



Avian & Pandemic Influenza

International Association of Fire Fighters

IAFF Always on the Frontline

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Objectives, p. 3

- After this unit, you will be able to:
 - Identify the differences between seasonal, epidemic, and pandemic infections.
 - Describe the symptoms of avian flu, how it is spread, the potential for an avian flu pandemic, and the effects of a pandemic.
 - Describe how you can help your department prepare for a pandemic.
 - Describe the role of the safety/infection control and prevention officer before and after a pandemic.
 - Explain how to protect yourself and patients.
 - Explain proper decontamination procedures.
 - Explain the importance of seasonal flu vaccination.



Exercise Objectives, p. 5

- Share general information on avian influenza.
- Identify the differences between seasonal, epidemic, and pandemic infections.
- Describe the symptoms of avian flu, how it is spread, and the potential for an avian flu pandemic.



Avian & Pandemic Influenza Overview

- Avian flu is:
 - Spread from birds to humans
 - Spread from bird to bird through migration
 - Currently, spread only from birds to humans, not human to human
- Avian flu could become a pandemic.
- There is no immunity to avian flu.
- The FDA approved a vaccine in 2007.
- It will take time to test and distribute the vaccine.
- For more information, explore:
 - Pandemic Flu Resources for First Responders
<http://www.iaff.org/pandemicflu/>
 - PandemicFlu.gov
<http://www.pandemicflu.gov/index.html>.



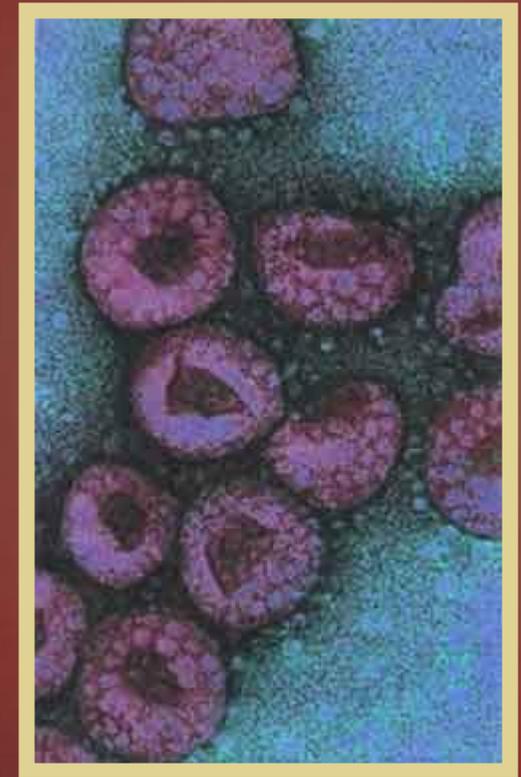
Seasonal Flu, Epidemics, and Pandemics

- Seasonal flu
 - Respiratory illness
 - Transmitted person-to-person
 - Vaccine is available
- Epidemic
 - An illness contained in a specific geographic area (e.g., Asia, the United States, Europe)
- Pandemic
 - A global disease outbreak



Why Does Avian Flu Have the Potential to Become a Pandemic?

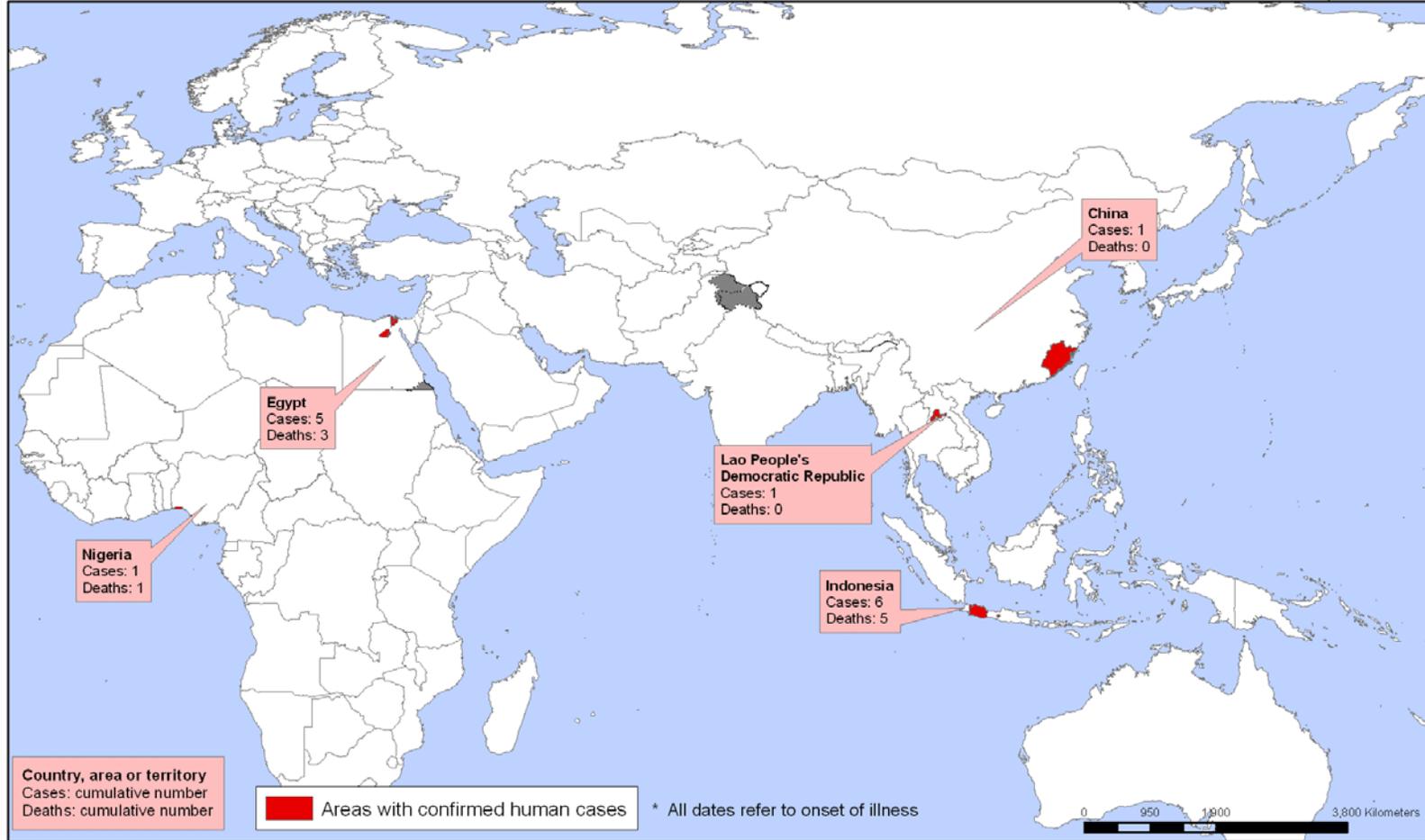
- It's being spread by migratory birds.
- It can be transmitted from birds to mammals (including humans).
- There is no human immunity.
- It's resistant to antiviral medications commonly used.
- The virus continues to mutate.



How Is Avian Flu Spreading?

Areas with confirmed human cases of H5N1 avian influenza since 1 January 2007 *

Status as of 1 March 2007
Latest available update



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: WHO / Map Production: Public Health Mapping and GIS Communicable Diseases (CDS) World Health Organization

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Number of Deaths

Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO

6 February 2007

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	0	0	6	6
China	1	1	0	0	8	5	13	8	0	0	22	14
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	2	2	20	12
Indonesia	0	0	0	0	19	12	56	46	6	5	81	63
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	97	42	116	80	9	8	272	166

Total number of cases includes number of deaths.
WHO reports only laboratory-confirmed cases.
All dates refer to onset of illness.



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Symptoms of Avian Flu

- Persistent fever
- Chills
- Productive or dry cough
- Shortness of breath
- Fatigue
- Muscle aches
- Low white blood count (lymphopenia)
- Progression to pneumonia or Acute Respiratory Distress Syndrome (ARDS) within five to seven days



Exercise Objective, p. 15 & 17

- Predict the effects of a pandemic flu on the:
 - Fire Station
 - Department
 - Family
 - Town/city
 - Nation



IAFF Influenza Pandemic Checklist, p. 19



IAFF Influenza Pandemic Checklist

Done	In Progress	Not Started	I. Planning Logistics
			Establish an Incident Management System that meets NFPA 1561, <i>Standard on Emergency Services Incident Management System</i> , including written Standard Operating Procedures (SOP) and Mitigation Plan.
			Identify and define roles and responsibilities of Incident Commander who will coordinate the emergency response and the response teams (NFPA 1500, chapter 8.1).
			Inter-Agency Cooperation: Establish relationships with community public health department and other emergency management groups. Define functional roles and responsibilities of internal and external agencies, organizations, departments, and individuals, and establish lines of authority.



Exercise Objective, p. 25

Describe the role of the safety/infection control and prevention officer both before a pandemic and after an incident.



The Role of the Safety/Infection Control and Prevention Officer

- Before a pandemic, ensure:
 - The fire station is a safe work environment.
 - There are adequate supplies and equipment.
 - Personal protective equipment (PPE) fits.
 - Fire fighters use proper equipment at the proper times.



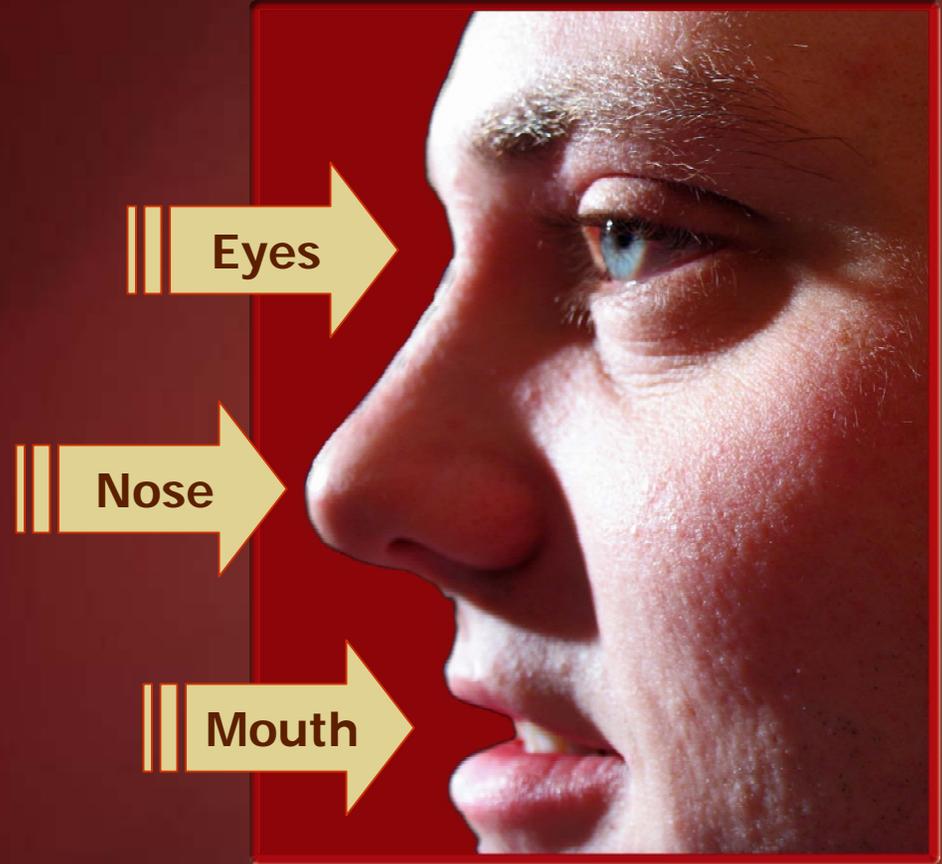
The Role of the Safety/Infection Control and Prevention Officer

- After an incident, ensure:
 - Health incidents are reported to health center.
 - Fire fighters follow incident-related decontamination guidelines.
 - Administrative and PPE controls are followed.



Exercise Objective, p. 27

Describe how to keep the most vulnerable areas safe from avian flu.



Respiratory Protection



**Surgical
Mask**



P100

*Recommended
by IAFF*



N95



Fit-Testing for Disposable Masks

STEP 1

Don hood while agent is sprayed for you to taste and smell.



STEP 2

Don mask. Agent is sprayed. Do you taste or smell it?



STEP 3

If you taste or smell agent, test another mask size (or type).



STEP 4

Carry results card.

RESPIRATOR FIT-TEST INFORMATION				
SCBA:		NAME		STAFF/SHIFT
BRAND	MODEL	SIZE	DATE	
TB:		NAME		STAFF/SHIFT
BRAND	MODEL	SIZE	DATE	
COMMENTS ON BACK				



Hand Care

- Wash hands properly.
- Wear disposable medical gloves.
- Keep waterless hand cleaner in your EMS bag.
- Discard gloves – do not wash or reuse gloves.



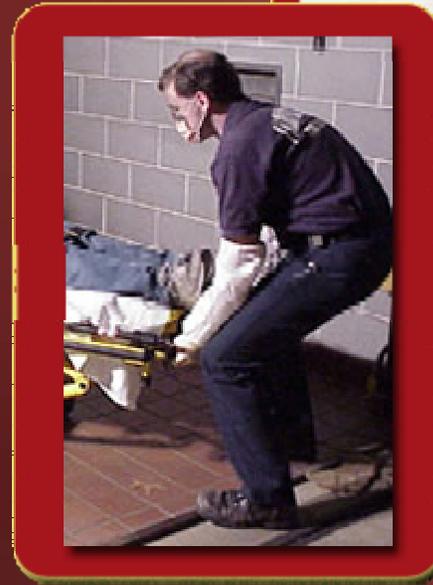
Eye Care

- Don protective eyewear.
- Do not rub eyes.



Exercise Objective, p. 33

Identify precautions to take when caring for and transporting patients with the flu.



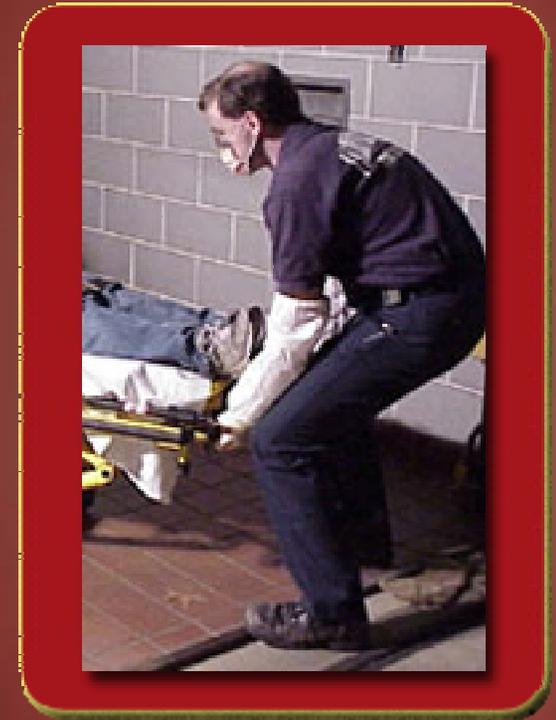
Precautions for Patient Care

- Request patients cover their mouths when coughing or sneezing.
- Apply disposable surgical masks or disposable respirators.
- Use bag-valve-masks.
 - *Never use direct mouth-to-mouth or mouth-to-mask resuscitation.*



Precautions for Patient Transport

- Do not allow air to re-circulate within the transport vehicle.
- Do not remove respirators to eat or drink.
- Have patients wear surgical masks, if tolerated.
- Use simple and non-rebreather face mask for oxygen support.



Exercise Objective, p. 35

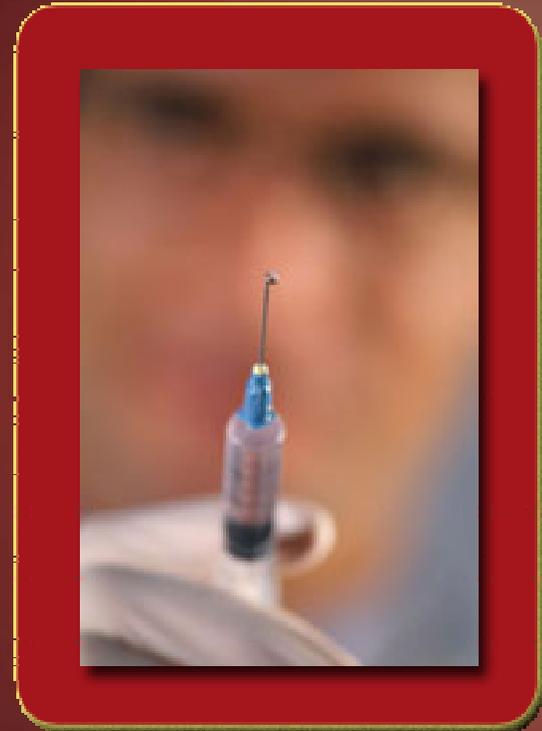
Describe how to decontaminate equipment that may have been contaminated with avian flu.



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Exercise Objective, p. 37

Explain why it is important to get a vaccine for seasonal flu.



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Avian and Pandemic Influenza

- In this unit, you learned:
 - Basic facts about avian and pandemic influenza
 - How a pandemic could affect the fire house, the department, your family, the wider community and the nation
 - How to prepare the department for a pandemic
 - How to keep yourself safe
 - How to care for and transport patients who may be infected with avian or pandemic flu
 - How to decontaminate equipment
 - Why vaccinations are important



Appendices, p. A-41

- Appendix A – Facilitators Guide to Preparing for a Pandemic Flu: What First Responders Need to Know
- Appendix B – Emergency Plan for First Responder Families Worksheet
- Appendix C – Additional Resources
 - IAFF Influenza Web Sites
 - PandemicFlu.gov
 - Center for Disease Control (CDC) Web Site
 - National Clearinghouse for Worker Safety & Health Training



Exercise Objective, p. 39

Plan actions you will take to change your behavior based on the topics covered in this unit.



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