



DEPARTMENT OF FORESTRY AND FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
Statewide Training and Education Advisory Committee
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Date: December 9, 2019

To: State Board of Fire Service

From: Kevin Conant, Fire Service Training Specialist III

SUBJECT/AGENDA ACTION ITEM:

FSTEP – Behavioral Health and Cancer Awareness 1A (2019)

Recommended Actions:

Information/Discussion

Background Information:

This curriculum is being presented for the first time to STEAC for information, discussion and providing feedback to staff. The Steering Committee and other stakeholders directed staff to develop a series of courses integral in addressing the need to develop curriculum on firefighter behavioral health and cancer awareness. This FSTEP curriculum is intended to function as both a “stand alone” FSTEP course, and be integrated into the CFSTES curriculum for Firefighter, Fire Officer, Chief Fire Officer and Executive Chief Fire Officer certification tracks.

Behavioral Health and Cancer Awareness is an emerging topic with significant resources, research and attention being devoted to the subject. NFPA standards have not yet been developed, however stakeholders are demanding these subjects be addressed with the intention of educating the workforce and simultaneously influencing the standards making process.

The concept of developing new FSTEP course curriculum is with the purpose of professional development and continuing education, which was approved by STEAC on April 18, 2014. Accordingly, stakeholders identified the need for the creation of curriculum in behavioral health and cancer awareness training at all levels of the California fire service.

A cadre of experienced subject matter experts with extensive technical expertise in these disciplines were selected from various agencies and backgrounds with the mission of further developing and validating the content for this FSTEP course.

“The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.”

Cadre Leadership

Kevin Conant, Fire Service Training Specialist III, Caryn Petty, Deputy State Fire Marshal III, Laura Garwood, Cadre Editor, Sacramento State.

Development/Validation Cadre Members

Tim Andre, Battalion Chief, Huntington Beach Fire Department; Robert Anthony, Captain, Sacramento Fire Department; Brent Brainard, Wellness Officer, San Diego Fire-Rescue Department; Noah Brownlow, Battalion Chief, Richmond Fire Department; Chris Emmons, Admin Officer, Humboldt Fire Department; Mike Massone, Captain, San Diego Federal Firefighters; Mike Ming, Deputy Fire Chief Employee Support Services, CAL FIRE; Dionisio Mitchell, Ph.D. (c), Battalion Chief, Kern County Fire Department; Mary Murphy, RN, Peer Support Lead and Cancer Prevention Program Lead, Carlsbad Fire Department; Mynda Ohs, Ph.D., Author and Psychologist, Private Practice; Kristin Thompson, EMS Chief, Newport Beach Fire Department; Derek Urwin, Ph.D. (c), Engineer, Los Angeles County Fire Department; Rob Wheatley, Division Chief and Director of Fire Training, CAL FIRE.

Several of the cadre members are State Fire Training Registered Instructors and all have extensive experience in the clinical, practical or operational setting with the subject matter. The diversity of experience, education, training and practical application of the subject matter, included members of the Labor/Management California Fire Service Behavioral Health Task Force, licensed therapist, Ph.D.'s, two Ph.D. candidates, Master's thesis subject matter authors, program directors, program coordinators, peer members, RN's, paramedics, EMT's, and cancer and trauma survivors. The development of the course required a multi-day session, over the course of a week, with additional work by the editor, cadre members and cadre lead to add the finishing touches of editing the course plan. Because this is an FSTEP Course, the development of a Certification Training Standards (CTS) was not required. However, Terminal Learning Objectives (TLO) were established and the supporting Enabling Learning Objectives (ELO) were developed using the latest evidence-based research and industry best practice, and using several others references as supporting documents in creating the Course Plan.

Analysis/Summary of Issue:

1. The FSTEP Behavioral Health and Cancer Awareness (2019) is an 8-hour course, including 6:15 (hours:minutes) of lecture/discussion and 1:45 (hours:minutes) of application/skills.
2. This course is intended to meet the Firefighter 1 (2019) curriculum needs as "plug-in" curriculum and be used as a "stand-alone" FSTEP course for incumbent members seeking professional development and continuing education.
3. This course is the first in a series of courses intended to address the need for creating an Awareness level course (firefighter, crew member), an Operations level course (company officer), and Technician level course (Chief Officer/Program Manager-Coordinator) for fire service behavioral health and cancer awareness education.
4. This course provides the student the opportunity for learning and demonstrating the basics of behavioral health and cancer awareness by describing stress and listing stressors, identifying and describing the impacts of stress, describing

factors and demonstrating practices for resilience, describing types, prevalence, and causes of cancer, describing exposure to carcinogenic chemicals, and describing and demonstrating minimizing exposure and risk to cancerous contaminants.

5. Due to the highly technical nature of the curriculum, use of subject-matter guest lecturers is strongly encouraged.



BEHAVIORAL HEALTH AND CANCER AWARENESS (2019) Curriculum Implementation Plan

Issued: October 11, 2019

OVERVIEW

This document is intended to provide information for all State Fire Training (SFT) stakeholders on the new FSTEP Behavioral Health and Cancer Awareness 1A (2019) curriculum. Stakeholders are encouraged to study this information carefully and seek clarification from SFT if questions arise.

Behavioral Health and Cancer Awareness 1A (2019) is an 8-hour course and is the first in a series of courses intended to address the need for creating an Awareness level course (firefighter, crew member), an Operations level course (company officer), and Technician level course (Chief Officer/Program Manager-Coordinator) for fire service behavioral health and cancer awareness education.

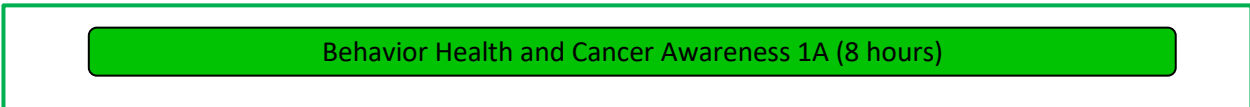
This course is intended for both the new student of the fire service, i.e., Firefighter 1 academy student, or for the professional development and continuing education of the incumbent fire service member. The Behavioral Health and Cancer Awareness 1A (2019) course provides the student the opportunity for learning the basics of Behavioral Health and Cancer Awareness by describing stress and listing stressors, identifying and describing the impacts of stress, describing factors and demonstrating practices for resilience, describing types, prevalence, and causes of cancer, describing exposure to carcinogenic chemicals, and describing and demonstrating minimizing exposure and risk to cancerous contaminants.

This new Course Plan has been developed based on the latest evidence-based research and industry best practice, and using several others references as supporting documents in creating the Course Plan. Behavioral health and cancer awareness are emerging topics where significant resources, research and attention is being dedicated to the study of the topics. To date, NFPA standards have not yet been developed, however stakeholders are demanding information on these subjects be addressed with the intention of educating the workforce and simultaneously influencing policy and the standards making process.

The Course Plan is available on the SFT website.

IMPLEMENTATION

New Behavioral Health and Cancer Awareness 1A (2019) Curriculum Available January 1, 2020



INSTRUCTOR REQUIREMENTS

Instructor Registration Available January 1, 2020

Instructors for Behavioral Health and Cancer Awareness 1A (2019) course must meet the SFT requirements for Fire Fighter Instructor (January 2019 State Fire Training Procedures Manual Section 6.6). Due to the significant technical information presented in this course, guest lecturers are highly encouraged.

The Behavioral Health and Cancer Awareness 1A (2019) Course can be delivered as an unregistered course utilizing an SFT Fire Fighter Instructor. Instructors shall be required to complete the following:

1. Certification:
 - a. Fire fighter II or higher
2. Instructor Requirements:
 - a. Has fulfilled one of the following instructor training qualifications:
 - i. Certified SFT Instructor I
 - ii. Certified SFT Training Instructor 1
 - iii. Certified SFT Fire Instructor 1
 - iv. SFT Historically Recognized Fire Fighter 1 & 2 Academy Instructor
3. Position:
 - a. Held the rank of a Fire Fighter performing suppression duties within a recognized fire agency in California for a minimum of three years. **OR**
Worked in a volunteer position or paid call fire fighter with a Recognized Fire Agency in California for a minimum of six years **and**;
 - b. Authority Having Jurisdiction (AHJ) letter verifying applicant's qualification to deliver training.

These courses will not be issued FSTEP course completion diplomas. Students will not be eligible for course equivalency or instructor equivalency.

Alternatively, the Behavioral Health and Cancer Awareness 1A (2019) Course can be delivered as an SFT registered course utilizing an approved Registered SFT Primary Instructor for the Behavioral Health And Cancer Awareness 1A (2019) Course. Registered courses will have FSTEP course completion diplomas issued to students. Registered Instructors would need to submit a letter from the Authority Having Jurisdiction (AHJ) verifying their expertise in this subject matter.

POTENTIAL AGENCY IMPACTS

Fire agencies desiring to utilize the curriculum as a requirement for their recruitment/promotion activities need to review the curriculum and certification requirements to be sure that all agency training needs are being met. After review, Fire Agencies should update their job specifications and recruitment documentation to reflect these new courses and certification requirements.

Accredited Regional Training Programs (ARTP), Accredited Local Academies (ALA), community colleges and all other local delivery venues need to review the curriculum and seek approval from their curriculum committee / program sponsor, as appropriate. ARTPs should review the new curriculum and discuss potential impacts with their advisory committees.



Behavioral Health and Cancer Awareness

Course Plan

Course Details

- Description:** This course provides awareness-level information on behavioral health and cancer in the fire service.
- Designed For:** Fire service personnel
- Authority:** Office of the State Fire Marshal
- Standard:** Complete all activities and formative tests.
- Hours:** Lecture: 6:15
Activities: 1:45
- Hours (Total):** 8:00
- Maximum Class Size:** 50
- Instructor Level:** Fire academy instructor
- Instructor/Student Ratio:** 1:10 activities, 1:50 lecture
- SFT Designation:** FSTEP

Required Resources

Instructor Resources

To teach this course, instructors need:

- See Online Resources

Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/instructorresources.php>:

- Everyone Goes Home: <https://www.everyonegoeshome.com>
- Fire Fighter Cancer Cohort Study: <https://www.ffccs.org>
- Fire Hero Learning Network:
https://www.fireherolearningnetwork.com/Training_Programs/Default.aspx
- Firefighter Behavioral Health Alliance: <http://www.ffbha.org>
- Firefighter Cancer Support Network: <https://firefightercancersupport.org>
- Firefighter Safety Through Advanced Research: <http://www.fstaresearch.org>
- Firestrong: <https://www.firestrong.org>
- First Responder Center for Excellence: <https://www.firstrespondercenter.org>
- Florida Firefighter Safety and Health Collaborative:
<https://www.floridafirefightersafety.org>
- Healing Our Own: <https://healingourown.org>
- Healthy In – Healthy Out: <https://www.wscff.org/health-wellness/healthy-in-healthy-out/>
- IAFC Lavender Ribbon Report Best Practices for Preventing Firefighter Cancer:
https://www.iafc.org/docs/default-source/1vcos/vcoslavendarribbonreport.pdf?sfvrsn=13f88b0d_8
- IAFF Health and Safety: <http://client.prod.iaff.org/#page=ProgramsAndServices>
- National Fallen Firefighter Foundation: <https://www.firehero.org>
- National Volunteer Fire Council: <https://www.nvfc.org>
- Trauma Screening Questionnaire: <https://www.everyonegoeshome.com/wp-content/uploads/sites/2/2014/04/FLS113TSQ.pdf>
- UL Firefighter Safety: Health Research: <https://ulfirefightersafety.org/research-projects/health/index.html>

Student Resources

To participate in this course, students need:

- Everyone Goes Home: <https://www.everyonegoeshome.com>
- Fire Fighter Cancer Cohort Study: <https://www.ffccs.org>
- Fire Hero Learning Network:
https://www.fireherolearningnetwork.com/Training_Programs/Default.aspx
- Firefighter Behavioral Health Alliance: <http://www.ffbha.org>
- Firefighter Cancer Support Network: <https://firefightercancersupport.org>
- Firefighter Safety Through Advanced Research: <http://www.fstaresearch.org>
- Firestrong: <https://www.firestrong.org>
- First Responder Center for Excellence: <https://www.firstrespondercenter.org>
- Florida Firefighter Safety and Health Collaborative:
<https://www.floridafirefightersafety.org>
- Healing Our Own: <https://healingourown.org>
- Healthy In – Healthy Out: <https://www.wscff.org/health-wellness/healthy-in-healthy-out/>
- IAFC Lavender Ribbon Report Best Practices for Preventing Firefighter Cancer:
https://www.iafc.org/docs/default-source/1vcos/vcoslavendarribbonreport.pdf?sfvrsn=13f88b0d_8
- IAFF Health and Safety: <http://client.prod.iaff.org/#page=ProgramsAndServices>
- National Fallen Firefighter Foundation: <https://www.firehero.org>
- National Volunteer Fire Council: <https://www.nvfc.org>
- Trauma Screening Questionnaire: <https://www.everyonegoeshome.com/wp-content/uploads/sites/2/2014/04/FLSI13TSQ.pdf>
- UL Firefighter Safety: Health Research: <https://ulfirefightersafety.org/research-projects/health/index.html>

Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

Facilities

- Classroom
- Open area for practice decontamination
- Yoga or relaxation activity space

Equipment

- Whiteboards, projectors, markers, erasers, and other classroom materials
- Complete wildland and structural PPE
- Selection of fire fighting tools and equipment
- Wipes (can be simulations, e.g., paper towels)
- Isolation bags
- Gross decontamination kit, including buckets, brushes (wet and dry), dish soap, water supply (hoses, nozzles, and fittings)
- Hard copies or technology for self-assessment

Personnel (Optional)

- Yoga or relaxation instructor
- Culturally competent subject matter experts
- First responders providing testimonials

Unit 1: Introduction**Topic 1-1: Orientation and Administration****Terminal Learning Objective**

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
 - Restroom locations
 - Food locations
 - Smoking locations
 - Emergency procedures
2. Identify classroom requirements
 - Start and end times
 - Breaks
 - Electronic device policies
 - Special needs and accommodations
 - Other requirements as applicable
3. Review course syllabus
 - Course objectives
 - Calendar of events
 - Course requirements
 - Student evaluation process
 - Assignments
 - Activities
 - Required student resources
 - Class participation requirements

Discussion Questions

1. To be determined by the instructor

Activities

1. To be determined by the instructor.

Unit 2: Stress and Resilience

Topic 2-1: Describing Stress and Listing Stressors

Terminal Learning Objective

At the end of this topic, given an assignment in the fire service, a student will be able to describe stress and list common sources of stress.

Enabling Learning Objectives

1. Define types of stress
2. Describe the signs and symptoms of and reactions to stress
3. List common stressors found in various situations and environments:
 - On-duty/station life
 - Relationships with peers/coworkers
 - Relationships with supervisors
 - Relationships with the community
 - Environmental stressors
 - Off-duty/family and personal life
 - Transitioning to home life
 - Responding to incidents
 - Extended deployments or shift assignments
 - Long-term injuries
 - Training

Discussion Questions

1. How do high-frequency calls without resolution impact job satisfaction?
2. If a firefighter responds to three calls to one patient in one day, what stressors will they be exposed to?
3. What are some techniques for transitioning between work and home life?
4. What is hypervigilance and how does it manifest at work and home?

Activities

1. To be determined by the instructor.

Instructor Notes

1. The instructor should refer to the Healing Our Own, Firefighter Behavioral Health Alliance, National Fallen Firefighter Foundation, Florida Firefighter Safety and Health Collaborative, National Volunteer Firefighter Council, and Firestrong websites.

Topic 2-2: Identifying and Describing the Impacts of Stress

Terminal Learning Objective

At the end of this topic, given an assignment in the fire service, a student will be able to identify and describe the physiological and emotional impacts of stress.

Enabling Learning Objectives

1. Describe the physiological and emotional impacts of stress
 - Acute versus cumulative
 - Stress and the brain
 - Parasympathetic versus sympathetic (fight or flight)
 - Adrenal fatigue
 - Mood and cognitive impacts
2. Describe behaviors associated with unmanaged stress
 - Anger and irritability
 - Sleep problems
 - Depression
 - Marital and family issues
 - Substance abuse
 - Addictions
 - Thoughts of suicide
 - Other forms of self-harm or risky behavior
3. Demonstrate the self-assessment process

Discussion Questions

1. What are the current statistics with regard to fire service suicide?
2. What is the difference between acute stress and cumulative stress?
3. What is your personal relationship with substance use, including drugs and alcohol?

Activities

1. The instructor must create an activity directing the students perform a self-assessment.

Instructor Notes

1. The instructor should refer to the Healing Our Own, Firefighter Behavioral Health Alliance, National Fallen Firefighter Foundation, Florida Firefighter Safety and Health Collaborative, National Volunteer Firefighter Council, and Firestrong websites. The instructor should provide statistics on issues like suicide and PTSD among first responders.
2. The instructor must provide case studies (in-person speakers, videos, etc.) and have the students perform a stress inventory to demonstrate assessment skills.
3. The instructor may use discussion question 3 as a place of reflection or as a written exercise. The students may experience discomfort but this is an important part of a wellness reflection.

Topic 2-3: Describing Factors and Demonstrating Practices for Resilience

Terminal Learning Objective

At the end of this topic, given an assignment in the fire service, a student will be able to describe factors and demonstrate practices contributing to resilience.

Enabling Learning Objectives

1. Describe the role of nutrition, sleep, exercise, relaxation techniques, and rest in mediating and mitigating stress
2. Demonstrate relaxation techniques
3. Describe healthy and unhealthy coping mechanisms
4. Identify potential consequences of unhealthy coping mechanisms
5. Describe the role of communication in coping with stress
 - Personal life
 - Professional life
6. Describe resources available in the AHJ, such as:
 - Peer support
 - Preventive tools
 - Employee assistance programs
 - Chaplains
7. Describe external resources, such as:
 - Community and faith-based groups
 - Health care system
 - Culturally competent clinicians
 - Hotlines and crisis resources

Discussion Questions

1. What are some stressors you will encounter in fire academy? What are some coping skills for these?
2. How is a personal support system a part of resilience?
3. What internal and external resources are available in your AHJ and how do you access them?
4. What would you do if a peer showed signs and symptoms of stress?

Activities

1. The instructor should create an activity directing students to use their self-assessments and coming up with specific strategies for dealing with stressors.

Instructor Notes

1. The instructor should present information on evidence-based relaxation techniques, possibly including yoga, breathing exercises, and mindfulness exercises. The instructor could choose to bring in someone to lead the class in relaxation techniques, such as a yoga instructor or someone familiar with breathing exercises.
2. Culturally competent providers and clinicians can help provide the information in this topic, such as peer counselors, psychologists with experience in fire culture, or chaplains.

Unit 3: Cancer Awareness**Topic 3-1: Describing Types, Prevalence, and Causes of Cancer****Terminal Learning Objective**

At the end of this topic, given an assignment in the fire service, a student will be able to describe types and prevalence of occupational cancer and list common causes of cancer in the fire service.

Enabling Learning Objectives

1. Describe cancer prevalence in the fire service
 - Types/locations
 - Statistics
2. Define carcinogenic agent
 - Occupational
 - Activities
 - Chemicals
3. List risk factors specific to the fire service
 - Exposure to carcinogenic chemicals
 - Sleep disruption
 - Shift work
 - UV radiation
4. List risk or protective factors specific to lifestyle or personal life, including but not limited to:
 - Tobacco
 - Alcohol
 - Stress
 - Diet
 - Exercise
 - Infectious agents
 - Age
 - Metabolic syndrome
 - Overweight
 - Mental health
 - Genetic history
 - Hormones

Discussion Questions

1. How does tobacco use affect your ability to claim workers compensation for cancer?
2. How are behavioral health, lifestyle, your occupation, and cancer risk related?
3. How do factors such as race and gender impact occupational cancer risk?
4. What are some types of carcinogenic agents other than chemical carcinogens?

Activities

1. To be determined by the instructor.

Instructor Notes

1. The instructor might consider having the students perform a risk self-assessment.
2. For this unit, the instructor should refer to Tucson best practices document and Washington state's "Healthy In, Healthy Out" document and video.

Topic 3-2: Describing Exposure to Carcinogenic Chemicals**Terminal Learning Objective**

At the end of this topic, given an assignment in the fire service, a student will be able to describe exposure to carcinogenic chemicals.

Enabling Learning Objectives

1. List sources of exposure
 - Fires and products of combustion
 - Hazardous materials
 - Environmental
 - Cross-contamination
2. List common states of carcinogenic chemicals
 - Gases
 - Particulates
3. List common categories of carcinogenic chemicals
 - Polycyclic aromatic hydrocarbon (PAHs)
 - Volatile organic compounds (VOCs)
4. List routes of exposure
 - Absorption
 - Inhalation
 - Ingestion
 - Injection or penetration
5. List common sources of exposure found in various situations and environments
 - Fire suppression
 - Overhaul, mop-up, and postincident activities
 - PPE
 - Equipment
 - Apparatus
 - Station
 - Home

Discussion Questions

1. What are some sources of exposure after a fire is extinguished?
2. How does duration of exposure relate to absorption of carcinogenic chemicals?
3. How might a firefighter ingest carcinogenic chemicals?
4. What are the exposure risks for members not engaged in the IDLH environment?

Activities

1. To be determined by instructor

Instructor Notes**Topic 3-3: Describing and Demonstrating Minimizing Exposure and Risk****Terminal Learning Objective**

At the end of this topic, given an assignment in the fire service, a student will be able to describe the factors and behaviors and demonstrate best practices for minimizing contaminant exposure and risk.

Enabling Learning Objectives

1. Identify unmodifiable factors
 - Infectious agents
 - Genetic history
 - Hormones
 - Age
2. Identify modifiable factors
 - Exposures
 - Sleep
 - Tobacco
 - Alcohol
 - Diet
 - Exercise
 - Metabolic syndrome
 - Overweight obesity
 - UV radiation
3. Define exclusion (hot) zones, contamination reduction (warm) zones, and support (cold) zones on a fireground
4. Identify and demonstrate the best practices for minimizing contaminant exposure and risk during fire suppression, overhaul, mop-up, and postincident activities
 - Wearing full PPE with SCBA until no longer exposed to carcinogenic chemicals
 - At wildland fires, wearing full PPE with respiratory protection until no longer exposed to carcinogenic chemicals
 - Gross decontamination procedures in the warm zone prior to rehabilitation
 - Appropriate placement and cleaning procedures for rehabilitation
 - Establish rehabilitation in the cold zone
 - Establish rehabilitation away from smoke (uphill, upwind)
 - Establish rehabilitation away from any sources of exhaust
 - Ensure clean hands, mouth, and face prior to eating or drinking
 - Only enter rehabilitation area after gross decontamination and removal of contaminated gear
 - Storage of contaminated gear in isolation bags for transfer

5. Identify and demonstrate the best practices for PPE that minimize contaminant exposure and risk
 - Proper fit
 - Best practice is two complete sets of everything
 - Helmet, hood, coat and liner, gloves, pants and liner, suspenders, boots, radio straps, hose/truck belts, web gear, goggles, respiratory protection, wildland coat and pants
 - Wearing PPE
 - Ensure it is clean before you put it on
 - Best practices for hood exchange
 - Transfer of PPE and equipment between job sites
 - Gross decontamination
 - Performed in the warm zone
 - The person being decontaminated needs to wear SCBA and remain on supplied air for the duration of the decontamination process
 - The person decontaminating needs to wear SCBA, remain on supplied air, and wear turnouts or splash protection for the duration of the decontamination process
 - While handling contaminated PPE, use EMS gloves
 - Dry, wet, or combination method
 - Wipe and wash your face, neck, armpits, torso, groin, and hands
 - Isolate contaminated turnouts
 - Wash turnouts
 - Air out turnouts at least twenty-five minutes outdoors before washing
 - Launder turnouts at approved location
 - Wash out or dispose of the isolation method
 - Commercial dishwasher for helmet and SCBA, boots, and gloves
 - Extractor washer for turnouts
 - Turnout dryer
 - While washing turnouts, need to wear EMS gloves and respirator and protective clothing, and have a negative pressure environment
6. Identify and demonstrate the best practices for equipment that minimize contaminant exposure and risk
 - The dangers of equipment off-gassing and cross-contaminating after exposure
 - Completing gross decontamination
 - Having a designated decontamination station
 - PPE for all decontamination practices
 - Cleaning products designed for purpose
 - Apparatus
 - The clean cab concept and treating contaminants as biohazards
 - Turning off apparatus and other vehicles to minimize exhaust

7. Identify and demonstrate the best practices that minimize contaminant exposure and risk at the station
 - Avoid cross-contamination at all costs
 - Identify hot, warm, and cold zones in fire stations
 - Treat living quarters as cold zones
 - PPE must never enter cold zones
 - Keep all doors at zone interfaces shut
 - Wash hands, face, and neck before entering the cold zone
 - Identify possible warm zones in fire stations (areas of interface between hot and cold)
 - Shower within an hour of exposure (cold and then hot water)
 - Infrared saunas as chemical decontamination units (CDUs)
 - PPE storage in the warm zone
 - Wash all garments and undergarments worn beneath PPE separately at the station
 - Identify hot zones
 - Treat apparatus floor as a hot zone because of vehicle exhaust
 - The following must not be located in the hot zone
 - Ice machines
 - Workout equipment
 - PPE storage must be situated to prevent exhaust carcinogen contamination
 - Off-duty storage
 - Response-ready storage
 - Use of exhaust systems
 - Tool maintenance and checks performed outdoors, wearing PPE, to prevent exposure
 - Tool decontamination performed in a negative pressure environment and while wearing PPE to prevent carcinogen exposure
 - Perform apparatus pretrips outside of the apparatus floor
8. Identify and demonstrate the best practices that minimize contaminant exposure and risk at home
 - Avoid cross-contamination at all costs, including with PPE
 - Don't wash work items at home
 - PPE including wildland
 - Uniforms
 - Personal items used during work hours
 - Garments or undergarments worn beneath PPE
 - Keep all work items in a sealed bag in vehicle and avoid direct sunlight and heat
 - Shower prior to leaving the station
9. Document all exposures, injuries, and illnesses within AHJ reporting system

Discussion Questions

1. What are the best practices for hood types, wearing, and exchange?

2. Under what circumstances is it best to do dry decontamination or wet decontamination?
3. What are the benefits of washing versus wiping during body decontamination?
4. Why is it important to use a new wipe for each part of your body? What can you use to wipe off contaminants?
5. Why is it critical to complete an exposure report for all exposures, injuries, and illnesses on all incidents?

Activities

1. The instructor must create an activity directing students to demonstrate the above ELOs.

Instructor Notes

1. This topic is interrelated with those pertaining to behavioral health and stress reduction. Some of the wellness behaviors will overlap.
2. NFPA 1500 (2019) Standard on Fire Department Occupational Safety, Health, and Wellness Program A.14.6 addresses exposure reports.
3. The instructor should refer to and share the NIOSH photo showing the limits of PPE in preventing exposure.

Time Table

Segment	Lecture Time	Activity Time	Total Unit Time
Unit 1: Introduction			
Topic 1-1: Orientation and Administration			
Lecture	1:00		
Activity 1-1: To be determined by instructor		0:00	
Unit 1 Totals	1:00	0:00	1:00
Unit 2: Stress and Resilience			
Topic 2-1: Describing Stress and Listing Stressors			
Lecture	1:00		
Activity 2-1: To be determined by instructor		0:00	
Topic 2-2: Identifying and Describing the Impacts of Stress			
Lecture	1:00		
Activity 2-2: Student Self-Assessment		0:15	
Topic 2-3: Describing Factors and Demonstrating Practices for Resilience			
Lecture	1:15		
Activity 2-3: Strategies for Resilience		0:30	
Unit 2 Totals	3:15	0:45	4:00
Unit 3: Cancer Awareness			
Topic 3-1: Describing Types, Prevalence, and Causes of Cancer			
Lecture	0:30		
Activity 3-1: To be determined by instructor		0:00	
Topic 3-2: Describing Exposure to Carcinogenic Chemicals			
Lecture	0:30		
Activity 3-2: To be determined by instructor		0:00	
Topic 3-3: Describing and Demonstrating Minimizing Exposure and Risk			
Lecture	1:00		
Activity 3-3: Demonstrating Best Practices		1:00	

Segment	Lecture Time	Activity Time	Total Unit Time
Unit 3 Totals	2:00	1:00	3:00
Lecture, Activity, and Unit Totals:	6:15	1:45	8:00

Course Totals

Total Lecture Time (LT)	6:15
Total Activity Time (AT)	1:45
Total Course Time	8:00

Acknowledgments

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Cadre Leadership**Kevin Conant***Cadre Leader**Fire Service Training Specialist III, State Fire Training***Caryn Petty***Cadre Leader**Deputy State Fire Marshal, State Fire Training***Laura Garwood***Cadre Editor**Sacramento State University***Cadre Participants****Tim Andre***Battalion Chief, Huntington Beach Fire Department***Robert Anthony***Captain, Sacramento Fire Department***Brent Brainard***Wellness Officer, San Diego Fire-Rescue Department*

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Chris Emmons

Admin Officer, Humboldt Fire Department

Mike Massone

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Engineer, Los Angeles County Fire Department

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Division Chief and Director of Fire Training, CAL FIRE

Partners

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