

## Introduction to Standard (Universal) Precautions

To fulfill the Standard (Universal) Precautions requirement for the Medical School, please read the following information and answer the five questions on the verification quiz. The Medical School must have a record of your quiz performance for you to satisfy this requirement.

To take the verification quiz, you will need to create a login account. Clicking on the highlighted web address here, [https://uwmad1-3.courses.wisc.edu/public/msup\\_001\\_training/index.html](https://uwmad1-3.courses.wisc.edu/public/msup_001_training/index.html), provides direct access to the informational page, and will help you create your login account. You will need to enter your last name, first name, a login ID and then a password. Your login ID and password can be any words of your choosing, however, they cannot include spaces or special characters. Click "done" when finished.

To create a login ID and then take the verification quiz, click the following web address, [https://uwmad1-3.courses.wisc.edu/webct/public/show\\_courses?990203629](https://uwmad1-3.courses.wisc.edu/webct/public/show_courses?990203629), then choose Medical School Universal Precautions.

If you have any questions about Standard (Universal) Precautions, or the educational material presented here, please e-mail or call Janet Johnson at (608) 262-0955 or page her at 265-7000, #4027.

## Standard Precautions

Standard Precautions are a set of precautions that the Centers for Disease Control and Prevention (CDC) has called for in order to minimize the risk that you will catch an infection from a patient or spread infection among patients.

You may have heard the term "Universal Precautions"--these were developed beginning in the 1980s specifically to protect you from bloodborne pathogens (covered in the next section). Standard Precautions basically expands upon Universal Precautions by covering more body fluids and sites, as follows:

|             |                           |                  |
|-------------|---------------------------|------------------|
| Blood       | Secretions                | Non-intact skin  |
| Body Fluids | Excretions (except sweat) | Mucous membranes |

**Standard Precautions must be observed with ALL patients at ALL times, regardless of their age, gender, diagnosis, or whether they are under isolation for a specific disease.**

- Avoid needlesticks and other sharp injuries by using all sharp items carefully, making use of safety devices which are available, and disposing of all sharps immediately. Do not recap needles (see the bloodborne pathogens section, below).

- Wear gloves when touching blood, body fluids, secretions, excretions, and contaminated items. Put on clean gloves just before touching a patient's mucous membranes and non-intact skin.
- Wash hands after touching blood, body fluids, secretions, excretions, and contaminated items, whether or not gloves had been worn.
- Wear a mask and eye protection or a face shield to protect the mucosa (moist areas) of the eyes, nose and mouth during procedures that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions.
- Wear a gown to protect skin and clothing during procedures that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions.
- Handle used patient care equipment soiled with blood, body fluids, secretions and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environments.

### **Basic rules of thumb to remember:**

- Use sharp items with utmost care
- If it's wet and human--DO NOT TOUCH IT WITHOUT GLOVES
- If it's wet and human and may splash or spray--PROTECT THE MUCOSA (MOIST AREAS) OF YOUR EYES, NOSE, AND MOUTH.

---

## **BLOODBORNE PATHOGENS**

Bloodborne pathogens include HIV (human immunodeficiency virus), HBV (hepatitis B virus) and HCV (hepatitis C virus). All of these agents can be spread by contact with blood or other body fluids.

Strictly following Standard Precautions, especially the precautions aimed at avoiding sharp injuries, will minimize your risk of acquiring these infections on the job. Receiving the hepatitis B immunization is a very good way to protect yourself from getting hepatitis B should an accidental exposure occur.

Your greatest risk of acquiring a bloodborne pathogen infection on the job is through a needlestick or other sharp injury.

### **HIV Exposures at UWHC**

There have been 60 employee exposures to HIV contaminated blood or body fluids at UWHC between 1985 and September, 1999.

63% of the HIV exposures were due to NEEDLESTICK injuries; 8% due to other SHARPS:

Needles/syringes must always be used with utmost care when providing patient care. You

are required to use the safety devices which the hospital makes available. It is imperative that sharp items be immediately discarded into a sharps container after use. Needles are not to be recapped. In the rare instances where recapping is absolutely necessary, use a one-handed technique.

22% of the HIV exposures were due to contact with the employee's MUCOUS MEMBRANES:

If the risk of a splash or spray of blood or body fluids is evident, employees must protect their eyes, nose and mouth from exposure. This can be accomplished by wearing a mask and protective eyewear with sideshields, or by wearing a full face visor.

7% of the HIV exposures were due to contact with the employee's NON-INTACT SKIN: If you have non-intact skin (cuts, abrasions, dermatitis, etc.), these areas must be protected from contact with blood or body fluids by using a barrier such as gloves or a fluid-resistant gown.

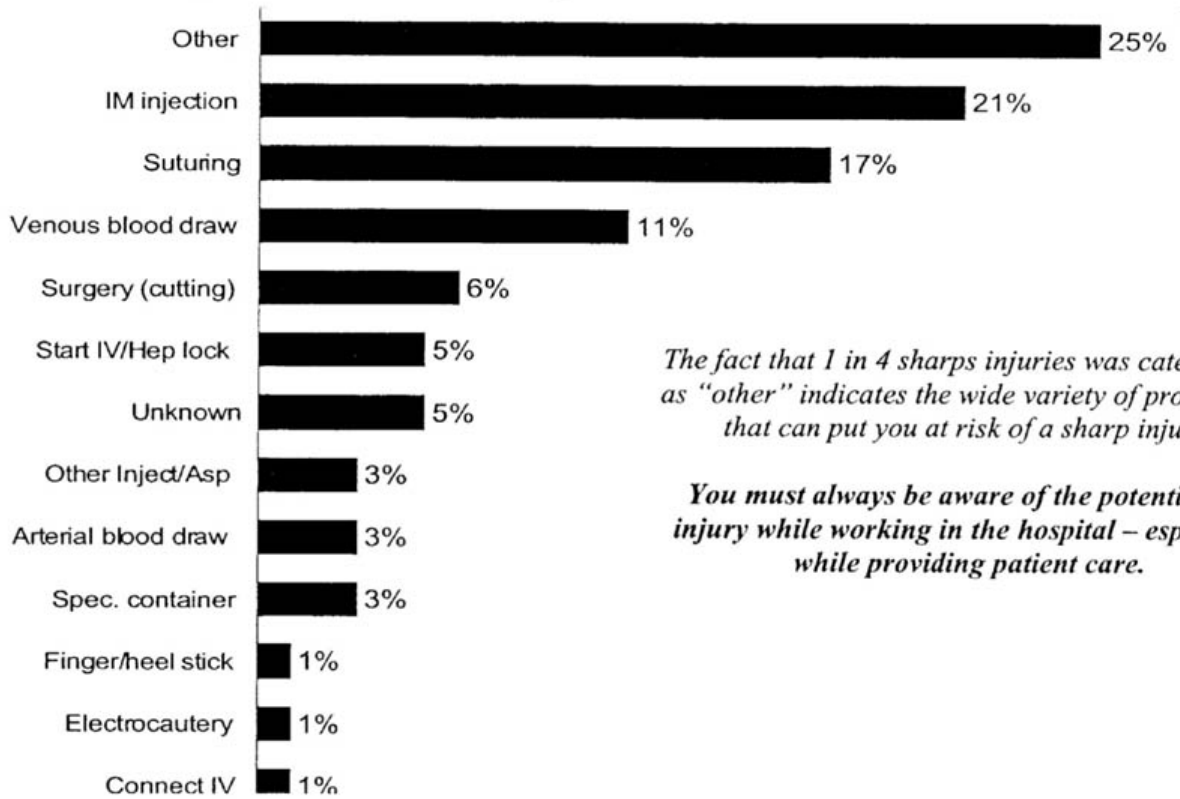
None of the UWHC employees exposed to HIV have developed HIV infection. However-through June 1999 there have been 55 U.S. healthcare workers with documented HIV infection that was acquired on the job. Eighty-five percent of these infections were due to a sharp injury (usually a needlestick). Healthcare occupations most heavily represented among these clearly documented on-the-job acquisitions were nurses (42%), laboratory technicians (29%), and physicians (11%).

***Don't wait for someone to protect you. Protect Yourself!***

UWHC provides employees and students with a number of safety devices to avoid sharp injuries (e.g., needle-less i.v. sets, safety catheters, self-blunting needles, etc.). Remember that no safety device is foolproof and these items are not intended to replace common sense and caution. Always stay vigilant in order to protect yourself and others from injury. It takes only a momentary lapse in concentration to leave yourself vulnerable to injury.

---

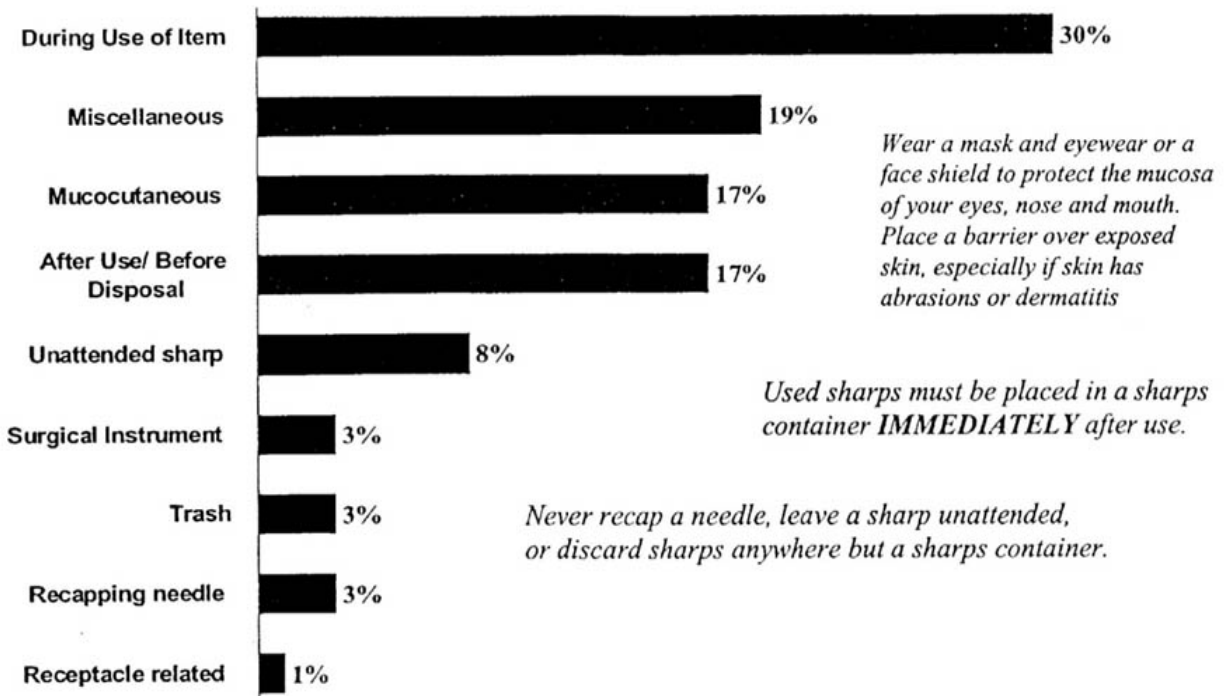
In 1999, there were **150 Sharp Injuries to hospital employees** reported to Employee Health Service. They occurred under the following circumstances:



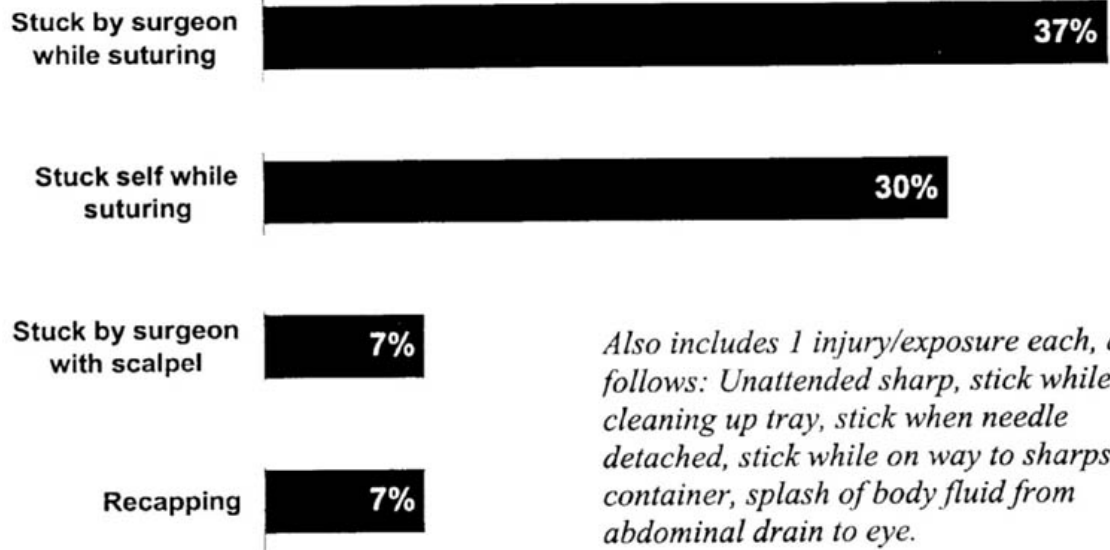
*The fact that 1 in 4 sharps injuries was categorized as "other" indicates the wide variety of procedures that can put you at risk of a sharp injury.*

*You must always be aware of the potential for injury while working in the hospital – especially while providing patient care.*

In 1999, there were **259 biohazardous injuries** and exposures to hospital employees, students and research personnel reported to Employee Health Service. They occurred as follows:



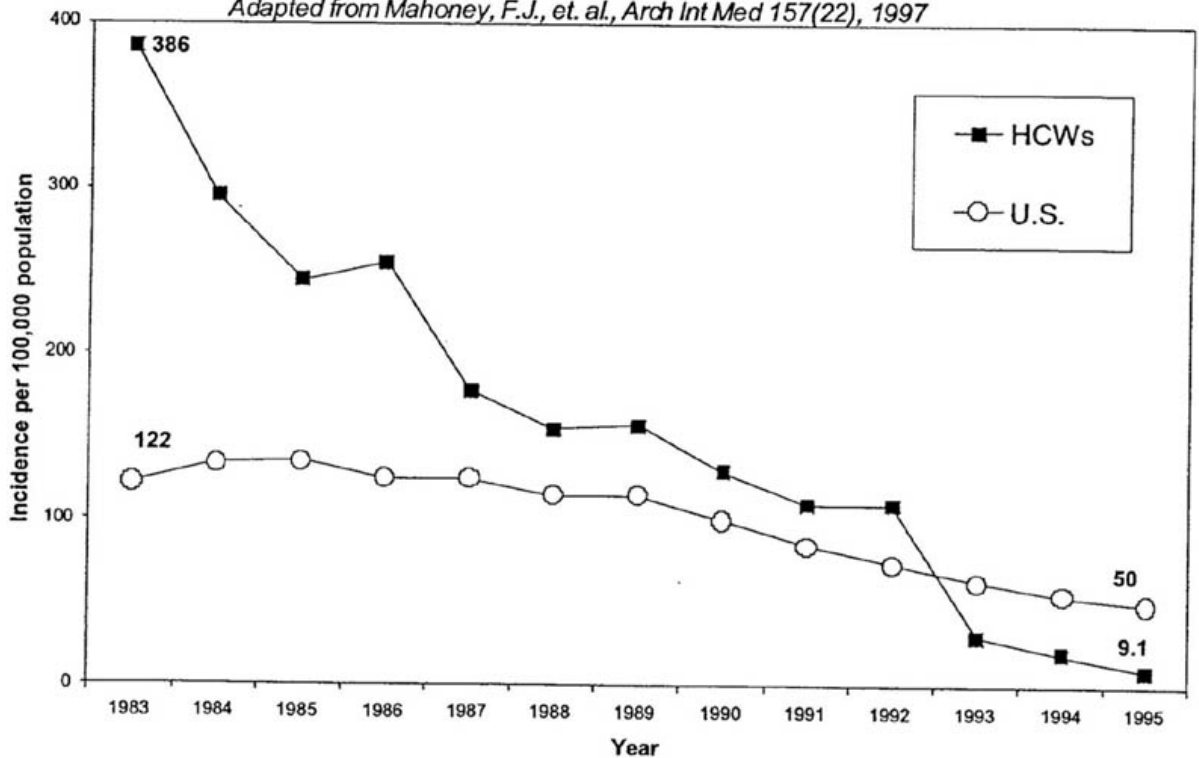
## Injuries/Exposures to Medical Students, UWHC 1999 (n=27)



*Also includes 1 injury/exposure each, as follows: Unattended sharp, stick while cleaning up tray, stick when needle detached, stick while on way to sharps container, splash of body fluid from abdominal drain to eye.*

## Estimated Incidence of HBV Infection

Adapted from Mahoney, F.J., et. al., *Arch Int Med* 157(22), 1997



Analysis of a national needlestick injury database reporting over 2,000 sharp injuries in 1995 indicated that 79% of hollow-bore needlestick injuries were potentially preventable (a safety device was available, but not used *or* the injury occurred after the device was used, but before it was properly disposed).

Exposure to bloodborne pathogens can occur in many ways. Although needlestick and other sharps injuries are the most common means of exposure for health care workers, bloodborne pathogens also can be transmitted through contact with mucous membranes and non-intact skin. While hospitals and clinics must provide for the evaluation and management of exposures that occur in their employees, they are under no obligation to provide the same services to a student doing a clinical rotation at their facility. Some clinical sites are very helpful to students in this situation, others are not. We've put together these guidelines to assist you in the event that you sustain a bloodborne pathogen exposure.

**So, what's an "exposure"?**

An exposure incident means a specific eye, mucous membrane non-intact skin or parenteral contact with

blood or other potentially infectious materials.

**What are infectious materials?**

Blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, amniotic fluid, saliva in dental procedures, any body fluid visibly contaminated with blood, mixtures of fluids where you can't differentiate between body fluids, unfixed human tissue or organs (other than intact skin), and certain cell, tissue or organ cultures and mediums.

**Learn your facility's procedures:**

- To whom do you report (e.g., the employee health service)?
- Who coordinates the evaluation of the source patient?
- How YOU get care?
- Who coordinates the follow up?
- Who pays?

**If you suffer an injury or exposure at the Clinical Science Center, take the following steps:**

| <b>Injury or Exposure</b>  | <b>Step 1</b>   | <b>Step 2</b>   | <b>Step 3</b>   |
|--|---|---|---|
| <b>Needlestick or other sharp injury</b>                               | Immediately wash the affected area with soap and water.   | Gently squeeze the injured area to induce bleeding, if possible.  | Notify supervisor and immediately report to University Health Services. Then inform Mike Snow at Student Services.* |
| <b>Splash of blood or body fluids to mucosa of eyes, nose or mouth</b> | Immediately flush the affected area with water or saline. | Notify supervisor and immediately report to University Health Services. Then inform Mike Snow at Student Services.* |   |
| <b>Splash of blood or body fluids onto non-intact skin</b>             | Immediately wash the affected area with soap and water.   | Notify supervisor and immediately report to University Health Services. Then inform Mike Snow at Student Services.* |   |
| <b>Splash of blood or body fluids onto intact skin</b>                 | Immediately wash the affected area with soap and          | If contact is prolonged, or involves extensive areas of skin, notify supervisor and report                          |   |

|  |        |  |  |
|--|--------|--|--|
|  | water. | to University Health Services. Then inform Mike Snow at Student Services.* |  |
|--|--------|--|--|

**\* IF THE INJURY OCCURS WHEN UNIVERSITY HEALTH SERVICE IS CLOSED, REPORT TO THE EMERGENCY DEPARTMENT.**

For more information on bloodborne pathogens see the *UWHC Bloodborne Pathogens Reference Manual*, available on all units where exposure to blood and body fluids may occur. This manual contains the OSHA Bloodborne Pathogens Standard ("Universal Precautions"), the UWHC Exposure Control Plan, additional information on the epidemiology and symptoms of bloodborne pathogens, and a reference list of related hospital policies.

---

**If you have an exposure incident at a site other than the Clinical Science Center:**

1. Notify your preceptor or clinical instructor.
2. Notify the facility's coordinator for employee health and/or infection control issues.
3. Contact your school's Student Services office (Mikel Snow) (608) 263-4920.
4. Contact University Health Services for advice, facilitation, follow-up:  
Janet Johnson RN (608) 262-0955 pager 265-7000, # 4027 email:  
jejohnso@facstaff.wisc.edu  
Craig Roberts PA-C (608) 262-6720 pager 265-7000, # 4555
5. You can leave a voicemail message for Janet or Craig any time, day or night.  
Toll free access: 800-330-8829, enter phone number when prompted

Clinical Medicine (general number) (608) 265-5600 8:30 am-5:00 pm weekdays  
After hours clinician on-call (608) 265-8200 5:00 pm-9:00 pm weekdays  
Noon-9:00 pm weekends

Health Services staff are experienced in the management of exposures and in the issues that surround them. University Health Services (UHS) provides prepaid primary care for students enrolled at UW-Madison, but we do not cover services provided elsewhere. Therefore, where it is not practical to come to the UHS clinic for care, the expense of services is the responsibility of the student or the student's insurance. Some facilities cover the cost of the student's testing, some do the testing but bill the student for a clinic or emergency room visit. The baseline testing for the student is rarely if ever an emergency. Therefore, if it is possible to come to the University Health Services within a few days for your own testing, it can be done with no cost to you.

**While the exact implementation of procedures will vary from place to place, here**

**are some common themes that will be part of the management of an exposure incident.**

|   |  |
|---|--|
| <p>TAKE CARE OF THE INJURY OR EXPOSED AREA</p>  | <p>Prompt and thorough cleaning of the blood spill or splash or of the injury is a KEY step in preventing blood-borne infection.</p> <p>How's your tetanus protection?</p>   |
| <p>REPORT THE INCIDENT</p> <p>Assess the exposure incident: Is this a significant exposure ?</p>  | <p>Another health professional will assist you, and the proper steps will be followed to collect the information that is needed to manage the exposure and to care for you.</p> <p>There is a specific definition of significant exposure, it takes into account the type of body fluid, the integrity of the skin surfaces, and the mechanics of the injury.</p> <p>Facilities use an incident report as a tool in evaluating such situations.</p> <p>Some thought should be given to understanding how the incident happened and how it could be prevented in the future. That might not be the first thing on your mind, but it should be part of the process sometime.</p> |
| <p>EVALUATE THE SOURCE PATIENT for bloodborne pathogens. Typically includes:<br/>HIV antibody<br/>hepatitis B surface antigen or panel<br/>hepatitis C antibody</p> | <p>One should not rely on medical or social history to assess the risk of bloodborne infections. A uniform practice of testing every source patient is the standard. This requires the patient's consent for testing. Ideally, you should not have to obtain the consent yourself, and there should be a mechanism in place for that to be done.</p> <p>This should be done as promptly as possible. Time is of the essence, especially with short hospital stays, or exposures in outpatient settings.</p> <p>Since exposures often take place in the surgical or delivery room area, the source patient's ability to give consent for testing may be delayed.</p>            |
| <p>YOUR OWN TESTING AND TREATMENT</p> <p>HIV antibody<br/>hepatitis B immune status<br/>hepatitis C immune status<br/>postexposure prophylaxis</p>                  | <p>All testing should be "on the record" to be of benefit to you as a baseline in a risk management sense.</p> <p>The results of recent anti-HBs testing may be sufficient.</p> <p>Chemoprophylaxis with immune globulin or antiviral medications may be recommended in some situations.</p>   |

|  |   |
|--|---|
| <p>FOLLOW-UP</p> <p>Repeat serology, schedule varies</p>   | <p>Your own test results should be given to you.</p> <p>The need for follow-up tests is determined largely by the source patient's availability for testing and the results of such tests. This is why reporting the incident is so important.</p> <p>HIV results usually are provided only in a personal visit.</p>  |
| <p>WHAT TO DO IN CASE OF A BLOOD/FLUID EXPOSURE</p> <ul style="list-style-type: none"> <li>• Immediately wash the affected area with soap and water or flush the affected mucosa with water or saline.</li> <li>• Report the incident immediately.</li> <li>• Evaluate the source patient.</li> <li>• Obtain baseline testing for you.</li> <li>• Follow up to learn your test results.</li> <li>• Follow up to learn source patient test results.</li> <li>• Obtain follow-up tests as needed.</li> </ul> | <p>Phone numbers to help you (all are area code 608):</p> <ul style="list-style-type: none"> <li>• University Health Services:<br/>Janet Johnson RN 262-0955265-7000 #4027<br/>Craig Roberts PA-C 262-6720 265-7000 #4555</li> <li>• University Health Services<br/>8:30 am-5:00 pm weekdays 265-5600</li> <li>• After hours clinician<br/>5:00 pm-9:00 pm weekdays 265-8200 and Noon-9:00 pm weekends</li> <li>• UW Medical School Student Services:<br/>Mikel Snow 263-4920 657-2055</li> </ul> |

---