Objectives/Overview

This lesson provides a general overview of employee safety and health through the following topics:

*Hazard Prevention & Control, Chemical Safety, Environmental and Equipment Safety, Patient Safety, Radiation Safety and Incident Reporting.*

The main goals of this lesson are to:

- Protect the safety, health and well-being of every staff member
- Prevent on-the-job injuries, illnesses and accidents
- Treat any job-related illness or injury promptly
- Encourage employees to report all hazards and incidents promptly
- Conduct periodic assessments of all procedures, equipment and work sites
- Meet required guidelines, regulations and standards
- Monitor and evaluate the effectiveness of the program
Potential Hazards at Baystate Health

Chemical Hazards
These include toxic substances, such as medications (e.g., chemotherapy drugs), gases (e.g., ethylene oxide and waste anesthetic gases), and solutions (e.g., formaldehyde).

Infectious/Biological Substances
These include blood and other body substances that may contain disease-causing bacteria, viruses, fungi or parasites.

Physical, Environmental and Equipment Hazards
These include air quality, noise, radiation, lasers, tripping hazards, electrical and other equipment hazards.

Ergonomic Hazards
These include improper lifting techniques and repetitive motion.
Ergonomics in the science of fitting the job to the worker. (See additional web-based course)

Job-Related Stress
This includes stress from shift work and can affect safety and health.

Security and Life Safety
These include fires, workplace violence, and personal security.
The Employee Safety and Health Program is designed to help meet:

**OSHA (Occupational Safety and Health Administration) Regulations**
- OSHA 29 CFR 1910.1200(h) Hazard Communication
- OSHA 29 CFR 1910.147(c)(7) The Control of Hazardous Energy (Lockout/Tagout)
- OSHA 29 CFR 1910.145 Specifications for Accident Prevention Signs and Tags
- OSHA 29 CFR 1910.332 Training

**CDC (Center for Disease Control and Prevention) Isolation Precautions**

**EPA (Environmental Protection Agency) Regulations**

**The Joint Commission**
- EOC Standards & National Patient Safety Goals


Click on each link above for more information about each Agency’s requirements.
Employee Safety & Health

Relevant Policies:

BMC Clinical Operations Policies

BFMC Clinical Operations Policies

BWH Clinical Operations Policies *(select “Policies” from menu on left side of page)*

X-Ray Radiation Safety Policies

Radionuclide Radiation Safety Policies

Laser Safety Policies
## Employee Safety & Health

### Important Phone Numbers

<table>
<thead>
<tr>
<th>Department</th>
<th>BMC/BMP</th>
<th>BFMC</th>
<th>BMLOC</th>
<th>BNH</th>
<th>BWH</th>
<th>BVNAH</th>
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</thead>
<tbody>
<tr>
<td>Occupational Health /Employee Health Services</td>
<td>794-3254</td>
<td>773-2182</td>
<td>967-2179</td>
<td>568-2811 X-5084</td>
<td>370-5264</td>
<td>794-3254</td>
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<tr>
<td>Safety Office/Officer</td>
<td>794-1400</td>
<td>773-2282</td>
<td>967-2140</td>
<td>568-2811 X-5769</td>
<td>370-5297</td>
<td>827-4523</td>
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<tr>
<td>Security</td>
<td>794-5534</td>
<td>Operator “0”</td>
<td>Operator “0”</td>
<td>636-1446</td>
<td>0-5445 OR Operator “0”</td>
<td>794-5534</td>
</tr>
<tr>
<td>Patent Safety Reporting System (SRS)</td>
<td>794-8832 or SRS Pager, 94777</td>
<td>794-8832 or SRS Pager, 94777</td>
<td>794-8832 or SRS Pager, 94777</td>
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<tr>
<td>Emergency</td>
<td>4-HELP 794-4357</td>
<td>3-HELP 773-4357</td>
<td>967-2211 or Operator “0”</td>
<td>Operator “0” or 636-1446</td>
<td>Dial 66 OR 0-5445</td>
<td>9-911</td>
</tr>
<tr>
<td>Radiation Safety</td>
<td>794-5405 or Pager 40245</td>
<td>794-5405 or Pager 40245</td>
<td>794-5405 or Pager 40245</td>
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OSHA (Occupational Safety and Health Administration)

These Regulations include:

Hazard Communication Standard
Otherwise known as “Right-to-Know Standard.” It requires employers to provide employees with information about chemical hazards and safe handling and disposal of chemicals.

Laboratory Safety Standard
This requires each lab to have a chemical hygiene plan that covers the hazardous materials found and used there.

Bloodborne Pathogens Standard
This requires all staff members to use either “universal precautions” or “standard precautions” to prevent exposure to body substances, such as blood, that may be infectious.
CDC (Centers for Disease Control and Prevention)

Isolation precautions are divided into two parts:

- **Standard body substance precautions**
  
  Guidelines for the care of all patients

- **Transmission-based precautions**

  Additional guidelines for the care of patients who may have a contagious illness, such as TB (tuberculosis).
EPA (Environmental Protection Agency)

These requirements are:

- Cover the use and disposal of hazardous materials
- Limit the release of any hazardous waste into the environment
Employee Safety & Health

Other Federal, State and Local Agencies

Cover a wide range of work issues including:

- The Americans with Disabilities Act
  - A federal law that protects the rights of employees with disabilities
- State and local fire, safety, health and building codes
The Joint Commission

• Sets standard practices to ensure quality patient care

• Conducts a wide-ranging survey of health-care facilities that is essential for gaining accreditation
Hazardous Material Safety

What does Hazmat stand for? Hazardous Materials
Hazardous material safety is a balance of rights and responsibilities. Every employee has a right to know what potentially hazardous materials may be present and how to work safely with and around them. Each of us also has a responsibility to learn and implement the safe work practices that will provide a safe environment for ourselves, coworkers, patients and visitors.

This program satisfies the training and implementation requirements of the Hazardous Communication Standard (29 CFR 1910.1200) as required by the Occupational Safety and Health Administration for protection of employees in the workplace from chemical hazards.
What are Hazardous Materials?

Hazardous materials are substances (chemicals) classified as a physical or health hazard. When important safety practices are not implemented, hazardous materials can also be dangerous to the people around you such as coworkers, patients and visitors and to the facility itself.

Health hazard = acutely toxic (by any route of exposure), can include, but is not limited to; skin corrosion/irritation, serious eye damage/irritation, respiratory irritation, skin sensitization, germ cell mutagenicity, reproductive toxicity, specific organ toxicity or aspiration hazard.

Physical hazard = can include, but is not limited to; explosive, flammable, oxidizer, self-reactive, pyrophoric, self-heating, organic peroxide, corrosive to metal or gas under pressure.

Certain chemicals can be dangerous to your health if you are exposed to an elevated amount. They can also be dangerous with improper handling. Hazardous materials can be solids, liquids or gases. Biological substances are also considered hazardous materials and should be treated as such.
Global Harmonizing System (GHS)

OSHA’s Hazard Communication Standard was first enacted in 1983, however, recent changes have brought the regulation more in line with international standards with the implementation of the Global Harmonizing System, or GHS for short.
Recognizing Hazards

Labels

One of the easiest ways to recognize a hazardous substance is by reading the label.

Labels are the most readily available source of information about a chemical.

Always review a container’s label and SDS carefully before using a substance.

Workplace labels do not need to follow GHS labeling but must provide all specific information regarding hazards of the chemical.
9 Pictograms are Now Used to Illustrate Hazards

Pictograms are used to alert the user of chemical hazards. They can be found on container labels and are often on the Safety Data Sheet as well.

**Health Hazard**
- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

**Flame**
- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

**Exclamation Mark**
- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer
  (Non-Mandatory)

**Gas Cylinder**
- Gases Under Pressure

**Corrosion**
- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

**Exploding Bomb**
- Explosives
- Self-Reactives
- Organic Peroxides

**Flame Over Circle**
- Oxidizers

**Environment (Non-Mandatory)**
- Aquatic Toxicity

**Skull & Crossbones**
- Acute Toxicity (fatal or toxic)
There are two signal words that appear on GHS container labels. The words “Danger” or “Warning” are used to emphasize hazards and indicate the relative level of severity of the hazard.

The signal word “Danger” represents a more severe hazard than the signal word “Warning”. Only one signal word, corresponding to the class of the most severe hazard, should be used on a chemical label.
What is a SDS?

SDS = Safety Data Sheet generated by the manufacturer of a substance

A Safety Data Sheet and a Material Safety Data Sheet (MSDS) are essentially the same thing - documents that accompany hazardous chemicals and substances and outline the dangers, composition, safe handling, and disposal of said chemicals and substances.

With new GHS standards all MSDS are being turned into SDS which must be set up with the same 16 section format.
To access a SDS go to the Applications tab on eWorkplace, (SDS Search).

If you have further questions contact:
Safety & Environmental Affairs Department @ (413) 794-1400.

Baystate Noble users can access SDSs through NobleNet.
Baystate Health has certain controls in place to reduce risks and eliminate hazards in the workplace. Some examples are listed below:

**Check Equipment Before Each Use**
Inspect it for defects and hazards. Don’t use it if cords are frayed, connections are loose, etc.

**Follow Proper Procedures**
Get all required training before you use any piece of equipment. Make repairs only if you are trained and authorized to do so.

**Safe Work Practices**
This means changing how a job is done to reduce the risks (e.g. preventing recapping needles)

**Administrative Controls**
This means changing how long or how often a worker is exposed to a hazard (e.g. adjusting work schedules to limit exposures)

**PPE (personal protective equipment)**
This means using special clothing to protect against hazards (e.g. using respirators to prevent exposure to airborne substances)
Some Examples of PPE include:

- Eye protection
- Hearing protection
- A mask, or a N95 particulate respirator, or a powered air purifying respirator (PAPR)
- Gloves
- Protective footwear
- Protective body covering, such as a lead apron
Safe Work Practices

Some examples of safe work practices include:

• Avoid unnecessary exposure to chemicals.
• Do not eat, chew gum or apply make-up or lip balm in areas with hazardous materials.
• Only use hazardous materials after you have received proper training on how to handle them.
• Make sure all hazardous materials are properly labeled.
• Always use appropriate PPE, including protective footwear and inspect before use.
• Do not lean against containers with hazardous materials in them.
• Do not stack or overcrowd containers with hazardous materials.
• Secure long hair and loose clothing.
• Reseal all hazardous material containers immediately after use.
• Report all exposures to your supervisor and Employee Health Services.
• Clean work areas after completion of task.
• Wash exposed skin thoroughly after using a hazardous material.
What To Do in the Event of an Accidental Spill

A spill is any uncontrolled release of a hazardous material from its container. Follow your department’s internal policy for specific directions.

- **BMC**: Report the spill to Security 794-5534 or 794-4357 (4-HELP) for immediate assistance.

- **BFMC**: Report the spill to the switchboard 773-4357 (3-HELP) and the Switchboard will have Security respond immediately.

- **BMLOC**: Report the spill to Security 7-4843 pager, if no answer call the operator.

- **BNH**: Report the spill to Environmental Services at 875-2270 or Security at 636-1446.

- **BWH**: Report spill to the switchboard 283-7651 (0 internally) and the Switchboard will contact the Emergency Coordinator.

- **BHH**: Report spill to Security Desk (4-6430) to contact Director of Facilities (for all emergencies)

If the spill is feasible to contain with department spill kit, utilize immediately. After contacting the appropriate authority, secure the area until their arrival to prevent exposure, and slips/trips/falls. Evacuate area if necessary. Notify your supervisor.
Read the Container Label
It uses words, pictures and symbols to give you general information about the chemical and product. For example, it lists the chemical identity, major hazards, precautions to avoid injury, first-aid instructions and handling and storage.

Keep Chemicals in their Original Containers
If substances must be transferred to another container, you are responsible for making sure that container is properly labeled.

Read the Safety Data Sheet (SDS) It gives detailed information like identifiers and hazardous ingredients, permissible exposures limits (PELs), physical/chemical data, fire/explosion data, reactivity data, control steps, precautions for safe handling and use, and health hazard data.

Always Follow Proper Procedures
Know what PPE (personal protective equipment) is required and how to use it properly. Know the precautions to take for safe handling, storage and disposal. Know what actions to take in case of a spill or injury.

Take Part in All Chemical Safety Training
It’s essential for the safety and health of everyone in the facility. Speak to your supervisor to find out what training you need to do your job.

Ask Questions
When not sure how to handle a product ask your manager or contact environmental health safety 794-1400. Ask questions to clarify what you need to know.
Did you know that some medications have to be handled as hazardous materials?

National Institute for Occupational Safety and Health (NIOSH), *United States Pharmacopeia* (USP) 800 and other state/federal regulations set standards for the handling of these medications. BH has set standards based upon NIOSH and USP 800.

- NIOSH: is responsible for making recommendations for the prevention of work-related injury and illness.
- USP 800: Sets the standards for handling hazardous drugs in the healthcare setting to promote patient safety, worker safety, and environmental protection.

Disposal of hazardous medications is based upon the Environmental Protection Agency (EPA) and other state/federal regulations.

- Hazardous Drug (HD) waste poses a risk to the environment (flammable, corrosive, reactive, etc.) if not disposed of properly.
Overview of HD List

• 3 levels of hazardous drugs identified based on handling procedures:
  – **Level 1: Hazardous Cytotoxic (Parenteral):** These agents are administered by injection/infusion and have a moderate-high potential of being hazardous if not handled properly.
  – **Level 2: Hazardous Cytotoxic (Non-Parenteral):** These agents are NOT administered by injection/infusion and have a moderate-high potential of being hazardous if not handled properly.
  – **Level 3: Hazardous Non-Cytotoxic (Parenteral/Non-Parenteral):** These agents are administered by any route and have a low-moderate potential of being hazardous.
    • Labeled with a yellow sticker or identified before removal from pyxis alert
• All HDs should be handled with gloves
• HD Waste identified as posing a risk to the environment are identified in the Pyxis machines and listed on a check off sheet on the black bins located at nurse stations/pharmacies
CO 11.510 Handling of Hazardous/Cytotoxic Drugs

• For detailed information on the safe handling or disposal see policy CO 11.510 and CO 11.515 which will include:
  – Personal protective equipment (PPE)
  – Handling procedures for HD’s
  – List of HD’s and assigned categories
  – Administration of “chemo” for non-chemo indications
If you are Injured or Get Ill at Work

Immediately report your injury/illness to your manager, charge person, or supervisor. They will assist you with filling out an accident report on line. You will be given a copy of the accident report. You will then be referred to Employee Health Services. If Employee Health Services is not open, you will be referred to the Emergency Room for an evaluation.

For more information contact Employee Health Services:

- BMC: 794-3254
- BFMC: 773-2183
- BMLOC: 967-2179
- BNH: 642-7200
- BWH: 370-5264
Employee Rights & Responsibilities

Your Rights

• Full information about hazardous materials present in your work area
• To receive safety training for material in your work area
• Instruction on what to do in case of accidental exposure

Your Responsibilities

• To incorporate the safety training you have received into your daily practices
• To protect yourself and others who work in your area
Who to Contact

For questions contact:

**BMC:** John Murray, Safety Director 794-1400

**BFMC:** Joe Mitko, BFMC Safety Officer 773-2979

**BWH/BMLOC:** Ron Krystofik, BWH Safety Officer 370-5297

**BNH:** Dave Rosinski, BNH Safety Officer 568-2811 X-5769
Employee Safety & Security
Security of Employees is a Shared Responsibility

• **Maintaining a safe and secure environment:** Thousands of patients, staff and visitors visit Baystate Health facilities every day. They come in contact with millions of dollars of equipment and supplies that are located in various locations. The challenge of keeping so many people, as well as places safe and secure is a sizable one. If each of us takes an active role, it can and will be achieved.

• **Protecting people and places:** Working in cooperation with the Security Department, we can protect the safety of our patients, visitors, co-workers and ourselves. We are also responsible for protecting the personal property of patients and co-workers, as well as hospital property. Hospital property includes all inventory, equipment, buildings, parking facilities and the grounds at Baystate Health’s many sites. Theft and destruction of hospital property challenge our ability to provide cost effective and quality care. Assisting Security in preventing these crimes will benefit our patients and our community.
Be Alert! Report a stranger. Each of us is responsible for working in partnership with Security in reporting strangers or suspicious activity in any of our buildings, grounds and parking facilities. If you see a stranger or an individual without a Baystate Health ID badge in an inappropriate place, offer assistance to help them reach their destination. If, for any reason, you are suspicious of their answers or their behavior, contact Security immediately at BMC: 4-H-E-L-P (x4-4357), BFMC: 3-H-E-L-P (x3-4357), BMLOC: Operator 7-2211, BWH: Operator “0”, BNH 636-1446. BHH: Security Desk central/Springfield 4-6430; eastern/Three Rivers same as BWH; western/Westfield same as BNH. Be prepared to state your location, the person’s description and any other information that might be helpful. Security will respond immediately to try to locate the person. If you feel unsafe in approaching a stranger to offer assistance, contact Security with your location and a description of the situation.
• **Be Alert! Display your ID Badge.** All Baystate Health employees are required to wear their personal Baystate Health identification (ID) badge whenever they are on duty. The badge must be worn in a prominent place above the belt line, with the picture side out. Remember your badge is your passport to restricted areas of the Medical Center. Additionally, after 8pm you will need your ID badge in order to gain access through exterior doors.
Be Alert! Maintain the integrity of locked access doors. Locked exterior doors and stairwell entries are secured for everyone’s protection. Don’t block doors. Doors which are left ajar, even for a few moments, can give an intruder the opportunity he or she is looking for. Don’t leave your property or yourself open to danger. Doors that shut automatically should be allowed to close properly at all times. Make sure that no one follows you through the door (tailgating). If they do, call Security with a description.
Security in Your Work Area

• **Ask questions:** Get to know new people in your work area. If you are uncertain whether a person has the authority to move equipment or other inventory from your area, don’t hesitate to ask. Contact your supervisor if you have any remaining questions.

• **Equipment:** Maintain an accurate inventory of Baystate Health property in your area at all times, including serial, cost and description of the items as appropriate. Report any missing items to Security as soon as possible.

• **If you can’t leave it home, lock it up!** Personal items of value and significant sums of money are best left at home. Purses, wallets and other items of value should be secured at all times. Keep them locked in a desk drawer or locker. Purses or other items left in the knee space of your desk, on a shelf or other unsecured area are prime targets for theft. If a theft does occur, report it to Security immediately.
Security in Your Work Area

• **Patient Valuables:** If you work in an area with patients, encourage them to leave their valuables at home. Any valuables brought in by patients should be locked up in accordance with the **BMC: Patient Valuables Procedure (CO Policy # 10.100, 10.105)**, **BFMC: Patient Valuables and Belongings Policy (BFMC Administrative Policy #34)**, **BNH: Patient Belongings and Valuables**, **BWH/BMLOC: Nursing Policy/Valuables**.
Secure your work area: Thefts from our offices occur because a door was left unlocked. Whenever you are the last person to leave your office, lock the door. Even if you will only be away for a few minutes, take the time to lock it up! Take a few minutes at the end of the work day to secure your work area; lock items from your desk inside your desk or in a file cabinet. Make sure all keys and ID cards are secured in a safe place. When staff end their employment at Baystate Health, be sure all keys and ID cards are returned.
Security in Your Work Area

• **Combination locks**: If your work area has a combination lock, keep the combination confidential. If you suspect that an unauthorized person has the combination to a secure area, contact Security to change the combination. Change combinations periodically and when those who have the combination leave the department.
Security On The Grounds

• **Exterior doors locking system:** It is important to remember that personal security concerns continue after you leave your work area as well.

• **Parking:** Be aware in parking lots and garages. Awareness of security issues should not end when we leave the work area.

• **Vehicles:** Personal items of value in your car are best left out of sight in the trunk or under cover. This would include phones, CDs, GPS units and any other electronic items.

• **Security Escort:** If you park on campus, anytime you feel uncomfortable and/or it’s after dark and you would like an escort to your car, call Security:
  
  – **BMC:** Security for assistance at 4-5534
  – **BFMC:** Switchboard Operator at “0” (on-site), or 773-2526 (off-site) to arrange a Security escort
  – **BMLOC:** Switchboard Operator at 7-2211 to arrange a Security escort
  – **BNH:** Call Security at 636-1446
  – **BWH:** Switchboard Operator at “0” to arrange a Security escort
  – **BHH:** The Security Desk at 50 Maple central/Springfield 4-6430; eastern/Three Rivers same as BWH; western/Westfield same as BNH
Who to Contact for an Emergency

• For emergency assistance:
  – BMC: 4-H-E-L-P (4-4357)
  – BFMC: 3-H-E-L-P (3-4357)
  – BMLOC: 7-2211
  – BNH: Operator “0” or 636-1446
  – BWH: Dial “0”
  – BHH: Security Desk central/Springfield 4-6430 or 4-H-E-L-P; eastern/Three Rivers same as BWH; western/Westfield same as BNH

Call this number anytime you feel immediate assistance is required.
Who to Contact

• For general information or an escort:
  – BMC: 4-5534
  – BFMC: Switchboard Operator at “0”, who will contact security for you
  – BMLOC: Switchboard Operator at 7-2211
  – BNH: Security at 636-1446
  – BWH: Switchboard Operator at “0”

Are there times I should call the Police Department? Anytime you feel in need of assistance or want to report a possible crime or security risk, contact Security. Security works closely with the Police and other agencies to investigate possible crimes whenever appropriate. Calling Security assures that you will receive the fastest possible assistance.

• Any questions please contact:
  – BMC: Monica Wynne, Director of Security BH, 794-5795
  – BMLOC: George Nolan, Security, 370-5300
  – BNH: Bruce Bussiere, Security, 579-2531
  – BWH: George Nolan, Security, 370-5300
In Case of Fire

- **R A C E** (Remove, Alarm, Confine, Evacuate)
  - **REMOVE** patient and visitors from the fire area.
  - Pull the nearest **ALARM** pull station and go to the phone and call 0 (3-HELP for BFMC) and report the exact location of the fire. BNH – Dial 61 and announce Code Red and location.
  - **CONFINE** the area by closing all doors and using extinguisher as needed.
  - **EVACUATE** only if told to do so by authorities or management.
In Case of Fire

- **P A S S** (Pull, Aim, Squeeze, Sweep)
  - **PULL** the pin on the fire extinguisher. Remove the plastic tag and pull the pin. Pull the nozzle from the holding clip.
  - **AIM** it at the base of the fire.
  - **SQUEEZE** the handle.
  - **SWEEP** the nozzle from side to side.
In Case of Fire

**Stay Put:** When you hear the alarm go off, stay put wherever you are. Do not go through fire doors.

**Assist Visitors:** Tell visitors to stay where they are until they hear the “all clear” or are instructed to evacuate the area.

**Fire Drills:** Fire drills are conducted on all shifts with the expectation of all employees to participate. Please consider each time as the “real thing”.

Baystate Health
Fire Alarm Pull Stations

• Located throughout the hospital are Alarm Pull Stations. When pulled, the alarm will sound and will automatically close all fire and smoke doors, as well as notify the Fire Department.
• It is important that you know where the pull stations are in your work area.
• Do you know?
  – If not, ask your supervisor.
Equipment Safety
Baystate Health strives to ensure a safe environment for its patients, visitors and employees. The implementation of a comprehensive Equipment Management Program ensures that the equipment is used, properly, safely and with utmost effectiveness. We represent the building blocks for the success of this program and thus have to treat our responsibilities accordingly.

Upon completion of this chapter, you should be able to explain:

1. The importance of using equipment only for its intended use.
2. The importance of performing visual and functional checks prior to using equipment.
3. The importance of training in proper use of equipment.
4. How to tag defective equipment and take it out of service.
Learn How to Use Equipment Properly

We all use a variety of equipment in our work environment – from coffee pots to computers, IV pumps to intensive care equipment. The technology we depend on in order to help us deliver quality care can change rapidly. Remember to learn how to use a new or seldom used piece of equipment before you use it and understand its intended use.

You must receive training on a new piece of equipment and as a result be able to demonstrate that you can use it safely and properly. You are also responsible for keeping your skills sharp. If you seldom use a particular piece of equipment, ask your supervisor or a skilled co-worker to help you refresh your skills before using that equipment. It is always a good idea to refer back to specific service and procedure manuals.
Check Equipment Before Use

• Visual Check
  – A quick visual check of a piece of equipment can often indicate a problem. Make a habit of looking over equipment before you use it. You may be able to quickly spot physical damage on equipment (e.g. IV poles, IV pumps, Sequential Compression Devices, etc.). Be sure to include power cords, plugs and electrical outlets in your visual check.
  – If you notice damage, remove the item from service using a pink “Do Not Use” tag (shown in the next slide). Then report the equipment to the appropriate service group. Be sure to securely tape the pink tag to the equipment where it will be clearly visible.
Check Equipment Before Use

• Functional Check

  – Perform a quick functional check before using equipment. Most patient care equipment now incorporates a simple operational check-out procedure, which should be completed by the operator prior to every use. Special patient care equipment (e.g. defibrillators, ventilators, etc.) must be checked daily or prior to every use. Early discovery of malfunctions helps ensure a safe environment.

  – If you find the equipment is not working properly, remove the item from service using a pink “Do Not Use” tag. Then report the equipment to the appropriate service group. Be sure to tie or securely tape the pink tag to the equipment where it will be clearly visible.
1. Complete a “Do Not Use” tag-- be sure to include the control number found on the piece of equipment, and a brief description of the problem.

2. Place tag on broken equipment and remove the device from patient service.

3. CALL the appropriate service line (Engineering, Clinical Engineering, or Information Technology) to report the piece of equipment.

4. If you find a piece of equipment that is tagged with a pink “Do Not Use” tag, DO NOT use it.
Where to Report Broken Equipment

Once a “Do Not Use” tag has been completed and the device has been removed from service, the equipment should be reported to one of the following departments:

Clinical Engineering: dial ext. 4-3382
Engineering: visit the Facilities Planning & Engineering webpage and submit an online service work request
IT/Information Services Help Desk: dial ext. 4-3000

In an emergency, contact the Engineering department for your location:
- BMC Engineering ext. 4-4200
- BFMC Engineering ext. 3-2082
- BMLOC Engineering ext. 9-2140
- BNH Engineering ext. 5769
- BWH Engineering ext. 0-5300

In the case that a piece of broken equipment is found in patient use, it must be removed immediately, and Risk Management must be notified (ext. 4-3359). Instructions for Event Reporting using the Safety Event Report (SRS) system are included elsewhere in this online training. For more information on the BMC Policy, please refer to Clinical Ops Policy [CO 9.113](#).
Patient Care Equipment

Patient care equipment is any equipment used to monitor, treat or diagnose a patient and should have a Clinical Engineering inventory control number tag on it. Use this number on the pink tag's first line under “Control Number.” If the equipment does not have a Clinical Engineering inventory control number, simply state the type of device it is.

Equipment Exposed to Blood or Body Fluids

If the equipment you are tagging out of service may have been exposed to blood or other body fluids, attach a “biohazard” sticker to the pink “Do Not Use Defective” tag. Follow appropriate departmental policies when handling potentially exposed equipment.
Employee-Owned Equipment

Small electronically powered consumer devices owned by employees such as personal radios, fans, coffee pots or microwave ovens may be used in administrative offices only under limited circumstances. Your supervisor must give permission for the appliance's use. All such appliances must meet the safety standards of Baystate Health.

Certain personally-owned small appliances may not be used under any circumstances because they present a significant fire hazard and cannot be safely used within the Baystate Health facilities. They may include the following:

- Space Heaters
- Toaster Ovens
- Electric Frying Pans
- Popcorn Makers
- Indirect Reflector Style Halogen Lamps
Patients may not bring in or use their own plug-in electrical devices during their stay in the hospital; the risk as a result of shock or fire is too great. The only exception to this rule is if the device is not available within Baystate Health and is ordered by a physician. Should this situation arise, the device must meet Baystate Health's safety standards and be successfully inspected by Clinical Engineering.

Nursing staff are responsible for monitoring the use of any patient-owned device in their area and ensuring that these devices are removed from use once the patient is discharged.

Battery powered patient-owned equipment such as personal radios and laptops are permitted except in oxygen rich environments. Patient cell phones must be kept three feet away from any medical device, unless otherwise prohibited.

Recharging of battery operated equipment is only permitted outside the patient care vicinity (six feet from the patient).
Use equipment for its intended purpose only.

If the equipment has safety guards, use them. Make sure all safety guards are properly in place before using the equipment.

If protective wear, such as gloves, respirators, or eye wear is required for using certain pieces of equipment, use it at all times.

Report defective equipment (including control number found on equipment) and remove it from service immediately.
Who to Contact

Questions contact:

Kris Walsh, Supervisor,
Clinical Engineering (X4-3898)
Utilities Safety
If You Lose Power

Who Do You Call?

- If you lose power or any other utility that is critical or life threatening, notify your department head, unit supervisor or senior person in your department immediately.

- Report the problem immediately to the Switchboard by dialing "0" (3-HELP for BFMC)

Scheduled Utility interruptions

- Occasionally, the hospital will have a routine, pre-planned power/utility interruption for maintenance, repair, testing, or equipment upgrades. You will be notified in writing in advance if your area will be affected by a scheduled interruption. If you encounter any problems during a scheduled interruption, notify the Switchboard by dialing "0" (3-HELP for BFMC)
Power Distribution System

The hospital is able to provide adequate amounts of power whenever necessary using our own system of generators. This power source can be maintained as long as is necessary with no interruptions of critical services. Should a power outage occur, our emergency generators will automatically restore power to critical areas in a matter of seconds. Every generator is tested monthly to make certain they are always ready. Our automatic alarm system will alert the Command Center and the Engineering Department immediately of any power interruptions.

At BMC and BMLH, red outlets mean “critical power.” In patient care areas, all red outlets with red cover plates are wired into the emergency power system. Under normal circumstances red outlets work the same as other outlets, providing power. But during a service interruption, critical care equipment plugged into the red outlets will have only a 6 second interruption in service. In non-patient care areas, grey outlets are utilized as “standby power,” functioning the same way “critical power” outlets are utilized.
At BMC and BMLOC

Critical power circuits are identified by either being red or by being labeled as emergency power.

Standby power circuits are identified by either being grey or by being labeled as standby power.
Use of Elevators During Emergencies

In the event of a power emergency, elevator use is generally limited to one elevator per bank (except at BFMC, where all elevators will remain on in a power emergency). In most areas, the emergency elevator is pre-selected. However, any elevator can be switched to emergency power. This selection is controlled through the Engineering Department.

If an elevator stalls with you onboard:

- **Remain calm**
- **Use the phone in the elevator car**
  to give your location to the operator

All elevator cars are equipped with telephones or emergency bells.
If you have any problems with electrical power or any other utility that is not an emergency, submit a Service Request to the Engineering Department.
Submitting a Service Request

To access FPEWeb, please use any of the following methods:

1. Go to eWorkplace – choose Content under “My Favorites” – check box for FPEWeb
2. Go to Departments Tab on eWorkplace – choose Engineering Dept.

If using a GN Login PC you will get a login screen, Please reset password on initial login.

BNH users may enter work orders through NobleNet.
Submitting a Service Request:

• To submit a Service Request, please use highlighted button on front page.
In the event of an Emergency

If there is an emergency event please call the Engineering Department, or send an Epage (at BFMC, call the Engineering Department at ext. 3-2082 during the day, or ext. 3-2383 after regular business hours, or submit a work order at any time with priority 1).

Emergency Events Requiring Epage:
- Smoke of any kind, anywhere
- Active flooding from ceilings, walls, floors, overflowing toilets
- Operating Room too hot or too cold
- Radiology Equipment Room or Control Room (MRI, CT, EP Lab, Linear Accelerator) too hot or too cold
- 3601 Main Animal Lab Rooms too hot or too cold
- No electrical power in an area, lights, computers, etc.
- Pneumatic Tube System is down
- Elevator entrapments or stuck/broken elevator
- Nurse Call Bell/remote not working
- Med Gas issues
- Broken window blinds with sun shining on patient’s face
- ED calls for something to be cut off of someone’s body, like a ring (you can try calling ERS before this is Epaged)
Emergency Engineering Contacts:

Baystate Medical Center
(413) 794-4200

Baystate Franklin Medical Center
(413) 773-2282 Day Shift
(413) 773-2383 Off Shift

Baystate Mary Lane Outpatient Center
(413) 967-2140

Baystate Noble Hospital
(413) 568-2811

Baystate Wing Hospital
(413) 370-5300
Oxygen

All equipment has alarms that will automatically signal low operating pressure as well as the status of the reserve supply. This alarm signals both the Security Command Center and the telephone operator’s console. Engineering professionals are well trained to provide an immediate and appropriate response to any alarm.

If You Need to Shut Off Oxygen

In the event of fire or other emergency where oxygen must be shut off in a patient room or treatment area, be sure you know how and where to shut off the oxygen for that room only. At BFMC, this task should be performed under the direction of the Nurse Manager. At BMLOC, BWH, and BNH, a Nursing Supervisor or Respiratory Technician shall have authority to shut off oxygen, medical air, or vacuum zone valves.

In most areas, patient room oxygen can be shut off to the equipment in the room from the inside of the room or from the zone value in the corridor. Normally, in other than emergency circumstances, these valves are shut off by engineering supervisors only. If shut off inappropriately, patients could be deprived of vitally needed oxygen.
Telephone System

The core of the hospital’s communications network is the telephone system. This equipment is reliable and has many back up features, including an uninterruptible power supply. To further enhance our communications capabilities, radio paging is interconnected with the phone system.

If you are experiencing a communications problem:

**Report all telecommunications problems to the Information Services Department.**

If your phone service is not working, report the outage to the nearest Security officer; either phone from another service area or send a runner.
Information Services maintains all computer systems and computer equipment. Scheduled downtimes are announced via email and on eWorkplace. For computer help contact the Information Service Department.
Radiation Safety
Objectives

- The objective of this chapter is to instruct you so that Baystate Health can keep personnel and patient radiation exposure as low as reasonably achievable (ALARA program). The information presented is in a basic general format for all employees. There is a separate course for those working with radiation on a daily basis.
What is Radiation?

• Radiation is energy that comes from a source and travels through some material or through space. Light, heat and sound are types of radiation, while the earth gives off radon (an inert gas) radiation. Not all types of radiation are harmful. Some types of radiation are used in healthcare for diagnosis and treatment.

• We are exposed to radiation in many forms. Radiation is found in the environment in many forms:

  • **Sun** – Ionizing Radiation
  • **Earth** – Radon (inert gas)
  • **People** – Radioactive material in the body
  • **Objects** – Smoke detectors, cell phones
Types of Radiation used in Healthcare

- Diagnostic X-ray, CT (Cat Scan), use thin X-ray beams to create a three dimensional image. Catheterization Labs

- Nuclear Medicine is the medical specialty that involves the use of radioactive isotopes in the diagnosis and treatment of disease.

- Cardiac Stress Test may incorporate radioactive substances during testing or treatment.

- Radiation Oncology uses radiation to treat some forms of cancer.
Forms of Radiation Used in Hospitals

- Ionizing – Ionizing radiation is radiation that has enough energy to remove electrons from atoms or molecules (groups of atoms) when it passes through or collides with some material.

- Examples of Hospital applications:
  X-ray – imaging internal organs

- Fluoroscopy - A technique for obtaining “live” X-ray images of a living patient. It is like an X-ray TV camera.

- Mammography – A mammogram is an X-ray test of the breasts (mammary glands) used to screen for breast problems.
Forms of Radiation Used in Hospitals

• Non-Ionizing – Non-ionizing radiation is described as a series of energy waves composed of oscillating electric and magnetic fields traveling at the speed of light. Non-ionizing radiation includes the spectrum of (UV) ultraviolet, visible light, infrared, microwave, radio frequency, lasers, and extremely low frequency.

• Examples of Hospital applications:
  – Ultrasound uses ultrasound high frequency sound waves to produce images of internal body tissues.
Forms of Radiation Used in Hospitals

• MRI magnetic Resonance Imaging is a non-invasive procedure that uses powerful magnets and radio waves to construct pictures of the body.

• Lasers use a laser light source to remove diseased tissues or treat bleeding blood vessels. The laser may also be used for cosmetic purposes, including removal of wrinkles, tattoos, or birthmarks.

• Ultraviolet is used for disinfecting operating rooms.
Radiation Protection Program

ALARA Program
As low as Responsibly Achievable (Reduces dose to both employees and patients)

- Lead aprons with neck collars and leaded glass shields are used for diagnostic radiography and fluoroscopy.
- All imaging equipment is tested annually by the Radiation Safety/Medical Physics Department. Preventative maintenance inspections are performed routinely by clinical engineering.

Quality Management

- Carefully identify the patient
- Ensure that the correct procedure ordered for the patient is being performed.
Radiation Area Signs

- Do not go into these areas without permission and an escort by authorized personnel.

- This sign indicates that radioactive material is in the room.
Radiation Dosimeters

- People who work in radiation areas wear dosimeters to document their exposure.

- Dosimeters are ONLY necessary if you work in a department utilizing radiation.

- If you are around X-ray equipment (including portable equipment) due to escorting, interpreting or providing environmental services, you ONLY need to stay 6 feet away when in use.
Basic Principles of Radiation Safety

• Time – decrease the amount of exposure time.
  – Example: Spend as little time in the area as necessary.

• Distance – increase the distance between you and the equipment.
  – Example: Position yourself as far as practicable from the exposure.

• Shielding – The more material between you and the radiation, the better.
  – Example: Stand behind walls, doors, and use lead aprons during regular x-ray exposure.
Enforcement

• **Massachusetts Department of Public Health / Radiation Control Program** regulates and enforces these policies.

• They compile and create their policy with information from the following agencies: ANSI Z136.3 Safe Use of Lasers in Health Care, Joint Commission, NRC (Nuclear Regulatory Commission), FDA and OSHA.

• You will find both Radionuclide Radiation Safety Polices and X-ray Radiation Safety Policies on eWorkplace.
Any concerns about radiation or questions about procedures should be addressed to the Radiation Safety Department located at 2 Medical Center Dr., Suite 108, Springfield, MA.

Radiation Safety / Radiation Safety Officer:
(413) 794-5405
Steven G. Marsh, M.S., DABMP
Email: Steven.Marsh@baystatehealth.org

For assistance in an emergency situation, contact:

- BMC: 4-H-E-L-P (4-4357)
- BFMC: 3-H-E-L-P (3-4357)
- BMLOC: 7-2211
- BNH: Operator “0” or 636-1446
- BWH: Dial “0”
Congratulations

You have completed this course. Click on the ‘X’ in the upper right corner to close this window and go back to your assigned items page in the web-based training system. To take the competency exam click on the title of the lesson again and click on the “Take test” button at the bottom. You must get 100% to get credit for this course.