant for training pandemic preparedness with a one health approach and 14 % said that it was relevant. The facilitators concurred with the trainees that the module was relevant.



Trainees' comments on Relevance of the module to pandemic preparedness with a one health approach

- More relevant as infection preventing and control is concerned
- Very relevant and authentic in terms of disease and control in case of pandemics and outbreak
- The module is so handy and touches on critical components of infection control This is very relevant because we learnt methods of reducing spread of infection,
- how to use PPE
- IPC is the epitome of the whole pandemic preparedness responders requires these skills otherwise they can become part of the problem by spreading infections or even succumbing

III. The flow of delivery:

Seventy seven percent (77 %) of trainees said that the flow of delivery was very good, 18% said that it was good, and 4.5 % said that it was poor.

Trainees' comments on the flow of delivery of the module to pandemic preparedness with a one health approach

- Good, more concepts in relating with real life
- Very good because of the knowledge experience and skills of the facilitators
- This is very relevant because we learnt methods of reducing spread of infection, how to use PPE
- Quite organized and fitting into each other in reaction to the whole course

IV. Mode of delivery:

Seventy six percent (76%) of the trainees said that the mode of delivery was excellent, 14 % said that it was very good and good 9.5%. The facilitators used lecture, demonstrations, video clips and group discussions to deliver the content.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

- Very good delivery with demonstrations to make in-depth understanding Used enough visual demonstration
- Good delivery, very participatory
- Excellent presentation with learners involvement as well as practical demonstration
- Very broad content
- The facilitators were really involving. Active participation

V. Other recommendations by the trainees and facilitators to improve the module content and delivery

- The module if possible should stand on its own to allow more practical aspect both in class and field environment
- I recommend that participants be given a chance to visit isolation units and quarantine centers to understand better how they work
- More demonstrations exercises on donning and doffing under different settings for example high risk situation (Ebola case), normal routine hospital practice this module is



so critical and I would recommend it be included among the modules to be done in this course

- The module was very important, it brings out some essential aspects and standards which are neglected most of the time but are crucial in outbreaks
- I highly recommend the module for this short course,
- Allow all the participants to exercise on donning and doffing of PPES
- this is a good module and should be included in the course for more practical sessions to be given to enhance knowledge on PPE practically
- The module requires to be conducted to enhance the practical skills for the learners/ responders
- Great work indeed.
- More time is needed for this module especially for practice Prevention aspect needs to be more developed
- More insight on field based approaches to human, animal and pharmacological agents especially since most elements are not ideal
- More of these practical sessions should be conducted because they strengthen on theoretical part
- Provide more opportunities to participants to practices various IPC procedures Use of case studies to enhance the course

Simulation (SIMMEX)

I. Content:

- One hundred percent (100%) of the trainees said that the content of the simulation was very relevant. there were no comments on the content from the trainees.

II. Relevance of the module to pandemic preparedness with a one health approach:

- All the trainees (100%) said that the simulation was very relevant for the training of pandemic preparedness with a one health approach.
- The trainees said that the simulation was the backbone of the training

III. The flow of delivery:

- Ninety percent (90 %) said that the flow of delivery was very good and 10% said that it was good

V. Mode of delivery:

- Sixty two percent (62%) of the trainees said that the mode of delivery was excellent, 29% said that it was very good, and 9% said that it was good.

Trainees' comments on the mode of delivery of the module to pandemic preparedness with a one health approach

the simulations made the concept of infection, prevention and control be understood

V. Other recommendations by the trainees and facilitators to improve the course content and delivery

- Adequate practical materials should be provided for more practice More time should be allocated.

- More simulation should be added
- More practice session should be added
- More example required with practical aspects
- More time should be added for simulation exercises Should be done in real time situation at the hospital

Facilitators guide for the course on Pandemic Preparedness with a One Health approach are hereto attached as **Annex VI**

6.0 PPOH STRENGTHS, WEAKNESSES AND CHALLENGES NOTED

6.1 Strengths

- The course was popular with all professions judging from the number of applicants and their qualifications.
- The modules tackled pandemic preparedness with a one health approach exhaustively. The trainees gained the following skills:
 - How to use minimal resources available to control and prevent diseases both human and animal diseases.
 - Cross boarder issues about crisis boarder sustainable pandemics preparedness.
 - Policies on infectious diseases and role of governments in pandemic preparedness
 - Resource mobilization and involving other sectors in managing outbreaks
 - Cross-cutting issues on zoonotic and food chains.
 - Community engagement in pandemic preparedness

6.2 Weaknesses

- More modes of delivery should be used rather than just the modules for example, video clips, trips, demonstrations and role plays.
- Most of the modules were too wide necessitating split of the modules or allocating more time to the presentations of the modules or both.
- The modules did not cover much on the management of the pandemics

6.3 Challenges

- The time allocated to the short course was too short
- The finances delayed, resulting in borrowing from other accounts in the university
- A large number of trainees (122) applied and qualified bit only eighteen were sponsored.

7.0 CONCLUSION

- The multi-disciplinary and multi-sectoral combination of trainees helped a lot in the discussion of various modules which made the learning very interactive.

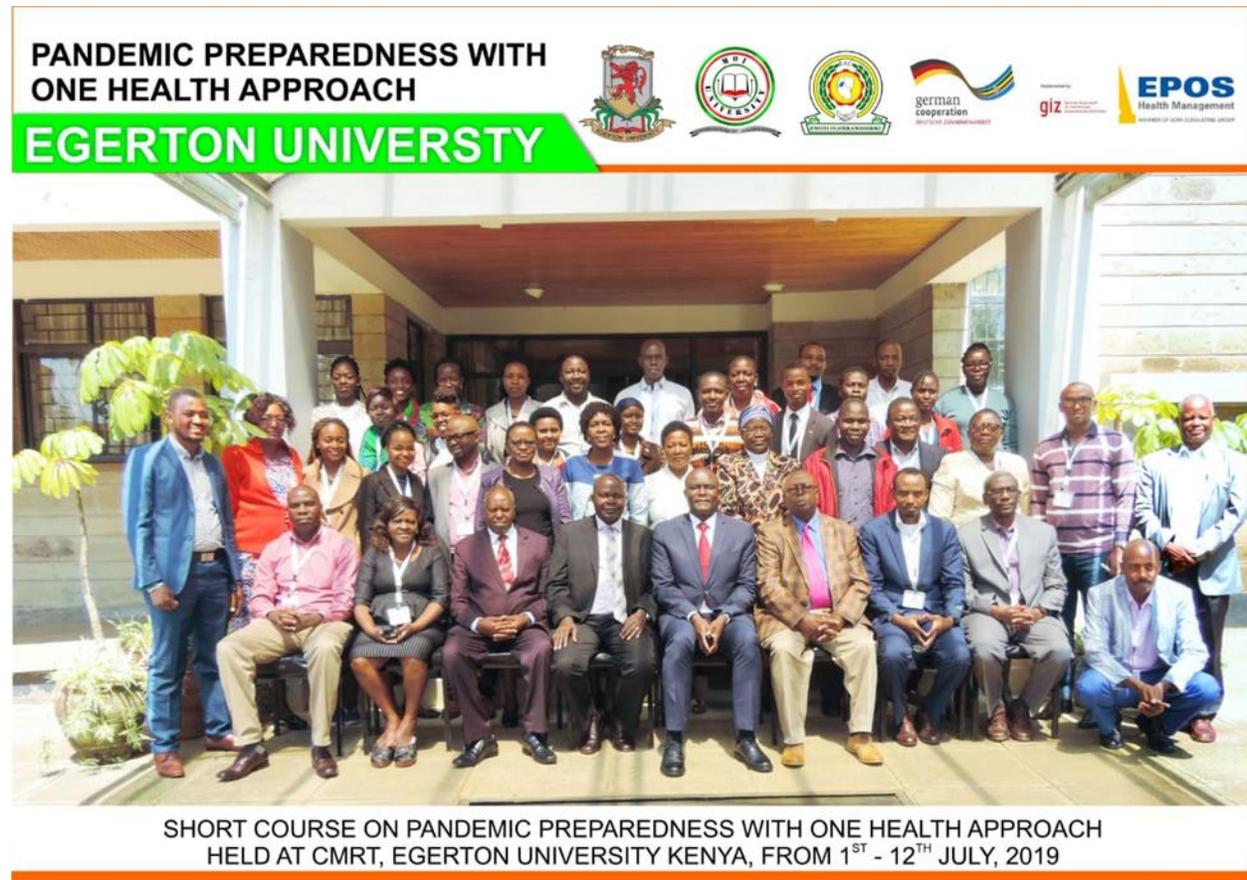
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- The modules were well developed with adequate content and sequence to train pandemic preparedness with one health approach.
 - Many of the modules require splitting as the content is quite wide. Food safety and Water & Sanitation could be considered as two new respective modules.
 - The modules should be improved, factoring with more pictures, figures and facts from various countries.
 - A number of trainees and facilitators wished to have a copy of the modules. An arrangement should be made for this to happen.
 - The time for training was very short, the trainees and facilitators recommended that most modules be allocated more time
 - All the facilitators were committed/ interested in delivering their modules. This means that there are enough personnel in the six East African countries to handle the training.
 - Quite a number of facilitators used were from Egerton University, meaning that Egerton University can efficiently run the training.
 - There were enough facilities in Egerton University, this means that the University can comfortably hold the training for trainees from all over the world.

10.0 RECOMMENDATIONS

- a. **There is need for the facilitators to look at the comments given by the students as per unit, and using the provided modules and their additional materials improve the modules.**
- b. **The observations and comments made by both the trainees should be used to improve on the modules, which should then be tested in the next training.**
- c. **Universities and colleges in East Africa and the world over should be encouraged to embrace the course, to train professionals in all fields to be prepared and manage pandemics.**
- d. **A similar course on management of pandemics with a one health approach should be developed.**
- e. **Personnel in various organizations such as the armed forces, police, Non-governmental organizations, national and local governments should be trained on pandemic preparedness with a one health approach**
- f. **Consider introducing Food safety and Water & Sanitation as two new respective modules**

8.0 BUDGET

The money disbursed before the training commenced USD 24,000 is used up with a number of payments still pending as shown in the expenditure summary and 40% budget in the attached folder.



In the Center (Blue Suit) is Prof. Alexander Kahi, the Egerton University , Deputy vice Chancellor Academic Affairs



Annexes

Annex I: List of the Trainees, Course Coordinators and Facilitators

Annex II: Teaching schedules (Timetable)

Annex III: Facilitators by Module

Annex IV: Evaluation tool (trainees)

Annex V: Evaluation tool (Facilitators)

Annex VI: PPOH Modules Facilitators guide for the course on
Pandemic Preparedness with a One Health approach