

## **PREVENTING THE SPREAD OF CONTAGIOUS ILLNESS**

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation. Featured are:

**INTRODUCTION:** A brief description of the program and the subject that it addresses.

**PROGRAM OUTLINE:** Summarizes the program content. If the program outline is discussed before the video is presented, the entire program will be more meaningful and successful.

**PREPARING FOR AND CONDUCTING THE PRESENTATION:** These sections will help you set up the training environment, help you relate the program to site-specific incidents, and provide program objectives for focusing your presentation.

**REVIEW QUESTIONS AND ANSWERS:** Questions may be copied and given to participants to document how well they understood the information that was presented. Answers to the review questions are provided separately.

### **INTRODUCTION**

Over the past several years, it seems you cannot turn on a newscast or open a newspaper without seeing headlines about an outbreak of some type of virus or infection. Swine flu, avian flu, the respiratory ailment known as SARS and the antibiotic-resistant staph infection known as MRSA are just a few of the highly contagious illnesses and infections that have caused hundreds of people to get sick and die around the globe in the past decade. The purpose of this program is to help employees understand how to prevent becoming infected by and transmitting these contagious illnesses. It also explains the symptoms and warning signs of flu, SARS and MRSA and discusses how to respond to a suspected infection.

Other topics include the use of facemasks to prevent infection, precautions to take in areas suspected of contamination, how various contagious illnesses are diagnosed and treated and how to prepare for and respond to a pandemic.

### ***PROGRAM OUTLINE***

#### **BACKGROUND**

- What has health officials worldwide so concerned about outbreaks of contagious illnesses is the real possibility that one will reach pandemic status.
- A pandemic occurs when an infectious disease, often involving a new strain of a virus or other infectious agent, emerges quickly throughout a large human population, being easily spread from person to person and causing serious illness on a global scale.
- Public health officials stress that a swine or avian flu pandemic is a real possibility because the viruses constantly swap genes to form new strains that are difficult to fight.
- While a pandemic of any illness could have catastrophic consequences worldwide, an illness doesn't have to reach pandemic status to affect you.
- Small local outbreaks of illness or infection occur frequently so you need to be prepared. The good news is that by following some simple precautions and using common sense, you can drastically reduce your chances of contracting a dangerous virus or infection.

#### **SWINE FLU & ITS SYMPTOMS**

- Swine flu is a respiratory disease of pigs caused by a Type A influenza virus that often becomes the source of regular outbreaks in pigs.
- Until recently, swine flu had mainly been confined to pigs and persons who had contact with pigs, but is now being transmitted from human to human.

- While there are several subtypes of the swine flu virus, influenza A H1N1 is the type of swine flu of most concern for health officials as it is highly contagious and has the ability to spread quickly throughout largely populated areas.
- The onset of symptoms of swine flu is similar to those of the common seasonal flu, including weakness, fever, body ache, sore throat, vomiting or diarrhea.
- In some cases, the illness can become severe, escalating to pneumonia and respiratory failure. Some deaths have also been reported.

### **AVIAN FLU & ITS SYMPTOMS**

- Avian influenza, commonly called “bird flu” is an infection caused by flu viruses that occur naturally in birds.
- Like swine flu, several strains of avian flu have been discovered. While most of the strains generally do not harm birds, influenza A H5N1 is known to kill them and infect a variety of other animals, including humans.
- While close contact with infected poultry has been the primary source for human infection, there have been reports of human-to-human transmission of the virus in recent years.
- Symptoms of avian flu are much like those of seasonal flu and swine flu: weakness, fever, body ache, sore throat, vomiting or diarrhea.
- Eye infection, acute respiratory distress, pneumonia and other severe, life-threatening complications have been reported in some avian flu patients.
- Genetic studies indicate that the H5N1 virus mutates rapidly and could adapt to allow easy human to human transmission. This is why the H5N1 virus found in avian flu has health officials concerned about its pandemic risk.
- To make matters worse, the viral components of avian influenza can mix with the swine flu virus to create new strains that not only could be spread easily, but could also be immune to the antiviral treatments that are currently available. When flu viruses mutate and change genetically, older vaccines become ineffective.

### **HOW SWINE & AVIAN FLU ARE TRANSMITTED**

- Avian and swine flu are transmitted much like the common seasonal flu is spread during flu season. This occurs mainly from person to person through the coughing and sneezing of infected people.
- Once the infected person sneezes or coughs, the droplets of the virus can be inhaled or swallowed, or they can enter the membranes of the eyes or the nose.
- Also, people are frequently infected by touching something with flu viruses on its surface, then touching their eyes, mouth or nose.
- Keep in mind that just about all types of flu viruses, seasonal, avian, swine and others, can live outside the human body for hours and can infect anyone coming in contact with them during that span.

### **SARS, ITS SYMPTOMS & TRANSMISSION**

- Another health concern is Severe Acute Respiratory Syndrome, or SARS, a respiratory illness caused by a coronavirus, a family of viruses that are also known to cause the common cold.
- These viruses are found in a variety of animals, including birds and mammals. SARS is thought to have passed from animals to humans in Eastern Asia during the past decade.
- Scientists believe this probably occurred during the butchering of animals or people eating undercooked meat.

- SARS is transmitted much in the same way as swine and avian flu. When a person sneezes or coughs, the virus can be inhaled, swallowed or enter the eye, nose or mouth membranes of anyone close by.
- Like the flu, a person can also be infected by SARS by touching his or her mouth, nose or eyes after contacting a contaminated object.
- SARS generally starts with a high fever. Other symptoms may include headache, body ache and diarrhea. After a few days, SARS patients may develop a dry cough, while most of them also develop pneumonia.

### **MRSA, ITS SYMPTOMS & TRANSMISSION**

- Another health issue affecting workplaces, schools and hospitals is Methicillin-resistant staphylococcus aureus, or MRSA. MRSA is a staph infection of the skin that is resistant to penicillin and many other antibiotics.
- The symptoms of MRSA are usually mild, such as redness and swollen lesions on the skin, but can quickly cause more serious infections by infecting surgical wounds, the bloodstream, the lungs or other organs. Some of these infections can be life-threatening and even result in death.
- Health officials have been alarmed recently by the spread of resilient strains of MRSA. Because it is so difficult to treat, MRSA is sometimes called a “super bug.”
- MRSA is transmitted by direct skin-to-skin contact or by contact with shared items or surfaces that have been infected by the bacteria. This includes tools, protective equipment or anything else someone with the infection has touched.
- It is also commonly spread through the handling of bandages and other items used to treat cuts and lacerations.

### **PREVENTING CONTAGIOUS ILLNESS INFECTION**

- Health officials agree that cleanliness is the best defense for protecting yourself from being infected by flu, SARS, MRSA or similar illnesses.
- Washing your hands thoroughly and often will help protect you from germs. It is recommended that you wash your hands with soap and warm water for 20 to 25 seconds. Wash your hands frequently and always after a known potential exposure.
- When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used.
- Since germs cling to your bare hands, covering your mouth and nose with your hands when you cough or sneeze could result in spreading germs and passing along infections to others.
- Instead, when you feel a cough or sneeze coming, cover your mouth and nose with a tissue or paper towel, then throw it away immediately. If a tissue or paper towel is not handy, some health officials recommend coughing into your elbow or shoulder, while others suggest you turn your head away from others and sneeze or cough into the air.
- Remember to wash your hands as soon as possible after coughing or sneezing.
- If outbreaks of flu, SARS or other infections have been reported in your geographical area, consider avoiding large public gatherings until local health officials confirm that it is safe to do so.
- You may also want to avoid buses and airplanes if infections have been confirmed in your area. The amount of people in closed quarters highly increases the potential for transfer of viruses.

- While it may be common sense to avoid sick people, all too often people are infected when they come in close contact with a friend or relative who is ill. Make sure any sick person is no longer contagious before physical contact.
- In general, the various flu viruses are contagious up to seven days from the onset of symptoms; however, severe cases may last longer.
- Another way to avoid picking up the virus is to avoid touching commonly used objects. These can be loaded with germs that may carry an infection or virus.
- Of course, it's impossible not to touch door handles, light switches and other common objects. This is why it's so important to wash your hands often and avoid touching your mouth, eyes and nose with your hands.

#### **USE OF MASKS TO PREVENT INFECTION**

- Experts generally agree that any type of mask can reduce the risk of infection, but they are not all created equally.
- While a regular surgical or dust mask can reduce the chance of indirect contact with others' germs and also reduce the spread of your germs, a particulate mask with a NIOSH N95 rating or higher is recommended for environments where exposure to viruses and infections may occur.
- Of course, a main benefit of wearing any type of mask is that it keeps you from touching your mouth and nose with your hands, which may carry the infection.

#### **MRSA PRECAUTIONS**

- Keep in mind that the precautions we have mentioned can help you prevent contracting many types of contagious illnesses, including the common cold and the seasonal flu; however, other specific precautions should be taken to avoid contracting a MRSA infection.
- First of all, keep all insect bites, cuts and abrasions covered with a clean bandage and change the bandage frequently.
- Avoid touching other people's wounds or bandages.
- Don't share personal items with other people, including towels, clothing, washcloths and razors.

#### **PRECAUTIONS FOR AREAS SUSPECTED OF CONTAMINATION**

- Once some type of illness or infection has occurred, areas known to have been occupied by the infected person or objects that have become contaminated require even more stringent precautions until they have been decontaminated and deemed free of exposure risk.
- More than likely, you won't be asked to work in a contaminated area unless you are involved in the clean up.
- No matter what reason you are in the area, use universal precautions by assuming everything you come in contact with is contaminated. "Universal precautions" means protecting yourself from direct contact by avoiding exposure or using an approved barrier device to prevent direct contact.
- This means putting on proper personal protective equipment. A full-face respirator may be required by some employers, but at a minimum, you should wear a NIOSH N95 rated facemask and safety goggles to protect your eyes and respiratory system.
- Make sure to wear gloves that provide the appropriate protection from both the physical hazards of the area as well as any germs that may be present.

- Sanitize all tools and equipment in the area before use. There are lots of sanitizing agents available, but a simple solution of bleach and water has been proven effective; the Centers for Disease Control recommends one-quarter cup of bleach per gallon of water.
- Keep in mind that anything the infected person touched could be contaminated and requires sanitizing, including door knobs, the arms of chairs, light switches, computer keyboards and mice, machine controls, tools, just to name a few.
- Make sure to wash your work clothes before wearing them again and wash and sanitize any reusable personal protective devices after each use in a potential exposure situation.
- Even if no known illness or infection exists, it's a good idea to frequently sanitize commonly used items if you share your desk, tools or protective equipment with co-workers.
- Sanitization is critically important if fellow workers have been sick or if there has been an outbreak in your geographic area.
- We all have a responsibility to prevent the spread of infection.

### **RESPONDING TO A SUSPECTED INFECTION**

- Despite all the efforts you may make to avoid contracting a contagious illness, there is always the possibility of getting sick. How and when you respond may be the difference between a few days of bed rest and severe infection that has long lasting consequences.
- First and foremost, do not go to work while sick. Do not send your kids to school or daycare while sick.
- Isolate yourself at home or visit your physician and follow his or her orders before returning to your job. Voluntary isolation is a responsible way to minimize the spread of contagious infections; avoiding contact with other people prevents the spread of your illness.
- Get plenty of rest and drink plenty of fluids.
- If you live in an area where outbreaks of swine flu or avian flu have been identified, you should consider contacting your physician if you suffer any flu-like symptoms.
- You should definitely seek medical care if you are worried about your condition, have experienced the symptoms for more than a couple of days or have recently visited an area where an avian or swine flu outbreak has occurred.
- It's important to contact your healthcare provider before your visit so the staff can take the proper precautions to protect themselves and other patients from exposure.
- If you are experiencing flu-like symptoms accompanied by difficulty breathing or shortness of breath, pain or pressure in the chest or abdomen, sudden dizziness, confusion, or severe or persistent vomiting, you should seek immediate medical attention.

### **DIAGNOSIS & TREATMENT OF AVIAN & SWINE FLU**

- If your doctor suspects you have avian or swine flu, he will conduct tests to diagnose your situation.
- The results for an avian flu test are usually available in about four hours, while a respiratory sample taken from you must be sent to a health laboratory to be analyzed for determining swine flu; this may take three to five days.
- If your doctor determines you have avian flu or suspects you have swine flu, he may prescribe an antiviral drug such as Tamiflu or Relenza.

- Be sure to read and follow the instructions on any medications prescribed by your physician.
- Keep in mind that your healthcare provider might not prescribe any type of prescription medications and may suggest a traditional approach to treating your symptoms since many people have fully recovered within a week of infection without taking any antiviral drugs.

### **DIAGNOSIS & TREATMENT OF SARS**

- While people who are infected with SARS generally suffer symptoms similar to those of the flu accompanied with breathing difficulty, the key symptom is a fever higher than 100.4 degrees F. If you are experiencing these symptoms, you should contact your physician and schedule a visit as soon as possible.
- Your doctor may suspect SARS if you have a fever higher than 100.4 and you have traveled to an area affected by SARS or have been around a person infected with SARS within the past 10 days.
- To determine if you have SARS, your physician will usually conduct several tests to see if your illness is caused by something else, then you will undergo two or more tests for antibodies done on separate days to confirm infection.
- You may be prescribed corticosteroids or the antiviral medication Ribavirin for treatment; however, there is no known medication to cure SARS. Fortunately, nine out of 10 people infected with SARS fully recover.
- If your breathing problems persist or your tests results indicate a severe infection, you will be hospitalized and isolated to prevent transmitting the virus to others.

### **MRSA DIAGNOSIS & TREATMENT**

- A MRSA infection usually appears as a bump on the skin or an area that has one or more of these symptoms: red, swollen, painful, warm to the touch or full of pus or other drainage.
- If you suspect you have a MRSA infection, contact your healthcare professional. You should see your physician as soon as possible if the symptoms of this infection are accompanied by a fever.
- Do not attempt to drain the infection yourself as this could worsen it or cause it to spread to other people; have your doctor drain the infection instead.
- If you are given an antibiotic, make sure to continue taking it until all doses are gone or your physician tells you to stop taking it, even if the infection looks healed. You often feel better before you are cured completely and failing to finish the antibiotic can help create drug-resistant strains of infection.

### **PREPARING FOR & RESPONDING TO A PANDEMIC**

- Develop a pandemic preparedness plan at work and at home much like you would for severe weather or fire.
- Should a pandemic appear imminent, talk with your local public health officials and healthcare providers. They can inform you about the signs and symptoms of a specific outbreak.
- If an outbreak reaches pandemic status, implement prevention and control actions recommended by local officials.
- Don't panic. Continue to follow the precautions you have learned in this program to help prevent contracting and spreading these types of infections.
- Stay informed about the pandemic through web sites such as the one for the Center for Disease Control, through local and national pandemic hotlines and through radio and television broadcasts.

## **PREPARE FOR THE SAFETY MEETING**

Review each section of this Leader's Guide as well as the videotape. Here are a few suggestions for using the program:

Make everyone aware of the importance the company places on health and safety and how each person must be an active member of the safety team.

Introduce the videotape program. Play the videotape without interruption. Review the program content by presenting the information in the program outline.

Copy the review questions included in this Leader's Guide and ask each participant to complete them.

Copy the attendance record as needed and have each participant sign the form. Maintain the attendance record and each participant's test paper as written documentation of the training performed.

### **Here are some suggestions for preparing your videotape equipment and the room or area you use:**

Check the room or area for quietness, adequate ventilation and temperature, lighting and unobstructed access.

Check the seating arrangement and the audiovisual equipment to ensure that all participants will be able to see and hear the videotape program.

## **CONDUCTING THE PRESENTATION**

Begin the meeting by welcoming the participants. Introduce yourself and give each person the opportunity to become acquainted if there are new people joining the training session.

Explain that the primary purpose of the program is to help viewers understand how to prevent becoming infected by and transmitting contagious illnesses such as swine flu, avian flu, SARS and MRSA.

Introduce the videotape program. Play the videotape without interruption. Review the program content by presenting the information in the program outline. Lead discussions about job tasks and work areas where the potential for contagious transmission exists and what employees can do to protect themselves and their co-workers from exposure. Use the review questions to check how well the program participants understood the information.

After watching the program, the viewer will be able to identify the following:

- The symptoms of swine flu, avian flu, SARS and MRSA and how these infections are transmitted;
- The precautions necessary for preventing the spread and contraction of contagious illnesses;
- The measures to take to prevent infection when working in areas suspected of contamination;
- How to respond to a suspected infection of a contagious illness;
- How to prepare for and respond to a flu or SARS pandemic.

**PREVENTING THE SPREAD OF CONTAGIOUS ILLNESS**  
**REVIEW QUIZ**

Name \_\_\_\_\_ Date \_\_\_\_\_

*The following questions are provided to check how well you understand the information presented during this program.*

1. Which of these contagious illnesses is a staph infection?
  - a. avian flu
  - b. swine flu
  - c. SARS
  - d. MRSA
  
2. Health officials agree that avoiding crowds of people is the best defense for protecting yourself from being infected by a contagious illness.
  - a. true
  - b. false
  
3. In general, flu viruses are contagious up to \_\_\_\_\_ days from the onset of symptoms.
  - a. three
  - b. five
  - c. seven
  
4. Experts agree that face masks don't reduce the risk of infection of a contagious illness.
  - a. true
  - b. false
  
5. What is the term used for protecting yourself from infection when assuming everything you come into contact with is contaminated?
  - a. collective safeguards
  - b. general avoidance
  - c. universal precautions
  
6. When suspecting you have a contagious illness, why should you contact your healthcare provider before visiting his or her facility?
  - a. so your physician can investigate your symptoms before you arrive
  - b. so the staff can take the proper precautions to protect against exposure to your infection
  - c. so your physician can prescribe the appropriate medications in case you cannot be seen right away
  
7. Your doctor may choose not to prescribe any prescription medications for a suspected avian or swine flu infection.
  - a. true
  - b. false
  
8. You should stop taking any antibiotic to treat a MRSA infection when the infected area looks healed or no longer causes any pain.
  - a. true
  - b. false



***ANSWERS TO THE REVIEW QUESTIONS***

1. d

2. b

3. c

4. b

5. c

6. b

7. a

8. b