



Understanding H1N1 Risks in the Transportation Sector



Course Goal

To enhance transportation employee awareness and personal preparedness relative to the H1N1 virus.

Course Objectives

- Define basic infectious disease terms and concepts
- Discuss the risks of H1N1 within the transportation sector
- Describe techniques for the prevention and treatment of H1N1

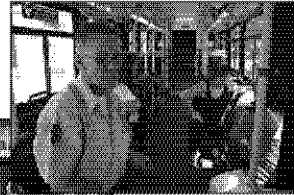
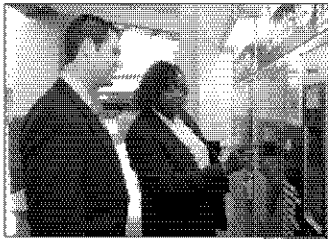
You are involved in this training today because there is a chance that H1N1 influenza may reappear during the fall months, causing a second, perhaps more serious wave of the pandemic that was declared during the summer of 2009. The training you are about to receive is designed to equip you with all of the information you will need to understand the disease, to keep yourself healthy, and to properly care for yourself and others should you become ill.

As such, the course objectives are as follows:

- Define basic infectious disease terms and concepts – not only will familiarizing yourself with these items be useful throughout the training process, it will allow you to better understand and interpret information delivered by the popular media and made available within the workplace.
- Discuss the risks of H1N1 within the transportation sector. The virus has unique characteristics related to how it spreads and causes disease. By understanding these characteristics, you will become better able to safeguard your own health, and the health of those around you.
- Describe techniques for disease prevention and treatment – arguably the most important goal of this training is to equip you with the knowledge and tools necessary to stay healthy, and if necessary, to appropriately care for yourself and/or others should illness occur. Included here are a number of tips and strategies for accomplishing these outcomes, both generally, and as they relate specifically to H1N1.

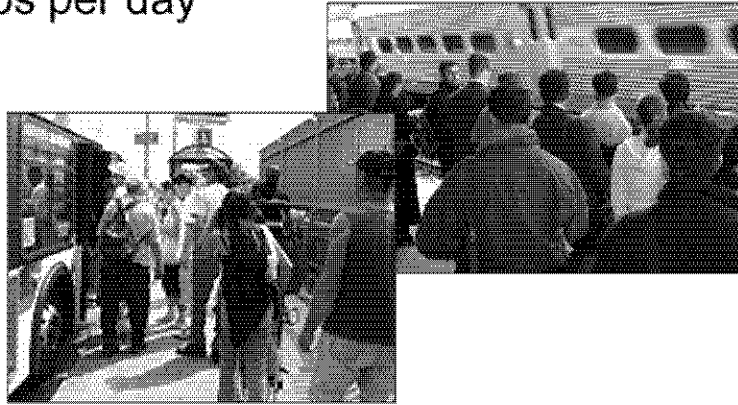
The Facts

You are one of approximately 500,000 bus and passenger rail employees in the U.S.



The Potential

Collectively you provide 35 million
trips per day



The Risk

As of September 2009 there have been approximately 90,000 confirmed cases of H1N1 in the U.S.



As of September 2009, the Centers for Disease Control (CDC) has confirmed approximately 90,000 cases of H1N1 have occurred in the U.S. Keep in mind, this likely *underestimates* the true rates of disease, as many cases produce only mild symptoms, which do not necessitate a doctor's visit.

Obviously, 90,000 is a large number, and the thought that this could actually represent only a fraction of actual cases may at first seem alarming. However, it is important to keep in mind that in the vast majority of cases, people sickened by H1N1 experience a mild form of illness. Of course, staying healthy is always preferable to getting sick, and in the following slides, we'll familiarize you with the precautions and practices you can follow to keep from catching H1N1.

What is H1N1?

- H1N1 (swine flu) is a new influenza virus
- Spreads from person-to-person similar to regular seasonal influenza viruses
- First detected in people in the U.S. in April 2009
- June 11, 2009, the World Health Organization (WHO) declared a pandemic of H1N1

H1N1, originally called “swine flu” is a new form of influenza virus that is unlike the typical “seasonal flu” we experience each year, yet both spread from person to person in much the same way.

The first cases were detected in the U.S. in April 2009, and on June 11th, the World Health Organization declared an official pandemic after 70 of its member nations reported continual community-level outbreaks.



Basic Terminology

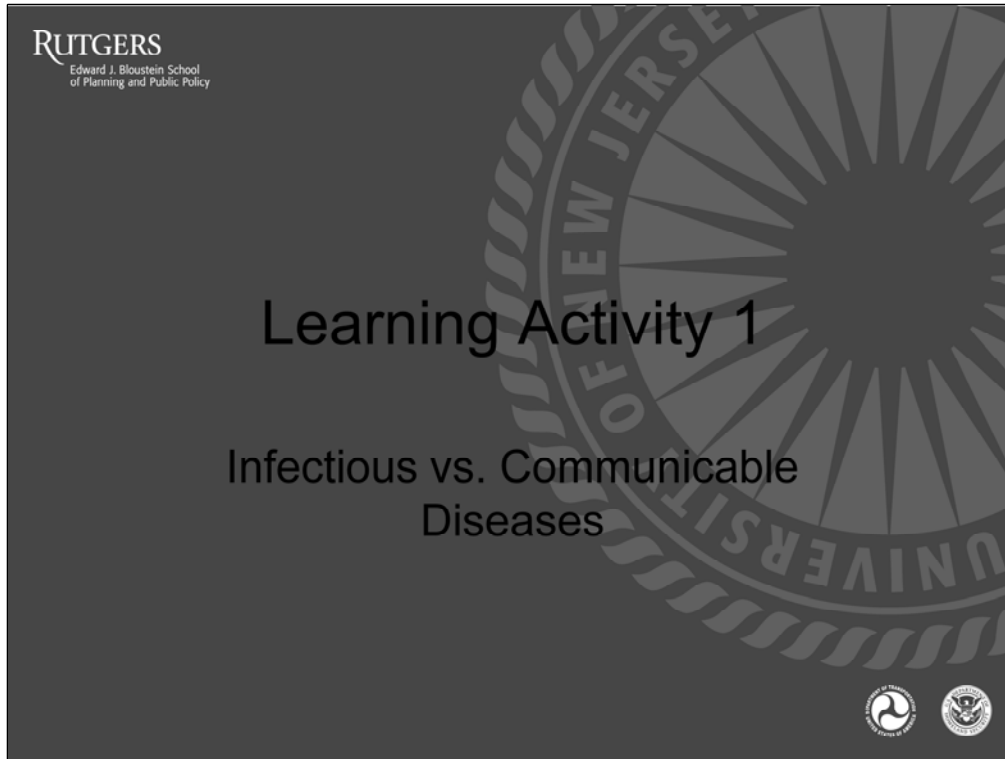
- **Pathogen:** a disease-causing biological agent
- **Infectious disease:** a disease caused by a pathogen
- **Communicable (contagious) disease:** an infectious disease transmitted from person to person

Before getting into the real meat of the course, it is first necessary to become familiar with some basic infectious disease terminology.

Pathogen: A disease-causing agent, typically a microorganism such as a virus, bacteria or fungus

Infectious Disease: A disease caused by a pathogen. Not all infectious diseases are communicable (or “contagious”).

Communicable Disease: An infectious disease which can be transmitted from person to person (also called a contagion or a contagious disease)



This activity helps participants to better understand the difference between infectious and communicable diseases. Begin by telling the group that many diseases are infectious— they are caused by a pathogen. However, explain that this does not mean that all infectious diseases are all are communicable. Use Lyme disease as an example. Lyme disease is an infectious disease that is transmitted to humans through a tick bite. Explain that it is not communicable, though, because you cannot catch Lyme disease directly from another person.

Ask the group if they can think of a few more diseases that are infectious, but not communicable. Next, you can ask for several types of communicable diseases. Several examples follow, including questions and answers to use to lead the discussion.

Tetanus

The bacteria causing tetanus lives widely in the environment and can enter through a break in the skin, such as a puncture wound from a nail or rose thorn. Tetanus is an infectious disease, caused by a pathogen.

Can one person infected with tetanus pass it on to others? <Participants should respond>

Answer: No, you can't pass tetanus on from person to person. Therefore tetanus is an infectious disease but it is not communicable.

So we have determined that Lyme disease and tetanus are infectious diseases but they are not communicable.

Measles and chicken pox? Are these diseases infectious? <Audience should respond>

Answer: Yes, they are infectious diseases caused by pathogens.

Are these diseases communicable? <Audience should respond>

Answer: Yes, these are viral illnesses that spread from person to person. They are infectious diseases and they are communicable.

Influenza? How do you catch influenza? <Audience should respond>

Answer: You catch it from another individual who has it. Therefore it is infectious and communicable. And, since H1N1 is a type of flu, that means it is both infectious and communicable.

Basic Terminology

- **Endemic:** The “typical” amount of cases of a disease in a community or region
- **Epidemic or Outbreak:** An increase in the number of cases above the endemic level
- **Pandemic:** An epidemic that becomes widespread in a region, continent or the world



We are here today to talk about a possible future pandemic (a term whose meaning we’ll discuss in a moment), but it is important to keep in mind that in every community, some level of disease is always present. For example, in any given city or town at any time, a few individuals are likely to have head colds. A few might have Lyme disease and it is probable that at least a few will have a sexually transmitted disease. *<Audience should perk up at this comment>*

Regardless the population, it is normal to find some cases of various infectious diseases at any time; this is what we call the endemic level of disease, or “background”.

When more infections are present in a population than this “background” level, we have an epidemic (also called an outbreak). Since the background level of infection varies between diseases, there is no specific number of cases that makes an epidemic, rather, it depends on the normal endemic conditions.

For example, we expect no cases of smallpox or polio in the United States. Should one case occur, we would have an immediate and massive public health response. For these two diseases, the first which has been eradicated from the world and the second of which has been eradicated from the Western Hemisphere, it only takes one case to declare an epidemic.

Flu is a different story, however. Under normal circumstances, communities expect some cases of seasonal flu every year. It is only when we have more cases of a particular type of flu than are expected that we declare an epidemic.

A pandemic is essentially a large-scale epidemic; or infection rates above normal (endemic) levels that are widespread, affecting a whole region, continent, or the world. When the World Health Organization declared the first H1N1 pandemic in July 2009, widespread infections had been documented in 70 countries across the globe.

When considering pandemics, one important point needs to be made: pandemics are declared according to *infection rates*, not according to the severity of the disease itself. Regardless whether the health impacts of a disease are relatively mild or severe, as soon as infection rates surpasses endemic levels across a large geographic area, a pandemic would be in progress.

Exposure vs. Infection



Likelihood of exposure = 100%

BUT Not all microbes are pathogenic



Good hygiene is the most effective prevention measure



AND You may have some natural immunity to those that are

So we've just learned about a variety of topics including pathogens, epidemics and pandemics, and it all sounds very dire. But before getting too panicked, it is important to remember that in our daily lives, we are constantly exposed to microbes (such as bacteria, fungi and viruses) that can infect our bodies; they're all around us, on everything we touch, in the air we breathe; they're even inside our bodies. We're exposed in our homes, workplaces, and in every kind of public place. But if this is true, why aren't we sick all the time?

To answer that question, we need to consider several factors:

While the probability of exposure is 100%, it is important to keep in mind that most of the microbes with which we'll come in contact are not pathogenic. In fact, the vast majority are benign, and have no effect on us.

But clearly, some of the microbes we encounter in our daily lives *are* pathogenic, and would cause us harm if they successfully infect our bodies. Luckily for us, we have some degree of natural immunity to many of these potential disease-causers, meaning that when we come in contact with them, our own bodies fight off infection. The following slide outlines a series of basic lifestyle choices that can help strengthen your immune system and help keep you healthy this fall.


Finally, even if we encounter a pathogenic microbe to which we have no natural immunity, there are a number of actions we can take to reduce the likelihood of infection. Later in this module, we'll outline specific hygiene-focused habits that can help keep you from contracting H1N1, even if you are exposed to the virus, and the good thing is, they're all simple, fast, and under your control.

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Lifestyle Choices Directly Affect Immunity

The following factors all have a direct impact on your body's ability to fight off infection

- Diet
- Rest
- Physical Activity
- Stress



We are all exposed to infectious agents all the time, yet as we saw on the previous slide, a number of factors help to determine whether or not we become ill as a result. One of the most important is your body's own immune system; when your immune system is strong and functioning properly, pathogens will have a harder time making you sick, because your natural defenses will help fight them off.

A number of factors dictate whether or not your immune system will be able to protect you from infection. Of these, lifestyle choices are among the most important, and unlike so many things in our lives, they are largely under our control.

What we eat doesn't just affect how we look, it also impacts how often we get sick. Choosing to eat a well-balanced diet rich in essential vitamins and nutrients helps strengthen your immune system; whereas eating nutritionally-poor "junk" food, weakens it.

<Ask audience to describe some of the dietary choices they consider "healthy" and others they think of as "junk." Ask which types of food they typically eat (at home, on the job, when out with friends or family). Ask those individuals who indicate eating a healthy diet if they have any pointers on how to accomplish this while balancing work, family and other responsibilities.>

The amount of sleep you get also affects health. People who get enough sleep have stronger immune systems than those who get too little. Most adults need 7 to 8 hours of sleep each night; however, the exact amount your body needs may be somewhat different.

<Ask for a show of hands of anyone who has difficulty getting enough sleep, and ask if anyone has any advice on how to get to sleep and stay asleep.>

Insomnia, or the inability to fall asleep or stay asleep, is a major problem for many people, but there are a number of things you can do to help address it:

- Set a regular bed time;
- Create a calming routine to follow each night before bed (for example, reading a book or meditating);
- Avoid bright lighting at night;
- Avoid eating late in the day;
- Limit caffeine consumption, especially late in the day;
- Create a dark, quiet atmosphere in the bedroom;
- Reserve the bedroom for sleeping (i.e. no television, etc.);
- If insomnia becomes a major problem, see your healthcare provider



Physical exercise has also been shown to boost natural immunity. Recommendations regarding exercise regimens vary according to age and physical condition, but in general, it's a good idea to do something physical almost every day.

<Ask the audience to describe whether, how, and how often they exercise. Ask them to describe the things that might prevent them from exercising and how they feel after being physically active. If many people report having difficulty finding the time or energy for exercise, remind them that small efforts (like taking the stairs instead of the elevator, or parking far away from your destination and walking instead of searching for the closest space, add up).>

As you probably know, high stress levels are very taxing on the body, but they can also reduce your immune system's ability to function properly. Although it's not always possible to avoid stress entirely, take steps to limit the intensity and duration of stress, and make time for activities you find relaxing.

<Ask the audience to describe their own stressors and stress levels. Ask what they do to avoid stress and to de-stress when stress is unavoidable. Remind them that simple steps, like making time for recreation or to be with family and friends can make a big difference, as can more focused efforts, like meditation.>

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Influenza

- Caused by a virus
- Classified by Type
 - A – causes the most severe cases in humans
 - B – causes milder disease in humans
 - C – does not cause disease in humans
- Frequent mutations of Influenza A require new vaccines

So now we have some background knowledge about infectious disease and how to strengthen our bodies against it, but what we're really interested in learning about today is the H1N1 virus and how to avoid catching it.

H1N1 is a kind of influenza, and like all influenzas, it is caused by a virus. Viruses are a class of microbes that are so small they need to be seen through an electron microscope. Viruses cannot reproduce on their own, instead, viral particles enter (infect) a healthy cell, "hijack" the internal structures of the cell, and redirect them to produce new viral particles. For example, a polio virus can invade a single human cell, causing it to produce 10,000 new copies of the virus, which then go on to infect other cells and repeat the process.

Because viruses do not expend any energy to reproduce, they can afford to have large numbers of genetic mutations. Sometimes these mutations give rise to new strains of disease, and the end result can be a new or "novel" virus with characteristics unlike any previously existing.

We classify influenza (or flu) viruses to help us understand their impact on populations. Type A influenzas cause the most severe cases of the disease. Type B influenzas cause milder cases while Type C usually does not cause human disease at all. Within each type of virus there are multiple strains and these are given names according to their physical characteristics. For example, H1N1 is a strain of influenza type A virus that can cause disease in humans.

Influenza viruses mutate frequently. In fact, new flu viruses are created so often that each year new vaccines must be developed to try to combat them. Because vaccines are made using only known strains of virus, there is always the chance that they will be ineffective in protecting against the next new strain. For the most part, however, vaccines *do* function to prevent disease, which is why public health officials urge people who have lots of contact with others (like transit workers) to get vaccinated each fall. Not only does getting vaccinated help prevent you as an individual, it helps safeguard community health by reducing disease transmission to others.

Influenza Pandemics

- Influenza pandemics occur about 3 times per century. In the 20th century, there were:
 - Spanish flu
 - Asian flu
 - Hong Kong flu
- Generally come in 3 “waves;” the second is the most severe
- Second wave of H1N1 has occurred already



Influenza Pandemic: An influenza pandemic is a global outbreak of flu that occurs when a new strain of the virus appears in human populations, causes serious illness, and then spreads from person to person. Unlike seasonal influenza, people will have little immunity to the virus that causes a pandemic.

Influenza pandemics occur about one time every 30 years (roughly 3 times a century). In the 20th century, there were 3 flu pandemics:

1. Spanish Flu (1918-1919): The “great pandemic,” killed 675,000 people in the U.S. and up to 100 million worldwide.
2. Asian Flu (1957): Killed 70,000 in the U.S.
3. Hong Kong Flu (1968): Killed 35,000 in the U.S.

<Ask audience members if they have any memory of past influenza pandemics and to describe any stories they might have.>

Pandemics often occur in 3 waves. Typically, the second wave is the most severe. With the Spanish flu, for example, 90% of casualties worldwide occurred during the second wave. In the U.S., deaths from Spanish Flu reached more than 50 per 1000 people each week in October 1918.

So why is there continued concern about the H1N1 pandemic? Public health officials are worried because there were a large number of infections reported worldwide during spring and summer 2009. It is possible that this was only the “first wave” of disease, and that a second, perhaps more severe form of the virus may emerge in the normal annual flu season.

Symptoms of H1N1

Are similar to those associated with seasonal flu and include:

- Fever
- Lethargy
- Lack of appetite
- Cough



The symptoms associated with H1N1 are very similar to those of seasonal flu and include:

- fever,
- lethargy,
- lack of appetite and
- Coughing

Symptoms of H1N1

Some people with H1N1 flu have also reported:

- Runny nose
- Sore throat
- Nausea
- Vomiting
- Diarrhea



Some people with H1N1 flu have also reported:

- runny nose,
- sore throat,
- nausea,
- vomiting and
- Diarrhea

Influenza-like Illness (ILI)

- Influenza-like illness is any case where you have a:
 - Fever
 - Cough or sore throat
 - Other possible symptoms
- If you have ILI, assume you have contracted H1N1 and take appropriate actions



Given the large number of symptoms the virus can cause, how can you know whether you're potentially ill with H1N1? The CDC defines influenza-like illness (ILI) as fever plus at least cough or sore throat and possibly other symptoms like runny nose, body aches, headaches, chills, fatigue, vomiting and diarrhea. If you have ILI, assume you have contracted H1N1 and take the actions outlined in later slides.

H1N1: Who is at risk?

- Pregnant women
- People with chronic medical conditions
- Healthcare workers
- Young people (Ages 6 months – 24 years)

H1N1 does not appear especially dangerous to the elderly; rather, younger people and people increasing weight problems of all ages appear at greater risk

Many of the same groups who are at increased risk from seasonal flu are at higher risk from H1N1. These include:

- Pregnant women
- People aged 25 to 64 with chronic medical conditions (such as asthma, diabetes, or heart disease)
- Healthcare workers
- Young people (ages 6 months to 24 years)

Unlike the seasonal flu, which often has the most serious effects in those ages 64 years and older; H1N1 appears to be more problematic for younger individuals. This is partly because they are less likely to have any natural immunity, which is developed from years of exposure to seasonal viruses, including H1N1.

How Does H1N1 Spread?

- Respiratory droplets generated when a person coughs or sneezes are the primary way H1N1 is spread
 - They can travel for up to 6 feet before landing
 - They can infect surfaces directly, or can spread through touching with dirty hands
- Flu viruses on hard and porous surfaces can still be infective for up to several days



The primary way that H1N1 is spread is through respiratory droplets generated when an infected person coughs or sneezes. A single cough or sneeze generates thousands of potentially-infectious droplets, which can travel up to 6 feet before settling. Then several things can happen:

- Droplets in the air can come in contact with another person's eyes, nose or mouth, infecting them.
- Droplets may also land on surfaces (such as doorknobs or telephones) or be introduced to surfaces if someone has coughed or sneezed into their hands and not washed them.
 - If someone touches a contaminated surface and then touches their eyes, nose or mouth, they can catch the virus.

Viral particles can remain viable (able to cause infection) on hard and porous surfaces for periods ranging from hours to days. Therefore, it is always best to assume that all surfaces are contaminated and take the necessary precautions.

H1N1 is a human flu virus and cannot be contracted by eating pork products.

Personal Protective Equipment (PPE)

- At this time, public health officials DO NOT recommend the use of respirators or other forms of PPE in the workplace to prevent flu transmission*
- If you choose to wear any form of PPE while on duty, you must check with your supervisor regarding your agency's policies and procedures

*However, those individuals with identified chronic medical conditions may wish to use respiratory protection when meeting in public, including at work.

Whenever we think of flu or pandemics, one of the first images that comes to mind is that of people wearing facemasks and respirators. So, shouldn't we take similar precautions to safeguard ourselves at work? The answer, perhaps surprisingly, is "no." Because of the way that H1N1 is spread, public health officials feel strongly that anyone working outside of a hospital or other healthcare setting should not wear a respirator or mask while on duty to prevent flu transmission. They simply don't offer the kind of protection you need. However, those individuals with identified chronic medical conditions may wish to use respiratory protection when meeting in public, including at work.


If you feel strongly about wearing PPE while on duty, check with your supervisor regarding your agencies policies and procedures.

So, if masks are out, does that mean we have no defense from contracting H1N1? Far from it, in fact, by following the simple precautions outlined on the following slides, you can dramatically reduce your likelihood of getting sick.

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Preventing the Spread of H1N1

- Get vaccinated
 - Seasonal flu and H1N1 vaccines available this year
 - Visit www.flufinder.gov to find locations of vaccination clinics
- Cover your cough or sneeze
- Clean hands frequently



As we saw earlier in the training, staying healthy has a lot to do with personal choices such as how we eat, how much we sleep and whether or not we exercise. When a pandemic threatens, however, there are specific additional steps that we, as individuals can take to reduce the likelihood of contracting the disease.

Get vaccinated: Getting a flu vaccine is your first line of defense against infection. Vaccines are designed to be administered to healthy individuals to help them develop immunity against a possible infection. Remember, in order to provide protection against infection, vaccines must be given in advance of exposure, so that a person's immune system has time to develop resistance to the strains of flu contained in the vaccine. Generally, it takes about 2 weeks after vaccination for immunity to develop.

This year, two types of vaccine are available: a seasonal flu vaccine (the kind which is available every year) and a vaccine specific to H1N1. Both the seasonal flu vaccine as well as the H1N1 vaccine will be administered in a single dose. To safeguard your health, it is important to seek both types of vaccine as soon as they become available.

Practice proper cough and sneeze etiquette: When someone coughs or sneezes, a multitude of droplets are released into the air, all of which may contain infectious viral materials. To prevent the spread of infection, therefore, you are advised to cough or sneeze into a disposable tissue, throw the tissue promptly away in a proper garbage receptacle, and clean your hands using soap and water or an alcohol-based hand sanitizer. If you can, offer tissues to others who may be coughing or sneezing and infecting others. The act reminds people to cover their mouths and it may prevent others from catching the flu!

<Engage the audience about how to approach coughing passengers or co-workers who may not be practicing cough and sneeze etiquette>

Also, if you have no tissues, you may opt to cough or sneeze into your upper sleeve as a way to prevent the spread of infection.

Clean your hands frequently: One of the major ways that flu spreads is through the introduction of virus particles to the mucus membranes of the eyes, nose and mouth via the hands. Whether you've come in contact with the virus by touching a contaminated surface or through respiratory droplets landing directly on your hands, the minute you bring your hands near your face (to scratch an itch, wipe your nose, etc.) you've provided the virus with easy access to your body.

Since it's often impossible to tell whether you're hands may be carrying viral particles, the safest bet is to clean them often. Do this, preferably with soap and hot water for 15-20 seconds, followed by a thorough drying with a disposable towel that is then thrown away. To time your hand washing, singing is sometimes helpful. One round of "Three Blind Mice" or the "ABC song," or two rounds of the "Happy Birthday" song sung while soaping the hands will help ensure you've washed sufficiently.

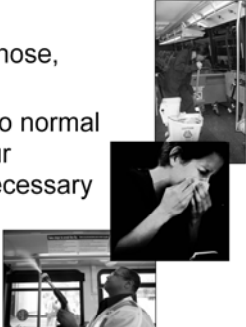
If you have no access to water, use an alcohol-based hand sanitizer containing 60-95% alcohol and rub it into your hands until dry. Hand sanitizer needs at least 60-95% alcohol to work on viruses.

<Engage the audience about hand washing behavior and how it differs in public v private settings. Those in public toilets where there are other people watching are far more likely to wash their hands compared to those who are not being observed by others. Peer pressure is important for hand-washing. How might this be translated to the workplace?>

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Preventing the Spread of H1N1

- Stay home if you are ill
- Avoid touching your eyes, nose, and mouth
- Clean surfaces according to normal agency policies, and in your immediate work area as necessary



Avoid touching your eyes, nose, and mouth: this is how viral particles enter your body, so be conscious of how frequently you rub your eyes, wipe your mouth, etc., and be sure to clean your hands thoroughly before doing so

Clean those surfaces: Surfaces contaminated with the H1N1 virus can provide a major transmission pathway – all you have to do is touch one and then touch your eyes, nose or mouth, and you could become infected.

The good news is that the procedures your agency already uses to clean its buses, train cars, etc. are sufficient to eliminate the virus. If it's your job to do this cleaning, follow all agency procedures and wear the necessary PPE.

But even if this kind of maintenance is not among your duties, it's still a good idea to be proactive about protecting your health, and that means spending a little time cleaning commonly-touched surfaces in your work area.

Here are some pointers on how to do this:

- For electronics, vehicle door handles, gear shifts and steering wheels, use sanitizing wipes
- For surfaces that are not visibly soiled, use a product that contains a detergent and a disinfectant and follow the package instructions;
- For visibly soiled surfaces, first clean with a detergent, dry the surface, and finally, apply a disinfectant.
- Remember, it is important to read package instructions carefully and to use any safety equipment (gloves, etc.) that is recommended; also, if planning to use more than one product, be sure that all products can be safely combined.
- If commercial products are unavailable, mix 1 tablespoon of bleach with 4 cups of water (or ¼ cup of bleach with 1 gallon of water) to create a cleaning solution. Apply the solution to surfaces using a clean cloth and allow it to sit for 3 to 5 minutes, then wash away with clean water. When using this solution, it is important to wear gloves to protect your hands

In selecting which surfaces to clean, some, such as doorknobs, may be obvious, but take a moment to think of all the things (like telephones, keyboards, etc.) you touch throughout your job duties, and be consistent about keeping them clean. At the start of a shift, consider taking a moment to clean shared work areas and items that may have been touched by others or contacted by respiratory droplets.

What If I Get the Flu?

Avoid spreading illness to others

- Stay home from work and avoid travel until at least 24 hours *after* fever subsides without the use of fever-reducing medicine
- Try to keep a distance of 6 or more feet from others



Unfortunately, no level of precaution can guarantee you will not fall ill. But if you are experiencing influenza-like illness (defined as: fever plus at least cough or sore throat and possibly other symptoms like runny nose, body aches, headaches, chills, fatigue, vomiting and diarrhea), **STAY HOME!** Not only will you feel better than you would if you tried to perform your work duties, you'll be helping to prevent the spread of the disease to others.

People infected with flu are contagious beginning about one day before they become symptomatic. Children may be contagious for longer periods. When trying to decide whether to report for work, remember: regardless whether you are taking medication or are under a doctor's care, if you have a fever (defined as a temperature of 100 degrees or more), you should stay home until at least 24 hours after the fever subsides without the use of fever-reducing medicine.

During this time, do your best to avoid contact with others to avoid spreading the disease – ideally, this means maintaining a distance of 6 or more feet between yourself and others. If you leave the house to seek medical attention, it is advised that you wear a face mask (if possible) to help prevent the spread of the disease.

What Do I Do if I Get the Flu?

Care for yourself

- Rest
- Drink plenty of clear fluids
- Take over the counter medications for symptom relief
- Contact your doctor to see if antiviral medications are appropriate



General Care:

If you are sick with influenza-like illness, taking certain actions can help speed your recovery, reduce your suffering and limit the likelihood of complications. Rest is one of the most important things you can do for yourself. Also, plan to stay either in your home, or in the home of someone who can act as a caregiver. Try to keep contact with other family members limited. Drink plenty of clear fluids (such as water, broth and sports drinks); and take over the counter medications as needed. Remember: children under 18 years of age should avoid aspirin and aspirin-containing drugs, as these may increase the likelihood of developing Reyes syndrome (acetaminophen or non-steroidal anti-inflammatory drugs are recommended for fever relief).

Antiviral medications: You've probably heard talk, in the news and elsewhere, about antiviral medications and may be wondering how they could fit in with your flu prevention and treatment strategy. Antiviral medications require a doctor's prescription, and unlike the flu vaccine, are not specific to any flu strain. They work by inhibiting the virus' ability to move from cell to cell, and can be used to help prevent infection, or to limit the duration and severity of symptoms by up to one day if administered immediately after an infection occurs. Currently two types, sold under the brand names "Tamiflu" and "Relenza," are approved to combat H1N1 in the U.S.

Guidance issued by the CDC in early September 2009 made clear that antiviral medications should be considered for individuals who are at high risk of flu-related complications because of other, existing health conditions, but not for members of the general population. If you would like to know whether this type of treatment might be appropriate for you, consult your physician.

When to Seek Emergency Care

Appearance of any of these symptoms signals complications associated with flu which require immediate attention.

Symptom	Children	Adults
Difficulty breathing	√	√
Unusual skin color	√	
Severe Vomiting	√	√
Nonresponsive/Irritable	√	
Symptoms return with fever and worse cough	√	√
Chest/Abdominal Pain/Pressure		√
Confusion		√
Insufficient fluid intake	√	
Dizziness		√

Most people who have been infected with H1N1 have made full recoveries without receiving medical care; however, the appearance of any of the following symptoms should signal you to seek immediate emergency care:

For children:

- Fast or labored breathing
- Bluish or gray skin color
- Not drinking enough fluids
- Severe or persistent vomiting
- Not waking up or not interacting
- Severe irritability (i.e. not wanting to be held)
- Flu-like symptoms improve but then return, accompanied by fever and worse cough

For adults:

- Shortness of breath or difficulty breathing
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve but then return, accompanied by fever and worse cough

How Should I Prepare at Home?

Stock up on:

- Non-perishable food and drink
- Prescription and over-the-counter medications
- Cleaning agents (including bleach)
- Tissues and other paper goods
- For more information on what to stockpile, see:



<http://flu.gov/plan/pdf/individuals.pdf>

Get involved in community preparations

To aid in planning efforts, federal authorities have created a worst-case scenario: An H1N1 pandemic could last 6-8 weeks within a given community and could reoccur in a cyclic fashion over 2-3 months. At the national scale, the event could last for 12 weeks or more. Approximately 30% of the population could be affected directly by illness, with absentee rates approaching 40%, as workers stay home to care for sick family members and look after children in the event of school closings.

Given this scenario, advance planning for your family's health and well being is critical.

We are accustomed to being able to go to a store and buy whatever we need, whenever we need it. However, an influenza pandemic and the mass absenteeism that could result would likely result in disruptions in retail supply chains and possibly store closures. If stores are closed and supply shortages occur because there are no deliveries, life could become uncomfortable, so it is important to take steps in advance to ensure that your family's basic needs will be met.

Stock up on at least 2 weeks worth of non-perishable food and drink, as well as adequate supplies of prescription and non-prescription drugs. Be sure you also have cleaning agents and paper goods (including tissues and toilet paper). Remember, having these items on hand could prove beneficial, not only during a potential pandemic, but also during a natural disaster or other event that causes widespread service interruptions.

<Ask the audience about how often they typically go to the store to meet their everyday needs and about the types of items they purchase most often. Ask whether they have prepared any kind of emergency provisions and what kinds of items (foods, medicines, etc.) they think should be included.>

Also remember: right now, preparations are underway nationwide to help ensure that communities will be able to react effectively in the advent of an H1N1 pandemic. Become involved in these local efforts in your community. Not only will you have a better understanding of what will take place, it will help ensure the maximum safety and welfare of your family.

Caring For a Sick Person in Your Home

- Keep the ill person separated from other family members
- Remind the ill person to practice proper cough and sneeze etiquette
- Designate a single care giver



Given the high levels of H1N1 infection that may occur during the fall and winter months, it is entirely possible that although you may not become ill, someone in your household will. If this occurs, observing the following precautions can help reduce the likelihood that the virus will spread to you or others in your home.

- If possible, keep the ill person in a room that is separate from those used by healthy family members. If this is not feasible, make sure that a distance of at least 6 feet is maintained between ill and healthy individuals, and if tolerable, the ill person should use face masks to reduce the likelihood of disease transmission to other family members.
- Remind the ill individual to practice proper cough and sneeze etiquette by coughing/sneezing into their sleeve, or (preferably) into a disposable tissue and then promptly throwing the tissue away and washing their hands.
- Designate a single care giver – if at all possible, this should not be a person in an “at-risk” group, such as pregnant women. If a member of an at-risk group must act as caregiver, they should wear a facemask or a respirator if tolerable whenever they are within 6 feet of the ill person

Caring For a Sick Person in Your Home

- Clean potentially contaminated surfaces regularly
- Keep household areas well ventilated
- Consider wearing a facemask when within 6 feet of the patient
- Everyone in the household should wash their hands frequently

- Clean surfaces (especially near the bed and in the bathroom) regularly using a household disinfectant. This also includes phones, computer keyboards, TV remote controls, and other commonly shared items.

- Clean bed linens, dishes and utensils as usual. Avoid “hugging” soiled laundry to your chest and do not reuse dishes or utensils without washing them first.

- Remind everyone in the household, whether sick or not, to wash their hands frequently and use disposable towels for drying or use an alcohol-based hand sanitizer.

- If possible, keep household areas well ventilated to reduce the likelihood of airborne transmission

- Garbage containing soiled tissues should be disposed of using gloves!



For More Information

- To find the latest information about H1N1 and seasonal flu, please visit:
 - <http://www.flu.gov>
 - <http://www.cdc.gov/H1N1FLU/>
 - <http://www.who.int/csr/disease/swineflu/en/>
- Or contact your state public health agency. For a complete list, visit:
 - <http://www.cdc.gov/mmwr/international/relres.html>

ATTENTION

- This slide left intentionally left blank. Read and follow instructions provided in the notes section and eliminate this slide before conducting training.

Participation in this training will likely raise a number of questions among employees about how their agency is preparing for H1N1, as well as what's being done to safeguard their health and safety. The following slides highlight a number of issues that merit discussion; replace the bulleted questions contained in each slide with answers specific to your organization's policies and procedures. If your organization has yet to address one or more of the issues identified here, eliminate those bullets (or slides) from the presentation, but be aware that audience members may ask questions related to these subjects.



Agency Policies and Procedures

- How will agency policies continue to evolve in response to new information, guidance, and direction from the CDC, WHO, as well as state/local health departments?
- Where can current information on agency policies and procedures be found?



Employee Hygiene and Protection

- Where are hand washing stations and will hand sanitizing gels be provided?
- What policies and/or engineering controls will be employed to aid employees in distancing themselves from others who are exhibiting flu-like symptoms?
- What is the availability of tissues and/or receptacles for the disposal of soiled tissues?



Cleaning Procedures

- What cleaning procedures are currently in place for all work areas (including vehicles, break rooms, common areas, etc.)?
 - Will these procedures be altered? If so, how?
- Will cleaning supplies be made available to all employees?
 - If so, what will be available and where will it be stored?
 - Are there specific times (i.e. at the beginning of a shift, etc.) you recommend employees clean their work areas?



Sick/Family Leave/Scheduling

- What are your agency's policies regarding employee and family sick leave?
- Will special provisions be put in place during a declared pandemic?
- What are your system's policies regarding extended/altered shifts, and/or sequestering employees at the worksite during a pandemic?

(Remember: These approaches have been identified by the Department of Homeland Security as potentially useful to help ensure continued operations during a major flu event, but it is critically important that employees and unions are aware of such plans, and are given an opportunity to participate in their design.)



Medicinal Safeguards/Interventions

- What are your agency's policies, if any, regarding vaccination?
- Will vaccinations be made available at the worksite or should employees seek them independently?
- Are there types or classes of employees (frontline employees, customer contact employees) who are especially encouraged to get vaccinated?



Medicinal Safeguards/Interventions

- If any exist, what is the availability and dedicated uses of company-stockpiled antiviral medications.
 - Who will receive them?
 - How will they be distributed?
 - Will they be used as treatment? Prophylaxis? Both?
- Are employees expected to obtain antiviral medications from their family physician?
 - If so, will the company provide employees with a form describing their job duties in order to aid their physician in deciding whether to give them prophylactic antiviral medications?



Company Stockpiles

- Will supplies be stockpiled?
- If so, what supplies will be available?
- Where will the stockpile(s) will be located?
- Who will have access to which resources and under what conditions?