BOIL WATER EVENTS
Checklist for Hospitals and Resident Medical Facilities

If a boil water notice has been issued for the drinking water supplied to your medical facility, there is a potential for exposure to water borne pathogens for your patients, staff and the public. If you must remain open to provide essential services, or if you elect to stay open to continue treating your patients, you must make sure every appropriate precaution is taken to eliminate all possible exposures. As a medical profession, it is your duty to ensure that your patients, staff, and the public will be protected.

Here are actions that will help you to control exposures, but as medical facilities are complex they are not meant to replace following your emergency response plans, and working with your facility engineers and local health department officials. Regulated facilities must also continue to make all needed monitoring, reporting and permit requirements unless notified by the relevant program office.

Before a boil water order event:

- ❑ Check and update your emergency response plan for appropriate steps and critical equipment/processes/connections. Update contact lists for personnel and organizations.
- ❑ Identify and evaluate any point of entry (for facility) or point of use water treatment equipment. Some treatment, such as chlorine dioxide, may provide sufficient additional treatment dependent on the contaminant and extent of treatment. Acceptability of additional treatment should be discussed with your local health department.
- ❑ Work with your facility engineering and maintenance staff to identify possible exposures and appropriate steps to be implemented.
- ❑ Identify all procedures and equipment that use tap water, ice made from tap water, or are interconnected to the water supply. Include equipment and procedures that use tap water for operational processes, sanitizing processes, solutions, and rinse water. Use standard infection control practices to evaluate modes of exposure to tap water or ice for all clientele and staff. Review any applicable facility emergency plans and procedures.
- ❑ Keep some bottled water on site. Consider developing a water balance plan to quantify how much water you need, where you will need it, and where you can get it from.
- ❑ Identify all equipment, water tanks, and appliances that may receive tap water during or just prior to the boil water event. If appropriate, define or implement protocols and procedures to isolate and/or drain equipment.

During a boil water event, do not use tap water for drinking water or sanitation without appropriate precautions:

- ❑ Check and follow your emergency response plan.
- ❑ The recommended treatment step for tap water during a boil water event is to bring the water to a full roiling boil for 1 minute, then allow the water to cool before use. This may take 20 or 30 minutes, so plan ahead.
- ❑ Identify and as appropriate clearly sign and isolate all sinks, spigots, ice machines and fountains.

- ❑ Make sure patients and staff on all shifts understand and implement all needed measures.
- ❑ Do not use tap water for: drinking, oral solutions, contact with open wounds or sores, internal treatment or contact within body cavities, patient rinsing, and hand washing. If practical, use boiled water, bottled water, or water from a safe alternate source.*
- ❑ Provide boiled (and then completely cooled) or bottled water for clients and staff to wash their hands in restrooms. Antimicrobial products that do not require water for use (e.g. alcohol based hand rubs) are less effective. If sanitary facilities cannot be provided for patrons and staff, the establishment should close unless it is a critical facility.
- ❑ Tap water can be used to wash the floors and walls, to flush toilets, but should not be used for sanitary surfaces**. Sanitary surfaces should be washed with boiled or bottled water.
- ❑ Tap water can be used to wash clothes and linens, as long as they are completely dried with heat before being used.
- ❑ Any ice made or mixed with ice made since the boil water event should not be used. If the age of the ice is uncertain, do not consume or use and label as unsafe for consumption. Drain and disconnect the ice machine. If the ice does not have a critical use, such as cooling medication, discard it.

During a boil water event, do not use tap water for patient care without appropriate precautions:

- ❑ Do not use untreated tap water for solutions, patient preparation, worker or patient hygiene, equipment preparation, equipment operations and office procedures without appropriate precautions.
- ❑ Any solution or equipment prepared with water during or just prior to the boil water event should be evaluated before use.

During a boil water event, do not use untreated tap water for medical procedures without appropriate precautions:

- ❑ Adjust or eliminate procedures that are hard to perform with limited water. If appropriate, switch to an acceptable water treatment procedure or an acceptable alternate water supply*. Also consider packaged ice from a safe alternate source.
- ❑ Some medical equipment that is properly installed, operated, and maintained may provide additional treatment of the tap water for normal equipment operations that may be sufficient to operate without the need for boiling or other supplemental disinfection *. Examples could include equipment with reverse osmosis filtration and dialysis equipment. Others, such as cartridge filters, may require adjustments or modifications to do so. Please refer to the manufacturer's specifications and your technical support staff to confirm proper operations and to determine any appropriate adjustments, increased monitoring, or other precautions.

During a boil water event, if your facility also provides food service, you must be able to fully protect your customers and staff from exposure to potentially contaminated water. Additional information can be found in the handouts for food service establishments. It is your responsibility to take whatever steps are needed to protect patients, staff and the public. In addition to boiling water or using alternate water sources, these may include:

- ❑ Change the menu to remove items that are difficult to prepare with limited water.
- ❑ Add menu items that require little or no water for preparation.
- ❑ Change food sources, switch to pre-washed produce, canned vegetables, and bottled drinks.
- ❑ Use single service tableware.
- ❑ Discontinue use of post-mix beverage equipment.
- ❑ NSF listed commercial dishwashers are acceptable if they were manufactured and are operated with a hot wash (170° F) at least 8 minutes in duration and use a disinfectant.
- ❑ "Green" or "Environmentally Friendly" dish washer rinse additives or sanitizers are weaker disinfectants and should not be relied upon to eliminate potential pathogens.
- ❑ Any food that was prepared or washed with the contaminated water should be discarded.

After the boil water event is over, the facility will be notified and must then be properly purged to fully eliminate the potential contaminants. All potentially affected equipment must be flushed, disinfected as appropriate, and potentially contaminated water/ice discarded. As medical facilities serve people that are already ill or immunocompromised and may have unique equipment and plumbing, there may be additional precautions that your facility should take.

- ❑ Flush **all** water lines, and then wash sinks, fountains, faucets and spigots. If your service connection is long or complex (like an office building), consider flushing for a longer period. A general recommendation is at least 15 minutes, however, your facilities engineer should be able to advise you on an appropriate time.
- ❑ Appliances, such as your water heater, water filters and water tanks, should also be flushed of at least two tank volumes. Any water filters should have their media backwashed or replaced per the manufacturer's recommendations.
- ❑ All potentially affected equipment that uses tap water, such as your medical equipment, solution machines, beverage machines, dishwasher, and ice machines, should be flushed and disinfected per the manufacturer's recommendations. This should include dedicated water lines and tubing. Run equipment a full cycle and flush contents to waste.
- ❑ Sanitary surfaces, patient contact surfaces, surfaces that will come into contact with utensils and medical tools, and ice bins should be cleaned with a disinfectant solution.