



## One Health Programme

### Training Module (Elected Representatives & Officials)



Health and Family Welfare Department  
Government of Kerala



Center For One Health Kerala (COHK)  
Thycaud Thiruvananthapuram

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**KERALA.HEALTH**

# **ONE HEALTH PROGRAMME**

## **Training Module (Elected Representatives & Officials)**

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<b>Session 4</b>	Community Based Disease Surveillance and One Health



## **One Health**

Training Program for Elected Representatives and Officials of Local Government Institutions

### **Background**

The concept of One Health is gaining traction globally. The health of humans, animals, plants, and the environment are interrelated. The concept of health or healthcare as being only human is no longer relevant. One Health aims to bring together sectors to combat diseases caused by interactions between humans and animals, and diseases and health problems caused by environmental factors.

We aim for social change towards health practices that ensure timely reporting of human and animal diseases and outbreaks to the highest levels and remedies. Decentralization has created wide opportunities for local governments to intervene in the field of One Health. Training courses are organized to utilize these opportunities effectively. People's representatives and officials of local government institutions are participating in this training program.

## Training Objectives

1	Explain the concept of One Health and its current relevance.
2	Create awareness about infectious diseases, zoonotic diseases, naturally occurring diseases and antimicrobial resistance.
3	Explain how the concept of One Health is related to environment, food chain, biodiversity, climate change etc.
4	Help identify environmental factors that cause disease.
5	Explain how human and animal diseases should be monitored and the importance of a unified surveillance system.
6	Clarify the role of local governments in implementing the One Health Programme and how the knowledge, skills and services of social workers and mentors can be utilized in this process.
7	Inculcate how the process should shape the unified and integrated activities of various line departments.

## **Training Topics**

<b>Session 1</b>	One Health concept and importance
<b>Session 2</b>	Spread of epidemics, zoonotic diseases, and the environment
<b>Session 3</b>	One Health – Kerala, the Organizational Structure, Duties and Responsibilities of Local Governments
<b>Session 4</b>	Community Based Disease Surveillance and One Health

## **Participants in the training program**

Elected representatives in local governments

Officials

## **Training Duration**

A training day starts at 10 am and ends at 4 pm.

## **Training Venue**

KILA, Thrissur

Selected Centres

## **Method of Study**

Participatory approach as is used in adult learning.

Group Discussions

Case Studies

## **Trainers**

Faculty members of KILA

District Level Mentors

Experts in the field of One Health

## **Study materials**

Handbook and other study materials are distributed to the participants for detailed reading and further study.

## **Follow up services.**

Facilitation will be provided to the trainees to continue to provide the services of the faculty members conducting the training, and facility will be provided to utilize the Help Desk system operating at the District Level Program Supporting Unit for query resolution.

## Programme Schedule

Sl No	Subject	Time
1	Welcome and introduction	30 minutes (10 to 10.30 am)
2	One Health – Concept and Importance	45 minutes (10.30 – 11.15 am)
	Tea break	15 minutes (11.15 – 11.30 am)
3	Spread of epidemics, zoonotic diseases, and the environment	60 minutes (11.30 – 12.30 pm)
4	One Health – Kerala, the Organizational Structure, Duties and Responsibilities of Local Governments	45 minutes (12.30 – 1.15 pm)
	Lunch break	45 minutes (1.15 – 2.00 pm)
5	Community Based Disease Surveillance and One Health	60 minutes (2.00 – 3.00 pm)
6	Conclusion and Acknowledgments	30 minutes (3.00 -3.30)

## Session-1

1. Topic: One Health - Concept and Significance
2. Objective: At the end of this session the trainees should be able to perform the following:
  - i. Understand what the concept of One Health is.
  - ii. To clarify the contemporary relevance of the concept of One Health.
3. Time: 45 minutes
4. Venue: Public venue
5. Content and Methodology

Sl No	Subject	Time (Minutes)	Method	Tools
1.	Explains what health is and what One Health is.	3	Brain Storming, Participatory Presentation	Slide 2
2.	Explains the concept and history of One Health	3	Participatory Presentation	Slide 3
3.	Explains how to protect the health of humans, animals, and the environment.	5	Participatory Presentation	Slide 4,5
4.	Explains how One Health can be used to combat common problems	5	Participatory Presentation	Slide 6
5.	Case Study	8	Group Discussion	Slide 7

Sl No	Subject	Time (Minutes)	Method	Tools
6.	One Health - highlights the importance of inter sectoral collaboration	4	Participatory Presentation	Slide 8
7.	Discusses the essential levels of resistance.	4	Participatory Presentation	Slide 9 9
8.	Explain what antimicrobial resistance is	4	Participatory Presentation	Slide 10, 11
9.	Health issues, epidemics, natural calamities, waste disposal issues and food adulteration are discussed in Kerala.	4	Participatory Presentation Discuss and analyze some problems affecting us and the society	Slide 12
10	Clearing Doubts	5		

## Necessary notes

### Slide 2

Let's start with the question, what is health? It then becomes clear that health is the physical, mental, and social well-being of a person. From this definition the concept of One Health should be clarified. It should be clarified that One Health includes the health of humans, plants and animals and the health of the environment. Pollution of water, air and soil, deficiencies in

scientific waste management and depletion of biodiversity are factors that determine the health of the ecosystem or environment.

### **Slide 3**

Diseases that spread from humans to animals and vice versa are generally known as zoonotic diseases. Briefly discusses what zoonosis is and the One World One Health approach raised by the 2004 Wildlife Conservation Symposium and the 2007 conference organized in New Delhi on the One Health Approach to Pandemics. It is preferable to present the information on this slide for 5 minutes.

### **Slide 4,5**

If the concept of One Health is to be implemented effectively, joint efforts of various departments like Veterinary Department, Agriculture Department, Forest Wildlife Department, Food Safety and Pollution Control are required. One Health triads should be explained with the help of slides. It is clear that the coordinated action of various departments and agencies is necessary to ensure the health protection of humans, animals and the environment. The trainer must read the manual.

### **Slide 6**

One Health is a popular topic. The activities of various departments and agencies should be coordinated at the local level. There needs to be a change in the attitude of people, people's representatives, and officials. Service and participation of volunteers should be ensured in this regard. Past experiences testify that a similar situation exists in our state. Explain with the help of slide 6.

## **Slide 7**

### **Case Study – Group Discussion**

#### **Subject**

## **Slide 8**

If the concept of One Health is to be implemented effectively, joint action of various departments like Animal Medicine Department, Agriculture Department, Forest Wildlife Department, Food Safety and Pollution Control is required. We will discuss this in detail in the fourth session.

## **Slide 9**

With the help of the chart, it should be explained that food security in the form of ensuring healthy food, incurable and dangerous trends including the use of pesticides in agricultural activities, animal-borne diseases, crises caused by climate change, the use of antibiotics, etc.

## **Slide 10,11**

Antimicrobials—including antibiotics, antivirals, antifungals, and antiparasitic drugs—are drugs used to prevent and treat infections in humans, animals, and plants. Antimicrobial resistance (AMR) is a condition in which the internal structure of bacteria, viruses, fungi, and parasites changes over time and becomes unresponsive to drugs. This makes the infection difficult to treat and increases the risk of disease spread, serious illness and death. An example of this is bacteria becoming resistant to antibiotics. Antibiotics were a revolutionary invention in modern medicine. This invention led to a great leap forward in the field of health, saving billions of lives. Antibiotics played no small role in the large increase in average life expectancy, which was 46 years at the beginning of the 20<sup>th</sup> century. Some

microbes have developed resistance to drugs that used to be effective against them. Resistance can occur naturally in bacteria through genetic mutation or by acquiring resistance from one species to another. Resistance can be achieved naturally due to random biotransformation. It also occurs through the spread of resistance genes through genetic transfer. Indiscriminate use of antibiotics causes mutations (biotransformation) to occur that can render antibiotics ineffective. By 2050, the number of deaths due to antimicrobial resistance will increase significantly. This is more than any other disease or accidental death. World Antimicrobial Awareness Week (WAAW) is an annual global campaign to improve awareness and understanding of AMR and promote better immunization practices among the public, health professionals and health policymakers.

### **Kerala Antimicrobial Resistance Strategic Action Plan (KARSAP)**

KARSAP has been developed covering multiple sectors. It addresses several actions needed to effectively address the problems caused by AMR. Integration of KARSAP and One Health activities is an important part of activities as part of RDRAM-RKI.

### **Slide 12**

Epidemics, natural calamities, food security issues, waste disposal and water supply issues faced by the people of Kerala should be presented in a simple manner. Then it should be analyzed in a participatory manner

## Session-2

1. Topic: Spread of infectious diseases and environment
2. Objective: At the end of this session the trainees should be able to perform the following:
  - i. Provide accurate awareness about various infectious diseases that can be transmitted to humans.
  - ii. Diseases transmitted to humans from wild animals, domesticated animals and insects make it possible to describe them in terms of the concept of One Health.
  - iii. It enables us to recognize the effects of pathogens and understand the goals we need to achieve.
  - iv. It illustrates the need for a coordinated approach.
3. Time: 60 minutes
4. Venue: Public venue
5. Content and Methodology

Sl No	Subject	Time (Minutes)	Method	Tools
1.	Discussing illnesses, infectious diseases, and epidemics	5	Brain Storming, Participatory Presentation	Slide 2 Chart Paper
2.	Explains the major communicable diseases and newly emerging diseases in Kerala	5	Participatory Presentation	Slide 3, 4
3.	Explains the conditions of transmission of diseases	5	Participatory Presentation	Slide 5
4.	Explains various zoonotic diseases, insect borne diseases and causes of occurrence of such diseases.	5	Participatory Presentation	Slide 6-8

Sl No	Subject	Time (Minutes)	Method	Tools
5.	Modes of transmission of zoonotic diseases are explained with examples	5	Participatory Presentation	Slide 9
6.	Case study Impact of various epidemics and pandemics on individuals and society.	10	Participatory Presentation	Slide 10
7.	Explains the effects of diseases on people and the economy of the country	5	Participatory Presentation	Slide 11
8.	Epidemiological triads explain the relevance and importance of environment in One Health	10	Participatory Presentation	Slide 12-14
9.	Discusses what you need to know and intervene in the topic of One Health	5	Participatory Presentation	Slide 15
10	Clearing Doubts	5		

## Necessary notes

### Slide 2

How do diseases occur? What are infectious diseases? Start the class by asking the students questions like They should write their answers on chart paper. After that the first slide should be shown and explained.

### Slide 3,4

In Kerala, epidemics and new and re-emerging diseases and pathogens should be thoroughly studied. Having read the manual should have a clear understanding of diseases and pathogens.

### **Slide 5,6,7,8,9.**

Zoonotic diseases are diseases that are transmitted between vertebrates and humans. Humans get diseases from wild animals, domestic animals, and insects. Diseases can be transmitted from humans to animals. The reasons for the increase in such diseases should be clarified. Details are on the slide. Modes of transmission of zoonotic diseases should be presented in a participatory manner by showing the slide.

### **Slide 10,11**

The spread of infectious diseases affects human health and affects all aspects of life. It also affects labor income. This will seriously affect the quality of the service sector and the agriculture, animal husbandry and small scale industries that govern the country's economic structure. This issue should be discussed on the basis of an infectious disease experienced in the country.

### **Subject**

Tourism is a sector on which many people directly and indirectly depend for their livelihood. There are many places in Kerala that are visited by tourists. Many small and big businesses are working in this regard. This includes everything from resorts and home stays to small food and beverage vendors for tourists. Discuss the impact on different sectors in the light of the Covid pandemic.

The trainees can be divided into three groups for discussion. After the discussion, a group should be invited for a presentation. Then the trainer should summarize the topic with the help of slide 11

**Slide 12,13,14,15.**

The biosphere is the part of the earth where living things live. Elements like air, soil and water found in the living world are called abiotic elements. Microorganisms, plants, and animals are called living organisms. Plants are producers among organisms. Herbivores survive by eating plants and carnivores survive by eating them. Microorganisms break down dead matter. Environment is the relationship between living and non-living things. It can be said that air pollution, water pollution and soil pollution all affect the health of the environment. Epidemiological triads should be analyzed. The importance of the environment should be clearly explained. When epidemics spread, it affects more than just individuals. It affects the family and society.

## Session 3

1. Topic: One Health - Kerala and Organizational System Duties and Responsibilities of Local Governments
2. Objective: At the end of this session the trainees should be able to perform the following:
  - i. Understand how the organizational structure has been set up for the implementation of the One Health Programme by the Government of Kerala
  - ii. Be aware of the relevance, importance, and responsibilities of local governments in implementing the One Health Programme
3. Time: 45 minutes
4. Venue: Public venue
5. Content and Methodology

Sl No	Subject	Time (Minutes)	Method	Tools
1.	Explains how the One Health Programme is extremely significant for Kerala	10	Participatory Presentation	Slide 2-3
2.	Explains Kerala's areas of emphasis in relation to One Health and the need for coordinated action by various departments and agencies.	5	Participatory Presentation	Slide 4
3.	The state level organization system is also explained based on the government order	5	Participatory Presentation	Slide 5
4.	State and district level organizational structure	5	Presentation	Slide 6,7

Sl No	Subject	Time (Minutes)	Method	Tools
5.	Local Government Level Committee	5	Presentation	Slide 8
6.	The duties and responsibilities of elected representatives and officials in local governments are discussed in detail	10	Presentation	Slide 9 10,11
7.	Clearing Doubts	5		

### **Necessary notes**

#### **Slide 2,3**

One Health Programme is very relevant to Kerala. Animal-borne diseases are being reported on an increasing scale in Kerala. Kerala's status in water pollution and air pollution are not satisfactory. Biodiversity depletion and other environmental issues need to be seriously looked into. One Health encompasses the health of humans, animals, and the environment. High population density, high number of non-resident Keralites, extensive forest area are the characteristics of Kerala. In this situation, the implementation of the project in Kerala is a necessary thing.

#### **Slide 4**

Emphasis areas related to implementation of One Health plan in Kerala should be explained. Ensure a uniform monitoring system for all types of diseases. For this, the necessity of proper functioning of various departments and agencies should be convinced.

### **Slide 5,6,7,8.**

It should be made clear that public health is the main responsibility of Grama Panchayats and Municipalities, and that One Health is a comprehensive program related to public health.

### **Slide 9,10,11.**

It should be made clear that public health is the primary responsibility of the Gram Panchayats and Municipalities and that the comprehensive program related to public health is One Health

The LSGs should be willing to take the initiative to identify and proactively address issues that may affect the delivery and utilization of healthcare services. Also, LSGs are to give due importance to preventive and promotive health care and curative care.

LSGs should also act as a driving force for developing a healthy culture that empowers the community to become guardians of their own health. Improving the health status of the community can reduce the per capita cost of health care. In implementing, monitoring, and evaluating the above activities, the performance indicators of the LSGs will be the health status indicators of the respective area.

Controlling infectious disease vectors, protecting the environment healthily, waste management, preventive measures and effective implementation of strategies and programs at the national and state levels for prevention and control are the essential responsibilities of the gram panchayat, so it is the responsibility of the gram panchayat to implement a comprehensive program of health related to health.

Read the manual thoroughly and then present

## Session-4

1. Topic: One Health – Community Based Surveillance

2. Objective: At the end of this session the trainees should be able to perform the following:

- i. Explains what community-based monitoring is and its importance as part of the One Health program.
- ii. About reporting methods and how to make social monitoring effective in practice
- iii. Clarifies identifying community mentors and identifying follow-up support they need.

3. Time: 60 minutes

4. Venue: Public venue

5. Content and Methodology

Sl No	Subject	Time (Minutes)	Method	Tools
1	Clarifies what Community Based Surveillance is.	5	Brain Storming, Participatory Presentation	Slide 2, Chart Paper
2	Explains how community-based surveillance can be implemented and the required reporting methods needed	5	Brain Storming, Participatory Presentation	Slide 3,
3	Explains the objectives of Community Based Surveillance and the procedures for implementation	5	Participatory Presentation	Slide 4

Sl No	Subject	Time (Minutes)	Method	Tools
4	Case Study - Prospects for Integrated Community Surveillance	15	Group Discussion	Slide 5
5	Discusses the eligibility and role of volunteers and mentors	15	Participatory Presentation	Slide 6,7
6	Discusses about the training program and key communication strategies	5	Participatory Presentation	Slide 8
7	Effective surveillance in local governments and the activities to be undertaken on the basis of surveillance.	5	Participatory Presentation	Slide 9
8	Clearing Doubts	5		

## Necessary notes

### Slide 2,3

Community surveillance is the method by which members of the community detect and report unique events that affect public health. Community Based Surveillance is a community-based surveillance system. Two types of monitoring systems should be explained. Indicator Based Surveillance and Event Based Surveillance.

#### **Slide 4.**

The objectives of the process of community surveillance are presented in a participatory manner.

#### **Slide 5.**

Subject and process

The existing monitoring system is limited. Apart from diseases affecting humans, the One Health program also includes monitoring and reporting of many factors such as domestic animals, domestic birds, stray animals, and migratory birds.

#### **Subjects**

A large number of new bats are seen in the trees near the panchayat building.

What should be observed?

A new type of migratory bird is seen in the water body where many tourists come and go. Some symptoms and death are seen in pet birds near the house.

How can it be? What all should be observed?

In a neighbouring house a man's constant cough is misdiagnosed as a very dry cough, and he also has fever from time to time what do we do?

There should be a detailed discussion on this should be monitored. The facilitator should record and codify the suggestions that emerge from the discussion.

#### **Slide 6,7**

Seven people from each ward should be selected as Community Volunteers. Find mentors who are at present collaborating with the community in consultation with local government representatives. Characteristics of

community workers should be well defined. The handbook contains more information. Mentors' duties and communication methods are detailed.

**Slide 8.**

The trainers should explain key communication strategies.

**Slide 9.**

It details the steps that have to be taken to conduct surveillance effectively. Various activities to be done as part of this should be presented in a participatory manner.