

# Pediatric Influenza update

Kathleen Winter, PhD, MPH

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KENTUCKY CABINET FOR  
HEALTH AND FAMILY SERVICES



**Kentucky Public Health**  
Prevent. Promote. Protect.

# Pediatric Influenza Deaths

- 🛡️ Six Kentucky children have died from influenza since late November.
  - Includes 3 in past week
- 🛡️ This equals the most pediatric flu deaths ever reported in a single flu season (2019-2020).
- 🛡️ All six were old enough to be vaccinated against influenza but none had record of a vaccine for this current flu season.
- 🛡️ Several were school-aged. Most did not have underlying risk factors.
- 🛡️ Several were co-infected with other respiratory illnesses, including RSV and group A streptococcus (group A strep).

# Group A Strep

- 🛡️ Group A strep (GAS) causes a variety of infections in children and adults.
  - Strep throat, scarlet fever, necrotizing fasciitis, toxic shock syndrome (TSS)
- 🛡️ Some states, including [Colorado](#) and [Minnesota](#), have reported recent increases in pediatric hospitalizations caused by group A strep.
- 🛡️ Increases in invasive group A strep (iGAS) have also been reported in children under age 10 years in several [European countries](#).
- 🛡️ [CDC is investigating](#) a possible increase in iGAS in the U.S.
- 🛡️ KDPH is requesting that children with severe iGAS infections be reported to public health.
  - Reminder: Streptococcal toxic shock, lab-confirmed influenza, and influenza-associated mortality (all ages) are already routinely reportable in KY.

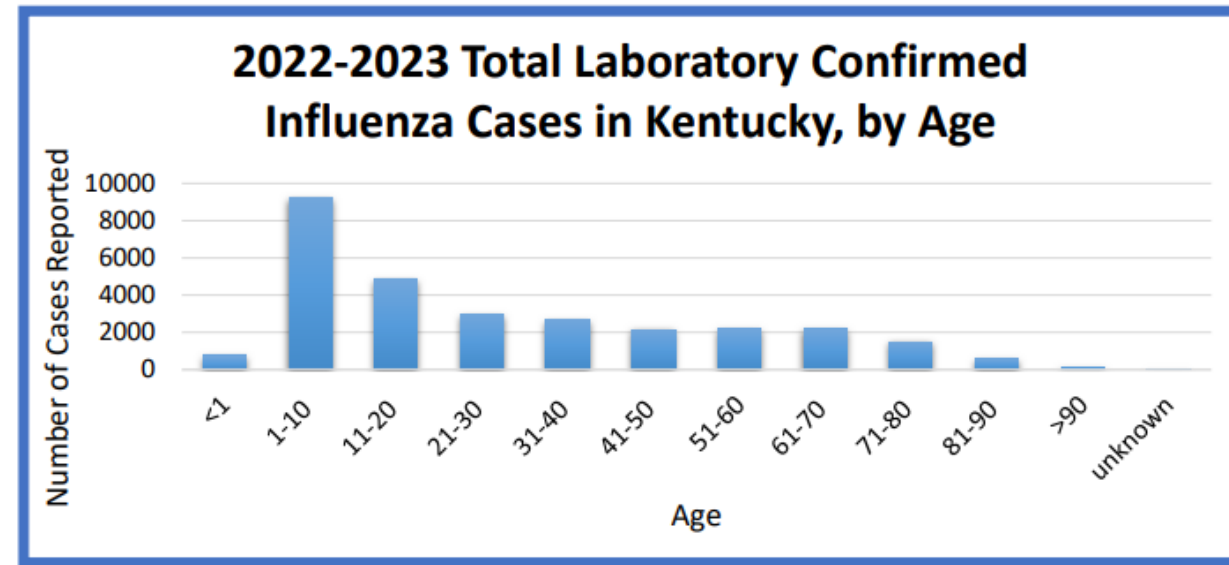
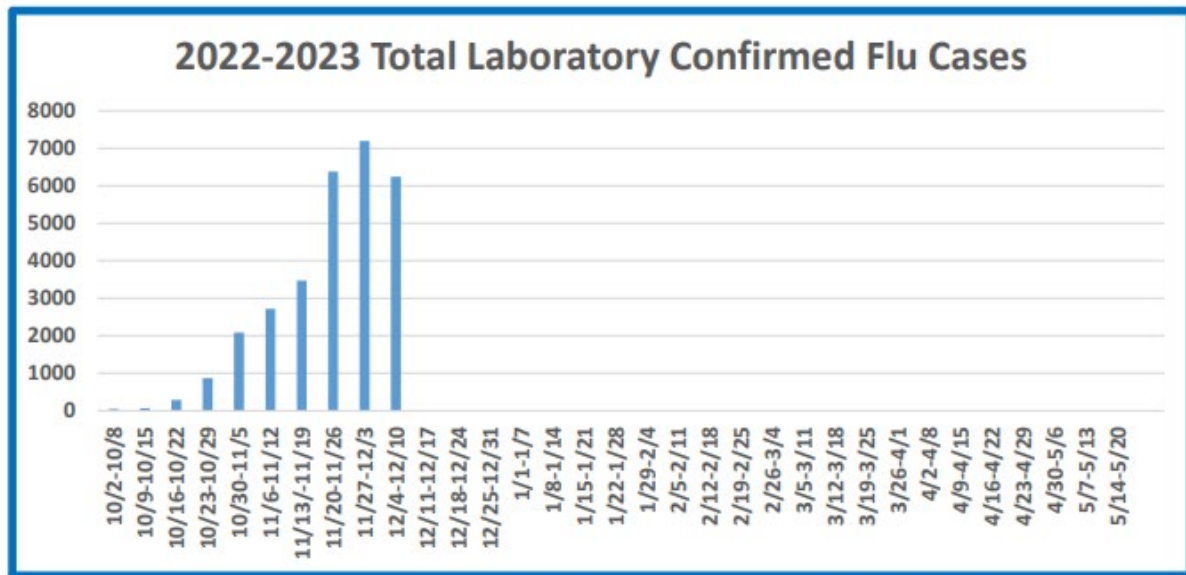
# Amoxicillin Shortage

- Earlier this fall, [FDA announced a shortage](#) of amoxicillin oral powder for suspension.
- [AAP recommendations](#) for alternatives during current amoxicillin shortage.

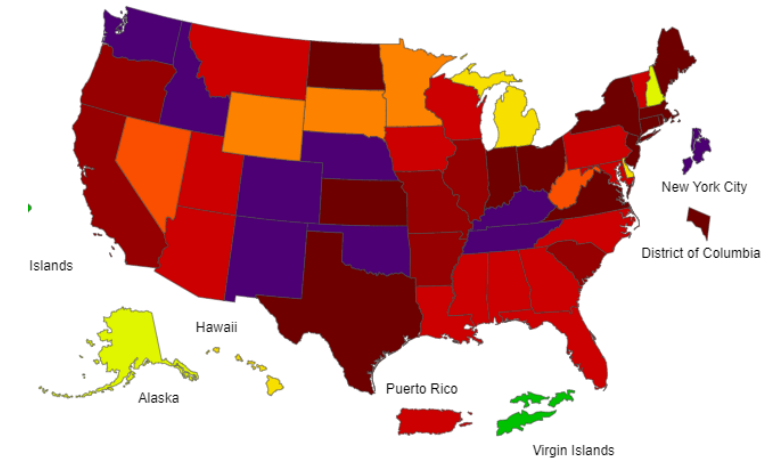
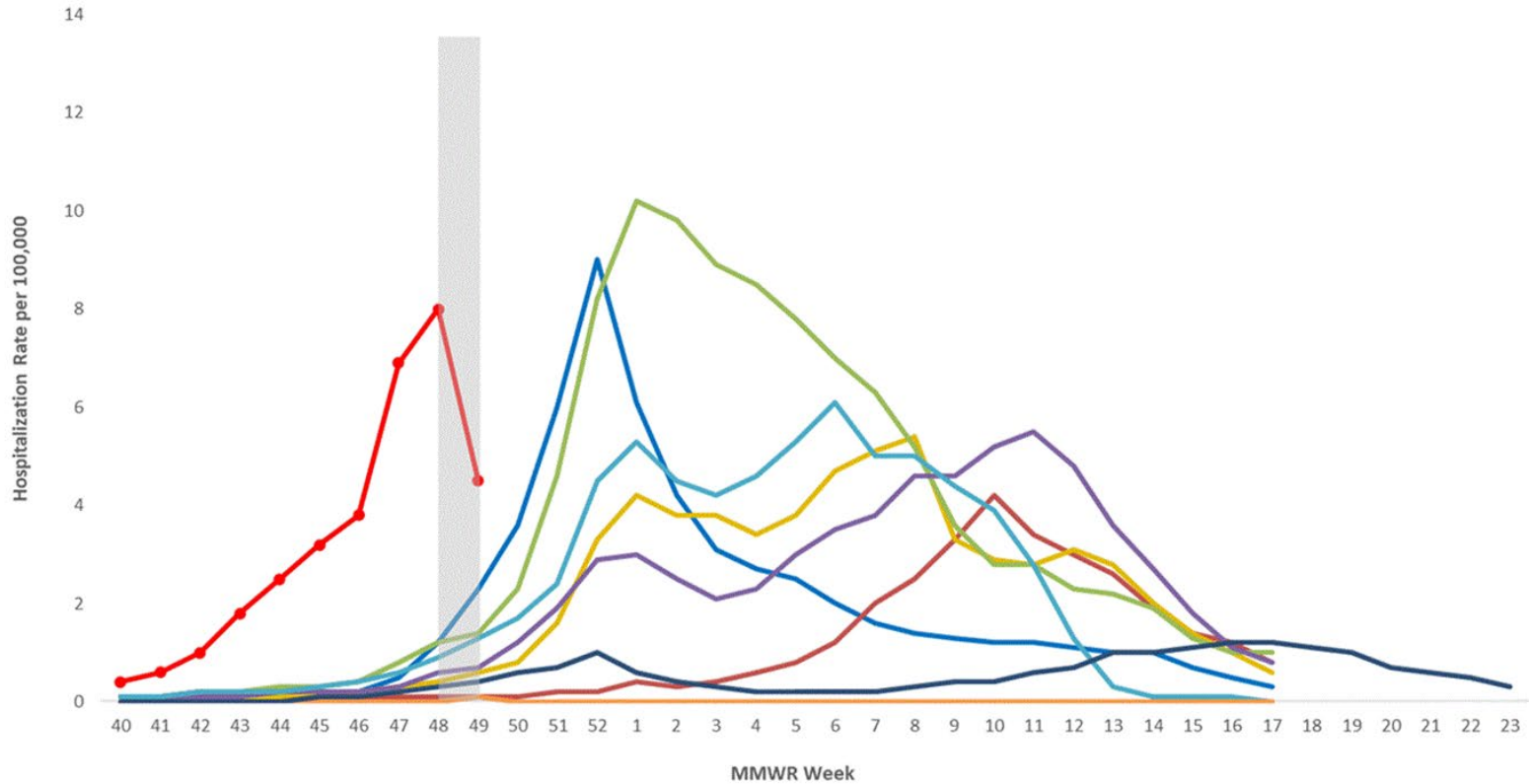
Condition	Alternative Antibiotics*	Duration and other strategies
Group A Streptococcus Pharyngitis	<ul style="list-style-type: none"><li>• Penicillin VK<ul style="list-style-type: none"><li>○ ≤27 kg: 250 mg BID</li><li>○ &gt;27 kg: 500 mg BID</li></ul></li><li>• IM penicillin G benzathine x1<ul style="list-style-type: none"><li>○ ≤27 kg: 600,000 units</li><li>○ &gt;27 kg: 1,200,000 units</li></ul></li><li>• Cephalexin (if PCN-allergic) 40mg/kg/day (max 500 mg/dose) divided BID</li></ul>	<ul style="list-style-type: none"><li>• Treat for 10 days</li><li>• Don't test children that have clear viral symptoms such as cough <b>and</b> rhinorrhea.</li><li>• Don't test children for group A strep under the age of 3 unless there is a household member with group A strep pharyngitis</li></ul>

# Influenza activity in Kentucky

- 🏥 [Flu activity in Kentucky](#) is classified as “Widespread” for the 9<sup>th</sup> consecutive week.
- 🏥 Nearly all are Flu A; mix of H1N1 and H3N2.
- 🏥 59 flu outbreaks in Long Term Care Facilities have been reported.



### Weekly Rate of Laboratory-Confirmed Influenza Hospitalizations among cases of all ages, 2014-15 to 2022-23, MMWR Week 49



- 2014-15
- 2015-16
- 2016-17
- 2017-18
- 2018-19
- 2019-20
- 2020-21
- 2021-22
- 2022-23

- ILI Activity Level**
- Very High
  - High
  - Moderate
  - Low
  - Minimal
  - Insufficient Data

\*\*In this figure, weekly rates for all seasons prior to the 2022-23 season reflect end-of-season rates. For the 2022-23 season, rates for recent hospital admissions are subject to reporting delays, as shown in the shaded area. As hospitalization data are received each week, prior case counts and rates are updated accordingly.

99.8% of typed are Flu A

- 20% H1N1)
- 80% H3N2

<https://www.cdc.gov/flu/weekly/index.htm>

**Figure 2A. Weekly Cumulative Influenza Vaccination Coverage\*, by Flu Season and Selected Demographics, Children 6 Months–17 Years, United States**  
**Data Source: NIS-Flu**  
**Data are current through December 3, 2022**

**Flu Season**

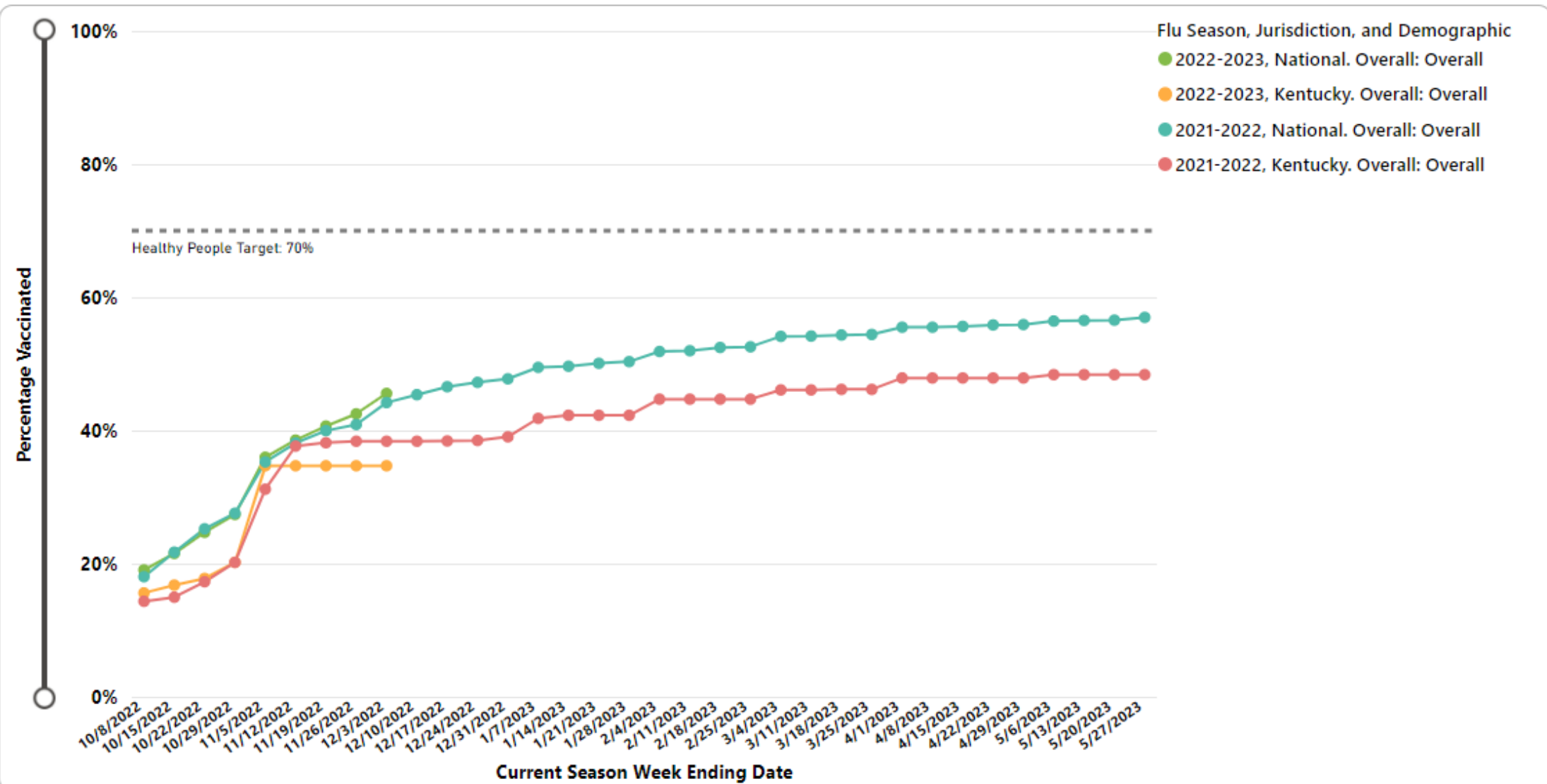
- Select All
- 2022-2023
- 2021-2022
- 2020-2021

**Jurisdiction**

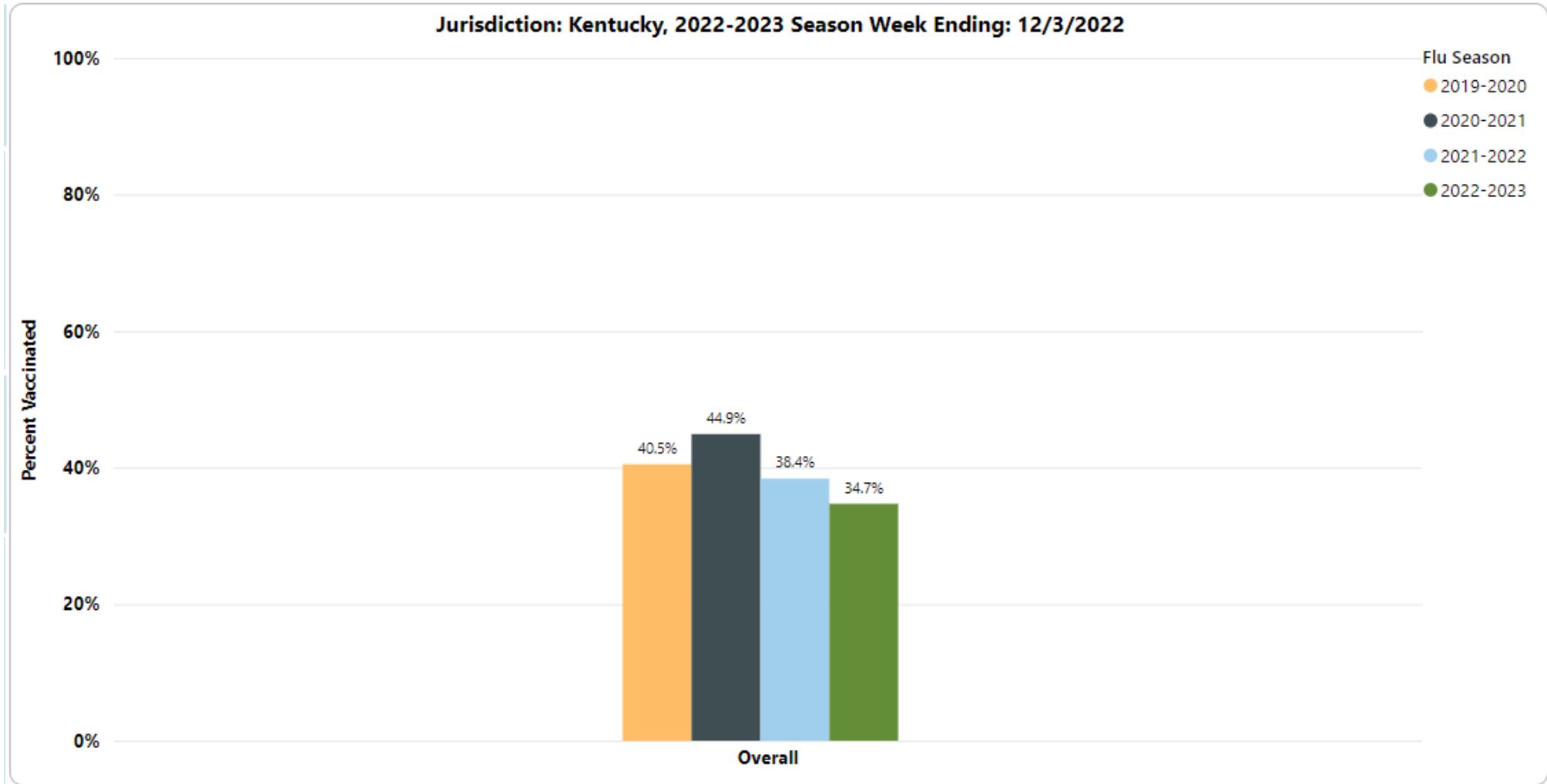
- Florida
- Georgia
- Guam
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine

**Demographic**

- 0 months–4 years
- 5–12 years
- 13–17 years
- Race/Ethnicity
  - All Races/Ethnicities
  - Black, Non-Hispanic
  - Hispanic
  - White, Non-Hispanic
  - Other, Non-Hispanic
- Urbanicity
  - Rural (Non-MSA)
  - Suburban (MSA No...
  - Urban MSA Princip...

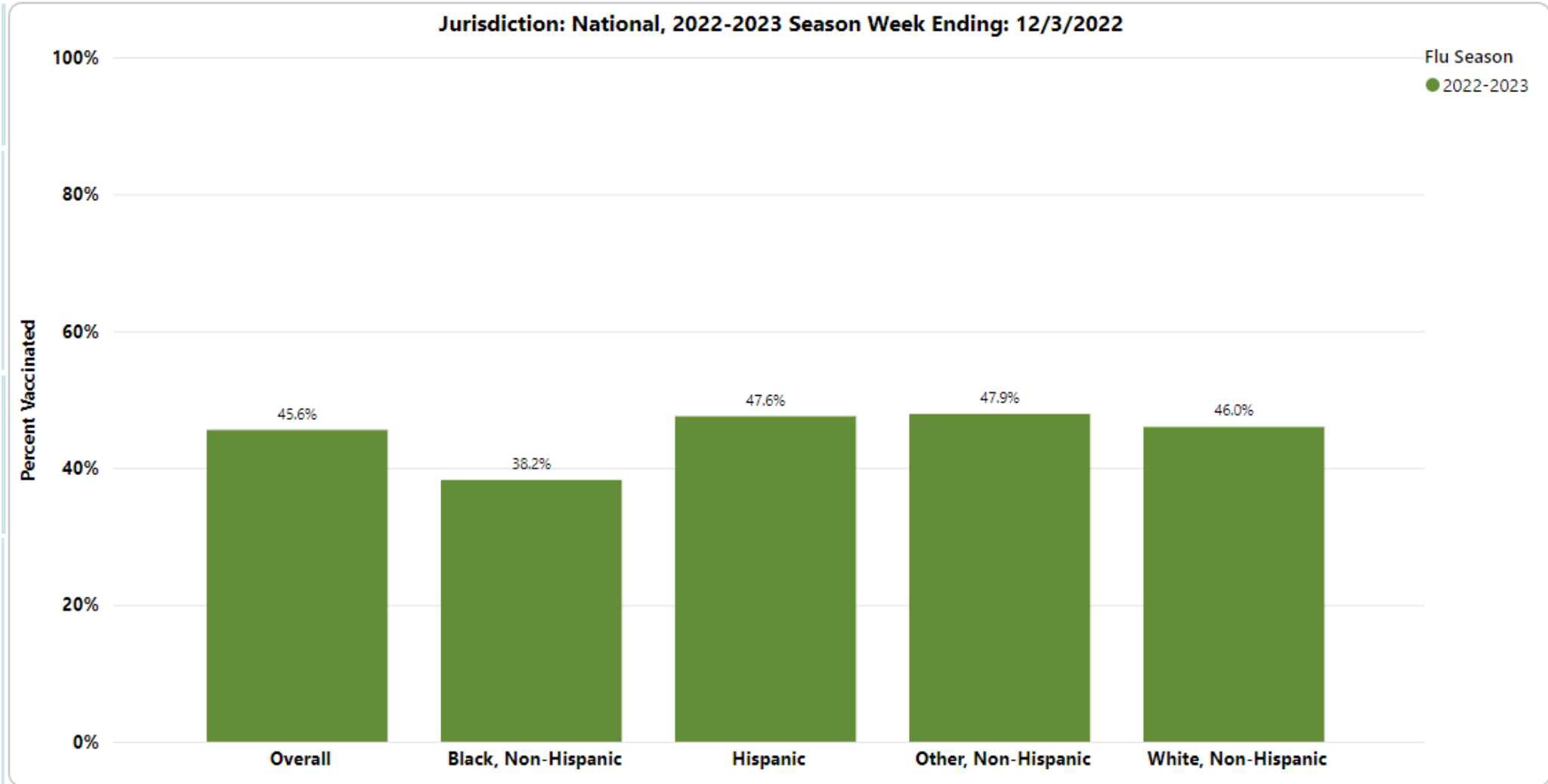


**Figure 2B. Cumulative Influenza Vaccination Coverage\*, by Week, Flu Season, and Race/Ethnicity, Children 6 Months–17 Years, United States**  
**Data Source: NIS-Flu**  
**Data are current through December 3, 2022**





**Figure 2B. Cumulative Influenza Vaccination Coverage\*, by Week, Flu Season, and Race/Ethnicity,  
Children 6 Months–17 Years, United States**  
Data Source: NIS-Flu  
Data are current through December 3, 2022



- 🛡️ CDC Health Alert issued last week.
- 🛡️ Summary of current recommendations for antiviral treatment.
- 🛡️ Including options for treatment when oseltamivir (Tamiflu) has limited availability.

<https://emergency.cdc.gov/han/2022/han00482.asp>

This is an official  
**CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network  
December 14, 2022, 4:00 PM ET  
CDCHAN-00482

**Interim Guidance for Clinicians to Prioritize Antiviral Treatment of Influenza in the Setting of Reduced Availability of Oseltamivir**

**Summary**

Seasonal influenza activity is high across the United States. The Centers for Disease Control and Prevention (CDC) estimates that in the 2022-2023 season to date, there have been at least 13 million illnesses, 120,000 hospitalizations, and 7,300 deaths from influenza ([Weekly U.S. Influenza Surveillance Report | CDC](#)). While the [Food and Drug Administration](#) (FDA) has not indicated shortages of oseltamivir (generic or Tamiflu) in any of its forms (capsules, oral suspension), CDC has received numerous anecdotal reports of availability issues for generic oseltamivir in some locations [1]. This may continue to occur in some communities as influenza activity continues.

This Health Alert Network (HAN) Health Advisory provides clinicians and public health officials with guidance for prioritizing oseltamivir for treatment and information on other influenza antivirals that are recommended for treating influenza in areas where oseltamivir is temporarily unavailable.

**Background**

Antiviral treatment of influenza is an important adjunct to influenza vaccination in the prevention and control of influenza and, when given early, reduces the duration of symptoms and may reduce the risk of some complications [2-4]. Influenza viruses typically circulate annually in the United States, most commonly from the late fall through the early spring. Most people recover from influenza without serious complications or sequelae. However, influenza can be associated with serious illnesses, hospitalizations, and deaths, particularly among [people at increased risk of complications](#) such as older adults, very young children, pregnant people, and people of all ages with certain chronic medical conditions [2].

Four FDA approved prescription [antiviral medications](#) (oseltamivir, baloxavir, zanamivir, and peramivir) are available for use for early treatment of outpatients with influenza. These antivirals have different formulations, routes of administration, dosing, duration of treatment, and recommendations for administration by age group. The clinical benefit of antiviral treatment of influenza is greatest when treatment is started early (within 2 days of illness onset) in people with mild, uncomplicated illness [3-4]. Oseltamivir treatment also is [recommended](#) as soon as possible for suspected or confirmed influenza requiring hospitalization, and to help control institutional influenza outbreaks [4].

A wide range of [tests](#) for respiratory specimens are available in clinical settings for diagnosing [influenza](#). Use of influenza testing, particularly rapid molecular assays, can inform antiviral treatment decisions, especially when other respiratory viruses are co-circulating in the community. CDC [has testing guidance](#) for clinicians when SARS-CoV-2 and influenza viruses are co-circulating. Of note, because SARS-CoV-2 and influenza virus co-infection can occur, a positive influenza test result without SARS-CoV-2 testing does not exclude COVID-19, and a positive SARS-CoV-2 test result without influenza testing does not exclude influenza.

# Key Points

- 🛡️ Studies have consistently shown that flu vaccination reduces risk of hospitalization and death.
- 🛡️ Vaccination against other illnesses (chickenpox, COVID-19) will lower risk of iGAS.
  - Fewer than 11% of Kentuckians age >5y have received the bivalent COVID-19 booster.
- 🛡️ Recommend frequent handwashing, use of well-fitted masks, and staying home from school/work/gatherings when sick to reduce spread.
- 🛡️ Alternative therapies should be considered if oseltamivir or amoxicillin are not currently available.
- 🛡️ Influenza-associated mortality (any age) or iGAS infections should be reported to the LHD.
  - Specimens may be requested for molecular typing.