PREVENTION, VACCINES HELP PROVIDERS DEAL WITH INFLUENZA VIRUS

IN ONE OF THE WORST FLU SEASONS EVER, DO YOUR STANDING ORDERS MAKE SENSE?

AN E-BOOK BY

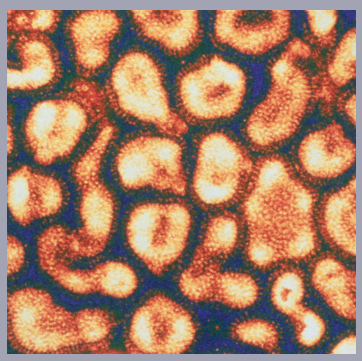
McKnight's

SPONSORED BY

Omnicare®

a CVSHealth company

TABLE OF CONTENTS



INFLUENZA IN LONG-TERM CARE: NEW CHALLENGES, NEW TOOLS

Even in the best of times, getting through a flu season can challenge any long-term care operator. Few would argue that these are the best of times. In fact, this may be the worst flu season we've seen in a decade.

In the pages that follow, we invite you to learn more about why prevention is such an important tool in influenza management — and why high-dose vaccines can be especially effective for your residents.

We hope you will find this e-book helpful as you strive to give residents the best care possible.

Todd King
Pharm.D., CGP, FASCP

Director of Clinical Services
Omnicare, a CVS Health Company

FIGHTING THE FLU: WHY PREVENTION IS YOUR BEST STRATEGY EVEN IN A SEVERE SEASON

By Kimberly Marselas

In Minnesota this winter, where the state Department of Health reported a record 91 buildings affected by flu through mid-January, long-term care facilities are taking plenty of extra anti-flu precautions.

At Westview Services Adult Foster Care there, nurses got creative by packing and distributing gift bags to residents stuffed with healthcare products such as hand sanitizer. They hoped to keep prevention top-of-mind among seniors while stepping up infection control procedures across the facility.

In Cleveland, nursing home staffs across the city were putting out masks, gowns and gloves for visitors. They were also increasing cleaning frequency of common areas and patient rooms, canceling group activities, quarantining residents and restricting visitors as necessary.

This year's flu season is so severe — widespread in all states except Hawaii for the first time in 13 years — that the Centers for Disease Control and Prevention canceled a proposed briefing on nuclear preparedness to talk about the more pressing flu outbreak.

The CDC reported the highest rates of influenza hospitalizations in January were for those aged 65 and older, making precautions so important several members of Congress sounded the warning bell.

"Older adults have the greatest risk for hospitalization due to influenza," said Senator Susan Collins (R-ME). "In this abnormally active flu season, I urge older Americans to practice good health habits and to seek medical attention if displaying any flu-like symptoms."

Last month, weeks ahead of the typical peak, the CDC reported "high" influenza activity in 32 states and Puerto Rico.

Days later, researchers at the University of Maryland School of Public Health published a new study showing that flu virus can be spread more easily than previously thought.

"We found that flu cases contaminated the air around them with infectious virus just by breathing, without coughing or sneezing," said Donald Milton, M.D., professor of environmental health.

It turns out that people in the early stages of flu infection spread tiny, virus-loaded droplets that can stay suspended in the air, he notes. That means the typical standards for prevention — hand washing and surface cleaning — may not offer as much protection as once believed.

In light of that new knowledge, vaccination and quarantine become even more critical pieces of a robust prevention strategy.

VACCINATE RESIDENTS AND STAFF

A 2015 study found alarmingly low flu vaccination rates among nursing home staff, despite the fact that the virus contributes to the decline of more than 7,000 skilled nursing facility residents annually.

Last fall, the CDC reported that 79% of healthcare personnel received the shot during the 2016-2017 flu season, but that rate fell to 68% among long-term care workers.

Encouraging more employees to get a shot can pay off by providing "herd immunity" to protect everyone in a community. It also can boost a community's reputation.

Almost three-fourths of seniors said they'd be less likely to choose a nursing home if they found a large share of its staff wasn't vaccinated against the flu, according to an AARP poll published late last year.

Facilities can offer vaccines for staff early and often, and keep extra on hand for new hires who start work mid-flu season.

Daniel Jernigan, M.D., M.P.H., director of the CDC's Influenza Division, estimated this year's vaccine effectiveness against the H3 viruses is around the 30% range.

CDC Director Brenda Fitzgerald said H3 viruses, this year's most commonly reported, are often linked to more severe illness, especially among children and people age 65 and older, leading to a worse flu season with more hospitalizations and more deaths.

The CDC estimates 71% to 85% of flu cases were in people 65 years or older in recent years. Even if it doesn't prevent an infection, a vaccine can lessen potentially deadly symptoms.

That makes vaccines a key part of any prevention protocol, even when the seasonal match "leaves a lot to be desired," as Jernigan said.

> "WE FOUND THAT FLU CASES CONTAMINATED THE AIR AROUND THEM WITH INFECTIOUS VIRUS JUST BY BREATHING."
>
> DONALD MILTON, M.D., UNIVERSITY OF MARYLAND SCHOOL OF PUBLIC HEALTH

While hand washing may not be enough, it remains essential.

"Our main tool for ongoing prevention should be flu vaccines," he told reporters during a press briefing in January. "And of course, do not forget to take the everyday common-sense behaviors that your mother taught you."

SANITIZE AND STERILIZE

For the University of Maryland's Miller, that means starting with stay-at-home protocols.

"This suggests handwashing alone is not enough," he says of his study.

"The main takeaway is that during the flu season, people who have fever and sore throat whether they have a cough or not should stay away from other people for at least three to four days and until the fever is gone whichever is longer," he adds.

But Miller's lab is constantly handling the flu virus, or people infected with it.

In his labs, he uses germicidal UV light in combination with a fan to kill the virus and is currently studying how CO^2, temperature, humidity and other air quality factors might influence disease transmission.

Long-term care can follow his lead with a variety of products, from portable UV lamps to air purification systems and flu-zapping robots. ■

HIGH-DOSE VACCINES PROVIDE BETTER PROTECTION FOR RESIDENTS

By Kimberly Marselas

It's been nearly 10 years since the first high-dose flu vaccine hit the U.S. market.

It contained four times more virus-blocking hemagglutinin per dose than a standard flu vaccine, but originally came with some extra side effects: injection site reactions and a steeper price tag.

Today, there are at least four high-dose formulations intended for seniors ages 65 and over, and Medicare covers the cost of at least one flu vaccine (regular or high-dose) per resident, per year.

Yet, some long-term care facilities still haven't made high-dose their standard of care.

There's no clinical reason not to switch to high-dose vaccines for people over 65, said Stefan Gravenstein, M.D., Brown University professor of medicine and health services, policy and practice.

"The data for high-dose shots is the best available to indicate specific superiority for this group of people," said Gravenstein, a geriatrician who studies immunity and aging. "Our data suggest that for high dose, the net benefit increases with increasing age and decreasing health."

It's with good reason that Medicare covers these vaccines. CMS reports 9 out of 10 flu-related deaths and 6 out of 10 flu-related hospital stays each year occur among people aged 65 and over.

"Human immune defenses become weaker with age, which places older people at greater risk of severe illness from influenza," the Centers for Disease Control and Prevention reports. "Also, aging decreases the body's ability to have a good immune response after getting influenza vaccine. A higher dose of antigen in the vaccine is supposed to give older people a better immune response, and therefore, better protection against flu."

By delivering four times the amount of antigen (the part of the vaccine that prompts the body to make antibody), the high-dose vaccine helps develop more antibodies and aids cells as they fight off attacks when exposed to flu virus.

Like regular flu vaccines, high-dose versions are also expected to reduce symptoms when patients develop flu due to a poor seasonal vaccine match.

RESEARCH BOOSTS

One study published in the *New England Journal of Medicine* indicated that the high-dose vaccine was 24.2% more effective in

preventing flu in adults 65 years of age and older relative to a standard-dose vaccine.

In a study published last summer in *The Lancet*, Gravenstein compared the effect of the more immunogenic, high-dose trivalent flu vaccine with a standard-dose vaccine in 823 facilities. The randomized trial found that nursing home residents given the high-dose formulation were "significantly" less likely to be admitted to the hospital with respiratory illnesses.

Looking at Medicare claims for a six-month period, the researchers reported 211 per 1,000 residents in those homes given the traditional vaccine were hospitalized for flu-like symptoms. That number fell to 185 per 1,000 among residents who lived in buildings giving the high-dose shot.

"Evidence for other formulations should build by year's end," Gravenstein told *McKnight's* in January. "I can't think of a compelling reason to give anything other than Fluzone High-Dose or Fluad for seniors in general, and if the recommendation is based solely on the strength of the evidence, I'd lean toward high-dose."

Researchers are investigating and testing ways to develop longer-lasting vaccines.

Gravenstein receives funding from Sanofi and Seqirus, but other drug makers have licensed high-dose formulations, including Flublok, a higher dose recombinant vaccine, and Fluad, a lower dose vaccine with added adjuvant that increases antibody response. Neither of those, however, have been thoroughly tested in a long-term care population yet. Gravenstein is working now with a larger research team to compare Fluad to regular vaccines in nursing homes.

For Fluzone High-Dose, the CDC reports the safety profile is similar to that of regular vaccines, although some adverse events — pain, redness and swelling at the injection site or headache and muscle aches — were reported more frequently after vaccination with Fluzone High-Dose.

> "FOR HIGH DOSE, THE NET BENEFIT INCREASES WITH INCREASING AGE AND DECREASING HEALTH."
>
> STEFAN GRAVENSTEIN, M.D., BROWN UNIVERSITY

MOVING FORWARD

Of course, any vaccine is dependent on accurate strain-prediction for true effectiveness.

In calling for a universal flu vaccine, NIH- and WHO-affiliated researchers said in the *New England Journal of Medicine* last month that 80% of viruses circulating during the severe 2014-2015 season differed from the vaccine virus.

That season's effectiveness rate was an estimated 13% against influenza A, likely contributing to the season's substantial morbidity and mortality rate among people over 65.

Even in good years, vaccine effectiveness typically ranges from 40% to 60%.

"Ultimately, a broadly-protected, longer lasting vaccine, one that you would get once or twice in life and it would cover every flu," said Daniel Jernigan, M.D., M.P.H. director of the CDC's Influenza Division. "We'd love to see something like that, but I think it's going to be several years."

Although this year's flu shot does not appear to be an ideal match, CDC officials insist any type offers better protection than not vaccinating.

"While our flu vaccines are far from perfect, they are the best way to prevent getting sick from the flu and it is not too late to get one," then- CDC Director Brenda Fitzgerald, M.D., said during a January press briefing. "Someday, of course, we hope to have a universal flu vaccine, one that attacks all influenza type viruses and provides protection that lasts for years. But until that day arrives, we will continue to improve the vaccines that we have and find ways and tools to help Americans reduce their risk of getting sick." ■

PREPARING FOR FLU SEASON: A YEAR-ROUND TASK IN PROJECT MANAGEMENT

From an Omnicare White Paper

Flu seasons are unpredictable in a number of ways. They can vary from state to state and from season to season. While flu spreads every year, the timing, severity, and length of the season varies from one year to another. Every flu season is different, and influenza infection can affect people differently. Millions of people get the flu every year, thousands of people are hospitalized and thousands or tens of thousands of people die from flu-related causes every year1. The variances from one year to another can make it hard for nursing homes to plan the next flu season.

Preventing transmission of influenza viruses within health care settings, including in long-term care facilities, requires a multi-faceted approach that includes vaccinations, testing, infection control, antiviral treatment of infected patients and chemoprophylaxis.

Because the best way to prevent the flu is by getting vaccinated each year, the first step in the process for nursing home managers is to pre-order influenza vaccine as early in the year as possible. By using the information about the number of doses administered to residents, staff members and to visitors during the 2017-2018 flu season, a facility should be able to predict the number of doses to be pre-ordered. Considerations for the numbers of needed doses should include planned increases in census, increases in staff, visitors and setting a goal that exceeds the number or percentage of persons vaccinated during the previous flu season. Residents should be screened to determine how many and which residents are eligible and wish to receive the vaccine.

Influenza activity often begins to increase in October. Most of the time flu activity peaks between December and February, although activity can last as late as May.

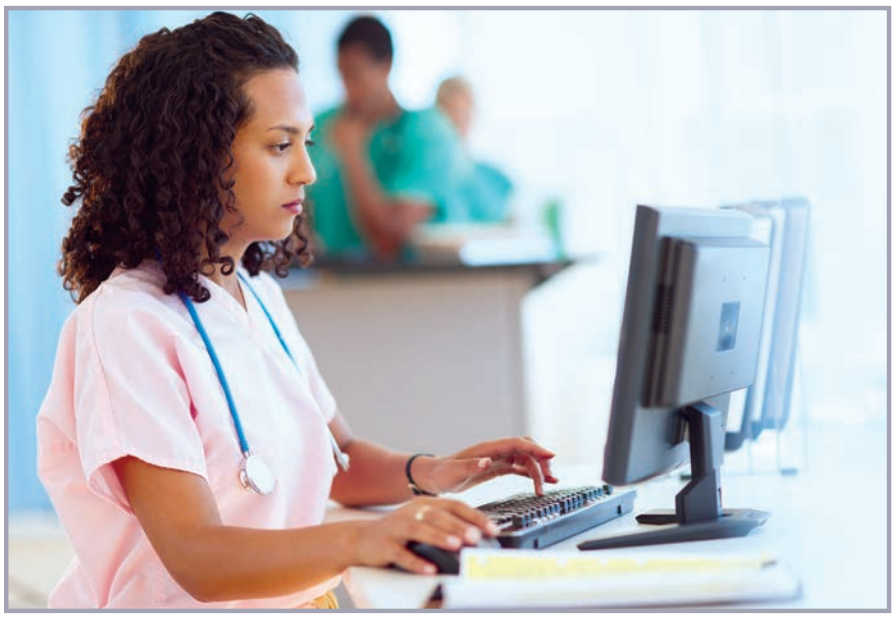
For skilled nursing facilities providing services to Medicaid and Medicare patients, the Centers for Medicare and Medicaid Services (CMS) has addressed influenza immunization in F833 §483.80(d)(1) Influenza. Each facility must develop policies and procedures to ensure that before influenza vaccinations are offered, the resident or his or her representative receives education

regarding the benefits and potential side effects of influenza vaccine and that each resident is offered an influenza immunization October 1 through March 31 annually, unless the immunization is medically contraindicated or the resident has already been immunized during this time period. However, the CDC recommends administering vaccinations as soon as vaccines become available. The regulation goes on to state that the resident or the resident's representative has the opportunity to refuse immunization; and the resident's medical record includes documentation that indicates, at a minimum, that the resident or resident's representative was provided education regarding the benefits and potential side effects of influenza immunization; and that the resident either received the influenza immunization or did not receive the influenza immunization due to medical contraindications or refusal2.

Each facility is required to develop procedures for managing the flu.

THE FIRST STEP IN THE PROCESS FOR NURSING HOME MANAGERS IS TO PRE-ORDER INFLUENZA VACCINE AS EARLY IN THE YEAR AS POSSIBLE.

Vaccination planning activities should include marketing the vaccination program to residents' council, family council, visitors and staff. Administrators and the interdisciplinary care team should develop planning and budgets for vaccination clinics, obtaining physician orders for eligible residents, scheduling extra staff to administer vaccines, ordering extra supplies such as syringes, alcohol swabs, personal protective equipment, sharps containers, adequate cold storage facilities, and the development of educational materials. The CDC's Flu.gov website provides ready-to-use tools and toolkits for long term care facilities and for individual health practitioners. Savvy nursing home managers visit this site for updates on vaccine and antiviral medication availability, weekly flu activity, and outbreak information. Healthcare providers are encouraged to subscribe to receive important flu updates via e-mail from the CDC at *https://www.cdc.gov/flu/resource-center/freeresources/flu-email-updates.htm.* ■



Preventing the spread of flu viruses requires a multi-faceted approach.