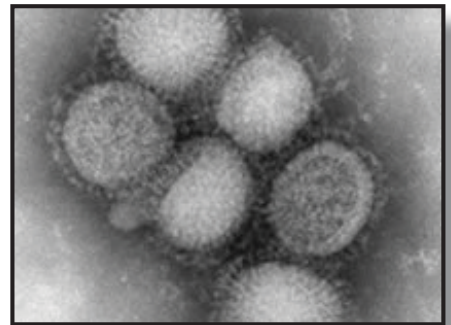




DENTAL PREPARATION FOR THE FLU

By now, you have been seeing a lot of information in the media about preparing for the seasonal influenza season and for the new flu virus, novel influenza A (H1N1). Originally called the swine flu, this new flu bug has already reached pandemic scope in less than six months and has not ebbed in the summer months like our regular seasonal flu. H1N1 does not appear to be any more virulent than the seasonal flu but its

rapid spread means that more people will be exposed, become ill, and go on to develop serious complications, even death. Businesses are being encouraged to prepare for staff shortages of 50% or more and to consider such work options as telecommuting. Unfortunately, dentists cannot telecommute and still treat their patients, so what strategies can we develop specifically in the dental environment for the prevention and control of the flu virus? I would like to share some approaches that my hospital peers are taking and see what we can adapt to dentistry.



H1N1 Influenza Virus
Source: CDC

LEARNING OBJECTIVES

After reading this article, you should:

- **Be aware of new flu vaccination information.**
- **Be able to effectively screen patients and staff for respiratory infections.**
- **Understand the importance of proper use of personal protective equipment.**

Turn to page 81 to take your infection prevention quiz for 1.0 CEU!

Prevention

Hand Hygiene. As always, the number one way to prevent the spread of infection is to **wash your hands**. Both flu viruses can be spread by contact as well as droplet and airborne so wash your hands or use an alcohol hand sanitizer between patient treatment and during regular activities of daily living.

Vaccination. In April of this year in the "Infection Prevention Corner," I presented a good case for Dental Health Care Workers (DHCWs) to have up-to-date immunizations.

The CDC recommendations for DHCWs should be followed. It is not a law but a guideline. Following such guidelines can keep you on the high road and out of trouble. An unvaccinated employee can pose a risk management issue if a vaccine-preventable disease is transmitted to a patient. If there is a vaccine-preventable disease transmission between employees then you have ill employees creating a staffing problem. Most of the recommended immunizations have been given to employees during their childhood so there should be little to do to complete

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INFECTION PREVENTION CORNER CONTINUED

the package. If your employees are missing some vaccinations, then choose to make it your responsibility to correct the situation to decrease your risk. Some of these vaccinations may be covered by the employee's insurance so that will be a help. Pay for the rest. Prevention is always cheaper in the long run. If you email me, I can send you a form that can be used to record an employee's immunization history so you know where you stand (kay@azda.org). This is all part of the employee health package that hospitals do on an ongoing basis.

Unlike the rest of the immunizations recommended for DHCWs, the flu vaccine is required every year so this seems to be more of a challenge to carry out. Many do not see the point of it. The following should change your mind.

Seasonal flu vaccine. Each year, the seasonal influenza vaccine contains influenza virus strains based on forecasts regarding what virus strains are most likely to cause illness in the coming season. The vaccination may prevent you from getting the flu or if it is not entirely effective for the current strain that is being transmitted, it can lessen the severity of the illness.

There are two influenza (flu) vaccines. The "flu shot" is an inactivated vaccine (containing killed virus) given as an injection. You cannot get the flu from the killed virus. There also is a nasal spray flu vaccine that contains weakened live viruses. The use of the nasal spray has limitations that can be explained to you by your physician if you wish to receive it that way.

About two weeks after vaccination, antibodies develop in the body that protect against infection by viruses

similar to those in the vaccine. In the past, these vaccines have been recommended for the following groups: health care workers, immunocompromised patients, and the elderly. This year, CDC's Advisory Committee on Immunization Practices (ACIP) Prevention and Control of Seasonal Influenza with Vaccines includes a recommendation that the annual vaccination be administered to all children aged 6 months to 18 years for the 2009-10 influenza season. Each year approximately 36,000 deaths in the United States are caused by our seasonal influenza.

The CDC, Occupational Safety and Health Administration (OSHA), and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) all strongly recommend annual influenza vaccination for healthcare workers (HCWs), even to the point that the CDC has called for workers who decline seasonal flu shots to sign declination statements. **Now, there are hospitals who are making flu shots mandatory for their HCWs;** the only exception is a medical "dispensation" by a qualified physician. **Those employees who refuse the flu vaccinations will no longer be employed.** This shows how serious the flu can be to compromised patients and the commitment by Infection Preventionists to move to a zero tolerance on this issue. As DHCWs are included in the recommendations that we get the annual flu vaccination, we could apply this strategy to the dental field; e.g.:

NO SHOT... NO JOB!

Novel H1N1 influenza virus. The novel H1N1 virus discovered this spring is not disappearing in the summer months and a vaccine is not available. According to

the World Health Organization (WHO), the number of human cases of pandemic (H1N1) is still increasing substantially in many countries, even in countries that have already been affected for some time. In addition, in most countries the majority of novel H1N1 virus cases are occurring in younger people, with the median age reported to be 12 to 17 years (based on data from Canada, Chile, Japan, UK, and the US). Some reports suggest that persons requiring hospitalization and patients with fatal illness may be slightly older. This is a much different patient population than is usually targeted by our regular flu bug, which preys mainly on the immunocompromised and the elderly.

Do not be lulled by apparently low novel H1N1 virus confirmed cases. After the initial findings regarding this flu, public health officials decided only to test patients who were seriously ill with flu symptoms as resources were being strained to test all cases. You can go to a CDC website and look at case numbers, but they will be artificially low. The fatal cases are being counted but counting all new cases takes too much time away from more essential issues. Because of the rapid evolution into a pandemic, resources are being used for control and for focusing on protection for the higher risk groups. We expect a more severe situation this fall.

As of this writing, we do not have a novel H1N1 vaccine available for distribution. However, the National Institutes of Health (NIH) in Washington, DC, on July 23, asked for volunteers to test a new vaccine early in August for distribution in October of this year. The usual concerns are allergic reactions and

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INFECTION PREVENTION CORNER CONTINUED

difficulties in manufacturing. Even if the vaccine becomes available, there is serious doubt that there will be enough to go around. Certain patient populations would be deemed a priority, probably children, as they seem to be the target population for this virus and are great incubators and spreaders of disease. Pregnant women appear to be more at risk so they will also probably be in the first group to be vaccinated. Let us hope that there is enough vaccine for the high-risk groups.

So what do we do if we cannot be protected by a vaccine?

Control

Airborne Control. In dentistry, we have had very little regulation regarding airborne disease until the CDC included dental facilities in their TB document, "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005." We are now to have baseline TB testing and perhaps further testing depending upon the TB risk in the facility. We know that we should not treat active TB patients. We also know to put a mask on when we are up close and personal when taking radiographs on any patient. Other than that little has been said about the prevention of airborne diseases... **until now.**

Precautions. Arizona Department of Health Services (ADHS) Interim Infection Control Recommendations for HCWs for all patients with a febrile respiratory illness, (i.e., not just suspect or confirmed cases of H1N1) include:

- Practice good hand hygiene (patient and staff)
- Practice good respiratory hygiene (patient and staff)
- Practice standard precautions
 - Treat all body fluids as potentially infectious, including stool
 - Wear gown, gloves, mask and eye protection if there is risk of contact or splash
- Wear surgical mask within 6 feet of a patient with a febrile, respiratory illness
- If conducting aerosol-generating procedures (e.g. endotracheal intubation, cardiopulmonary resuscitation, endotracheal suctioning), wear:
 - N-95 respirator (fit-tested) or PAPR
 - Eye-protection (face shield or goggles; AND
 - Gown and gloves (all persons in the room.)

- Patients with influenza-like illness should be instructed to stay out of school or work for 7 days AND at least 24 hours after symptoms resolve.

How does that relate to dentistry? Because the vast majority of dental procedures generate splatter and aerosol, we should not plan to treat any patient ill with a febrile respiratory disease. [Febrile is defined as fever greater than 100 degrees F or 37.8 degrees C.] We cannot test and determine what disease they have. We do not have special isolation rooms for containment. If nothing else will deter you, think of the cost of the masks. One box of N-95 masks can cost more than a case of surgical masks, that is, if you will be able to get them. Dealing with the new virus this spring, Valley hospitals used large amounts of N-95 masks and found it extremely expensive.

We must screen patients and educate patients and refer them to their physician if they are ill. This should be an ongoing approach for the prevention of transmission of any respiratory illness, flu or not. The hospitals do this every year during RSV and flu season. We can do it too. **Refer to the sign at left.**

Signs and symptoms of novel H1N1 flu virus. The symptoms are similar to the symptoms of seasonal flu and include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, and fatigue.

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VISITOR RESTRICTIONS

**NO VISITORS UNDER THE
AGE OF 16 ALLOWED IN PATIENT
CARE AREAS.
NO PERSONS OF ANY AGE WITH
SYMPTOMS OF FEVER AND FLU
SHOULD VISIT THE HOSPITAL.**

It is RSV (Respiratory Syncytial Virus) and FLU (Influenza) season here, and these viruses are easily spread among people.
We appreciate the cooperation of the community during this cold and flu season.

**OUR PRIMARY CONCERN IS FOR THE HEALTH
AND SAFETY OF OUR PATIENTS**

INFECTION PREVENTION CORNER CONTINUED

A significant number of people who have been infected with this virus also have reported diarrhea and vomiting.

Control Measures for staff and patients:

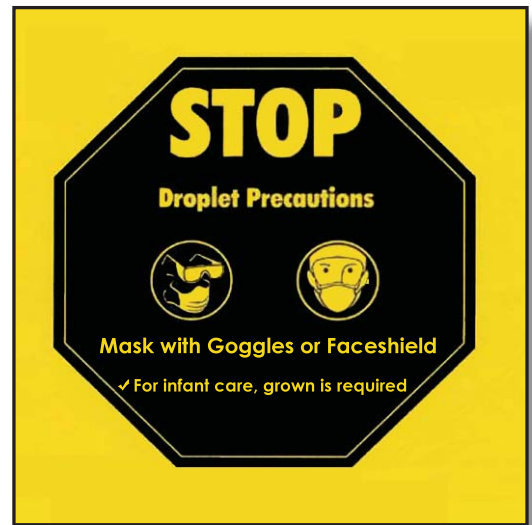
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.
- Avoid touching your eyes, nose, or mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- Stay home if you are sick for 7 days after your symptoms begin or until you have been symptom-free for 24 hours, whichever is longer. This is to keep from infecting others and spreading the virus further.

Patient Education Made Easy. As always, prevention is much easier than dealing with disease exposure.

Educate your patients. When you call to remind patients for their upcoming appointments, review with them the importance of not presenting for appointments when they are ill with a respiratory infection. Many offices now enlist electronic reminders for patients, including e-mails, and this information can easily be conveyed.

Precaution Signs for Staff. Infection prevention personnel in hospitals enlist the use of signs so that HCWs are aware what type of precautions to take with different communicable diseases. Signs with good visuals prompt staff as to the proper protocol, and are posted on patient room doors so they are easy to follow.

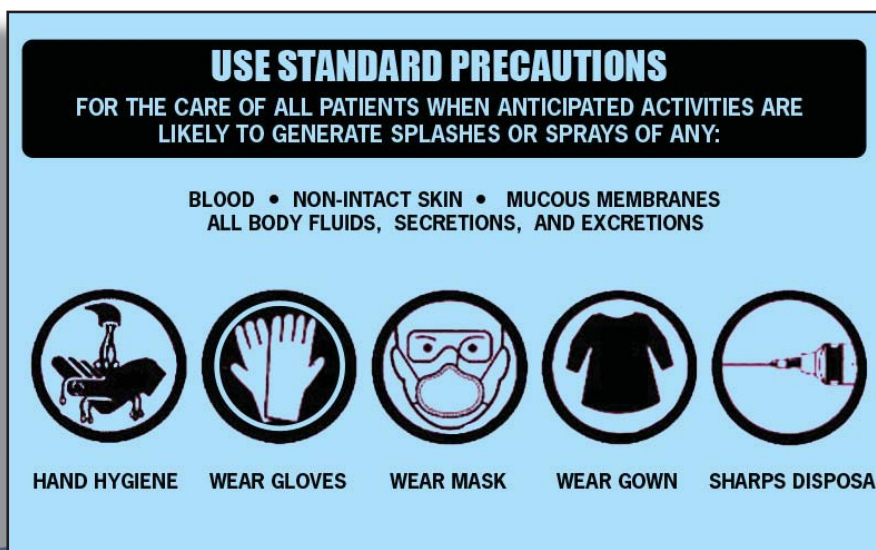
On this page are two signs that we should be following for droplet and standard precautions for all our patients. Notice that hand hygiene is the first precaution listed on the Standard Precautions sign.



“Cover Your Cough” Signs for Patients and Staff. There are four great signs from the CDC that can be posted for staff and patients. They are available both in English and Spanish.

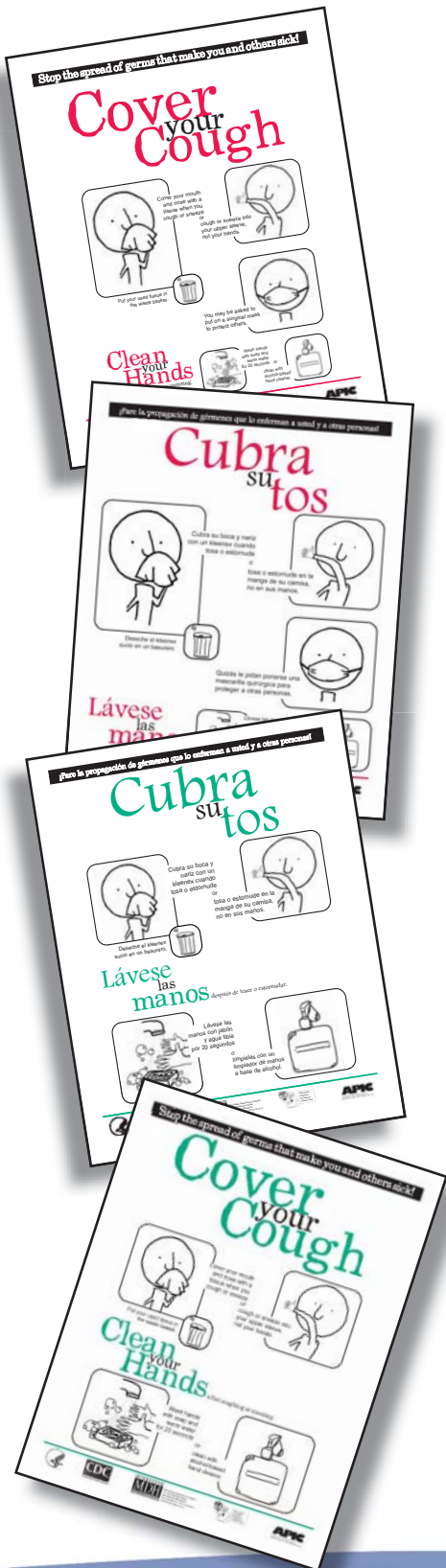
The posters recommend suitable technique to cover your cough. These are great tools to be posted in the back office for employees and the waiting room for patients. [See page 62.](#)

Patients should be taught to understand that they should not present themselves for treatment if they have a respiratory infection. Did I already mention that? Yes, I did.



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INFECTION PREVENTION CORNER CONTINUED



Summary

- Get the seasonal flu shots for yourself and staff
- Get the Novel H1N1 flu shot if it becomes available to you and your staff
- Screen your patients and staff for disease
- Wear personal protective equipment properly
- Teach patients to not present for treatment if they are ill
- Teach patients and staff control measures

Sources

2009 CDC Recommended Adult Immunization Schedule:
<http://www.cdc.gov/mmwr/PDF/wk/mm5753-Immunization.pdf>

Prevention and Control of Seasonal Influenza with Vaccines, Recommendations of the Advisory Committee on Immunization Practices, 2009: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0724a1.htm?s_cid=rr58e0724a1_e

World Health Organization information on Novel H1N1 influenza virus:
<http://www.who.int/csr/disease/swineflu/en/>

Selecting the Viruses in the Influenza (Flu) Vaccine: <http://www.cdc.gov/flu/professionals/vaccination/virusqa.htm>

CDC information on the Novel H1N1 influenza virus:
<http://www.cdc.gov/h1n1flu/>

Arizona Department of Health Services (ADHS) Interim Infection Control Recommendations for HCWs for all patients with a febrile respiratory illness. http://www.azdhs.gov/flu/h1n1/pdfs/providers/h1n1_clinician_guidelines_20090706.pdf

Healthcare English poster:
http://www.cdc.gov/flu/protect/pdf/covercough_hcp8-5x11.pdf

Healthcare Spanish poster:
http://www.cdc.gov/flu/protect/espanol/pdf/covercough_hcp8-5x11span.pdf

Patient English poster:
http://www.cdc.gov/flu/protect/pdf/covercough_school8-5x11.pdf

Patient Spanish poster:
http://www.cdc.gov/flu/protect/espanol/pdf/covercough_school8-5x11-spanish.pdf

Kay Carl is board certified in infection control and epidemiology. She has over 35 years experience in infection control and has worked in collaboration with AzDA since 1991 to provide continuing education in OSHA, infectious diseases and infection control. She is an active member of OSAP, the national dental infection control association, and a prolific contributing author and editor for various industry print and electronic media. Email questions to Kay@azda.org (all inquiries and their sources remain confidential).

Turn to page 81 for your Infection Prevention Corner Quiz to earn 1.0 CEU while supporting the Arizona Dental Foundation.

INFECTION PREVENTION CORNER QUIZ

To Obtain CE Credit

For a score of at least 70% (seven out of ten) you will be issued one hour of CE credit through the Arizona Dental Association. There is a \$20.00 processing fee for each test submitted. A portion of the proceeds will go to the Arizona Dental Foundation. Incomplete tests will not be processed. All tests will be handled confidentially.

AzDA is a Continuing Education Recognition Program (CERP) provider conducted under the auspices of the American Dental Association.



Complete the quiz online at AzDA.org/ce

All major credit cards accepted

With online completion, you receive CE certificate electronically

OR:

Mail with \$20.00 check (do not send cash) payable to

Arizona Dental Foundation
to ADF CE Quiz
3193 N. Drinkwater Blvd.
Scottsdale AZ 85251

OR:

Fax (credit card only) to (480) 344-1442

Questions?

Call (480) 344-5777 or (800) 866-2732



A portion of the proceeds from "Infection Prevention Corner" CE quizzes will go to the Arizona Dental Foundation (ADF) whose mission is keeping Arizona smiling by connecting and mobilizing people and resources to provide education and statewide charitable dentistry to children, elderly and special needs populations. Processing fee is deductible only to the extent allowed by law; consult your tax advisor for details.

- Diarrhea and vomiting may be two of the signs and symptoms of novel H1N1 flu virus.
 - a. true
 - b. false
- The best way to be protected from the season flu virus is to:
 - a. know the signs and symptoms of seasonal flu.
 - b. get vaccinated yearly.
 - c. use proper personal protective equipment.
 - d. screen patients for signs of respiratory illness.
- To protect staff and patients from novel H1N1 flu virus:
 - a. Screen patients for signs of respiratory illness and do not treat.
 - b. Get vaccinated yearly.
 - c. Use proper personal protective equipment.
 - d. All of the above.
 - e. a. and c. only
- The number one way to prevent the spread of infection is by:
 - a. Vaccination
 - b. Personal protective equipment
 - c. Covering your cough
 - d. Hand washing
- The seasonal flu shot contains a live flu virus that can give you the flu.
 - a. true
 - b. false
- Recommendations for screening and educating patients with a febrile respiratory illness can:
 - a. only be used for novel H1N1 flu virus.
 - b. only be used for patients with seasonal flu.
 - c. be used for any patient ill with a febrile respiratory illness.
 - d. none of the above.
- The following are included in Standard Precautions:
 - a. Hand hygiene
 - b. Gloves and mask
 - c. Gown
 - d. All of the above
- The following are to be used for Droplet Precautions (hint -- refer to signs):
 - a. Mask with goggles or mask with face shield
 - b. Apron
 - c. A N-95 fit-tested respirator
 - d. A Powered, Air-Purifying Respirator (PAPR)
- If the novel H1N1 flu virus is making large numbers of the population ill you should:
 - a. close your office.
 - b. screen your patients and staff for disease.
 - c. teach patients and staff control measures.
 - d. b. and c. only
- Currently health officials monitoring the novel H1N1 flu virus are:
 - a. confirming every case by laboratory testing.
 - b. conserving their resources by tracking severe or fatal cases.
 - c. vaccinating all high-risk groups.
 - d. confident that the pandemic is resolving.

Please send my CE certificate: Electronically (must provide email address) By Mail

Your Name _____ ADA # _____ Email _____

Street Address _____ City, State, Zip _____

Payment Method: Check enclosed payable to Arizona Dental Foundation

Credit Card # _____ Exp _____ V-code (required) _____

Cardholder Name _____ Signature _____

Billing Address if different from above _____