



This presentation will provide an overview of the Healthcare Personnel Safety component of NHSN.



Target Audience



- This training is designed for those who will collect and analyze Healthcare Personnel Safety Component (HPS) data or enroll a facility into NHSN to participate in HPS

This includes:

- NHSN Facility Administrator
- HPS Primary Contact
- Occupational Health Professionals (OHPs)
- Infection Preventionists (IPs)
- Epidemiologists
- Data entry staff



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 or 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.



Objectives



1. Describe NHSN and its purposes
2. Define the authority and confidentiality protections for NHSN
3. Identify the requirements for participating in the Healthcare Personnel Safety Component
4. List the modules of the Healthcare Personnel Safety Component
5. Explain key terms used in the Healthcare Personnel Safety Component
6. Describe the Monthly Reporting Plan

The objectives of the presentation are to describe NHSN and its purposes, to define the authority and confidentiality protections for NHSN, to identify the requirements for participating in HPS, to list its modules, explain key terms used in HPS, and to describe the monthly reporting plan. More detailed information about the HPS modules is provided in other training sessions.



National Healthcare Safety Network (NHSN)

- NHSN - an internet-based surveillance system that integrates three surveillance systems previously managed separately in the Division of Healthcare Quality Promotion (DHQP) at CDC.
 - National Nosocomial Infections Surveillance (NNIS) System
 - Dialysis Surveillance Network (DSN)
 - National Surveillance System for Healthcare Workers (NaSH)

NHSN is an internet-based surveillance system that integrates three surveillance systems that were previously managed separately in the Division of Healthcare Quality Promotion (DHQP) at the Centers for Disease Control and Prevention or CDC. Those surveillance systems were the National Nosocomial Infections Surveillance (or NNIS) System, the Dialysis Surveillance Network or DSN, and the National Surveillance System for Healthcare Workers or NaSH.



Purposes of NHSN



- Collect data from a sample of US healthcare facilities to permit valid estimation of the
 - magnitude of adverse events among patients and healthcare personnel
 - adherence to practices known to be associated with prevention of healthcare-associated adverse events
- Analyze and report collected data to permit recognition of trends

NHSN has several purposes. One of those purposes is to collect data from a sample of US healthcare facilities to permit valid estimation of the magnitude of adverse events among patients and healthcare personnel and of adherence to practices known to be associated with prevention of healthcare-associated adverse events. Another purpose of NHSN is to analyze and report collected data to permit recognition of trends in these adverse events and their prevention.



Purposes of NHSN



- Provide facilities with data that can be used for inter-facility comparisons and local quality improvement activities
- Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare personnel safety problems and prompt intervention with appropriate measures
- Conduct collaborative research studies with members

Other purposes of NHSN are to provide healthcare facilities with data that can be used for inter-facility comparisons and local quality improvement activities; to assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare personnel safety problems and prompt intervention with appropriate measures; and to conduct collaborative research studies with NHSN members. NHSN also can be used to assess the impact of interventions to prevent patient and healthcare personnel safety problems.



Authority and Confidentiality for NHSN



- Public Health Service Act (42 USC 242b, 242k, and 242m(d))
- Confidentiality Protection
 - Sections 304, 306, and 308(d) of the PHS Act

“The information contained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not be disclosed or released without the consent of the individual, or the institution in accordance with Sections 304, 306, and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).”

CDC is authorized to collect data in NHSN under the Public Health Service Act, 42 of the United States Code or USC. Confidentiality protection for NHSN data is provided under certain sections of this act. This means that the information contained in NHSN that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not be disclosed or released without the consent of the individual, or the institution in accordance with the sections of the Public Health Service Act that are listed here.



Data Collection and Reporting Requirements for Healthcare Personnel Safety Component



1. Submit a Monthly Reporting Plan to inform CDC which, if any, of the Healthcare Personnel Safety modules will be used for that month.
2. Adhere to the selected module's protocol(s) exactly as described in the *NHSN Manual: Healthcare Personnel Safety Component Protocol*.
3. Report exposure and/or vaccination data to CDC within 30 days of the end of the month as indicated on the Plan.

There are 6 requirements for data collection and reporting. The requirements, shown in several slides, include the following:

- 1st, submit a monthly reporting plan to inform CDC which, if any, of the HPS modules will be used for that month.
- 2nd, adhere to the selected module's protocol(s) exactly as described in the *NHSN Manual: Healthcare Personnel Safety Component Protocol* .
- 3rd, report exposure and/or influenza vaccination data to CDC within 30 days of the end of each month as indicated on the Plan



Data Collection and Reporting Requirements for Healthcare Personnel Safety Component

(continued)

4. Submit data for at least one module for a minimum of 6 months of the calendar year.
5. Complete an annual survey for your facility.
6. Pass quality control acceptance checks that assess the data for completeness and accuracy.

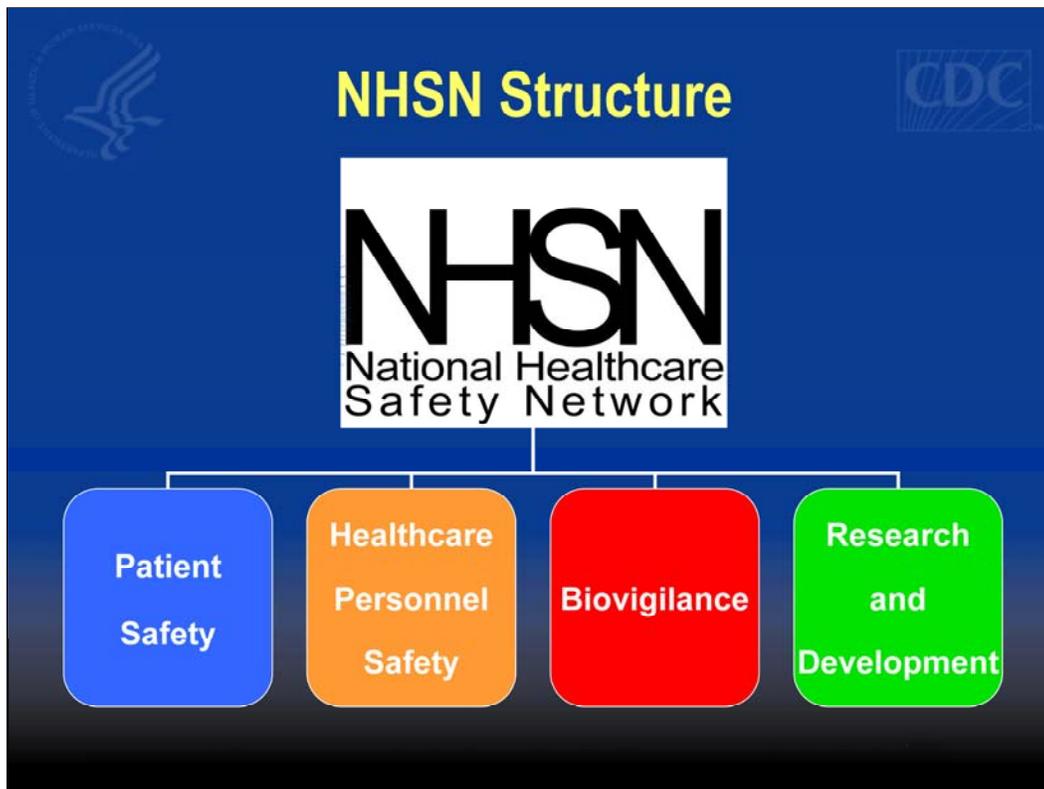
- 4th, submit data for at least one module for a minimum of 6 months of the calendar year
- 5th, complete an annual survey for your facility,
- 6th, pass quality control acceptance checks that assess the data for completeness and accuracy.

 **Staffing Requirements for Participating in the Healthcare Personnel Safety Component** 

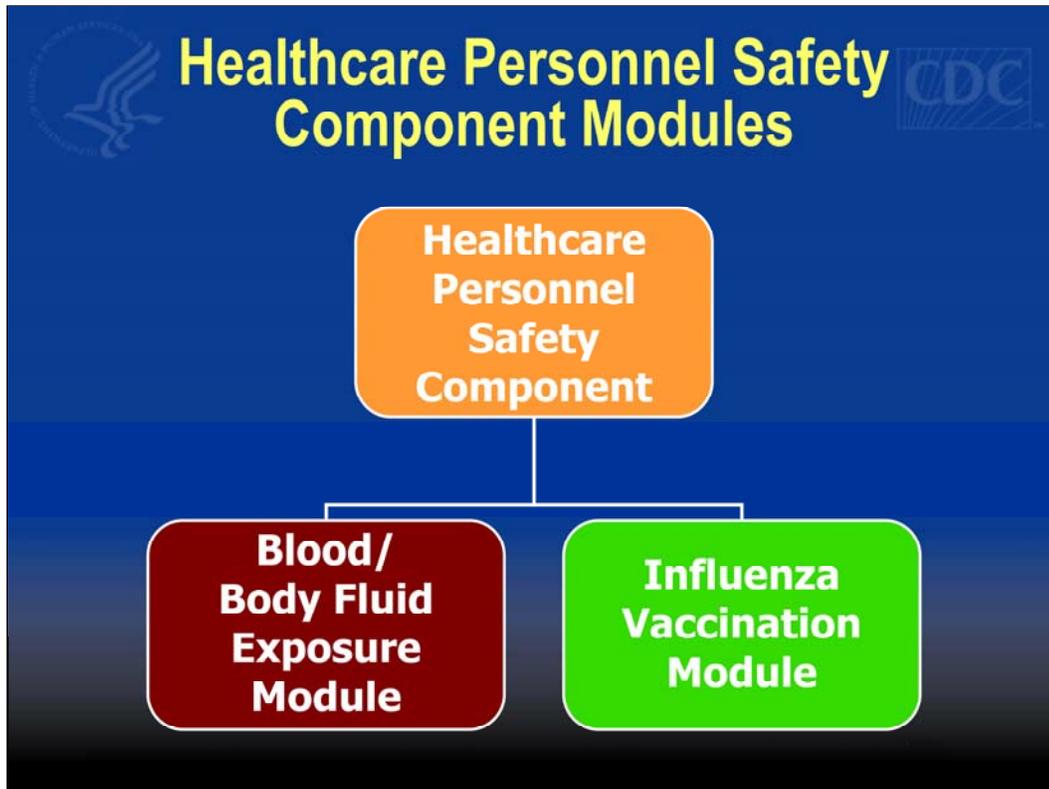
- Oversight of occupational health surveillance program by trained Occupational Health Professional (OHP), infection preventionist (IP) or Hospital Epidemiologist
- Other personnel can be trained to
 - Screen for events (e.g., exposures, vaccinations)
 - Collect denominator data
 - Collect exposure management/vaccination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



To participate in HPS, we require that a trained occupational health professional, infection preventionist, or hospital epidemiologist should oversee the occupational health surveillance program in a facility. Other personnel could be trained to screen for events, such as exposures and vaccinations, to collect denominator data in the annual facility survey, to collect exposure management and vaccination data, and finally to enter and analyze data.



NHSN is organized into four components: Patient Safety, Healthcare Personnel Safety, Biovigilance, and Research and Development. Patient Safety is used for monitoring patient healthcare-associated infection events and process measures for their prevention, Healthcare Personnel Safety is for monitoring healthcare personnel occupational-associated adverse events and process measures for their prevention. The Biovigilance component tracks adverse events and incidents associated with receipt of blood transfusions. The Research and Development component is for performance of special studies.



The Healthcare Personnel Safety Component currently consists of two modules, one for tracking blood/body fluid exposures and exposure management, and another module for tracking healthcare personnel seasonal influenza vaccination, exposure prophylaxis, and treatment.



Benefits of Participation in the Healthcare Personnel Safety Component

- Provides access to web-based tool for tracking occupational exposures, exposure management, and immunizations
- Allows comparison of facility-specific data to nationally aggregated data
- Follows trends in exposure, exposure management, immunization, etc. in own facility
- Allows generation of exposure reports for individual medical records and facilitates generation of OSHA-300 or equivalent reports

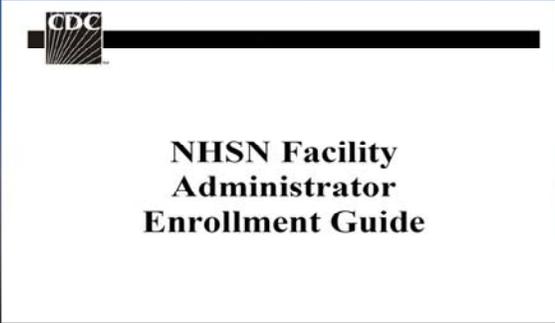
The benefits of participating in the Healthcare Personnel Safety component of NHSN are listed here. Participants have access to a Web-based tool for tracking occupational exposures, exposure management, and immunizations. They will be able to compare facility-specific data to nationally aggregated data and follow trends in exposure, exposure management, and immunizations in their own facilities. Finally, data collected in HPS can be used to generate exposure reports for individual medical records and to facilitate generation of OSHA-300 or equivalent reports. There are no fees associated with enrollment in or use of NHSN.



New Facility Enrollment



- For information on enrolling a new facility in NHSN
 - See NHSN website
 - <http://www.cdc.gov/nhsn/enroll.html>
 - Refer to NHSN Facility Administrator Enrollment Guide
 - Complete all NHSN HPS training sessions



**NHSN Facility
Administrator
Enrollment Guide**

Information about enrolling a new facility in NHSN can be found on the NHSN website, shown here. The NHSN Facility Administrator Enrollment Guide on the website provides detailed enrollment information. In addition, successful enrollment requires completion of NHSN HPS training sessions appropriate for the role in the facility (e.g., administrator, data entry, etc.)

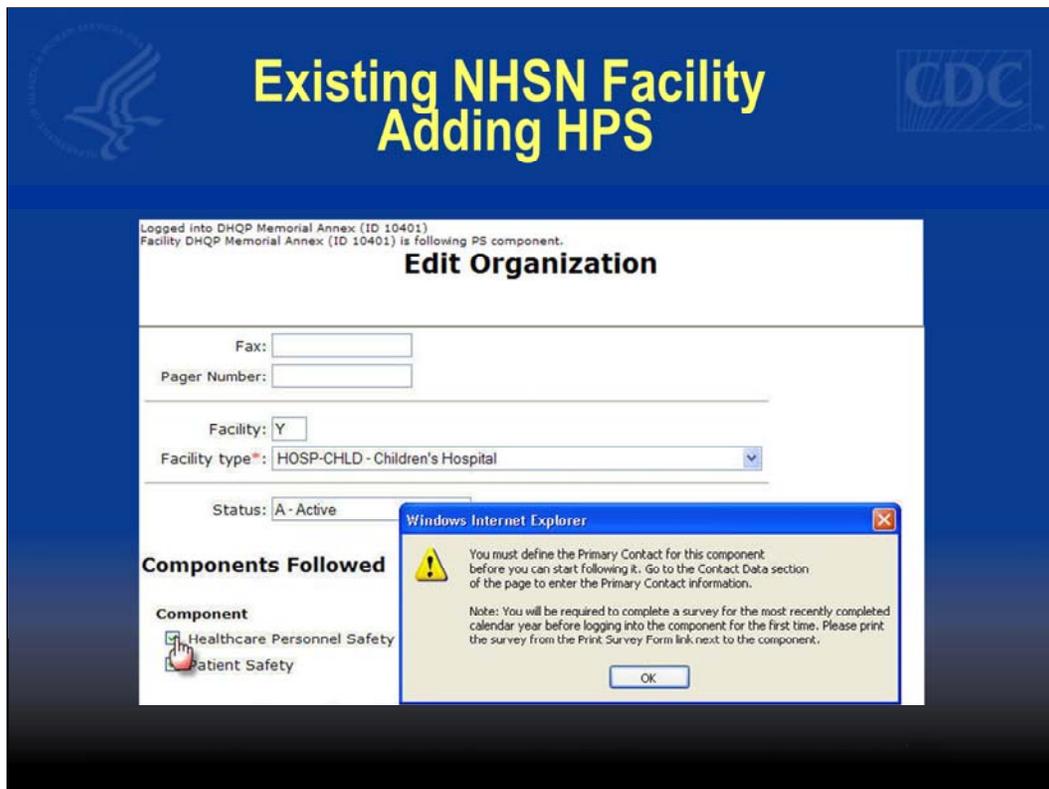


Existing Facility Enrollment



- The NHSN facility administrator adds the healthcare personnel safety component (HPS), then adds a user and assigns her/him administrative rights in HPS
- HPS user with administrative rights adds other users, if needed
- HPS users need to complete NHSN HPS training

For an existing NHSN facility, the NHSN Facility Administrator adds the HPS component and then adds a user who is given administrative rights to HPS. This person can then add and assign rights to additional HPS users. For existing NHSN facilities, the NHSN Facility Administrator is likely to be someone in the infection prevention or epidemiology department. Once the component is added, the facility survey will be displayed and must be completed before any users or data may be added! The survey will be described in later slides. Once it is completed, the HPS user with administrative rights can add additional HPS users and designate their rights, as needed. If they are new to NHSN, the HPS users need to complete NHSN HPS training before they can obtain their digital certificates. The next slide shows how to add HPS component.



When the administrator in an existing NHSN facility adds the Healthcare Personnel Safety Component, a pop-up message tells the administrator to add a primary contact for HPS and complete an annual survey, as shown here.

Adding Administrative User, Existing NHSN Facility



Logged into Mount Sinai Medical Center (ID 10127) as MSHEPARD.
Facility Mount Sinai Medical Center (ID 10127) is following the PS component.

Edit User Rights

Users rights saved successfully.

User ID: **RUBY (ID 1102)**

Facility List: Mount Sinai Medical Center (10127)

Rights	Patient Safety	Healthcare Personnel Safety	Biovigilance
Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All Rights	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Analyze Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enter Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This screen shows that the rights of an existing user of NHSN have been modified to include administrative rights to both Patient Safety, Healthcare Personnel Safety, and Biovigilance Components.

Adding Administrative User, New NHSN Facility

Logged into DHQP MEMORIAL HOSPITAL (ID 10018) as TCH.
Facility DHQP MEMORIAL HOSPITAL (ID 10018) is following HCW component.

Edit User Rights

User ID: **ALP4 (ID 376)**

Facility List: **DHQP MEMORIAL HOSPITAL (10018)**

Rights	Patient Safety	Healthcare Personnel Safety
Admin User	<input type="checkbox"/>	<input checked="" type="checkbox"/>
View Data	<input type="checkbox"/>	<input type="checkbox"/>
Enter Data	<input type="checkbox"/>	<input type="checkbox"/>
Analyze Data	<input type="checkbox"/>	<input type="checkbox"/>
All Rights	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Customize Rights	<input type="checkbox"/>	<input type="checkbox"/>

Advanced

This screen shot shows a user who has administrative rights to only the Healthcare Personnel Safety Component.



Annual Facility Survey



- Completed on enrollment for new NHSN facilities or when adding the Healthcare Personnel Safety Component for existing NHSN facilities
- First survey – data for the full calendar year before submission date
- Collects information that can be used as denominators for expressing rates, e.g., percutaneous injury rates per 100 admissions
- Completed once a year after enrollment

The annual facility survey must be completed on enrollment for new NHSN facilities or when adding the Healthcare Personnel Safety Component for existing NHSN facilities. The first survey is for data for the full calendar year before the year of enrollment. The survey collects information that can be used as denominators for expressing rates, such as percutaneous injury rates per 100 admissions or vaccination rates per 100 FTEs. The survey is completed once per calendar year after enrollment. The next slide shows a screen shot of the facility survey in HPS.

Annual Facility Survey

NHSN - National Healthcare Safety Network (ISD-CLFT-NHSN1) | NHSN Home | My Info | Contact us |

Logged into Mount Sinai Medical Center (ID 10127) as RUBY.
 Facility Mount Sinai Medical Center (ID 10127) is following the HPS component.

View Facility Survey

Facility ID: Mount Sinai Medical Center (10127)
 Survey Year: 2008

Facility Information		Number of
Total beds set up and staffed*		500
Patient admissions*		4500
Inpatient days*		10200
Outpatient encounters*		4600
Hours worked by all employees (from OSHA 300 log)		48000

Selected Healthcare Worker Occupation Groups		
Occupation	*Number of HCWs:	*FTEs:
Registered nurse	1	0
Licensed practical nurse	0	0
Nurse practitioner/clinical nurse specialist	0	0
Nursing assistant/patient care technician	0	0

This survey can only be completed by a person with administrative rights.

The Healthcare Personnel Safety Component Facility Survey is different from the Patient Safety Component Annual Facility Survey. The HPS Facility Survey must be completed by both **new** and **existing NHSN** facilities. **New NHSN facilities** complete the survey during their enrollment process.



The slide features a dark blue background with a white eagle logo in the top left and the CDC logo in the top right. The title "Healthcare Personnel Safety Component - Key Terms" is centered in yellow. Below the title, two key terms are listed in white: "Healthcare personnel/worker" and "Location". Under "Location", two sub-points are listed: "CDC Location" and "80% Rule". At the bottom left, a URL is provided: <http://www.cdc.gov/nhsn/library.html>.

Key terms to be reviewed include:

- Healthcare personnel and healthcare worker
and
- CDC location, including the 80% rule

A document containing all the CDC Location descriptions can be found in the NHSN document library.

Healthcare Personnel / Worker

- Healthcare personnel/worker:
all persons who work in the facility, whether paid or unpaid
- Healthcare worker:
an individual who works in the facility, whether paid or unpaid



Healthcare personnel are defined as all persons who work in the facility, including employees, contractors, students, trainees, and volunteers. For example, attending physicians who may not be employees but who work in a facility would be included among a facility's HCP.

A healthcare worker is defined as an individual who works in the facility, whether paid or unpaid.

Healthcare worker is the singular form of healthcare personnel.



Location



- A location may be where a given worker is assigned permanently or where an exposure occurs in the healthcare facility
- Work location is used to stratify blood/body fluid exposure rates and influenza vaccination rates



Location indicates where a given worker is assigned permanently or where an exposure has occurred in a healthcare facility. Location can be used to stratify blood/body fluid exposure rates and influenza vaccination rates.



CDC Locations



- CDC Locations are descriptions for patient care and other areas of healthcare facilities
- Patient Safety, Biovigilance, and Healthcare Personnel Safety Components of NHSN use the same list of Locations
- The list of CDC Locations can be found in the NHSN documents library:
<http://www.cdc.gov/nhsn/library.html>
- Each facility location must be “mapped” to a CDC Location

CDC Locations are standard descriptions for patient care and other areas of healthcare facilities. Patient Safety, Biovigilance, and Healthcare Personnel Safety Components use the same list of CDC Locations. In HPS, there can be many non-patient-care area locations, such as microbiology and laundry. The list of CDC locations can be found in the NHSN documents library. In order to enter work location or location where an exposure occurred for an HCW, that location must be “mapped” to one of the CDC Locations.



CDC Location 80% Rule



- The correct mapping of a patient-care location to a CDC Location is determined by the type of patients receiving care in that location
 - **Example:** If 80% of patients on a ward are pediatric patients with orthopedic problems, the location is designated as an Inpatient Pediatric Orthopedic Ward.
 - **Exception:** For patient-care areas where the mix of medical and surgical patients is approximately equal, use the combined medical/surgical location designation.
- For instructions on setting up locations in NHSN, refer to the training “NHSN HPS Component Setting Up a Facility”.

The correct mapping of a patient-care location to a CDC Location is determined by the type of patients receiving care in that location. The 80% rule means that 80% of the patients must be of a consistent type to classify the location as that specific type.

For **example**, if 80% of patients on a ward are pediatric patients with orthopedic problems, the location is designated as an Inpatient Pediatric Orthopedic Ward.

An **exception** to this rule would be patient-care areas where the mix of medical and surgical patients is approximately equal. In this case the location would be designated the combined Inpatient Medical/Surgical Ward.

For instructions on setting up locations in NHSN, see the training, “NHSN HPS Component Set-up”.



Data Entry in NHSN



- Data entered into NHSN are available to both CDC and to the facility as soon as they are saved.
 - No “transmission” lag
- Data can be edited after they are saved
 - Exceptions - HCW ID and linked data
- Records can be deleted

Data entered into NHSN are available to both CDC and to the facility as soon as they are saved. There is no “transmission” time lag as there was in the NNIS and NaSH systems.

Data can be edited after they are saved, with one important exception. Once an HCWID has been saved, that ID number cannot be edited – you’ll have to create a new HCW with a new ID. If you edit the demographic information about a HCW, that information will be changed on all records for that HCW, including the demographic record, and any event records.

All records can be deleted except Monthly Reporting Plans, the Facility survey and pre-season flu survey. Healthcare personnel demographic records can be deleted, but by doing so, all event records for that HCW (e.g., exposures, vaccinations, etc.) would also be deleted.



Requirements for Data Fields

- Required:
 - Must be completed
 - A red asterisk (*) appears next to the field label
- Conditionally required: when the requirement depends on the response given in another field (e.g., clinical specialty for physician occupation)
- Optional:
 - NHSN does not require the data and the information will not be used in analyses by CDC (e.g., number of hours on duty)

Every field in NHSN is designated as required, conditionally required, or optional. Required fields are marked on the screen with a red asterisk. You cannot save the record until a value is recorded in all required fields.

A conditionally required field is one in which the requirement depends on the response given in another field (e.g., if the occupation is physician, then clinical specialty is a required field).

And finally, optional fields are those that are not required, period. For example, “Number of hours on duty” is an optional field.



Types of Data Entered in NHSN

- Healthcare worker demographics
- Events (e.g., blood and body fluid exposures)
- Interventions (e.g., vaccination, prophylaxis, treatment, laboratory)
- Surveys
 - Annual facility survey provides denominators
 - Pre and post season influenza surveys
- Custom data

The types of data entered into NHSN are listed here:

- Healthcare worker demographics consist of HCW ID number, age, gender, occupation, and assigned work location.
- Events, in the healthcare personnel safety component include blood/body fluid exposures, laboratory tests, influenza vaccinations, and postexposure prophylaxis or treatment for a healthcare worker.
- Denominators for expressing rates, such as number of beds, admissions, or healthcare personnel by occupation, are recorded in the Annual Facility Survey.
- Custom data can be entered into custom fields on NHSN forms. Instructions on customizing HPS forms are found in the online NHSN Help system. Customized data are not included in NHSN aggregate analyses.



Monthly Reporting Plan



- The Monthly Reporting Plan informs CDC which modules a facility is following during a given month.
- A facility must enter a Plan for every month of the year, even those months in which no modules are followed.
- Only data for months in which Plans are on file are included in CDC aggregate analyses and reports.
- Monthly Reporting Plans cannot be deleted.

The HPS Monthly Reporting Plan informs CDC which modules a facility is following during a given month.

A facility must enter a Plan for every month of the year, even those months in which no modules are followed.

A facility may enter data only for months in which Plans are on file.

Only data for those months in which a facility stated it would participate in its monthly reporting plan are included in CDC aggregate analyses and reports.

As already mentioned, Monthly Reporting Plans cannot be deleted.



Monthly Reporting Plan Options

- Plan that conforms to one or more of the modules of the Healthcare Personnel Safety Component

OR

- “No Healthcare Personnel Safety Modules Followed”

There are two options for entering a Plan.

You can enter a Plan that conforms to one or more of the modules of the Healthcare Personnel Safety Component or you may use the “No Healthcare Personnel Safety Modules Followed” option.

However, you can select “No Healthcare Personnel Safety Modules Followed” no more than six times per year to remain a participant in HPS.

Example Plan that Conforms to Modules of the Healthcare Personnel Safety Component

The screenshot shows the NHSN interface for adding a monthly reporting plan. The page title is "Add Monthly Reporting Plan". A message states: "No data found for August, 2009". The form includes a sidebar with navigation options: NHSN Home, Reporting Plan (Add, Find), HCW, Vaccination, Lab Test, Exposure, Propyl/Treat, Analysis, Surveys, Users, Facility Group, and Log Out. The main content area shows the following fields and options:

- Facility ID*: Mount Sinai Medical Center (ID 10127)
- Month*: August
- Year*: 2009
- No NHSN Healthcare Personnel Safety Modules Followed this Month
- Healthcare Personnel Exposure Modules**
 - Blood/Body Fluid Exposure Only
 - Blood/Body Fluid Exposure with Exposure Management
 - Influenza Exposure Management
- Healthcare Personnel Vaccination Module**
 - Influenza Vaccination with Exposure Management/Treatment

Buttons for "Save" and "Back" are located at the bottom right of the form.

Here is a view of what the actual screen would look like in NHSN, showing the first option. In this example the facility indicated it would follow blood and body fluid exposures and influenza vaccination with exposure management and treatment for August 2009.

Example Plan that Conforms to the “No Healthcare Personnel Safety Modules Followed” Option

Add Monthly Reporting Plan

Mandatory fields marked with *

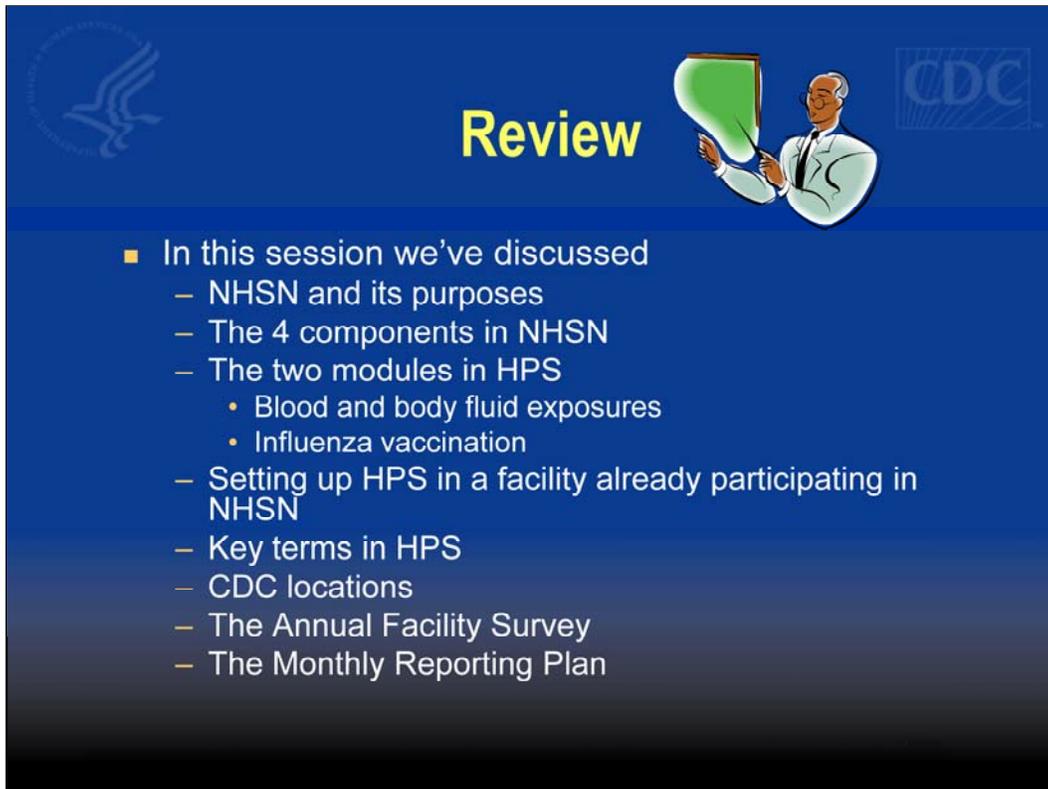
Facility ID*: DHQP MEMORIAL HOSPITAL (ID 10018) ▾

Month*: May ▾

Year*: 2008 ▾

No NHSN Healthcare Personnel Safety Modules Followed this Month

This monthly reporting plan indicates that no modules would be followed this month.



Review

- In this session we've discussed
 - NHSN and its purposes
 - The 4 components in NHSN
 - The two modules in HPS
 - Blood and body fluid exposures
 - Influenza vaccination
 - Setting up HPS in a facility already participating in NHSN
 - Key terms in HPS
 - CDC locations
 - The Annual Facility Survey
 - The Monthly Reporting Plan

In this session we've discussed NHSN and its purposes, the 4 components in NHSN: Patient Safety, Healthcare Personnel Safety, Biovigilance, and Research and Development.

The two modules in HPS are Blood and Body Fluid Exposures and Influenza Vaccination.

We've described setting up an existing facility for HPS and adding users. We've defined key terms in HPS and discussed setting up CDC locations. Finally, we've discussed the Annual Facility Survey and completing the Monthly Reporting Plan.



References



For more information, visit the NHSN website:
<http://www.cdc.gov/nhsn/hps.html>

- *NHSN Manual: Healthcare Personnel Safety Component Protocol*
 - Tables of instructions for completing all forms
 - Key terms
- CDC locations
- CDC occupation codes
- Purposes, data collection requirements and assurance of confidentiality
- NHSN data collection forms



For more information about these topics,
please visit the NHSN Website. Thank
you!