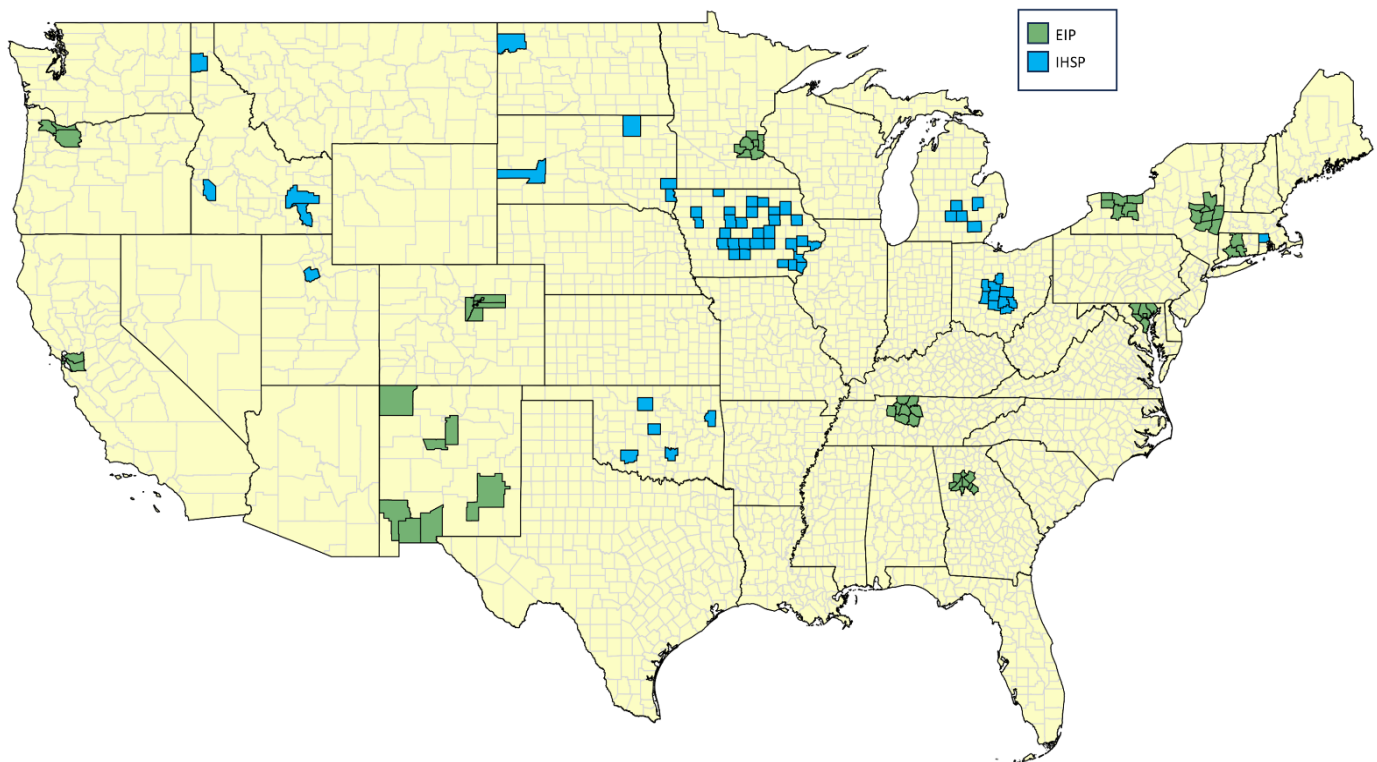


## Supplementary Figure 1. Surveillance catchment areas, Influenza Hospitalization Surveillance Network (FluSurv-NET), United States, 2003-04 through 2022-23 influenza seasons\*



\*This map displays Emerging Infections Program (EIP) counties included in FluSurv-NET surveillance during the 2003-04 to 2022-23 influenza seasons, with exceptions for counties that did not participate all 20 years as noted: California (Alameda, Contra Costa, and San Francisco counties); Colorado (Adams, Arapahoe, Denver, Douglas, and Jefferson counties); Connecticut (New Haven (2003-04 through 2022-23), Hartford (2010-11 through 2011-12), Middlesex (2010-11 through 2022-23)); Georgia (Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, Newton, and Rockdale counties); Maryland (Anne Arundel, Baltimore, Baltimore City, Carroll, Harford, Howard); Minnesota (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties); New Mexico (Bernalillo (2004-05 through 2022-23), Dona Ana, Grant, and Luna (2005-06 through 2022-23), San Juan (2010-11 through 2022-23), Chaves and Santa Fe (2007-08 through 2022-23) counties); New York (Albany, Columbia, Genesee, Greene, Livingston, Monroe, Montgomery, Ontario, Orleans, Rensselaer, Saratoga, Schenectady, Schoharie, Wayne, and Yates counties); Oregon (Clackamas, Multnomah, and Washington counties); Tennessee (Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson counties). This map also displays Influenza Hospitalization Surveillance Program (IHSP) counties included in FluSurv-NET surveillance during the 2009-10 to 2022-23 influenza seasons, with exceptions for counties that did not participate all 14 years as noted: Idaho (Ada, Kootenai counties (2009-10 through 2010-11), Bingham (2009-10), Bannock (2010-11)); Iowa (Bremer, Buena Vista, Cherokee, Decatur, Delaware, Des Moines, Emmet, Fayette, Floyd, Greene, Grundy, Hamilton, Hancock, Humboldt, Jasper, Johnson, Jones, Marshall, Monroe, O'Brien, Polk, Pottawattamie, Poweshiek, and Scott counties (2009-10), Dallas, Guthrie, Madison, Polk, and Warren (2012-13), and one de-identified county in 2020-21 through 2021-22); Michigan (Clinton, Eaton, and Ingham (2009-10 through 2022-23), Genesee (2012-13 through 2022-23), and Washtenaw (2017-18 through 2022-23)); North Dakota (Williams county (2009-10)); Ohio (Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway and Union (2010-11 through 2022-23), Hocking and Perry (2013-14 through 2022-23)); Oklahoma (Cherokee, Comanche, Garfield, Oklahoma, Pontotoc counties(2009-10through 2010-11)); Rhode Island (Providence county (2010-11 through 2012-13)); South Dakota (Brown, Lincoln, Minnehaha, Pennington counties (2009-10)); Utah (Salt Lake County (2010-11 through 2022-23)).

## 2022-23 FluSurv-NET Influenza Hospitalization Surveillance Project Case Report Form

FORM APPROVED  
OMB NO. 0920-0978



<b>FluSurv-NET Case ID:</b> <u>2 2 2 3</u>	<b>COVID-NET Case ID:</b> _____	<b>RSV-NET Case ID:</b> _____
--	---------------------------------	-------------------------------

**A. Patient Data – THIS INFORMATION IS NOT SENT TO CDC**

Last Name:		First Name:		Middle Name:		Chart Number:	
Address:						Address Type:	
City:			State:		Zip Code:		Phone No. 1:
Phone No. 2:		Emergency Contact:			Emergency Contact Phone:		<input type="checkbox"/> No PCP
PCP Clinic Name 1:		PCP Phone 1:		PCP Fax 1:			
PCP Clinic Name 2:		PCP Phone 2:		PCP Fax 2:			
Site Use 1:		Site Use 2:		Site Use 3:		CDCTrack:	

**B. Abstractor Information – THIS INFORMATION IS NOT SENT TO CDC**

1. Abstractor Name: _____	2. Date of Abstraction: ____ / ____ / ____
---------------------------	--

**C. Enrollment Information**

<b>1. Case Classification:</b> <input type="checkbox"/> Prospective <input type="checkbox"/> Surveillance Discharge Audit	<b>2. State:</b> _____	<b>3. County:</b> _____	<b>4. Case Type:</b> <input type="checkbox"/> Pediatric <input type="checkbox"/> Adult	<b>5. Date of Birth:</b> ____ / ____ / ____	<b>6. Age:</b> _____ <input type="checkbox"/> Years <input type="checkbox"/> Months (if < 1 yr) <input type="checkbox"/> Days (if < 1 month)	<b>7. Sex:</b> <input type="checkbox"/> Male <input type="checkbox"/> Female
<b>8. Race</b> (select all that apply): <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or other Pacific Islander <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Multiracial, not otherwise specified <input type="checkbox"/> Not specified	<b>9. Ethnicity:</b> <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Non-Hispanic/Latino <input type="checkbox"/> Not Specified	<b>11. Type of Insurance</b> (select all that apply): <input type="checkbox"/> Private <input type="checkbox"/> Medicare <input type="checkbox"/> Medicaid/state assistance program <input type="checkbox"/> Military <input type="checkbox"/> Indian Health Service <input type="checkbox"/> Incarcerated <input type="checkbox"/> Uninsured <input type="checkbox"/> Unknown <input type="checkbox"/> Other, specify: _____		<b>12. Pregnant?</b> (15-49 years of age only): <input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown <input type="checkbox"/> Not applicable (male/pregnant outside of applicable age range)		
<b>14. Was patient transferred from another hospital?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		<b>14a. Transfer Hospital ID:</b> _____		<b>14b. Transfer Hospital Admission Date:</b> ____ / ____ / ____		
				<b>14c. Transfer Date:</b> ____ / ____ / ____		
<b>15. Where did the patient reside at the time of hospitalization? (Indicate TYPE of residence.)</b>						
<input type="checkbox"/> Private residence		<input type="checkbox"/> Alcohol/Drug Abuse Treatment		<input type="checkbox"/> Hospice		<input type="checkbox"/> Psychiatric facility
<input type="checkbox"/> Private residence with services		<input type="checkbox"/> Hospitalized at birth		<input type="checkbox"/> Assisted living/Residential care		<input type="checkbox"/> Other long term care facility
<input type="checkbox"/> Homeless/shelter		<input type="checkbox"/> Rehabilitation facility		<input type="checkbox"/> LTACH		<input type="checkbox"/> Other, specify: _____
<input type="checkbox"/> Nursing home/Skilled nursing facility		<input type="checkbox"/> Corrections facility		<input type="checkbox"/> Group/Retirement home		<input type="checkbox"/> Unknown
<b>15a. If resident of a facility, indicate NAME of facility:</b> _____						

**D. Influenza Testing Results (can add up to 4 test results in database)**

<b>1. Test 1:</b> <input type="checkbox"/> Rapid Antigen <input type="checkbox"/> Molecular Assay <input type="checkbox"/> Rapid Molecular Assay <input type="checkbox"/> Viral Culture <input type="checkbox"/> Serology <input type="checkbox"/> Fluorescent Antibody <input type="checkbox"/> Method Unknown						
<b>1a. Result:</b> <input type="checkbox"/> Flu A (no subtype) <input type="checkbox"/> H1, Seasonal <input type="checkbox"/> Flu A, Unsubtypable <input type="checkbox"/> Flu B, Yamagata <input type="checkbox"/> Unknown Type <input type="checkbox"/> Other, please specify: <input type="checkbox"/> 2009 H1N1 <input type="checkbox"/> H1 <input type="checkbox"/> Flu B (no lineage) <input type="checkbox"/> Flu A & B <input type="checkbox"/> Negative <input type="checkbox"/> H1, Unspecified <input type="checkbox"/> H3 <input type="checkbox"/> Flu B, Victoria <input type="checkbox"/> Flu A/B (not distinguished) <input type="checkbox"/> H3N2v						
<b>1b. Specimen collection date:</b> ____ / ____ / ____		<b>1c. Specimen ID:</b> _____		<b>1d. Testing facility ID:</b> _____		
<b>2. Test 2:</b> <input type="checkbox"/> Rapid Antigen <input type="checkbox"/> Molecular Assay <input type="checkbox"/> Rapid Molecular Assay <input type="checkbox"/> Viral Culture <input type="checkbox"/> Serology <input type="checkbox"/> Fluorescent Antibody <input type="checkbox"/> Method Unknown						
<b>2a. Result:</b> <input type="checkbox"/> Flu A (no subtype) <input type="checkbox"/> H1, Seasonal <input type="checkbox"/> Flu A, Unsubtypable <input type="checkbox"/> Flu B, Yamagata <input type="checkbox"/> Unknown Type <input type="checkbox"/> Other, please specify: <input type="checkbox"/> 2009 H1N1 <input type="checkbox"/> H1 <input type="checkbox"/> Flu B (no lineage) <input type="checkbox"/> Flu A & B <input type="checkbox"/> Negative <input type="checkbox"/> H1, Unspecified <input type="checkbox"/> H3 <input type="checkbox"/> Flu B, Victoria <input type="checkbox"/> Flu A/B (not distinguished) <input type="checkbox"/> H3N2v						
<b>2b. Specimen collection date:</b> ____ / ____ / ____		<b>2c. Specimen ID:</b> _____		<b>2d. Testing facility ID:</b> _____		
<b>3. Test 3:</b> <input type="checkbox"/> Rapid Antigen <input type="checkbox"/> Molecular Assay <input type="checkbox"/> Rapid Molecular Assay <input type="checkbox"/> Viral Culture <input type="checkbox"/> Serology <input type="checkbox"/> Fluorescent Antibody <input type="checkbox"/> Method Unknown						
<b>3a. Result:</b> <input type="checkbox"/> Flu A (no subtype) <input type="checkbox"/> H1, Seasonal <input type="checkbox"/> Flu A, Unsubtypable <input type="checkbox"/> Flu B, Yamagata <input type="checkbox"/> Unknown Type <input type="checkbox"/> Other, please specify: <input type="checkbox"/> 2009 H1N1 <input type="checkbox"/> H1 <input type="checkbox"/> Flu B (no lineage) <input type="checkbox"/> Flu A & B <input type="checkbox"/> Negative <input type="checkbox"/> H1, Unspecified <input type="checkbox"/> H3 <input type="checkbox"/> Flu B, Victoria <input type="checkbox"/> Flu A/B (not distinguished) <input type="checkbox"/> H3N2v						
<b>3b. Specimen collection date:</b> ____ / ____ / ____		<b>3c. Specimen ID:</b> _____		<b>3d. Testing facility ID:</b> _____		

Public reporting burden of this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB Control Number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Request Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-0978).

E. ICU and Other Interventions

1. Was the patient admitted to an intensive care unit (ICU)?
1a. Date of 1st ICU Admission:
1b. Date of 1st ICU Discharge:
2. BiPAP or CPAP use?
3. High flow nasal cannula (e.g., Vapotherm)?
4. Invasive mechanical ventilation?
5. ECMO?
6. Vasopressor use?
7. Renal Replacement Therapy (RRT) or Dialysis?

F. Outcome

1. What was the outcome of the patient upon discharge?
2. If patient discharged alive, please indicate to where:
3. Additional notes regarding discharge:

G. Admission and Patient History

1. Reason for admission:
2. Acute signs/symptoms present at admission (began or worsened within 2 weeks prior to admission)
3. Date of onset of acute respiratory symptoms (within 2 weeks before a positive influenza test):
4. Height:
5. Weight:
6. BMI (non-pregnant cases and cases >= 2 years only):
7. Smoker (tobacco):
8. Alcohol abuse:
9. Substance Abuse:
10. Substance Abuse Type (current use only) check all that apply:
11. Code status on admission:

## H. Underlying Medical Conditions

1. Did the patient have any of the following pre-existing medical conditions? (Select all that apply):  Yes  No  Unknown

1a. Asthma/Reactive Airway Disease:  Yes  No/Unknown

1b. Chronic Lung Disease:  Yes  No/Unknown

- Active Tuberculosis (TB)
- Asbestosis
- Bronchiectasis
- Bronchiolitis obliterans
- Chronic bronchitis
- Chronic respiratory failure
- Cystic fibrosis (CF)
- Emphysema/Chronic obstructive pulmonary disease (COPD)
- Interstitial lung disease (ILD)
- Obstructive sleep apnea (OSA)
- Oxygen (O<sub>2</sub>) dependent
- Pulmonary fibrosis
- Restrictive lung disease
- Sarcoidosis

1c. Chronic Metabolic Disease:  Yes  No/Unknown

- Adrenal Disorders (*Addison's disease, adrenal insufficiency, Cushing syndrome, congenital adrenal hyperplasia*)
- Diabetes mellitus (DM)
- Glycogen or other storage diseases (*See list*)
- Hyper/Hypo- function of pituitary gland
- Inborn errors of metabolism (*See list*)
- Metabolic syndrome
- Parathyroid dysfunction (*hyperparathyroidism, hypoparathyroidism*)
- Thyroid dysfunction (*Grave's disease, Hashimoto's disease, hyperthyroidism, hypothyroidism*)

1d. Blood Disorders/Hemoglobinopathy:  Yes  No/Unknown

- Alpha thalassemia
- Aplastic anemia
- Beta thalassemia
- Coagulopathy (*Factor V Leiden, Von Willebrand disease (VWD), see list*)
- Hemoglobin S-beta thalassemia
- Leukopenia
- Myelodysplastic syndrome (MDS)
- Neutropenia
- Pancytopenia
- Polycythemia vera
- Sickle cell disease
- Splenectomy/Asplenia
- Thrombocytopenia

1e. Cardiovascular Disease:  Yes  No/Unknown

- Aortic aneurysm (AAA), history of
- Aortic/Mitral/Tricuspid/Pulmonic valve replacement, history of
- Aortic regurgitation (AR)
- Aortic stenosis (AS)
- Atherosclerotic cardiovascular disease (ASCVD)
- Atrial fibrillation (AFib)
- Atrioventricular (AV) blocks
- Automated implantable devices (AID/AICD)/Pacemaker
- Bundle branch block (BBB/RBBB/LBBB)
- Cardiomyopathy
- Carotid stenosis
- Cerebral vascular accident (CVA)/Incident/Stroke, history of
- Congenital heart disease (*Specify*)
  - Atrial septal defect
  - Pulmonic stenosis
  - Tetralogy of Fallot
  - Ventricular septal defect
  - Other, specify: \_\_\_\_\_
- Coronary artery bypass grafting (CABG), history of
- Coronary artery disease (CAD)

1e. Cardiovascular Disease, continued:

- Deep vein thrombosis (DVT), history of
- Heart failure/Congestive heart failure (CHF)
- Myocardial infarction (MI), history of
- Mitral regurgitation (MR)
- Mitral stenosis (MS)
- Peripheral artery disease (PAD)
- Peripheral vascular disease (PVD)
- Pulmonary embolism (PE), history of
- Pulmonary hypertension (PHTN)
- Pulmonic regurgitation
- Pulmonic stenosis
- Transient ischemic attack (TIA), history of
- Tricuspid regurgitation (TR)
- Tricuspid stenosis
- Ventricular fibrillation (VF, VFib), history of
- Ventricular tachycardia (VT, VTach), history of

1f. Neurologic Disorder:  Yes  No/Unknown

- Amyotrophic lateral sclerosis (ALS)
- Cerebral palsy
- Cognitive dysfunction
- Dementia/Alzheimer's disease
- Developmental delay
- Down syndrome/Trisomy 21
- Edward's syndrome/Trisomy 18
- Epilepsy/seizure/seizure disorder
- Mitochondrial disorder (*See list*)
- Multiple sclerosis (MS)
- Muscular dystrophy (*See list*)
- Myasthenia gravis (MG)
- Neural tube defects/Spina bifida (*See list*)
- Neuropathy
- Parkinson's disease
- Plegias/Paralysis/Quadriplegia
- Scoliosis/Kyphoscoliosis
- Traumatic brain injury (TBI), history of

1g. History of Guillain-Barre Syndrome:  Yes  No/Unknown

1h. Immunocompromised Condition:  Yes  No/Unknown

- AIDS or CD4 count<200
- Complement deficiency (*See list*)
- Graft vs. host disease (GVHD)
- HIV infection
- Immunoglobulin deficiency/immunodeficiency (*See list*)
- Immunosuppressive therapy (*within the 12 months previous to admission*) (*see instructions*):
  - If yes, for what condition? \_\_\_\_\_
- Leukemia\*
- Lymphoma/Hodgkins/Non-Hodgkins (NHL)\*
- Metastatic cancer\*
- Multiple myeloma\*
- Solid organ malignancy\*
  - If yes, which organ? \_\_\_\_\_
- Steroid therapy (*within 2 weeks of admission*) (*see instructions*)
- Transplant, hematopoietic stem cell (*bone marrow transplant (BMT), peripheral stem cell transplant (PSCT)*), history of
- Transplant, solid organ (SOT), history of

\*Current/in treatment or diagnosed in last 12 months

**H. Underlying Medical Conditions (continued)**

**1i. Any Obesity:**  Yes  No/Unknown

- Obese
- Severely/morbidly obese (ADULTS ONLY)

**1j. Post-Partum (two weeks or less):**  Yes  No/Unknown

**1k. Renal Disease:**  Yes  No/Unknown

- Chronic kidney disease (CKD)/chronic renal insufficiency (CRI)
- Dialysis (HD)
- End stage renal disease (ESRD)
- Glomerulonephritis (GN)
- Nephrotic syndrome
- Polycystic kidney disease (PCKD)

**1l. Gastrointestinal/Liver Disease (Do Not Record GERD):**  Yes  No/Unknown

- Alcoholic hepatitis
- Autoimmune hepatitis
- Barrett's esophagitis
- Chronic liver disease
- Chronic pancreatitis
- Cirrhosis/End stage liver disease (ESLD)
- Crohn's disease
- Esophageal varices
- Esophageal strictures
- Hepatitis B, chronic (HBV)
- Hepatitis C, chronic (HCV)
- Non-alcoholic fatty liver disease (NAFLD)/NASH
- Ulcerative colitis (UC)

**1m. Rheumatologic/Autoimmune/Inflammatory**

**Conditions (Do Not Record OA):**  Yes  No/Unknown

- Ankylosing spondylitis
- Dermatomyositis
- Juvenile idiopathic arthritis
- Kawasaki disease
- Microscopic polyangiitis
- Polyarteritis nodosum (PAN)
- Polymyalgia rheumatica
- Polymyositis
- Psoriatic arthritis
- Rheumatoid arthritis (RA)
- Systemic lupus erythematosus (SLE)/Lupus
- Systemic sclerosis
- Takayasu arteritis
- Temporal/Giant cell arteritis
- Vasculitis, other (See list)

**1n. Hypertension:**  Yes  No/Unknown

**1o. Mental Health Conditions:**  Yes  No/Unknown

- Bipolar disorder
- Depression
- Schizophrenia spectrum disorder

**1p. Other:**  Yes  No/Unknown

- Feeding tube dependent (PEG, see list)
- Trach dependent/Vent dependent
- Wheelchair dependent
- Other, specify \_\_\_\_\_

**1q. PEDIATRIC CASES ONLY**

- Abnormality of airway (see instructions)
- Chronic lung disease of prematurity/Bronchopulmonary dysplasia (BPD)
- History of febrile seizures
- Long term aspirin therapy
- Premature (gestation age <37 weeks at birth for patients < 2 years)  
If yes, specify gestational age at birth in weeks: \_\_\_\_\_
- Unknown gestational age at birth

**I. Bacterial Pathogens - (can add additional culture results to the study database) - Sterile or respiratory site only**

**1. Were any culture tests performed within 3 days prior to or 3 days following admission?**  Yes  No  Unknown

**Culture 1**

**2a. If yes, what is the specimen source?**  Blood  Bronchoalveolar lavage (BAL)  Pleural fluid  Cerebrospinal fluid (CSF)  
 Sputum  Endotracheal aspirate  Other, specify: \_\_\_\_\_

**2b. Date of specimen collection for culture**  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_

**2c. Result of culture:**  
 Positive  Negative  Unknown

**2d. If positive, what pathogen was identified?**  
 Bacteria, specify: \_\_\_\_\_  
 Aspergillus (fungus)  Mucormycosis (fungus)

**2e. If Staphylococcus aureus, specify:**  Methicillin resistant (MRSA)  Methicillin sensitive (MSSA)  Sensitivity unknown

**Culture 2**

**3a. If yes, what is the specimen source?**  Blood  Bronchoalveolar lavage (BAL)  Pleural fluid  Cerebrospinal fluid (CSF)  
 Sputum  Endotracheal aspirate  Other, specify: \_\_\_\_\_

**3b. Date of specimen collection for culture**  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_

**3c. Result of culture:**  
 Positive  Negative  Unknown

**3d. If positive, what pathogen was identified?**  
 Bacteria, specify: \_\_\_\_\_  
 Aspergillus (fungus)  Mucormycosis (fungus)

**3e. If Staphylococcus aureus, specify:**  Methicillin resistant (MRSA)  Methicillin sensitive (MSSA)  Sensitivity unknown

**J. Viral Pathogens**

**1. Was patient tested for any of the following viral respiratory pathogens within 14 days prior to admission or ≤3 days after admission?**  Yes  No  Unknown

<b>1a. Respiratory syncytial virus/RSV</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1b. Adenovirus</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1c. Parainfluenza 1</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1d. Parainfluenza 2</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1e. Parainfluenza 3</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1f. Parainfluenza 4</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1g. Human metapneumovirus</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1h. Rhinovirus/Enterovirus</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1i. Coronavirus SARS-CoV-2</b>	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____
<b>1j. Coronavirus, other:</b> _____	<input type="checkbox"/> Yes, positive	<input type="checkbox"/> Yes, negative	<input type="checkbox"/> Not tested/Unknown	<b>Date:</b> _____ / _____ / _____

**K. Influenza Treatment (can add up to 4 treatment courses in database)**

**1. Did the patient receive treatment for influenza?**  Yes  No  Unknown

**1a. Treatment 1:**  Baloxavir marboxil (Xofluza)  Peramivir (Rapivab)  Other, specify: \_\_\_\_\_  
 Oseltamivir (Tamiflu)  Zanamivir (Relenza)  Unknown

**1b. Start date:** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  Unknown

**2a. Treatment 2:**  Baloxavir marboxil (Xofluza)  Peramivir (Rapivab)  Other, specify: \_\_\_\_\_  
 Oseltamivir (Tamiflu)  Zanamivir (Relenza)  Unknown

**2b. Start date:** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  Unknown

**3. Additional Treatment Comments:**

**L. Chest Imaging – Based on radiology report only**

**1. Was a chest x-ray taken within 3 days of hospitalization?**  Yes  No  Unknown

**2. Were any of these chest x-rays abnormal?**  Yes  No  Unknown

**2a. Date of first abnormal chest x-ray:** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

**2b. For first abnormal chest x-ray, please check all that apply:**

<input type="checkbox"/> Report not available	<input type="checkbox"/> Cannot rule out pneumonia	<input type="checkbox"/> Lung infiltrate	<input type="checkbox"/> Empyema
<input type="checkbox"/> Air space density	<input type="checkbox"/> Consolidation	<input type="checkbox"/> Interstitial infiltrate	<input type="checkbox"/> Other
<input type="checkbox"/> Air space opacity	<input type="checkbox"/> Cavitation	<input type="checkbox"/> Lobar infiltrate	
<input type="checkbox"/> Bronchopneumonia/pneumonia	<input type="checkbox"/> ARDS (acute respiratory distress syndrome)	<input type="checkbox"/> Pleural Effusion	

**M. Discharge Summary**

**1. Did the patient have any of the following new diagnoses at discharge? (select all that apply):**  No discharge summary available

Acute encephalopathy/encephalitis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Guillain-Barre syndrome	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute liver failure	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Hemophagocytic syndrome	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute myocardial infarction	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Invasive pulmonary aspergillosis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute myocarditis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Kawasaki disease	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute renal failure/acute kidney injury	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Mucormycosis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute respiratory distress syndrome (ARDS)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Multisystem inflammatory syndrome in children (MIS-C) or adults (MIS-A)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Acute respiratory failure	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Other thrombosis/embolism/coagulopathy	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Asthma exacerbation	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Pneumonia	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Bacteremia	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Pulmonary embolism (PE)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Bronchiolitis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Reyes Syndrome	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Bronchitis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Rhabdomyolysis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Chronic lung disease of prematurity/BPD	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Sepsis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Congestive heart failure	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Seizures	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
COPD exacerbation	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Stroke (CVA)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Deep vein thrombosis (DVT)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown	Toxic shock syndrome (TSS)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown
Diabetic ketoacidosis	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown		
Disseminated intravascular coagulation (DIC)	<input type="checkbox"/> Yes <input type="checkbox"/> No/Unknown		

**N. ICD-10-CM codes Discharged Diagnoses (to be recorded in order of appearance)**

ICD-10-CM codes not available:

- |          |          |          |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

**O. Pregnancy Information - To be completed for pregnant women only**

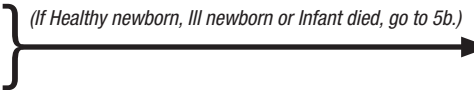
- |  |   |
|--|---|
| <b>1. Total # of pregnancies as of date of admission (Gravida, G):</b><br>_____ <input type="checkbox"/> Unknown | <b>2. Total # of pregnancies that resulted in a live birth as of date of admission (Parity, P):</b><br>_____ <input type="checkbox"/> Unknown |
|--|---|

**3. Specify total # of fetuses for current pregnancy as of date of admission:**  1  2  3  >3  Unknown

**4. Specify gestational age in weeks as of date of admission:** \_\_\_\_\_  Unknown  
**If gestational age in weeks unknown, specify trimester of pregnancy:**  1st (0 to 13 6/7 weeks)  2nd (14 0/7 to 27 6/7 weeks)  3rd (28 0/7 to end)  Unknown

**5. Indicate pregnancy status at discharge or death:**  Still pregnant  No longer pregnant  Unknown

**5a. If patient was pregnant on admission but no longer pregnant at discharge, indicate pregnancy outcome at discharge:**  
 Healthy newborn  
 Ill newborn  
 Infant died  
 Miscarriage (intrauterine death at <20 weeks GA)  
 Stillbirth (intrauterine death at ≥20 weeks GA)  
 Abortion  
 Unknown



**5b. Pre-term live birth? (<37 weeks GA)**  
 Yes  Pre-term delivery, gestational age in weeks: \_\_\_\_\_  
 No  
 Unknown

**5c. If no longer pregnant, indicate date of delivery or end of pregnancy:** \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  Unknown

**P. Vaccination History**

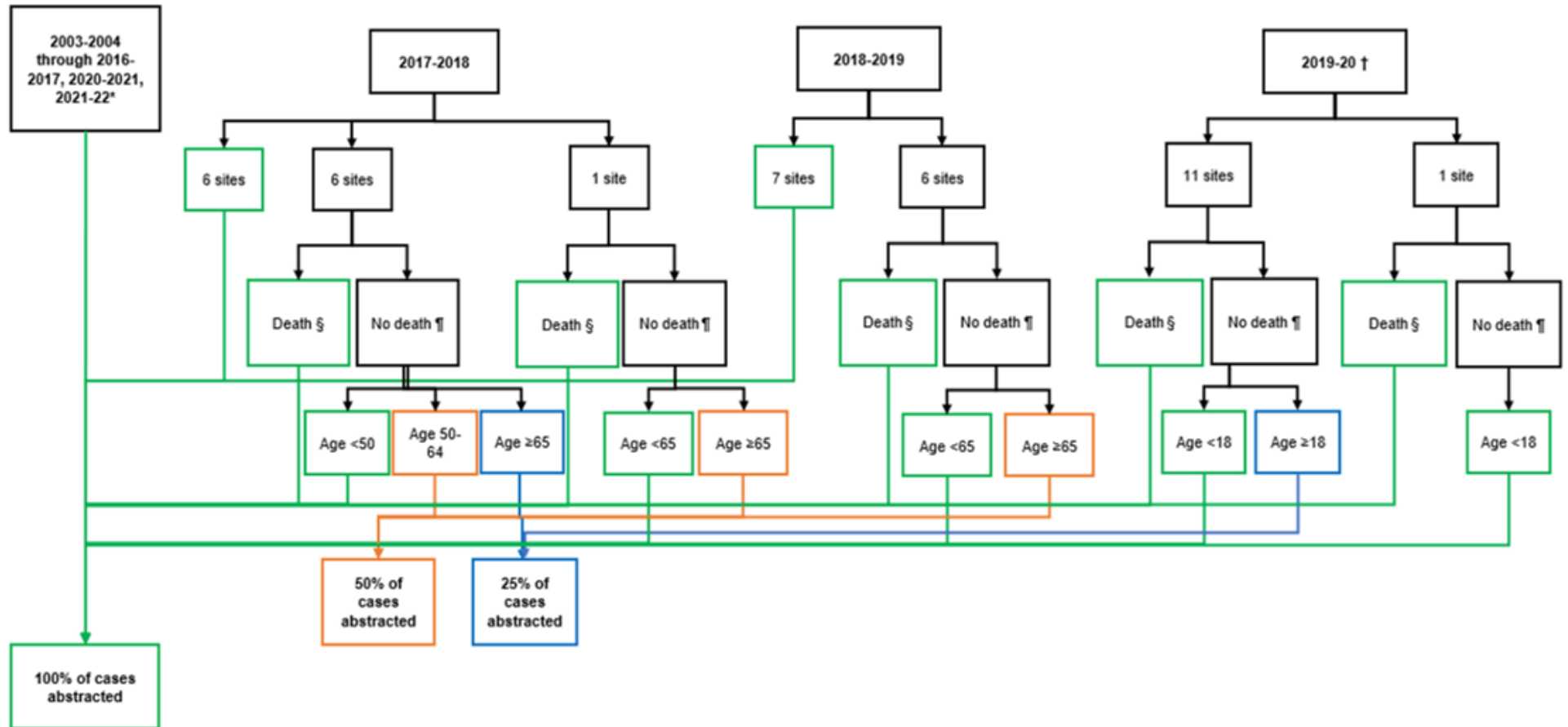
**Specify vaccination status and date(s) by source:**

- |   |   |   |   |   |                                      |   |
|---|---|---|---|---|--------------------------------------|---|
| <b>1. Medical Chart:</b>  | <input type="checkbox"/> Yes, full date known               | <input type="checkbox"/> Yes, specific date unknown | <input type="checkbox"/> No                   | <input type="checkbox"/> Unknown                    | <input type="checkbox"/> Not Checked | <input type="checkbox"/> Unsuccessful Attempt |
| <b>1a. If yes, specify dosage date information:</b>   | _____ / _____ / _____ <input type="checkbox"/> Date Unknown |   |   |   |                                      |   |
| <b>1b. If patient &lt; 9 yrs, specify vaccine type:</b>   | <input type="checkbox"/> Injected Vaccine                   | <input type="checkbox"/> Nasal Spray/FluMist        | <input type="checkbox"/> Combination of both  | <input type="checkbox"/> Unknown type               |                                      |   |
| <b>2. Vaccine Registry:</b>   | <input type="checkbox"/> Yes, full date known               | <input type="checkbox"/> Yes, specific date unknown | <input type="checkbox"/> No                   | <input type="checkbox"/> Unknown                    | <input type="checkbox"/> Not Checked | <input type="checkbox"/> Unsuccessful Attempt |
| <b>2a. If yes, specify dosage date information:</b>   | _____ / _____ / _____ <input type="checkbox"/> Date Unknown |   |   |   |                                      |   |
| <b>2b. If patient &lt; 9 yrs, specify vaccine type:</b>   | <input type="checkbox"/> Injected Vaccine                   | <input type="checkbox"/> Nasal Spray/FluMist        | <input type="checkbox"/> Combination of both  | <input type="checkbox"/> Unknown type               |                                      |   |
| <b>3. Primary Care Provider /LTCF:</b>  | <input type="checkbox"/> Yes, full date known               | <input type="checkbox"/> Yes, specific date unknown | <input type="checkbox"/> No                   | <input type="checkbox"/> Unknown                    | <input type="checkbox"/> Not Checked | <input type="checkbox"/> Unsuccessful Attempt |
| <b>3a. If yes, specify dosage date information:</b>   | _____ / _____ / _____ <input type="checkbox"/> Date Unknown |   |   |   |                                      |   |
| <b>3b. If patient &lt; 9 yrs, specify vaccine type:</b>   | <input type="checkbox"/> Injected Vaccine                   | <input type="checkbox"/> Nasal Spray/FluMist        | <input type="checkbox"/> Combination of both  | <input type="checkbox"/> Unknown type               |                                      |   |
| <b>4. Interview:</b>  | <input type="checkbox"/> Patient                            | <input type="checkbox"/> Proxy                      | <input type="checkbox"/> Yes, full date known | <input type="checkbox"/> Yes, specific date unknown | <input type="checkbox"/> No          | <input type="checkbox"/> Unknown              |
| <b>4a. If yes, specify dosage date information:</b>   | _____ / _____ / _____ <input type="checkbox"/> Date Unknown |   |   |   |                                      |   |
| <b>4b. If patient &lt; 9 yrs, specify vaccine type:</b>   | <input type="checkbox"/> Injected Vaccine                   | <input type="checkbox"/> Nasal Spray/FluMist        | <input type="checkbox"/> Combination of both  | <input type="checkbox"/> Unknown type               |                                      |   |
| <b>5. If patient &lt; 9 yrs, did patient receive any seasonal influenza vaccine previous seasons?</b> | <input type="checkbox"/> Yes                                | <input type="checkbox"/> No                         | <input type="checkbox"/> Unknown              |   |                                      |   |
| <b>6. If patient &lt; 9 yrs, did patient receive 2nd influenza vaccine in current season?</b>         | <input type="checkbox"/> Yes                                | <input type="checkbox"/> No                         | <input type="checkbox"/> Unknown              |   |                                      |   |
| <b>6a. If yes, specify 2nd dosage date information:</b>   | _____ / _____ / _____ <input type="checkbox"/> Date Unknown |   |   |   |                                      |   |

**Q. Additional Comments**

Supplementary Figure 3. Sampling schemes used for Influenza Hospitalization Surveillance Network, United States, 2003-04 through 2022-23 influenza seasons

A) 2003-04 through 2021-22 seasons



\* In the 2021-22 season, 100% of cases from October 2021 through April 2022 were sampled for complete chart review. Cases admitted from May 2022-June 2022 did not have complete chart reviews.

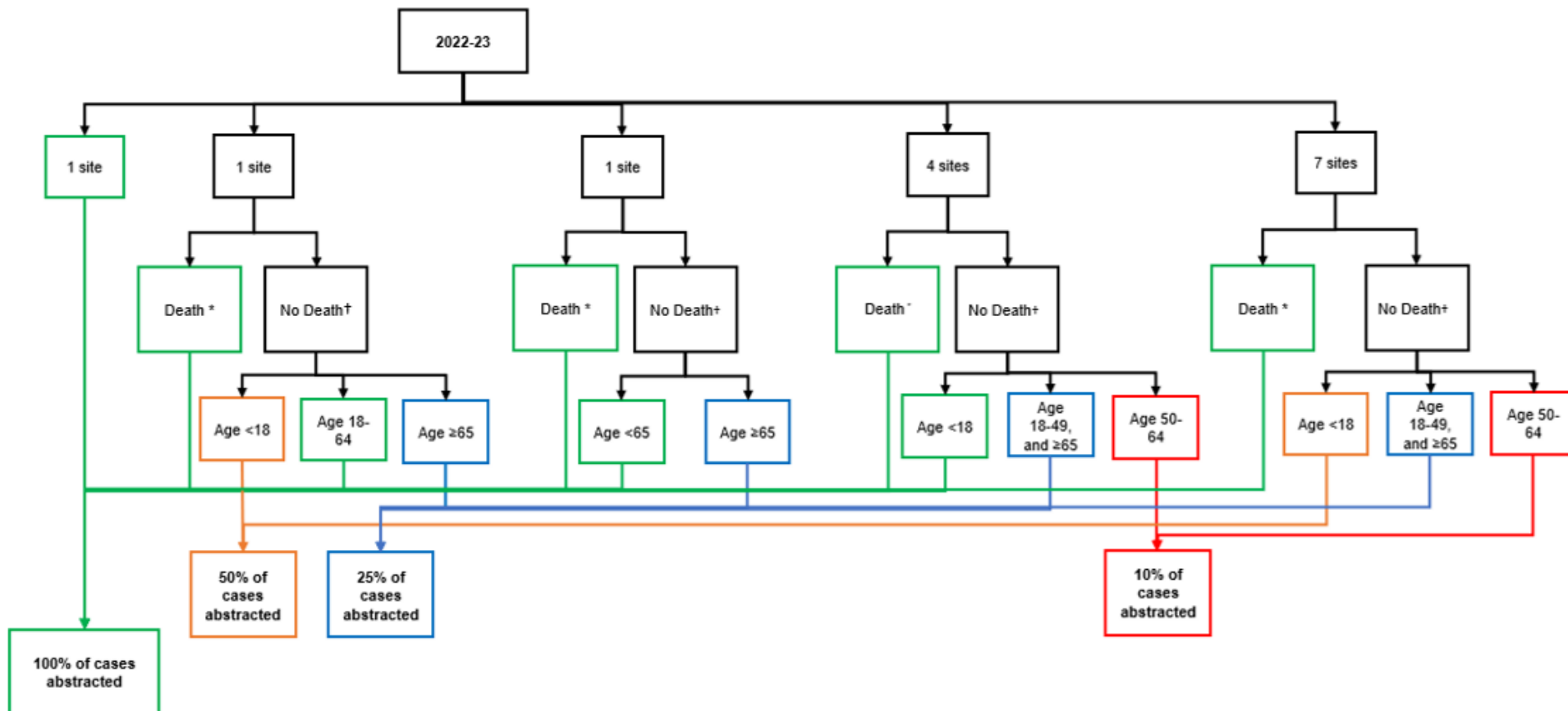
† In 2019-20, one site did not sample any charts in 2019-20. Eight sites conducted charts of all in-hospital deaths this season but not on deaths occurring within 30 days of hospital discharge.

§ Case died in hospital or within 30 days of hospital discharge.

¶ Case did not die in hospital or within 30 days of hospital discharge.



B) 2022-23 season



\* Case died in hospital or within 30 days of hospital discharge.

† Case did not die in hospital or within 30 days of hospital discharge.












Underlying medical condition	Influenza Season												
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2021-22		
Bipolar													
Depression													
Schizophrenia spectrum disorder													
<b>Other Disease</b>													
Active tuberculosis *													
Feeding tube (PEG, see list)													
Systemic lupus erythematosus/SLE/Lupus <sup>+++++</sup>													
Trach dependent/Vent dependent													
Wheelchair dependent													
Other													
<b>Abnormality of upper airway (pediatric only)</b> <sup>§§§§§</sup>													
<b>Chronic lung disease of prematurity/Bronchopulmonary dysplasia (BPD)</b>													
<b>History of febrile seizures (pediatric only)</b>													
<b>Long-term aspirin therapy (pediatric only)</b>													
<b>Premature (pediatric &lt;2 years only)</b>													

<b>Key</b>	 Case Report Form & Database	 Database only	 Not collected
------------	---	---	---

\*In 2018-19, TB was moved from Other Disease to Chronic Lung Disease Section.

† In 2019-20, Thyroid dysfunction definition expanded to include Grave's disease, Hashimoto's disease, hyperthyroidism, hypothyroidism.

§ In 2010-11, collected as "Hemoglobinopathy (including sickle cell disease)".

¶ Changed from Chronic Cardiovascular Disease.

\*\* Label updated in 2019-20 to add clarification, "history of".

†† Label updated in 2019-20 from Cerebral vascular incident/stroke.

§§ In 2019-20 Congenital Heart Disease was expanded to include subcategory options that should be selected in addition to Congenital Heart Disease option.

¶¶ Removed in 2021-22, conditions combined into Neurologic disorders.

\*\*\* Label updated in 2019-20 to include Epilepsy.

††† Label updated in 2019-20 to include Quadriplegia.

§§§ In 2019-20, NHL was added as an option to existing lymphoma/Hodgkins.

¶¶¶ Label updated in 2019-20 to include Immunodeficiency.

\*\*\*\* In 2019-20, condition of selecting option specified to within 12 months prior to admission (see instructions).

†††† Label updated in 2019-20 from Stem cell transplant (e.g. bone marrow transplant).

§§§§ Label updated in 2019-20 from Organ Transplant.

¶¶¶¶ In 2019-20, dialysis was separated off into a new option.

\*\*\*\*\* Label updated in 2019-20 from Liver Disease; separated into its own category in 2017-18.

††††† In 2019-20, viral hepatitis was split into two new options.

§§§§§ Separated into its own category from Other in 2017-18.

¶¶¶¶¶ Pregnancy removed from underlying condition section in 2022-23 and added to admission information section.

\*\*\*\*\* Osteoarthritis excluded.

††††† Systemic lupus erythematosus/SLE/Lupus moved from Other Diseases to Rheumatologic/Autoimmune/Inflammatory Conditions in 2019-20.

§§§§§ Label updated to remove "upper" in 2019-20.

**Supplementary Table 2. International Classification of Disease, 9<sup>th</sup> Revision (ICD-9) and 10<sup>th</sup> Revision (ICD-10) codes at discharge used in part to define community-acquired pneumonia†**

Description	ICD-9	ICD-10
Viral pneumonia; Viral pneumonia not elsewhere classified	480.*	J12.*
Pneumococcal pneumonia, Pneumonia due to Streptococcus pneumoniae	481, 481.0, 481.00	J13
Other bacterial pneumonia, Pneumonia due to Hemophilus influenzae	482.*	J14
Pneumonia due to other infectious organisms, not elsewhere classified		J16.*
Pneumonia due to other specified organism, Bacterial pneumonia, not elsewhere classified	483.*	J15.*
Pneumonia infectious diseases classified elsewhere, Pneumonia in diseases classified elsewhere	484.*	J17
Pneumonia, unspecified organism	485, 485.0, 485.00, 486, 486.0, 486.00	J18.*
Influenza due to identified novel influenza A virus with pneumonia; Influenza due to other identified influenza virus with pneumonia; influenza due to other identified influenza virus with unspecified type of pneumonia; influenza due to other identified influenza virus with the same other identified influenza virus pneumonia; influenza due to other identified influenza virus with other specified pneumonia; Influenza due to unidentified influenza virus with pneumonia; Influenza due to unidentified influenza virus with unspecified type of pneumonia; Influenza due to unidentified influenza virus with specified pneumonia	487, 487.0	J09.X1, J10.0, J10.00, J10.01, J10.08, J11.0, J11.00, J11.08
Empyema; Pyothorax without fistula	510, 510.9	J86.9
Abscess of lung and mediastinum; Abscess of lung with pneumonia	513, 513.1	J85.1
Ventilator associated pneumonia	997.31	J95.851

\* All subsequent codes under this header are included.

†These categories are not mutually exclusive, so a patient could have a discharge diagnosis in more than one category.

**Supplementary Table 3. Duration of hospitalization and ICU admission of laboratory-confirmed, influenza-associated hospitalizations overall and by age group, Influenza Hospitalization Surveillance Network, United States, 2010-11 – 2022-23 influenza seasons**

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2021-22	2022-23
	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)
<b>Duration of hospitalization (days)</b>												
All ages	3 (2-6)	3 (2-5)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-5)	3 (2-6)
0-4 years	2 (1-4)	2 (1-3)	2 (1-4)	2 (2-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-3)	2 (1-3)	2 (1-3)	2 (1-4)
5-17 years	3 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (2-4)	2 (1-4)	2 (1-4)	2 (1-3)	2 (1-4)
18-49 years	3 (2-5)	2 (2-4)	3 (2-5)	3 (2-5)	3 (2-4)	3 (2-5)	3 (2-5)	3 (2-5)	3 (2-5)	3 (2-5)	2 (2-4)	3 (2-4)
50-64 years	4 (2-7)	3 (2-5)	3 (2-6)	4 (2-7)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)	3 (2-6)
≥65 years	4 (3-7)	3 (2-6)	4 (2-6)	4 (2-7)	4 (2-6)	4 (2-6)	4 (2-6)	4 (2-6)	4 (2-6)	4 (2-6)	4 (2-7)	4 (2-7)
<b>Duration of ICU (days)</b>												
All ages	--	3 (1-5)	3 (1-6)	4 (2-9)	3 (1-6)	3 (2-7)	3 (1-5)	3 (1-5)	3 (1-6)	3 (1-6)	2 (1-5)	3 (1-5)
0-4 years	--	2 (1-4)	3 (1-5)	3 (1-6)	2 (1-5)	2 (1-6)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-4)	2 (1-3)	2 (1-4)
5-17 years	--	2 (1-3)	2 (1-5)	3 (1-6)	2 (1-4)	3 (1-5)	2 (1-4)	2 (1-4)	2 (1-5)	2 (1-6)	2 (1-3)	2 (1-4)
18-49 years	--	3 (1-8)	3 (1-6)	4 (2-11)	2 (1-6)	3 (2-10)	2 (1-5)	2 (1-5)	3 (1-7)	2 (1-6)	2 (1-4)	3 (2-7)
50-64 years	--	3 (2-9)	3 (1-7)	4 (2-9)	3 (1-7)	4 (2-9)	3 (1-6)	3 (1-6)	3 (1-6)	3 (2-7)	3 (1-8)	3 (2-6)
≥65 years	--	2 (1-5)	3 (1-5)	3 (2-7)	3 (1-6)	3 (2-6)	3 (1-5)	3 (1-5)	3 (1-6)	2 (1-6)	3 (1-6)	3 (1-5)

IQR = Interquartile Range



**Supplementary Table 4. Distribution of influenza type (and subtype\*) among laboratory-confirmed influenza-associated hospitalizations, by age group, Influenza Hospitalization Surveillance Network, United States, 2010-11 – 2022-23 influenza seasons**

	Influenza Season											
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2021-22	2022-23
<b>Age (years)</b>												
<b>Influenza type (subtype)</b>												
0-4												
A(H1N1)pdm09	24.9	19.6	4.6	84.2	0.2	71.3	3.6	29.7	61.9	51.4	0.5	18.4
A(H3N2)	45.4	67.7	58.0	6.6	80.1	7.6	68.2	47.4	33.8	1.6	97.3	78.1
B	29.7	12.7	37.4	9.2	19.8	21.1	28.1	22.9	4.3	47.0	2.2	3.5
5-17												
A(H1N1)pdm09	28.3	23.6	3.1	78.1	0.2	56.6	1.4	19.3	46.7	42.4	0	18.3
A(H3N2)	33.6	50.8	46.8	9.0	77.8	6.0	63.6	46.4	49.0	2.4	99.1	77.8
B	38.1	25.7	50.1	12.9	22.0	37.4	35.0	34.3	4.4	55.3	1.0	3.9
18-49												
A(H1N1)pdm09	46.1	35.4	7.3	86.2	0.4	72.5	2.7	20.7	60.5	62.9	0.3	24.9
A(H3N2)	37.3	52.3	70.2	7.2	79.9	7.4	72.1	53.4	35.4	2.5	97.5	70.8
B	16.7	12.3	22.5	6.6	19.7	20.1	25.2	25.9	4.1	34.6	2.2	4.3
50-64												
A(H1N1)pdm09	44.8	26.0	6.3	84.4	0.2	74.7	2.1	18.0	62.0	80.1	0.2	31.8
A(H3N2)	44.8	59.1	71.9	6.4	80.1	6.0	73.8	52.5	34.6	2.6	95.5	64.7
B	10.4	14.9	21.8	9.2	19.7	19.3	24.1	29.5	3.4	17.3	4.3	3.6
≥65												
A(H1N1)pdm09	13.0	6.1	1.4	63.9	0.2	54.6	1.3	7.1	39.1	73.9	0.1	23.1
A(H3N2)	75.3	85.5	86.3	19.6	89.7	13.6	80.8	66.4	56.7	5.8	96.4	73.6
B	11.7	8.4	12.2	16.5	10.0	31.7	18.0	26.5	4.1	20.3	3.5	3.3

\* Subtype was imputed for influenza A cases with unknown subtype using multiple imputation. The percent imputed ranged from 38% to 72% across all seasons.

**Supplementary Table 5. Influenza vaccination among patients with high-risk (HR) conditions, Influenza Hospitalization Surveillance Network, United States, 2010-11 through 2022-23 influenza seasons**

	Influenza Season											
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2021-22	2022-23
	%	%	%	%	%	%	%	%	%	%	%	%
<b>Received Vaccine*</b>												
All ages												
HR	45.3	47.6	49.3	35.4	52.6	42.5	51.4	49.3	50.6	40.0	44.0	30.8
Non-HR	25.5*	33.6*	32.6*	20.9*	31.7*	21.7*	30.2*	27.5*	30.5*	22.9*	26.0*	16.3*
0-4 years												
HR	42.6	41.7	43.6	41.3	49.7	48.6	52.7	50.9	44.1	44.5	45.3	21.0
Non-HR	26.7*	47.2*	38.7	33.2	32.0*	33.0*	36.7*	31.1*	40.6	33.2*	38.7	17.3
5-17 years												
HR	36.2	43.9	43.7	37.7	45.0	37.8	39.1	39.5	45.5	38.2	36.6	17.7
Non-HR	20.3*	23.2*	20.0*	25.3	24.0*	22.9*	18.8*	22.3*	27.8*	23.0*	22.3*	19.8
18-49 years												
HR	26.0	24.6	30.0	21.3	33.4	27.6	32.6	28.3	32.3	25.5	24.4	16.3
Non-HR	16.0*	8.0*	12.6*	6.9*	11.6*	10.4*	11.9*	13.2*	12.3*	9.3*	14.9*	6.2*
50-64 years												
HR	40.4	42.2	40.0	31.7	44.0	38.7	43.3	39.7	41.7	35.4	37.6	24.7
Non-HR	15.4*	28.0	24.2*	13.4*	18.4*	9.1*	18.8*	18.1*	17.2*	16.6*	6.1*	11.8
≥65 years												
HR	61.2	62.5	59.4	50.0	59.1	54.5	58.5	57.3	61.7	51.0	56.8	41.3
Non-HR	48.4*	51.9	48.9*	39.4*	45.5*	29.7*	43.8*	39.3*	45.8*	27.0*	41.3	29.1

\* p < 0.05 by Chi Square test comparing those vaccinated, unvaccinated, and with missing/unknown vaccination among high-risk versus non-high-risk cases.