CDC Influenza Division Key Points
January 13, 2014

In this document:

Summary Key Messages

- FluView indicates that flu activity is high nationwide and is spreading to other states.
- The number of states reporting widespread geographic influenza went from 25 to 35 this week.
- It's likely that the United States will continue to experience high levels of flu activity for the next several weeks at least. (See the FluView Activity Update below.)
- The predominant virus so far this season is H1N1. This is the H1N1 virus that emerged in 2009 to cause a pandemic. This virus has continued to circulate since the pandemic as a seasonal flu virus.
- Seasonal flu is responsible for severe illness and death every year, but who is most affected each season can vary depending on the predominant circulating virus.
- During the pandemic, younger adults and children, particularly people with chronic medical conditions and pregnant women, were harder hit by H1N1 virus compared with adults aged 65 and older.
- During the pandemic, people who are morbidly obese (BMI of 40 or greater) and Alaska Natives and American Indians also were at higher risk for serious flu complications than other people.
- While it is not possible to predict which influenza viruses will predominate for the entire 2013-2014 influenza season, if H1N1 virus continues to circulate widely, illness that disproportionately affects young and middle-aged adults may occur this season.
- CDC has already received several reports of severe flu illness among young and middle-aged adults, many of whom were infected with the 2009 H1N1 virus. Some hospitalizations and deaths have been reported.
- So far, 61.6% of the reported hospitalizations this season have been in people 18 to 64 years old.

- More commonly, most flu hospitalizations occur in people 65 and older. Usually 50-60% of flu hospitalizations occur in people 65 and older. (See section "Influenza-Related Hospitalizations by Age".)
- Unfortunately, younger adults – especially those who are otherwise healthy – are less likely to get vaccinated.
- Early estimates for this season as of mid-November were that among people 18-49 years, only 31 percent of people in that age group had gotten vaccinated. That is nearly 10% points lower than the national average.
- CDC also is getting reports of serious illness and hospitalizations among pregnant women and people who are obese.
- More than 40% of reported hospitalizations in adults this season have been in those who are obese.
- Among 84 hospitalized women of childbearing age (15-44 years) who were hospitalized, 19 (23%) were pregnant.
- Pregnant women and people who are morbidly obese also were hard hit by the pandemic.
- In fact, it was during the pandemic that morbid obesity was identified as a high risk factor for serious flu complications.
- On December 24, 2013, CDC issued a Health Alert Network (HAN) discussing the recent reports of severe infection associated with 2009 H1N1 virus infection. The Health Update is available at http://emergency.cdc.gov/HAN/han00359.asp.
- These severe flu outcomes are a reminder that flu can be a very serious disease for anyone, including young, previously healthy adults.
- CDC urges people who still have not gotten vaccinated to get vaccinated now.
- All flu vaccines this season are designed to protect against H1N1.
- Vaccination is especially important for people in the most vulnerable groups.
- People at high risk for serious flu complications include: people with underlying chronic medical conditions such as asthma, diabetes, heart disease, or neurological conditions; pregnant women; those younger than 5 years or older than 65 years of age; or anyone with a weakened immune system. A full list of high risk factors is available at http://www.cdc.gov/flu/about/disease/high_risk.htm.
- Also, as always, people who are at high risk for influenza complications should see their health care provider promptly if they get flu symptoms, even if they have been vaccinated this season.
- A health care provider can determine if the patient needs influenza antiviral drugs. Antiviral drugs can treat flu illness and prevent serious flu complications. These drugs

work best when started soon after influenza symptoms begin (within 2 days), but persons with high-risk conditions can benefit even when antiviral treatment is started after the first two days of illness.

- Flu symptoms include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headache, chills and fatigue.
- The 2013-2014 flu vaccine is designed to protect against three or four flu viruses, depending on which vaccine you get.
- While how well the flu vaccine works can vary, CDC recommends a yearly flu vaccination as the first and most important step in protecting against flu and its potentially serious complications.
- Flu vaccination can reduce flu illnesses, doctors' visits, missed work due to flu, as well as prevent flu-related hospitalizations and deaths.
- More than 131 million doses of flu vaccine had been delivered in the United States as of early January with manufacturers projecting total production of 138-145 million doses this season.
- Flu vaccines are offered in many locations, including doctor's offices, clinics, health departments, retail stores, pharmacies, health centers, and by many employers and schools.
- Last week WHO reported the first confirmed case of human infection with avian influenza A (H5N1) virus in North America. Read more about this case in the CDC Flu Spotlight, First Human Avian Influenza A (H5N1) Virus Infection Reported in Americas.

FluView Activity Update

- According to this week's FluView report, overall flu activity continues to be high in the United States with activity continuing to spread to other states. Thirty-five states are now experiencing widespread activity and twenty states are reporting high levels of influenza-like illness (ILI). H1N1 viruses continue to predominate across the country.

- Below is a summary of the key indicators for the week ending January 4, 2014:
    - For the week ending January 4, 2014, the proportion of people seeing their health care provider for ILI decreased, but remains above the national baseline. All ten regions reported ILI activity above their region-specific baseline level. The apparent decrease this week is likely due to differences in care-seeking, testing, and reporting practices over the holidays rather than an actual decline in flu activity.
    - Twenty states experienced high ILI activity, the same number as in the previous week. Seven states and New York City experienced moderate ILI activity. Eleven

states experienced low ILI activity. Twelve states experienced minimal ILI activity. The District of Columbia did not have sufficient data to calculate an activity level. ILI activity data indicate the amount of flu-like illness that is occurring in each state.

- Thirty-five states reported widespread geographic influenza activity. This is up from 25 states that reported widespread activity last week. Guam and 12 states reported regional activity. The District of Columbia, Puerto Rico, and two states reported local activity. Hawaii reported sporadic influenza activity. The U.S. Virgin Islands did not report. Geographic spread data show how many areas within a state or territory are seeing flu activity.
- 2,622 laboratory-confirmed influenza-associated hospitalizations have been reported since October 1, 2013. This translates to a cumulative rate of 9.7 hospitalizations per 100,000 people in the United States.
    - Of the 2,622 influenza-associated hospitalizations that have been reported this season, 61.6% have been in people 18 to 64 years old. More commonly, most flu hospitalizations occur in people 65 and older. This pattern of more hospitalizations among younger people was also seen during the 2009 H1N1 pandemic.
    - Hospitalization data are collected from 13 states and represent approximately 8.5% of the total U.S. population. The number of hospitalizations reported does not reflect the actual total number of influenza-associated hospitalizations in the United States.
- The proportion of deaths attributed to pneumonia and influenza (P&I) based on the 122 Cities Mortality Reporting System increased this week, but remains below the epidemic threshold.
- Four influenza-associated pediatric deaths were reported to CDC during the week ending January 4. Three of the deaths were associated with a 2009 H1N1 virus. The other death was associated with an influenza A virus for which subtyping was not performed. A total of ten influenza-associated pediatric deaths have been reported for the 2013-2014 season at this time. Additional information regarding the 2013-2014 pediatric deaths is available through FluView Interactive.
- Nationally, the percentage of respiratory specimens testing positive for influenza viruses in the United States during the week ending January 4 decreased slightly to 26.2%. During the last three weeks, the regional percentage of respiratory specimens testing positive for influenza viruses ranged from 17% to 42.4%.
- Influenza A (H3N2), 2009 influenza A (H1N1), and influenza B viruses have all been identified in the U.S. this season. To date, influenza A (H1N1) viruses have predominated. This is the H1N1 virus that emerged in 2009 to cause a pandemic. H1N1 viruses have continued to circulate among people since that

time, but this is the first season that the virus has circulated at high levels since the pandemic. During the week ending January 4, 2,421 of the 2,486 influenza-positive tests reported to CDC were influenza A viruses and 65 were influenza B viruses. Of the 1,391 influenza A viruses that were subtyped, 1.4% were H3 viruses and 98.6% were 2009 H1N1 viruses.

- CDC has antigenically characterized 639 influenza viruses, including 572 viruses identified as 2009 H1N1 viruses, 59 influenza A (H3N2) viruses, and 8 influenza B viruses, collected since October 1, 2013.
    - All 572 of the 2009 H1N1 viruses tested were characterized as A/California/7/2009-like. This is the influenza A (H1N1) component of the Northern Hemisphere quadrivalent and trivalent vaccines for the 2013-2014 season.
    - All 59 of the influenza A (H3N2) viruses tested were characterized as Texas/50/2012-like. This is the influenza A (H3N2) component of the Northern Hemisphere quadrivalent and trivalent vaccines for the 2013-2014 season.
    - Three of the eight influenza B viruses tested belonged to the B/Yamagata lineage of viruses, and were characterized as B/Massachusetts/02/2012-like. This is an influenza B component for the 2013-2014 Northern Hemisphere quadrivalent and trivalent influenza vaccines.
    - The five other influenza B viruses belonged to the B/Victoria lineage of viruses, and were characterized as B/Brisbane/60/2008-like. This is the recommended influenza B component of the 2013-2014 Northern Hemisphere *quadrivalent* influenza vaccine.
- Since October 1, 2013, CDC has tested 1,100 2009 H1N1, 76 influenza A (H3N2), and 17 influenza B virus samples for resistance to the neuraminidase inhibitor influenza antiviral drugs. The neuraminidase inhibitors oseltamivir and zanamivir are currently the only recommended influenza antiviral drugs. While the vast majority of the viruses that have been tested are sensitive to oseltamivir and zanamivir, three additional 2009 H1N1 viruses proved resistant to oseltamivir during the week ending January 4. So far this season 13 (1.2%) 2009 H1N1 viruses have shown resistance to oseltamivir. No viruses have shown resistance to zanamivir.
    - As in recent past seasons, high levels of resistance to the adamantanes (amantadine and rimantadine) continue to persist among 2009 H1N1 and influenza A (H3N2) viruses. Adamantanes are not effective against influenza B viruses. Adamantanes are not recommended for use against influenza this season.
- FluView is available – and past issues are archived – on the CDC website.

Notes: Delays in reporting may mean that data changes over time. The most up to date data for all weeks during the 2013-2014 season can be found on the current FluView.

Flu Vaccine Options

- There are several flu vaccine options available for the 2013-2014 flu season. Traditional flu vaccines made to protect against three different flu viruses (called "trivalent" vaccines) are available this season. In addition, flu vaccines made to protect against four different flu viruses (called "quadrivalent" vaccines) also are available.
- With regard to trivalent vaccine, in addition to the traditional seasonal flu shot available for people 6 months and older, an egg-free flu shot is available for people 18 through 49 years of age, a high dose flu shot is available for people 65 and older, and an intradermal flu shot is approved for people 18 to 64 years of age.
- Regarding the quadrivalent vaccine, standard dose nasal spray vaccines are available for healthy, non-pregnant people 2 through 49 years of age; standard dose flu shots also are available.

Influenza Antiviral Supply

- Influenza antiviral drugs are commercially manufactured and supplies of these drugs are dependent upon those commercial manufacturers.
- The Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) work with manufacturers to assess influenza antiviral supply issues on an ongoing basis.
- On January 6, 2014, FDA posted a notice on its Drug Shortages page about Oseltamivir Phosphate (Tamiflu) Oral Suspension (which is one of the pediatric formulations) at http://www.fda.gov/Drugs/DrugSafety/DrugShortages/ucm314742.htm#oseltamivir.
- According to the manufacturer, temporary delays in manufacturing of Tamiflu Oral suspension will result in brief shortage of Tamiflu Oral Suspension during early to mid-January.
- However, pediatric doses of Tamiflu capsules remain available AND sufficient supplies of 75mg capsules are available and can be used to compound suspension.
- Instructions for how pharmacists can compound the adult formulation into a pediatric dose are available at http://www.tamiflu.com/hcp/resources/hcp_resources_pharmacists.jsp.

- Additionally, it's possible that some pharmacies may not carry antiviral drugs or in places with elevated influenza activity, locating influenza antiviral drugs may be more difficult.
- Patients who have been prescribed an influenza antiviral drug by their health care provider may need to call more than one pharmacy to fill their prescription.
- If the exact prescribed formulation cannot be located, patients should consult with their physician or pharmacist for additional options.
- CDC and FDA will continue to work with manufacturers on influenza antiviral supply issues this season.

Oseltamivir-Resistant Influenza Viruses

- Influenza viruses can sometimes develop resistance to antiviral medications.
- Antiviral resistance means that a virus has changed in such a way that the antiviral drug is less effective in treating or preventing illnesses caused by the virus.
- Influenza viruses constantly change as the virus makes copies of itself. Some changes can result in the viruses being resistant to one or more of the antiviral drugs that are used to treat or prevent influenza.
- Resistance of influenza A viruses to antiviral drugs can occur spontaneously or emerge during the course of antiviral treatment.
- Antiviral resistance is detected through laboratory testing.
- CDC reports specimens collected and tested through national surveillance as well as additional specimens tested at public health laboratories who share testing results with CDC.
- For the week ending January 4, 2014 (week 1), three oseltamivir-resistant 2009 H1N1 viruses were reported, bringing the total number of oseltamivir-resistant viruses to 13 for this season.
- While each report of antiviral drug resistance is concerning, these reports are not unexpected; further, the proportion of non-resistant 2009 H1N1 viruses among all tested 2009 H1N1 viruses (1.2%) is not unusual and is comparable to recent past seasons.
- The majority of 2009 H1N1 viruses circulating in the United States remain susceptible to both of the neuraminidase inhibitor antiviral medications, oseltamivir and zanamivir. No viruses have shown resistance to zanamivir.

- Oseltamivir-resistant viruses often have a single known substitution in the neuraminidase protein of the virus (H275Y) that seems to confer oseltamivir resistance. The resistant viruses reported during week 1 have this substitution.
- CDC and state and local partners will continue to watch influenza viruses closely for possible emerging patterns of antiviral resistance in addition to watching for antigenic changes.
- Two FDA-approved influenza antiviral medications are recommended for use in the United States during the 2013-2014 influenza season: oseltamivir (Tamiflu®) and zanamivir (Relenza®). More information about antiviral drug resistance can be found at http://www.cdc.gov/flu/about/qa/antiviralresistance.htm and http://www.cdc.gov/flu/antivirals/index.htm.
- Information on the monitoring of antiviral resistance of influenza viruses to oseltamivir and zanamivir is updated weekly in the CDC FluView surveillance report, which is available at: http://www.cdc.gov/flu/weekly/.

Influenza-Associated Pediatric Deaths

- Four pediatric deaths were reported to CDC during the week ending January 4, 2014 (Week 1). A total of 10 influenza-related pediatric deaths have been reported for the 2013-2014 season at this time.
- Additional information regarding these deaths is now available through FluView Interactive.
- A pediatric death is a death in a person who is a U.S. resident and younger than 18 years old from an illness associated with infection with an influenza virus.
- During the 2012-2013 influenza season, a total of 171 influenza-associated pediatric deaths were reported to CDC.
- A review of the available pediatric death reports from the 2012-2013 season indicates that:
    - Of the 164 deaths in which the child's medical history was known, 55% occurred in children who had underlying medical conditions that placed them at high risk of developing serious flu-associated complications. However, 45% had no recognized underlying health problems.
    - The proportions of pediatric deaths that occurred in unvaccinated children and among children with underlying medical conditions that placed them at high risk from flu complications are largely consistent with what has been seen in the past.

- Since 2004, when flu-associated pediatric deaths became a nationally notifiable condition, the number of deaths reported to CDC each season has ranged from 35 (2011-2012 season) to 171 (2012-2013 season).
- During the 2009 H1N1 pandemic — April 15, 2009 to October 2, 2010 — 348 pediatric deaths were reported to CDC.
- These deaths are a somber reminder of the danger flu poses to children.
- The single best way to protect children against seasonal flu and its potential severe consequences is to have them receive a seasonal flu vaccine each year.
- Among children, vaccination is especially important for those younger than 5 years of age and those of any age with an underlying medical condition like asthma; a neurological, neuromuscular or neurodevelopmental disorder; or immune suppression. These children are at higher risk of serious complications if they get the flu.
- Yearly vaccination also is especially important for people who come in contact with high risk children in order to protect the child (or children) from the flu.
- Even previously healthy children can become seriously ill if they get the flu. Laboratory-confirmed influenza hospitalization data reported during the 2012-2013 flu season indicated that approximately 47% of children hospitalized with the flu had no identified underlying medical conditions.
- Flu-associated deaths in children younger than 18 years old should be reported through the Influenza-Associated Pediatric Mortality Surveillance System. The number of flu-associated deaths among children reported during the 2013-2014 flu season will be updated each week and can be found at http://www.cdc.gov/flu/weekly/.
- Additional information about the pediatric deaths, including basic demographics, underlying conditions and week and place of death, for the 2013-2014 season as well as past influenza seasons, is available through the Influenza Associated Pediatric Mortality application of FluView Interactive at http://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html.

2009 H1N1 Influenza in Specific Groups

2009 H1N1 Influenza in Pregnant Women

- Pregnant women up to two weeks post-partum are at an increased risk of developing severe flu-related complications compared with women who are not pregnant.
- These complications can adversely affect mothers and babies and can lead to preterm labor, and in some cases, hospitalization and death.

- It is particularly important for pregnant women to be vigilant about protecting themselves against flu during seasons such as this when H1N1 influenza viruses predominate, as the 2009 H1N1 pandemic was particularly harsh for pregnant women.
- The current H1N1 virus emerged in 2009 to trigger a pandemic and continues to circulate. So far it is the most common flu virus in the United States this season. During the pandemic, pregnant women, were highly impacted.
- Four percent of 2009 H1N1-related deaths during the pandemic occurred in pregnant women and six percent of reported hospitalizations were in pregnant women.
- Data from one study conducted in the early months of the 2009 H1N1 pandemic show that pregnant women were 4 times more likely than the general population to be hospitalized as a result of 2009 H1N1 virus infection.
- CDC has already received reports of flu hospitalizations and deaths in pregnant women with influenza virus infection this season.
- At this time, 22% of reported flu hospitalizations among women of childbearing age (15 to 44 years) have occurred in pregnant women.
- Pregnant women who have not gotten a flu shot yet this season, should get one immediately.
- A flu shot is the best way to help protect pregnant women from flu and its serious complications.
- A recent study using data from the 2010-2011 and 2011-2012 flu seasons showed that getting a flu vaccine reduced a pregnant woman's risk of illness from influenza viruses by half.
- The flu shot has been safely given to millions of pregnant women over many years. (Pregnant women should only receive the flu shot, not the nasal spray vaccine.)
- If a pregnant woman suspects she is sick with flu (even if she got vaccinated), she should seek medical care immediately.
- There are prescription drugs that can treat influenza infection.
- A doctor may prescribe antiviral drugs to help treat flu illness. More information about antiviral drugs is available at http://www.cdc.gov/flu/antivirals/index.htm.
- For more information about pregnancy and flu, visit http://www.cdc.gov/flu/protect/vaccine/pregnant.htm.

2009 H1N1 Influenza in People Who are Morbidly Obese

- Obesity – particularly morbid obesity – is a risk factor that places people at higher risk of serious complications from flu. This season an H1N1 influenza virus is the most

common flu virus spreading and causing illness in people. This H1N1 virus – although now considered a seasonal flu virus – is the same flu virus that caused the 2009 pandemic. During the 2009 H1N1 pandemic, public health researchers observed that people who were morbidly obese were at higher risk of hospitalization or death. (For more information, see the "Background" section).

- Because this same H1N1 virus is spreading and causing illness this season, people who are obese – particularly morbidly obese – may be at higher risk of hospitalization and death this season compared with those who aren't morbidly obese, even if they do not have any other previously recognized high-risk condition.

- In fact, based on cumulative hospitalization data reported so far to CDC this season, 47% of adults hospitalized with flu have been obese and 15% of children hospitalized with flu have been obese (data is as of Jan 4, 2014). For more information, see FluView Interactive: http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

- "Obesity" and "morbid obesity" are defined based on the body mass index (BMI). BMI is a measure of body fat based on a person's height and weight.

    - "Obesity" is defined as a BMI greater than or equal to 30 kilos per meter squared.

    - "Morbid obesity" is defined as a BMI greater than or equal to 40 kilos per meter squared.

- Because morbid obesity places people at high risk of serious flu-related complications and because of the precedent that this particular H1N1 virus has for impacting obese people, it is particularly important that people who are obese – and particularly morbidly obese – get a seasonal flu vaccination. This season's flu vaccine protects against the H1N1 virus. Getting a seasonal flu vaccine is the most important step people can take to prevent flu and its complications.

- If you are obese or morbidly obese and you do develop flu illness, seek medical care right away.

- Your doctor may choose to treat you with prescription medications called "antiviral drugs" that can be used to treat flu illness.

- Antiviral drugs are prescription medicines (pills, liquid or an inhaled powder) that fight against the flu in your body. Antiviral drugs are different from antibiotics, which fight against bacterial infections.

- When used for treatment, antiviral drugs can lessen symptoms and shorten the time you are sick by one or two days. Antiviral medications also can prevent serious flu complications, like pneumonia. For people with a high-risk medical condition,

treatment with an antiviral drug can mean the difference between having milder illness stead of a very serious illness that could result in a hospital stay.

- For more information on flu antiviral medications, see http://www.cdc.gov/flu/antivirals/index.htm.

Background

- When the 2009 H1N1 virus (also known as "H1N1pdm" virus) first emerged in spring 2009, early reports from the United States and internationally suggested that obesity was more frequently reported among people hospitalized with 2009 H1N1 disease or among people who died following 2009 H1N1 infection.
- Prior to the 2009 H1N1 pandemic, neither obesity nor morbid obesity were considered independent risk factors that placed a person at higher risk for serious flu-related complications.
- However, studies conducted during the pandemic provided data that showed that obesity – and in particular – morbid obesity were associated with increased 2009-H1N1 associated hospitalizations and deaths compared to people of normal weight. (Note: The studies associated with obesity and morbid obesity as a risk factor for serious flu-related 2009 H1N1 complications are available in the ACIP recommendations.)
- As a result, CDC's Advisory Committee on Immunization Practices (ACIP) added morbid obesity to its list of risk factors associated with serious flu-related complications. The full list of these high-risk factors is available from the CDC website here: http://www.cdc.gov/flu/about/disease/high_risk.htm.

Influenza-Associated Hospitalizations by Age

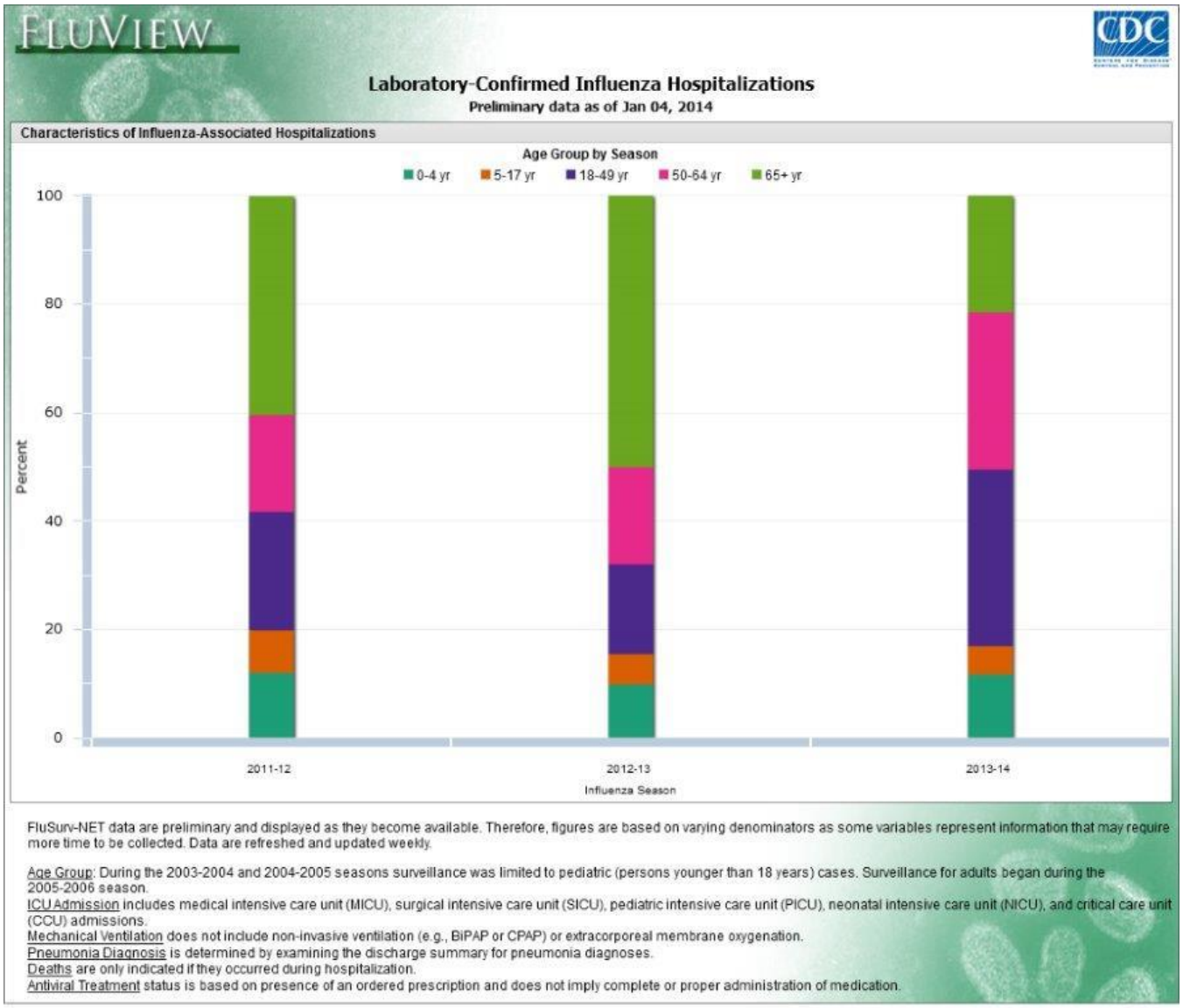
- Seasonal flu is responsible for thousands of hospitalizations every year.
- Flu is often harder on older adults, relative to young healthy adults, but every season is different.
    - For example, based on surveillance data, over the course of the 2012-2013 flu season 50.1% of hospitalizations occurred in adults 65 years and older (and 34.5% had occurred in adults 18-64 years).
    - Over the course of the 2011-2012 flu season, 40.4% of the reported hospitalizations occurred in adults 65 years and older (39.7% had occurred in adults 18-64 years).

- This season, a pattern of hospitalization that is similar to what was seen during the 2009 H1N1 pandemic has started to emerge. During the pandemic, younger people had more flu-related hospitalizations for severe illness than did older adults.
- To date this season, 61.6% of the reported hospitalizations have been in people 18 to 64 years old, while 21.6% of hospitalizations have occurred in adults 65 years and older.
    - Among all hospitalizations, 32.6% have been in adults 18-49 and 28.9% have been in adults 50-64.
- There are many factors that may contribute to this observed pattern of hospitalization across age groups.
- Those factors include the fact that 2009 H1N1 viruses have been more common this year than in recent seasons since the pandemic.
- Flu viruses circulate at different levels, and often one virus will predominate (be more common) for all or part of a season. Who is most affected each season can vary depending on the predominant circulating virus.
- This season, 2009 H1N1 viruses (which have circulated each year since the 2009 pandemic as seasonal flu viruses) have predominated nationally and caused the majority of severe illness.
- During the 2011-2012 and 2012-2013 seasons, influenza A (H3N2) influenza viruses predominated.
- Another factor is vaccination status. Early estimates for this season as of mid-November were that among people 18-49 years, only 31 percent of people in that age group had gotten vaccinated. That is nearly 10% points lower than the national average.
- Unfortunately, younger adults – especially those who are otherwise healthy – are less likely to get vaccinated.
- This season, as in past seasons, so far the majority of adults (86.3%) and 57% of children hospitalized with flu have had a medical condition that puts them at high risk for flu-related complications.
- Influenza takes a toll every season on people who are at high risk for serious flu complications.
- People at high risk for serious flu complications include: people with underlying chronic medical conditions such as morbid obesity, asthma, diabetes, heart disease, or neurological conditions; pregnant women; those younger than 5 years or older than 65

years of age; and anyone with a weakened immune system. A full list of high risk factors is available at http://www.cdc.gov/flu/about/disease/high_risk.htm.

- So far this season, more than 40% of hospitalizations among adults have been in adults who are obese.
- Among the 84 women of childbearing age (15-44 years) who have been hospitalized with flu, 19 (23%) were pregnant.
- Pregnant women and people who were morbidly obese were hit hard by the pandemic.
- In fact, it was during the pandemic that morbid obesity was identified as a high risk factor for serious flu complications.
- CDC recommends that everyone aged 6 months and older get a flu vaccine each season.
- It's important to note that even otherwise healthy people can get very sick from flu and end up in the hospital.
- People who are at high risk for influenza complications should see their health care provider promptly if they get flu symptoms, even if they have been vaccinated this season.

Image: Laboratory-Confirmed Influenza Hospitalizations: 2011-2014



Source. CDC. This graph is available for download at http://gis.cdc.gov/grasp/fluview/FluHospChars.html.