

Virtual Grand Rounds EMERGING PUBLIC HEALTH ISSUES

Southern California Wildfire Response – What Clinicians Need to Know









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Assistant Health Officer, California

Population Health Director,
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Public Health







Disclosure



- + The following speakers disclose no relevant financial relationships with ineligible companies: Rita Nguyen, M.D.; Dan Southard; and Cyrus Rangan, M.D., FAAP, FACMT.
- + All other planners, staff and others involved with this activity have reported no relevant financial relationships with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

+ This activity has not received commercial support.









- + Wildfire Impacts on health, what Clinicians Should Know
 - Cyrus Ranga, M.D., FAAP, FACMT
- Department of Managed Health Care (DMHC) Response to the Southern California Wildfires
 - Dan Southard
- + Q&A







Continuing Medical Education (CME) Offered

Learning Objectives:

- + Describe the physical effects of wildfire on an urban community.
- + Direct patients to recovery and support resources.
- + Employ flexibility on health plan requirements during this disaster.
- + Identify keys to diagnosis and treatment of patients exposed to smoke.
- + Discriminate direct and indirect clinical impacts during and after fire events.







Cyrus Rangan, M.D., FAAP, FACMT

Assistant Deputy Director,

California Department of

Public Health Center for

Healthy Communities

Medical Toxicologist, Children's

Hospital Los Angles (CHLA)







Wildfire Smoke in California: Health Risks and Mitigation





Disclosures

I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this educational activity.

I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.



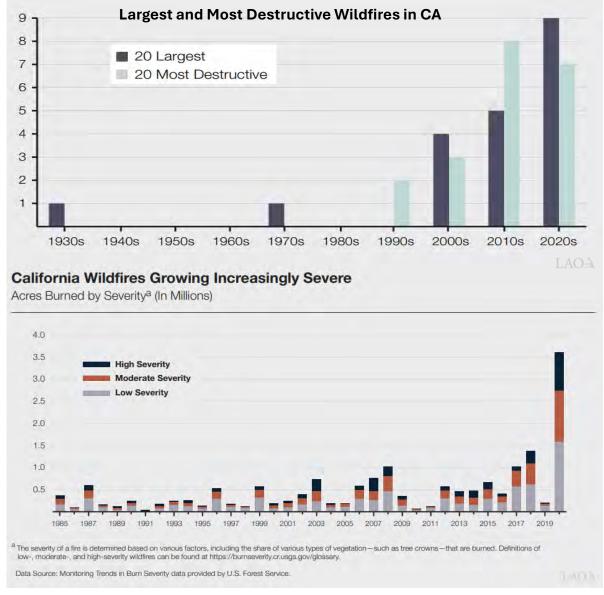
Outline

- Background: Wildfire Trends and Patterns in California
- Air Quality Impacts of Wildfire Smoke
- Wildland-Urban Interface (WUI): A Growing Risk
- Health Effects of WF Smoke: Disproportionate Impacts Among Subpopulations
- Mitigation Strategies to Reduce Health Risks
- o CDPH Programs and Activities Focused on Wildfire Smoke and Public Health



Background

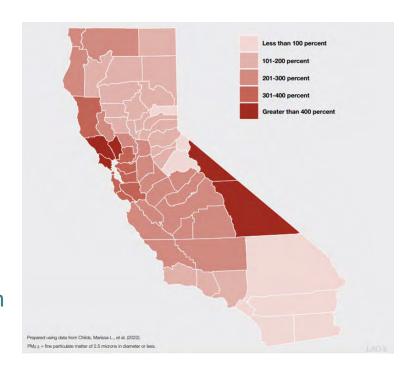
- Acres burned per year by wildfires (WF) have significantly increased nationally
- WF in CA have intensified in frequency, severity, and duration in the last two decades
- Large areas of landscape burning at high intensity produce smoke emissions near source and potentially far from fire location





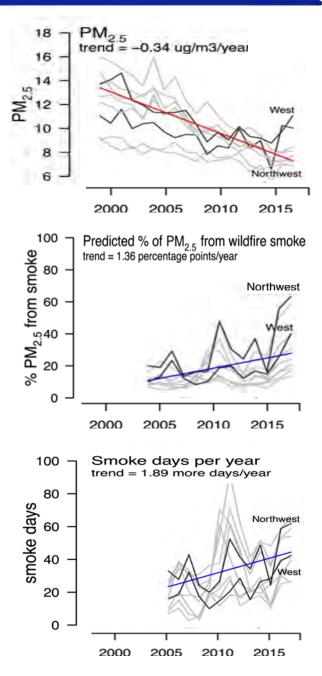
Air Quality

- Gains made in improving air quality are being countered by WF smoke events
- Number of smoke days has increased in Western U.S.
- WF smoke accounts for up to 50% of concentrations of fine particulate matter (particles less than 2.5 micron in diameter, PM_{2.5}) in Western U.S.
- Most of CA has experienced large increases in WF-driven air pollution



Percent increase in estimated annual average $PM_{2.5}$ from wildfires between 2007-2013 & 2014-2020

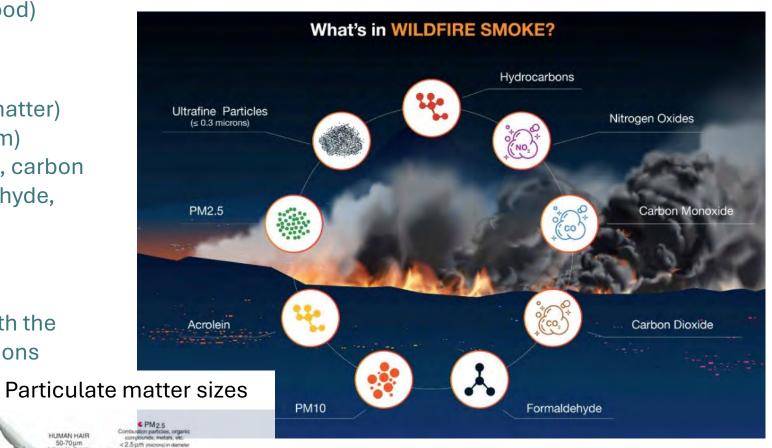
(LAO) (2022)





Wildfire Smoke Composition

- Biomass combustion (e.g., vegetation/wood)
 emits particles into the air
 - Coarse particles (PM₁₀) (Ash/soot)
 - Fine particles (PM_{2.5}) (Soot/organic matter)
 - Ultrafine/nano particles (UFP < 0.1 μm)
 - Gaseous pollutants carbon dioxide, carbon monoxide, nitrogen oxides, formaldehyde, benzene
 - Volatile organic compounds (VOCs)
 - Metals
- Fuels and burn conditions can impact both the composition and toxicity of smoke emissions
 - Vegetation type
 - Moisture/Wind/Temperature
 - Flaming vs. smoldering
 - Soil composition

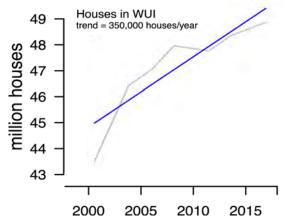


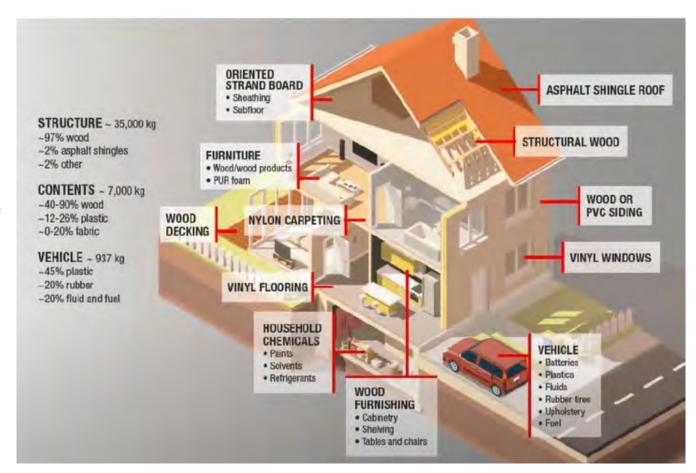




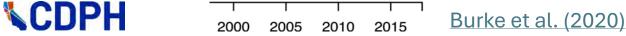
Wildland-Urban Interface (WUI)

- CA has the greatest number of houses in WUI
- o 5 million housing units (45% of CA's total housing) are in WUI (Li et al., 2022)
- Expansion of homes in WUI brings structures and populations in closer proximity to WF-prone areas
- Smoke from treated wood used in structures generate toxic fumes



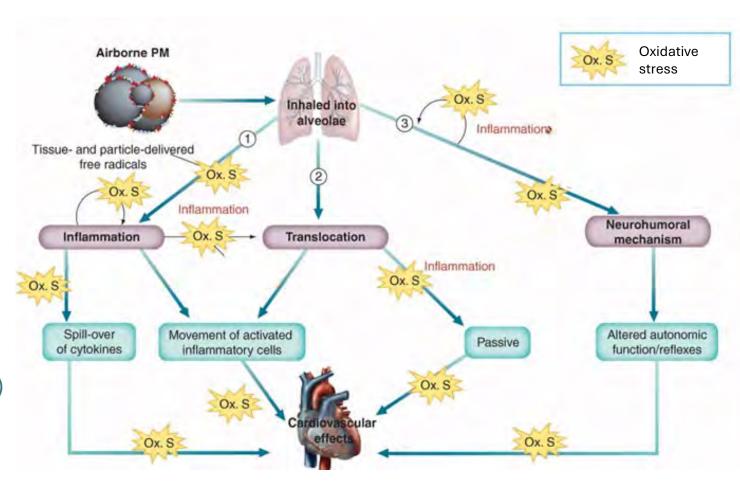


Averett et al. (2024)



Health Effects of Wildfire Smoke

- PM_{2.5} is generally the largest fraction of WF smoke and a key pollutant of health concern
- Acute Symptoms: eye irritation, sore throat, wheeze, cough, chest pain
- Health outcomes associated with WF smoke exposure:
 - Mortality (all-cause, cause-specific)
 - Morbidity (asthma exacerbation, COPD, cardiovascular events etc.)
 - Pregnancy/birth outcomes (hypertensive disorders, preterm birth, low birth weight)
 - Cognitive impairment
 - Mental health (anxiety, depression, stress)







Health Effects of Wildfire Smoke

	Infectious Disease	Toxic contaminants	Physical
GI	 Damaged food (power outage) Mass feeding at shelters: unsafe food handling, storage, donated food prepared at home Food prep with contaminated water Contaminated drinking water (private wells) Sewage leaks Vector-borne 	 Fire damaged food (refrigerated food, contaminated agricultural/backyard produce) Drinking water (municipal systems/private wells) – VOCs from burnt pipes, external contaminants. 	
Dermal	Infectious agents in shelters	 wildfire smoke, exposure to corrosives Skin dryness/irritation 	Burns, fire debris, sharps including metal and glass
Respiratory	 Shelters – overcrowding/ vulnerable people Occupational – Valley fever in fire fighters 	Air pollutants in wildfire smoke, particularly PM 2.5 + metals, VOCs, etc.	



Health Effects of Wildfire Smoke

	Infectious Disease	Toxic contaminants	Physical
Cardiovascular		Air pollutants in wildfire smoke, particularly PM 2.5	
Cancer		Air, water, food, soil contaminants from multiple sources: combustion byproducts including VOCs, heavy metals, POPs, asbestos, formaldehyde and other construction material-associated toxics; Industrial releases	Radiological release
Pregnancy		Miscarriages, LBW, preterm birth	
Lead Exposure		Potential exposure to lead in air and soil	



Mental and Other Impacts, Resources

- Community mental Health due to health impacts, lost property and community, evacuation, places of work and worship
- Responder mental Health particularly responders who live(d) in impacted areas
- Easier access to drugs and illicit substances in abandoned homes
- Easier access to firearms

- Resource for pediatric healthcare providers (includes mental health resources): https://wrap-em.org/
- Health Facility Evacuations
- Emergency Prescription Assistance
 Program (EPAP)
- Prevention of <u>Norovirus</u> and <u>Respiratory</u>
 Viruses in Shelters
- Food safety after fire damage
- Mental Health and CalHOPE
- California WIC
- LA County Health and safety:
 http://publichealth.lacounty.gov/eh/safety/returning-home-after-fire.htm
- AirNow Fire and Smoke Map
- CDPH Wildfire Smoke: Considerations for California's Public Health Officials



Disproportionate Impacts

Who is most at risk to wildfire smoke inhalation?

Sensitive Populations









Demographic, Socioeconomic, Geographic Factors

- Low-income, communities of color, indigenous communities
- Areas with high air pollution and/or high baseline morbidity
- Environmental justice communities
- Outdoor workers
- Unhoused populations
- o Rural/WUI communities





Los Angeles County Resources

If you've been affected by the wildfires, <u>this link</u> provides answers to common questions about accessing and replacing medications. It also explains the disaster response rules for pharmacies and insurers. Public Health wants to know if their rules are being followed. If you were charged more than your usual copay or experienced other issues, please report it by clicking <u>here</u>.



Medications, Medical Supplies, and Equipment for People Affected by the LA County Fires

Frequently Asked Questions

1. I lost my medications. How can I get them replaced?

If you have been affected by the wildfire emergency, there are several different options to get your medications replaced. You do not need to have your prescriptions or your prescription bottles. Note, if your medication is a controlled substance, such as a strong painkiller, see question 2.

Go to a pharmacy:

- If possible, call or visit the pharmacy where you originally filled your prescription.
- If your pharmacy is part of a chain, but is closed or you can't access it, go to any pharmacy in the same chain. They can look up your records in their system. If you cannot get to your pharmacy or pharmacy chain, you can go to any pharmacy that is open. They can transfer your prescriptions. If they can't reach your regular pharmacy or your doctor, they may be able to give you enough medicine to use until you can get your regular supply. This is allowed in emergencies like the LA fires, see

pharmacy.ca.gov/licensees/state of emergency la.pdf

Note: During this emergency, wherever you get your prescription filled, you should only have to pay your usual copay. This applies even if it is too early for a regular refill or if you go to a pharmacy that is not in your network. For more information, see

dmhc.ca.gov/Resources/Newsroom/PressReleases/January9,2025.aspx.

- Call your insurance company: During an emergency, insurance companies can send your
 prescriptions to a pharmacy and allow early refills. They can also help with your medical supplies
 and equipment. This includes Medicare and all Medicare Advantage plans.
 - Information for L.A. Care members: https://www.lacare.org/members/health-news-advisories/los-angeles-wildfires-2025-member-services-updates
 - Information for Health Net members: https://www.healthnet.com/content/healthnet/en_us/news-center/news-releases/2025-01-08-health-net-providing-special-assistance-members-affected-palisades-fire.html
 - Information for Medicare members: cms.gov/files/document/dme-emergency-provider-response-support-tool.pdf
- Contact your doctor: If you can reach your healthcare provider or clinic, tell them you need an
 emergency prescription refill.
- Use a telehealth service if none of the above work or if you need a new prescription. See questions 4 and 5.

publichealth.lacounty.gov/media/wildfire 1.16.25





Los Angeles County Resources

HEALTH INSURANCE COVERAGE FOR WILDFIRE DISASTER VICTIMS

California residents can enroll in health coverage through Covered California until Jan. 31, 2025, by either visiting CoveredCA.com or by calling Covered California at (800) 300-1506. FEMA-emergency-affected individuals will have up to 60 days from the end of the FEMA-designated incident period to select a new Marketplace plan or make changes to their existing Marketplace plan. They must contact the Marketplace Call Center at 1-800-318-2596 or TTY at 1-855-889-4325 and indicate they were eligible for an enrollment window but were unable to complete their enrollment due to a FEMA-designated emergency or disaster.

For more information, please visit: https://www.cms.gov/newsroom/news-alert/cms-announces-resources-and-flexibilities-assist-public-health-emergency-state-california.

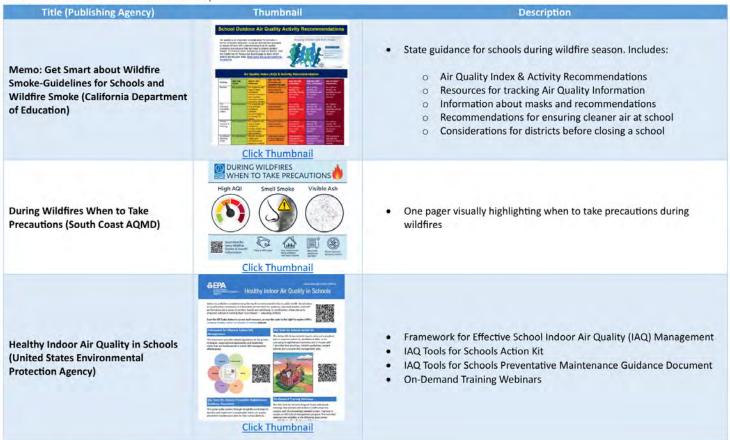


Los Angeles County Resources

LA County Resources for Schools

LA County Wildfires- Resources for Schools

Environmental Health and Safety



LA County Wildfires- Resources for Schools 1/16/2025



Los Angeles County Resources

Clean-Up After a Fire



The Los Angeles County, Department of Public Health, Environmental Health Division, is here to provide guidance and support as you recover after a fire. Please note. Even after a fire is out, hazards may persist, and precautions should be taken for the health and safety of you, your family, and your community. Below are frequently asked questions and answers to help guide you in your clean-up efforts.

- What should I wear when returning to inspect and clean-up my property in an impacted area?
 Wear proper protective equipment, highly recommended, including:
 - . N95 or P100 respirator mask: Filters out harmful particles from the fires from the air you breath.
 - Gloves: Protect hands from cuts and harmful ash, dust, dirt, and chemicals during inspection and clean-up.
 - Long-sleeved shirt and long pants: Shield arms and legs from ash, dust, dirt, sharp objects, and other potential hazards.
 - Sturdy closed-toe shoes: Keep feet safe from debris, sharp objects, and other potential hazards.
 - Safety Goggles: Protect eyes from harmful ash, dust, and dirt that may be stirred up during inspection and clean-up.
- 2. Can I wear a wet cloth over my nose and mouth instead of a respirator mask while I clean up?

Wearing a wet cloth, instead of a respirator mask, is not recommended. A wet cloth is not as effective as a respirator mask. While it can block larger particles, it won't protect against fine particles resulting from smoke and stirred up ash. Use a properly fitted NAS or P-100 respirator mask with no sans around the edges for better protection.



Mitigation

- **Indoor air quality solutions:**
 - Access Clean Air Centers (AB 836)
 - MERV 13 or higher rated filters
 - Air conditioning/portable air cleaner
 - Create clean air rooms/spaces in homes
 - Weather stripping, foam taping windows and doors
- **Risk mitigation/personal interventions:**
 - Stay indoors
 - Reduce activity
 - Limit infiltration
- **Personal Protective Equipment (PPE):**
 - Properly fitted N95 respirators



Hierarchy of Controls

Elimination

Substitution

Controls

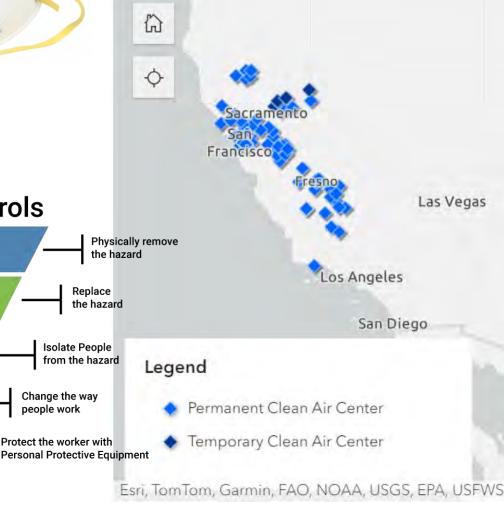
Administrative

Controls

PPE

people work







effective

effective

CARB Clean Air Centers

Mitigation

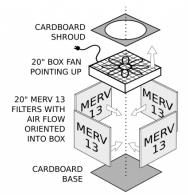
How to build a DIY air filter with a box fan, tape, and MERV13 filters - CorsiRosenthal Box

20 inch (standard size) Box fan

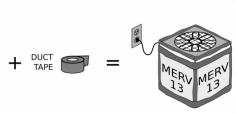
20x20x1 or 20x20x2 MERV 13 furnace filters (1, 2, 4 or 5 filter designs available)

Duct tape or packing tape

DIY box-fan instructional video

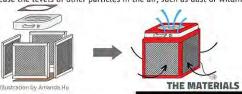




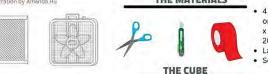


HOW TO BUILD A CORSI-ROSENTHAL BOX

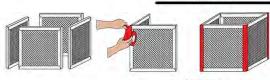
The Corsi-Rosenthal Box is an affordable DIY air-cleaning system made with simple materials found in hardware stores. The box fan pulls air through the filters on the sides and blows out clean air. It is proven to reduce indoor exposure to airborne particles, including those containing the virus that causes COVID-19. The box can also decrease the levels of other particles in the air, such as dust or wildfire smoke.



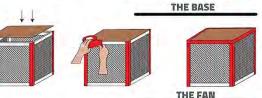
- · Filters can last up to a year
- · Keep away from walls and corners



- 4 Filters: 3M MPR 1900 (20" x 20" x 1" or 20" x 25" x 1") or MERV 13 (20" x 20" x 2" or 20" x 20" x 1" or 20" x 25" x 2" or 20" x 25" x 1" [2-inch preferred])
- · Lasko or Mainstays 20-inch Box Fan
- . Scissors, Utility Knife, Duct Tape



- Arrange the filters to create a symmetrical structure
- Ensure the arrows are pointing inwards
- Duct tape the four edges
- Vertical orientation of the pleats is preferred



- Use one side of the fan's cardboard
- · Cut the cardboard to fit the base of
 - · Duct tape it on all four sides



- Place the fan on top of the cube (air must blow upward)
- · Seal all sides, including corners . Ensure any holes on the side of the fan are sealed off with duct tape





- This work is licensed under CC BY-NC-SA 4.0. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-sa/4.0/
- Cut the other cardboard sheet to fit the top of the fan
- Cut a circular hole (Diameter: 15" for Lasko and 16" for Mainstays)
- · Place the shroud on the fan and tape it on all four sides
- · The shroud increases efficiency and decreases the noise level

Illustrator: Marija Mladenović Creator: Shiven Taneja



CDPH Environmental Health Laboratory Branch (EHLB) Filtration for Respiratory Exposure to Wildfire Smoke from Swamp Cooler Air (FRESSCA-Mujeres Project)



Swamp cooler filters



Air sampling & low-cost sensors

- Assessing smoky air + heat stress inside CA farmworker homes
- Community-led team to evaluate exposures & solutions
 - Farmworker women participants were provided swamp
 cooler DIY filters + indoor air cleaners
 - Low-cost sensors + measurements of 52 airborne chemicals (particles & gases), indoors vs. outdoors
 - Urine & saliva measurements of chemicals & biomarkers of stress
 - Results return & community meetings for air quality & biomonitoring

















Resources

WF Smoke Mitigation Program (Preventive Health and Health Services Block Grant)

PHHSG FFY 2024 California State Plan

Wildfire Forecast and Threat Intelligence Integration Center (WFTIIC) Situational Awareness Dashboard

Wildfire Forecast and Threat Intelligence Integration Center

Interagency Wildland Fire Air Quality Response Program (IWFAQRP) Smoke Outlooks

Current Smoke Outlooks (wildlandfiresmoke.net)

California Syndromic Surveillance Program (CalSyS)

About CalSyS (California Syndromic Surveillance) Program

Assembly Bill (AB) 619 – Air Quality Health Plan for Wildfires

Bill Text - AB-619 Air quality. (ca.gov)

Assembly Bill (AB) 836 – Wildfire Smoke Clean Air Centers for Vulnerable Populations

Wildfire Smoke Clean Air Center Grant | California Air Resources Board



Resources

Public Health Impact of Prescribed Fire (PHIRE) Study

Hayashi, T., Thilakaratne, R., Hoshiko, S., Rosenberg, A., Buckman, J. R., & Rappold, A. G. (2023). California Wildfire Smoke and Air Pollution Health Burden Mapping Dashboard.

https://experience.arcgis.com/experience/25873f6d310741e9bcbf2cbf3c87d904.

Hoshiko et al. (2023). Responses to Wildfire and Prescribed Fire Smoke. A Survey of a Medically Vulnerable Adult Population, Mariposa County. https://doi.org/10.3390/ijerph20021210

Thilakaratne et al. (2023). Wildfires and the Changing Landscape of Air Pollution-related Health Burden in California. https://doi.org/10.1164/rccm.202207-1324OC

Rosenberg et al. (2024). Health Impacts of Future Prescribed Fire Smoke: Considerations from an Exposure Scenario in California. http://doi.org/10.1029/2023EF003778

FRESSCA Project

FRESSCA (Filtration for Respiratory Exposure to wildfire Smoke from Swamp Cooler Air)

Filtration for Respiratory Exposure to wildfire Smoke from Swamp Cooler Air (FRESSCA) – Mujeres

FRESSCA Mujeres – Stories of Resilience – YouTube



Acknowledgments

Andrew Rosenberg

Lori Copan

CDPH Environmental Health Investigations Branch

Sauda Yerabati Mark Starr

CDPH Center for Environmental Health

Jeff Wagner

CDPH Environmental Health Laboratory Branch

Special Acknowledgement:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH





Dan Southard

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Chief Deputy Director,
Department of Managed
Health Care (DMHC)









Virtual Grand Rounds EMERCING TOTAL

EMERGING PUBLIC HEALTH ISSUES

Department of Managed Health Care (DMHC) Response to the Southern California Wildfires

Dan Southard

Chief Deputy Director

Department of Managed Health Care





What is the DMHC?











Regulator of full service and specialized health plans

- + All HMO and some PPO/EPO products
- + Some large group and most small group & individual products
- + Most Medi-Cal Managed Care plans
- + Dental, vision, behavioral health, chiropractic and prescription drug plans
- + Medicare Advantage (for financial solvency only)







DMHC Response to the Southern California Wildfires

+ Health and Safety Code 1368.7 requires health plans to file notification with the DMHC within 48 hours of a proclaimed state of emergency.







The health plans notification to the DMHC must describe:

- + Whether the health plan has or expects to have a disruption in its operations;
- How the health plan is communicating with potentially impacted members; and
- + The actions the health plan has or will take to ensure members health care needs are met.







On January 9, 2025, the DMHC issued an All Plan Letter.



Gavin Newsom, Governor State of California Health and Human Services Agency DEPARTMENT OF MANAGED HEALTH CARE 980 9th Street, Suite 500 Sacramento, CA 95814 Phone: 916-324-8176 | Fax: 916-255-5241

www.DMHC.ca.gov

ALL PLAN LETTER

DATE: January 9, 2025

TO: All Full-Service and Specialized Health Plans¹

FROM: Sarah Ream

Chief Counsel

SUBJECT: APL 25-001 - Southern California Fires and Enrollees' Continued Access

to Health Care Services

On January 7, 2025, California Governor Gavin Newsom <u>proclaimed</u> a State of Emergency in Los Angeles and Ventura Counties due to the Palisades Fire and windstorm conditions.

 Health plans must notify the DMHC regarding the actual or potential impact to plan operations and enrollees

Per Health and Safety Code section 1368.7, health plans must provide enrollees who have been displaced or whose health may otherwise be affected by a state of emergency with access to medically necessary health care services. Within 48 hours of a proclaimed state of emergency that displaces or affects (or could displace or affect) the plan's enrollees or providers, plans must file with the DMHC a notification describing:







The DMHC's All Plan Letter directed health plans to:

- + Ensure members have access to medically necessary care, including medically necessary prescription drugs.
- + Ensure the health plan has a toll-free telephone number members or providers may call for answers to questions regarding loss of ID cards, RX refills, and how to access services.
- + Prominently display on the health plan's website information describing how impacted members can continue to access health care services and how members and providers can contact the plan for more information.







The DMHC's All Plan Letter directed health plans to:

- + Suspend prescription refill limitations without authorization and allow impacted members to utilize out-of-network pharmacies at the same in-network cost sharing.
- + Allow members to replace medical equipment or supplies.
- + Allow members to access care from out-of-network providers if innetwork providers are unavailable within the timely access or geographic standards or if the member is outside the service area due to displacement. The member shall only be subject to their innetwork cost sharing.







The DMHC's All Plan Letter directed health plans to:

+ Reduce or remove unnecessary barriers for the efficient admission, transfer, and/or discharge of health plan members to/from contracted or non-contracted hospitals.







The DMHC's All Plan Letter encouraged health plans to:

- + Shorten time frames for prior approvals, pre-certifications, referrals and to extend the time such approvals, pre-certifications and referrals remain valid.
- + Extend the health plans claim filing deadlines.







On January 14, 2025, the DMHC posted a Resource Guide on the DMHC's public

Website.

The Resource Guide provides information on health plan requirements to help health plan members, as well as contact information (phone numbers and websites) for health plans operating in Los Angeles and Ventura Counties.



DMHC Resource Guide: 2025 Southern California Wildfires

Full Service Commercial & Medi-Cal Health Plans Operating in Los Angeles & Ventura Counties

Published: Tuesday, January 14, 2025







- + The DMHC is closely monitoring this situation and is working with the California Medical Association (CMA) and the California Hospital Association (CHA).
- + The DMHC will update the guidance to health plans and information for health plan members and providers, as necessary.







Getting help for your patients

- + If a health plan member needs assistance in obtaining health care services, prescription medication, replacement medical equipment, etc., the members should first contact their health plan for assistance.
- + If a health plan is not resolving the health plan member's issue(s), the member may contact the DMHC Help Center for assistance at www.DMHC.ca.gov or 1-888-466-2219 (TDD: 1-877-688-9891). The DMHC Help Center provides assistance in all languages and all services are free.







Virtual Grand Rounds EMERGING PUBLIC HEALTH ISSUES

Questions





Q & A





Rita Nguyen, M.D.



Cyrus Rangan, M.D., FAAP, FACMT



Dan Southard





Next Webinar in Series





- + Tuesday, March 11, 2025
- + More information at www.cmadocs.org/grandrounds
- + 12:00 1:00pm





CME

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- + You will receive an email after this webinar with an evaluation around 5pm
- Upon completion of survey, a
 CME certificate will be sent
 out within 1 week.







Upcoming CMA Events

Visit cmadocs.org/events to register and learn more.



May 6-7, 2025 | Westin San Diego Bayview

HEALTH EQUITY
LEADERSHIP SUMMIT

July 10-11, 2025 | Westin Pasadena



August 13, 2025
SAFE Credit Union Convention Center, Sacramento





Thank You



