

**HealthStream Course 10314
Providence Alaska Medical Center
Annual Safety Update 2011**

**Hazardous Materials/Waste
Management, Oxygen/Gas
Cylinder, Radiation Safety, &
Medical Equipment**



Course Description

This course consists of four unique parts

- **Hazardous Materials and Waste Management**
- **Oxygen/Gas Cylinder**
- **Radiation Safety**
- **Medical Equipment**

Hazardous Materials and Waste Management

Learning Objectives

Welcome to the section on Hazardous Materials & Waste Management. After completing this section you will be able to:

- **Recognize the 5 requirements of the Hazard Communication Standard;**
- **Confirm that all chemicals in your department are inventoried in MAXCOM;**
- **List the types of personal protective equipment (PPE) needed for chemical protection;**

Identify where the material safety data sheets (MSDS) are located online and what information they contain;



Right-to-Know: The Hazard Communication Standard

- It is your right to know about the chemicals you work near.
- Your department must:
 - Train all employees on handling the chemicals in the department;
 - Maintain a current list (inventory) of all chemicals present in the department;
 - Provide access to the MSDS for each chemical (available electronically on Maxcom);
 - Make sure all chemicals in the department are labeled; and
 - Provide the correct personal protective equipment (PPE) for handling the chemicals in the department

Personal Protective Equipment

- Personal protective equipment (PPE) puts a barrier between the human body and the hazard.
- PPE is specialized to the task.
- PPE includes:
 - Gloves
 - Goggles
 - Safety Glasses
 - Respirators
- PPE use is NOT optional! When indicated by the procedure, it must be worn.



Safe Use

Reduce a harmful chemical effect by:

- Limiting exposure.
 - Limit amount of time using chemicals.
 - Use personal protective equipment (PPE) to prevent the chemical from entering the body.
- Following safe work practices.
 - Use the correct chemicals.
 - Follow proper procedures.
- Learning the hazards of the chemical before use. Read the
 - MSDS; and
 - Label.

Labeling

All chemicals are labeled by the manufacturer. A container that holds hazardous chemicals contains the following words on the label:

- Danger
- Caution
- Warning

Remember:

- Do not deface or cover the original container label.
- Do not reuse the container.
- Dispose of the original container when it is empty.
- Do not use a new chemical until you have been trained to use it properly.



Secondary Label

- If a chemical is transferred from an original container to a new container, the new container must be correctly labeled.
- Use a Providence approved secondary label.
 - Include the chemical name; and
 - List the hazards.
- Maxcom provides easy-to print labels for all chemicals in your department's inventory.
- Call the HazMat manager (212-2305) with any questions about secondary labels.



Chemical Spill Response

- If you have a chemical spill or leak, page SECURITY immediately by calling “777.”
- Staff should clean up the spill ONLY if they are trained on clean-up procedures for that specific chemical.
- First aid response information is found on the MSDS and applies to patients and staff.
- Environmental Services is NOT involved in any chemical spill clean up.



Asbestos Program

- PAMC is not an asbestos-free building.
- There is no known asbestos in public areas or in areas used in day-to-day operations that presents a health hazard.
- Areas of known asbestos are visibly marked.
- Contact the Asbestos Coordinator in the Facilities Support Department (x25000) with questions.



Oxygen Cylinder Safety



Oxygen Cylinder Storage

Oxygen tanks must be secured at all times. Tanks are under high pressure and improper handling may result in injury or death.

- Always make sure oxygen tanks are secured in a cylinder holder and that the retaining screw is tight.
- Never lay a tank on the floor.
- Never leave it sitting upright without support.



Oxygen Cylinder Use

- Oxygen is a drug and requires a physician's order.
- Only medical personnel that are licensed to deliver medications may administer oxygen.

Fire Precaution

Oxygen greatly increases the rate of combustion! Do not use the following around oxygen cylinders:

- Open flames or smoking;
- Friction toys or devices that may create a spark; and
- Electrical equipment.

Flammable products not to be used around oxygen cylinders include:

- aerosol sprays;
- alcohol, alcohol-based products, or products containing ether;
- oil or grease (Note: Do not oil or grease the oxygen equipment); and
- petroleum products such as Vaseline or lotions (Note: Do not use while changing oxygen regulators or handling oxygen equipment).

Section Summary

By following these few precautions, the use of oxygen cylinders can be a safe activity.

Remember:

- Oxygen tanks must be properly secured at all times.
- Oxygen greatly increases the rate of combustion.
- Avoid open flame, electrical equipment, and sparks.
- Avoid using flammable products around oxygen.



Radiation Safety

Providence Alaska Medical Center Radiation Safety

Providence Alaska Medical Center (PAMC) has developed a radiation protection program to ensure that public and employee exposures are kept as low as possible.



Radiation Safety Concepts

Three (3) radiation safety concepts which will help protect you around X-ray equipment and radium implant patients:

- Time - limit your time near the source;
- Distance - stay as far away from the source as possible; and
- Shielding - use lead walls, aprons, or doors as a shield.

Summary

- Do not enter rooms marked with the symbol for radioactive materials, unless authorized.
- Observe warning signs in regulated areas that store ionizing equipment and radioactive materials (These areas are limited to trained and authorized staff).
- The three radiation safety concepts that will help protect you around radiation are time, distance, and shielding.
- All questions regarding contamination and spills should be immediately directed to Dr. Yongli Ning, Radiation Safety Officer in the Radiation Oncology department at 212-3186.
- No clean-up of radioactive materials should take place without the Radiation Safety Officer.

Medical Equipment Safety

Learning Objectives

Welcome to the section on Medical Equipment Safety.

After completing this section you will be able to:

- Identify safe and proper operational procedures for medical equipment and portable communication devices at PAMC;
- Identify how to submit a work request for broken equipment; and
- Explain what you should do with trial, loaner or demo equipment before using it on a patient.



Portable Communication Devices

Portable communication devices such as cell phones and two-way radios cause electromagnetic interference with some medical devices. Hospital policy states:

- Use of portable communication devices is restricted in critical care and highly instrumented areas where posted.
- When operating cell phones, users will maintain a distance of 6 feet or greater from medical devices.



When operating two-way radios, users will maintain a distance of 25 feet or greater from medical devices.

Safety Inspection of Patient and Staff Owned Devices

Patient or staff owned devices may be used at PAMC if these devices have been safety checked by:

- Biomedical Services; or
- Staff members trained by BioMedical Services.



Wireless Clocks

- Wireless clocks (identified by the Providence Logo) represent the most accurate time source available where installed.
- The wireless clocks derive their time source from the Global Positioning System (GPS) via satellite.
- The GPS time signal is interfaced to numerous systems/computers, but does not interface (synchronize) with stand-alone medical devices.
- All stand-alone devices require manual adjustment to match the time on the wireless clocks.



2011 Volunteer Annual Safety Update (ASU) Test Questions

Please open the 2011 Answer Sheet, print that document and mark your answers on the answer sheet.

Another option would be to open the 2011 Test Questions document, print it and mark your answers, then return either one to Volunteer Services.

Hazardous Materials

12. Oxygen tanks are under high pressure and must be:

- A. Stored on the floor
- B. Left outside
- C. Secured at all times
- D. Kept warm

13. Three Radiation Concepts that will help protect you around x-ray equipment are:

- A. Distance, PPEW, and Respond eFeedback event reports
- B. Time, distance, and shielding
- C. Shielding, time, and PPE
- D. MSDS, masks, and fire extinguishers

14. If you see a new chemical in your department, you should make sure you know how to use it properly before handling it.

- True False