National Healthcare Safety Network (NHSN)

The National Healthcare Safety Network (NHSN) is a voluntary, secure, internet-based surveillance system that integrates and expands legacy patient and healthcare personnel safety surveillance systems managed by the Division of Healthcare Quality Promotion (DHQP) at CDC. NHSN also includes a new component for hospitals to monitor adverse reactions and incidents associated with receipt of blood and blood products. Enrollment is open to all types of healthcare facilities in the United States, including acute care hospitals, long term acute care hospitals, psychiatric hospitals, rehabilitation hospitals, outpatient dialysis centers, ambulatory surgery centers, and long term care facilities. For more information, click on the topics below.

Topics

- **About NHSN**
  - Overview
  - External Peer Review
  - Confidentiality
  - How data are used...

- **Enrollment Requirements**
  - Eligibility
  - Required Training
  - Reporting & System Requirements
  - Security
  - Begin Enrollment...

- **Patient Safety Component**
  - Procedure, Device (Dialysis Event)
  - Medication-associated, MDRO, & HRIIV Modules...

- **Healthcare Personnel Safety Component**
  - Influenza Vaccination, Antiviral Chemoprophylaxis...

Data & Statistics

States with Facilities Using NHSN

(03/21/08)
Healthcare Personnel Safety Component

Occupational hazards faced by healthcare personnel (HCP) in the United States have received increasing attention. Although recommendations, guidelines, and regulations to minimize HCP exposure to such hazards have been developed, additional information is needed to improve HCP safety.

CDC developed a surveillance system, NaSH or the National Surveillance System for Health Care Workers that focused on surveillance of exposures and infections among HCP. Operational from 1995 through 2007, NaSH has been replaced by the Healthcare Personnel Safety (HPS) Component of the National Healthcare Safety Network (NHSN). The component consists of four modules: Blood/Body Fluids Exposure with Exposure Management, Blood/Body Fluids Exposure only, Influenza Exposure Management, and Influenza Vaccination with (or without) Exposure Management. Additional modules are anticipated in the future.

Benefits of Participation in the Healthcare Personnel Safety Component

- Data collected in this surveillance system will assist healthcare facilities, HCP organizations, and public health agencies
- To monitor and report trends in blood/body fluid exposures
Introduction to NHSN’s Healthcare Personnel Safety Component

- Launched in September 2009
- Continuation and expansion of the previous National Surveillance System for Healthcare Workers (NaSH)
- Collect data from sample of US healthcare facilities
  - Estimate the severity and magnitude of adverse events among healthcare personnel
  - Estimate healthcare personnel participation in seasonal flu vaccine campaigns
- Work toward prevention strategies to improve adverse events in healthcare personnel
Benefits of Participation

- Monitor and report trends in blood/body fluid exposures
- Assess the impact of preventive measures
- Monitor influenza vaccination rates among HCP
- Characterize influenza antiviral medication use
- Generate exposure reports for individual medical records and OSHA-300 or equivalent reports
Staffing Requirements for Participating in the Healthcare Personnel Safety Component

- Oversight of occupational health surveillance program by trained Occupational Health Professional (OHP), Infection Preventionist (IP) or Hospital Epidemiologist
- Other personnel can be trained to:
  - Screen for events (e.g., exposures, vaccinations)
  - Collect denominator data
  - Collect exposure management/vaccination data
  - Enter data
  - Analyze data
Types of Data Entered in HPS

- Healthcare worker demographics
- Denominators
  - Measures of facility size (e.g., # beds, in-patient days, staffed beds)
  - Denominators for exposure rates, including facility size measures, numbers of HCP and FTEs
Healthcare Personnel Safety Component: Overview

Summary
This training reviews NHSN and its purposes, the 4 components in NHSN: Patient Safety, Healthcare Personnel Safety, Biovigilance, and Research and Development, and the two modules: Blood and Body Fluid Exposures and Influenza Vaccination. This training also defines key terms in HPS and how to complete the HPS Annual Facility Survey and the Monthly Reporting Plan.

Audience: This training is designed not only for those who will collect and analyze Healthcare Personnel Safety Component (or HPS) data, but also for those who will enroll a healthcare facility into NHSN. This includes NHSN facility administrators, the Healthcare Personnel Safety Primary contact, occupational health professionals, infection preventionists (IPs), epidemiologists, and data entry staff. The primary HPS contact is the person in your facility who has primary contact with CDC, especially regarding data entry questions. This is likely to be someone with occupational health responsibilities in your facility.

Corresponding Slidesets:
- Overview of the personnel Safety Healthcare Component PDF (785 KB / 50 slides)

Corresponding materials: Protocol and Instructions
  Guidelines and procedures monitored in the Healthcare Personnel Safety Component includes instructions for completing data collection forms.
  PDF (351 KB / 53 pages)
Blood and Body Fluids
Exposure Module
Overview of NHSN’s Blood and Body Fluid Exposure Module

- Designed for prospective data collection on incidents and post-exposure follow-up
- Facilities can opt to collect data on exposures or exposures+management for a min. of 6 months per calendar year
Overview of NHSN's Blood and Body Fluid Exposure Module

Module organized into:
- HCP Demographics
- Exposure Details and Baseline Lab
- Prophylaxis or Treatment
- Follow-Up Laboratory Results
Features of the Blood and Body Fluid Exposure Module

- Integration of denominators to calculate local and regional rates of injury
- Compliance with OSHA 300 log features for archiving and retrieval
- Ability to compare and benchmark rates across NHSN sites
- Produce on-demand queries, reports, or line-lists
Forms Used in the Blood and Body Fluids Exposure Module

- Healthcare Worker Demographic Data
- Exposure to Blood/Body Fluids
- Healthcare Worker Prophylaxis/Treatment
- Laboratory Testing
Entry form for a new exposure

Add Exposure

Mandatory fields marked with *
Fields required when Blood/Body Fluid Exposure is in Plan marked with †
Fields required when Blood/Body Fluid Exposure with Exposure Management is in Plan marked with §

Healthcare Worker Information

Facility ID*: DHQP MEMORIAL HOSPITAL (ID 10018)  
HCW ID*:  
Social Security #:  
Last Name:  
Middle Name:  
Gender*:  
Work Location*:  
Occupation*:  
Exposure Event #: 425  
Secondary ID:  
First Name:  
Date of Birth*:  

Exposure Type Information

Exposure Type*: BBF - Blood/Body Fluids  

General Exposure Information

Did the exposure occur in this facility?*:  
Date of Exposure*:  
Link/Unlink  
Exposure is not Linked  
Time of Exposure*:  AM  PM
Influenza Vaccination Module
Influenza Vaccination Module

National-Level Purposes

- Continue and expand occupational exposure and infection surveillance
- Collect data from U.S. healthcare facilities to estimate participation in flu vaccination campaigns
- Estimate the severity and magnitude of adverse reactions to flu vaccine among healthcare personnel
- Monitor treatment and prophylaxis administered for influenza infections
- Assess adoption and effect of strategies to increase vaccination uptake
Influenza Vaccination Module

Facility-Level Purposes

- Provide a record of flu vaccination and adverse reactions for HCP in the facility
- Meet requirement for record-keeping for adult vaccine administration
- Monitor trends in vaccination and declination rates
- Monitor treatment and prophylaxis administered for influenza infections
- Assess efficacy of facility influenza vaccination programs
Forms Used in the Influenza Vaccination Module

- Pre- and Post-season Survey on Influenza Vaccination Programs for Healthcare Personnel
- Healthcare Worker Demographic Data
- Importing HCWs
- Healthcare Worker Influenza Prophylaxis/Treatment
- Other required forms
- Facility Survey
- Monthly Reporting Plan
- Printable and web-based forms
Pre-season survey

*Date Entered: __________________________  *For Season: ____________
(Month/Year)  (Specify years)

*1. Which personnel groups do you plan to include in your annual Influenza vaccination program?
   - All personnel who work in the facility
   - All personnel who work in clinical areas, including those without direct patient care duties (e.g., clerks, housekeepers)
   - Only personnel with direct patient-care duties (e.g., physicians, nurses, respiratory therapists)

*2. Which of the following types of employees do you plan to include in your annual Influenza vaccination program? (check all that apply)
   - Full-time employees  Number ______
   - Part-time employees  Number ______
   - Contract employees  Number ______
   - Volunteers  Number ______
   - Others, specify: ________________________  Number ______

*3. At what cost will you provide Influenza vaccine to your healthcare workers?
   - No cost
   - Reduced cost
   - Full cost

*4. Will Influenza vaccination be available during all work shifts (including nights and weekends)?
   - Yes
   - No

*5. Which of the following methods do you plan to use this Influenza season to deliver vaccine to your healthcare workers? (check all that apply)
   - Mobile carts
   - Centralized mass vaccination fairs
   - Peer-vaccinators
   - Provide vaccination in congregate areas (e.g., conferences/meetings or cafeteria)
   - Provide vaccination at occupational health clinic
   - Other, specify: ________________________
# HCW Influenza Demographic Data

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>*HCW ID#:</td>
<td>Social Security #:</td>
</tr>
<tr>
<td>Secondary ID#:</td>
<td></td>
</tr>
<tr>
<td>HCW Name, Last:</td>
<td>First:</td>
</tr>
<tr>
<td>Street Address:</td>
<td>Middle:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Home Phone:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Email Address:</td>
<td></td>
</tr>
<tr>
<td>Gender:</td>
<td>☐ F ☐ M</td>
</tr>
<tr>
<td>*Date of Birth:</td>
<td>/ /</td>
</tr>
<tr>
<td>Born in U.S.?</td>
<td>☐ Yes ☐ No ☐ Unknown</td>
</tr>
<tr>
<td>Ethnicity:</td>
<td>☐ Hispanic or Latino ☐ Not Hispanic or Not Latino</td>
</tr>
<tr>
<td>Race:</td>
<td>☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American ☐ Native Hawaiian or Other Pacific Islander ☐ White</td>
</tr>
<tr>
<td>Employment Information</td>
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</tr>
<tr>
<td>Work Phone:</td>
<td>( )</td>
</tr>
<tr>
<td>*Start Date:</td>
<td>/ /</td>
</tr>
<tr>
<td>*Work Status:</td>
<td>☐ Active ☐ Inactive ☐ No longer affiliated</td>
</tr>
<tr>
<td>*Type of employee:</td>
<td>☐ Full-time ☐ Part-time ☐ Contract employee ☐ Volunteer ☐ Other(specific)</td>
</tr>
<tr>
<td>*Work Location:</td>
<td>Department: Supervisor:</td>
</tr>
<tr>
<td>*Occupation:</td>
<td>Title:</td>
</tr>
<tr>
<td>If occupation is a physician,</td>
<td>indicate clinical specialty (check one):</td>
</tr>
</tbody>
</table>
Vaccination details-page 1

* Type of vaccination: Influenza
* Influenza subtype: □ Seasonal (specify years) ________  □ Non-seasonal
* Do you plan to use this information to satisfy federal record-keeping requirements for the administration of vaccine covered by the Vaccine Injury Compensation Program? □ Yes  □ No
* Vaccine administered: □ On-site at this facility
□ Offsite at a location other than this facility
□ Declined due to medical contraindications (e.g., allergy to vaccine components)
□ Declined due to personal reasons
   If declined for personal reasons: (check all that apply)
   □ Fear of needles/injections
   □ Fear of side effects
   □ Perceived ineffectiveness of vaccine
   □ Religious or philosophical objections
   □ Concern for transmitting vaccine virus to contacts
□ Other (specify): __________________________

* Date of vaccination: _____ / _____ / ______
□ mm  dd  yyyy

* Product: (check one)
□ Afluria®  □ Lot number: __________
□ Fluarix®  □ Manufacturer: __________
□ Flulaval®
□ Flumist®
□ Fluvirin®
□ Fluzone®
□ Other (please specify) __________________________

* Type of influenza vaccine:
□ Live attenuated (LA) [e.g., nasal (Flumist®)]
□ Inactivated vaccine (INA) [e.g., injectable (Fluvirin®, Fluzone®, Fluarix®, Fluvirin®, Afluria®)]

* Route of administration:
□ Intramuscular
□ Subcutaneous
□ Intranasal
Vaccination details-page 2

*Adverse reaction to vaccine: ☐ Yes ☐ No ☐ Don't know

If Yes, check all that apply:
☐ Arthralgia  ☐ Pain/soreness at injection site
☐ Chills  ☐ Rash, generalized
☐ Cough  ☐ Rash, localized
☐ Fever  ☐ Rhinorrhea
☐ Headache  ☐ Shortness of breath/difficulty breathing
☐ Hives  ☐ Sore throat
☐ Malaise/fatigue  ☐ Swelling
☐ Myalgia  ☐ Others (specify): __________________________
☐ Nasal congestion

Which vaccine information statement, including edition date, was provided to the vaccinee?
☐ Live Attenuated Influenza Vaccine Information Statement
☐ Inactivated Influenza Vaccine Information Statement

Edition date: _____ / _____ / ______ 
mm  dd  yyyy

Person Administering Vaccine

Vaccinator ID: _____________________ (This is the HCW ID# for the vaccinator)
Name, Last: ___________________ First: ___________________ Middle: ___________________
Title: ____________________________
Work address: ____________________________
City: __________________ State: ____________ Zip code: ____________
<table>
<thead>
<tr>
<th>Indication (select one)</th>
<th>#</th>
<th>Influenza subtype</th>
<th>Antiviral medication (Enter code from below)</th>
<th>Start date</th>
<th>Stop date</th>
<th>Adverse reactions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prophylaxis</td>
<td></td>
<td>Seasonal</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>Prophylaxis</td>
<td></td>
<td>Non-seasonal</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>Prophylaxis</td>
<td></td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td>Seasonal</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td>Non-seasonal</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
</tbody>
</table>

Infectious agent: *Influenza*

For season: ___________________________

(specify years)
### Antiviral Prophylaxis/Treatment-p.2

#### Adverse reactions to antiviral medication #1: (check all that apply)

- Acute respiratory failure
- Anaphylactic reaction
- Arrhythmia
- Behavior disturbances
- Bronchospasm
- Cardiac arrest
- Cardiac failure
- Coma
- Convulsions; seizure
- Delirium, delusions, stupor
- Erythema multiforme
- Hemorrhagic colitis
- Hepatitis
- Hypotension; orthostatic hypotension
- Leukopenia; neutropenia
- Life threatening overdose
- Liver function test elevation
- Mydriasis (in patients with untreated angle closure glaucoma)
- Neuroleptic malignant syndrome with abrupt discontinuation or dose reduction
- Oropharyngeal edema
- Psychosis
- Pulmonary edema
- Serious skin rash
- Suicide or self-harm attempt
- Swelling of face or tongue
- Syncope
- Tachycardia
- Toxic epidermal necrolysis/Stevens Johnson Syndrome
- Urinary retention
- Other ____________

#### Adverse reactions to antiviral medication #2: (check all that apply)

- Acute respiratory failure
- Anaphylactic reaction
- Arrhythmia
- Behavior disturbances
- Bronchospasm
- Cardiac arrest
- Hemorrhagic colitis
- Hepatitis
- Hypotension; orthostatic hypotension
- Leukopenia; neutropenia
- Life threatening overdose
- Liver function test elevation
- Pulmonary edema
- Serious skin rash
- Suicide or self-harm attempt
- Swelling of face or tongue
- Syncope
- Tachycardia
National Healthcare Safety Network (NHSN)

Webcast training lectures

These training sessions are available for those who need to fulfill the training requirements of the NHSN, or for those who need a refresher on a particular topic.

The NHSN requires that each of its users is thoroughly trained before enrolling in or using the system. The training requirements differ depending on the role of the NHSN user.

Enrollment

- NHSN Enrollment & Facility Start-up Required for: All new NHSN Facility Administrators
  - Overview of NHSN, Device-associated module (CLABS1, VAP, CAUTI)
  - Audience: All NHSN users including Facility Administrators and Group Administrators.

- Conferring Rights to Groups
  - Audience: Group Users, Facility administrators already joined to a group or interested in joining a group and conferring rights

- Confer Rights to Group How-to Guide
  - Audience: Group Users, Facility administrators already joined to a group or
HPS Training

- Live webcast sessions
- Email and telephone support for surveillance and technical advice
- Online archived sessions and documents, including FAQs and newsletters
- Members meetings at national conferences
- Hands-on training
- NHSSN Members Conferences

Planned
Healthcare Personnel Safety Component

- Influenza Vaccination Module
  Audience: Administrators, the Healthcare Personnel Safety Primary contact, occupational health professionals, infection preventionists (IPs), epidemiologists, and data entry staff.

- Setting Up a Facility
  Audience: administrators, the Healthcare Personnel Safety Primary contact, occupational health professionals, infection preventionists (IPs), epidemiologists, and data entry staff.

- Overview of the personnel Safety Healthcare Component
  Audience: administrators, the Healthcare Personnel Safety Primary contact, occupational health professionals, infection preventionists (IPs), epidemiologists, and data entry staff.

- Blood and Body Fluids Exposure Module
  Audience: All NHSN users including Facility Administrators and Group Administrators.

http://www.cdc.gov/nhsn/training.html
Thank you

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The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention.