A Healthy Missouri, Influenza Basics

2020-2021

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Highly Infectious Viral Illness

- 1580 – first pandemic
- 19th Century – at least four pandemics
- 20th Century - three pandemics
- 1933 – first virus pandemic
- 2009 – H1N1
Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2017-2021 Influenza Seasons

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal. Population data from Missouri Census Data Center 2017 (https://census.missouri.edu).
Impact of Influenza

- Influenza deaths vary by:
  - Year
  - Virus type and subtype
  - Age group
- Between 2010 and 2017 an average of 37,877 annual deaths
- Persons 65+ account for 80% of deaths
Impact of Influenza

• Complications and hospitalizations high among:
  • Persons 65+
  • Young children
  • Persons with underlying medical conditions
• 2015-2016 flu season – 310,000 people hospitalized
TABLE 1. Age-adjusted Influenza-related Hospitalizations by Race/Ethnicity (2009-2010 through 2018-2019)*

Age-adjusted influenza-associated hospitalization rates by race and ethnicity — FluSurv-NET, 2009-10 through 2018-19

<table>
<thead>
<tr>
<th>Race and Ethnicity</th>
<th>Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic Black</td>
<td>68.1</td>
</tr>
<tr>
<td>Non-Hispanic American Indian or Alaska Native</td>
<td>47.5</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>44.0</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>38.3</td>
</tr>
<tr>
<td>Non-Hispanic Asian or Pacific Islander</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Health Disparities
Influenza Vaccine
4.4 million flu cases prevented in 2018–2019 due to flu shots. Fewer doctor visits, less $ on copays.

The flu vaccine can reduce your and your family’s risk of hospitalization.

- Flu related pediatric intensive care unit (PICU) admission: Risk reduced by 74%.
- Flu related ICU visits by adults: Risk reduced by 82%.
- Flu associated hospitalizations among pregnant women: Risk reduced by 40%.
- Flu associated hospitalizations among older adults and elderly: Risk reduced by 40%.

*Percentages provided by the CDC.*
Vaccine Recommendations
Vaccine Recommendations
Can a flu vaccine give you flu?

NOPE
During the pandemic, it is more important than ever to get the flu shot. Here are three important reasons why:

1. To reduce the overall burden of respiratory illnesses
2. To protect vulnerable populations at risk of severe illness
3. To reduce the burden on the healthcare system and other critical infrastructures

There’s no better time than now to get the flu vaccine!
COVID-19 Versus The Flu

- Flu + COVID-19 infections possible
- Treatments for severe COVID-19 might be harmful for influenza patients
- Surveillance is tricky
- Simultaneous testing process for flu and COVID-19 needed
- ICU and ventilator capacity concerns for COVID-19 high incidence states

Source: https://jamanetwork.com/journals/jama/fullarticle/2769835
## Healthcare System Burden

### Healthcare System Capacity

To enhance the viewability of this chart, scroll down or click the "expand" button at the upper right of this window.

**Current Status:** YELLOW

Each hospital in Boone County will provide a daily report of either green status, yellow status, or red status. The various colored status designations are defined by the following:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Operating within licensed bed capacity, accepting patient transfers from referring hospitals within standard care operating procedures.</td>
</tr>
</tbody>
</table>
| Yellow | Operating within standard capacity and meeting any of the following criteria:  
- Delaying non-emergency patient transfers from referring hospitals due to capacity for greater than two (2) days, or  
- Delaying non-emergency patient transfers from referring hospitals due to staffing for greater than two (2) consecutive days, or  
- Delaying non-urgent procedures and operations to provide additional inpatient capacity |
| Red   | Expansion of care for patients above and beyond standard capacity, diversion or delays from own Emergency Department due to staffing or capacity at any time for greater than two (2) consecutive days. |

The Info Hub will report:

- **Green** status if no more than one hospital reports yellow, and no hospitals report red;
- **Yellow** status if two hospitals report yellow, or one hospital reports red;
- **Red** status if two or more hospitals report red;

### Figure 6. Percent ICU Availability vs. Percent Ventilator Availability

<table>
<thead>
<tr>
<th>Bed Totals - ICU</th>
<th>Bed Availability - ICU</th>
<th>Ventilator Totals</th>
<th>Ventilator Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>497</td>
<td>264</td>
<td>185</td>
<td>112</td>
</tr>
</tbody>
</table>
What Can You Do?

**Take 3 Actions to Fight the Flu**

- **Get Yourself and Your Family Vaccinated!**
  - A yearly flu vaccine is the first and most important step in protecting against flu viruses.
  - Everyone 6 months or older should get an annual flu vaccine. Protect Yourself. Protect Your Family. Get Vaccinated! Fight the Flu.

- **Stop the Spread**
  - Take everyday preventive actions to help stop the spread of flu viruses.
  - Avoid close contact with sick people, avoid touching your eyes, nose, and mouth, cover your coughs and sneezes, wash your hands often with soap and water.

- **Ask Your Doctor About Flu Antivirals**
  - Take antiviral drugs if your doctor prescribes them!
  - Antiviral drugs can be used to treat flu illness and can make illness milder and shorten the time you are sick.

**Know the Symptoms of Flu**

- Flu viruses can cause mild to severe illness, and at times can lead to death. The Flu is different from a cold. The Flu usually comes on suddenly.
- People who have flu often feel some or all of these symptoms: Fever* or feeling feverish/chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue (tiredness). Some people may have vomiting and diarrhea. This is more common in children.
- *It's important to note that not everyone with flu will have a fever.

**Take Antiviral Drugs if Your Doctor Prescribes Them!**

- Antiviral drugs can be used to treat flu illness. Antiviral drugs can make illness milder and shorten the time you are sick. They also can prevent serious flu complications.
- CDC recommends that antiviral drugs be used early to treat people who are very sick with the flu and people who get flu symptoms on or after the 2nd day after they get a flu shot. Stay home for at least 24 hours after your fever is gone enough to get medical care or for other necessities.

**Stay Home When Sick**

- When you are sick, limit contact with others as much as possible. Remember to cover your nose and mouth with a tissue when you cough or sneeze. Wash your hands often with soap and water. Stay home for at least 24 hours after your fever is gone enough to get medical care or for other necessities.

www.cdc.gov/flu/takingcare.htm

#FIGHTFLU
Receiving Flu Shot, % by County

CLS 2016

- 60.98 - 72.22
- 56.80 - 60.97
- 52.90 - 56.79
- 36.69 - 52.89
Ways to Support Vaccine Efforts

- Reminder system utilization
- Combining multi-system interventions
- MU CARES Immunization Report
- Social media posts
- Local testimonials
Influenza is bad
Influenza + COVID-19 is very bad
Influenza is preventable
You can help!
It is especially important for children to get flu vaccine during the COVID pandemic.

Yet only 1 in 3 parents believe getting flu vaccine is more important this year.
Questions

- Rob Kallenbach, Associate Dean of CAFNR Extension and Senior Program Director of Agriculture and Environment Extension
- Kathleen Quinn, Associate Dean for Rural Health/Senior Program Director for Health and Safety
- Lynelle Phillips, Extension Nurse Specialist
- Nicole Cope, Interim Executive Director, Missouri Immunization Coalition