

Basic Field Epidemiology

Facilitator Guide



HEWAN SEHAT, KITA SEHAT

Contents

About this guide	3
Overview of the course.....	4
Competency statement.....	4
Structure of the course.....	5
Training resource package.....	5
Preparing for the Basic Field Epidemiology course.....	7
Who should be at the training?.....	7
Where should the training be held?.....	7
What resources are needed?	7
Projecting PowerPoint files	8
Assessment of participant performance	8
How to make your training successful and interesting?	9
How to use the Facilitator Guide	11
The Schedule	12
Session 1: Welcome and Introduction	13
Session 2: Overview of Epidemiology	14
Session 3: Signs, syndromes and making a diagnosis	15
Session 4: Disease investigation	16
Session 5: Causes of disease.....	17
Session 6: How disease progresses.....	18
Session 7: Transmission and spread	19
Session 8: Using a field epidemiology approach to larger disease investigations	20
Session 9: Collecting data and counting cases.....	21
Session 10: Making sense of the information	22
Session 11: Application of epidemiological approach to routine cases	23
Session 12: Course evaluation, conclusion, and closing.....	24

About this guide

This guide contains information to help facilitators prepare for and deliver the training course on Basic Field Epidemiology.

The guide contains an overview of the course including the course structure, objectives, and required resources to run the training. It contains information on how to prepare for a successful course and how to facilitate each session.

Where the training sessions include exercises or questions for the participants the answers are included in this guide.

Each facilitator will receive a copy of this guide along with the Training resource package which contains all documents and videos required to facilitate the course.

Facilitators should read through the training material and watch any videos prior to the training course. Becoming familiar with the other supporting administrative material is also important.

A highly practical guide, ***Training Facilitation: How to facilitate a course and help people to learn***, has been developed in order to support and further develop your facilitation skills. You should read this manual and view accompanying video material prior to the course to help you feel more confident and to get the most benefit out of the course material.

Overview of the course

This training course was developed as part of the Australian Indonesian Partnership for Emerging Infectious Disease – Animal Health Program.

The overarching aim for Component 2.1 of the AIP-EID Animal Health Program is to improve the collection, management and use of animal health information to improve capacity for effective disease control and prevention.

The training in basic field epidemiology has been developed to provide para-veterinary (and veterinary) field staff with the skills required to collect high quality surveillance data, and to make better decisions on the basis of the data collected.

Competency statement

A competency statement is a description of what an individual may be expected to be able to do to be successful in their work. The following competency statement describes what para-veterinarians are expected to be able to do.

Para-veterinarians are expected to be able to use field epidemiology skills together with individual animal clinical skills to provide diagnostic, treatment and disease prevention services for the benefit of Indonesian livestock and their owners.

In order to achieve this, para-veterinarians working in village settings with limited resources need to be able to:

- Explain the difference between sign or syndrome, disease and diagnosis;
- Describe a systematic approach to investigation of disease in animals that involves collection of evidence through history, clinical examination, environmental examination and laboratory testing;
- Understand causes of disease and use this information to assess and explain options for farmers to treat and prevent diseases in their livestock;
- Contribute data and information into and use information derived from relevant Animal Health Information Systems such as iSIKHNAS to assist in the above activities.

Structure of the course

The course is designed to be delivered over 3 days, totalling 12 teaching sessions. The first session is an introduction to the course and the last session will focus on conclusions and the closing ceremony. This leaves 10 sessions for content training.

The general structure of each session is

- Introduction to the sessions, learning objectives, and exercises
- Video or PowerPoint file associated with this session is presented and discussed
- Activities and exercises
- Key concepts review
- Feedback and evaluations

Training resource package

The training resources package for this course include the following:

- **Facilitator's Guide** – to be provided to all facilitators.
- **Basic Field Epidemiology Resource Book** – Contains the full content for the course and is intended to be used by facilitators as a source of material and also as a stand-alone reference for enthusiastic participants. It is recommended that a few copies be printed and kept in the office for loan by staff interested in reading the material or revising. The document will also be available online as a PDF downloadable file.
- **Participants' manual** – to be available to each participant. An easy-to-read document containing the summarised content covered in the course. The manual will be used by participants as reference material during the course and afterwards. The manual will also be made available online and as a PDF file that can be downloaded and viewed on any computer or tablet device.
- **PowerPoint files** – to be provided to all facilitators and made available online or as electronic files to all participants. For all sessions except the first and last session, there will be two PowerPoint files:
 - one PowerPoint file is intended for facilitators to present and speak to
 - the second file is intended to be recorded as a voice over to the PowerPoint so it can be projected like a video. This file will present most of the technical

content for each session. The purpose of this is to ensure that the technical content can be delivered in a consistent way through all the training programs.

- **Administration documents**- to be provided to all facilitators. These documents include: facilitators training package information, participant pre-course information, training course preparation checklist, attendance list, certificate template, and are needed to effectively run the training.
- **Evaluation forms** – to be provided to all facilitators and participants. The evaluation forms are used for two purposes: evaluation of participant performance, and for collecting feedback on the course from participants and facilitators.
- **Online support** – a website will be developed for this project to make resource material available online. Teaching materials, videos and additional learning resources will be made available through the website.

Preparing for the Basic Field Epidemiology course

Who should be at the training?

This course has been designed for para-veterinarians who routinely work with farmers and their animal health issues in the field.

Veterinarians who would like to refresh their basic epidemiological understanding and be more informed about the knowledge and capabilities of staff they supervise should also be encouraged to attend. If veterinarians attend they should be encouraged to participate more as observers and resource people and leave the more active participation to the para-vets.

Where should the training be held?

The training venue should be comfortable, quiet and away from distractions such as participants' offices. The training room should be equipped with tables and chairs that can be moved around and there should be sufficient room for participants to be able to work comfortably in group exercises. There should be whiteboards, flipcharts, computer and projectors, and plenty of wall space to display ground rules, expectations, and the outcomes from group exercises.

What resources are needed?

- Enough copies of the Participant workbook to provide one copy to every participant
- Facilitator's Guide for each facilitator
- Basic Epidemiology Resource Book (copy for each facilitator and perhaps 1-2 extras for participants to look at during the course.
- Whiteboard , white board marker pens & eraser; flipchart and paper for flipchart and marker pens, adhesive to stick paper to wall, pens for participants, blank note paper for participants.
- Facilitators will need a laptop computer, projector, and microphone if necessary.

Projecting PowerPoint files

The training material includes one or two PowerPoint files intended to be projected during each session.

It is suggested that facilitators use **Presenter View** (in Microsoft Office 2010 or later) to project the facilitator file. Using Presenter View is a great way to view your presentation with speaker notes on one computer (your laptop, for example), while your audience views the notes-free presentation projected on a larger screen.

The facilitator file has been developed with notes inserted so that when using presenter view the facilitator can view the explanatory notes and suggestions relating to each slide as it is projected.

If facilitators do not have Microsoft Office 2010 or later, then this capacity may not be functional. In that case facilitators may wish to print handout versions of the PowerPoint files so they can refer to these notes as they project their PowerPoint files.

Assessment of participant performance

Assessment of participant performance should be based on two criteria. The first is attendance at each of the three training days. Participants will be asked to sign their names at an attendance sheet each morning so there is a record of attendance each day.

The second criteria for assessment is through facilitators observing participants during the training course and recording brief notes on participation during training and any relevant comments.

During this assessment process facilitators should consider allocating participants to three broad categories:

- those that are doing an outstanding job of participating in discussions and showing an understanding of the concepts,
- those who are participating and grasping most of the concepts, and
- those who appear to not understand issues or make little contribution to discussion and activities

It will be important that facilitators be prepared to provide extra discussion and review for participants that appear to be struggling to understand concepts and also to try and encourage these individuals to participate more in group activities.

How to make your training successful and interesting?

a. Give yourself sufficient time to prepare

It is very important that you read through all the training package material. Also becoming familiar with other supportive resources/ material/ references will help you have a successful work shop.

This material has been developed for veterinarians to act as facilitators. Facilitators are not expected to become an expert in epidemiology. You should not attempt to pretend to the participants that you are. As the facilitator of this course, you are leading the learning, guiding activities and helping to draw the most out of the material with the group.

The training course is designed to give the participants general skills in field epidemiology they need to improve animal health in Indonesia. The training is not designed to make them experts in epidemiology.

If asked questions that you are unable to answer then it is ok to say “I don’t know”. The participants are part of the Dinas and you can refer these questions to the local Dinas veterinarian.

Use the training course preparation checklist provided in the Administration materials to help ensure that you have prepared adequately for the course.

b. Develop your facilitation skills

It may be useful to review some key concepts about how adults learn and some of the core characteristics of good facilitation.

A guide to good facilitation has been developed to assist you in this preparation. Please take the time to read this guide, ***Training Facilitation: How to facilitate a course and help people to learn***, and to adopt some of the key concepts which will

help you to relax and enjoy your role as facilitator as well as assist the group to gain the most benefit from the course.

Your training course will be more successful if you can:

- **Communicate easily with participants** – be relaxed and aware of social and cultural issues that may affect the training. Remember to always use simple terms and appropriate language wherever possible.
- **Your role is to facilitate the training material** - you do not need to be a teacher in the subject matter.
- **Respect the knowledge held by participants** – have respect for the skills and knowledge that the participants already have. When checking if you have communicated clearly ask in a positive manner “Did I explain that clearly?” rather than in a negative manner such as “Did you understand that?”
- **Keep eye contact** – do not talk to the participants with your back to them while writing on the flipchart paper, for example.
- **Write clearly** – make sure your letters and numbers are clearly written so all participants can understand them.
- **Keep on time** - try not to let any session run more than the allotted time.
- **Be interesting** – show an interest in what you are saying. Tell a few stories if possible. Speak clearly and loudly but not fast.
- **Be enthusiastic and encourage all to participate.** – have enthusiasm for facilitation and teaching. Have enthusiasm for the course material and this will be imparted to the participants through your action and will encourage them to participate.

Most importantly, relax and enjoy the learning and training experience this course will provide.

c. Group size

It is recommended an ideal group size is 10 - 12 participants. This way you can pay close attention to each participant's needs. A maximum group size of 20 participants should not be exceeded. The training budget may limit the options for group sizes. In larger groups certain individuals can be reluctant to participate and having a larger group can limit the effectiveness of the training.

How to use the Facilitator Guide

The purpose of this facilitator guide is to provide information to facilitate each of the training course sessions effectively. Some parts of the Guide provide examples of what you can say in different sections. Some less experienced facilitators may find it useful but you are not obliged to follow this advice.

Information is provided for each session under the following headings:

Session structure

This indicates the key activities in each session.

Session objectives

This section lists the key objectives of the session. It is important to keep these in mind because they give you clear goals for the outcome of the session.

Session Steps

This section provides a reminder of the PowerPoint files to open and use in each session.

The Schedule

The Basic Field Epidemiology course is designed to be delivered over 3 days. Each day is divided into four, 1.5 hour sessions.

Session 1: Welcome and introduction

Session 2: Overview of epidemiology

Session 3: Signs, syndromes and making a diagnosis

Session 4: Disease investigation

Session 5: Looking at risk factors

Session 6: How disease progresses

Session 7: Transmission and spread of disease

Session 8: Larger disease investigations

Session 9: Collecting data and counting cases

Session 10: Making sense of the information you collect

Session 11: Application of epidemiology to para-veterinary work

Session 12: Course evaluation, conclusion and closing

Session 1: Welcome and Introduction

Session structure

Step 1: Official welcome

Step 2: Introduction to the training, course objectives, and structure

Step 3: Group activity – introductory icebreaker

Step 4: Methods of monitoring learning and engagement

Step 5: Group activity – setting the rules for the course

Step 6: Summary of session

Session objectives

On completion of this session the participants will:

- Have met facilitators and other participants and made to welcome
- Have shared recent work experiences and opinions about their work and the benefits of better support with training or resources
- Understand the structure and schedule, and the role of evaluation of the training course
- Have developed the ground rules for the training course by consensus

Session steps

Step 1: Official Welcome

Resources have not been developed for the official welcome

Steps 2 to 6: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session1_Facilitator.pptx*

Follow the slide progression and refer to the notes section for suggestions and explanatory notes for each slide.

Session 2: Overview of Epidemiology

Session structure

- Step 1:** Introduction to the session
- Step 2:** Curiosity raising activity
- Step 3:** Play video or PowerPoint file
- Step 4:** Discuss content of recorded PowerPoint file
- Step 5:** Group activity: patterns of disease
- Step 6:** Group activity: shared experience
- Step 7:** Summary of session

Session objectives

On completion of this session the participants should be able to:

- Describe the main roles of para-vets in Indonesia
- Explain the relevance of epidemiological skills to para-veterinary work
- Describe the overall concept of epidemiology
- Understand the importance of both veterinary clinical skills and field epidemiology skills in animal health
- Explain how epidemiological skills help prevent zoonoses

Session steps

Steps 1 and 2: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session2_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 3: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session2_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session2_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint. Follow the slide progression as above.

Session 3: Signs, syndromes and making a diagnosis

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: healthy and unhealthy animals and production

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Describe the effect of disease on animal health and production
- List possible signs of disease
- Define a syndrome
- Explain the difference between a differential diagnosis list and a definitive diagnosis

Session steps

Steps 1 and 2: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session3_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 3: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session3_Content.pptx*

Steps 4 and 5: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session3_Facilitator.pptx*

Session 4: Disease investigation

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Investigation of abortions in pigs

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Describe a systematic approach to disease investigation
- Explain how to collect and use information from the investigation process to modify the differential diagnosis list and identify a likely diagnosis

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session4_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session4_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session4_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 5: Causes of disease

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Sickness in chickens and farm workers

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Explain how and why disease occurs in some animals and not in others

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session5_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session5_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session5_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 6: How disease progresses

Session structure

- Step 1:** Introduction to the session
- Step 2:** Curiosity raising activity
- Step 3:** Play video or PowerPoint file
- Step 4:** Discuss content of recorded PowerPoint file
- Step 5:** Group activity: Sickness in chickens and farm workers
- Step 6:** Summary of session

Session objectives

On completion of this session the participants should be able to:

- Outline the infectious disease progression in individuals and populations

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session6_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session6_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session6_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 7: Transmission and spread

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Sickness in chickens and farm workers

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Understand methods of transmission, spread and maintenance for infectious diseases of animals

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session7_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session7_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session7_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 8: Using a field epidemiology approach to larger disease investigations

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Investigation of abortions in pigs

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Understand when a systematic epidemiology approach to larger disease events or outbreaks will be useful
- Describe the cases and assign animals to cases and non-cases based on initial findings

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session8_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session8_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session8_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 9: Collecting data and counting cases

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Investigation of abortions in pigs

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Describe how you would collect data on cases and non-cases

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session9_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session9_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session9_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 10: Making sense of the information

Session structure

Step 1: Introduction to the session

Step 2: Curiosity raising activity

Step 3: Play video or PowerPoint file

Step 4: Discuss content of recorded PowerPoint file

Step 5: Group activity: Investigation of abortions in pigs

Step 6: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Use counting of cases and local populations (animals in one or more areas) to describe patterns of disease
- Outline how data analysis methods could be used to describe extent and severity of disease and help identify possible causes
- Outline how you would develop hypotheses and control measures

Session steps

Step 1: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session10_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Step 2: Play content PowerPoint file

File name in training package: *BasicFieldEpi_Session10_Content.pptx*

Steps 4 to 7: Resume facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session10_Facilitator.pptx*

Resume the facilitator PowerPoint at the appropriate position to continue the facilitator PowerPoint.

Session 11: Application of epidemiological approach to routine cases

Session structure

Step 1: Introduction to the session

Step 2: Present and discuss examples

Step 3: Summary of session

Session objectives

On completion of this session the participants should be able to:

- Understand how epidemiology skills are applied in routine work through case examples

Session steps

Step 1 to 3: Start facilitator PowerPoint for this session

File name in training package: *BasicFieldEpi_Session4_Facilitator.pptx*

Follow the slide progression, and refer to explanatory notes for each slide.

Session 12: Course evaluation, conclusion, and closing

Session structure

Step 1: Complete evaluations

Step 2: Presentation of certificates

Step 3: Formal closing

Session objectives

On completion of this session the participants will:

- Complete evaluations and receive certificates
- Contribute to training course conclusions
- Formal closing

Session steps

Step 1: Complete evaluations

Resources have been developed for evaluation of the course

File name in training package:

Steps 2: Presentation of certificates

File name in training package:

Steps 3: Formal closing