

FIRE MARSHAL'S DIRECTIVE: 2014-002

(revised May 9, 2016)

ANNEX A

Fire Drill Scenario

Fire Drill Scenario

Purpose:

The purpose of this document is to assist Chief Fire Officials and owners/operators of buildings that contain **care occupancies, care and treatment occupancies** and **retirement homes** address the provisions of Sentence 2.8.3.2.(6) of Division B of the Fire Code.

Background:

Sentence 2.8.3.2.(6) of Division B of the Fire Code requires that once every 12 months, a fire drill in **care occupancies, care and treatment occupancies** and **retirement homes** be carried out using a scenario representing the lowest staffing levels that might be encountered in the facility. This scenario must be approved by the Chief Fire Official in advance of the fire drill. The purpose of the drill is to confirm compliance with Sentence 2.8.2.2.(1) which requires that there be sufficient supervisory staff to carry out the duties in the fire safety plan.

The annual fire drill required by Sentence 2.8.3.2.(6) should be based on a probable fire scenario that would provide the greatest evacuation challenge for staff. Ontario fire loss statistics reveal that fires starting in resident/patient rooms tend to be the most serious in that they account for the largest number of fire deaths in vulnerable occupancies. Typically, night time hours represent the time during which staffing levels are at the lowest levels. As a result, a scenario based on a fire originating in a patient/resident room during night time hours would constitute an effective annual fire drill exercise.

It should be noted that the fire drill is a simulation of a fire occurrence and although the number of staff and their location in the facility should replicate night time conditions, the drill itself can be undertaken on any day, at any time. Furthermore, owner/operators may consider the use of proxies in lieu of actual residents/patients for participation in the drill. Additionally, in hospitals, proxy locations should be used in situations where conducting a drill in an inpatient unit may put patients at risk.

In keeping with the objective of developing a probable fire scenario that poses evacuation challenges, the zone or floor area chosen to demonstrate the fire drill should be one that includes either the largest number of residents/patients or a large number of residents/patients that require the greatest assistance with evacuation. In facilities with a variety of sleeping arrangements, the sleeping room chosen to be the room of fire origin within the selected zone or floor area should be one occupied by non-ambulatory resident(s)/patient(s) with more than one occupant, where applicable.

The fire drill should demonstrate staff responding to the resident/patient room of fire origin, the removal or assistance of the occupant(s) from the room, and the closing of the door to the room.

Similarly, evacuation of residents/patients in the zone/floor area outside the room of origin to the nearest point of safety should also be undertaken as part of the drill. This portion of the drill should demonstrate that evacuation can be accomplished while conditions within the corridor remain safe. The following are considered points of safety for this portion of the drill:

- Outside the building
- Exit stairwell separated from the remainder of the building with fire separations rated for at least 30 minutes, and
- Adjacent zone where floor is divided into zones by fire separations rated for at least 30 minutes

The times available to safely carry out these critical duties are determined in advance of the fire drill and constitute a critical part of the scenario. The ability of staff to carry out these duties within these times needs to be verified during the drill so as to establish that the provisions of Sentence 2.8.2.2.(1) are satisfied for the scenario.

The fire drill begins with activating the fire alarm system and ends when all residents/patients that require assistance have reached a point of safety.

The following form is to be used for the fire drill scenario. A different form may be used provided that it collects all of the information required in the following form.

Additional information is available on the OFMEM website at:

www.ofm.gov.on.ca/english/FireMarshal/CareOccupanciesCareandTreatmentOccupanciesRetirementHomes/QuestionandAnswers/QandAsFireCode.html

Fire Drill Scenario Form

Parts A, B and C to be completed by Owner/Operator

Parts D to be completed by the Chief Fire Official with the authority to approve the fire drill scenario

Part E to be completed by the Inspector witnessing the fire drill

PART A – PROPERTY PROFILE

Owner: _____

Operator:
(if different from
above) _____

Address: _____

City/Town: _____

Postal
Code: _____

Contact Name:
(please print) _____

Contact number: _____

Contact e-mail: _____

OCCUPANCY CLASSIFICATION

Check the appropriate occupancy classification:

- Care Occupancy
- Care and Treatment Occupancy
- Retirement Home regulated under the *Retirement Homes Act, 2010*

PART B – PROPOSED FIRE DRILL

Step 1 – Develop a Scenario Representing Lowest Staffing Level Complement

A. Select a zone/floor area of fire origin involving residents/patients in resident/patient rooms that poses the greatest evacuation challenge for staff.

Floor # : _____ Zone: _____

Number of residents/patients in the selected zone/floor area that will require evacuation to a point of safety: _____

B. Select a resident/patient room within this zone/floor area that would represent the room of fire origin.

Room #: _____ Total residents/patients in the room: _____

C. Identify the point of safety to which residents/patients in the zone/floor area of fire origin will be evacuated.

- Outside Building
- Exit stairwell (minimum 30 minutes fire resistance rating)
- Adjacent Zone (minimum 30 minutes fire resistance rating)

D. Specify the time of day that represents the lowest staffing level complement and the number of staff available at that time to respond to the room of fire origin.

Time of day: _____ Number of staff available to respond: _____

PART B – PROPOSED FIRE DRILL, continued

Step 2 – Determine Time Available for Closing the Door to the Room of Fire Origin

A. Using the table below, enter the time required for detecting a fire in the room of fire origin.

Fire detection time (**A**): _____ minutes

B. Enter the time period during which the suite or room of fire origin is safe to enter.

Choose **2.5 minutes** for an unsprinklered room or **5 minutes** for a sprinklered room.

Time room is safe to enter (**B**): _____ minutes

C. Calculate the time available for staff, following activation of the alarm, to carry out the duties required in the fire safety plan leading up to and including closing the door to the room of fire origin

Time available (**C**): _____ minutes, where **C = B - A**

Fire Detection Times

Detection Method	Time to Detect ¹ (min)
Smoke alarm/detector in small bedroom (12x12 ft.) (3.66x3.66 m.)	0.25 - 0.50
Smoke alarm/detector in medium to large room (15x20 to 25x25 ft.) (4.6x6.1m to 7.6x7.6 m.)	0.25 - 0.75
Smoke detector in corridor, with fire initiating in adjacent bedroom with open door, based on smoke detector spacing of 30x30 ft. (9.1x9.1 m.)	0.50 - 1.50
Smoke detector in corridor, with fire initiating in adjacent small bedroom with closed solid-core wood door, based on smoke detector spacing of 30x30 ft. (9.1x9.1 m.)	2.66 – 5.00
135°F heat detector in small bedroom (12x12 ft.) (3.66x3.66 m.)	0.66 - 1.50
135°F heat detector in medium to large room (15x20 to 25x25 ft.) (4.6x6.1m to 7.6x7.6m.)	0.66 - 2.50
135°F heat detector in corridor outside small bedroom with door open	2.00 - 3.30
135°F heat detector in corridor outside small bedroom of fire origin with closed solid-core wood door	15.00 - 18.00
135°-165°F residential type sprinkler system in a bedroom based on sprinkler spacing of 15x15 ft. (4.6x4.6 m.)	1.50 - 2.50

¹ The higher value should be used unless a lower value is known for the specific detection device.

PART B – PROPOSED FIRE DRILL, continued

Step 3 – Determine Time Available to Evacuate Occupants in the Zone/Floor Area of Fire Origin to a Point of Safety Following Closing the Door to the Room of Fire Origin

A. Enter the fire rating of the door to the room of fire origin from the following information:

- Wood panel or Hollow-core wood door in wood or steel frame – 5 minutes
- 45 mm thick solid-core wood in wood or metal frame – 15 minutes
- Steel door in wood frame – 15 minutes
- 20-min.labelled door in 20 min labelled frame – 20 minutes
- Steel door in steel frame – 30 minutes
- 45 min labelled door in 45 min labelled frame – 45 minutes

Door rating (**D**) _____ minutes

B. Enter the water supply duration for automatic sprinklers from the following information:

- No sprinklers = 0 minutes
- Sprinklers designed to NFPA 13D = 20 minutes
- Sprinklers designed to NFPA 13R = 30 minutes
- Sprinklers designed to NFPA 13 = 30 minutes
- Municipal water supply to sprinklers = 60 minutes

Sprinkler system water supply duration (**E**) _____ minutes

C. Calculate the time available for staff, following closing of the door to the room of fire origin, to carry out the duties required in the fire safety plan leading up to and including evacuating residents/patients that require assistance to the point of safety

(**F**) _____ minutes, where $F = D+E$

Proposed Fire Drill Date _____

Proposed Alternate Date _____

PART C – SUBMISSION TO FIRE DEPARTMENT

Parts A, B and C prepared by: _____ and submitted to the Chief Fire Officials on: _____

PART D – CHIEF FIRE OFFICIAL APPROVAL

Fire Drill Scenario Approved By:		
_____	on	_____
Print Name		Date
Proposed Fire Drill Dates Approved By:		
_____	on	_____
Print Name		Date

PART E – OBSERVATION OF FIRE DRILL

Step	Time Available	Time Required	Were the duties completed within the time available ⁽¹⁾
Carrying out the duties required in the fire safety plan leading up to and including closing the door to the room of fire origin	Enter time C _____ Minutes	Enter time measured during the drill _____ Minutes	<input type="checkbox"/> Yes <input type="checkbox"/> No
Carry out the duties required in the fire safety plan leading up to and including evacuating residents / patients that require assistance to the point of safety	Enter time F _____ Minutes	Enter time measured during the drill _____ Minutes	<input type="checkbox"/> Yes <input type="checkbox"/> No

⁽¹⁾ There is sufficient staff to carry out the duties under the approved fire drill scenario if the answer is yes for both steps.

Fire Drill observed by inspector: _____ <div style="text-align: center; margin-left: 200px;">Print Name</div> On: _____

Footnote

Section 6.6 of technical guideline [OFMEM TG-03-2016](#) provides guidance on adjustments that may be considered if the fire drill determines that there is insufficient staff to carry out the duties required to complete step 2 or step 3.