NHSN Vaccination Module
Target Audience

- **Population served:** Healthcare Facility Inpatients
- **Module is designed for those who will collect and analyze data for inpatient vaccination efforts**
- **This may include:**
  - NHSN Facility Administrator
  - Patient Safety Primary Contact
  - Infection Preventionist (IP)
  - Epidemiologist
  - Data entry staff
  - Professional nursing staff
  - Trained support staff
Learning Objectives

- Understand the impact of influenza vaccinations on patient safety
- Discuss the recommendations of the Advisory Committee on Immunization Practices (ACIP) for influenza vaccinations
- Review the structure of the Patient Safety Component Modules and describe the surveillance methodology used for data collection
- Define the ways the module can assist facilities with the management of patient vaccination
Background

- Influenza infections are associated with increased medical costs, hospitalizations, lost productivity, and thousands of deaths every year in the United States.

- Annual influenza vaccination in all persons ≥ 6 months of age is the best way to reduce the risk for illness and possible death from influenza infections.

- Groups at highest risk for influenza infections and complications are:
  - Persons ≥ 65 years of age
  - Children < 2 years of age
  - Persons of any age with underlying medical conditions placing them at increased risk for the complications of influenza

*One opportunity to vaccinate are when these persons are hospitalized*
Highlights of the ACIP Recommendations

- Annual vaccination administered to all persons aged ≥ 6 months

- Two doses of vaccine are recommended for children aged 6 months to 8 years whose vaccination status is unknown or who have never received seasonal influenza vaccine

- The 2009 H1N1 vaccine is included in the 2010 trivalent vaccine
ACIP Recommendations (continued)

- For 2010 — 2011, there is an approved high dose vaccine for persons aged ≥ 65 years

- Vaccination efforts should begin as soon as the seasonal influenza vaccine is available and continue through the season (September — April)
Patient Safety Component Modules

- Device-associated Module
- Procedure-associated Module
- Medication-associated Module
- MDRO & CDI Module
- Vaccination Module
Surveillance Methodology

There are two separate surveillance approaches within the Vaccination Module:

- **Retrospective: Summary Method**
  - Requires review of medical records
  - Uses optional Influenza Vaccination Standing Orders form

- **Prospective: Patient-Level Method**
  - Tracks patient admissions to determine eligibility for vaccination
  - Uses optional Influenza Vaccination Standing Orders form
Minimum Surveillance Requirements

- Complete module for at least one month during influenza season

- Either method may be used during the season: Summary Method or Patient–Level Method

- When vaccinations for more than one subtype are recommended during a season, use a *single* method during the month and report data separately for each vaccination subtype

- Maximal benefit obtained by completing module each month for each subtype during influenza season
NHSN Forms Used for Vaccination Module

- Vaccination Monthly Monitoring Form — Summary Method (CDC Form 57.130)
- Vaccination Monthly Monitoring Form — Patient-Level Method (CDC Form 57.131)
- Patient Vaccination form (CDC 57.133)
- Influenza Vaccination Standing Orders (Optional) (CDC Form 57.134)

Tables of Instructions for Forms
Monthly Reporting Plan

Add Monthly Reporting Plan

Mandatory fields marked with **

Facility ID*: DHQP MEMORIAL HOSPITAL (ID 10018)
Month*: 
Year*: 

☐ No NHSN Patient Safety Modules Followed this Month

Scroll down

Vaccination Module

Summary Method: 
Patient-level Method: 
Copy from Previous Month

During a given month of influenza season, select surveillance method.
Summary Method

- Uses a single form: Vaccination Monthly Monitoring Form — Summary Method
- Less data required to complete; summary counts only
- Less information provided about patient population than Patient-Level Method
- Influenza Vaccination Standing Orders form can be used; optional
Summary Method

Add Patient Safety Summary Data

Summary Data Type: Device Associated - Intensive Care Unit / Other Locations
- Device Associated - Intensive Care Unit / Other Locations
- Device Associated - Neonatal Intensive Care Unit
- Device Associated - Specialty Care Area
- Device Associated - Outpatient Dialysis - Census Form
- MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

Add Vaccination Monthly Monitoring Form - Summary Method from the Summary Data section of the Navigation Bar.
If more than one flu vaccine subtype is recommended for a season, use one form per subtype for the month.
### Summary Method Monitoring Form

#### Fill out all mandatory fields of the Summary Method.

<table>
<thead>
<tr>
<th>Patient categories</th>
<th>Number of patients in each category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total # of patient admissions</td>
<td>= 30</td>
</tr>
<tr>
<td>2. Total # of patients aged 6 months and older meeting criteria for influenza vaccination</td>
<td>= 20</td>
</tr>
<tr>
<td>3. Total # of patients previously vaccinated during current influenza season</td>
<td>= 5</td>
</tr>
<tr>
<td>4. Total patients not previously vaccinated during current influenza season (Box 2 - Box 3)</td>
<td>= 15</td>
</tr>
<tr>
<td>5. Patients meeting criteria offered vaccination but declining for reasons other than medical contraindication</td>
<td>= 5</td>
</tr>
<tr>
<td>6. Patients meeting criteria offered vaccination but having medical contraindication</td>
<td>= 5</td>
</tr>
<tr>
<td>7. Patients meeting criteria receiving vaccination during admission</td>
<td>= 5</td>
</tr>
<tr>
<td>8. Total patients offered vaccination (Box 5 + Box 6 + Box 7)</td>
<td>= 15</td>
</tr>
</tbody>
</table>

*This count is optional, however, if not reported the assumption will be that no inpatients were previously vaccinated.*
Patient-Level Method

- **Two forms are required:**
  - Patient Vaccination form
  - Vaccination Monthly Monitoring Form — Patient-Level Method
  - Optional; Influenza Vaccination Standing Orders form

- **Patient-level data required**

- **Provides more information about patient population**
Patient Vaccination Form

Add Event

Required patient demographic fields (marked with *):
*Patient ID
*Gender
*Date of birth

Add Patient Vaccination Form from the Event section of the Navigation Bar.
If vaccine not offered:

If vaccination offered=No, form is complete. Click save.
If vaccine offered and declined:

If vaccine offered=Yes, and vaccine declined=Yes, check reason(s) vaccine declined.

Check all that apply in either section A or section B, but not both. If reasons exist in both categories, then medical contraindications (section A) takes priority and should be completed.
Patient Vaccination Form

- **If vaccine offered and administered:**

<table>
<thead>
<tr>
<th>Event Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type*</td>
<td>FLUVAX - Influenza Vaccination</td>
</tr>
<tr>
<td>Influenza subtype*</td>
<td>SEASONAL - Seasonal</td>
</tr>
<tr>
<td>Date Admitted to Facility*</td>
<td>03/11/2011</td>
</tr>
<tr>
<td>Vaccine Offered*</td>
<td>Y - Yes</td>
</tr>
<tr>
<td>Vaccine Declined*</td>
<td>N - No</td>
</tr>
</tbody>
</table>

**Type of influenza vaccine administered**

- Vaccine administered* | Y - Yes |
- Date Vaccine Administered: |  |
- Product* |  |
- Type of influenza vaccine* |  |
- Manufacturer |  |
- Lot number* |  |
- Route of administration* |  |

Vaccine information statement (VIS) provided to patient:

- Live Attenuated Influenza VIS
- Inactivated Influenza VIS
- None or unknown

Edition date: |

Vaccinator ID: | Find HCW |
Title: |
Last Name: |
First Name: |

If vaccine offered=Yes, and vaccine administered=Yes, complete vaccine product information.
Patient Vaccination Form

Vaccinator information is optional.
Add Patient Safety Summary Data

Summary Data Type:
- Device Associated - Intensive Care Unit / Other Locations
- Device Associated - Neonatal Intensive Care Unit
- Device Associated - Specialty Care Area
- Device Associated - Outpatient Dialysis - Census Form
- MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring
- Vaccination Monthly Monitoring Form - Summary Method
- Vaccination Monthly Monitoring Form - Patient-Level Method

Add Vaccination Monthly Monitoring Form - Patient-Level Method from the Summary Data section on the Navigation Bar.
Vaccination Monthly Monitoring Form — Patient-Level Method

Fill out all mandatory fields of the Patient-Level form.

<table>
<thead>
<tr>
<th>Patient categories</th>
<th>Number of patients in each category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of patient admissions</td>
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</tr>
<tr>
<td>Total # of patients previously vaccinated during current influenza season</td>
<td>5</td>
</tr>
<tr>
<td>Total patients not previously vaccinated during current influenza season (Box 2 - Box 3)</td>
<td>* 15</td>
</tr>
</tbody>
</table>

This count is optional, however, if not reported the assumption will be that no inpatients were previously vaccinated.
Important Notes about the Patient-Level Surveillance Method

NHSN patients who meet criteria, but have previously been vaccinated during the current influenza season do **not** require the Patient Vaccination form, **but** should be totaled and entered on the Vaccination Monthly Monitoring Form — Patient Level Method (Box 3).
Important Notes about the Patient-Level Surveillance Method

Patients requiring a second vaccine should *not* be included in the count of those previously vaccinated on the Vaccination Monthly Monitoring — Patient-Level Method form, however, a Patient Vaccination form needs to be completed for each of the two doses given.
Vaccination Module Influenza Vaccination
Standing Orders Form

- Use is optional

- May be used to collect information required to complete forms for Summary or Patient-Level Methods

- Available on NHSN website for printing as is or customize to meet facility-specific needs
Using Vaccination Module Data

- **Data are:**
  - Stratified by time: month or season
  - Stratified by influenza subtype: seasonal or non-seasonal

- **Both methods provide data for 10 different rates (refer to protocol)**

- **Patient-Level method provides additional data to describe characteristics of inpatients identified including:**
  - Age, gender, date of admission and vaccination, if administered
  - Type of vaccination administered to patient
  - Reasons for declination
## Metrics for Summary Method

**Table 2: Formulas for Metrics: Summary Method**

All data come from Boxes 1-8 of the Vaccination Monthly Monitoring Form—Summary Method (CDC 57.130).

<table>
<thead>
<tr>
<th>Metric</th>
<th>Formula (x 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prevalence rate for inpatients not previously vaccinated among all inpatient admissions</td>
<td>Box 4 / Box 1</td>
</tr>
<tr>
<td>2 Adherence rate for offering influenza vaccination to inpatients among all those not previously vaccinated</td>
<td>Box 8 / Box 4</td>
</tr>
<tr>
<td>3 Adherence rate for receiving influenza vaccination by inpatients among all those not previously vaccinated</td>
<td>Box 7 / Box 4</td>
</tr>
<tr>
<td>4 Adherence rate for receiving influenza vaccination by inpatients among all medically eligible inpatients</td>
<td>Box 7 / (Box 4 − Box 6) Box 7 / Box 4 − Box 6</td>
</tr>
<tr>
<td>5 Adherence rate for receiving influenza vaccination by inpatients among all medically eligible, willing inpatients</td>
<td>Box 7 / (Box 4 − (Box 6 + Box 5))</td>
</tr>
</tbody>
</table>
### Metrics for Patient-Level Method

#### Table 3: Formulas for Metrics: Patient-Level Method

Data come from two CDC forms:
- Boxes 1 - 4 of the *Vaccination Monthly Monitoring Form–Patient-Level Method* (CDC 57.131)
- *Patient Vaccination (PV)* form (CDC 57.133)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Formula (x 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prevalence rate for inpatients not previously vaccinated among all inpatient admissions</td>
<td>Box 4&lt;br&gt;Box 1</td>
</tr>
<tr>
<td>2 Adherence rate for offering influenza vaccination to inpatients among all those not previously vaccinated</td>
<td>Total # PV Forms “Vaccine offered” = “Yes”&lt;br&gt;Box 4</td>
</tr>
<tr>
<td>3 Adherence rate for receiving influenza vaccination by inpatients among all those not previously vaccinated</td>
<td>Total # PV Forms “Vaccine administered” = “Yes”&lt;br&gt;Box 4</td>
</tr>
<tr>
<td>4 Adherence rate for receiving influenza vaccination by inpatients among all those not previously vaccinated</td>
<td>Total # PV Forms “Vaccine administered” = “Yes”&lt;br&gt;Box 4&lt;br&gt;Total # PV Forms “Vaccine declined” = “Yes”&lt;br&gt;Box 4 - Total # PV Forms “Vaccine declined” = “Yes”</td>
</tr>
</tbody>
</table>
Summary of NHSN Vaccination Module

- Allows facilities to track rates of vaccine administration among inpatients

- Vaccination Module forms are used to collect data using CDC definitions and protocols

- Vaccination Module data may be used to:
  - Improve the rate of influenza vaccine administration
  - Reduce the risk of complications in inpatients from influenza infection
  - Assist facilities in documentation efforts
Resources Available for NHSN Vaccination Module

The following NHSN resources are available to assist in the completion of the Vaccination Module:

- **Vaccination Protocol**

- **Forms for Vaccination Module**

- **Tables of Instructions**
  - Provides step-by-step instructions about how to complete the Vaccination Module forms
Contact Information

NHSN Help Desk: nhsn@cdc.gov
NHSN website: www.cdc.gov/nhsn