CDC FluSurv-NET Interactive: Laboratory-Confirmed Influenza Hospitalizations Application Quick Reference Guide

Introduction
This Quick Reference Guide provides guidance on using the FluView web application on this webpage: https://gis.cdc.gov/grasp/fluview/FluHospChars.html and gives an overview of the influenza hospitalization surveillance network (FluSurv-NET).

This application features data shown in the CDC FluView report, which provides a weekly summary and interpretation of key indicators about the United States Influenza season. This includes information related to influenza-related outpatient visits, emergency department visits, hospitalizations, deaths, and laboratory data. The CDC FluView report is accessible through the following weblink: https://www.cdc.gov/flu/weekly/index.htm.

About the Data
Laboratory-confirmed influenza-associated hospitalization rates are monitored through the Influenza-Associated Hospitalization Surveillance Network (FluSurv-NET). FluSurv-NET conducts population-based surveillance for laboratory-confirmed influenza-associated hospitalizations in children (persons younger than 18 years) and adults. The current network covers over 70 counties in the 10 Emerging Infections Program (EIP) states (CA, CO, CT, GA, MD, MN, NM, NY, OR, and TN) and four additional states (IA, MI, OH, and UT) through the Influenza Hospitalization Surveillance Project (IHSP). Approximately 9% of US population is covered by this surveillance system.

Note: FluSurv-NET hospitalization data are preliminary and subject to change as more data become available.

Accessing the FluSurv-NET Web-Based Application

The FluSurv-NET application is available online and accessible by the public through the following internet link: http://gis.cdc.gov/GRASP/Fluview/FluHospChars.html.

Application requirements:
　　　Preferred browsers are Google Chrome, Edge, Safari, or Mozilla Firefox. Internet Explorer is supported but not a preferred browser due to decreased functionality and visualization of the interactive web application.
Once the website is loaded, a disclaimer dialog box will appear. Please review the disclaimer for important reference information.

Application Functions and Tool Overview
Below is an image of the default view of the current influenza season in the laboratory-confirmed influenza hospitalizations web application. This interactive tool allows users to display and query information about laboratory-confirmed influenza hospitalizations by flu type, underlying medical conditions, or other selected characteristics. The descriptions for each tool function are listed below the application image.
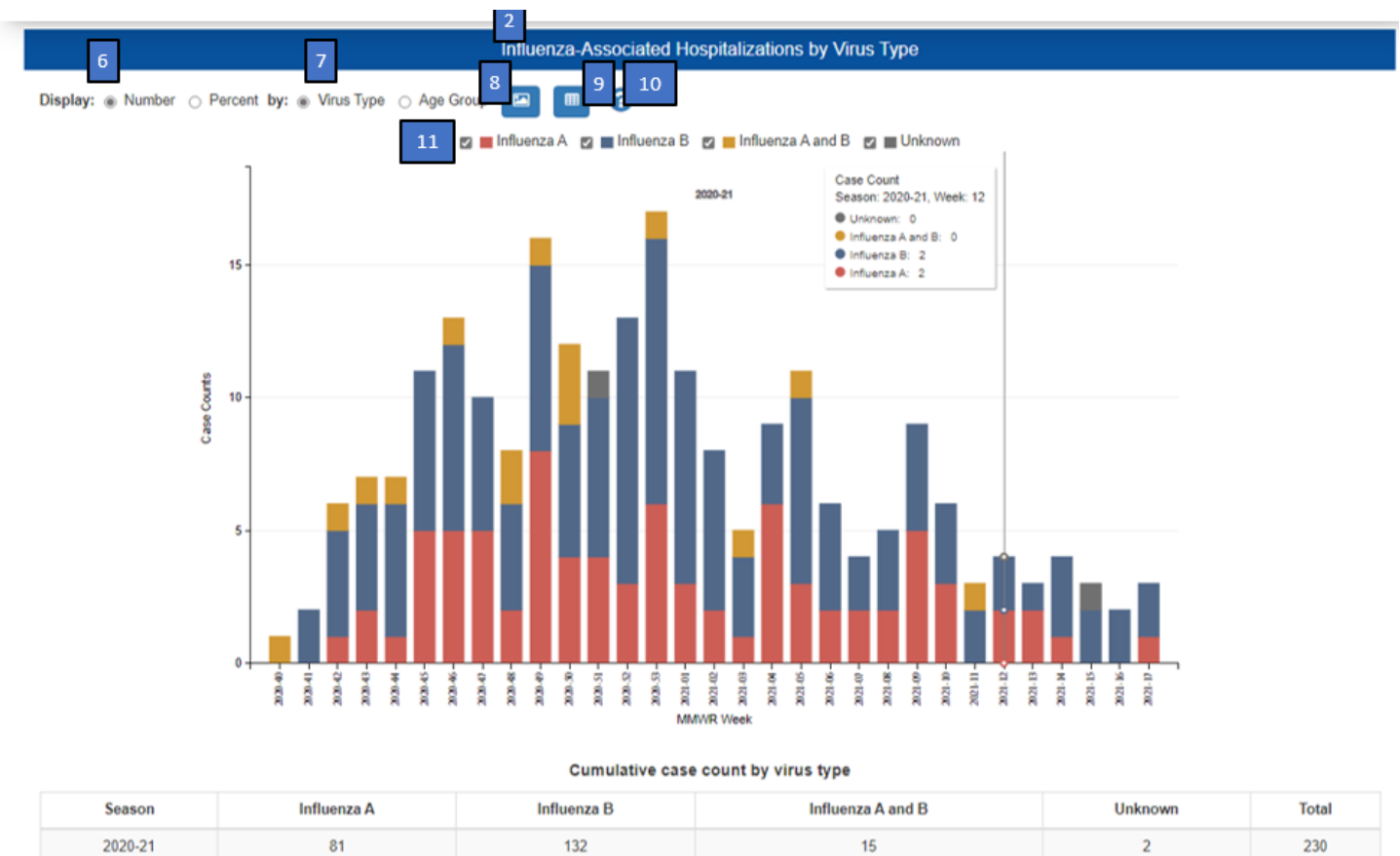
The screenshots below contain preliminary data that are subject to change. These are examples of the appearance of the interactive web application.

1. **Hospitalization Rates** – Click to view the cumulative and weekly influenza-associated hospitalization rates and by age group, sex, race and ethnicity, and surveillance site.
2. **Influenza-Associated Hospitalizations by Virus Type or by Age Bar Chart**– This bar chart displays the virus type distribution of influenza-associated hospitalizations by age group and by week of hospitalization. Hovering over the graph will display information on virus type, influenza season, MMWR week, and case count or virus type percent. Data can be displayed as number of cases or percent of cases with each virus type. When case counts are viewed in full screen, the graph also includes a data table summarizing the number of cases by virus type by

season.

3. **Characteristics of Influenza-Associated Hospitalizations Bar Chart** – This bar chart displays the distribution of selected characteristics (i.e., age group, sex, intensive care unit admission, mechanical ventilation, pneumonia diagnosis, deaths, and antiviral treatment) of influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the category selected, and the percent and count of hospitalizations.

4. **Select Underlying Medical Conditions Bar Chart** – This bar chart displays the distribution of selected medical conditions associated with influenza severity among pediatric, adult, and pregnant influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the age category (Adult or Pediatric) and on the percent and count of hospitalizations.

5. **Select up to 4 Seasons** – Click on the drop-down to display up to four seasons of interest to display in the Hospitalizations by Virus Type or by Age Bar Chart, Characteristics of Influenza-Associated Hospitalizations Bar Chart, and Selected Underlying Medical Conditions. At least one season must be selected in order for data to be displayed.

6. **Download Data Button** – The download data button allows the user to download data from any selected data source in the current view. A zip file will be created with the data stored in a separate comma separated values (*.csv) files.

7. **Help** – The help menu provides a detailed overview and describes the full functionality of the FluSurv-NET web application.

Cumulative case count by virus type

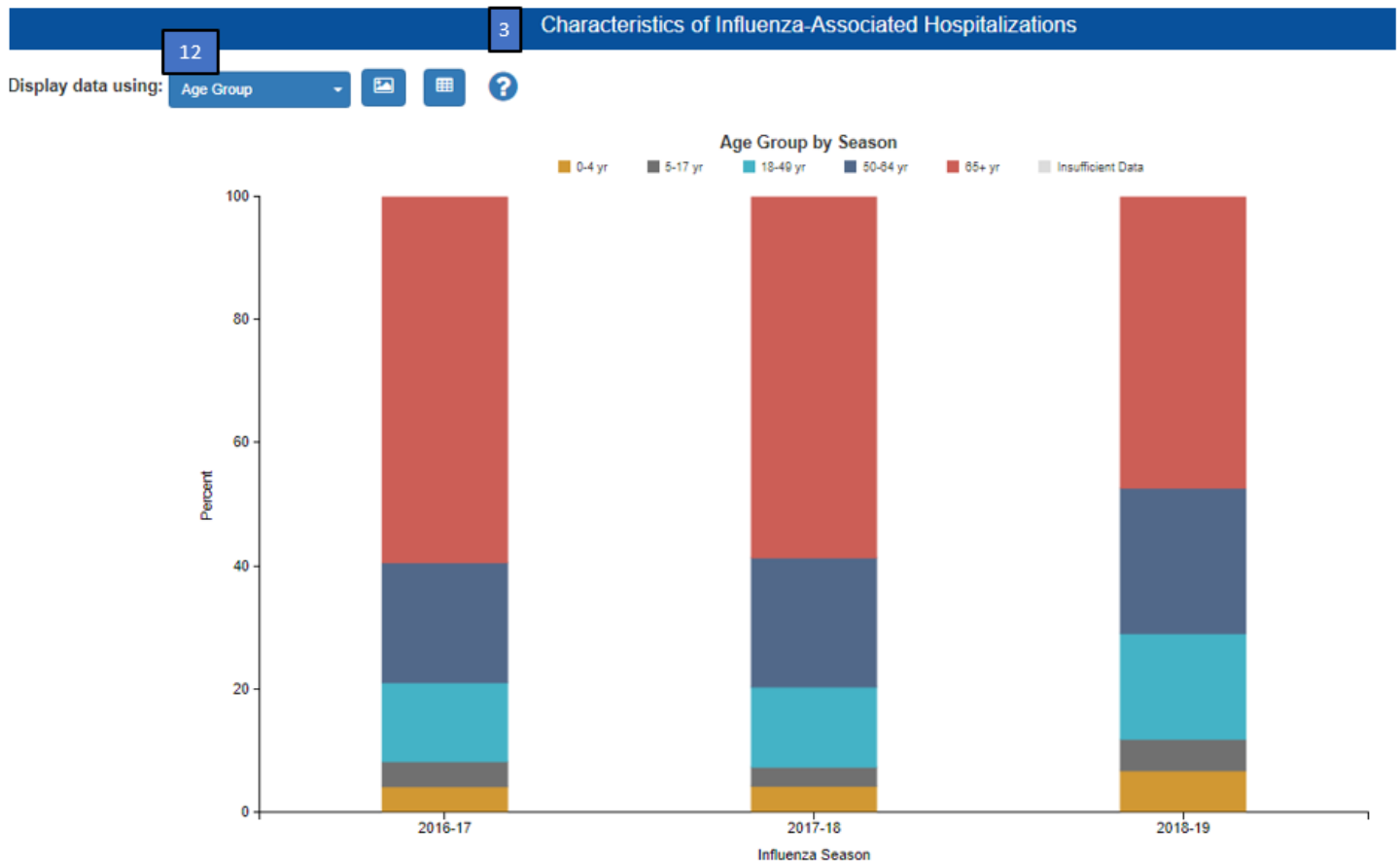| Season	Influenza A	Influenza B	Influenza A and B	Unknown	Total
2020-21	81	132	15	2	230

Application Functions and Tool Overview

2. **Influenza-Associated Hospitalizations by Virus Type or by Age Bar Chart**– This bar chart displays the virus type distribution of influenza-associated hospitalizations by age group and by week of hospitalization. Hovering over the graph will display information on virus type, influenza season, MMWR week, and case count or virus type
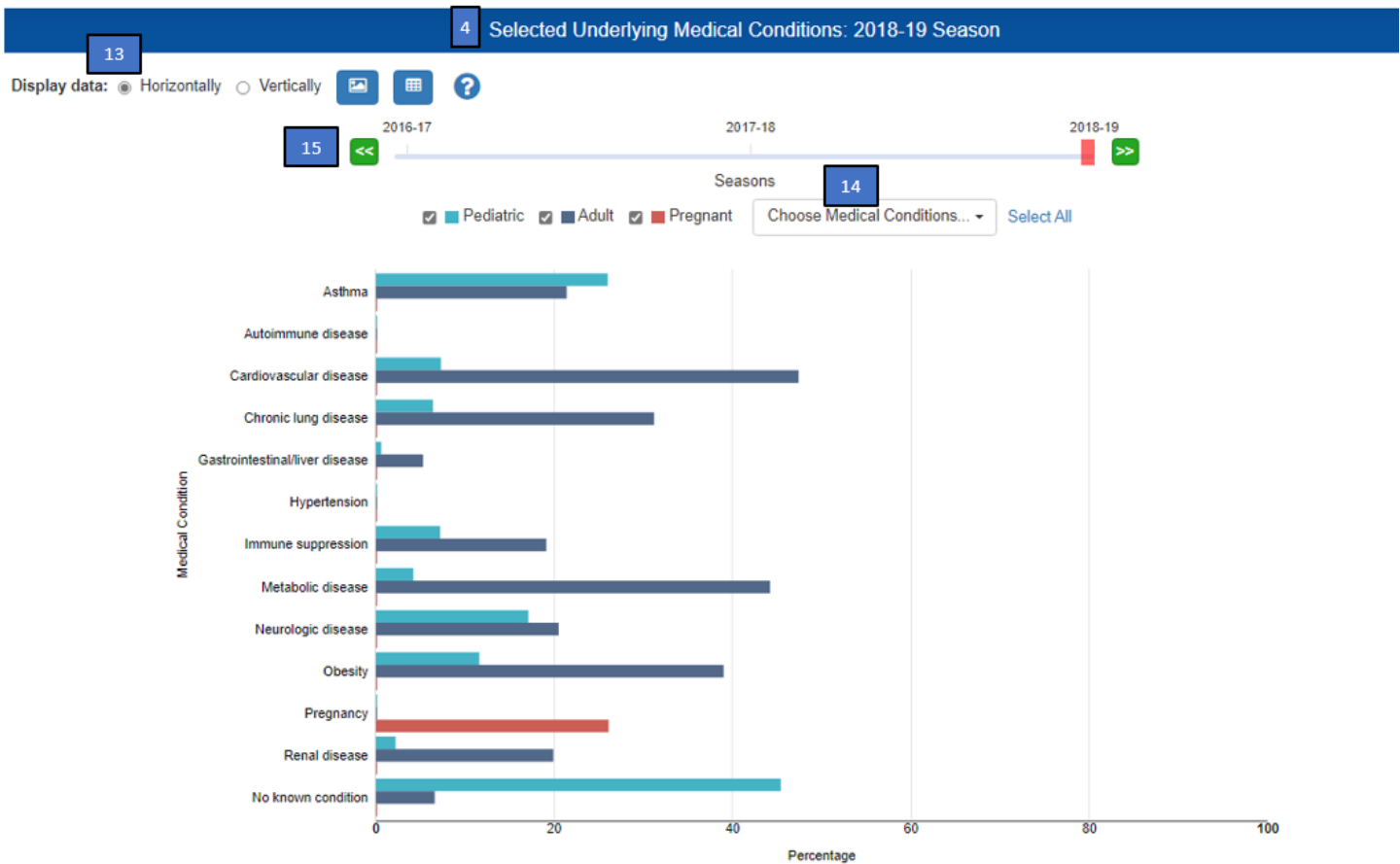
percent. Data can be displayed as number of cases or percent of cases with each virus type. When case counts are viewed in full screen, the graph also includes a data table summarizing the number of cases by virus type by season.

6. **Display as Number/Percent** – Data in the Influenza-Associated Hospitalizations by Virus Type Bar Chart can be displayed as a number or percentage by using these radio buttons. Selecting "Number" displays the number of cases by virus type or age group by week, while selecting "Percent" displays the percentage of that week's cases attributed to each virus type or age group.

7. **Display by Virus Type/Age Group** – Data on virus type and age group can be displayed in the Influenza-Associated Hospitalizations by Virus Type Bar Chart. Selecting "Virus Type" displays data by virus type, including Influenza A, Influenza B, Influenza A and B, and Unknown by week.

8. **Download Image Button** – To create a static image of the data displayed in your current view, click the "Download Image" button. A file download dialog will appear with options to open, save, or discard (cancel) the currently displayed chart(s).

9. **Download Data Button** – To create a copy of the data in the current view, click the "Download Data" button. A zip file will be created with the data stored in a separate comma separated values (*.csv) files.

10. **Virus Type Help** – The help menu provides a detailed description of the elements displayed on the graph.

11. **Interactive Legend** – The interactive legend for the Influenza-Associated Hospitalizations by Virus Type or Age Group Bar Chart becomes active when data are displayed as numbers. Users can check which virus type(s) or age group(s) they would like displayed in the graph.

3. **Characteristics of Influenza-Associated Hospitalizations Bar Chart** – This bar chart displays the distribution of selected characteristics (i.e., age group, sex, intensive care unit admission, mechanical ventilation, pneumonia diagnosis, in-hospital deaths, and antiviral treatment) of influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the category selected, and the percent and count of hospitalizations.

12. **Display Data Using drop-down box** – specific characteristics can by displayed in the Characteristics Bar Chart using this drop-down menu. The options for this drop-down are: Age Group, Sex, Intensive Care Unit Admission,

Mechanical Ventilation, Pneumonia Diagnosis, In-hospital Deaths, and Antiviral Treatment.

4. **Select Underlying Medical Conditions Bar Chart** – This bar chart displays the distribution of selected medical conditions associated with influenza severity among pediatric, adult, and pregnant influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the age category (Adult or Pediatric) and on the percent and count of hospitalizations.

13. **Display Data Horizontally/Vertically** – These radio buttons allow users to view the Selected Underlying Medical Conditions Bar Chart as either a horizontal or vertical bar graph.

14. **Underlying Medical Condition Selector** – Click on the drop-down menu to display the list of available underlying medical conditions. Users can display the frequency of one or more of the following conditions by clicking the box next to it: Asthma, Autoimmune disease, Cardiovascular disease, Chronic lung disease, Gastrointestinal/liver disease, Hypertension, Immune suppression, Metabolic disease, Neurologic disease, Obesity, Pregnancy, Renal disease, and No known condition. Obesity is defined as body mass index (BMI) ≥30 kg/m2 in adults aged 18 years and older; in children, obesity is defined as BMI (kg/m^2) ≥95th percentile for age and sex based on CDC growth charts among children aged ≥2 years and <18. Obesity was not evaluated for children aged < 2 years.

15. **Influenza Season Slider Bar** – The slider bar is used to select the season displayed in the Selected Underlying Medical Conditions Bar Chart. Use the cursor or green and white arrows on either side of the slider bar to move the slider from one season to another