Healthcare Personnel Safety Component

Blood and Body Fluids Exposure Module

Division of Healthcare Quality Promotion
Personnel who will enter and analyze data in the NHSN Healthcare Personnel Safety component:

- Healthcare worker (HCW) demographics
- Blood and body fluid exposure events
- Laboratory follow-up tests
- Post-exposure Prophylaxis (PEP)

May include: NHSN facility administrators, occupational health professionals, infection preventionists, epidemiologists, data entry staff
Prerequisites

- You should have already viewed the HPS Overview training slides
- Annual Healthcare Personnel Safety Facility Survey must be completed
Objectives

- Describe the purpose of the blood/body fluids exposure (BBF) module
- Describe how to enter BBF exposure data into NHSN, consistent with your monthly reporting plan
- Define various types of data fields in NHSN
- Show examples of data entry
- Describe the process of linking interventions with exposures.
NHSN Structure

NHSN

Patient Safety Component

Healthcare Personnel Safety Component

Biovigilance Component

Long Term Care Facility Component

Exposure Module

Vaccination Module
HPS Component Purposes

- Continue and expand occupational exposure and infection surveillance that started with the National Surveillance System for Healthcare Workers (NaSH)
- Collect data from sample of US healthcare facilities to:
  - Estimate the severity and magnitude of adverse events among healthcare personnel (HCP)
  - Estimate HCP participation in seasonal and novel flu vaccination campaigns
- Assess adoption and effect of strategies to prevent adverse events in HCP.
HPS Component Modules

Healthcare Personnel Safety Component

Exposure Module

Vaccination Module
BBF Exposure Module

Purposes - Facility level

- Provide a record of BBF exposures and exposure management for HCP in the facility
  - Document baseline and follow-up laboratory tests
  - Document receipt of and adverse reactions related to PEP
- Monitor trends in BBF exposures
- Monitor process measures of exposure management.
BBF Exposure Module

Purposes - National level

◆ Provide aggregate BBF exposure risk estimates
◆ Assess the diffusion and adoption of sharps devices with safety features
◆ Evaluate prevention measures, including engineering controls, work practices, protective equipment, and PEP
◆ Monitor adherence to PHS recommendations for exposure management
BBF Exposure Module

BBFE Documents/Forms: http://www.cdc.gov/nhsn/hps.html

  background and methods for performing surveillance

- Tables of Instructions
  details and rules for entering each data field on the data collection forms

- Data Collection Forms for BBF
  - Monthly Reporting Plan
  - Healthcare Worker Demographic Data
  - Exposure to Blood/Body Fluids
  - Healthcare Worker Prophylaxis/Treatment
    - BBF Post-exposure Prophylaxis (PEP)
  - Follow-up Laboratory Testing
Healthcare Worker: An individual who works in the facility, whether paid or unpaid

Healthcare Personnel: All persons who work in the facility, whether paid or unpaid
Occupational exposure:
Exposure to blood, visibly bloody fluids, other body fluids to which universal precautions apply (i.e., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid), tissues, and laboratory specimens that contain concentrated virus.

Modes of exposure include percutaneous injuries, mucous membrane exposures, non-intact skin exposures, and bites.
Percutaneous injury: Penetration of skin by a needle or other sharp object that was in contact with blood, tissue, or other body fluid prior to the exposure.

Mucous membrane exposure: Contact of mucous membranes (i.e., eyes, nose, or mouth) with fluids, tissues, or specimens listed in the definition of "Occupational Exposure."
BBF Exposure Module: Key Terms

- **Non-intact skin exposure**: Contact of non-intact skin with the fluids, tissues, or specimens listed in the definition of "Occupational Exposure."

- **Bite**: A human bite sustained by a healthcare worker from a patient, co-worker or visitor.
Types of Data Entered in the BBF Module

- Monthly reporting plan data – informs CDC of what you intend to report. Must be completed monthly
- HCW demographic data – information on the exposed healthcare worker
- BBF exposure data and the management of these adverse events (e.g., PEP, follow-up laboratory)
- Denominators (required for the Annual Facility Survey)
  - Measures of facility size (e.g., # beds, in-patient days)
  - Numbers of HCP and FTEs
- Custom data
- Comments
- Facilities must enter data for at least 6 months per year
Data Fields in NHSN

**Required:**
- Must be completed for record to be saved
- Marked by a red asterisk (*) next to the field label

**Conditionally required:** Requirement to complete depends on a response given in another field (e.g., clinical specialty for physician occupation)

**Optional:** Data not required to save record and will not be used in analyses by CDC (e.g., number of hours on duty)
Steps for Entering BBF Exposures in NHSN

- Enter Monthly Reporting Plan for each month that you intend to collect and report information on blood and body fluid exposures; otherwise, report “no modules followed”
- Enter the Blood and Body Fluid Exposure form after all baseline information and testing are completed

If following Exposure Management:
- Enter any post-exposure prophylaxis administered to the HCW for the exposure
- Enter any follow-up laboratory testing
Two options on the monthly reporting plan:

- Post-exposure prophylaxis (PEP)
- Laboratory follow-up
Adding HCW Demographic Data

- **Required fields**
  - HCW ID
  - Gender
  - Date of Birth
  - Work status, location, and occupation

- **Conditionally required field**
  - Clinical specialty, for physicians

- **Optional fields (not used by CDC)**
  - Social security number
  - Name
  - Secondary ID
  - Address
HCW Demographic Data

- Can be entered into NHSN using several options:
  - Facility HCW records can be imported into NHSN
  - Records can be entered using the HCW -> add button on the left navigation bar (shown below).
  - Some HCW demographic information can be entered directly into the exposure screen
  - Use “Find” HCW to populate the HCW demographic data fields of BBF exposure form (See training on HPS set up for importing HCP data.)
Adding a HCW Record

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 Demographics

Facility ID*: DHQP MEMORIAL HOSPITAL (ID 10018)  Exposure Event #: 465
HCW ID*: 913169  Find HCW
Social Security #: 

If a HCW has not been previously added, you may still enter their information here and it will be added and saved under a new HCW profile. A popup will let you know whether this HCW already exists in the dataset.

Windows Internet Explorer

Could not find HCW.
You can directly enter a new HCW from this screen or
Click 'Add HCW' to enter a new HCW with additional fields.

OK
Entering a BBF Exposure in NHSN

Add Exposure

Mandatory fields marked with *
Fields required when Exposure is in Plan marked with †
Fields required when Exposure with Management is in Plan marked with §

Healthcare Worker Demographics

Facility ID*: Doctors Hospital (ID 10552)  
HCW ID*:  
Social Security #:  
Last Name:  
Middle Name:  
Secondary ID:  
First Name:  
Exposure Event #: 736
Adding a HCW Record to an Exposure

Add Exposure

Mandatory fields marked with *
Fields required when Exposure is in Plan marked with †
Fields required when Exposure with Management is in Plan marked with §

Healthcare Worker Demographics

Facility ID*: Doctors Hospital (ID 10552) | Exposure Event #: 733

HCW ID*: RP1234 | Find HCW | Add HCW

Social Security #: | Secondary ID:
Last Name: | First Name:
Middle Name: | | Date of Birth*: [ ]
Gender*: | | [ ]
Work Location*: | | [ ]
Occupation*: | | [ ]
BBF Exposure Form

Multi-section form –

- Demographic information about an exposed HCW can be found in database or new HCW information added as required
- General information about the exposure (e.g., type, location where occurred, body fluid involved, etc.)
- More detailed information about percutaneous, mucocutaneous, and bite exposures
- Information about source patient
- Initial care given to the exposed HCW
General Exposure Information

Did the exposure occur in this facility?*: Y - Yes

Date of Exposure*: 01/21/2009

Time of Exposure (hh:mm)*: 05:00 AM

Number of hours on duty: 7

Location where exposure occurred*: 5E - 5 EAST

Type of Exposure (check all that apply)*: Percutaneous

Did exposure involve a clean, unused needle or sharp object?* N - No

Mucous membrane
Skin
Bite

Type of fluid/tissue involved in exposure*: BBP - Blood/blood products

Body site of exposure (check all that apply)*: Hand

Eye
Mouth
Nose
Other Specify:
BBF Exposure Form

Exposure to Blood/Body Fluids

Facility ID #: ________________
Exposure Event #: ________________

*HCW ID #: ____________________

HCW Name, Last: ____________________ First: ____________________ Middle: ____________________

*Gender: □ F □ M
*Date of Birth: ______/_____/_______

*Work Location: ____________________

*Occupation: ____________________ If occupation is physician, indicate clinical specialty: ____________________

Section I - General Exposure Information

1. *Did exposure occur in this facility? Y □ N
   1a. If No, specify name of facility in which exposure occurred: ____________________

2. *Date of exposure: ______/_____/_______
3. *Time of exposure: _____ L AM □ L PM

4. Number of hours on duty: ________
5. Is exposed person a temp/agency employee? Y □ N

6. *Location where exposure occurred: ____________________

7. *Type of exposure: (Check all that apply)
   7a. Percutaneous: Did exposure involve a clean, unused needle or sharp object? Y □ N
   (If No, complete Q8, Q9, Section II and Section V-XI)
   7b. Mucous membrane (Complete Q8, Q9, Section III and Section V-XI)
   7c. Skin: Was skin intact? Y □ N □ Unknown (If No, complete Q8, Q9, Section II & Section V-XI)
   7d. Bite (Complete Q9, and Section IV-XI)

8. *Type of fluid/tissue involved in exposure: (Check one)
   - Blood/blood products
   - Body fluids: (Check one)
   - Solutions (IV fluid, irrigation, etc.): (Check one)
   - Visibly bloody

Be sure to follow the skip patterns on the form so you don’t try to complete unnecessary information.
BBF Exposures
Clean or Unused Sharps

- Exposures to clean needles/sharps pose no risk of transmission of bloodborne virus infection
- Information about clean needle/sharp exposures not included in CDC exposure analyses
- Completion of remaining information on BBF Exposure Form optional
BBF Exposures: Percutaneous Injury

Additional information is collected about percutaneous exposures such as:

• Depth of injury
• Device Involved and Type
• Circumstances at the time of injury
BBF Exposures: Mucous Membrane or Non-Intact Skin Exposure

- For mucous membrane or skin exposure, quantity of fluid, activity when exposure occurred, and type of personal protective equipment used
BBF Exposures: Bites

- For bites, description of wound and activity when exposure occurred
Exposure Management

- Information about exposure source
- Initial care provided to exposed HCW
- Baseline and follow-up lab testing
- Recommendations to HCW for follow-up
- HCW narrative about exposure and prevention of exposure
Exposure Source Information

Source Information

Was the source patient known?: Y - Yes

Was HIV status known at the time of exposure?:

Select test results for the source patient:

**Hepatitis B**
- HBsAg
- HBeAg
- Total anti-HBc
- anti-HBs

**Hepatitis C**
- anti-HCV EIA
- anti-HCV supplemental
- PCR-HCV RNA

**HIV**
- EIA, ELISA
- Rapid HIV
- Confirmatory test

For HIV Infected Source

Stage of disease: AIDS - AIDS

Is the source patient taking anti-retroviral drugs?: Y - Yes

Drugs:
- 3TC - Lamivudine
- SQV - Saquinavir

Most recent CD4 count: 150 mm³

Viral load: 150000 copies/ml

Date (mo/yr): 05 / 2008
Exposure Interventions

- Postexposure prophylaxis (PEP)
  - Initial PEP (initiated within 48 hours): Regimen and/or drugs, start and stop dates, reason for stopping
  - PEP change: Regimen and/or drugs, start and stop dates, reason for change in PEP
  - Adverse reactions to PEP
  - If any drug in a regimen is discontinued, the entire regimen is considered “stopped.” If one or more drugs is continued in the new regimen (and other drugs are added), enter them as PEP change with new start date

- Laboratory baseline tests: HIV, Hepatitis B, Hepatitis C, and other results
### BBF Exposure Form: HCW Narrative

#### Follow-up
Is it recommended that the HCW return for follow-up of this exposure?:

#### Narrative
In the worker's words, how did the injury occur?:

#### Prevention
In the worker's words, what could have prevented the injury?:

#### Custom Fields

#### Comments
**Data Entry Form for HIV Prophylaxis**

**Healthcare Worker Prophylaxis/Treatment**

**BBF Postexposure Prophylaxis (PEP)**

- **Facility ID#:** ____________  **MedAdmin ID#:** ____________
- **HCW ID#:** ____________
- **HCW Name, Last:** __________________  **First:** __________________  **Middle:** ____________
- **Gender:**  □ F  □ M  **Date of Birth:** _____/_____/_______
- **Infectious Agent:** ____________  **Exposure Event #:** ____________

**Initial Postexposure Prophylaxis**

- **Indication:** Prophylaxis  **Time between exposure and first dose:** ____________ hours
- **Drug:** ____________  **Drug:** ____________  **Drug:** ____________  **Drug:** ____________
- **Date Started:** _____/_____/_______  **Date Stopped:** _____/_____/_______
- **Reason for Stopping (select one):**
  - □ Completion of drug therapy
  - □ Source patient was HIV negative
  - □ Lab results
  - □ HCW choice
  - □ Lost to follow up

**PEP Change 1**

- **Indication:** Prophylaxis  **Drug:** ____________

**Adverse Reactions**

- Select all that apply:
  - Abdominal pain
  - Flank pain
  - Arthralgia
  - Headache
  - Dark urine
  - Insomnia
  - Diarrhea
  - Involuntary weight loss
  - Dizziness
  - Jaundice
  - Emotional distress
  - Light stools
  - Fever
  - Liver enlargement
  - Loss of appetite
  - Lymphadenopathy
  - Malaise/fatigue
  - Myalgia
  - Nausea
  - Night sweats
  - Nephrolithiasis
  - Rash
  - Somnolence
  - Spleen enlargement
  - Vomiting
  - Other (specify): ____________
  - Paresthesia
  - Rash
  - Somnolence
  - Spleen enlargement
  - Vomiting
  - Other (specify): ____________
  - Unknown

*required for saving  **required for completion*
# Data Entry for HIV Prophylaxis

Enter prophy/treat from main menu or within the exposure record.

---

## NHSN Home
- Reporting Plan
- HCW
- Vaccination
- Lab Test
- Exposure
- Prophy/Treat
  - Add
  - Find
- Analysis

Logged into Doctors Hospital (ID 10552) as RUBY. Facility Doctors Hospital (ID 10552) is following the HPS component.

## Add Prophylaxis/Treatment

Mandatory fields marked with *
Conditionally required fields marked with ^

### Healthcare Worker Demographics
- **Facility ID**: Doctors Hospital (ID 10552)
- **Med Admin ID**: 926

---

## Initial Care given to Healthcare Worker

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV postexposure prophylaxis Offered?</td>
<td></td>
</tr>
<tr>
<td>HBIG Given?</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B vaccine given?</td>
<td></td>
</tr>
</tbody>
</table>

- **Enter Prophy/Treat**
Data Entry for HIV Prophylaxis

Information about the Antiviral Medication

Infectious agent: HIV - HIV/AIDS
Exposure Event #: 727
Date of Exposure: 07/27/2009

Initial PEP - First drugs initiated

Time between exposure and first dose: 0 hours
Drug: 3TC - lamivudine
Date Started: 07/27/2009
Date Stopped: 08/07/2009
Reason for stopping: CHOICE - HCW choice

PEP Change 1

Drug: D4T - stavudine
Date Started: 08/07/2009

Second regimen date started must be on or after first regimen completed.
Entering Baseline Laboratory on Exposed HCW

Baseline lab entered in the last section of the BBF Exposure Form
Entering Baseline Laboratory on Exposed HCW

Baseline lab results should be collected within 2 weeks (before or after) of exposure.

<table>
<thead>
<tr>
<th>Lab Test*</th>
<th>Date*</th>
<th>Result*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV-EIA - HIV antibody</td>
<td>01/10/2009</td>
<td>N - Negative</td>
</tr>
<tr>
<td>HCV-EIA - Hepatitis C antibody</td>
<td>01/10/2009</td>
<td>N - Negative</td>
</tr>
</tbody>
</table>
Linking Records

- Post-exposure prophylaxis for HIV and laboratory records are linked to an exposure.
- Records are linked to assist in analyzing exposures and any related interventions.
- Every HIV PEP and laboratory record must be linked.
- If you delete a BBF record, any laboratory or prophy/treat record(s) linked to that exposure will also be deleted.
- Linking is automatically done if you enter HIV PEP while in the BBF Exposure record.
## Follow-up Laboratory Testing Form

<table>
<thead>
<tr>
<th>Lab Results</th>
<th>Date*</th>
<th>Result*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lab Test</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV-EIA - HIV antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV-CONF - HIV confirmatory</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hepatitis C</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCV-EIA - Hepatitis C antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCV-SUPP - Hepatitis C suppl. Antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCV-PCR - Hepatitis C PCR for RNA</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hepatitis B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HB-SAG - Hepatitis B surface antigen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IGM-ANTI-HBC - IgM Hep B core antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOT-ANTI-HBC - Total Hep B core antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANTI-HBS - Hepatitis B surface antibody</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other Labs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT - ALT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMYLASE - Amylase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLGLUCOSE - Blood Glucose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEMAT - Hematocrit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEMOGLOB - Hemoglobin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLATELET - Platelet count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>URINALYSIS - # Blood cells in urine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WBC - White Blood Cell count (blood)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CREATININE - Creatinine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER - Other Lab Test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Add a Test] [Save] [Back]
Follow-up Laboratory Testing Form

Facility Doctors Hospital (ID 10552) is following the HPS component.

Edit Follow-up Laboratory Testing

Mandatory fields marked with *

Healthcare Worker Demographics

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID*</td>
<td>Doctors Hospital (ID 10552)</td>
</tr>
<tr>
<td>HCW ID*</td>
<td>HCW001</td>
</tr>
<tr>
<td>Social Security #</td>
<td>11122111</td>
</tr>
<tr>
<td>Last Name</td>
<td>NURSE</td>
</tr>
<tr>
<td>Middle Name</td>
<td>B</td>
</tr>
<tr>
<td>Gender*</td>
<td>F - Female</td>
</tr>
<tr>
<td>Work Location*</td>
<td>1234 - INPATIENT BEDS</td>
</tr>
<tr>
<td>Occupation*</td>
<td>RN - Registered Nurse</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>NOHISP - Not Hispanic or Not Latino</td>
</tr>
<tr>
<td>Race</td>
<td>White</td>
</tr>
<tr>
<td>Date of Birth*</td>
<td>01/01/1955</td>
</tr>
<tr>
<td>Lab ID #</td>
<td>486</td>
</tr>
<tr>
<td>Secondary ID</td>
<td>RL1111</td>
</tr>
<tr>
<td>First Name</td>
<td>LISA</td>
</tr>
</tbody>
</table>

Exposure Event #: 727 Date of Exposure: 07/27/2009

Lab Results

<table>
<thead>
<tr>
<th>Lab Test*</th>
<th>Date*</th>
<th>Result*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEMOGLOBIN - Hemoglobin</td>
<td>07/27/2009</td>
<td>223.0 gm/L</td>
</tr>
</tbody>
</table>
Facility Doctors Hospital (ID 10552) is following the HPS component.

Add Prophylaxis/Treatment

Mandatory fields marked with *
Conditionally required fields marked with ^

Healthcare Worker Demographics

Facility ID*: Doctors Hospital (ID 10552)
HCW ID #: RP32421
Social Security #: 
Last Name: Monday
Middle Name: 
Gender*: F - Female
Work Location*: 5E - 5 EAST
Occupation*: RN - Registered Nurse
Ethnicity: 
Race: □ American Indian/Alaska Native □ Asian
□ Black or African American □ Native Hawaiian/Other Pacific Islander
□ White

Information about the Antiviral Medication

Infectious agent*: HIV - HIV/AIDS
Exposure Event #: 742 Date of Exposure: 01/10/2009

Print PDF Form
Review!

- NHSN Structure
- HPS Component Purposes
- Blood and Body Fluid Exposure and Management Module
- Documents used in the BBF Module
- Key terms for BBF exposures
- Types of data entered in NHSN
- NHSN data fields
- Steps for entering BBF exposures in NHSN
Steps for entering BBF exposures in NHSN

- Add monthly reporting plan
- Enter HCW demographic data
- Enter blood and body fluid exposure record
  - Add post-exposure prophylaxis (if any)
  - Add baseline laboratory records
- Enter any follow-up laboratory testing

- All laboratory and prophylaxis records must be linked to an exposure for BBF events
For more information, visit the NHSN website:
http://www.cdc.gov/nhsn/hps.html

  - 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
Questions or Need Help?
Contact User Support

nhsn@cdc.gov