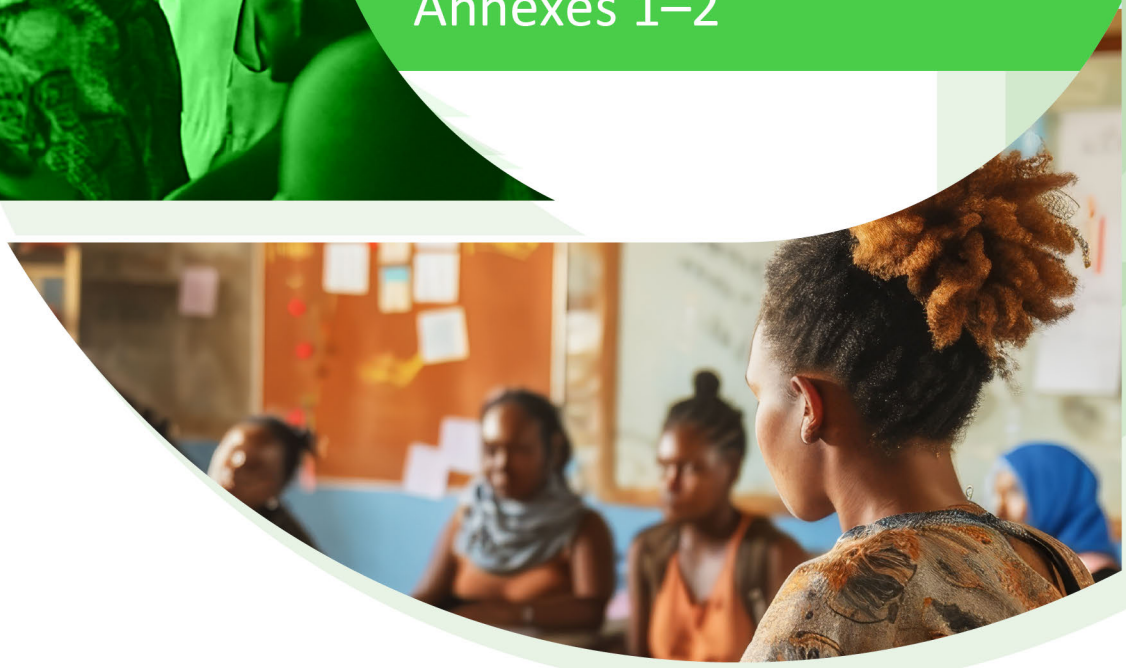
One Health Risk Communication Training for Media Professionals and Public Health Professionals

Annexes 1–2



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ANNEX 1: TOOLS FOR FACILITATORS

The materials in Annex 1 are not for distribution to participants. They consist of:

- The Material Checklist, which provides a list of all materials needed for the training including copies of each handout and a list of flip charts to prepare in advance.
- The Pre/Posttest Score Sheet.

MATERIAL CHECKLIST

Note: The number of copies needed is based on a training group of 20 participants and 4 facilitators. Adjust as needed for your group. Please review this checklist before printing any materials front-to-back.

Material	# of Copies Needed	Comments
Facilitator Guide	1 per facilitator (4)	1 per facilitator and participant for TOT (24)
Annex to Facilitator Guide	1 per facilitator (4)	1 per facilitator and participant for TOT (24)
Presentation Slides *(optional)*	2 per training	1 for each breakout session (Annex 4)
Handout 1: *Character Cards*	5 copies – cut in advance	Session **Make enough copies so each participant has one square. Each person should have a match.*
Handout 2: *4 -Day Agenda*	1 per person (20)	Provide at Registration – reference in session 1.2
Handout 3: *Pre/Posttest Questionnaire*	1 per person (20)	Session 1.3
Handout 4: *National One Health and PZD Resource Sheet*	1 per person (20)	Prepare in advance and distribute in Session 2.1
Handout 5: *Compiled WHO Factsheets*	1 per person (20)	Session 2.3
Handout 6: *Case Studies-Ebola, SARS, and COVID-19*	9 copies of full document (separated by disease scenario)	Session 3.2 Each person in Group 1 gets a copy of Ebola case only Each person in Group 2 gets a copy of SARS case only Each person in Group 3 gets a copy of COVID-19 case only *Do not print front-to-back
Handout 7: *Community engagement*	1 per person (20)	Session 3.3
Handout 8: *Roles and Responsibilities of Public Health Spokespersons and Journalists*	1 per person (20)	Session 3.4
Handout 9: *Pneumonic Plague Scenario*	1 per person (20)	Session 3.5

Material	# of Copies Needed	Comments
Handout 10: *Messages and Materials Development Checklist*	1 per person (20)	Session 3.5
Handout 11: *Mweetwa and Chilufya Scenarios (MPs)*	5 copies cut or torn in half in advance	Session 4.1 (MPs) Each J participant (10) receives one of the two scenarios
Handout 12: *Interview Role Play (MPs)*	5 copies separated by scenario A or B in advance	Session 4.2 (MPs) *Do not print front-to-back
Handout 13: *Pitfalls and Strategies: Press Briefings and Community Meetings (PHP)*	1 Per PHP participant (10)	Session 4.2 (PHP)
Handout 14: *Sample Press Briefing (PHP)*	1 per PHP participant (10)	Session 4.2 (PHP)
Handout 15: *Case Study Interview Preparation (PHP)*	1 per PHP Participant (10)	Session 4.3 (PHP)
Handout 16: *Strategies for Successful Interviews (PHP)*	1 per PHP Participant (10)	Session 4.3 (PHP)
Handout 17: *Resource Package (PHP)*	1 per PHP Participant (10)	Session 4.4 (PHP)
Handout 18: *Social listening Report*	9 copies of full document	Session 5.2
Handout 19: *Disease Z Simulation Role Play*	7 copies of full document (separated by role)	Session 6.2 Each person in the Community Group gets a copy of their role only Each person in the Journalist Group gets a copy of their role only Each person in Public Health Group gets a copy of their role only *Do not print front-to-back
Handout 20: *Workshop Evaluation*	1 per person (20)	Session 6.3
Handout 21: *Certificate* Template	1 per person (20)	Session 6.3 Complete with name, date and local signature before printing. Do not print front to back. Distribute with submission of completed evaluation and posttest

Material	# of Copies Needed	Comments
Scoring Sheet for Pre/Posttest	1	Not for distribution – in Annex 1
Contact Sheet	1 for completion + 1 copy of completed sheet for each participant (20)	For completion during registration so copy can be distributed to participants with certificate. Recommended entry directly into excel to reduce mistakes due to handwriting. Information to include: Name Title/ Role Affiliation/ Organization/ Ministry Area of Expertise Phone/ What's App Other (Twitter, skype, Instagram, Facebook, etc.)
Flip charts	10	Stands are helpful, if available
Markers	5 boxes	Multi-colored
Tape	2-3 rolls	
Scissors	2 pairs	
Bowl or plastic bag	1	
Sticky notes/ VIPP Cards	3-5 packs	Multi-colored, if possible
Pens and notepads	1 per person (20)	
Projector, extension cord, laptop, adaptor *(optional)*	2 complete sets	1 for each breakout room
Prepared flip charts	Risk communication definition	Session 1.2
	Training objectives	Session 1.2
	Zoonotic disease definition	Session 2.1
	Group work questions	Session 2.2
	Group work questions	Session 2.3
	Group work questions	Session 3.2
	Group work questions	Session 3.3

Material	# of Copies Needed	Comments
	Group work questions	Session 3.4
	Group work questions	Session 4.1 (J)
	Aspects of non-verbal communication	Session 4.2 (J)
	Simple ways to show empathy	Session 4.2 (J)
	Group work questions	Session 4.2 (J)
	Simple ways to show empathy (*different than J)	Session 4.2 (PHP)
	Group work questions	Session 4.2 (PHP)
	Role Play Instructions	Session 4.3 (PHP)
	Criteria to assess risk of rumor	Session 5.1
	Instructions for rumor reflection	Session 5.2
	Role play instruction	Session 6.2
Energizers and Ice breaker Ideas	Online resource	https://www.sessionlab.com/library/energiser

PRE/POSTTEST SCORING GUIDE

Instructions:

- **Section 1:** *True/False.* Measure the difference in the number of correct True/False between the pre-test and post-test
- **Section 2:** Score the number of correct responses for each question. Measure the difference in correct answers between the pretest and posttest
- **Section 3:** *Agree or Disagree.* Note an increase in more participants feeling more confident and having more knowledge.

Q1. One Health focuses on the health of animals.

FALSE

Q2. The main principles of effective risk communication are transparency, consistency, frequent communication, and empathy.

TRUE

Q3. Messages given about a particular outbreak should include as much medical terminology as possible, so people know the disease is serious.

FALSE

Q4. When communicating to the public about a health risk, it is important for spokespersons to hide what they do not know about the disease

FALSE

Q5. In order to address a rumor, it is important to understand why it is occurring and to understand the gaps in the public's knowledge and information.

TRUE

Q6. Journalists must obtain informed consent from the sources they interview.

TRUE

Q7. Different groups of people may have customs or beliefs that go against advice given during a disease outbreak.

TRUE

Q8. Communication to the public via social media should be avoided during a public health outbreak because it is hard to control and spreads a lot of misinformation.

FALSE

Q9. The primary role of journalists during a disease threat is to criticize the government response.

FALSE

Q10. Write down the name of two zoonotic diseases.

Use list of your country's priority zoonotic diseases for answers to this question. Answers could include:

- Viral Hemorrhagic fevers: Ebola, Lassa Fever, Crimean Congo Hemorrhagic Fever, Rift Valley Fever, and Marburg virus
- Animal influenzas: Avian influenza (bird flu); Swine (pig) Flu
- Other bacterial diseases and viruses: Anthrax, Bovine Tuberculosis, Brucellosis, Trypanosomiasis (Sleeping Sickness), and rabies

Q11. What is one way to identify rumors?

Answers may include: monitor social media, listen to community members, building trust with local leaders, talking to health workers.

Q12 and Q13. Note whether participants confidence (Q12) and knowledge (Q13) increase from the pretest to the posttest.

Q14. There are 4 thematic areas: Governance and coordination, surveillance, preparedness and response, advocacy, communication and training, and research.

Q15. Advocacy, Communication, and Training.

ANNEX 2: MATERIALS FOR DISTRIBUTION TO PARTICIPANTS

Annex 2 contains the following:

- Agenda
- Pre/Posttest
- Activity Handouts and resource materials for participants used in Sessions
- Workshop Evaluation
- Certificate template

Materials are presented in the order in which they are presented to participants by facilitators.

HANDOUT 1: CHARACTER CARDS

Instructions: Cut the squares, fold them in half, and put them in a bowl or bag. Make as many copies as needed so each person has a square.

Created by Laymik from Noun Project	Created by Laymik from Noun Project
Created by Wahyuntitle from Noun Project	Created by Wahyuntitle from Noun Project
Created by Yugudesign from Noun Project	Created by Yugudesign from Noun Project
Created by David from Noun Project	Created by David from Noun Project
Created by sarah from Noun Project	Created by sarah from Noun Project
Created by Kevin from Noun Project	Created by Kevin from Noun Project

Created by parkjisun from Noun Project	Created by parkjisun from Noun Project

HANDOUT 2: 4-DAY AGENDA

Day	Time	Topic/Session
Monday	**08:30–09:00hrs**	**Arrival and Registration**
	09:00–09:30hrs	Opening remarks, prayers, and other protocols
	MODULE 1: Introduction	
	09:30–10:00hrs	Session 1.1: Introductions
	10:00–10:30hrs	Ground rules, Housekeeping
		Expectations, learning objectives, and purpose of training
	10:30–11:00hrs	Pretest
	MODULE 2: Overview of One Health and Priority Zoonotic Diseases	
	11:30–12:00hrs	Session 2.1: Setting the Foundations: Zoonotic Disease and the One Health Approach
	12:00–13:00hrs	Session 2.2: Priority Zoonotic Diseases – Country Level Focus 1
	13:00–14:00hrs	**Lunch**
	14:00–15:30hrs	Session 2.3: Priority Zoonotic Diseases – Country Level Focus 2 (group work)
	15:30–16:00hrs	**Tea Break**
	16:00–16:45	Plenary session
	16:45	Closing
Tuesday	**08:00–08:30**	**Arrival and Registration**
	08:30–09:00hrs	Recap of Day One
	09:00–10:00hrs	Session 2.4: Risk Communication within a One Health Framework
	10:00–10:30hrs	**Tea Break**
	MODULE 3: Communicating for Behavior Change	
	10:30–12:00hrs	Session 3.2: Trust and Principles of Effective Risk Communication and Community engagement
	12:00–13:00hrs	Effective Community Engagement
	13:00–14:00hrs	**Lunch**
	14:00–15:00hrs	Session 3.3: Roles and Responsibilities in Risk Communication and community engagement
	15:00–15:30hrs	**Tea Break + Energizer**
	15:30–16:30hrs	Session 3.4: Elements of Effective Messaging
	16:30	Closing
Wednesday	**08:00–08:30hrs**	**Arrival and Registration**
	08:30–09:00hrs	Recap of Day Two Instructions for Breakout sessions
	MODULE 4: Professional Breakout Sessions	

	09:00–10:00hrs	Breakout Session 4.1 (MPs): Ethical Principles and Frameworks for Reporting in Public Health Emergencies
		Breakout Session 4.1 (PHP): Understanding Media Needs
	10:00–10:30hrs	**Tea Break**
	10:30–12:00hrs	Breakout Session 4.2 (MPs): Ethical Interviewing
		Breakout Session 4.2 (PHP): Best Practices Press Briefings and Community Meetings
	12:00–13:00hrs	Breakout Session 4.3 (PHP): Considerations for Successful Interviews
		Breakout Session 4.3 (MPs): Social Media Ethics
	13:00–14:00hrs	**Lunch**
	14:00–15:30hrs	Breakout Session (PHP): Best Practices: Risk Communication Plan and Media Strategy
	15:30–16:00hrs	**Tea Break**
	16:00–16:30hrs	Plenary session
	16:30hrs	Closing
Thursday	**08:00–08:30hrs**	**Arrival and Registration**
	08:30–09:00hrs	Recap of Day Three (Feedback on Day 3)
	MODULE 5: Addressing Rumors and Misinformation	
	09:00–10:00hrs	Session 5.1: Overview: Defining, Assessing, and Responding to Rumors
	10:00–11:00hrs	Module 5.2: Using Media Monitoring to Manage Rumors in Traditional and Social Media
	11:00–11:15	**Tea Break**
	MODULE 6: Effective Coordination	
	11:15–12:00hrs	Session 6.1: Envisioning Effective Coordination
	12:00–13:00hrs	Session 6.2: Bringing it all Together
	13:00–14:00hrs	**Lunch**
	14:00–15:00hrs	Session 6.3: Posttest, Workshop Evaluation, Certificate Handover
	15:00hrs	Closing

HANDOUT 3: PRETEST/POSTTEST QUESTIONNAIRE

SECTION 1: For each answer, circle either True or False.

Q1. One Health focuses on the health of animals.

True

False

Q2. The main principles of effective risk communication are transparency, consistency, frequent communication, and empathy.

True

False

Q3. Messages given about a particular outbreak should include as much medical terminology as possible, so people know the disease is serious.

True

False

Q4. When communicating to the public about a health risk, it is important for spokespersons to hide what they do not know about the disease.

True

False

Q5. In order to address a rumor, it is important to understand why it is occurring and to understand the gaps in the public's knowledge and information.

True

False

Q6. Journalists must obtain informed consent from the sources they interview.

True

False

Q7. Different groups of people may have customs or beliefs that go against advice given during a disease outbreak.

True

False

Q8. Communication to the public via social media should be avoided during a public health outbreak because it is hard to control and spreads a lot of misinformation.

True

False

Q9. The primary role of journalists during a disease threat is to criticize the government response.

True

False

SECTION 2: Write your responses to the following questions.

Q10. Write down the name of two zoonotic diseases.

_____

Q11. What is one way to identify rumors?

_____

SECTION 3: Indicate whether you agree or disagree by circling your responses to the following questions.

Q12. I feel confident that I have the skills to communicate with the public and/or report during a disease outbreak.

5 Strongly Agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly Disagree

Q13. I know best practices for coordination, trust-building, and cooperation between journalists and government spokespersons during a zoonotic disease outbreak.

5 Strongly Agree	4 Agree	3 Neither or N/A	2 Disagree	1 Strongly Disagree

Q14. There are four thematic areas that govern One Health in Zambia

True

False

Q15. Which thematic area under One Health in Zambia is responsible for Risk Communication and Community Engagement?

_____

HANDOUT 4: NATIONAL ONE HEALTH AND PZD RESOURCE SHEET

MAPPING ONE HEALTH RESOURCES FOR (INSERT COUNTRY NAME)

Instructions: Work with One Health and Risk Communication partners to complete this sheet in advance of the training for each participant to use as a reference resource.

List of the Priority Zoonotic Diseases in (country)	• African Trypanosomiasis • Anthrax • Enteric Diseases (Salmonellosis), • Viral Hemorrhagic Fevers (Ebola) • Rabies • Plague • Influenza like Illnesses (Zoonotic Avian Influenza), • Zoonotic Tuberculosis (ZTB) • Cysticercosis • Brucellosis
Key risk-communication structures in (country)	One Health ACT TWG Health Promotion Directorate (National RCCE TWG) National Agricultural Information Services (NAIS) Zambia News and Information Services (ZANIS)
Key National/Regional One Health Structures and Ministries in (country) (Include disease-specific entities, e.g., National Avian Flu Task Force, etc.)	One Health Steering Committee One Health Coordinating Committee OH TWGs (Advocacy, Communication and Training TWG, Research, Preparedness and Response, Surveillance)
Existing key One Health and PZD documents (strategic plans, operational plans, technical resources in-country) and links to access if available	National One Health Strategic Plan 2022–2026 https://w2.znphi.co.zm/resources/ (Under One Health Reports) IHR-PVS National Bridging Workshop Report

One Health Resource persons in (country)	Dr. Hamoonga Raymond, ZNPHI Dr. Linous Musimbwe, MoFL Dr. Cornelius Mundia, MoFL

HANDOUT 5: COMPILED WHO FACTSHEETS

PRIORITY ZOONOTIC DISEASES

Information below is based on WHO factsheets (Infectious Diseases. Fact Sheets. World Health Organization 2023. https://www.who.int/news-room/fact-sheets). Some information has been edited based on field experiences in Zambia.

SALMONELLA

Key facts

- Salmonella is 1 of 4 key global causes of diarrheal diseases.
- Most cases of salmonellosis are mild; however, sometimes it can be life-threatening. The severity of the disease depends on host factors and the serotype of Salmonella.
- Antimicrobial resistance is a global public health concern for Salmonellosis. Basic food hygiene practices, such as "cook thoroughly", are recommended as a preventive measure against salmonellosis.

Background

Salmonellosis is caused by Salmonella bacteria and results in symptoms such as fever, abdominal pain, diarrhea, nausea, and vomiting. Symptoms begin within 6-72 hours of infection and last for 2-7 days. While most patients recover without treatment, dehydration can be life-threatening, particularly for children and the elderly. Most salmonellosis cases are not part of a known outbreak and go undiagnosed.

Treatment

In severe cases of vomiting and diarrhea, electrolyte replacement and rehydration are required. Antimicrobial therapy is not recommended for mild or moderate cases in healthy individuals due to the risk of resistance. However, high-risk groups may need it, and it's given if the infection spreads. Treatment guidelines should be regularly reviewed considering the bacteria's resistance pattern.

Prevention

Prevention against Salmonella involves control measures at all food chain stages. Such measures include agricultural production, food processing, manufacturing, and preparation. To prevent Salmonella in the home, one should follow the same recommendations for other foodborne bacterial diseases. Also, infants and young children should be supervised when in contact with pet animals such as cats, dogs, and turtles that may be carrying Salmonella. National and regional surveillance systems for foodborne diseases are important in detecting and responding to salmonellosis and other enteric infections in early stages, preventing further spreading.

Recommendations for the public and travelers

The following recommendations will help ensure safety while travelling:

- Food should be cooked properly and served hot
- Avoid raw milk and drink only pasteurized or boiled milk
- Avoid unsafe ice and if drinking water is questionable, boil it or disinfect it with a slow-release disinfectant
- Wash hands, fruits, and vegetables thoroughly with soap to ensure proper hygiene. If possible, vegetables and fruits should be peeled

Recommendations for food handlers

Food handlers should follow hygienic rules while preparing food. Sick professional food handlers should report to their employer immediately. WHO recommends the five keys to safer food for food safety, which include:

- Keeping clean
- Separating raw and cooked
- Cooking thoroughly
- Keeping food at safe temperatures
- Using safe water and raw materials.

Recommendations for producers of fruits, vegetables, and fish

The WHO has provided five keys to growing safer fruits and vegetables and five keys to safer aquaculture products to protect public health. These practices are aimed at preventing microbial contamination.

The Five keys to growing safer fruits and vegetables are:

- Personal hygiene
- Protecting fields
- Treating fecal waste
- Evaluating irrigation water risks
- Maintaining clean equipment

Similarly, the five keys to safer aquaculture products. The Five keys to safer aquaculture products to protect public health are:

- Maintaining good personal hygiene
- Ensuring clean pond sites
- Managing water quality
- Keeping fish healthy
- Using clean harvest equipment and containers

Country response

- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses several laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever, Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status in order to prevent the spread of diseases.
- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

CYSTICERCOSIS

Key facts

- Cysticercosis is caused by the larval stage of the pork tapeworm, Taenia solium.
- Cysticercosis is a major public health concern in regions where Taenia solium is endemic, particularly in areas with poor sanitation and hygiene.
- It is a leading cause of acquired epilepsy in endemic areas.
- The disease is most prevalent in Latin America, Africa, and Asia, where pig farming is common, and sanitation conditions are often inadequate.

Background

Cysticercosis is a parasitic infection that effects both humans and pigs. People get this infection when they swallow Taenia solium eggs that are passed in the feces of a human with a tapeworm The eggs spread through contaminated food, water, or surfaces. Importantly, someone with a tapeworm can infect him-or herself with tapeworm eggs (autoinfection) and can infect others in the family. These eggs can hatch in the intestines and lodge into the tissues, such as muscle, heart, tongue brain, and eyes. It can cause neurocysticercosis when cysts are found in the brain. Eating pork cannot give you cysticercosis.

Signs and symptoms of cysticercosis

Signs and symptoms will depend on the location and number of cysts in your body.

- Cysts in the muscles:
- Cysts in the muscles generally do not cause symptoms. However, you may be able to feel lumps under your skin. The lumps sometimes become tender.
- Cysts in the eyes:
- Although rare, cysts may float in the eye and cause blurry or disturbed vision. Infection in the eyes may cause swelling or detachment of the retina.

- Neurocysticercosis (cysts in the brain, spinal cord):
- Symptoms of neurocysticercosis depend upon where and how many cysts are found in the brain. Seizures and headaches are the most common symptoms. Other symptoms may include lumps under the skin, blurred vision. However, confusion, lack of attention to people and surroundings, difficulty with balance, and excess fluid around the brain (called hydrocephalus) may also occur. If not treated, the disease can result in death.

Treatment

Some people with cysticercosis do not need to be treated. There are medications available to treat cysticercosis for those who do need treatment. Sometimes surgery may be needed. Your doctor will advise you on which treatment is best for you.

Prevention

- To prevent cysticercosis, the following precautions should be taken:
- Observe high standards of hygiene, such as washing hands with soap and warm water after using the toilet, changing diapers, and before handling food
- Teach children the importance of washing hands to prevent infection
- Wash and peel all raw vegetables and fruits before eating

Country response

- The Ministry of Livestock in collaboration with Ministry of Local Government other stakeholders conduct meat inspections.
- Countrywide deworming of children under the age of five by Ministry of Health.
- Sensitization programs by relevant government ministries and stakeholders in high-risk areas e.g. Katete District of Eastern Province.

BRUCELLOSIS

Key facts

- Brucellosis is found globally and is a reportable disease in most countries.
- The disease causes flu-like symptoms, including fever, weakness, malaise and weight loss.
- Person-to-person transmission is rare.
- Brucellosis is a bacterial disease caused by various Brucella species, which mainly infect cattle, swine, goats, sheep and dogs.

Background

Brucellosis is a bacterial disease that infects various animals including cattle, swine, goats, sheep, and dogs. Brucellosis is found globally and is a reportable disease in most countries. It affects people of all ages and both sexes. Human-to-human transmission is very rare but commonly spread by coming in contact with infected animals or consuming contaminated animal products. The disease is mainly caused by drinking unpasteurized milk or cheese from

infected goats or sheep. It is a significant public health concern in endemic areas due to the lack of hygienic measures in animal husbandry and handling food.

The disease is also considered an occupational hazard for people who work in the livestock sector. People who work with animals and are in contact with blood, placenta, fetuses and uterine secretions have an increased risk of contracting the disease. This method of transmission primarily affects farmers, butchers, hunters, veterinarians and laboratory personnel. Worldwide, Brucella melitensis is the most prevalent species causing human brucellosis, owing in part to difficulties in immunizing free-ranging goats and sheep.

Prevention and control

Preventing brucellosis involves surveillance and reducing risk factors. The best strategy is to eliminate infection in animals through vaccination or culling. In areas with low prevalence, testing and culling can also be effective. To prevent human infection, it is important to raise awareness, practice food safety, maintain occupational hygiene, and ensure laboratory safety. Pasteurization of milk is crucial, and education campaigns about avoiding unpasteurized milk products can be effective. In agricultural work and meat-processing, using protective barriers and proper handling and disposal of animal parts is essential.

Treatment

Brucellosis typically causes flu-like symptoms, including fever, weakness, malaise and weight loss. However, the disease may present in many atypical forms. In many patients the symptoms are mild and, therefore, the diagnosis may not be considered. The incubation period of the disease can be highly variable, ranging from 1 week to 2 months, but usually 2–4 weeks.

Treatment options include doxycycline 100 mg twice a day for 45 days, plus streptomycin 1 g daily for 15 days. The main alternative therapy is doxycycline at 100 mg, twice a day for 45 days, plus rifampicin at 15mg/kg/day (600-900mg) for 45 days. Experience suggests that streptomycin may be substituted with gentamicin 5mg/kg/daily for 7–10 days, but no study directly comparing the two regimes is currently available. The optimal treatment for pregnant women, neonates and children under 8 is not yet determined; for children, options include trimethoprim/sulfamethoxazole (co-trimoxazole) combined with an aminoglycoside (streptomycin, gentamycin) or rifampicin.

Country response

- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses several laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever,

Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status to prevent the spread of diseases.

- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

AFRICAN TRYPANOSOMIASIS

Key facts

- While the incidence of African trypanosomiasis has decreased in recent years due to control measures, it remains a threat in endemic regions with sporadic outbreaks.
- African trypanosomiasis is caused by protozoan parasites of the genus Trypanosoma. There are two subspecies: Trypanosoma brucei gambiense (responsible for chronic infection in West and Central Africa) and Trypanosoma brucei rhodesiense (responsible for acute infection in East and Southern Africa).
- The disease is transmitted through the bite of an infected tsetse fly (Glossina species).

Background

African Trypanosomiasis, also known as “sleeping sickness”, is caused by microscopic parasites transmitted by the tsetse fly and found only in sub-Saharan Africa. It is curable with medication but fatal if left untreated. The number of cases has been reduced through control efforts and in 2020, fewer than 700 combined cases were reported to WHO.

Treatment

African Trypanosomiasis is treated with specific drugs based on the type of infection and disease stage. Pentamidine or fexinidazole are used for first stage T. b. gambiense infections. Nifurtimox eflornithine combination therapy or fexinidazole are used for second stage T.b. gambiense infections. Suramin and melarsoprol are used to treat first and second stage T. b. rhodesiense infections, respectively. There is no test of cure for African trypanosomiasis and patients should be monitored for relapse after treatment.

Prevention and control

There is no vaccine or drug for prophylaxis against African trypanosomiasis. Preventive measures are aimed at minimizing contact with tsetse flies. Local residents in endemic countries are usually aware of the areas that are heavily infested and may be able to provide advice about places to avoid. African trypanosomiasis has no vaccine or drug for prophylaxis. To minimize contact with tsetse flies, wear neutral-colored, medium-weight clothing, inspect vehicles before entering, avoid bushes, and use insect repellent.

Country response

- Human African Trypanosomiasis is one of the ten prioritized zoonotic diseases in Zambia (PZDs). As a disease of concern, the government is committed to building capacity across the country to effectively respond to it.

- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses a number of laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever, Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status in order to prevent the spread of diseases.
- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.
- Technical guidelines for integrated diseases surveillance and response in Zambia include plague.
- Tsetse control unit
- Mass tsetse control across the country

PLAGUE

Key facts

- Plague is caused by the bacteria *Yersinia pestis*, a zoonotic bacteria usually found in small mammals and their fleas.
- People infected with Y. pestis often develop symptoms after an incubation period of one to seven days.
- There are two main clinical forms of plague infection: bubonic and pneumonic. Bubonic plague is the most common form and is characterized by painful swollen lymph nodes or 'buboes'.
- Plague is transmitted between animals and humans by the bite of infected fleas, direct contact with infected tissues, and inhalation of infected respiratory droplets.
- Plague can be a very severe disease in people, with a case-fatality ratio of 30% to 60% for the bubonic type and is always fatal for the pneumonic kind when left untreated.
- Antibiotic treatment is effective against plague bacteria, so early diagnosis and early treatment can save lives.
- Currently, the three most endemic countries are the Democratic Republic of the Congo, Madagascar, and Peru.

Background

Plague is an infectious disease caused by the bacteria Yersinia pestis, usually found in small mammals and their fleas. Humans can be infected through bites of infected fleas, contact with bodily fluids or contaminated materials, or inhalation of respiratory droplets. The disease is severe, with a high case-fatality ratio if left untreated. Plague was responsible for widespread pandemics in the past, but now it can be easily treated with antibiotics and standard precautions. Plague epidemics have occurred in Africa, Asia, and South America; but since the

1990s, most human cases have occurred in Africa. The three most endemic countries are the Democratic Republic of Congo, Madagascar, and Peru. As an animal disease, plague is found in all continents, except Oceania. There is a risk of human plague wherever the presence of plague natural foci (the bacteria, an animal reservoir and a vector) and human population co-exist. Plague epidemics have occurred in Africa, Asia, and South America; but since the 1990s, most human cases have occurred in Africa. The three most endemic countries are the Democratic Republic of Congo, Madagascar, and Peru. Confirmation of plague requires lab testing. The best practice is to identify Y. pestis from a sample of pus from a bubo, blood or sputum. A specific Y. pestis antigen can be detected by different techniques. One of them is a laboratory validated rapid dipstick test now widely used in Africa and South America, with the support of WHO.

Treatment

Untreated pneumonic plague can be rapidly fatal, so early diagnosis and treatment is essential for survival and reduction of complications. Antibiotics and supportive therapy are effective against plague if patients are diagnosed in time. Pneumonic plague can be fatal within 18 to 24 hours of disease onset if left untreated, but common antibiotics for enterobacteria (gram negative rods) can effectively cure the disease if they are delivered early.

Prevention

Preventive measures include informing people when zoonotic plague is present in their environment and advising them to take precautions against flea bites and not to handle animal carcasses. Generally, people should be advised to avoid direct contact with infected body fluids and tissues. When handling potentially infected patients and collecting specimens, standard precautions should apply.

WHO does not recommend vaccination, expect for high-risk groups (such as laboratory personnel who are constantly exposed to the risk of contamination, and health care workers).

Managing plague outbreaks

During a plague outbreak, it's important to identify and stop the source of infection. This involves finding the most likely source of infection in the area where the human case(s) was exposed. Appropriate infection prevention and control procedures, as well as vector and rodent control, must be put in place. Health workers should be informed, trained, and protected. Patients should be isolated and treated with appropriate antibiotics. Close contacts of patients should be identified and monitored. Specimens for lab testing should be collected and sent immediately to the labs. Routine disinfection and safe burial practices are also necessary.

Surveillance and control

To manage plague outbreaks, it is important to investigate animal and flea species involved in the disease cycle, develop environmental management programs, and conduct active long-term surveillance of animal foci. Having an informed and vigilant healthcare workforce and community is crucial for quickly diagnosing and managing infected patients, identifying risk factors, controlling vectors and hosts, and communicating findings with appropriate authorities.

Country response

- Plague is one of the ten prioritized zoonotic diseases in Zambia (PZDs). As a disease of concern, the government is committed to building capacity across the country to effectively respond to it. Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.
- Technical guidelines for integrated diseases surveillance and response in Zambia include plague.

INFLUENZA (AVIAN AND OTHER ZOONOTIC)

Key facts

- Humans can be infected with avian, swine and other zoonotic influenza viruses, such as avian influenza virus subtypes A(H5N1), A(H7N9), and A(H9N2) and swine influenza virus subtypes A(H1N1), A(H1N2) and A(H3N2).
- Human infections are primarily acquired through direct contact with infected animals or contaminated environments, these viruses have not acquired the ability of sustained transmission among humans.
- Avian, swine and other zoonotic influenza virus infections in humans may cause disease ranging from mild upper respiratory tract infection (fever and cough), early sputum production and rapid progression to severe pneumonia, sepsis with shock, acute respiratory distress syndrome and even death. Conjunctivitis, gastrointestinal symptoms, encephalitis and encephalopathy have also been reported to varying degrees depending on subtype.
- The majority of human cases of influenza A (H5N1) and A(H7N9) virus infection have been associated with direct or indirect contact with infected live or dead poultry. Controlling the disease in the animal source is critical to decrease risk to humans.
- Influenza viruses, with the vast silent reservoir in aquatic birds, are impossible to eradicate. Zoonotic influenza infection in humans will continue to occur. To minimize public health risk, quality surveillance in both animal and human populations, thorough investigation of every human infection and risk-based pandemic planning are essential.

Background

Humans can be infected with zoonotic influenza viruses such as avian or swine influenza viruses. There are four types of influenza viruses: types A, B, C and D:

Influenza A viruses can cause a pandemic and infect humans and animals. Influenza A viruses are classified into subtypes based on surface proteins. Aquatic birds are the primary natural reservoir for most subtypes of influenza A viruses. Influenza B viruses circulate among humans and seals and cause seasonal epidemics. Influenza C viruses can infect both humans and pigs but infections are generally mild and are rarely reported. Influenza D viruses primarily affect cattle and are not known to infect or cause illness in people. Highly pathogenic avian influenza causes severe disease and death in poultry.

Signs and symptoms in humans

Avian, swine and other zoonotic influenza infections in humans may cause mild to severe respiratory disease, ranging from upper respiratory infection to severe pneumonia, acute respiratory distress syndrome, shock, and even death. The severity of symptoms and clinical outcome varies by the virus causing infection but mainly manifests with respiratory symptoms. The case fatality rate for A(H5) and A(H7N9) subtype virus infections among humans is much higher than that of seasonal influenza infections. Swine influenza viruses' human infections have mostly been mild, with a few cases hospitalized and very few deaths.

Epidemiology of human infections

Avian and other zoonotic influenza viruses can be transmitted to humans through direct contact with infected animals or contaminated environments, but do not result in efficient transmission of these viruses between people. Outbreaks in poultry have impacted livelihoods, the economy and international trade in affected countries. The primary risk factor for human infection with avian influenza viruses is exposure to infected live or dead poultry or contaminated environments. For swine influenza viruses, the risk factors include close proximity to infected pigs or visiting locations where pigs are exhibited. The average incubation period for avian influenza A(H5N1) and A(H7N9) viruses is longer than that for seasonal influenza, while for swine influenza viruses it is 2-7 days.

Diagnosis

Laboratory tests are required to diagnose human infection with zoonotic influenza. WHO, through its Global Influenza Surveillance and Response System (GISRS), periodically updates technical guidance protocols for the detection of zoonotic influenza in humans using molecular e.g. RT-PCR and other methods. Rapid influenza diagnostic tests (RIDTs) have lower sensitivity compared to PCR and their reliability depends largely on the conditions under which they are used. Commercially available RIDTs in general cannot provide subtype information. RIDTs are sometimes used in clinical settings, but their use in detection of zoonotic viruses is limited. Adequate, appropriate samples for influenza tests should be taken from patients and processed with diagnostics according to relevant guidance and protocols

Treatment

Antiviral drugs like oseltamivir and zanamivir can reduce viral replication and improve survival, but oseltamivir resistance has been reported. Neuraminidase inhibitors are recommended as soon as possible after symptom onset, and treatment should last for at least 5 days. Corticosteroids should not be used routinely and adamantane antiviral drugs are not recommended for monotherapy. Co-infection with bacterial pathogens can occur in critically ill patients.

Prevention

To prevent the spread of influenza, it is important to practice good hygiene by washing your hands and covering your mouth and nose when coughing or sneezing. If you feel unwell, it is

important to self-isolate and avoid contact with others. Healthcare workers should use proper protective equipment during epidemics. Travelers should avoid contact with animals in affected areas and follow good food safety practices. Antiviral treatment may be an option for some individuals.

Pandemic potential

Influenza pandemics are unpredictable events that can have worldwide health, economic and social consequences. They occur when a novel virus emerges and spreads rapidly with little time to prepare. Some avian influenza viruses in poultry are of public health concern as they can cause severe disease in humans. The potential for a future pandemic is unknown, but surveillance and pandemic preparedness planning are necessary.

Country response

- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses a number of laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever, Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status in order to prevent the spread of diseases.
- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

BOVINE TUBERCULOSIS

Key Facts

- In 2016, there were an estimated 147 000 new cases of zoonotic TB in people globally, and 12 500 deaths due to the disease. The African region carries the heaviest burden, followed by the South-East Asian region.
- The true burden of zoonotic TB is likely to be underestimated due to a lack of routine surveillance data from most countries.
- Bovine TB is endemic in animal populations in many parts of the world.

Background

Bovine tuberculosis also known as zoonotic tuberculosis (ZTB) is a chronic disease of animals caused by a bacterium called Mycobacterium bovis, which is closely related to the bacteria that causes human and avian tuberculosis.

This disease can affect practically all mammals causing a general state of illness, coughing, and eventual death. ZTB is caused by the bacteria M. bovis. It is found most in cattle and deer, but

can affect almost all mammals, including people. ZTB spreads from animal to animal and from animals to people.

People most commonly get ZTB through eating or drinking raw milk or dairy products from animals infected with ZTB. It is also possible for the disease to spread through a break or opening in the skin, like a cut or a scratch, when touching an infected animal through activities such as hunting, slaughter, milking, or processing hides. It is rare, but also possible to breathe in the small droplets released with the cough or sneeze of an animal that has ZTB. People that work or live in close contact with cattle or other animals are most at risk of ZTB.

ZTB can cause impacts to economic activities as well as to human health. Outbreaks of ZTB can result in the loss of lives to both people and animals as well as the loss of livelihood, a reduction in animal production, and an increase in the cost of animal production.

Risk factors

While the most common route of transmission of M. bovis to humans is through contaminated food (mainly untreated dairy products or, less commonly, untreated meat products), airborne transmission also poses an occupational risk to people in contact with infected animals or animal products, including farmers, veterinarians, slaughterhouse workers and butchers.

ZTB can damage the lungs, lymph nodes, and other parts of the body. Once a person has ZTB in their lungs, they can spread it directly to other people when they cough or sneeze. Some people that become infected with the disease do not feel sick, do not show symptoms, and cannot spread the disease to others. These people have a form of the disease called latent TB infection. They may go on to fully develop ZTB in time. ZTB in people may be indistinguishable from human TB and prescribed treatment is the same.

Symptoms in humans and animals

Animals do not often show signs or symptoms of ZTB until later stages of the disease, which can vary greatly in time from a month to multiple years after infection.

These signs and symptoms include:

- Large weight loss,
- Dullness or tiredness,
- Weakness,
- Unwilling to eat,
- Small fever (low-grade fever),
- Cough that will not go away (pneumonia with a chronic wet cough), and
- Enlarged glands (lymph nodes).

Signs and symptoms of ZTB are similar to TB and include:

- Fever
- Night sweats
- Weight loss

Additional signs and symptoms may depend on where the infection is located in the body, like a cough when the infection is in the lungs, and pain and diarrhea when it is in the stomach and intestines (gastrointestinal tract).

Some people that are infected with ZTB will show no signs and symptoms and cannot spread the disease to others.

Because many of the signs and symptoms of ZTB are like those for malaria and other serious diseases, it is important to go to a health facility for early testing and treatment for any fever.

Prevention and control

- To reduce the spread of ZTB within a herd, avoid sharing bulls across farms if they have any of the signs and symptoms of ZTB.
- When possible, contact a Veterinary Officer to test animals with tuberculin skin test.
- To stop the spread of disease to other animals or people, do not eat, sell, or give away any animal that has recently aborted, looks sick, or that is found dead.
- Do not take animals with any of the signs or symptoms of ZTB to market.
- Do not sell, eat, or give away milk or other animal products from sick animals. Sick animals and animals that are found dead can pass their diseases to other people and animals when you touch them, eat them, or move them from place to place to sell them. Immediately separate any sick or dead animals from your healthy animals to stop the spread of disease and inform a Veterinary Officer.
- To protect you and your family from ZTB, boil dairy products, including milk from any animal.
- Many animals that have ZTB do not show signs or symptoms, so it is best to avoid all raw milk and dairy products.
- Do not eat, drink, sell, offer for sale, or give away raw milk or dairy products from any animal that has signs of ZTB or any other disease.
- To avoid ZTB, cook food well and avoid raw or undercooked meat.
- Make sure to keep raw food and cooked food separate to avoid contamination.
- Wash knives, bowls, plates, and surfaces that were used to cut, prepare, or store meat with soap and water before using them for cooked foods to avoid contamination.
- Keep animals in specific areas outside of the home to reduce the spread of the disease through close contact.
- To reduce the spread of ZTB to other animals and humans, avoid selling or giving away an animal that shows any sign or symptom of the disease.
- Separate sick animals from your herd and contact a Veterinary Officer

Country response

- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses a number of laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever, Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status in order to prevent the spread of diseases.
- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

EBOLA

Key facts

- Vaccines to protect against some types of Ebola have been used to control the spread of Ebola in outbreaks. Other vaccines are in development.
- Early supportive care with rehydration and the treatment of symptoms improves survival.
- WHO has made strong recommendations for the use of two monoclonal antibody treatments in treating Ebola: mAb114 (Ansuvimab; Ebanga) and REGN-EB3 (Inmazeb).
- The average Ebola case fatality rate is around 50%. Case fatality rates have varied from 25–90% in past outbreaks, depending on circumstances and the response.
- Good outbreak control relies on taking many types of actions: care of patients, infection prevention and control, disease surveillance and contact tracing, good laboratory services, safe and dignified burials, and social mobilization.
- Community engagement is key to successfully controlling outbreaks.

Background

Ebola virus disease (formerly known as Ebola haemorrhagic fever) is a rare but severe, often fatal, often fatal illness, with a death rate of up to 90% in humans caused by the Ebola virus, a member of the filovirus family. Ebola virus disease (EVD or Ebola) is a rare but severe illness in humans and is often fatal.

Some types of Ebola can be prevented with vaccines and treated with medicines.

Ebola first appeared in 1976 in 2 simultaneous outbreaks, one in what is now Nzara, South Sudan, and the other in Yambuku, Democratic Republic of Congo. The latter occurred in a village near the Ebola River, from which the disease takes its name. The virus family Filoviridae includes 3 genera: Cuevavirus, Marburgvirus, and Ebolavirus. Within the genus Ebolavirus, 6 species have been identified: Zaire, Bundibugyo, Sudan, Taï Forest, Reston and Bombali.

Transmission

Ebola virus is thought to be hosted by fruit bats of the Pteropodidae family. The virus is introduced to humans through close contact with infected animals, such as chimpanzees, gorillas, and monkeys. Ebola spreads through human-to-human transmission via direct contact with body fluids of an infected individual or contaminated objects.

People get infected with Ebola by touching:

- Infected animals when preparing, cooking or eating them
- Body fluids of an infected person such as saliva, urine, feces, or semen
- Things that have the body fluids of an infected person like clothes or sheets.

Ebola enters the body through cuts in the skin or when touching one's eyes, nose or mouth.

Health-care workers are at risk of contracting Ebola when infection control precautions are not strictly practiced. Burial ceremonies that involve contact with the body of the deceased can also contribute to the transmission of Ebola. After recovery, survivors may still carry the virus in their blood or breastmilk. Pregnant women who get acute Ebola and recover from the disease may still carry the virus in breastmilk, or in pregnancy related fluids and tissues.

Symptoms

The symptoms of Ebola infection can be sudden and include fever, fatigue, muscle pain, headache and sore throat. These are followed by vomiting, diarrhea, rash, and internal and external bleeding. The time from when someone gets infected to having symptoms is usually from 2 to 21 days. A person with Ebola can only spread the disease once they have symptoms. People can spread Ebola for as long as their body contains the virus, even after they have died.

After recovering from Ebola, some people may have symptoms for two years or longer. These symptoms can include:

- Feeling tired
- Headache
- Muscle and joint pain
- Eye pain and vision problems
- Weight gain
- Belly pain and loss of appetite
- Hair loss and skin problems
- Trouble sleeping
- Memory loss
- Hearing loss
- Depression and anxiety.

People should speak to a health-care professional if they have:

- Symptoms and have been in an area known to have Ebola.
- Been in contact with someone who may have had Ebola.

Diagnosis

It can be difficult to clinically distinguish Ebola virus disease from other infectious diseases such as malaria, typhoid fever and meningitis. Many symptoms of pregnancy and Ebola disease are also quite similar. Because of risks to the pregnancy and themselves, pregnant women should ideally be tested rapidly if Ebola is suspected.

Confirmation that symptoms are caused by Ebola virus infection are made using the following diagnostic methods:

- Antibody-capture enzyme-linked immunosorbent assay (ELISA)
- Antigen-capture detection tests
- Serum neutralization test
- Reverse transcriptase polymerase chain reaction (RT-PCR) assay
- Electron microscopy
- Virus isolation by cell culture.
- Diagnostic tests evaluated through the WHO emergency use assessment and listing process can be seen here.

Treatment

Ebola patients need immediate medical care. Treatment is provided in the hospital and includes fluids and medicines, as it's not safe to care for them at home. For all types of Ebola, supportive treatments save lives and include the following:

- Oral or intravenous fluids
- Blood transfusions
- Medicines for other infections the person may have, such as malaria
- Medicines for pain, nausea, vomiting and diarrhea.

WHO has guidance on the supportive care Ebola patients should receive, from relevant tests to managing pain and nutrition. In the 2018–2020, Ebola outbreak in the Democratic Republic of the Congo, the first-ever multi-drug randomized control trial was conducted to evaluate the effectiveness and safety of drugs used in the treatment of Ebola patients. WHO has living guidance on the recommended treatments and approaches.

Prevention and control

To protect oneself from Ebola, one should wash hands regularly, avoid touching the body fluids of infected people, not touch the bodies of those who died from Ebola, and get vaccinated if at risk. WHO prequalifies Ebola vaccine, paving the way for its use in high-risk countries. The Ervebo vaccine has been shown to be effective in protecting people from the species Zaire

ebolavirus and is recommended by the Strategic Advisory Group of Experts on Immunization as part of a broader set of Ebola outbreak response tools. Good outbreak control involves multiple interventions, including case management, surveillance, contact tracing, safe burials, and social mobilization. Health workers should use standard precautions and extra infection control measures when caring for Ebola patients. In addition, laboratory workers should handle samples with care. Raising awareness of risk factors for Ebola infection and protective measures (including vaccination) that individuals can take is an effective way to reduce human transmission. Risk reduction messaging should focus on several factors:

- Reducing the risk of wildlife-to-human transmission,
- Reducing the risk of human-to-human transmission,
- Outbreak containment measures, including safe and dignified burial of the dead,
- Reducing the risk of possible sexual transmission, and
- Reducing the risk of transmission from pregnancy related fluids and tissue.

Country response

- Ebola is one of the ten prioritized zoonotic diseases in Zambia (PZDs). As a disease of concern, the government is committed to building capacity across the country to effectively respond to it.
- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

ANTHRAX

Anthrax is primarily a disease of herbivorous mammals, although other mammals and some birds have been known to contract it. Until the introduction and widespread use of effective veterinary vaccines, it was a major cause of fatal disease in cattle, sheep, goats, camels, horses, and pigs throughout the world. Anthrax continues to be reported from many countries in domesticated and wild herbivores, especially where livestock vaccination programs are inadequate or have been disrupted.

Humans generally acquire the disease directly or indirectly from infected animals, or occupational exposure to infected or contaminated animal products. Control in livestock is therefore the key to reduced incidence. The disease is generally regarded as being non-contagious. Records of person-to-person spread exist but are rare.

Who is at risk

Anyone who has come in contact with anthrax spores could be at risk of getting sick. Most people will never be exposed to anthrax. However, there are activities that can put some people at greater risk of exposure than others.

- People who handle animal products
- Veterinarians
- Livestock producers

- Travelers
- Laboratory professionals
- Mail handlers, military personnel, and response workers who may be exposed during a bioterror event involving anthrax spores

Symptoms

The symptoms of anthrax depend on the type of infection and can take anywhere from 1 day to more than 2 months to appear. All types of anthrax have the potential, if untreated, to spread throughout the body and cause severe illness and even death.

Cutaneous anthrax symptoms

- A group of small blisters or bumps that may itch
- Swelling can occur around the sore
- A painless skin sore (ulcer) with a black center that appears after the small blisters or bumps
- Most often the sore will be on the face, neck, arms, or hands

Inhalation anthrax symptoms

- Fever and chills
- Chest Discomfort
- Shortness of breath
- Confusion or dizziness
- Cough
- Nausea, vomiting, or stomach pains
- Headache
- Sweats (often drenching)
- Extreme tiredness
- Body aches

Gastrointestinal anthrax symptoms

- Fever and chills
- Swelling of neck or neck glands
- Sore throat
- Painful swallowing
- Hoarseness
- Nausea and vomiting, especially bloody vomiting
- Diarrhea or bloody diarrhea
- Headache
- Flushing (red face) and red eyes
- Stomach pain
- Fainting
- Swelling of abdomen (stomach)

In animals

The length of time from when anthrax enters an animal's body to when the animal starts to show signs and symptoms of anthrax ranges from one day to two weeks. The signs and symptoms of anthrax in animals includes:

- Difficulty breathing
- Sudden death
- Bleeding from the mouth, nose, and other body openings after death
- Swelling of the body after death
- Lack of body stiffness after death

Transmission

- Anthrax is a sickness that can spread between animals and from animals to humans.
- Anthrax rarely spreads from person to person.
- Anthrax can spread from an animal to a person through:
- A break or opening in the skin such as a cut or a scrape when a person has direct contact with blood or other body fluids, such as urine, stool, blood, snot, or saliva, or animal products such as meat from an animal that has anthrax
- Eating the meat or blood of an animal that is sick with or died from anthrax
- Touching or breathing in anthrax spores from the bones, skin, or hide of an animal that died with anthrax

Treatment

Doctors have several options for treating patients with anthrax, including antibiotics and antitoxin. Patients with serious cases of anthrax will need to be hospitalized. They may require aggressive treatment, such as continuous fluid drainage and help breathing through mechanical ventilation.

Country response

- Anthrax is a reportable disease in Zambia
- The Zambia Central Veterinary Research Institute (CVRI) institute under the Ministry of Fisheries and Livestock uses a number of laboratory techniques in the diagnosis of animal diseases. These include serology, microscopy, culture, and molecular techniques among others. The diseases diagnosed include diseases of national economic importance such as Foot and Mouth Disease (FMD), Contagious Bovine Pleural Pneumonia (CBPP), African Swine fever (ASF), Rabies, Anthrax, etc. In addition, CVRI is involved in the surveillance of emerging and endemic animal diseases such as Peste des Petit Ruminants (PPR), Rift valley fever, Avian influenza, Salmonellosis, African swine fever, Brucellosis and Tuberculosis. Furthermore, the institute has continued to screen animals that are meant for movement from one area to another to determine their disease status to prevent the spread of diseases.

- Zambia National Public Health Institute (ZNPHI), under the Ministry of Health, is responsible for information dissemination on all the outbreaks.

RABIES

- Rabies is a vaccine-preventable viral disease which occurs in more than 150 countries and territories.
- Dogs are the main source of human rabies deaths, contributing up to 99% of all rabies transmissions to humans.
- Interrupting transmission is feasible through vaccination of dogs and prevention of dog bites.
- Infection causes tens of thousands of deaths every year, mainly in Asia and Africa.
- Globally rabies causes an estimated cost of US$ 8.6 billion per year
- 40% of people bitten by suspect rabid animals are children under 15 years of age.
- Immediate, thorough wound washing with soap and water after contact with a suspect rabid animal is crucial and can save lives.
- Engagement of multiple sectors and One Health collaboration including community education, awareness programs and vaccination campaigns are critical.
- WHO leads the collective “United Against Rabies” to drive progress towards "Zero human deaths from dog-mediated rabies by 2030"

Background

Rabies is a vaccine-preventable, zoonotic, viral disease. Once clinical symptoms appear, rabies is virtually 100% fatal. In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans. Yet, rabies can affect both domestic and wild animals. It is spread to people and animals through bites or scratches, usually via saliva.

Rabies is present on all continents, except Antarctica, with over 95% of human deaths occurring in the Asia and Africa regions. Rabies is one of the Neglected Tropical Diseases (NTD) that predominantly affects poor and vulnerable populations who live in remote rural locations. Approximately 80% of human cases occur in rural areas. Although effective human vaccines and immunoglobulins exist for rabies, they are not readily available or accessible to those in need. Globally, rabies deaths are rarely reported and children between the ages of 5–14 years are frequent victims. Managing a rabies exposure, where the average cost of rabies post-exposure prophylaxis (PEP) is currently estimated at an average of US$ 108 can be a catastrophic financial burden on affected families whose average daily income may be as low as US$ 1–2 per person[1].

Every year, more than 29 million people worldwide receive a post-bite vaccination. This is estimated to prevent hundreds of thousands of rabies deaths annually. Globally, the economic burden of dog-mediated rabies is estimated at US$ 8.6 billion per year.

Prevention

Eliminating rabies in dogs

Rabies is a vaccine-preventable disease. Vaccinating dogs is the most cost-effective strategy for preventing rabies in people. Dog vaccination reduces deaths attributable to dog-mediated rabies and the need for PEP as a part of dog bite patient care.

Awareness on rabies and preventing dog bites

Education on dog behavior and bite prevention for both children and adults is an essential extension of a rabies vaccination program and can decrease both the incidence of human rabies and the financial burden of treating dog bites. Increasing awareness of rabies prevention and control in communities includes education and information on responsible pet ownership, how to prevent dog bites, and immediate care measures after a bite. Engagement and ownership of the program at the community level increases reach and uptake of key messages.

Symptoms

The incubation period for rabies is typically 2–3 months but may vary from 1 week to 1 year, dependent upon factors such as the location of virus entry and viral load. Initial symptoms of rabies include a fever with pain and unusual or unexplained tingling, pricking, or burning sensation (paresthesia) at the wound site. As the virus spreads to the central nervous system, progressive and fatal inflammation of the brain and spinal cord develops.

There are two forms of the disease:

- Furious rabies results in signs of hyperactivity, excitable behavior, hydrophobia (fear of water) and sometimes aerophobia (fear of drafts or of fresh air). Death occurs after a few days due to cardio-respiratory arrest.
- Paralytic rabies accounts for about 20% of the total number of human cases. This form of rabies runs a less dramatic and usually longer course than the furious form. Muscles gradually become paralyzed, starting at the site of the bite or scratch. A coma slowly develops, and eventually death occurs. The paralytic form of rabies is often misdiagnosed, contributing to the under-reporting of the disease.

Transmission

People are usually infected following a deep bite or scratch from an animal with rabies, and transmission to humans by rabid dogs accounts for 99% of cases.

In the Americas, bats are now the major source of human rabies deaths as dog-mediated transmission has mostly been broken in this region. Bat rabies is also an emerging public health threat in Australia and Western Europe. Human deaths following exposure to foxes, raccoons, skunks, jackals, mongooses and other wild carnivore host species are very rare, and bites from rodents are not known to transmit rabies.

Transmission can also occur if saliva of infected animals comes into direct contact with human mucosa or fresh skin wounds. Contraction of rabies through inhalation of virus-containing aerosols or through transplantation of infected organs is described, but extremely rare. Human-to-human transmission through bites or saliva is theoretically possible but has never been

confirmed. The same applies for transmission to humans via consumption of raw meat or milk of infected animals.

Post-exposure prophylaxis

Post-exposure prophylaxis (PEP) is the immediate treatment of a bite victim after rabies exposure. This prevents virus entry into the central nervous system, which results in imminent death. PEP consists of:

- Extensive washing and local treatment of the bite wound or scratch as soon as possible after a suspected exposure.
- A course of potent and effective rabies vaccine that meets WHO standards.
- The administration of rabies immunoglobulin (RIG), if indicated.

Starting the treatment soon after an exposure to rabies virus can effectively prevent the onset of symptoms and death.

Extensive wound washing

This first-aid measure includes immediate and thorough flushing and washing of the wound for a minimum of 15 minutes with soap and water, detergent, povidone iodine or other substances that remove and kill the rabies virus.

Exposure risk and indications for PEP

Depending on the severity of the contact with the suspected rabid animal, administration of a full PEP course is recommended as follows:

Categories of contact with suspect rabid animal	Post-exposure prophylaxis measures
Category I - touching or feeding animals, animal licks on intact skin (no exposure)	Washing of exposed skin surfaces, no PEP
Category II - nibbling of uncovered skin, minor scratches or abrasions without bleeding (exposure)	Wound washing and immediate vaccination
Category III - single or multiple transdermal bites or scratches, contamination of mucous membrane or broken skin with saliva from animal licks, exposures due to direct contact with bats (severe exposure)	Wound washing, immediate vaccination and administration of rabies immunoglobulin

All category II and III exposures assessed as carrying a risk of developing rabies require PEP. This risk is increased if:

- The biting mammal is a known rabies reservoir or vector species
- The exposure occurs in a geographical area where rabies is still present
- The animal looks sick or displays abnormal behavior

- A wound or mucous membrane was contaminated by the animal's saliva
- The bite was unprovoked
- The animal has not been vaccinated.

The vaccination status of the suspect animal should not be the deciding factor when considering initiating PEP or not when the vaccination status of the animal is questionable. This can be the case if dog vaccination programs are not being sufficiently regulated or followed out of lack of resources or low priority.

WHO continues to promote human rabies prevention through the elimination of rabies in dogs, dog bite prevention strategies, and more widespread use of the intradermal route for PEP which reduces volume and therefore the cost of cell-cultured vaccine by 60% to 80%.

Integrated bite case management

If possible, the veterinary services should be alerted, the biting animal identified, removed from the community and either quarantined for observation (for healthy dogs and cats) or submitted for immediate laboratory examination (dead or euthanized animals showing clinical signs of rabies). PEP must be continued during the 10-day observation period or while awaiting laboratory results. Treatment may be discontinued if the animal is proven to be free of rabies. If a suspect animal cannot be captured and tested, then a full course of PEP should be completed. Joint contact tracing by veterinary and public health services is encouraged to identify additional suspected rabid animals and human bite victims, with the goal to apply preventive measures accordingly.

Country Response

- Country's commitment to the Elimination of dog mediated rabies by 2030
- Surveillance-Rabies Information Management System (IMS)

HANDOUT 6: EBOLA, SARS, AND COVID-19 CASE STUDIES

Instructions: The following case studies are based upon real-world zoonotic disease epidemic scenarios. Each member of the group should take a few minutes to read through your assigned case study. All group members should then come together to discuss:

1. What are the key pitfalls or lessons learned in the epidemic response presented?
2. Which effective practices of risk communication were applied in this case?
3. How might effective collaboration between media actors and public health actors have changed the situation?

One person should take notes of key points of the discussion. You will have twenty minutes to work on this exercise before presenting your analysis for five minutes to the larger group.

CASE STUDY 1: EBOLA IN WEST AFRICA

The 2013–2016 outbreak of EVD in Liberia, Sierra Leone and Guinea sent shockwaves throughout the world. The outbreak was so terrifying due to its virulence and mortality rates, with an estimated 28,616 people infected and 11,310 deaths. In addition to the devastation and loss of life it caused, the epidemic was so striking because one of the biggest factors impeding the ability for responders to control and contain its spread was widespread resistance to the risk communication strategy among affected and at-risk communities.

Fear, fueled by rumors and conspiracy theories, amplified some distrust of the government and international NGOs among citizens in countries where the disease spread unabated. For this reason, there was initially persistent and widespread denial of the reality of the disease, especially in Liberia and Sierra Leone, where theories that the disease was a deliberate conspiracy quickly spread. Faced with this denial, early risk communication efforts focused on spreading information that, while technically factually correct at the time, prioritized fear-based messages in an attempt to simply convince people that the virus was a real threat, rather than presenting more nuanced messaging to emphasize what communities could do to prevent it. Such messages--such as that the virus was deadly, and there was no vaccine or cure—succeeded more in stoking fear and panic than inducing meaningful preventative actions. This panic further undermined already weak public faith in the health system's capacity to successfully treat infected people. While conspiracy theories and rumors continued in earnest, mistrust in the health system drove infected people away from notifying symptoms to health authorities, further hampering the community-based surveillance and rapid response system and thus containment efforts.

Beyond negative, fear-based messages to combat denial, early risk communication efforts around Ebola were based on an assumption that simply disseminating factual, biomedical information about the virus would change people's behaviors. The "low-hanging" fruit of health messaging was employed, using simplistic slogans like "Wash your hands" and "Stop Ebola;" these phrases were helpful and easy for people to recall, but they did not inspire deeper thought and engagement, nor help communities to grapple with the realities of the newfound

risk inherent in various social situations and interactions. The scientific uncertainty and rapidly changing information on the ground about the epidemiology of the disease further complicated communication efforts, as new information about the virus's characteristics was constantly emerging, which was communicated to the public but was later modified or disproven; this sparked doubt about the credibility of advice given by the authorities. Finally, the response strategy was dominated largely by players from outside the affected countries and especially from the global North, which focused on rapidly rolling out the highly technical aspects of outbreak response and failed to understand and engage meaningfully with the social, cultural and economic contexts that influenced an individual's risk assessments and decisions.

As the epidemic wore on, and it became clear that the Ebola response was largely failing in its efforts to bring communities to take preventative action, the communication strategy evolved. Implementing organizations began to consult with and involve religious and traditional leaders, traditional healers, youth groups and other formal and informal community structures in communication efforts, even if this process was more complex and required more time to coordinate than the prior top-down messaging strategy more closely. As these local players began to take on a larger role, there was evidence that communities were becoming more receptive to adopting some of the more challenging behaviors to reduce risks. The leadership of communities also allowed for the creation of feedback loops between communities and service providers, which did not exist before with the technocratic approach. The community-driven strategy was more effective but was introduced relatively late in the epidemic; had it been taken earlier on, more people may have taken preventative action sooner, likely altering the trajectory of the disease.

Mass communication efforts were also seriously challenged by the epidemic. Governments and their international partners were reluctant to release information about the disease locally and internationally. All countries, already economically impacted by unjustified negative perceptions in the Global North, were worried about bad publicity and wanted to protect their image in the eyes of foreign donors and investors, therefore delaying the release of information about the severity of the situation to international stakeholders and to the media. In some cases, an antagonistic relationship between journalists and official spokespersons in affected countries further delayed the release of public information. In Liberia, for instance, the government initially issued a state of emergency that prevented journalists from reporting on the outbreak, effectively silencing critical voices. The restrictions placed on journalists furthered exacerbated already weak media systems, which are marred by a lack of professionalism, inaccurate and sensationalist reporting, poorly trained and poorly paid journalists, self-censorship and government repression of critical voices. It later reversed the decision.

CASE STUDY 2: SARS IN CHINA, HONG KONG, AND VIETNAM

The outbreak of severe acute respiratory syndrome--the first new disease of the 21st century--is widely considered a watershed health event of the era. Despite its relatively low rate of transmission, the virus managed to infect 8,000 people across 29 countries in a matter of just a few months. SARS not only demonstrated how quickly a new virus can piggyback on the modern tools of a global world to spread quickly across geographic boundaries, but it also

showed how quick decisive action and international cooperation can prevent a new disease from becoming endemic.

Initially, there were strong efforts by the Chinese government to control the narrative around the emerging disease and avoid mass panic by blocking the disclosure of information about the real magnitude of the health threat to the public—both nationally and internationally. This first strategy backfired dramatically as public ignorance and a lack of reliable information about the disease facilitated its early unabated spread and affected public trust. During this period of official denial, news of the outbreak leaked out on the Internet, through rumors spread via mobile phone text messaging, and through brief news items in local newspapers that hinted at the presence of disease. The few statements made by local official spokespersons were all denying the existence of a serious disease rather than providing meaningful information about what was known at the time. During this period, the propaganda department of the Guangdong provincial party committee issued, almost on a daily basis, a series of directives, notices, warnings, and "unified official news releases" to the local media organization, trying to maintain control of media coverage on the epidemic. In the early stages, government secrecy significantly hampered later attempts to mobilize the public, as authorities had undermined public trust in the response effort.

From this initial stage of covering up and denying the existence of the disease, a second stage of the response included admitting the existence of the disease but playing down its severity. Finally, after failure of the first two approaches, the government adopted a strategy of greater openness about the situation and public mobilization to fight the disease.

Other countries took a contrasting strategy to the controlling approach of China. In Hong Kong and Vietnam, control efforts and a swift public health response were made a top priority among governments as containment of the disease was seen as critical to restoring tourism and regaining the confidence of international investors and trade partners. In both countries, the full participation of the public as a partner was considered critical to this effort, and accurate and timely information was considered the best way to secure this participation and maintain trust. Reporting on the outbreak by local authorities was open, honest, straightforward and constant.

Since it was a new disease, information about it was constantly changing, and it was challenging for authorities and communicators to provide the right level of assurance to the public when the biomedical information was incomplete. Authorities therefore recognized how important it was to be available and accessible to the media in this time of uncertainty, to give constant updates as new information came to light. Reporters shared the concerns of the public and replies to the media about the specific concerns expressed were widely publicized in lay language, which promoted public understanding of the issues, including what was known and what wasn't known. Not only did this approach instill public confidence in the government's concern for the wellbeing of citizens and commitment to the response effort, but it also inspired people to take personal action. Rapid and reliable access to information translated into

increased likelihood that citizens would follow outbreak containment measures, avoiding the early ignorance that stymied adoption of such measures in China.

CASE STUDY 3: COVID-19 IN THE UNITED STATES AND NEW ZEALAND

When COVID-19 became a global pandemic in early 2020, the United States and New Zealand were two countries that demonstrated divergent approaches to controlling the outbreak within their borders. The United States has long been regarded as a world leader in public health with top-notch scientific expertise and state of the art technology; the U.S.'s Centers for Disease Control and Prevention (CDC) trains public health officials around the world. As the mysterious virus came onto the global stage, there was a widespread early perception that this expertise, wealth and resources would most certainly insulate the United States from the worst of any global pandemic.

While it is now recognized that there was enough reason to be concerned about the potential for COVID-19 to spread within the US by very early 2020, much of the months of January and February were spent with officials minimizing its potential impact even as some public health experts began to raise the alarm. Instead of directing top agencies to ramp up production of necessities such as personal protective equipment and ventilators or instituting early closures or restrictions on non-essential businesses, top authorities focused heavily on the risk posed by international travelers and began implementing travel bans from heavily affected areas, further cementing the idea of COVID-19 as a "Chinese virus" and underestimating the risk or likelihood of extensive internal spread within the US.

Messages to the public were in constant flux, with confusion and contradictions amongst different officials and agencies charged with controlling the epidemic. Early communications from officials such as the US Surgeon General actually discouraged healthy people from using masks— driven by a concern of overwhelming the supply chain and not having enough PPE for health workers, along with the relatively low rate of transmission at that time. As evidence began to mount that masks were an important preventative tool and infections continued to rise exponentially, public health authorities were forced to backtrack their statements and encourage all Americans to wear masks in public. Various social media commentators and some politicians cast doubt on the efficacity of masks due to this shift in guidance, and compliance with mask-wearing guidelines fell short, long after the reversal.

Additionally, in the first several months of the outbreak, individuals with no biomedical expertise promoted various experimental drugs and treatments which had not yet had proven efficacy against the virus; these communications fueled an "infodemic" of conspiracy theories and questionable prevention and treatment advice, flourishing on social media, which diverted public attention and a sense of urgency away from the everyday preventative actions shown to curb viral spread. Even fervent pleas from the nation's top public health officials to maintain compliance with prevention guidelines into the summer were consistently undermined by politicians eager to "open up" their states and project that the nation had the situation under control and was close to eliminating the virus. There were also premature projections about

when a vaccine would likely be ready and widely available to Americans, which served to further divert focus from the individual prevention actions urgently needed to slow the spread.

At times, the US' decentralized public health system left decisions around messaging and restrictions at the mercy of the interpretation of state governors, who faced competing pressures to reopen their economies as quickly as possible and to safeguard public health. There is evidence that most Americans actually complied with early stay-at-home orders and other restrictions, although compliance varied by state, age, and political affiliation. However, as weeks and months wore on, public support for mask ordinances and stay-at-home orders waned quickly in some parts of the country, leading some state governments to force a reopening of businesses and schools far before CDC guidelines indicated they were ready to do so, based on rates of new infections. As a result of these pressures and premature re-openings, infection rates soared. As of early September, US infection totals far surpassed those of any other country worldwide.

The response to COVID-19 in New Zealand was very different to that of the US. Clear, decisive public health action was taken early on in the pandemic. All borders and entry ports of New Zealand were closed to all non-residents by 20 March 2020, with returning citizens and residents being required to self-isolate and mandatory quarantine policies closely enforced. A simple, easy-to-follow four-level alert system was introduced, and the country went into a nationwide lockdown in March, with the vast majority complying with all restrictions. Bars and restaurants were closed more quickly than in other affected countries.

Importantly, public health messaging in New Zealand was consistently clear and precise; this transparency helped achieve a high level of compliance with the country's strict measures, and therefore has been credited with helping to stem the tide of the pandemic in the country at a time when infections were rising exponentially in other nations. Prime Minister Jacinda Ardern hosted well-publicized televised roundtables with infectious diseases doctors; PM Ardern was widely lauded for her empathetic approach to communicating with the public about the shared responsibility of prevention (portraying the country's inhabitants as "a team of five million" in the fight for COVID-19 elimination), which garnered public confidence and facilitated cooperation with the strict, science-based control measures adopted by her administration. This strong compliance kept infection rates down and freed up critical resources for contact tracing and testing. No locally acquired COVID-19 infections were reported in New Zealand from the start of May through early August.

HANDOUT 7: COMMUNITY ENGAGEMENT

The objectives of this exercise are two-fold: (1) provide insights as to how well we know the communities that we serve and (2) plan for how to engage affected communities before, during, and after a crisis. This can be used in an emergency to understand community perceptions and support the design of a communication response.

Instructions
The government has recently declared an anthrax outbreak in District X, a rural area in Zambia where most of the population consists of livestock farmers. As members of the One Health RCCE Technical Working Group district planning team, you are tasked with organizing community engagement activities. Use the guiding questions below to plan these activities effectively:

PART 1: REFLECTION ON WHAT WE KNOW ABOUT A COMMUNITY

1. Each group will receive 3 questions from the below list:
   - What are some of the existing community stakeholders that can be leveraged?
   - What two-way forms of communication exist in target communities?
   - Who are the most trusted voices among target populations, and does this differ by demographic features?
   - Who are the dissenting voices that are likely to contradict a new narrative, and what motivates them?
   - What are the additional vulnerabilities that need to be considered, that may differ among various groups in the same community?
   - How can you rapidly pretest with the key audience for comprehension, acceptability, and appeal?
2. Take 3 minutes to jot down your thoughts/responses to the questions individually.
3. Then, take the next 7 minutes to discuss what you wrote down with your group mates.
4. Identify a spokesperson who will share any common responses at the end of the exercise.

Part 1 should take approximately 10 minutes in total for the individual reflection and group discussion.

PART 2: PLAN FOR COMMUNITY ENGAGEMENT

5. In your small group, draw three columns on a flipchart that reads:
   Before a crisis | During a crisis| After a crisis
6. Have the spokesperson identified for Part I serve as the facilitator/notetaker and jot down ideas that the group has about how best to engage the community during the different phases of a crisis, considering your earlier reflections. Some examples of what you can do before an outbreak are:
   - Learn about what public health coordination mechanisms exist in the event of a public health emergency.

- Identify key personnel and community stakeholders to develop relationships with so that you can learn about the latest information about an event and the community's reactions to it and ideas for solutions.
- Identify partners that can be leveraged to fill gaps, such as in translating research into simple terminology.

7. Post the completed flipchart on the wall so that the spokesperson can present to the larger group.
   Part II should take approximately 20 minutes in total.
8. After 30 minutes, we will share our discussions as a large group to learn from each other.
9. Look to see if there is consensus among the groups or if there are areas of disagreement

Do's and Don'ts of Community Engagement	
Do's	**Don'ts**
• Ask people what they know, think, and feel first – then address them with information. • Allow the community to participate in finding solutions. Give information that helps people to discover how they can enact protective behaviors. • Understand anger in the context of an emergency. Listen for both intent (feeling) and content (facts) and ask questions to make sure you understand and indicate your interest in what is being said. • Have a two-way conversation with communities. Provide information openly and maintain avenues for communities to ask questions. Provide opportunities for communities to provide inputs into the response. Those who have been most affected by a crisis want to participate in key decisions. The opportunity to provide input can help offset feelings of being powerless. Make communities part of the response process and decision-making. • Express empathy. Communities need to know that response officials understand at a very human level what they are experiencing. • Regularly adapt and update information based on community feedback.	• Don't simply tell people what to do. Behaving as if you and your organization know what is best for others may seem arrogant to stakeholders who already feel powerless. • Avoid defining anger as either rational or irrational. • Use one-way messages & channels to communicate. There is a tendency during a crisis to engage in internal decision-making. This may make you and your organization seem inaccessible. • Do not speak in absolutes or perpetuate misinformation. • Write messages at the start of the outbreak and don't update them.
Adapted from: https://emergency.cdc.gov/cerc/ppt/CERC_CommunityEngagement.pdf and https://emergency.cdc.gov/cerc/resources/pdf/CERC_Engaging_the_Community_with_Credibility.pdf	

HANDOUT 8: ROLES AND RESPONSIBILITIES OF PUBLIC HEALTH SPOKESPERSONS AND JOURNALISTS

KEY ROLES AND RESPONSIBILITIES OF PUBLIC HEALTH SPOKESPERSONS

Key Role of the Public Health Spokespersons in an Epidemic: Communicate information that the public wants or needs; enable people to take informed action to protect themselves; strengthen trust; and minimize physical and mental harm. The spokesperson **does not accomplish these objectives** alone but works in close collaboration with key professionals with expertise in communication/SBC, relevant in-country Technical Working Groups, and other key actors in One Health (animal, human, environmental health); risk communication; and epidemic response.

Phase	Main Responsibilities
Before an epidemic	• Maintain an up-to-date understanding of the situation of the PZDs in the country. • Maintain regular attendance at One Health team meetings and a thorough understanding of the actors involved in risk communication, including the Technical Working Groups to be activated in the event of a public health emergency and the entities leading these groups as well as the key actors involved in collecting information about rumors emerging in geographic communities or online/on social media. • Participate in preparedness exercises and/or emergency simulations to test the functionality of the communications processes in place; and communicate with the media and public about the importance of these exercises. • Take part in international webinars and meetings on zoonotic and infectious diseases, One Health, antimicrobial resistance, food safety, vector-borne diseases, recent outbreaks, and related health threats at the animal-human-environment interface. • Maintain and add to key expert contact lists for all One Health Ministries—Health, Livestock/Animal Health; Agriculture; Environment; other official spokespersons at different levels of government as well as leaders of community, religious and traditional networks.
During an active epidemic	• Actively coordinate with experts from the One Health sectors to present key information from each perspective. • Collaborate with other spokespersons at various levels of government to strategize on sharing key information and messaging. • Determine priorities for pushing out messaging around prevention, consistently highlighting those actions which are most critical.

Phase	Main Responsibilities
	• Acknowledge uncertainties to the public; craft messages that convey what is known and not known in a clear, precise and transparent way. • Remain abreast of emerging data and research findings related to the epidemic, and craft precise, clear summaries of relevant results to share with the public; direct the media to official sources for up-to-date data. • Give journalists a reasonable time frame in which new information will be released and establish a schedule for releases along with ground rules. • Be readily available at all times to respond timely to concerns raised by the media and other actors; provide regular opportunities for questions, and respond to all questions transparently, accurately and to the best of one's knowledge while recognizing areas of uncertainty. • Monitor social media; remain aware of emerging false information and rumors, and address them in briefings with factual information—while avoiding repeating the rumor itself • Anticipate and prepare in advance for the questions that journalists are likely to pose during a response *(see "Questions journalists might ask of official spokespersons" below)* • Regularly offer the media: • Quotes and key, digestible background information about disease origins and spread. • Synthesis of important data and studies about the outbreak. • Insight into the human, animal and environmental health connections. • Information about the impact of the epidemic on animals and humans.
Following an epidemic	• Communicate clearly and precisely about ongoing risk as an epidemic begins to recede. • Review official messaging, successes and difficulties in the response, and support the transparent dissemination of these lessons

Key Role of the Journalist in an Epidemic: Informing a majority of the public very quickly with critical, factual information that enables them to make informed choices to protect their lives and counter misinformation. This includes acting as public watchdog; interpreting official information; driving public agendas and reflecting what is already on communities' agendas.

Phase	Main Responsibilities
Before an epidemic	• Establish relationships with key public health officials and other One Health actors, as well as community leaders and representatives. • Become familiar with the One Health and risk communication infrastructure and emergency response protocols in the country. • Cultivate an understanding of and raise public awareness about zoonotic disease risks and what is being done within the public health system to prepare for a possible outbreak. • Report regularly on the concerns of the community that affect preparedness for an epidemic—such as resources for the local health system, satisfaction and feedback linkages with health providers, etc.
During an active epidemic	• Rapidly activate a network of diverse sources to get information out as timely as possible to inform and empower the public. • Encourage people to adopt protective measures, health-seeking behavior, and direct people to services and information. • Reach audiences in different locations. • Build large or location-dependent audiences and attract readers and listeners. • Counter misinformation with facts. • Draw attention to the work that the government and its partners are doing to respond to the outbreak • Frame issues compellingly with "a good story" (see "What's a good story?" below). • Interpret or help explain official information coming from government sources so that it is understandable to the non-technical media consumer (in layman's language, distilled to key take-aways, highlighting the relevance of the information to the broader public). • Carefully verify and corroborate emerging information before reporting it; collect perspectives from multiple sources and always seek expert verification in checking facts. • Collect and report on the concerns of real community members; develop stories centered on the concerns of communities and groups whose perspectives may not easily be heard.

What's a "Good Story" in an Epidemic?

- One that speaks to the current moment and the public's most pressing concerns.
- One that captures the reality of ordinary people's experiences but avoids sensationalizing.
- One that helps people understand complex issues to make informed choices.
- One that can attract attention in a crowded media landscape with many voices.
- One with widespread appeal, that can grow the following of the journalist or media outlet.

Phase	Main Responsibilities
	• Serve as a watchdog to hold authorities to account, raising the concerns of the community when posing questions to authorities and investigating as necessary the cause, responsibility and adequacy of the response • Explore viewpoints that may differ from those of public health professionals and authorities; point out apparent contradictions or misinformation in public health-related statements so that these points can be clarified for the public. • Respect confidentiality and abide by all principles of journalistic ethics in reporting.
Following an epidemic	• Continue to share information about the long-term impact of the epidemic. • Report on any post-response action or reports, so that the public is aware and can hold officials accountable for continued investment

HANDOUT 9: PNEUMONIC PLAGUE SCENARIO

Instructions: Within your group, read the below public health emergency background and scenario around a plague outbreak. **After reading, you will have thirty minutes to discuss the following questions.** One note-taker should record the highlights of your responses for reporting out to the larger group.

1. What is the **predominant emotion of the population,** and how does this affect the tone of your messaging?
2. Where would **coordination between media and public health professionals** most strengthen the messaging?
3. What **information and behaviors would you prioritize** for the public in the affected area?
4. Who are the **potential audiences** you would target your messages to?
5. What is **one example of an effective message** you would create for one of your audiences?

You may not feel you have all the information to respond fully to some of the above questions; that is expected. Note places where you think more information needs to be gathered and reflect upon the discussions in this workshop and your own professional and personal experiences.

SCENARIO

Background

Plague is one of the oldest – and most feared – of all diseases. Historically, plague has been responsible for widespread pandemics with high rates of death. It was known as the "Black Death" during the fourteenth century, causing more than 50 million deaths in Europe.

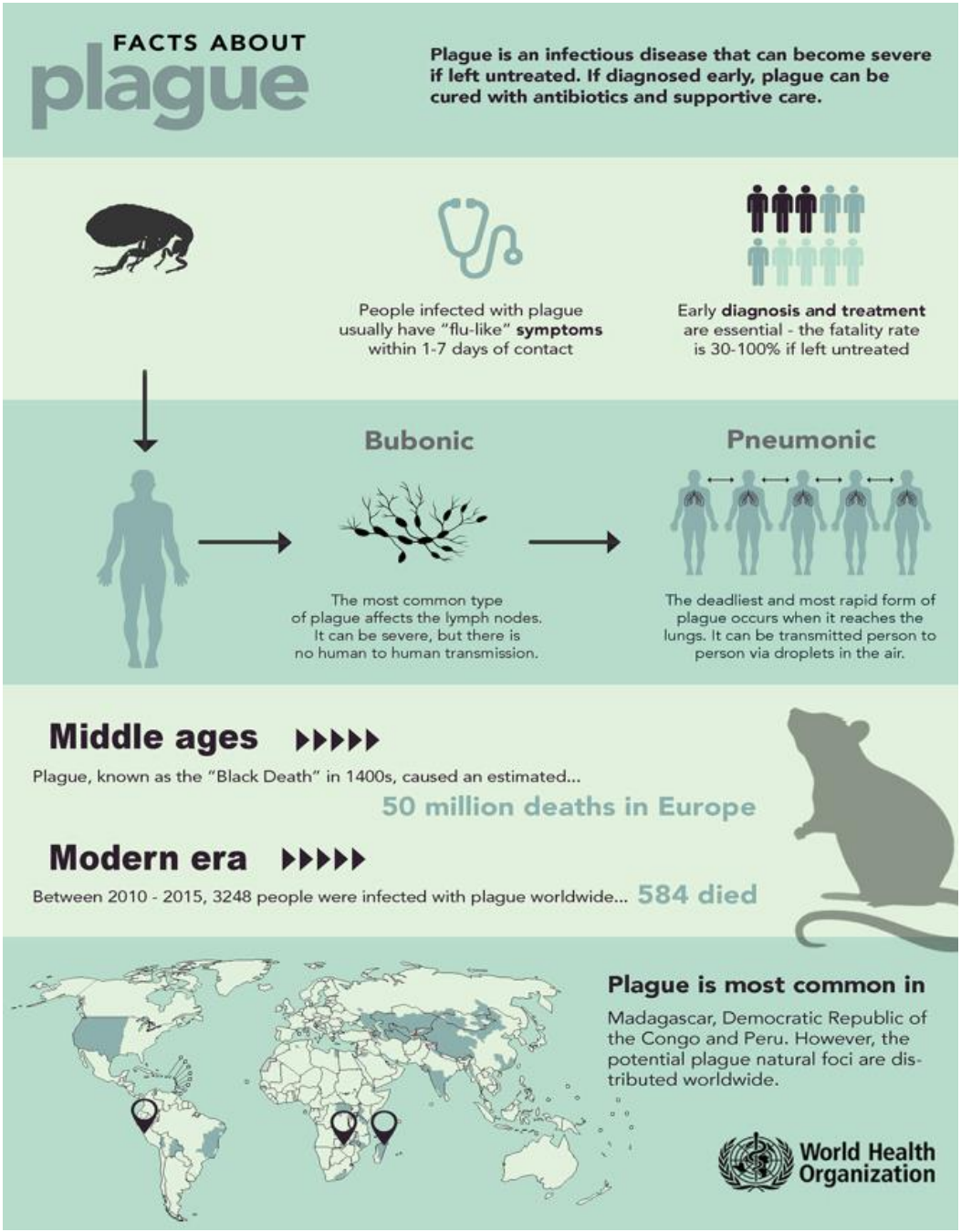
Plague is a zoonotic disease and can take two main forms: bubonic and pneumonic. Bubonic plague spreads only from fleas to humans and occurs when the causative bacteria invade the lymphatic system. In total, 30% to 60 % of people that get bubonic plague die. Bubonic plague can also evolve into septicemic plague, meaning that the bacteria invades the blood; this can lead to septic shock that is typically fatal. However, this form is rare and does not spread from person to person. Pneumonic plague is a more dangerous form of the disease that attacks the lungs and spreads from person to person through droplets from coughing, like a cold. Untreated pneumonic plague is always deadly, typically within 24 hours of disease onset.

Today, plague can be prevented through the use of standard precautions and can be treated with antibiotics if detected early enough.

Scenario

An outbreak of plague was reported in Region 1, of Country X. Though the bubonic form of the plague occurs with regularity in the rural regions, the pneumonic form is less familiar. Over the

past month, the outbreak has rapidly expanded moving into densely populated urban areas and cases have far exceeded what is expected in a normal year. WHO announced that the outbreak is unusually severe with the majority of cases presenting as the more dangerous pneumonic plague. It is spreading rapidly from person to person in densely populated urban centers, with high numbers of residents with limited literacy living in neighborhoods with poor sanitation infrastructure where rodents have easy access to living spaces. More than 80 health workers are reported to be infected, though none are reported to have died.



The Government and international response to date has been substantial and well-organized, with strategies to address all of the key areas of prevention and control: active case finding and treatment; comprehensive identification and prophylaxis of contacts; rodent and flea control; safe and dignified burials; and departure screening and preparedness to prevent spread to other countries.

HANDOUT 10: MESSAGES AND MATERIALS CHECKLIST

Before finalizing your messages and associated materials, ensure that:	✓
All messages and materials:	
Are accurate	
Are presented in clear language, without technical jargon or complex words	
Acknowledge feelings of fear and uncertainty, without elevating either	
Are written in a way that communicates empathy for the audience	
Are expressed in a concise manner, with only the information the audience needs to know	
Do not promote stigma or discrimination against a certain group(s) of people	
Were developed after considering feasibility of actions, cultural and religious practices, perceived risks and barriers and facilitators	
Are clear and attractive in presentation	
Consider different cultural context and linguistics	
Preventative action messages:	
Indicate the audience (s) for which the action is appropriate	
Have a clear and feasible call to action	
Are aligned with messages from other key actors (WHO, MOH, and partners), to avoid confusion	
Link to available services and resources	
Provide information on how or why as appropriate	
Outbreak updates and new information messages:	
Address current concerns of the community/public	
Clearly communicate what is known and not known about the disease and outbreak at the time	
Explain what is being done to understand the outbreak further	
If dispelling rumors, myths or misinformation, do so in a manner that is understanding, and not accusatory	
Indicate where to find the most updated information	
Additional considerations for messages prior to dissemination:	
Are contextualized according to local culture, linguistic preferences, and current data, on behavior change and social science data	
Are appropriate in length, format and content for the media channel/delivery method	
Have been pretested with key audience(s) and revised to incorporate and address feedback received	

HANDOUT 11: *MWEETWA AND CHILUFYA SCENARIOS* (MPS)

Instructions: Read the below scenarios (1 or 2 based on your assigned group.) After reading and discussing the scenario, take **20 minutes** to discuss and take notes on the following questions for share-out:

1. Who do you need to talk with to confirm the accuracy of the information?
2. Are there concepts or topics you need more information about?
3. What is the best source to learn more?
4. What angle would you take in reporting the story?
5. What are some of the potential unintended consequences the story could have?
6. What are some of the things people in the community would want to know?
7. How would you present the information in a useful and actionable way?

SCENARIO 1: MWEETWA

You run into your cousin's friend, Mweetwa, a farmer in Kaposhi, a small village not far from Chongwe, a larger market town. In catching up with him, he tells you this story. A few weeks ago, he came into Chongwe to visit the market and ran into his friend, a popular traditional healer. The traditional healer says he has been receiving a very large number of visitors complaining of fevers, headaches and muscle pain and has treated them. He has heard of several people who have died and more keeping coming to visit him with the same symptoms. Two weeks later, at the next market day, Mweetwa looked for but could not find his friend; after asking around, a market vendor told him that the healer hasn't been seen for the past week and people are saying that he is very ill at home. When Mweetwa arrives back in Chongwe that evening, he returns to the news that the village chief has died. He usually doesn't travel outside of the village these days but had walked into Chongwe a week earlier to seek traditional medicine for a skin condition and became dramatically ill over the last two days. His wife was also beginning to develop a strong fever and was staying at home.

SCENARIO 2: CHILUFYA

One of your neighbors tells you a story they heard at church from their friend Chilufya. Chilufya is a farmer who lives in Chongwe. Chilufya shared that a lot of the poultry farmers in Chongwe are really worried about a spate of deaths of poultry in the past few weeks; the disease became quite widespread at one large farm and soon other farmers with much smaller flocks were sharing on a WhatsApp group for area farmers that their chickens were dying. He heard that one poultry farmer had become very ill. Government inspectors had been out to the large farm to investigate and ordered a number of flocks to be culled, generating press attention. Chilufya says that villagers think that this is an attempt by a nearby large poultry farming enterprise to sabotage the business of small poultry farmers in the area, and that the media are exaggerating the story and the numbers of chickens affected; there is another rumor circulating that the national government is playing up the risk of this poultry disease to gain more funding from international organizations. Farmers are complaining that the new farm regulations the government is establishing to control the poultry disease are impossible for them to meet; some are avoiding

informing the authorities of illness in their chickens for fear that the whole flock will be destroyed by inspectors and their livelihoods affected.

HANDOUT 12: INTERVIEW ROLE PLAY (MPS)

GROUP A INSTRUCTIONS

You will be role playing the below scenario within your group in order to practice what we have discussed about interviewing during a public health emergency.

Please select one person in your group to be the journalist in the scenario; this person will represent your group. As a group, you will have **ten minutes to work with your journalist and prepare for the interview role play**. The journalist should be prepared with questions and keep in mind all of the principles we have discussed in previous sessions.

After **ten minutes**, you will begin to act out the scenario in a ten-minute interview with Group B. Those group members without an acting role will be observing and taking notes on how the journalist applies, or does not apply, the principles we have discussed, such as: empathy, informed consent, considering the risks involved for informants, active listening and types of questions. After this ten-minute role play, we will come together to discuss these questions for the last five minutes.

Scenario

There has been a spate of reported illnesses in chickens in Petauke over the past few weeks. Since the first cases at a large commercial farm nearby, other small family-owned farms have started to see their flocks affected. Animal husbandry and poultry rearing, in particular, is the most significant industry in Petauke; many families rely on their flocks as a major source if not the only source of income for their families. There has been talk of the owner of the first commercial farm also becoming ill recently with flu-like symptoms, although these reports are unconfirmed. Government veterinary inspectors have been out to the large farm and have ascertained that the cause of the widespread chicken disease is most likely a form of influenza. They ended up culling a significant portion of the flock, but some were spared because the large farm had enough resources to space out the chickens into numerous chicken houses and limit its spread.

Now panic is spreading among the smaller family farms in Petauke, most of which have far fewer resources than the commercial farm to protect their flocks or their families. Most only have one or two small chicken houses, with chickens overcrowded because of the limited land available.

As a journalist with the *Daily Nation*, you have been covering the ongoing investigation into the chicken epidemic and the actions of the local public health and veterinary authorities. A contact from the local Farmer's Union puts you in touch with his friend Banda, who he says has been greatly affected by the spreading epidemic as his own flock became infected following a visitor from the nearby commercial farm. The illness spread rapidly amongst his chickens and a visit from the veterinary inspector led to the vast majority of his flock being culled to avoid spreading the infection. Your contact tells you that Banda's family is devastated and do not

know how they are going to replace the income from their lost flocks, nor do they trust the government to offer the support promised to farmers whose animals must be culled due to disease. He says that Banda is bitter with what he says has been a lack oof understanding or empathy on the part of the veterinary services and the feeling that he and his family have been 'the sacrificial lambs' of a government trying to show that the epidemic is under control. He has also been active in a WhatsApp group discussing the rumor that the chicken disease is a political ploy to disempower the farmers of the region.

You contact Banda, who agrees to be interviewed the next day at 10AM at the family farm. You immediately begin preparing for the interview.

GROUP B INSTRUCTIONS

You will be role playing the below scenario with your group in order to practice what we have discussed about interviewing during a public health emergency.

Please select one person in your group to be Banda, the person being interviewed in the below scenario; this person will represent your group. As a group, you will have ten minutes to work with your representative and get him into character for this role. Discuss what this character might be feeling and how he might respond to likely questions based on his story and experiences.

After **ten minutes,** you will begin to act out the scenario (a ten-minute interview) with Group A.

Those group members without an acting role will be observing and taking notes on how the journalist applies, or does not apply, the principles we have discussed, such as: empathy, informed consent, considering the risks involved for informants, active listening and types of questions. After this ten-minute role play, we will come together to discuss these questions.

Scenario

There has been a spate of reported illnesses in chickens in Petauke over the past few weeks. Since the first cases at a large commercial farm nearby, other small family owned farms have started to see their flocks affected. Animal husbandry and poultry rearing in particular is the most significant industry in Petauke; many families rely on their flocks as a major source if not the only source of income for their families. There has been talk of the owner of the first commercial farm also becoming ill recently with severe flu-like symptoms, although these reports are unconfirmed. Government veterinary inspectors have been out to the large farm and have ascertained that the cause of the widespread chicken disease is most likely a form of influenza. They ended up culling a significant portion of the flock, but some were spared because the large farm had enough resources to space out the chickens into numerous chicken houses and limit its spread.

Now panic is spreading among the smaller family farms in Petauke, most of which have far fewer resources than the commercial farm to protect their flocks or their families. Most only

have one or two small chicken houses, with chickens overcrowded because of the limited land available.

You are Banda, a small-time farmer who has been greatly affected by the spreading epidemic. Your flock first became infected following a visit from your neighbor—a worker at a nearby large commercial farm. The illness spread rapidly amongst your chickens and a visit from the veterinary inspector led to the vast majority of the flock being culled to avoid spreading the infection; they told you that it was a public health necessity even though you explained the impact this would have on your livelihood. Your wife and children are devastated; you do not know how you are going to replace the income from the lost flocks. The government inspector who culled the chickens promised that a program would offer your family support to replace the income from the culled flocks, but so far you have seen none of these promises come to fruition. You are bitter that the epidemic has hit small farmers like you so hard, while bigger farms scrape by and can more easily adapt. You hear rumors that this chicken disease is just a government conspiracy or political ploy to disempower the small farmers of the area; you don't know what to believe, but you think it is important that decision makers realize how difficult the culling policy has been to families like yours.

A friend of yours from the local farmers' union connected you with a reporter at the *Daily Nation.* You have agreed to meet the reporter at your family farm for an interview tomorrow at 10AM. Now, you must prepare for what you want to say.

HANDOUT 13: PITFALLS AND STRATEGIES: PRESS BRIEFINGS AND COMMUNITY MEETINGS (PHP)

Pitfalls and Strategies for Public Health Spokespersons Conducting Briefings	
Common Briefing Pitfall	**Better Strategy**
Defaulting to jargon, technical, language, or NGO lingo	• If it is necessary to use a technical term or acronym, take the time to introduce it and explain it to the audience, using short sentences and simple, plain language. • Emphasize what you know; acknowledge what isn't yet known, and what type of process is in place to learn more.
Referring to people with the disease or possible disease as "cases" or "victims" or "suspects"	• Use instead "people who have X"; "people who are being treated for X"; "people who are recovering from X" or "people who have died after contracting X" or "people who are presumptive for X", or "people who may have X" • Commit to helping your audience understand how a disease may affect someone and the ways they can safely interact with them without stigmatizing or isolating them.
Attaching locations or ethnicity to the disease	• Use the appropriate scientific names of the disease to avoid stigma -e.g. COVID-19, instead of "Wuhan Virus," "Chinese Virus," or "Asian Virus."
Talking about a person "transmitting the disease," "infecting others," or "spreading the virus"	• Talk instead about people "*acquiring"* or "*contracting*"
Using humor or off the cuff remarks like one-liners	• In line with the principle of offering authentic expressions of care, seek to acknowledge fears, uncertainty, and a shared sense of misery. • Reinforce the steps that people can take.
Repeating negative allegations or rumors	• Know the messages you want to emphasize and consistently use positive and neutral terms
Avoiding uncertainty, speculating, or making premature promises	• Emphasize what you know, acknowledge what isn't yet known, and what type of process is in place to learn more. • If you anticipate the situation may get worse, always l*et people know what to expect* to help manage expectations.
Answering a question or offering information outside	• Know your agency's policies about the clearance process and release of information and the scope of their responsibilities.

Pitfalls and Strategies for Public Health Spokespersons Conducting Briefings	
Common Briefing Pitfall	**Better Strategy**
the scope of the emergency response	• Tell the truth and be open when challenged. Explain why a given question cannot be answered.

General Do's and Don'ts for Briefings and Community Meetings	
Dos	**Don'ts**

• **PREPARE**:
  • Make sure you are familiar with the format the briefing will be delivered in – radio, tv, webcam, so you know what is expected of you and you minimize distractions from technical glitches.
  • Have a template with the information you want to share.
  • Identify your key messages and behaviors you want to drive home no matter what happens - think about the final message you wish the public to receive.
  • Coordinate with others working on the various aspects of risk communication such as messaging and community engagement as well as other pillars of the response to make sure you understand the information you are delivering and can answer questions.
  • Determine in advance who will answer questions about specific topics. Consider having various experts available during the briefing as part of the team.
  • Consider the audience and their needs – are your words and delivery accessible and appropriate to the needs of the most vulnerable?
  • Prepare short brief answers to anticipated questions about uncertainties.
  • Practice delivery and watch recordings of yourself on the phone or previous briefings.
  • Show empathy.
  • Maintain calm and manage emotions.
	• Do not show anger.
	• Do not rehash mistakes
	• Do not offer immediate solutions to the problem without listening first to the community's concerns.

General Do's and Don'ts for Briefings and Community Meetings	
Dos	**Don'ts**
• Listen carefully to feedback and ask questions • Acknowledge mistakes and encourage people to look forward.	

HANDOUT 14: SAMPLE PRESS BRIEFING (PHP)

GROUP A INSTRUCTIONS

You will have 20 minutes to discuss the scenario below with your group and prepare a five-minute press briefing taking into account the techniques we have discussed for professionals delivering press briefings. Your goal is to **highlight best practices (the "dos")** to ensure the effectiveness of the briefing. Together, write a five-minute briefing and practice delivering it amongst your group. We will have ten minutes at the end to come together and present both groups' briefings.

GROUP B INSTRUCTIONS

You will have 20 minutes to discuss the scenario below with your group and prepare a five-minute press briefing around the situation that **demonstrates what NOT to do** as a spokesperson giving a briefing. Be sure to refer to the best practices for press briefings and ensure that your briefing does **not** follow this guidance. Your goal is to highlight all the **mistakes or pitfalls** (the "don'ts") a spokesperson might make in giving a briefing on the situation. Together, write a five-minute briefing and practice delivering it amongst your group. We will have ten minutes at the end to come together and present both groups' briefings.

Scenario

There has been an epidemic of Disease X in Country Y raging for the past seven months. Disease X is a new respiratory disease that is moderately easily spread; it has so far claimed many thousands of lives and continues to spread rapidly, particularly in crowded urban areas and during cold weather when other, commonly known infectious diseases routinely spread. Scientists have been rapidly working to find a vaccine for the illness; fortunately, they have finally found a candidate that made it through safety trials and is expected to be available for use in the coming month or two. There is much optimism about the vaccine amidst the rising incidence and mortality due to disease X; still, there is some public skepticism given that several other vaccine candidates' trials have been cancelled following reports of adverse events, although their relationship to the vaccine itself has still not been fully proven. At the same time, reports of the possible jump in infection rate if no widespread vaccine is available before the change in season have been alarming to the general public, creating a sense of urgency along with public pressure to release a vaccine as soon as possible.

As a public health professional, you have been asked to deliver a media briefing regarding the vaccine. You know that even through the vaccine is projected to be available very soon, there are unlikely to be enough doses for the entire population at risk of Disease X and there will need to be a prioritization process and phased rollout so that those who are most at-risk or most vulnerable to severe disease are able to receive it first. Key officials are still in the process of determining what that prioritization process will look like and what criteria will be used to determine who gets first access to the vaccine. While promoting the acceptance of this vaccine, there is a need to temper the public's expectations about the gradual rollout so as to avoid a possibly counterproductive outcry or refusal of the vaccine.

HANDOUT 15: CASE STUDY INTERVIEW PREPARATION (PHP)

INSTRUCTIONS

In your group, decide on one person who will be the government spokesperson being interviewed. Read the below scenario and take the first ten minutes to prepare the person who will be doing the interview.

Discuss and coach your spokesperson from the initial contact with the reporter, to identifying key messages and dealing with potential challenging tactics by the journalist. You will want to refer to Handout 15 as a reminder of important aspects of preparation for an interview as a public health professional or spokesperson.

After about ten minutes of strategizing, start practicing the interview within your group. One person should play the journalist and pose questions of the spokesperson. You will have about fifteen minutes to role play with interview. If you finish the interview with time to spare, you may want to switch roles so that someone else can practice being the spokesperson.

We will come together after 25 minutes to briefly discuss your experience.

SCENARIO

Outside of Rain Town, in a small farming village, there has been a cluster of illness in households. At first, it seemed that people were only becoming mildly ill—headaches and short-lived fevers that gave rise suspicions of malaria-- but then there were more severe cases where people have died, sometimes after bouts of bleeding or after falling into a coma. A pregnant woman in Sun Town, in her eighth month of pregnancy, recently just died following this illness; her fetus did not survive. Following testing in the capital city, it has been confirmed that the disease affecting the village is not malaria, nor even the much-feared Ebola – it is in fact Lassa fever, carried into the village by a large population of rats-- the natural vectors of the virus to humans.

This village has cyclical cases of Lassa Fever following the harvest each year—villagers report an increase in the rat population in and around their homes once the farmland has been harvested. However, this seems to be an unprecedented outbreak for this area in terms of scale. Nearly thirty people are reported to have been infected, and four-including the pregnant woman—have died.

You are the Communications Liaison at the Rain Town Office of Public Health and have been fielding questions from anxious community members and the media over the past several weeks. The Ministry of Health has sent contact tracers to the origin village and other villages in Rain Town, with ecology officers to trap rats. This has been met with resistance in some cases. Your office has been criticized for not doing enough to control the epidemic quickly or to discourage the sale and consumption of rodent meat, which is part of the reason people are saying that the virus has been able to spread; doctors and nurses unions, meanwhile, have been upset and vocal about the lack of protective equipment to deal with potential Lassa cases at the

district hospital. There are rumors circulating in some villages that people with Lassa symptoms sent to the hospital who are determined lethally infected are being injected to die faster, as a dramatic means to control the spread of the disease. Others are saying that the pregnant woman who died early on in the outbreak did not have Lassa, but rather died during a medical procedure and Lassa was being used as a cover-up to take the blame off of the health workers involved. For this reason, there have been reports that some communities are rejecting contact tracers.

In this context, you are asked to give an interview to the *Rain Town Times* regarding the government's response to the Lassa outbreak. You have agreed to do so and must now prepare for this interview.

HANDOUT 16: STRATEGIES FOR SUCCESSFUL INTERVIEWS (PHP)

Domain	Specific Strategies
Pre-Research	**Know in advance:** • Who will be conducting the interview, what news outlet are the working with, and who is their audience? • What is the purpose of the interview and the subjects to be covered? • If the interview goes in a different direction, this will help you to refocus the conversation or indicate you are not the right person to answer the question at this time • Who else has/will be interviewed? • What is the format and duration of the interview?
Preparation and practice	• Identify a clear purpose for your interview • What are the core messages you want to deliver? • Are there supporting papers (or weblinks) that you can have with you to give to the reporter after the interview that can be used as a way of confirming information and facts? • What are some anticipated questions? • Take time to thoroughly learn the ideas, facts, and anecdotes that apply to the interview topic.
Pacing	• Microphones and nerves tend to make people talk faster. Practice speaking at a measured pace with deliberate pauses between sentences.
Brevity	• Try to say the key point in 30 seconds and in fewer than 90 words. • Avoid lengthy scientific responses aiming to keep answers focused organized and no longer than 2 minutes. • Reporters may often hold a microphone in front of your face after you have answered. Resist the temptation to add to your response. Redirect the conversation instead.
Manage tone of voice and mannerisms	• Approaching the journalist and the interview with a sense of optimism and trust adds credibility and can help pave the way for a positive outcome. • Use simple, conversational tone and phrases for clarity and warmth. • Use natural gestures and facial expressions. Remember the power of non-verbal communication and avoid expressions of annoyance, anger, hurry/rushed, confusion, or surprise. • Look at the reporter or camera, try not to look at or shuffle your notes.

Domain	Specific Strategies
	• If a reporter offers rapid-fire questions, regain control of the pacing with a phrase like *"I would like to answer those questions one at a time."* • *Reframe loaded or leading questions* in neutral terms and avoid repeating any inflammatory or emotional language.
Reframe or redirect	• Reframe hypothetical or sensational questions in a way that addresses legitimate concerns of the public without being sensational or offering speculation. • Use positive words to correct any inaccuracies or reject the dilemma without repeating the negative words. • Use redirect phrasing (*The overall issue is" "What is important to remember is" "What I am really here to discuss is") …*
Transparency and accountability	• Do not make up answers, over reassure, speculate, or distort the truth in any way. If the specific piece of information is not yet available, say so, along with what you are doing to find answers. • Avoid responding to a question with "*no comment*". As we discussed yesterday, explain why you can't answer that question. • Do not say anything before, during, or at the conclusion of an interview that you are not prepared to see in print the next day or uploaded to social media in the next hour. • Make yourself available to media even if only for a few moments. Try not to actively avoid media which can give a sense you have something to hide.
Reflection and follow-up following the interview	• When reviewing the published story, ask yourself: • Did the reporter effectively and accurately convey my message, or did they misquote me? Are the facts accurate? • In case the answer is 'no', contact the journalist directly and ask for a correction to be issued. This is common practice in journalism. • Is there anything I didn't convey in my interview that I wanted to express? • Are my quotes succinct and clear?

Preparation is Critical: Questions Journalists Might Ask of Official Spokespersons

What are you doing to bring the situation under control? Where is the funding going? What is going to happen next? How soon will this vaccine/therapeutic be rolled out? How long will it be until the situation returns to normal? Why did this happen? What is the cause of this outbreak?

Why didn't the government react faster? Are you hiding information? Are you sure this isn't a man-made outbreak? Why didn't you do more to prevent this outbreak happening? What are you doing now? What is the worst-case scenario? What is the best-case scenario? Can you grant us access to hospitals and health facilities? Can you help journalists get the vaccine? What lessons are you learning, and are you going to implement them? Why aren't you telling us the name of patient zero?

What are the most important things that people need to know? How can people protect themselves? Where can people get help/healthcare/food/money at this time? What is the meaning behind all this? How does the vaccine/therapeutic work? What does the disease do to the human body? When is the next press conference?

HANDOUT 17: RESOURCE PACKAGE (PHP)

NEEDS ASSESSMENT FOR CRISIS AND EMERGENCY RISK COMMUNICATION (CDC)

This checklist is a resource from the CDC's CERC Guide. A PDF of the checklist and many other useful risk communication resources is available at the CDC's CERC resource page: https://emergency.cdc.gov/cerc/resources/templates-tools.asp.

Planning, Research, Training, and Evaluation

❑ **Yes** ❑ **No** Does your organization have a crisis and emergency risk communication operational plan for public information and media, partner, and stakeholder relations?

❑ **Yes** ❑ **No** Have you coordinated your planning with the community or state emergency operation center?

❑ **Yes** ❑ **No** Have you coordinated your planning with other response organizations or competitors?

❑ **Yes** ❑ **No** Have designated spokespersons received media training and risk communication training?

❑ **Yes** ❑ **No** Do the spokespersons understand crisis and emergency risk communication principles to build trust and credibility?

If Your Organization Has a Plan, Does It Have the Following Elements:

❑ **Yes** ❑ **No** Designated responsibilities for public information team?

❑ **Yes** ❑ **No** Information verification and clearance procedures?

❑ **Yes** ❑ **No** Agreements on information release authorities (who releases what, when, and how)?

❑ **Yes** ❑ **No** Regional and local media contact list, including after-hours news desks?

❑ **Yes** ❑ **No** Procedures to coordinate with the public health organization response teams?

❑ **Yes** ❑ **No** Designated spokespersons for public health issues in an emergency?

❑ **Yes** ❑ **No** Public health organization emergency response team after-hours contact numbers?

❑ **Yes** ❑ **No** Contact numbers for emergency information partners such as governor's public affairs officer, local FBI public information special agent in charge, local or regional department of agriculture or veterinarian public information officers, Red Cross and other nongovernmental organizations?

❑ **Yes** ❑ **No** Agreements and procedures to join the Joint Information Center (JIC) of the emergency operations center, if activated?

❑ **Yes** ❑ **No** Procedures to secure needed resources such as space, equipment, and personnel, to operate the public information operation during a public health emergency 24 hours per day, 7 days per week, if needed?

❑ **Yes** ❑ **No** Identified methods of information dissemination to public, stakeholders, and partners such as websites, Twitter feeds, e-mail lists, broadcast fax, door-to-door leaflets, and press releases, during a crisis?

Message and Audiences

❑ **Yes** ❑ **No** The following are types of incidents that could require intense public information, media, and partner communication responses: ‰ Infectious disease outbreak (e.g., pandemic influenza, cholera, E. coli infection)? ‰ Bioterrorism (e.g. anthrax, smallpox) ‰ Chemical emergencies (e.g., nerve agents, oil spill) ‰ Explosions (e.g., explosions, terrorist bombing) ‰ Natural disasters and severe weather (e.g. earthquakes, hurricanes, tornadoes) ‰ Radiation emergencies (e.g., dirty bomb, nuclear accident)

❑ **Yes** ❑ **No** Have you identified special populations, such as the elderly, people who speak a first language other than English, Tribal communities, and border populations? List any specific subpopulations, such as tribal nations, persons with chronic respiratory illnesses, and unvaccinated seniors, that need to be targeted with specific messages during a public health emergency related to your organization.

❑ **Yes** ❑ **No** Have you identified your organization's partners who should receive direct information and updates (not solely through the media) from your organization during a public health emergency?

❑ **Yes** ❑ **No** Have you identified all stakeholder organizations or populations who should receive direct communication during a public health-related emergency? These are groups or organizations your organization believes have an active interest in monitoring activities, to whom you are most directly accountable, other than official chain of command.

❑ **Yes** ❑ **No** Have you planned ways to reach people according to their reactions to the incident (fight or flight)? Are messages, messengers, and methods of delivery sensitive to all types of audiences in your area of responsibility?

❑ **Yes** ❑ **No** Are there mechanisms and resources in place to create messages for the media and public under severe time constraints, including methods to clear these messages within the emergency response operations of your organization? Make sure to include cross clearance in this consideration.

❑ **Yes** ❑ **No** Have you identified how you will perform media evaluation, content analysis, and public information call analysis in real time during an emergency to ensure adequate audience feedback?

❑ **Yes** ❑ **No** Have you developed topic-specific pre-crisis materials for identified public health emergency issues, or identified sources of these materials if needed?

❑ **Yes** ❑ **No** Topic fact sheet (e.g., description of the disease, public health threat, treatment?)

❑ **Yes** ❑ **No** Public Questions and Answers?

❑ **Yes** ❑ **No** Partner Questions and Answers?

❑ **Yes** ❑ **No** Resource fact for media, public, or partners to obtain additional information?

❑ **Yes** ❑ **No** Web access and links to information on the topic?

❑ **Yes** ❑ **No** Recommendations for affected populations?

❑ **Yes** ❑ **No** Background B-roll for media use on the topic?

❑ **Yes** ❑ **No** List of subject matter experts outside your organization who would be effective information sources for the public and the media regarding your activities during a public health emergency?

Messenger

❑ **Yes** ❑ **No** Have you identified public health spokespersons for media and public appearances during an emergency?

If Yes, Have You…

❑ **Yes** ❑ **No** Identified persons by position, such as a media spokesperson or a community meeting speaker, to act as spokespersons for multiple audiences and formats about public health issues during an emergency?

❑ **Yes** ❑ **No** Ensured that the spokespersons understand their communication roles and responsibilities and will incorporate them into their expected duties during the crisis? Methods of Delivery and Resources

❑ **Yes** ❑ **No** Does your organization have “go kits” for public information officers who may have to abandon their normal place of operation during a public health emergency or join a JIC? Do the Kits Include…

❑ **Yes** ❑ **No** Computer(s) with access to the Internet and e-mail?

❑ **Yes** ❑ **No** CD-ROM, DVD, or flash drives containing the elements of the crisis communication plan, including media contact lists, public health contact lists, organization contact lists, partner contact lists, and information materials?

❑ **Yes** ❑ **No** Cell phone or satellite phone, wireless device, etc.?

❑ **Yes** ❑ **No** Funding mechanism, such as a credit card, that can be used to purchase operational resources as needed?

❑ **Yes** ❑ **No** Manuals and background information necessary to provide needed information to the public and the media?

❑ **Yes** ❑ **No** Care and comfort items for the public information operations staff?

❑ **Yes** ❑ **No** Have you identified the mechanisms that are or should be in place to ensure multiple channels of communication to multiple audiences during a public health emergency? Channels of communication

❑ **Yes** ❑ **No** Have you identified the mechanisms that are or should be in place to ensure multiple channels of communication to multiple audiences during a public health emergency?

If Yes, Do Mechanisms Include…

❑ **Yes** ❑ **No** Media channels such as print, TV, radio, and Web?

❑ **Yes** ❑ **No** Websites, Facebook, Twitter, and other social media?

❑ **Yes** ❑ **No** Phone banks?

❑ **Yes** ❑ **No** Town hall meetings?

❑ **Yes** ❑ **No** Listserv e-mail?

❑ **Yes** ❑ **No** Broadcast fax?

❑ **Yes** ❑ **No** Letters by mail?

❑ **Yes** ❑ **No** Subscription newsletters?

❑ **Yes** ❑ **No** Submissions to partner newsletters?

❑ **Yes** ❑ **No** Regular or special partner conference calls?

❑ **Yes** ❑ **No** Door-to-door canvassing?

❑ **Yes** ❑ **No** Are contracts or agreements in place to post information to broadcast fax or e-mail systems?

❑ **Yes** ❑ **No** Have locations for press conferences been designated and resourced?

Personnel

❑ **Yes** ❑ **No** Have you identified employees, contractors, fellows, and interns currently working for you or available to you in an emergency that have skills in the following areas:

- ❑ **Yes** ❑ **No** Public affairs specialist?
- ❑ **Yes** ❑ **No** Health communication specialist?
- ❑ **Yes** ❑ **No** Communication officer?
- ❑ **Yes** ❑ **No** Health education specialist?
- ❑ **Yes** ❑ **No** Training specialist?
- ❑ **Yes** ❑ **No** Writer/editor?
- ❑ **Yes** ❑ **No** Technical writer/editor?

❑ **Yes** ❑ **No** Audio/visual specialist?

❑ **Yes** ❑ **No** Internet/Web design specialist?

❑ **Yes** ❑ **No** Social media specialist?

❑ **Yes** ❑ **No** Others who contribute to public and provider information?

❑ **Yes** ❑ **No** Have you identified who will provide the following expertise or execute these activities during a public health emergency (including backup)

Command and Control

❑ **Yes** ❑ **No** Directs the work related to the release of information to the media, the public, and partners?

❑ **Yes** ❑ **No** Activates the plan, based on careful assessment of the situation and the expected demands for information by the media, partners, and the public?

❑ **Yes** ❑ **No** Coordinates with horizontal communication partners, as outlined in the plan, to ensure that messages are consistent and within the scope of the organization's responsibility?

❑ **Yes** ❑ **No** Provides updates to the organization's director, EOC command, and higher headquarters, as determined in the plan?

❑ **Yes** ❑ **No** Advises the director and chain of command regarding information to be released, based on the organization's role in the response?

❑ **Yes** ❑ **No** Ensures that risk communication principles are employed in all contact with the media, the public, and partner information release efforts?

❑ **Yes** ❑ **No** Advises on incident-specific policy, science, and the current situation?

❑ **Yes** ❑ **No** Reviews and approves materials for release to the media, the public, and partners?

❑ **Yes** ❑ **No** Obtains required clearance of materials for release to the media on policy or sensitive topic-related information not previously cleared?

❑ **Yes** ❑ **No** Determines the operational hours and days, and reassesses throughout the emergency response?

❑ **Yes** ❑ **No** Ensures resources are available, such as personnel, technical resources, and mechanical supplies?

❑ **Yes** ❑ **No** Assesses media needs and organizes mechanisms to fulfill media needs during the crisis, such as daily briefings in person versus a website update?

❑ **Yes** ❑ **No** Triages the response to media requests and inquiries?

❑ **Yes** ❑ **No** Ensures that media inquiries are addressed as appropriate?

❑ **Yes** ❑ **No** Supports and briefs spokespersons?

❑ **Yes** ❑ **No** Develops and maintains media contact lists and call logs?

❑ **Yes** ❑ **No** Produces and distributes media advisories and press releases?

❑ **Yes** ❑ **No** Produces and distributes materials such as fact sheets and B-roll?

❑ **Yes** ❑ **No** Oversees media monitoring systems and reports (e.g., analyzing environment and trends to determine needed messages, determining what misinformation needs to be corrected, identifying concerns, interests, and needs arising from the crisis and the response)?

❑ **Yes** ❑ **No** Ensures that risk communication principles to build trust and credibility are incorporated into all public messages delivered through the media?

❑ **Yes** ❑ **No** Acts as member of the JIC of the field site team for media relations?

❑ **Yes** ❑ **No** Serves as liaison between organizations through the JIC? Direct Public Information?

❑ **Yes** ❑ **No** Manages the mechanisms for responding to public requests for information via social media, telephone, in writing, or by e-mail?

❑ **Yes** ❑ **No** Oversees public information monitoring systems and reports (e.g., analyzing environment and trends to determine needed messages; determining what misinformation needs to be corrected; identifying concerns, interests, and needs arising from the crisis and the response)?

❑ **Yes** ❑ **No** Oversees and activates social media, telephone, public e-mail correspondence response systems?

❑ **Yes** ❑ **No** Organizes and manages the emergency response Web sites, Web pages, Facebook page and other social media?

Direct Public Information

❑ **Yes** ❑ **No** Establishes and maintains links to other emergency response Web sites? Partner and Stakeholder Information

❑ **Yes** ❑ **No** Establishes communication protocols based on prearranged agreements with identified partners and stakeholders?

❑ **Yes** ❑ **No** Translates EOC situation reports and meeting notes into information appropriate for public and partner needs?

❑ **Yes** ❑ **No** Works with subject matter experts (SMEs) to create situation-specific fact sheets, Q&As, and updates?

❑ **Yes** ❑ **No** Manages the development and testing of messages and materials for cultural and language requirements of special populations?

❑ **Yes** ❑ **No** Coordinates with other communication team members regarding content and message needs?

❑ **Yes** ❑ **No** Adapts messages based on analysis from media, social media, public, and partner monitoring systems, SME clearance, and feedback?

❑ **Yes** ❑ **No** Guides documents through formal clearance process before they are released to the media, the public, or partner organizations?

Content and Material for Public Health Emergencies

❑ **Yes** ❑ **No** Develops and establishes mechanisms and protocols to rapidly receive information from the EOC

❑ **Yes** ❑ **No** Translates EOC situation reports and meeting notes into information appropriate for public and partner needs

❑ **Yes** ❑ **No** Works with subject matter experts (SMEs) to create situation-specific fact sheets, Q&As, and updates

❑ **Yes** ❑ **No** Manages the development and testing of messages and materials for cultural and language requirements of special populations

❑ **Yes** ❑ **No** Coordinates with other communication team members regarding content and message needs

❑ **Yes** ❑ **No** Adapts messages based on analysis from media, social media, public, and partner monitoring systems, SME clearance, and feedback

❑ **Yes** ❑ **No** Guides documents through formal clearance process before they are released to the media, the public, or partner organizations

Suggestions to Consider about Resources

Space

❑ **Yes** ❑ **No** You have space to operate communication teams or the JIC outside the EOC. A place is also needed to bring media on site that is separate from the EOC and the JIC.

❑ **Yes** ❑ **No** You have quiet space to quickly train and brief spokespersons.

❑ **Yes** ❑ **No** You have conference space for team meetings.

❑ **Yes** ❑ **No** You have office space dedicated for equipment exclusive to your use. You cannot stand in line for the copier when facing media deadlines.

❑ **Yes** ❑ **No** You have space where staff can take breaks, when necessary, whether for eating, sensory deprivation, rest, or even a nap.

❑ **Yes** ❑ **No** An offsite space is identified in case the crisis damages your original space. Contracts and Memoranda of Agreement(s)

❑ **Yes** ❑ **No** Consider a contract with a comprehensive newswire service that will disseminate your information across a wide variety of platforms, such as print and broadcast news, Internet, and social media sites. Also consider using a variety of communication tools, such as press releases, videos, images, e-mail, and social media tagging.

❑ **Yes** ❑ **No** Consider contracts with writers or public relations personnel who can augment your staff, especially persons with social media writing and monitoring expertise, if your organization doesn't have those personnel.

❑ **Yes** ❑ **No** Consider a contract for administrative support and technical support.

Contracts and Memoranda of Agreement(s)

❑ **Yes** ❑ **No** Consider a phone system/contractor that can supply a phone menu that directs the type of caller and level of information desired:

- General information about the threat
- Tip line listing particular actions people can take to protect themselves
- Reassurance/counseling
- Referral information for media requests for information or interviews
- Referral information for healthcare/medical facility workers
- Referral information for epidemiologists or others needing to report cases
- Laboratory and treatment protocols
- Managers looking for policy statements for employees

Equipment

❑ **Yes** ❑ **No** Computers (desktop or laptop) loaded with secure Internet access, software programs, and documents needed for crisis communication and information sharing. These items include e-mail lists, the crisis communication plan, and collaboration software.

❑ **Yes** ❑ **No** Landline phones with dedicated lines and 800 MHz radios, in case of power outage or cell phone network overload

❑ **Yes** ❑ **No** Fax machines with numbers preprogrammed for broadcast fax releases to media outlets and partners

❑ **Yes** ❑ **No** Dedicated computer server with additional bandwidth to handle increased Internet traffic

❑ **Yes** ❑ **No** Computer printers, including at least one color printer

❑ **Yes** ❑ **No** Tables (You will need a large number of tables.)

❑ **Yes** ❑ **No** Color copier machine and backup

❑ **Yes** ❑ **No** Cell phones, pagers, personal data devices, and e-mail readers

❑ **Yes** ❑ **No** Extension cords

❑ **Yes** ❑ **No** Visible calendars, flow charts, bulletin boards, and easels

❑ **Yes** ❑ **No** Designated personal message board

❑ **Yes** ❑ **No** Small refrigerator

❑ **Yes** ❑ **No** A/V equipment to host press conferences such as portable microphones, sound system, multibox or press box, projector and screen, and recording devices

❑ **Yes** ❑ **No** Podium

❑ **Yes** ❑ **No** TVs with cable hookup

❑ **Yes** ❑ **No** DVD player

❑ **Yes** ❑ **No** Paper shredder

❑ **Yes** ❑ **No** Alternative power supply, such as a generator, for the EOC and the JIC

❑ **Yes** ❑ **No** Portable cots

❑ **Yes** ❑ **No** Supplies (all labeled "for emergency only use"):

- Copier toner
- Printer ink
- Paper, notepads, and notebooks
- Pens, pencils, markers, highlighters, and erasable markers
- Supplies for mail, FedEx, UPS, and other shipping services
- Sticky notes
- Standard press kit folders
- Flash drives and portable hard drives
- Color-coded everything (copy paper, folders, inks, etc.)
- Baskets to contain items that you're not ready to throw away
- Organizers to support your clearance and release system
- Expandable folders with alphabet or days of the month
- Staplers (lots of them)
- Paper punch
- Three-ring binders
- Organization's press kit or its logo on a sticker
- Organization letterhead
- Paper clips (all sizes)
- Tape

MESSAGE MAPS

What is a Message Map?

A message map is a roadmap for displaying detailed, organized responses to anticipated questions or concerns. Well-constructed and accessible message maps are useful tools during an emergency that, if shared with partners and stakeholders, can support harmonized messages.

Message maps are developed for each intended audience segment. There are generally three levels to a message map:

Audience:	**Level 1.** *Insert the audience to whom this message map is addressed. It can be as broad as "the general public," or more specific. For example, the media, decision makers or at-risk individuals. Each message map should target ONE audience only.*		
Concern or Question:	*Insert ONE anticipated concern or question that the audience is likely to have regarding the emergency. Examples include: "What does one do to stop the outbreak?"; "What are the signs and symptoms of Covid-19?"*		
Level 2			
	Key Message 1: *Insert one message that can help answer the selected concern/question.*	Key Message 2: *Insert a second message that can help answer the selected concern/question.*	Key Message 3: *Insert a third message that can help answer the selected concern/question.*
Level 3			
	Supporting Points: *Write between two and five points with information that supports and clarifies the key message.*	Supporting Points: *Write between two and five points with information that supports and clarifies the key message.*	Supporting Points: *Write between two and five points with information that support*

How to Develop a Message Map[1]

Message maps are generally designed following seven recommended steps. For the case of emergencies, the seventh step has been adapted to ensure timely updates to the map. It is also recommended that partners and stakeholders convene and create message maps together, in order to ensure harmonization from the outset.

Step	Details
Identify audiences (or stakeholders)	Stakeholders include the general public as well as other interested parties who are in some way affected by the emergency. Examples include at-risk individuals, service providers, journalists and authorities. The list of stakeholders for a message map generally includes more parties than the intended audiences of a social behavior change (SBC) strategy. As the emergency evolves, in fact, the communication response becomes more focused through an SBC strategy in which primary and influencing audiences are identified.

[1] Covello, V. T. (2002, October). Message mapping, risk and crisis communication. In Invited paper presented at the World Health Organization Conference on Bio-terrorism and Risk Communication, Geneva, Switzerland. http://rcfp.pbworks.com/f/MessageMapping.pdf

Step	Details
Identify anticipated questions and/or concerns of stakeholders	A list should be developed of potential questions and concerns relating to the emergency that each major group of stakeholders is likely to have.
Identify frequent concerns	From the list of questions and concerns produced under point 2, select the most common categories of underlying concerns for each stakeholder. These common concerns will form the first level of the message map. Examples: include health risks, safety, environment, ethics, livestock or pets, religion.
Develop key messages	For each concern, identify a maximum of three key messages that respond to it. These key messages make up the second layer of the message map.
Develop supporting information	Identify key supporting facts for each key message.
Contextualizing messages	As messaging strategies evolve and become tailored to different audiences, also consider risk perceptions; knowledge about causes, symptoms, and transmission; beliefs, attitudes and concerns about these causes, symptoms and transmission; rumors or misinformation; social and cultural norms around behaviors and practices; habits; and key barriers and facilitators, including structural barriers that may inhibit practices
Conduct pretesting	The pretest should be conducted both with technical experts to ensure that the information is factually correct, and with representatives of the target stakeholder group to ensure that it is understood and received as intended.
Update and disseminate the maps	Even when maps are developed jointly with partners and stakeholders, they should be shared among all parties involved in communication. In emergency settings, a system should also be set up to update message maps with the most current information on the outbreak and disseminate the revised message maps to ensure continued coordination among communication partners.

Developing Message Maps

Directions: Complete this worksheet together with stakeholders to promote a broad exchange and analysis. Wherever possible, access evidence-based data to complete this worksheet.

1. Brainstorm with your team to name all possible audiences that are in some way affected by the emergency. Consider some of the following categories of stakeholders to prompt your thinking; however, you may wish to add other categories specific to your context:

Category	Stakeholders/Audiences	Concerns/Questions
Individuals directly or indirectly affected	[E.g., Persons who have been in close contact with individuals who have had Covid-19 – persons who have recently traveled to Hubei, China]	

Category	Stakeholders/Audiences	Concerns/Questions
At-risk and vulnerable individuals	[E.g., Everyone is at risk. Elderly and people with underlying conditions (e.g., heart disease, diabetes) have been shown to be more at risk for severe disease.]	
Healthcare	[E.g., healthcare workers, etc.]	
Education	[E.g., School administrators, teachers, students, parents of school-aged children]	
Government	[E.g., Ministry of Health, Ministry of Education, Military, etc.]	
Decision makers/influential individuals	[E.g., Parent-teacher associations, respected religious leaders, respected/trusted cultural leaders, etc.]	
Response teams, organizations	[E.g., Case management, surveillance, IPC, food security, etc.]	
Other		

2. To help you identify possible concerns or questions an audience may have relating to the emergency, consider the various aspects that may be impacted by the outbreak or that impact the way the individual responds to the outbreak. Coordination with various sectors – contact tracers, burial teams, psychosocial teams, case management, as well as social mobilizers, hotline operators or social scientists – often helps identify these. For each audience, list possible concerns or questions relating to the following areas: access to information, ethnicity, gender, health, susceptibility, economics/income generating activities, religion, trust, safety/security, livestock, other.
3. Review the questions/concerns in the table above and select the ones that you believe to be most pertinent. For each selected audience and question/concern, use the tables below to develop:
    a. Three key messages that answer that question/concern
    b. Three supporting facts for each key message, addressing **what** people need to know and do, **why** they should do it (benefits and risks), and **how** they should do it.
    c. Be sure to align your messages and facts with the most updated information on the outbreak as provided by the WHO, MOH or other reliable sources of information.

CHOOSING COMMUNICATION CHANNELS

Some messages will not be appropriate for every channel of communication. Messages should be created with consideration of audience needs and **intervention activity.**

Understanding the behaviors, knowledge, aspirations, and feelings of an audience can help identify messages and activities that resonate and motivate behavior change. It also informs the selection of approaches and delivery channels to which audiences are more likely to respond for the desired changes to occur.

What Is a Communication Channel?

A communication channel is a medium or method used to deliver a message to the intended audience. A variety of communication channels exist, and examples include:

- **Mass media,** such as television, radio (including community radio) and newspapers
- **Community engagement**, also known as social mobilization with two-way participation that fosters community ownership, such as community dialogues, listening groups or action planning
- **Print media**, such as posters, flyers and leaflets
- **Social and digital media,** such as mobile phones, applications and social media
- **Inter-Personal Communication**, such as door-to-door visits, phone lines and discussion groups

Different channels are appropriate for different audiences, and the choice of channel will depend on the audience being targeted, the messages being delivered and the context of the emergency. Using a variety of channels or a channel mix, is recommended so that messages can be reinforced through multiple sources.

Contextualizing Messages

Messages will need to be contextualized to ensure they are culturally and linguistically relevant, and consider current behaviors, practices, attitudes, concerns, stigma, and rumors and misinformation.

As messaging strategies evolve and become tailored to different audiences, also consider the following information in relation to the audience. Where possible, use recent research/evidence to inform your messages:

- What are their **general risk perceptions, emotions and fears** associated with the outbreak?
- What is their level of knowledge about **causes, symptoms and transmission**?
- What are their common **beliefs, attitudes and concerns** about these causes, symptoms and transmission?
- What **rumors or misinformation** are prevalent and need to be addressed?
- What are the **dominant social and cultural norms** around **behaviors and practices** linked to the outbreak?
- What are the **dominant current behaviors**?
- What are the **key barriers and facilitators** to the desired behavior?

Social mobilizers, community workers and volunteers have an important role in providing timely and actionable information and promoting community dialogues with trusted community leaders to identify key knowledge gaps and address fears and anxiety. It is important to consider the following.

- **Engage families and communities in a dialogue** to share information and understand key concerns and questions, rather than telling people what to do. Asking people what they know, want and need, and involving them in designing and delivering Covid-19 related activities improves the effectiveness of our community interventions and sustains necessary changes.
- **Recruit and support peers and leaders to deliver messages**: People are more likely to pay attention to information from people they already know, trust and whom they feel are concerned about their wellbeing
- **Encourage awareness and action:** Communication and community engagement typically contains information targeted to communities and should be action oriented, including:
    - An instruction to follow (e.g., If you get sick, seek medical care at hospital x),
    - A behavior to adapt (e.g., Wash your hands frequently to protect yourself and others from getting sick…) and information they can share with friends and family (such as where and when to access services, e.g., Treatment is free of charge and available at health facilities).

Data Source	Details
Rapid Needs Assessment	Provides insights and understanding about a range of factors that affect behaviors related to an outbreak and about how to best support the population to reduce their risk. Dedicating even just a few days to a needs assessment is important to obtain information about how households and communities perceive a potential or outbreak, what they know and do about it, what barriers and facilitators exist to the adoption of protective behaviors, and how cultural and social dynamics influence them. This knowledge supports program managers and implementers to develop targeted interventions and messages to support the success of all response efforts.
Secondary data with Epidemiological data	Often used to assess information that already exists about demographic, geographic, behavioral and social factors that affect how people respond to an outbreak. Data to review can include WHO Situation Reports on the outbreak and other related data about the outbreak, such as inter-border exchanges that may affect how the disease spreads. Other examples of useful secondary data include knowledge, attitudes and practice (KAP) surveys, media consumption studies and project reports from organizations

Data Source	Details
	working in the affected areas. DHS data can provide information on literacy levels and health practices and behaviors.
Knowledge, Attitudes, and Practices (KAP) surveys	Representative of a specific population to collect information on what is known, believed, and done in relation to a particular topic. In an outbreak response, knowledge is usually assessed to see how far community knowledge corresponds to biomedical concepts. Typical questions include knowledge about causes and symptoms. Knowledge that deviates from biomedical concepts is usually termed as *beliefs*. Attitude has been defined as "a learned predisposition to think, feel and act in a particular way towards a given object or class of objects." As such, attitude is a product of a complex interaction of beliefs, feelings, and values.[2] Keep in mind that with KAP survey findings, there may be considerable gaps between what is said and done, and a lack of cultural/religious/social context. Knowledge is generally a poor predictor of behavior.
Social Science studies	These studies might focus on culture and society, social risk factors and mechanisms for disease transmission, local cultural interpretations of disease and response interventions, and the functioning of the health system and local structures of power and authority. Studies by social behavior change experts, social scientists and/or medical anthropologists can fill in the gaps of KAP studies, particularly where geographic areas of an outbreak are more defined. This information can be essential in developing effective community engagement and health promotion strategies and ensuring response pillars are fit-for-purpose at the local level.

[2] ul Haq, N., Hassali, M.A., Shafie, A.A. *et al.* A cross sectional assessment of knowledge, attitude and practice towards Hepatitis B among healthy population of Quetta, Pakistan. *BMC Public Health* **12**, 692 (2012). https://doi.org/10.1186/1471-2458-12-692

Choosing the Appropriate Communication Channel

Channel	In an outbreak context, this channel is most appropriate for…
Community Engagement	• Engaging communities • Promoting discussion and reflection among communities about the issues or regarding the adoption of complex prevention practices (ex. changes to burial practices, mixing chlorine solutions) • Modeling behaviors • Communicating with low literacy and/or hard-to-reach audiences
Mass Media	• Raising awareness across audiences (informing and educating) • Modeling behaviors • Reducing stigma and taboos • Communicating with low literacy audiences • Obtaining wide regional and national reach • Rapid and/or frequent information sharing
Print Media	• Supporting other communication channels • Providing more detailed information on a particular topic that individuals can look through at home • Providing information about personal and confidential issues • Engaging with policy and decision makers
Social & Digital Media	• Obtaining a large reach (if Internet is widely available and accessible) • Promoting discussions through chat rooms or email exchanges • Providing information about personal and confidential issues
Interpersonal Communication	• Creating a two-way communication process with the audience • Engaging community members and creating community action plans • Promoting discussion, reflection and challenging dominant norms • Informing and educating (increase knowledge) • Imparting skills • Discussing sensitive topics

HANDOUT 18: SOCIAL LISTENING REPORT

INSTRUCTIONS

- Each group will be assigned a disease.
- In your groups, you will review the media monitoring report with insights on rabies, anthrax and cholera gathered from X (formerly twitter) and Facebook using CrowdTangle and Sprinklr.
- Develop recommendations for RCCE activities for your assigned disease based on the insights in the report.
- Using the guiding questions below:

CHOLERA GROUP

- What are the key insights from social media about public perception and awareness of cholera?
- What RCCE activities can we implement to enhance public knowledge and preventive behaviors for cholera?
- How can we improve the reach and effectiveness of cholera-related communication on social media?

ANTHRAX GROUP

- Why is there limited awareness about anthrax during periods with few reported cases?
- What RCCE strategies can we develop to maintain continuous awareness and education about anthrax, even when case numbers are low?
- How can we leverage local health institutions to increase engagement and preparedness for anthrax outbreaks?

RABIES GROUP

- What are the challenges in raising awareness about rabies based on social media insights?
- What RCCE activities can we propose to improve community engagement and knowledge about rabies prevention and control?
- How can partnerships with veterinary services and community leaders enhance rabies communication efforts?

Biweekly Social Listening Report
Reporting period: 1/31/2024-2/15/2024
Project: USAID Breakthrough ACTION

Anthrax and rabies

- There were few posts about anthrax and rabies during this period. In the period immediately before this report (between November 2023 – January 2024) few to no new cases were being reported. This is also indicative that in times when there are few to no cases reported, individuals and institutions conduct limited awareness raising.
- During this period there was no mention of the term anthrax or rabies but a post from Zambia National Public Health Institute Director, indicating that zoonotic disease outbreaks may increase, especially with the country experiencing a drought was shared on https://www.lusakatimes.com/2024/02/27/zambia-national-public-health-institute-collaborates-with-government-agencies-to-address-zoonotic-

Cholera

- During the search period the Sprinklr posts were a total of 635 mentions for cholera, of these mentions, 301 were X (formerly known as Twitter) updates, 124 were replies to the X updates, and 52 were X mentions. About one quarter (25.4 percent) of the mentions were posted by individuals as status updates and 24.7 percent of posts were made by news outlets, with the rest either being reposts of the status updates or pictures. The estimated reach for the 635 mentions is 20. 903 million people, but this number is not limited to Zambia.
- The number of cholera mentions declined steadily from 28th January to 11th February coinciding with the reduction in the number of cholera cases being recorded daily. Despite the decrease in Cholera mentions, the Ministry of Health has continued to share content on cholera prevention actions on their social media pages.
- Posts from highly recognized organizations such as UNICEF and World Vision were met with more positive sentiments than other posts. These posts focused on collaboration efforts to assist the government in the fight against cholera.
- Top phrases used during this period included such as “show us way forward on cholera” indicating that people are interested in a sustainable solution to the frequent cholera outbreaks while phrases such as “not throw waste through car windows” indicate that people are aware of some of the behavioral factors that contribute to the outbreaks and are encouraging each other to stop these actions.
- Posts from this period related to cholera:

Lessons learned

- Misinformation tends to rise during outbreaks, but there is currently no mention that the search picked up limited posts spreading misinformation or rumors. Posts tended to reflect concern about cholera and updates rather than minimizing it.
- There is a lack of proactive content creation on zoonotic diseases across official social media platforms, pages, and news blogs, despite the importance of continuous awareness and sensitization.
- While there were frequent updates on anthrax during the October-November 2023 outbreak, general messaging on other PZDs was lacking
- Mentions on cholera focused more on government efforts and mechanisms of response rather than actionable advice.
- The public is interested not only in long-term sustainable measures to end cholera but also in ensuring government recommendations are followed for prevention.

HANDOUT 19: DISEASE Z SIMULATION ROLE PLAY

GROUP 1: PUBLIC HEALTH OFFICIALS (RED TEAM)

Instructions

Within your group, carefully read the scenario below, which involves an entirely fictional zoonotic outbreak situation of a disease known as "Disease Z." In this exercise, your group will be representing the **role of public health officials/spokespersons**. Please choose one person to serve as the official spokesperson who will represent all the points of the group.

You will have ten minutes to discuss amongst yourselves the scenario and key aspects of the public health spokesperson's role. Then, you will conduct a short role play of a press conference and community meeting involving this outbreak.

Scenario

In Village X, local animal health workers have been reporting an unusually high number of goats and cattle have been falling ill and dying over the past month. Some farmers have directly observed high fever or other signs of distress in the animal for a period of time prior to death, but others are finding their animals dead without having had any obvious symptoms. A number of carcasses have been found in areas surrounding the village. So far, there has been one case of a worker at the local slaughterhouse also falling ill; the worker eventually died. No other suspicious illnesses or deaths in humans have been reported. Residents of the village are becoming anxious following the death of the slaughterhouse worker and the rapid increase in animal deaths.

The local veterinary health team is conducting a joint investigation of the outbreak with the local health authorities. After consulting with the local animal health worker, investigators noted that few residents of the far-flung village have regularly vaccinated their animals. Further, many residents, when they find their animals dead, are moving as quickly as possible to either eat the animal or to sell the meat at local market while they can still fetch a reasonable sum. It appears that this practice is contributing to a high risk of further human transmission of disease Z. However, despite messaging on the radio and awareness sessions with local health teams, the population is reluctant to disrupt their livelihoods by stopping the sale of animal products at the local market, and the informal nature of the sale makes it very difficult to monitor or regulate.

You are a spokesperson of the local public health department and have decided to host:

1. Press conference
2. Community meeting in village x in light of the continued rapid spread of disease z.

Your main goal as a public health official is to convey the **three public health messages that are most critical** for the population of Village X at this time.

You will be providing a very brief summary of the current Disease Z situation and taking questions from the journalists and members of the community. You will have ten minutes to prepare your talking points. Remember to be brief and take into account the best practices for press conferences and community meetings that you have learned in this course.

GROUP 2: JOURNALISTS (BLUE TEAM)

Instructions

Within your group, carefully read the scenario below, which involves an entirely fictional zoonotic outbreak situation of a disease known as "Disease Z." In this exercise, you group will be representing the role of local journalists.

You will have ten minutes to discuss amongst yourselves the scenario and key aspects of the journalist's role in the situation and prepare points. Then, you will participate in a short role play of a journalist press conference and community meeting around this outbreak.

Scenario

In Village X, local animal health workers have been reporting an unusually high number of goats and cattle have been falling ill and dying over the past month. Some farmers have directly observed high fever or other signs of distress in the animal for a period of time prior to death, but others are finding their animals dead without having had any obvious symptoms. A number of carcasses have been found in areas surrounding the village. So far, there has been one case of a worker at the local slaughterhouse also falling ill; the worker eventually died. No other suspicious illnesses or deaths in humans have been reported. Residents of the village are becoming anxious following the death of the slaughterhouse worker and the rapid increase in animal deaths.

The local veterinary health team is conducting a joint investigation of the outbreak with the local health authorities. After consulting with the local animal health worker, investigators noted that few residents of the far-flung village have regularly vaccinated their animals. Further, many residents, when they find their animals dead, are moving as quickly as possible to either eat the animal or to sell the meat at local market while they can still fetch a reasonable sum. It appears that this practice is contributing to a high risk of further human transmission of disease Z. However, despite messaging on the radio and awareness sessions with local health teams, the population is reluctant to disrupt their livelihoods by stopping the sale of animal products at the local market, and the informal nature of the sale makes it very difficult to monitor or regulate.

You are a local journalist attending a **press conference and community meeting** in Village X in light of the continued rapid spread of Disease Z.

Your goals in this role are to:

- Clarify the scientific facts of the outbreak with the public health experts.
- Hold local officials accountable for the timeliness and quality of the outbreak response.

As a journalist, you will be posing questions to the public health spokesperson during the press conference. You will have ten minutes to prepare your talking points/questions for the spokesperson. Remember to be brief and take into account the best practices you have learned in this course.

GROUP 3: COMMUNITY MEMBERS (ORANGE TEAM)

Instructions

Within your group, carefully read the scenario below, which involves an entirely fictional zoonotic outbreak situation of a disease known as "Disease Z." In this exercise, you group will be representing the role of community members living in Village X, affected the outbreak.

You will have ten minutes to discuss amongst yourselves the scenario and key aspects of the community members' concerns and role in this situation. Then, you will participate in a short role play of a press conference and community meeting around this outbreak.

Scenario

In Village X, local animal health workers have been reporting an unusually high number of goats and cattle have been falling ill and dying over the past month. Some farmers have directly observed high fever or other signs of distress in the animal for a period of time prior to death, but others are finding their animals dead without having had any obvious symptoms. A number of carcasses have been found in areas surrounding the village. So far, there has been one case of a worker at the local slaughterhouse also falling ill; the worker eventually died. No other suspicious illnesses or deaths in humans have been reported. Residents of the village are becoming anxious following the death of the slaughterhouse worker and the rapid increase in animal deaths.

The local veterinary health team is conducting a joint investigation of the outbreak with the local health authorities. After consulting with the local animal health worker, investigators noted that few residents of the far-flung village have regularly vaccinated their animals. Further, many residents, when they find their animals dead, are moving as quickly as possible to either eat the animal or to sell the meat at local market while they can still fetch a reasonable sum. It appears that this practice is contributing to a high risk of further human transmission of disease Z. However, despite messaging on the radio and awareness sessions with local health teams, the population is reluctant to disrupt their livelihoods by stopping the sale of animal products at the local market, and the informal nature of the sale makes it very difficult to monitor or regulate.

You are community leaders attending a **community meeting** in Village X in light of the continued rapid spread of Disease Z. Your main goal in this role is to **represent the concerns and fears of the community to public health officials and the media.**

You will have ten minutes to prepare your points. Remember to be brief and take into account the best practices you have learned in this course.

HANDOUT 20: WORKSHOP EVALUATION

Instructions

Please take a few moments to provide us with some important feedback about your experience with the PZD risk communication training program. Your responses are anonymous and will help improve future workshops.

Please indicate the extent to which you agree or disagree with the following statements:

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Objectives					
The workshop objectives were clearly stated and met.					
The workshop objectives met my expectations.					
The information in the workshop is relevant to my work.					
Content					
The content was applicable to people with different experiences and skill levels.					
The content is relevant to my job.					
The difficulty level of this workshop was appropriate.					
Facilitation					
The facilitator was knowledgeable.					
The facilitator provided ample time for questions and answered them satisfactorily.					
The facilitator spoke in a clear and easy-to-understand manner.					
The workshop was well-organized.					
The workshop provided several opportunities for me to practice the new skills I was learning.					
The activities helped me deepen my understanding of the material.					
The workshop format allowed for collaboration with other participants.					
Results					

I will be able to use what I learned in my work.					
I accomplished the objectives of this workshop.					
What would you improve about this workshop?					
Additional Comments					

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