

# Needlestick and Splash Exposure Flow Chart

## Clinical Practice Guidelines

If ANY employee (including resident/fellow/attending) experiences a needlestick or splash exposure ANY time of day/night, they need to **page 708 643-0833** (\*\*in the event the paging system is down, see bottom of page 6)

- 1) Employee Health working hours are weekdays 7:30a.m.-4:00p.m. All other times are "off hours".
- 2) Nursing Supervisor all other times. When Nursing Supervisor receives this page, the Nursing Supervisor will:

If not already done, instruct employee on **basic first aid**:

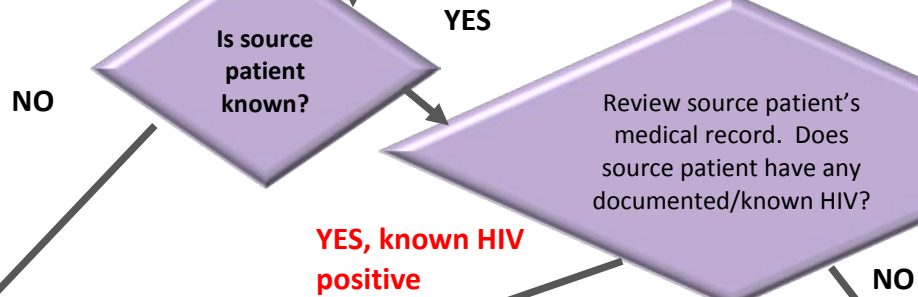
- 1) Wash site immediately, taking care not to injure or abrade the exposed site
  - a.) Eyes /mouth -flush with water, remove contact lens if applicable
  - b.) Open wound - clean with antiseptic soap and water immediately
- 2) Confirm that injury occurred at LUMC. If not, redirect employee to appropriate affiliate.

- 1) Provide employee **emotional first aid** over phone (or in person when *necessary*) and get contact information. (Optional script available to aid in dialogue.) (At any point, the injured employee may go directly to Employee Health during working hours or ED during off hours.)
- 2) **STRONGLY** encourage injured employee to complete online **Employee Safety incident report** (NOT VOICE report).

**Responsibilities of:**

- Nursing Supervisor (off hours) otherwise Employee Health
- Hospitalist on call
- O.R. Attending Physician (Surgery or Anesthesiology)
- Emergency Department (off hours) otherwise Employee Health
- Infectious Disease Fellow

Example of "unknown" source patient:  
 \*Needle in sharps container or trash  
 \*Unclear of actual patient



Order source testing on source patient to determine source HepB/HepC

Instruct employee to go to **Employee Health** during weekdays 7:30 a.m.-4:00p.m.  
 Outside of those hours, go to **Emergency Department (ED) TRIAGE NURSE** for further work up and treatment (see page 6 of flowchart). ED will follow Post Blood/Body Fluid Exposure Policy.

**RARE ALTERNATIVE:** If injury occurred in operating room (O.R.), Employee can choose to remain in clinical setting as source patient care necessitates.  
 O.R. Attending Physician will order antiretroviral medication by calling in-patient Pharmacy (6-6175) and have Exposure Kit sent via tube system to the injured employee who will begin first dose of p.o. antiretroviral medication (tenofovir 300mg/emtricitabine 200mg tab PLUS raltegravir 400mg tab). Note: Pharmacy will only dispense meds after receipt of prescription (back up slip or electronic order). If injured employee has any risk of impaired renal or hepatic function, Infectious Disease Fellow on call should be paged to order appropriate labs and alternative regimen.  
 As soon as possible, employee will contact Employee Health during working hours or present to ED TRIAGE NURSE during off-hours for further treatment, subsequent antiretroviral medications and HepB/Hep C assessment and management.

- 1) **Order source testing** on source patient by text paging hospitalist on call (12666) "Exposure: urgent source test needed!" with extension for return call. **Hospitalist will call Nursing Supervisor within 10 minutes to provide telephone order with read back.**
- 2) Inform injured employee that HIV results will be released about **1 hour** after source testing is sent through Employee Health during working hours (216-2312) or in the ED during off hours. (note: injured employee should physically go to ED TRIAGE NURSE to get registered in order to obtain source HIV results.)
- 3) If injured employee wishes to be seen by **ED at any time** while HIV test is running, direct them to the ED Triage Nurse.

Nursing Supervisor on call (after hours) will call Employee Health (6-2312) and leave message including:

- 1) Injured employee name
- 2) Time of injury
- 3) Source patient when known

When injured employee presents in person to ED/(Employee Health), ED Physician/(Employee Health) will assess if employee is **AT RISK** for bloodborne pathogen exposure. If YES to EITHER of the following two questions, the employee is considered AT RISK:

- 1) Was employee stuck by needle or cut with sharp object that was contaminated by blood?
- 2) Did patient's **potentially infectious body fluids** come in contact with employee mucus membrane OR non-intact skin?

If YES to any of the above, proceed to next section.

If NO exposure occurred, further management and treatment at discretion of ED Physician.

**Potentially infectious body fluids** include:

- Blood
- Body fluids containing visible blood
- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Synovial fluid
- Pleural fluid
- Peritoneal fluid
- Pericardial fluid
- Amniotic fluid

Note: Feces, nasal secretions, saliva, sputum, sweat, tears, urine, and vomitus are NOT considered potentially infectious UNLESS they contain blood.

**Special circumstances:**

\*Any direct contact (i.e. contact without barrier protection) to concentrated virus in a research laboratory or production facility is considered exposure that requires clinical evaluation.

\*For human bites, the clinical evaluation must include the possibility that both the person bitten and the person who inflicted the bite were exposed to blood borne pathogens.

ED Staff /Employee Health will instruct employee to complete online incident report (THEIR) if not already done.

To access THEIR:

Go to Spirit and click on *Employee Safety* app. Complete the Trinity Health Employee Incident Report

If employee presents in person to ED/(Employee Health), ED Physician/(Employee Health) will ensure that employee has current Tetanus vaccine (<10 years (<5 yrs for puncture wounds) and immune Hepatitis B antibody on file in the following areas of the medical record:

- a. Check lab section
- b. Check media tab for scanned outside lab results
- c. Check snapshot for Tetanus record

Employee will be quickly triaged through ED to receive source patient results. (Employee and ED Physician/Employee Health can determine whether employee returns to or is removed from patient care while awaiting rapid HIV results.)

Note: current guidelines do NOT require that source testing be done on injured employee unless source patient is positive for HIV, Hep B or Hep C (as described on page 3 and 5).

(ED Physician may have to contact Nursing Supervisor if the injured employee does not know the source patient name/MR#)

Is source **positive** for HIV?

NO, **negative** for HIV

YES, **positive** for HIV

Is source **positive** for HepB or Hep C?

NO, **negative** for Hep B AND Hep C

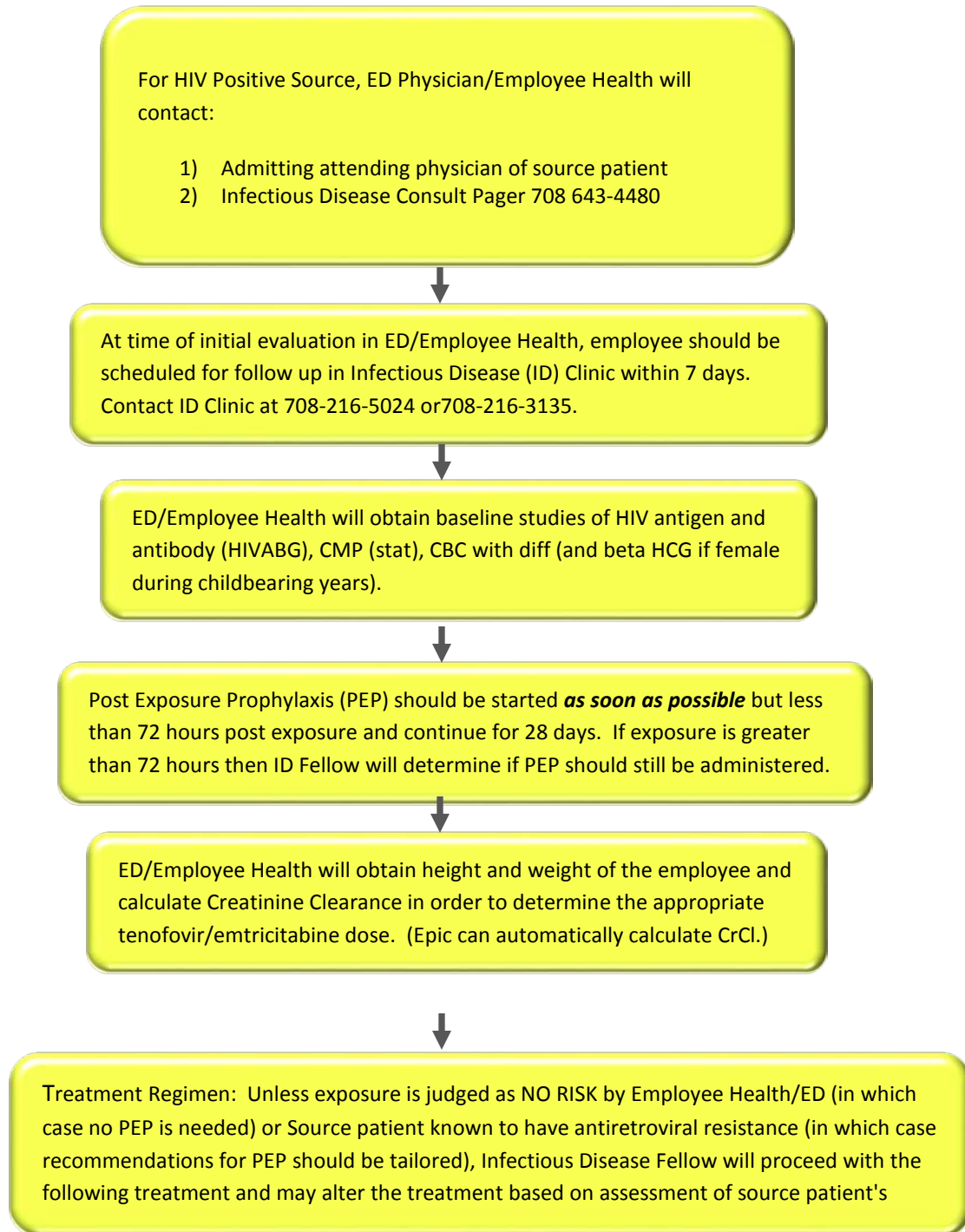
YES, **positive** for Hep B, Hep C, or either result still pending

ED Physician/Employee Health will follow **Clinical Practice Guidelines** on page 3.

No further treatment necessary

ED Physician will inform employee of results and instruct them to contact Employee Health on the very next weekday morning (216-2312) to follow up with Hep B/Hep C assessment and further management. Employee can opt to visit ED at any time for any reason post-exposure. Employee Health will follow **Clinical Practice Guidelines** (see page 5 of flow chart).

**HIV POSITIVE SOURCE (For ED/Employee Health)**



HIV Conversion after HIV positive exposure risk	
Exposure	Risk
Needle stick	0.3% (1/300 chance)
Mucous Membrane Exposure	0.1% (1/1000 chance)
Small amount of blood splash to intact skin	No risk
Urine (not bloody) splash to skin or mucous membranes	No risk

**HIV POSITIVE SOURCE (For Infectious Disease Fellow)**

PEP Choice	Renal Function	Medications
KIT A	CrCl $\geq$ 50	tenofovir 300mg/emtricitabine 200mg 1 tab by mouth ONCE daily, plus raltegravir 400mg 1 tab by mouth TWICE daily
KIT B	CrCl 30-49	tenofovir 300mg/emtricitabine 200mg 1 tab by mouth q 48 hours, plus raltegravir 400mg 1 tab by mouth TWICE daily

\*\*if CrCl < 30 an alternative regimen will be chosen without tenofovir\*\*

PEP kits containing a 7 day supply of tenofovir/emtricitabine and raltegravir are available from the inpatient pharmacy. The remaining 21 days of medication should be filled at an outpatient pharmacy with a prescription and prescription program form if Loyola Medical Center Employee and exposure is work related.

If a PEP regimen differs from tenofovir/emtricitabine/raltegravir, then a prescription should be given to the employee to be filled with the prescription program form. If you are a Loyola Medical Center Employee and the exposure is work related, a prescription (RX) can be filled at the Loyola Outpatient Pharmacy during operating hours. Monday-Friday 8am-4:30pm closed 1-1:45 pm. After hours, RX may be filled through the Loyola inpatient pharmacy or an outside retail pharmacy.

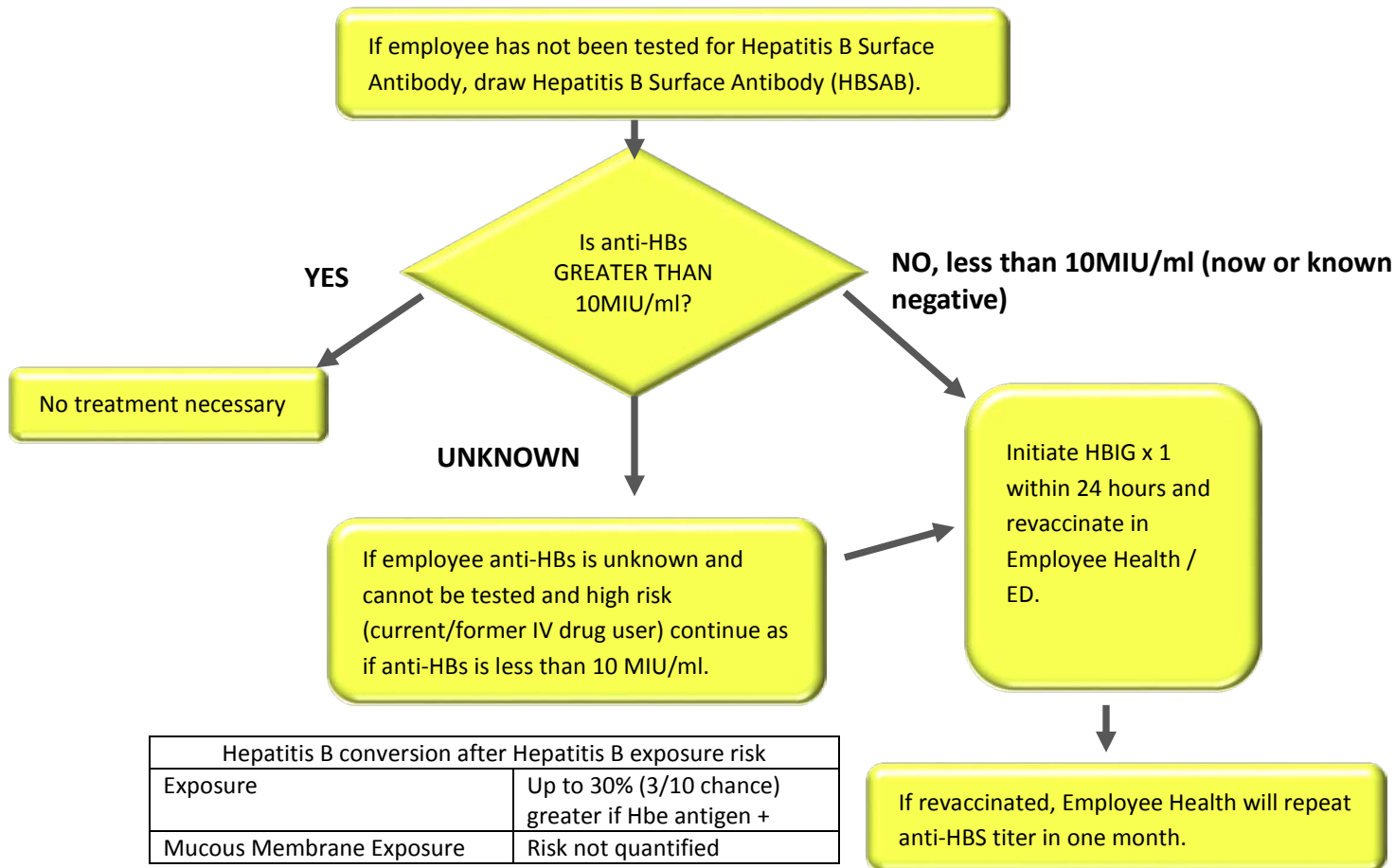
Employee Health/ID will obtain repeat CBC with diff and CMP 2 weeks after starting HIV prophylaxis.

Employee Health/ID will obtain HIV antigen and antibody (HIVABG) at 6 weeks and 4 months post exposure.

Any communication with injured employee can be documented as a brief clinical update note in EPIC.

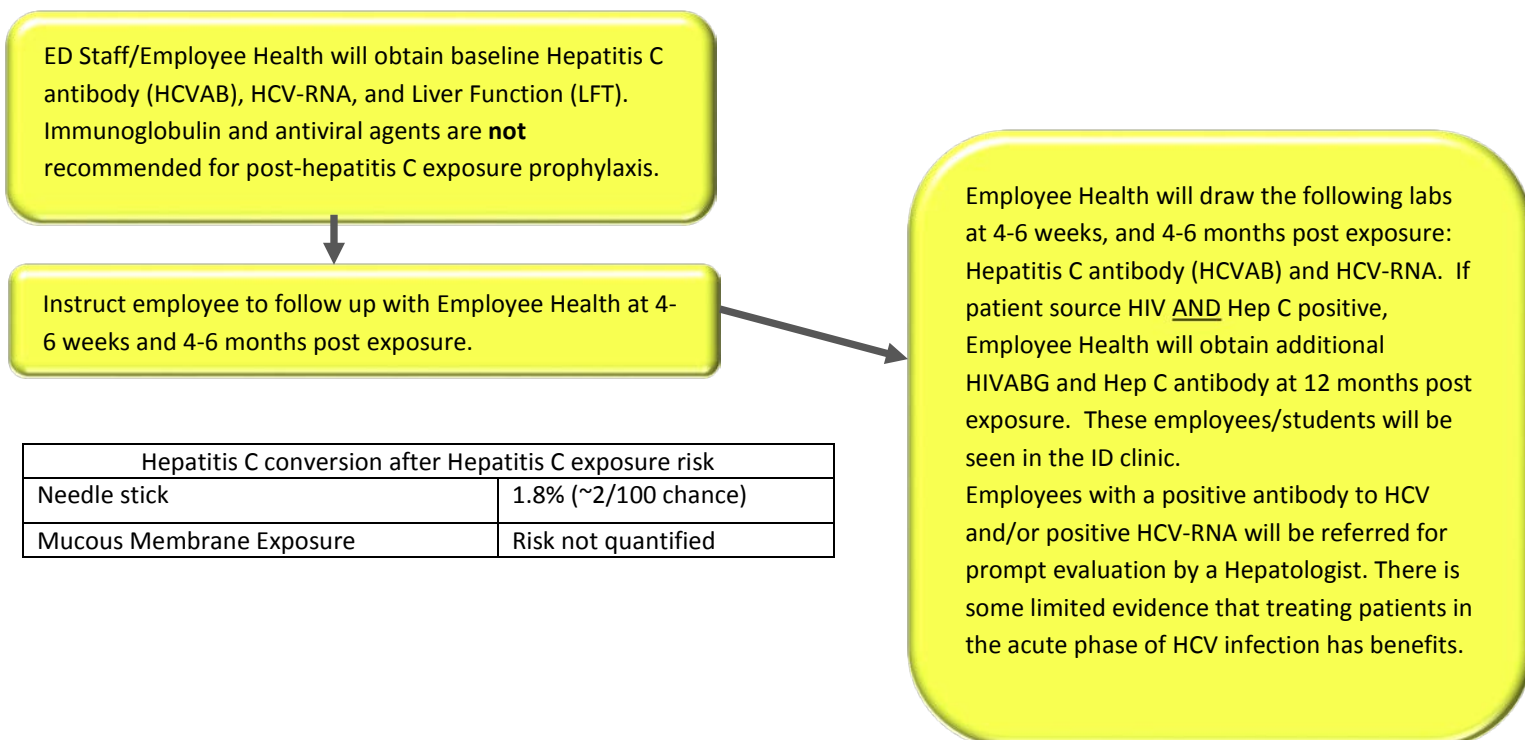
Clinical Practice Guidelines

**HEPATITIS B SURFACE ANTIGEN POSITIVE SOURCE (For ED/Employee Health)**



Hepatitis B conversion after Hepatitis B exposure risk	
Exposure	Up to 30% (3/10 chance) greater if Hbe antigen +
Mucous Membrane Exposure	Risk not quantified

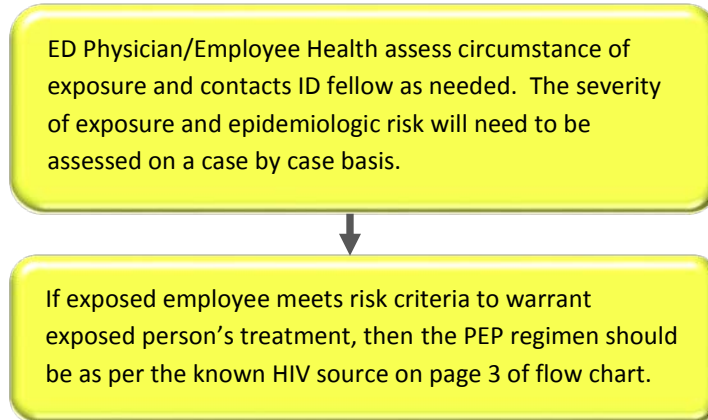
**HEPATITIS C POSITIVE SOURCE (For ED/Employee Health)**



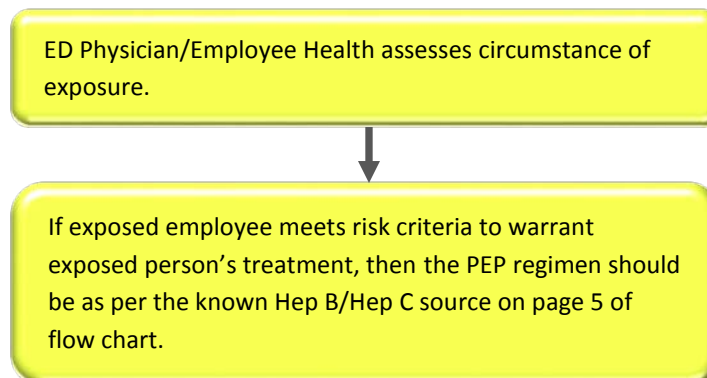
Hepatitis C conversion after Hepatitis C exposure risk	
Needle stick	1.8% (~2/100 chance)
Mucous Membrane Exposure	Risk not quantified

## UNKNOWN SOURCE (For ED/Employee Health)

For Unknown HIV:



For Unknown Hepatitis (Hep B and Hep C):



\*\*In the event the paging system is down and you cannot page 708 643-0833

- 1) During weekday working hours 7:30a.m.-4:00p.m., call 6-2312
- 2) During weekends and off hours, call 6-0333 and state "nursing supervisor" to use Vocera to contact nursing supervisor