SEMESTER 6
LEARNING AND FOCUS GROUP DISCUSSION GUIDELINES

STUDENT BOOK

UNIVERSITAS GADJAH MADA
FACULTY OF VETERINARY MEDICINE
Adress: Jl. Fauna No. 2, Karangmalang, Yogyakarta 55281, Indonesia
Telp. 0274-560862, Fax. 0274-560861
e-mail: fkh@ugm.ac.id

Learning and Focus Group Discussion Guidelines Semester 6
Third Edition
2018

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FGD Book for Student

Semester 6

Scenario 1-4

Integration and Synergy Courses:

- Veterinary Immunology
- Fish and Shrimp Diseases Science
- Veterinary Clinical Diagnostic
- Pharmacotherapy II and Toxicology
- Animal Laboratory Science
- Veterinary Public Health
- Zoonosis
- Clinical Pathology Case and Interpretation

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COMPILER TEAM

Coordinator

Advisor: drh. Agung Budiyanto, MP., Ph.D

Chairman:
- Dr. drh. Tri Wahyu Pangestiningsih, MP.

Secretaries:
- Dr. drh. Yatri Drastini, M.Sc.
- Dr. drh. Amelia Hana, MP.

Members:
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- Prof. drh. Widya Asmara, SU., Ph.D.
- Dr. drh. Yuli Purwandari Kristianingrum, MP
- Dr. drh. Soedarmanto Indarjulianto
- Dr. drh. Agustina Dwi Wijayanti, MP.
- Prof. drh. Bambang Hariono, Ph.D.
- Dr. drh. Doddi Yudhabuntara
- drh. Christin Marganingsih S., M.Si.

Technical Practitioners:
- Heru Dwiatma. S.Pt., M.Si.
- Murjiyo

Facilitators:
- Prof. drh. Widya Asmara, SU., Ph.D.
- Dr. drh. Tri Untari, M.Si.
- Prof. Dr. drh. AETH Wahyuni, M.Si.
- Dr. drh. M. Haryadi Wibowo, MP.
- Drh. Sidna Artanto, M.Biotech.
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- Dr. drh. Agustina Dwi Wijayanti, MP.
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- drh. Christin Marganingsih Santosa, M.Si.
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- drh. M.Th. Krisdiana Putri, MP., Ph.D.
- Roza Azizah Primatika, S.Si., M.Si.
- Dr. drh. Yatri Drastini, M.Sc.

PREFACE

Education goals of Faculty of Veterinary Medicine Universitas Gadjah Mada (FKH UGM) which has been set in Renstra FKH UGM 2013-2017 are generating competent veterinarian in handling animal diseases and harmonizing animal health, human and its environment health, as problem solver pioneer of animal health problem, and ready to carry technical duties that fulfill standard competency of veterinary profession. Therefore it needs Higher Education curriculum that adjusted and harmonized to existing needs and developments, assessed periodically minimum once in 5 (five) years so that it fits to needs and demands of Higher Education graduates public user. Faculty of Veterinary Medicine hereafter, develops new curriculum with competency basis with SK Rektor (Rector Decree) No: 484/SK/HT/2013 on 24 July 2013, starting effectively since academic year of 2013/2014.

Main competency of Program Study FKH UGM graduates that develops in that curriculum is adjusted with mutual agreement in Provisions of Professional Education of Veterinary Assembly of Indonesian Veterinary Association (9 competencies), added with 9 supporting competencies that are development and characterization of Faculty of Veterinary Medicine UGM competencies.

Learning method applied is Student Teacher Aesthetic Rolesharing (STAR) or Student Centered Learning plus (SCL+) that combine Teacher Centered Learning (TCL) and Student Centered Learning (SCL) proportionally according to learning outcome that will be achieved in learning. STAR principle is existence of harmonious relationship between lecturers and students, enhancement of reciprocal learning partners between students and lecturer, so *Patrap Triloka* is created, *ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani*, lecturers properly becomes an example in front of students, motivates in the middle,

gives supports behind with lecturers authority so that the students will develop. Harmonious relationship between lecturers and students is created since the beginning of the lectures through interaction in class and more focus through tutorial in Forum Group Discussion (FGD), and added with guidance to students to be long life learner.

Lecture delivery method in class is done by cooperative learning method, lecturers deliver materials and discussion, deliver what will be learn and why it needs to be learned by the students. On the inaugural lecture, coordinator of the Course (MK) deliver learning contract to students, learning contract content is suitable with Plan of Semester Learning Activities Program (RPKPS) that has compiled by lecturers team, introducing all lectures with each of their expertise with goal that the students know the lecturers and their expert since the beginning of the lecture, so that the lecturers are expected to be a role model for their students. After lectures in class are done, it is followed by tutorial activities in small classes through FGD for SCL application. Delivery method in FGD at the beginning of the semester is done with collaborative learning method, while for the next semester it can be done using competitive learning, case-based learning, research-based learning, problem-based learning, and other way used according to learning objective.

This learning and FGD guidelines book is used for guiding the student during the FGD process and doing FGD program. We wish that output result in this learning and education process in Faculty of Veterinary Medicine UGM is able to prioritize intellectual ability for sharpening hard skills and improving soft skills based on moral and veterinary Ethics, can conduct its students to achieve competencies that have set.

February, 2018
Dean

INTRODUCTION

Focus Group Discussion is done through discussion inside small classes to discuss existing tasks in a designed scenario so that students can understand significantly, deeply, not only in the form of theory but more realistic in the form of scenario through synergy and integration of Veterinary Immunology, Fish and Shrimp Diseases Science, Veterinary Clinical Diagnostic, Pharmacotherapy II and Toxicology, Animal Laboratory Science, Veterinary Public Health, Zoonosis, Clinical Pathology Case and Interpretation Courses. Integral discussion from various course aims to support achievement of curriculum learning competency of Faculty of Veterinary Medicine.

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LEARNING OBJECTIVES

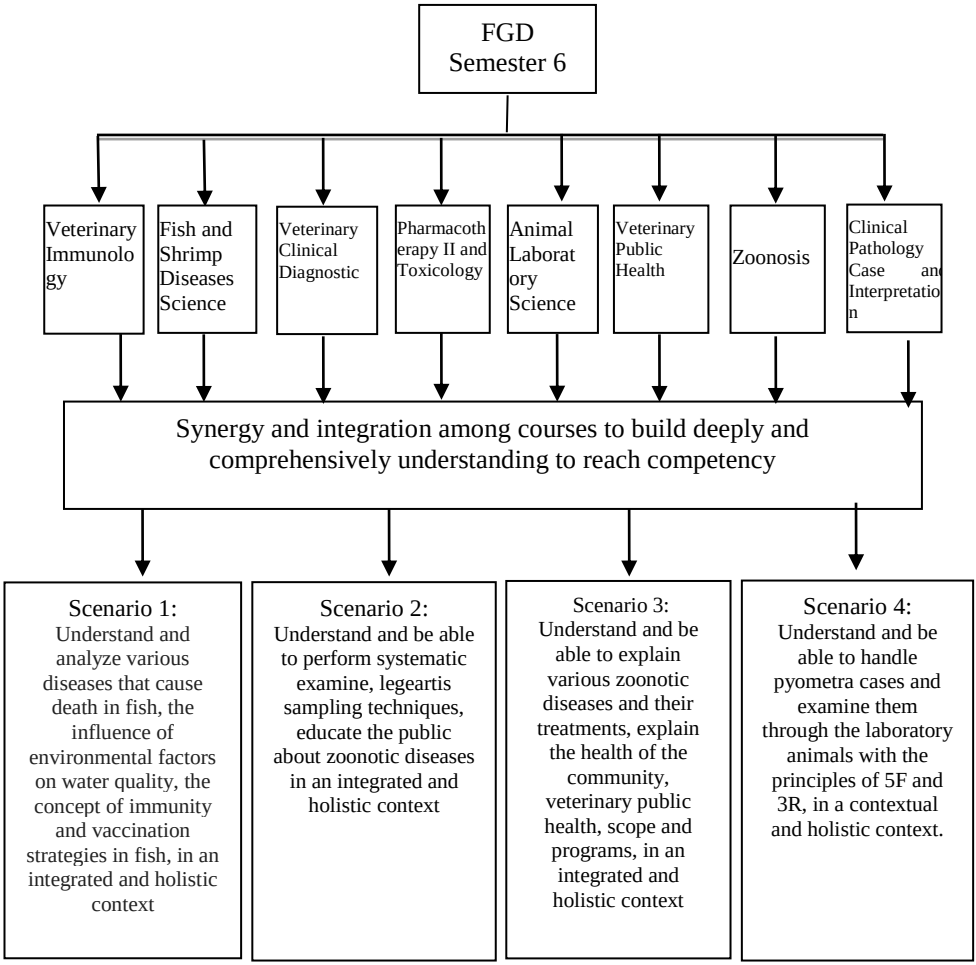
General Instructional Goal

Students are able to understand courses that learned through implementation of integration and synergy among courses to complete/ improve/ sharpen each other and share scientific, skill, and behavior concepts.

Specific Instructional Goal

Students are able to understand significantly of Veterinary Immunology, Fish and Shrimp Diseases Science, Veterinary Clinical Diagnostic, Pharmacotherapy II and Toxicology, Animal Laboratory Science, Veterinary Public Health, Zoonosis, Clinical Pathology Case and Interpretation Courses that mutually synergized and integrated in a scenario to be discussed.

LEARNING SCHEME



LEARNING OUTCOME

Integral discussion from various courses through scenario in FGD aims to support curriculum competency learning achievement of Faculty of Veterinary Medicine.

Learning Outcome of Veterinary Immunology:

Students are able to understand, analyze the concepts and theories of Immune Response, and implementation of vaccination regulations for prevention and control of infectious diseases in animals.

Learning outcome of Fish and Shrimp Diseases Science:

Students are able to recognize diseases in fish and shrimp, clinical signs, causes, pathogenesis including disease prevention; able to identify diseases in fish and shrimp and their handling in the field; able to diagnose various diseases in fish and shrimp correctly so the treatment given is more optimal.

Learning outcome of Veterinary Clinical Diagnostic:

Students are able to understand the general procedures for patient examination, restrain and handling, physical examination and sample collection, normal physiological data of healthy animals, laboratory examination and interpretation of results; able to identify and formulate the problem of procedures for examining patients in the veterinary world; able to analyze physiological data and abnormalities of physical and laboratory examination results; able to implement physical examination procedures, sampling, sample checking and diagnosis determination in patients (animals).

Learning outcome of Pharmacotherapy II and Toxicology:

Students are able to explain and understand various chemotherapy compounds and their use in various species; able to explain the advantages and disadvantages of using chemotherapy compounds (especially antibiotics); able to explain the definition of toxic substances, poisoning and treatment; able to explain the importance of toxicology, pathway, mechanism, form and nature of toxic substances; able to understand the mechanism of antidotes and their use in dealing with poisoning problems; able to explain the factors that affect the toxicity of an ingredient, the error of drug administration and the mechanism of side effects; able to explain the mechanism and effects of various kinds of toxins (cleaning agents, paints and polishes, cosmetics) and therapy of these substances poisoning; able to explain the nature, mechanism of action and effects of poisoning of compounds of herbicides, rodenticides and insecticides; able to explain therapy and treatment of these ingredients poisoning; able to explain the type, nature, symptoms and mechanism of action of lead, copper, mercury and arsenic; able to explain therapy and treatment of heavy metal poisoning; able to explain various kinds of toxic compounds from animal feed, work mechanism, symptoms of plant poisoning; able to explain antidota action and therapy and handling plant poisoning in animals; able to analyze the situation (poisoning and disease) and handle it in the right way; able to understand the development and progress of chemotherapy treatment (resistance, cancer drugs).

Learning outcome of Animal Laboratory Science:

Students are able to understand the biological nature of various laboratory animals and the role of laboratory animals for the advancement of science; able to manage, breed, feed, and provide maintenance facilities; able to recognize the types of diseases in laboratory animals and their prevention efforts; able to choose laboratory animals suitable for research; able to handle, take samples, treat and euthanacy.

Learning outcome of Veterinary Public Health:

Students are able to explain Veterinary Public Health as part of public health in Indonesia and other countries in general; able to connect the concept of environmental health with zoonoses, environmental health of animal cultivation, and risk analysis; able to connect education and health behaviors with the Veterinary Public Health program, zoonoses, and food hygiene; able to connect public health administration with Veterinary Public Health systems and programs; able to connect community nutrition with food hygiene programs, HAACP, and codex alimentarius; able to connect occupational health with food hygiene and health of the work environment, Veterinary Public Health program, and Zoonosis. Students will be able to integrate Kesmavet program activities integrally in public health activities; able to develop cooperation between agencies under the Veterinary Public Health and public health program. Students will be able to identify and apply public health methods into the Veterinary Public Health program; able to identify possible cooperation between agencies under public health and the Veterinary Public Health.

Learning outcome of Zoonosis:

Students are able to explain zoonoses which include: definition, classification of zoonoses, causes of disease, incidence of disease in humans and animals, zoonotic events in Indonesia, sources of infection, modes of transmission, diagnosis, treatment, prevention and control methods; able to explain control measures for zoonosis.

Learning outcome of Clinical Pathology Case and Interpretation:

Students are able to understand various types of cases commonly found in clinics which are usually equipped with laboratory examination data or related research data, then

interpreting the data as well as tracing the pathogenesis of the disease.

LEARNING ACTIVITIES

This learning activities series is prepared to direct the students reach learning objectives:

1. Learning method

Learning method used is through Student Teacher Aesthetic Rolesharing (STAR), by combining proportionally between teacher centered learning (TCL) and student centered learning (SCL) according to learning outcome that will be achieved.

STAR principle is harmonious relationship between lecturers and students, enhancement of reciprocal learning partners between students and lecturer, so *Patrap Triloka* is created, *ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani*, lecturers properly becomes an example in front of students, motivates in the middle, gives supports behind with lecturers authority so that the students will develop. Harmonious relationship between lecturers and students is created since the beginning of the lectures through interaction in class and more focus through discussion activities in forum group discussion (FGD), and student guidance to be a long life learner.

2. Lectures

Lectures method is used by lecturers delivering/presenting materials and discussion, delivering what will be learned by the students and why should it be learned. On the inaugural lecture, coordinator of the Course (MK) deliver learning contract to students, learning contract content is suitable with Plan of Semester Learning Activities Program (RPKPS) that has compiled by lecturers team, introducing all lectures with each of their expertise with goal that the students know the lecturers and their expert since the beginning of the lecture, so that the

lecturers are expected to be a role model for their students. Plan of Semester Learning Activities Program (RPKPS) and teaching materials must be given to students to be copied (or given to Library as narration/ reference/ students learning materials). Coordinator of MK introduces all of lecturer team and facilitators involved from each division with each expertise.

In applying curriculum competency basis, lectures are held by combining with group discussion in small classes, aim to make students obtain enough lecture materials and followed by self study time addition. Lectures are held based on specified learning outcome in reaching competencies. Integration and synergy among courses are held through FGD that discuss certain scenario, to increase and sharpen students understanding. Lectures can be held between FGD schedule, to give chance to student for clarifying and discussing unanswered students question in group discussion.

3. Group discussion in FGD with facilitator mentoring

FGD is scheduled twice a week. If facilitator could not come because of certain reasons, it should be substitute by other facilitator. If at the fixed schedule the facilitator has not come yet, relevant students group should inform academic as soon as possible. During discussion process, all of the groups should bring relevant learning sources that might be needed during tutorial.

To reach learning objective in the first semester, collaborative learning method is used, that held in twice discussion meeting in discussing one same scenario. Basic questions that should be underlined are: What have we known? What else that we expected to know?

First FGD:

- All students are divided into 12 classes, each of class consist of 12-16 students.

- Facilitator explains the discussion process and scenario for discussion
- Facilitator divides the class into small groups of 5-6 students
- Facilitator asks each students to read the scenario relevant to materials learned
- Facilitator asks the students to do task relevant with perception and solution towards cases/problems in scenario
- Facilitator asks students to discuss their work results in each of their small groups, led by one of the students (as chairman) helped by one other students (as secretary)
- Facilitator asks each of small groups discuss the group agreement
- Facilitator asks each of the students to make report of discussion results with by searching reference sources as wide as possible. Contents of the report are: discussion topic, learning objective, learning scheme, analysis, conclusion, learning outcome (explaining student ability after discussing topic in scenario), references.
- Facilitator asks every small groups prepare their discussion results in the form of power point that presented by one of the group representatives in the second FGD meeting.

Second FGD:

- Facilitator asks every students to submit complete report
- Facilitator asks each of the group to present group discussion result
- Facilitator asks other groups to give feedback to presentation result

Facilitator Job:

- Facilitator must be present on schedule. The facilitator's delay in attending is a maximum of 10 minutes (the rest will be replaced by a substitute facilitator).

- Directing and facilitating the discussion, lecturers put themselves as trend setter applying *patrap triloka ing ngarsa sung tulada, ing madya mangun karsa, tut wuri handayani* (in front becomes example, in the middle motivates, at behind gives support with lecturers authority so that students can develop).
- Giving assessment to students activities during discussion in the first and second FGD, with assessment through 3 aspects:
  1. A = Attitude (mental and manner) = affective
  2. S = Skill (competent, expert, adaptable to positive competency) = psychomotor
  3. K = Knowledge (building intellectual capital) = cognitive

4. Group discussion without facilitator mentoring

According to group needs, students can held a meeting without facilitator. Aims of this discussion are varies, for example, identificate theoritical questions, identificate group learning objective, ensure that group have already submitted all of the information needed, and identificate practical questions.

5. Practice

Held by Laboratorium in Division to enrich students understanding about discussed concept related to science development. Exercise to improve skills that needed by veterinarians to fulfill their competencies also given intensively (such as communication with clients skill, clinical skill, etc.)

6. Expert consultation

This activity is held based on needs and held by groups of students, by directly contacting the relevant competent lecturer. It is very recommended for the chairman of the group make an appointment before with the relevant experts.

7. Self study

As mature learner, students are expected to able to applied self study, a kind of important skills for developing personality and career in the future. This skill including ability to find personal interest, find more information from various learning sources, decided the appropriate learning style, and identificate further learning needs. Students will not feel enough to study only from lecture notes or text books. Self study is the most important character of SCL approach, and in the certain level, study will be an unlimited journey.

8. Class discussion

Class discussion can be held through lectures between FGD schedules. The aims of this discussion are to give explanation and compare learning process among groups to prevent wrong direction groups in the discussion. All of the groups can propose certain issues to be discussed, and facilitator or lecturers will answer questions based on their own competencies.

GENERAL ASSESSMENT

Some assessments to evaluate students learning results achievement:

1. **Formative Exam**
   Students will be given series of pre-test or post-test during lectures. This test is unscheduled, so that will force students to learn the materials since the beginning of learning. This test gives contribution to student final grade. So that, if there is a students disturbed in their final tests, this tests will help the final grade result.

2. **Summative Exam**
   This exam is done in the mid-semester (mid-semester exam/UTS) and semester final exam (UAS). Students should prepare themselves to take summative exam. A mature learner can achive better result because s/he can utilize time effectively to achieve goals.

3. **Remidial Exam**
   Students are possible to tak eremidial exam to improve grades of certain MK that failed. This exam is held at the end of final semester exam.

BLUE PRINT OF ASSESSMENT

STUDENTS ASSESSMENT COMPONENTS

- ✓ FGD 15 %
- ✓ Practice 25%
- ✓ UTS + UAS 60 %

Types of question:

- MCQ with answer types of a, b, c, d, e
- Essay
- etc.

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Scenario 1

(FGD Semester 6)

Outbreaks in Groupers

A grouper farmer report to the Fish Cultivation Center, Ministry of Maritime Affairs and Fisheries in the Batam area that the fish had been showing symptoms of swimming, sluggish, staying in the bottom of the water like sleeping. Then the officers took fish samples for histopathological examination, immunology and polymerase chain reaction (PCR). Temporary necropsy results show changes in swelling of the liver and spleen organs. Hysopatological examination found intracitoplasmic body inclusions in the spleen organs. Immunological examination with rapid coagglutination test showed a positive reaction to Red SeaBream Iridoviral Disease (RSID) and PCR results showed DNA molecular weight of 570 bp. The treatment has been done but the results are not satisfactory. The best preventive measures are done by vaccination but it is important to understand that the immune response in fish is different from that of mammals.

Keywords: grouper, coagglutination test, RSID, immune response, vaccination

Learning Objectives:

1. Students are able to understand the causes of the disease in fish, recognize the clinical symptoms of the disease, diagnose and its treatment, and the prevention of the disease.
2. Students are able to trace the pathogenesis of the disease (philosophical concepts: what, why and how), diagnosis, disease prognosis and advice for fish farmers.

3. Students are able to understand the concept of immunity in fish, cold-blooded and warm-blooded immune responses, and vaccination strategies in fish.
4. Students can collaborate with each other, share scientific concepts, skills and behavior in discussions.

Scenario 2

(FGD Semester 6)

Rabies Suspected Dog

In the1986, there was a zoonosis case. A dog bites a resident in Sleman, Yogyakarta. The next day that person was died, and on the same day there was a report of a dog biting to several people in next to the village where the first victim lived. Dog carcasses were found in the village the next day. Village officials report the incident to the Livestock Service Office and the local Health Office. Carcasses of dogs that discharge saliva are taken by the Livestock Service officer and then sent to the Veterinary Center in Wates to check the presence of viruses and negri bodies in the cytoplasm of the brain neuron. The veterinarian in charge instructs the officer to be carried out a counseling, vaccination healthy dogs, and euthanizing wild dogs without owners. Bite victims were reported to the Health Office and bite wounds were washed with soapy water.

Key words: zoonosis, dog, saliva, rabies, bite

Learning objectives:

1. Students understand and are able to perform systematic examination on several animal species, are able to apply lege artis specimen collection techniques, sample collection, laboratory tests, etc.
2. Students understand and know the spreading of disease from sick animals to other animals or humans.
3. Students understand and can educate the public about viral zoonosis (eg. rabies).

4. Students can collaborate with each other, share scientific concepts, skills and behavior in discussions.

Scenario 3

(FGD Semester 6)

Zoonosis is a Serious Threat to Human Health

Deputy Director of the United States Agency for International Development (USAID), Ryan Washburn, said two-thirds of all infectious diseases in humans came from animals. These potentially dangerous pathogens should be identified and infected animals must be treated before they pose a threat to human health and global health security.

"For example in West Africa the Ebola outbreak has affected around 30 thousand people, and 11 thousand of them have died. This is certainly damaging the health system, economic and community," he said at UGM Senate Hall on Tuesday (13-2-2018) on Pre Launching and Cross-Sector Guidelines Seminar Facing Zoonotic Outbreaks and Emerging Infectious Diseases.

Therefore, planning as preparedness in dealing with pandemics become complex and requires an integrated framework between programs, processes and planning guidelines. All of these can be scaled up and adapted in various sectors both at the national and regional levels. To do so, efforts must be made to improve cross-sectoral coordination by placing national and international institutions in the prevention and control of zoonoses and emerging infectious diseases.

"By working together we can certainly strengthen the health systems of animals, wildlife and humans in order to have a better track, control and respond to extraordinary events," he said.

Ryan Washburn believes that Indonesia has worked hard over the past two decades to improve preparedness and response to highly pathogenic avian influenza and other infectious diseases that appear and reappear. Indonesia, he said, has played a role at the

regional and global level in preventing and controlling diseases and strengthening global health security.

"The reduction in the number of extraordinary incidents and human cases is a testament to the success of Indonesia's efforts," he said. To strengthen this effort, Ryan Washburn said, the United States government through the United States Agency for International Development (USAID) felt honored to be involved by the Coordinating Ministry of PMK and several stakeholders in preparing and reviewing the Cross-Sector Guidebook. This guideline is an instrument and reference policy to coordinate activities between relevant stakeholders in the preparedness and response of 'non-natural' disasters, both at national and regional levels.

"In addition to real benefits for Indonesia, this guideline certainly has the potential to be a best practice instrument for other countries in facing similar challenges," he said. The Minister's Expert Staff in the Sustainable Development Goals of the Coordinating Ministry for PMK, Ghofur Akbar Dharma Putra, S.E., M.Com., added that the problem of zoonosis and emerging diseases is actually not only the responsibility of the Ministry of PMK, but this problem covers cross-ministries. Guidelines that have been produced are indeed easy to talk about, but not easy to do. "In the field, coordination seems to be difficult," said Ghofur Akbar.

Infectious diseases disaster problems are closely related to animal health, environment and human problems. This disaster is very high risk and allows policy differences to occur so guidelines are needed. "The Minister of Health and Minister of Agriculture has its own regulations respectively, and when there is an outbreak, who handles and what is handled is the homework, with this guide it is expected that it can be minimized," he explained.

The remarks of the Governor of DIY, drg. Pembayun. S, M. Kes, Head of the DIY Health Office, said human behavior in the world on a wide scale contributes to the emergence of zoonoses, including population pressure, deforestation, agricultural

intensification, global trade in wild animals and excessive meat consumption. This condition, if it continues to occur, can initiate the emergence of new zoonotic diseases.

"Researchers are now beginning to see and know how the nature destruction, such as global warming, widespread deforestation and chemical pollution in the marine environment can have a negative impact on the health and balance of flora and fauna, including animals and humans," he said.

Therefore, said Pembayun, to face the complexity of zoonosis, all parties are expected to not ignore the relationship between humans, animals, livestock and wildlife, their social and ecological environment. Thus an integrated approach to human and animal health is needed in the social and environmental context.

Meanwhile, UGM Chancellor, Prof. Ir. Panut Mulyono, M.Eng., D.Eng., revealed that to control and mitigate zoonotic threats, the concept of one health that emphasizing the system of thinking, collaboration and trans discipline, are the choice to overcome the disease. Covering three perspectives, namely environmental health, animal health, and human health, the position of UGM is very strategic and can contribute to issues that require trans disciplines.

"We really appreciate the Coordinating Ministry of PMK, USAID and UGM for raising the issue of one health, which enables UGM to work across sectors in tackling strategic issues in the fields of health, zoonosis and emerging diseases because this is a serious threat to our society," he said. (UGM Public Relations February 13, 2018/Agung).https://ugm.ac.id/id/news/15688.zoonosis..menjadi.ancaman.serius..kesehatan.manusia (February 14th 2018).

The news above has made students of Faculty of Veterinary Medicine UGM to think about aspects of public health and veterinary public health that can be applied to prevent and control various serious threats, both in the fields of health, emerging diseases and zoonoses.

Key words: public health, veterinary public health, zoonosis, behavior, one health

Learning Objectives:

1. Students are able to explain public health, the scope of public health and its programs.
2. Students are able to explain veterinary public health, the scope of veterinary public health and its programs.
3. Students are able to explain various zoonosis about the causes of disease, modes of transmission, clinical symptoms, diagnosis and prevention-control and control in a transdisciplinary manner (one health).
4. Students can collaborate with each other, share scientific concepts, skills and behavior in discussions.

Scenario 4

(FGD Semester 6)

Uterine Abscesses Inflammation in Dogs

Mr. Brotoseno's family is known as a harmonious family and love all kinds of animals including dogs in the village. In the past few days, his family had felt upset especially because of his Pomeranian dogs (aged 5 years) who had been showing symptoms of pregnancy after being married, but in fact the enlarged dog's stomach (thought to be pregnant) was accompanied by clinical symptoms, such as illness (depression) for example: lethargy, does not want to eat, drink (dehydrated) and even vomiting, anemic, vulva looks swollen and secretes rather thick (mucopurulent) and rotten-smelling, high fever, fast breathing frequency with a feeling of pain in the abdomen and conjunctival mucosa congestion. As recommended by veterinarians practicing at RSH Prof. Soeparwi, the dog need to be treated for observation and it is very possible to do the uterine surgery if needed. Mr Brotoseno's family hand over their dog to be hospitalized with the hope that their beloved dog would survive, recover, be healthy and be able to give birth again.

During the dog care process, it has inspired a student, named Dewi Ratih to research the relation between bacterial infection and pyometra cases in experimental animals. She began to learn things related to: a review of the types of bacteria as major causes of this disease, laboratory animals, animal models, handling, restrain, sampling, anesthesia, euthanization, animal welfare such as 5 Freedoms (5F) and 3 R (reduction, replacement, refinement), ethical clearance, hematological evaluation/clinical pathology and enzymatic evaluation. Besides that, she also

prepared the supportive and curative medical knowledge for her provision of knowledge after being a veterinarian.

Key words: uterine abscesses, anemic, swollen vulva, major cause, treatment, animal welfare

Learning Objectives:

1. Students are able to recognize dog disease caused by bacteria, able to recognize features characterizing the results of laboratory examination, diagnose and prognosis of disease, therapy and surgery if needed.
2. Students are able to trace the pathogenesis of the disease philosophical concepts: what, why, and how, history, sample examination, diagnosis, prognosis, disease therapy and advice for animal owners
3. Students are able to associate laboratory data from various laboratories as well as carry out the integrated interpretations before heading to a definite diagnose of disease.
4. Students can collaborate with each other, share scientific concepts, skills and behavior in discussions.