

CBRF Fire Safety Training



PARTICIPANT GUIDE

**Wisconsin CBRF Training Registry
University of Wisconsin-Green Bay**

**Approved by:
Wisconsin Department of Health Services
Division of Quality Assurance Bureau of Assisted Living**

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Important Note

Participants must successfully complete this three hour training to meet the requirements of DHS 83.20 (2) (b) Fire Safety.

This standardized training material is the only curriculum approved by the WI Department of Health Services to meet the requirement listed above. In addition, the training must be delivered by an instructor approved by the Wisconsin CBRF Training Registry, University of Wisconsin-Green Bay. To view the registry of approved instructors, go to: www.uwgb.edu/cbrf-registry

Participants who successfully complete this training will be added to a registry located at www.uwgb.edu/cbrf-registry

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CBRF Fire Safety Training Overview

In Wisconsin, Community Based Residential Facilities or CBRFs are regulated by the Department of Health Services (DHS) Division of Quality Assurance (DQA). The rules for CBRFs are outlined in state statute and more specifically defined in the Wisconsin Administrative Code.

Chapter DHS 83, Wisconsin Administrative Code, is the rule that defines the responsibilities and restrictions of CBRFs. DHS 83.20 requires that all CBRF employees successfully complete this three hour (plus testing time) Fire Safety course within 90 days of their hire date.

NFPA is the National Fire Protection Agency. DHS 83 and other rules and regulations in Wisconsin often use NFPA standards as the basis for fire safety requirements.

Course Requirements – Exemptions from Training

Employees who have completed a DHS-approved Fire Safety training before April 1, 2010, are exempt from this training. Firefighters are also exempt. All other CBRF employees must complete the training within 90 days of the hire date.

A Note to Participants

Use the guide to make notes, write questions, and underline or highlight important material. The participant guide is the participant's to keep and can serve as an important resource upon returning to the CBRF.

At the end of this training, a test is required. Participants may use this participant guide to complete the test.

Learning Objectives

Let's review the main learning points:

- Understand the nature of fire
- Recognize fire hazards and ways to prevent fires
- Learn about early warning systems
- Understand the use of fire extinguishers
- Focus on the evacuation needs of residents
- Follow the CBRF emergency and disaster plan
- Respond well to an emergency

Understanding the Basics of Fire and Fire Prevention

Every staff member at an assisted living facility plays a role in helping residents remain safe during an emergency. Understanding the nature of fire is an important first step.

Many people overestimate how much time they will have to escape a fire. As a result, a person may try to extinguish a fire before evacuating people or re-enter a building once the fire has started. As you will discover, neither action is appropriate. Both can be dangerous.

It only takes two minutes for a room to become completely engulfed in flames. Because of that, the first two minutes after a fire starts are extremely important regarding how a person responds to that situation.

The following video is designed to show how quickly a fire can spread.



YouTube video resource (2:50 min) Why Seconds Count Video:
<https://www.youtube.com/watch?v=piofZLySsNc>

Because many CBRF residents have physical or cognitive limitations, it is critical that staff know exactly how to proceed in the case of an emergency and to know how your residents will respond. Knowing your role in advance is the key to responding rapidly, calmly and efficiently.

The information presented today is useful in both workplace and home settings and may save lives during an emergency.

What Causes Fire



The “fire triangle” is made up of the three components needed to produce fire:

- Fuel (something that will burn)
- Heat (enough to make the fuel burn)
- Oxygen (air)

All three components must be present to have a fire. Fire will burn until one or more of the components is removed. Traditional fire extinguishing methods involve removing the fuel, heat, or oxygen.

The only way to stop a fire is to eliminate one of those three elements in the following ways:

1. Cool the burning material
2. Exclude oxygen
3. Remove the fuel
4. Break the chemical reaction

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Products of Combustion

Flames and smoke are the main products of combustion. A flame is a burning gas or vapor, accompanied by heat and light. Smoke is the visible product of vapor and gases given off by burning, smoldering substances.

Most fire fatalities are caused by smoke inhalation, not from the fire itself. It can take only 2 minutes for a building to become completely engulfed in flames and dense, black smoke.



Some people make the mistake of thinking they can find their way in a smoke-filled room. However, smoke can quickly affect breathing and disorient a person, making escape more difficult.

Some of the products of combustion like carbon monoxide, toxic gases from melting plastic or sulfur dioxide are invisible. Even if you believe there is no fire in the immediate area, there can be significant danger from smoke or other non-visible products of the fire.

Transfer of Heat

Fire spreads by transferring the heat energy from the flames in one of three different ways:

Conduction is the transfer of heat through a material. It requires the direct contact of two bodies such as heat and metal. For example, a burning wastebasket heats a nearby couch, which ignites and heats the drapes hanging behind, until they too burst into flames.

Convection is the flow of fluid or gas from hot areas to cooler areas. The heated air is less dense and rises, while cooler air descends. A large fire in an open area produces a plume or column of hot gas and smoke high into the air. But inside a room, those rising gases meet the ceiling. They travel horizontally along the ceiling forming a thick layer of heated air, which then moves downward.

Radiation involves heat traveling via electromagnetic waves, without objects or gases carrying it along. Radiated heat goes out in all directions, unnoticed until it strikes an object. Burning buildings can radiate heat to surrounding structures, sometimes even passing through glass windows and igniting objects inside. Radiation is not affected by wind or air currents.

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Stages of Fire



A fire goes through stages, from the moment it starts, until the fire is extinguished (put out). The fire itself can be extinguished during any of the stages.

Ignition

Fuel, oxygen and heat join together in a constant chemical reaction. The oxygen level is near normal. Smoke and gases will begin to rise. Only at this early stage is a fire extinguisher likely to control the fire.

Growth

With the initial flame as a heat source, the additional fuel ignites and the fire grows. Convection and radiation ignite additional surfaces. The size of the fire increases and the plume reaches the ceiling.

Fully Developed

The fire has spread over much, if not all, the available fuel. The temperatures reach their peak, typically over 1300 degrees. The oxygen is consumed rapidly and is now below 15%.

Decay (Burnout)

Once a fire has consumed all the available fuel, the temperature of the fire decreases and the fire becomes less intense. This is called the decay or burnout phase. NOTE: Not every fire will go through all stages, depending on when it is extinguished.

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Special Circumstances

Under certain conditions, flashover and backdraft create circumstances that can be frightening and deadly.

Flashover is the sudden ignition of everything in a room. Hot gases rise to the ceiling and spread across to the walls. Heat radiates downward and builds up until all burnable items reach their ignition temperatures and burst into flames.

In a flashover situation, temperatures soar to as much as 1000 degrees Fahrenheit in a few seconds. Even a firefighter in full protective gear is unlikely to survive a flashover.

Firefighters are trained to recognize the signs that flashover is about to occur: dense black smoke with tightly packed curls ("black fire"); dense, black smoke that pushes out of a doorway or window opening; smoke that has accumulated as low as a doorknob, with the fire seen below.

Backdraft is an explosion that occurs when oxygen is introduced into a room full of hot gases. This happens when a fire burning in a confined area consumes all the oxygen in that area. The visible flames disappear. Solid fuels smolder and hot, flammable gases fill the room. The temperature increases, the gases expand, and pressure builds, pulsing against doors and windows.

From outside, the building may look like it is breathing or throbbing. If an opening is made to admit oxygen, the hot vaporized fuel bursts into flames and the pressurized gases explode through the opening, resulting in a rolling fireball.

Classifications of Fire

Classifications of fire are based on fuel type. They match up with classes of fire extinguishers, which will be covered later in the course.



Class A fires involve ordinary combustible (burnable) materials, such as wood, cloth, paper, rubber and many plastics. They burn with an ember and leave ash.

Class A fires are extinguished by cooling the fuel to a temperature that is below the ignition temperature. Water and other extinguishing agents are effective in putting out a class A fire. They can also be extinguished using the dry chemicals used for Class A, B and C fires.



Class B fires involve flammable liquids (which can burn at room temperature) and combustible liquids (which require heat to ignite). Examples of class B fuels include cooking oils, oil-based paints, solvents, lacquers, nail polish and aerosol hairspray.

Class B fires are a high fire hazard; water may not extinguish the fire. This type of fire is best extinguished by creating a barrier between the fuel and the oxygen, or a smothering effect. Dry chemical, foam, vaporizing liquids, carbon dioxide and water fog can be used to extinguish a Class B fire, depending on the circumstances of the fire.



Class C fires occur because of electrical equipment that has a current running through it, such as appliances, extension cords, outlets, and fuse boxes. Special techniques and agents are required to extinguish these types of fires, most commonly carbon dioxide or dry chemical agents.

Use of foam, water and other water-type extinguishing agents is dangerous because water conducts electricity. Use of these on an electrical or Class C fire could kill or injure the person operating the extinguisher or cause severe damage to the electrical equipment.

Class D fires involve combustible metals, such as magnesium, titanium, zirconium, sodium, lithium and potassium. Most cars contain numerous such metals. Because of extremely high flame temperatures, water can break down into hydrogen and oxygen, enhancing burning or exploding. Class D fires should be extinguished with special powders based on sodium chloride or other salts; also clean dry sand. It is unlikely that you would encounter a Class D fire in a CBRF.

Class K fires are fires that involve vegetable oils, animal oils or fats in cooking appliances. This classification is for commercial kitchens. Some CBRFs may have kitchens that are classified as commercial.

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Activity: Identify Flammable Materials

Think about the average CBRF. Which materials might be prone to causing or fueling a fire based on each of the classes we just discussed?

Class A: _____

Class B: _____

Class C: _____

Prevention



Most people who die in fires die from smoke inhalation, not burns. Those at highest risk are the young children and older adults, who may have difficulty making a quick escape.

Sprinklers and smoke alarms together can cut the risk of dying in a home fire by 82%.

Causes of Fire

Understanding some of the most common sources of fires will help you recognize the potential for danger and will help you to identify ways to prevent the fire before it even starts.

Kitchens/Cooking pose a high risk of fire from carelessness or unattended ovens, stoves, microwaves or other appliances. This could include spilling oil on a burner, placing a hot pad too close to a heat source, or forgetting to turn off the stove. Dirty or poorly maintained range hoods can also be a source of fires.

According to the NFPA, twenty percent of fires start in the kitchen.

Examples from CBRF Fire Reports:

- Element on stove began to smoke and a small flame was noted
- Toast was left in toaster
- Cook did not realize that the hot pad was stuck to the baking dish and it caught on fire in the oven
- Resident typed the wrong amount of time into the microwave and started a fire
- Grease spilled from a baking dish and started a fire in the oven

Prevention Ideas:

- Keep ovens and stoves clean
- Assess residents for ability to safely use cooking appliances
- Monitor food when cooking

Smoking is the leading cause of fire fatalities (deaths) when people fall asleep while smoking or handle smoking materials carelessly. In the CBRF setting, residents should be assessed for their ability to smoke independently and safely. DHS 83 requires that each CBRF develop and implement a written policy on smoking. CBRFs must also comply with the Wisconsin Clean Indoor Air Act. More information is available on DQA Memo 10-016.



Examples from CBRF Fire Reports:

- The resident was smoking and when finished, they put their cigarette in the coat and placed it in their room. The cigarette caught the coat on fire.
- The resident placed the cigarette in an unsafe smoking receptacle, which had not been cleaned out recently. The cigarettes and container caught on fire.
- The resident attempted to smoke in their room and started a small fire.

Prevention Ideas:

- Assess the resident for ability to smoke independently
- Provide supervision for residents who are unsafe smoking
- Only use approved cigarette receptacles to collect butts in. Empty food cans are not appropriate for collecting butts
- Cigarette receptacles should be cleaned routinely per manufacturer's recommendations

Electrical fires may result from the improper use of extension cords or circuits that are overloaded. Temporary or exposed wiring also poses a fire hazard. The use of extension cords in CBRF settings is not allowed unless used for a temporary disaster-related situation according to DHS 83.46(4)(e-g).

Examples from CBRF Fire Reports:

- Electric element at the bottom of the stove caught on fire
- A battery charger caught on fire while charging batteries

Prevention Ideas:

- Do not use extension cords
- Replace frayed or worn cords
- Have electrical equipment inspected per manufacturer's recommendations
- Immediately replace or fix any exposed wires or broken equipment
- Any object (appliance, lamp, etc.) that emits a spark or unusual smell should be immediately disconnected and inspected

Heating Systems and fireplaces must be inspected and regularly maintained to ensure that they are functioning properly. The use of portable space heaters in CBRFs is not allowed unless the heater has automatic thermostatic control and is physically attached to a wall.



Examples from CBRF Fire Reports:

- Starting capacitor in furnace began to smoke

Prevention Ideas:

- Have all heating systems inspected as required
- Any systems emitting sparks or unusual smells should be turned off and checked immediately

Burning candles left unattended are another leading cause of fires. Battery-operated candles are now available in many sizes and provide a safe alternative. As a rule, CBRFs should not permit the use of candles.

Bedrooms contain many flammable materials, e.g., mattresses, clothing, bedding, etc. The risk of a bedroom fire may be even higher because sleeping residents may not notice early warning signs. Because residents bring their own belongings into their bedroom, it is important for staff to check those items for fire risks.

Examples from CBRF Fire Reports:

- The resident was smoking in their room and burned a hole in their mattress and pillow.

Prevention Ideas:

- Monitor resident rooms for potential fire risks such as frayed wires, candles or other items families may bring in without knowing they pose a risk of fire.

Clothes Dryers are fire hazards based on the potential for accumulated lint, a highly flammable fire source. Filters and vents should be cleaned regularly.



Examples:

- Lint in dryer vent began to smoke and caught on fire

Prevention Ideas:

- Regulations require attaching dryers with vent tubing that is of rigid material with a fire rating that exceeds the temperature rating of the dryer
- Clean the filters before each use of the dryer
- Clean behind the dryer often to prevent lint buildup

Prevention Activity:

What are some additional ideas for preventing fires? Work in small groups to write down three additional fire prevention ideas.

1. _____

2. _____

3. _____



Early Warning Systems and Fire Safety Equipment

DHS 83 imposes specific requirements on CBRFs concerning warning systems (such as alarms) and equipment (such as sprinklers). The requirements vary according to the size and the licensure status of the CBRF and the length of time it takes for residents to evacuate in an emergency. Requirements are also based on the type of construction of the facility.

Smoke Alarms



A smoke detector sounds an alarm when the device detects a certain level of smoke in a particular area. Because most fires start at night, a functioning smoke alarm provides an early warning and provides more time to evacuate residents and staff safely.

Local vs. Externally Monitored Smoke Alarms

Smoke alarms can be installed in two different ways:

1. A **local** smoke alarm provides a warning at the facility and alerts residents and staff of the need to evacuate. **Facility staff is responsible for alerting the fire department.**
2. An **externally** monitored smoke alarm is integrated with the local fire department. **The fire department is automatically notified when the smoke alarm is activated, but staff should still always call 911 as a precaution.**

Interconnected Systems

An interconnected smoke detector system causes all smoke detectors in the system to sound an alarm when at least one is activated. For example, if a smoke detector on the third floor of the building senses smoke, all detectors in the building will sound an alarm.

Many interconnected smoke detector systems will have a central panel or panels throughout the facility that gives the zone or exact location of the fire. This can be a helpful tool to assist staff in locating the fire location to evacuate residents that are closest to the fire.

CBRF Requirements: CBRFs must have an interconnected smoke detection system to protect the entire facility. If any detector is activated, it will either trigger alarms throughout the facility or will trigger a centrally located alarm.

The exception to this is:

A CBRF that has 8 or fewer beds may use a radio-transmitting smoke detection system that triggers an audible alarm throughout the building and is safeguarded against deactivation.



Care and Maintenance

Smoke detectors powered by the CBRF's electrical system must be tested at least once every other month. The CBRF must document the dates of the required testing, along with any maintenance performed on the system.

Also, these systems must be inspected, cleaned and tested annually by certified or trained and qualified personnel. Records of this inspection must be maintained by the facility.

If any of the smoke detectors have been exposed to a fire condition, they must be inspected, cleaned and tested within five days after the exposure by a certified or trained and qualified person. Each detector must operate within the manufacturer's intended response parameters, or it must be replaced within ten days after exposure to a fire condition.

What Staff Need to Know

Make sure that smoke detectors in your facility are clear of any obstructions. For example, don't stack boxes up to the ceiling and cover a detector. If a detector seems defective in any way, report it to your supervisor. It is the responsibility of the CBRF owner or operator to ensure compliance with the testing requirements of DHS 83.48 fire protection systems.

Heat Detectors

A heat detector is a device that responds to a change in temperature, rather than smoke or flame. When a certain threshold is reached, an alarm sounds.

Care and Maintenance

Heat detectors must be inspected, cleaned and tested annually by certified or trained and qualified personnel. If the heat detector is suspected of exposure to a fire condition, it must be inspected, cleaned and tested within five days after the exposure. If it does not operate properly, it must be replaced within ten days after the exposure happened. Documentation of these inspections must also be maintained by the facility.

What Staff Need to Know

Heat detectors should be free of obstructions just like smoke detectors. If a detector seems defective in any way, report it to your supervisor.

Manual Pull Stations



A fire alarm pull station is an active fire protection device, usually wall mounted. The act of pulling the handle down sends an alarm to the fire alarm control panel.

What Staff Need to Know

Staff should know the location of all pull stations in the facility. There must be a clear path to them, with no obstructions.

Staff should always CALL 911 to notify the Fire Department of the fire after activating the alarm.

Sprinkler Systems



When the air temperature above the fire rises to a certain temperature, a fire sprinkler system is activated. The sprinkler sprays water forcefully over the flames, extinguishing them completely in most cases, or at least controlling the heat and limiting the toxic smoke until the fire department arrives. Only the sprinkler(s) nearest the fire activate. Smoke alone does not activate sprinklers.

Sprinkler system requirements vary according to the size of the facility, the construction of the facility, and the evacuation abilities of the residents. Staff should check with their administrators to determine if their CBRF has a sprinkler system.

Sprinklers are effective because they react so quickly. They reduce the risk of death or injury from a fire because they dramatically reduce the heat, flames and smoke produced, allowing time to evacuate.

In less time than it usually takes the fire department to arrive, sprinklers can sometimes contain and even extinguish a fire.

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YouTube video resource (3:38 min) Flashover-Fire Sprinkler Demonstration: <https://www.youtube.com/watch?v=AH6J-Szo8dw&t=21s>

Care and Maintenance

A sprinkler system water flow alarm must be connected to the facility's fire alarm system. A water flow alarm sounds when water flows through the sprinkler system, indicating that a sprinkler may have activated within the building. Water flow alarms may also activate due to a surge in the water supply. Contact the fire department when a flow alarm sounds.

The sprinkler system must have a reliable water supply. If the system requires a mechanical device such as a compressor, pump, or motor the device shall be supplied by a reliable source of emergency power in accordance with NFPA regulations.

The sprinkler system must be inspected, maintained and tested at least annually. The CBRF must keep these records for at least two years.

Sprinkler heads must be kept clean and unobstructed. Nothing should be hung from a sprinkler head.

What Staff Should Know

It is the responsibility of the CBRF owner/operator to ensure compliance with the requirements of DHS 83.48(8) sprinkler systems. It is your responsibility to notice and report any suspected defects or obstructions to your supervisor.

Staff should be trained on the specifics of the sprinkler system in the CBRF they work in. This includes understanding where the system is located and how it works, including the emergency shutoff system.

Carbon Monoxide Detectors

Carbon monoxide (CO) is often called the silent killer because it is an invisible, odorless, colorless, poisonous gas created when fuels such as gasoline, wood, coal, or natural gas burn incompletely. Carbon monoxide is the #1 cause of accidental poisoning deaths in the United States. New, energy-efficient construction compounds the problem because it traps more CO inside where it can build to potentially dangerous levels.

Toxic CO levels can occur suddenly or accumulate slowly over time. In a CBRF, heating and cooking equipment that burn fuel can be sources of carbon monoxide.

Symptoms of CO poisoning according to the CDC are:

- Headache
- Dizziness
- Weakness
- Upset stomach or vomiting
- Chest Pain
- Confusion



Symptoms seem flu-like. Extreme exposure will cause a person to become unresponsive and can lead to death.

Carbon monoxide detectors should be installed wherever there are fuel-burning appliances in the CBRF and should be tested according to the manufacturer's instructions. This can include locating a detector in the area of a gas stove, gas grill, gas oven, gas water heater, gas clothes dryer, gas boiler or a gas fireplace.

CO detectors must be repaired within five days of any report by a resident or employee that the detector is malfunctioning or is missing.

Wisconsin Department of Safety and Professional Services codes define which facilities must have CO detectors and where they must be located. The requirements vary based on the facility type and date of construction.

When a CO Alarm Signal Sounds

Never ignore an alarming CO detector! It is warning you of a potentially deadly hazard.

- Do not try to find the source of the CO.
- Call your emergency services, fire department, or 911.
- Move the residents to safety by immediately moving outside to fresh air.
- After calling 911, do a head count to check that all persons are present.
- DO NOT re-enter the premises until the emergency services responders have given you permission. You could lose consciousness and die if you go back inside.
- If the source of the CO is determined to be a malfunctioning appliance, DO NOT operate that appliance until it has been properly serviced by trained personnel.
- Depending on the source of the CO, residents may need to be evacuated from the premises until the problem is resolved.



Fire Extinguishers

Fire extinguishers are canisters that can be sprayed onto a fire to extinguish it.

Fire Extinguishers in CBRFs

CBRFs are required to place at least one multi-purpose extinguisher on each floor. Let's focus on that type:



Multi-purpose dry chemical extinguishers put out fires by coating the fuel with a thin layer of fire retardant powder, separating the fuel from the oxygen. The powder also works to interrupt the chemical reaction, which makes these extinguishers extremely effective.

Multi-purpose fire extinguishers are red in color and range in weight from five to 20 pounds.

Dry chemical extinguishers will have a label indicating that they may be used on class A, B, and/or C fires or will display these symbols:



Placement and Mounting

There are specific DHS 83 requirements for the placement and mounting of fire extinguishers in a CBRF.

Fire extinguishers must be inspected by a qualified professional one year after the initial purchase date and annually after that. Each fire extinguisher must have a tag documenting the date of inspection.

What Staff Should Know

Make sure that nothing is obstructing an extinguisher so that it can be accessed quickly if needed. If a fire extinguisher looks defective, notify a supervisor immediately.

Nuisance and False Alarms

Alarms that sound when there is no fire are just that—a nuisance (bother). For example, most of us are familiar with the amount of heavy smoke produced when microwave popcorn burns, causing the alarm to activate, creating a nuisance but no real danger. A device that malfunctions is also considered a nuisance alarm. These are different from alarms that are accidentally activated which are false alarms.

Do your best to avoid any activity that might set off an alarm. Clean, well-maintained devices are less likely to sound an alarm in error.

Risk Factors for Residents



Anyone living in a CBRF could be at increased risk for injury or death in a fire. CBRF residents often need assistance from staff with at least some of their daily activities. Some may have conditions that put them at risk for safely evacuating on their own.

Here are some examples of residents who may be at risk during an emergency.

Residents with dementia may not understand the danger or need to evacuate and may be unable to evacuate a building independently. They may also have a fear of strangers including firefighters and emergency personnel. Residents with dementia may need close supervision to ensure that they evacuate to a safe area *and* remain there.

Elderly residents and those with physical disabilities may not be physically able to evacuate the building safely. They may be unable to reach assistive equipment such as a wheelchair or a walker.

Residents with developmental disabilities may become uncomfortable with a variation in routine. An emergency such as fire may seem especially disruptive. Practice the evacuation protocol in advance with these residents.

Residents with visual impairments may have trouble finding an exit due to reduced visibility from smoke.

Residents with hearing impairments may not be wearing hearing aids and fail to hear audio alarms.

The sensory impairment of the resident must be noted in the resident's record and communicated to all employees within three days of admission, or after determination of the impairment is made. A plan should be identified on the ISP.



Knowing your residents and the level of assistance each one needs can save lives in an emergency.

Assessment Requirements

Each new CBRF resident must be evaluated within three days of moving in to determine the resident's ability to evacuate the facility and the amount of assistance needed to evacuate. The CBRF uses specific questions, contained in a mandatory form, to assess those needs.

Providers must also re-evaluate each resident's ability to respond to a fire alarm:

- At least annually or
- When there is a change in the resident's condition related to the ability to evacuate

What Staff Should Know

It is the responsibility of the CBRF to assess each resident's evacuation needs. It is your responsibility to know which residents need assistance and what type of assistance might be needed.

Activity: Assessing Residents' Ability to Evacuate

Although it is the CBRF's responsibility to evaluate and re-evaluate each resident's ability to respond to alarms and evacuate, it is your responsibility to recognize the needs of each resident in an emergency. To understand those needs, use the following scenario to complete the "**Resident Evacuation Assessment**" form.

Scenario:

Rosie Smith just moved into your CBRF yesterday. You have been asked to meet with her and assess her evacuation abilities. So far she has been agreeable and follows any directions given to her by staff. She is a one-person transfer into her wheelchair but can self-propel once she is in the wheelchair. She is not confused and is aware of her



surroundings. However, she has fainted once in the last ten years. Even though she is new, she has demonstrated that she can locate the nearest exits and responds when staff practices a fire drill with her. Rosie has vision issues and wears glasses during the day. She sleeps soundly at night and you are unsure if she would wake up to a fire alarm. Without the hearing aids, she may not be able to hear the alarm.

Complete the "Resident Evacuation Assessment," based on the information provided.

Tips for Completing the Resident Evacuation Assessment

- After fire drills, double check the assessment to make sure the resident has not had a change of condition
- Once the resident has participated in the night-time simulated drill, remember to update the assessment
- Make sure that assessment tool and ISP match
- All staff should understand the resident's evacuation capacity

CBRF Evacuation Requirements

CBRFs are categorized and licensed according to the size of the facility and the evacuation abilities of the clients served.

Size of the Facility

A *small* CBRF is licensed for 5 to 8 residents

A *medium* CBRF is licensed for 9 to 20 residents

A *large* CBRF is licensed for 21 or more residents

Licensing Categories

Class A ambulatory: Serves only residents who are ambulatory and who are mentally and physically capable of responding to a fire alarm by exiting the CBRF without any help or verbal or physical prompting.

Class A semi-ambulatory (AS): Serves only residents who are ambulatory or semi-ambulatory and who are mentally and physically capable of responding to a fire alarm by exiting the CBRF without any help or verbal or physical prompting.

Class A non-ambulatory (ANA): Serves residents who are ambulatory, semi-ambulatory or non-ambulatory and who are mentally and physically capable of responding to a fire alarm by exiting the CBRF without any help or verbal or physical prompting.

Class C ambulatory (CA): Serves only residents who are ambulatory but one or more of whom are not mentally capable of responding to a fire alarm by exiting the CBRF without any help or verbal or physical prompting.

Class C semi-ambulatory (CS): Serves only residents who are ambulatory or semi-ambulatory, but one or more of whom are not physically or mentally capable of responding to a fire alarm by exiting the CBRF without help or verbal or physical prompting.

Class C non-ambulatory (CNA): Serves residents who are ambulatory, semi-ambulatory or non-ambulatory, but one or more of whom are not physically or mentally capable of responding to a fire alarm by exiting the CBRF without help or verbal or physical prompting.

As you can see, licensing categories relate directly to the residents' ability to evacuate the facility. In all Class A facilities, the residents must be able to evacuate without any help or verbal or physical prompting. In all Class C facilities, at least one resident needs assistance or needs verbal or physical prompting to evacuate the facility.

Evacuation Times and Fire Safety Requirements

Fire safety equipment and some building construction requirements are based on the time it takes a resident to evacuate, outlined by the chart below.

| Evacuation Time Limit | Safety Requirements |
|-----------------------|--|
| 2 minutes or less | If all residents can evacuate the facility in 2 minutes or less, the facility must have the following: <ul style="list-style-type: none"> • Smoke detection system • Sprinkler system only if required by the type of construction, the number of floors, or class of facility. |
| 2 – 4 minutes | If any resident needs between 2 and 4 minutes to evacuate, the CBRF must have all of the following: <ul style="list-style-type: none"> • Externally monitored smoke detection system unless equipped with a sprinkler system • Vertical smoke separation between all floors • Rated stair enclosure |
| Over 4 minutes | If any resident needs 4 or more minutes to evacuate, with or without employee assistance, the CBRF must have all of the following: <ul style="list-style-type: none"> • A sprinkler system • Vertical smoke separation between all floors • Rated stair enclosure • 24-hour awake qualified resident care staff (NOTE: This is a key difference from the other levels.) |

Responding to a Fire Emergency – RACE(E)

The acronym RACE(E) stands for the five basic steps that everyone should remember in the event of a fire or alarm.

Rescue: Remove those in immediate danger

Activate the alarm: Notify the fire department/911 and others in the facility

Control: Prevent the fire from spreading

Evacuate: Remove all residents from the building or into a safe area

Extinguish: Attempt to extinguish small fires with a fire extinguisher

Rescue: Remove those in immediate danger

If there is a fire or smoke in one area of the facility, remove the residents in that area first. Ask for help if you need assistance in removing residents from the immediate area.

Activate the alarm: Notify the fire department/911 and others in the facility

Pull the alarm to ensure that all staff and residents are notified of the emergency situation. Dial 911 and report the emergency.

Control: Prevent the fire from spreading

Control the fire. On your way out of the building or room, close the doors between you and the fire. Containing a fire in one area is the most effective method of limiting the spread of smoke and fire in a building.

Evacuate

Evacuate all residents from the building or past a firewall according to your facility plan. This includes using horizontal evacuation or areas of refuge if they are an approved part of the CBRF's plan.

Horizontal Evacuation

Depending on the facility structure and size, some facilities may use horizontal evacuation as the first step in the resident evacuation. The ability to use horizontal evacuation depends on the construction of the building, including the presence of smoke and fire barriers. Often an area of refuge is used during a horizontal evacuation.

An area of refuge is a specially constructed room to protect residents who cannot be evacuated safely by CBRF staff. Residents who are unable to negotiate stairs are transported to a specially protected room while awaiting evacuation assistance from the fire department or emergency services. Not all CBRFs have rooms designated as areas of refuge. DHS 83.51 mandates special rules for a room used as an area of refuge.

Any CBRF that uses an area of refuge or a horizontal evacuation must notify the local fire department of the emergency evacuation plan, including the use and location of each area of refuge, and the potential number of residents and employees who would use each area of refuge.

Evacuation Outside

In this case, staff evacuates the residents outside of the building. Each CBRF should have a designated place outside where residents and staff should meet. Assure that all residents and staff have evacuated the CBRF. Monitor residents to ensure none try to re-enter the building.

Never re-enter a burning building. Stay outside of the building until the fire department approves entering.

When the fire department arrives, give the location of the fire in the building if you know it.

What Staff Should Know

It is the CBRF's responsibility to devise evacuation strategies permitted under the regulations. It is your responsibility to:

- Know which doors are parts of the firewall
- Make sure the doors are NEVER propped open or obstructed in any way
- Report any unintentional penetration of the firewall, e.g. an electrician or cable technician drilling a hole in the firewall
- Know which residents must be moved to an area of refuge during an emergency.
- Feel doors before opening. Touch the upper part of the door; feel the doorknob lightly. If either feels hot to the touch, don't open the door!
- Check through cracks in the doorframe for smoke.

Extinguish: Fire Extinguishers

If it is safe to do so, staff can use a fire extinguisher to extinguish the fire. You should have experience handling a fire extinguisher before attempting this step.



Before attempting to use a fire extinguisher, you need information on how extinguishers work, as well as hands-on practice. This part of the training is designed to provide both.

As with any other mechanical device, lack of knowledge and experience can sometimes do more harm than good. When deciding whether to use a fire extinguisher, consider the following:

1. **What type of fire extinguisher is needed?** Is it available?
2. **Can the fire be controlled?** Portable extinguishers are useful immediately on small fires but contain limited amounts of extinguisher agents.

3. **Have other staff, residents and the fire department been notified?**
4. **Have all residents been removed from the immediate area?**
Remember, your priority is the safety of the residents.
5. **Are you safe from any toxic smoke produced by the fire?**
6. **Do you have a means of escape?**
7. **Are you capable of lifting and using the extinguisher? Have you been trained?**

Don't consider using a fire extinguisher unless you can answer "yes" to all these questions.

PASS

To operate a fire extinguisher, think of the acronym PASS to remember the steps:

Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.

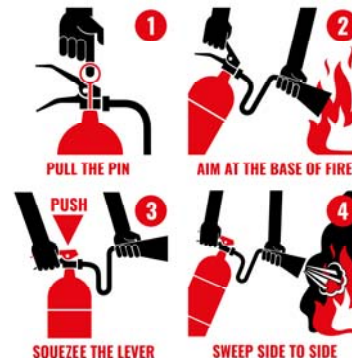
Aim low. Point the extinguisher at the base of the fire.

Squeeze the lever slowly and evenly.

Sweep the nozzle from side-to-side.

Know when to go. Fire extinguishers are one element of a fire response plan, but the primary element is a safe escape. You should immediately leave the area if the fire spreads from the original area, if smoke fills the room, or if the fire continues to burn after the extinguisher is empty.

If a fire extinguisher is emptied, place it on its side to indicate it has been used.



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Activity: Using a Fire Extinguisher

In this activity, the instructor will demonstrate the proper use of one or more types of fire extinguisher, using the steps outlined in PASS. Each participant will have a chance to hold an extinguisher and practice the same steps. **The training cannot move forward until each student has this opportunity and demonstrates an understanding of the steps.**

Show the video below:



YouTube video resource (3:38 min) Fire Safety: How to Use a Fire Extinguisher.

<https://www.youtube.com/watch?v=Hw4uliXUCY4>

Maintenance and Location of Exits

There are also specific requirements for the location and maintenance of exits in CBRFs. Any licensed CBRF has met DHS 83 exit requirements.

Exits and pathways must be kept clear of all obstructions (including snow and ice). The cleared area or path must be four feet wide, at a minimum. Further requirements include:



The CBRF must maintain a cleared pathway for all exterior doors used in an emergency.

For facilities serving semi-ambulatory and non-ambulatory residents, the CBRF must maintain a cleared, hard-surfaced, barrier-free walkway to a public way or a safe distance away from the building for at least two primary exits from the building.

All other required exits must have at least a cleared pathway maintained to a public way or a safe distance from the building.

An exit door or walkway to a cleared driveway leading away from the CBRF also meets this requirement.

Fire and Relocation Reporting to the Department

Each CBRF is required to send a written report to the state (DQA) within three working days in the event of a fire at the facility or the temporary relocation of residents and employees from the CBRF for reasons other than a fire drill. The report of a fire should be filed using the F-62500 "Fire Report" form.

The CBRF Emergency and Disaster Plan

We've all heard the phrase, "Practice makes perfect." Knowing and practicing our role in an emergency increases the likelihood that we will respond in a calm, confident manner.

Every CBRF must have a written plan for responding to emergencies and disasters, including fires. The plan must detail the responsibilities of the employees and be readily available to those employees. The CBRF must provide information on the plan to all employees in advance of performing any job duties.

Plans will vary based on the size and construction of the CBRF, the ability of residents to evacuate, and the fire prevention systems in place.

Emergency and Disaster Plan Requirements

Each facility emergency plan must contain all of the following:

- Procedures for the orderly evacuation of the residents during an emergency or disaster, including use of areas of refuge
- Procedures to follow when any resident refuses to follow evacuation or emergency procedures
- The facility's response to serious illness or accidents
- Procedures to follow when a resident is missing
- The facility's preparation for and response to severe weather including tornado and flooding
- A route to dry land when the CBRF is located in a floodplain
- The location of an emergency shelter for the residents and a means of transporting the residents to the shelter
- Procedures on how meals and medications will be provided to residents at the emergency shelter

Fire Plan

Life Safety Code § 18.7.2.2 and 19.7.2.2 requires facilities to have a written fire safety plan that outlines the minimal actions required by facility personnel upon discovery of fire. The written fire safety plan shall include the following elements:

- Use of alarms
- Transmission of alarm to fire department
- Response to alarms
- Isolation of fire
- Evacuation of immediate area
- Evacuation of smoke compartment
- Preparation for floors and building for evacuation
- Extinguishment of fire

Facilities are required to personalize their fire safety plan to make it relevant to their specific facility.

Important things to know from a CBRF Emergency Disaster Plan:

- The plan should identify where residents should be moved if they have to evacuate the facility
- Who to call to transport the residents to the evacuation location
- Who to notify of emergencies and evacuations
- It is important for staff to know where the plan is kept
- When developing a plan, think about the following questions:
 - In winter will the meeting place be accessible and safe for the residents?
 - Is the transportation option available 24 hours a day?
 - Is the emergency shelter available 24 hours a day?



Staff should periodically review the plan and make sure they are familiar with what to do in case of an emergency.

Severe Weather

In addition to fire preparedness, the facility emergency plan must outline steps for staff and residents to follow in case of other emergencies, specifically those related to severe weather. Examples of this can include tornados and flooding.



Most people think of tornado season as happening only in the late spring and early summer. However, a tornado can occur anytime during the year and CBRFs must have a plan in place to respond to a tornado.

When there is a chance of severe weather, forecasters may determine an area to be under either a “tornado watch” or a “tornado warning.” It is important to understand the difference:

Tornado Watch means that conditions are favorable for a tornado to occur.

Tornado Warning means that a tornado funnel has been sighted or is indicated by weather radar.

Certain signs may indicate an approaching tornado: dark or green-colored sky; dark, low-lying sky; large hail; or a loud roar that sounds like a freight train. If you observe any of these signs, be prepared to take action.

If there is a risk of a tornado, all residents and staff should evacuate to a safe place in the facility. It is the CBRF’s responsibility to designate that area. It is usually a basement or interior room with no windows. If that is not possible, the location should be on the lowest level, away from windows. Everyone must remain in the designated space until an all-clear is given.

In any year, unexpected amounts of rain can cause flooding in many parts of the state. Each CBRF emergency plan must contain steps for relocating residents and staff to a safe location.

Disaster Reporting to the Department

Each CBRF must send a written report to the Division of Quality Assurance within three working days of either event: 1) a catastrophe occurs resulting in damage to the facility, or 2) the CBRF evacuates and temporarily relocates residents and employees for reasons other than a fire drill.

Exit Diagram



The facility emergency and disaster plan must contain an exit diagram that is posted on each floor of the CBRF that houses residents. It must be in a noticeable location, easily seen by residents.

The diagram must identify:

- Exit routes from the floor, including internal horizontal exits when applicable
- Smoke compartments (a space within a building enclosed by smoke barriers on all sides, top and bottom). Not every building has a smoke compartment
- A designated meeting place outside and away from the building when outside evacuation is part of the plan

Other Fire Safety Requirements

A variety of other requirements are contained in DHS 83.47 and listed below:

Posting Emergency Phone Numbers

The phone numbers for emergency services must be posted near phones used by CBRF employees. For example, staff will normally call 911 in a fire emergency. Any other emergency numbers should also be located near the phones.

Communicating Emergency Plans to Residents

The procedures for responding to fire, tornado, flooding or any other emergency or disaster must be communicated to a new resident within 72 hours of admission. That communication must be documented in the resident's record. It is good practice to walk the new resident through emergency procedures.

Fire Drills



Fire drills must be conducted on a routine basis at the CBRF. Conducting drills keeps the process fresh in the mind of staff and residents. In a real emergency, everyone knows how to respond.

Fire evacuation drills must be conducted at least every 90 days with both employees and residents. Only the employees scheduled to work at the time of the drill are required to be present. Fire evacuation drills may be announced in advance.

Nighttime Simulated Drill

At least once a year, a fire evacuation drill must be held that simulates the conditions during the usual sleeping hours. These drills may be announced in advance. The drills are limited to the employees scheduled to work during the residents' normal sleeping hours.

Some of the parameters for the annual nighttime simulated drill include:

- The drill should be announced to the residents the day of the drill
- Drills must be held in the evening, after dark and before residents normally go to bed
- The residents should be in their rooms at the time the alarm is activated. Residents should not be wearing hearing or vision aids but may be dressed in daytime clothing
- Only the lights that are normally on when the residents are sleeping may be on during the drill (unless this would be detrimental to the health, safety and welfare of the resident)

Disaster Evacuation Drills

At least semi-annually, the facility is required to conduct evacuation drills so that residents and staff know what to do in the case of a tornado, flooding or any other emergency or disaster.

Documentation of Drills

The CBRF is required to document all evacuation drills. The documentation must include:

- Date of the drill
- Time of the drill
- CBRF's total evacuation time
- Residents whose evacuation time was greater than the time allowed for that CBRF and the type of assistance needed for evacuation

The CBRF must maintain these records for a minimum of 2 years.

Fire Watch

Fire Watch procedures involve the assignment of a dedicated person or persons to an area for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires, or protecting the public from fire or life safety dangers.

The requirement for a “fire watch” appears in the 2000 edition of National Fire Protection Association (NFPA) 101 Life Safety Code as:

- Where a required fire alarm system is out of service for more than 4 hours in a 24-hour period, the authority having jurisdiction shall be notified and the building shall be evacuated, or an approved fire watch shall be provided for all parties left unprotected by the shutdown until the fire alarm system has been returned to service. LSC § 9.6.1.8.
- Where a required automatic sprinkler system is out of service for more than 10 hours in a 24-hour period, the authority having jurisdiction shall be notified and the building shall be evacuated, or an approved fire watch shall be provided for all parties left unprotected by the shutdown until the fire alarm system has been returned to service. LSC § 9.7.6.1

DQA has forms available at this website for the rounds during a fire watch:
<https://www.dhs.wisconsin.gov/dqa/memos/15-007-fire-report-rounds.pdf>

Annual Fire Inspection and Coordination with Local Fire Authority

The CBRF must arrange for an annual inspection by a local fire authority or certified fire inspector. The CBRF is required to retain the fire inspection reports for two years.

If the CBRF evacuation plan includes the use of an area of refuge, the fire department may request additional evacuation drills. It is good practice to include the fire department in some of the facility drills.

Risk of Using Oxygen



DQA Memo 16-006 addresses *Revised Guidance for the Safe Use of Oxygen - Use of Hair Dryers*. The purpose of this memorandum is to provide updated guidance regarding the safe use of hair dryers by residents who are receiving oxygen therapy in residential and healthcare facilities. Life Safety Code regulations state that the resident's nasal cannula or face mask must be at least one foot away from the heating element (NFPA 99 section 8-2.1.2.3.).

Hair dryers that have the heating element in the base of the hair dryer are safer for resident use as opposed to when the heating element is located within the bonnet of the hair dryer. The Division of Quality Assurance (DQA) requests that facilities re-evaluate the use of oxygen in their facility when residents are using hair dryers and consider changes to their policies and procedures to promote a safe environment.

Oxygen Therapy

The number of people using oxygen in residential and healthcare facilities to treat emphysema, chronic bronchitis and congestive heart disease has risen over the past several years. Oxygen therapy allows people to increase the quality of their life, but it also puts the person at risk for injury. While smoking when oxygen is in use creates the highest risk of fire, injury or death, other sources of heat or electrical sparks when in contact with oxygen can also result in serious harm. Extra caution to prevent fire risk should be taken when residents use oxygen.

The entire memo is available at

<https://www.dhs.wisconsin.gov/dqa/memos/16-006.pdf>

Case Study

The scenario below is based on a real fire that occurred in a Wisconsin CBRF.

Scenario:

John Smith enjoys having a cigarette several times a day. He normally goes outside to smoke, but today he decided that it was too cold and he decides to have a cigarette in his room.

Jane Jones is one of three of the caregivers working today and at 10 am she hears the fire alarm go off. Checking the panel she sees that the alarm is coming from John's room. Upon entering the room, she finds John standing by the bed looking at a small fire with flames on the floor and some burn marks on his bed.

Questions for Scenario:

What are the steps Jane and her co-workers should take in this fire?

What steps should be taken to prevent future accidental fires by John?

Wrap-Up

Every employee in a CBRF is responsible for keeping residents and themselves safe in the event of an emergency. Understanding the basics of fire, knowing what systems are in place to protect residents, understanding the needs of each resident in an emergency and responding well in a crisis helps protect everyone!

Learning Objectives Review

Let's review the Learning Points from today's training:

- Understand the nature of fire
- Recognize fire hazards
- Learn about early warning systems
- Understand the use of fire extinguishers
- Focus on the evacuation needs of residents
- Follow the CBRF emergency and disaster plan
- Respond well to an emergency

Steps to Save Lives

Several steps help save lives in the event of a fire or other emergency.

- Make sure that staff recognize potential fire hazards and take extra precautions to prevent fires
- Ensure that up-to-date fire systems, including smoke and heat detectors, sprinkler systems, etc. are in working order
- Develop a good emergency plan that includes evacuation information
- Practice the evacuation plan

Resources

The following are resources used for this curriculum. These resources may also provide valuable information about current standards and practices. Instructors and students are encouraged to explore the resources to increase program knowledge.

National Fire Protection Agency (NFPA)

<http://www.nfpa.org>

Fire Concepts, Early Warning Systems, Fire Extinguishers, etc.

Wisconsin Administrative Code and Register

<http://www.legis.state.wi.us/rsb/code/dhs/dhs083.pdf>

Chapter DHS 83

Community-Based Residential Facilities

WI Department of Health Services

Division of Quality Assurance Bureau of Assisted Living

http://dhs.wisconsin.gov/rl_dsl/CBRF/CBRFintro.htm

Rules, regulations and resources for CBRFs

Occupational Safety and Health Administration (OSHA)

<http://www.osha.gov>

Fire safety information

US Fire Administration/Federal Emergency Management Agency

<http://www.usfa.dhs.gov/>

Fire safety, fire extinguisher use, evacuation systems, etc.

DQA Memo 17-003: Fire Watch, Fire Plan and Fire Reporting Update

<https://www.dhs.wisconsin.gov/dqa/memos/17-003.pdf>

DQA Memo 16-006: Revised Guidance for the Safe Use of Oxygen – Use of Hair Dryers <https://www.dhs.wisconsin.gov/dqa/memos/16-006.pdf>