# Improving Information Exchange with At-Risk Populations People with Heart and Lung Disease, Older Adults, and Children



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Wildland Fires: Towards Improved Understanding and Forecasting of Air Quality Impacts

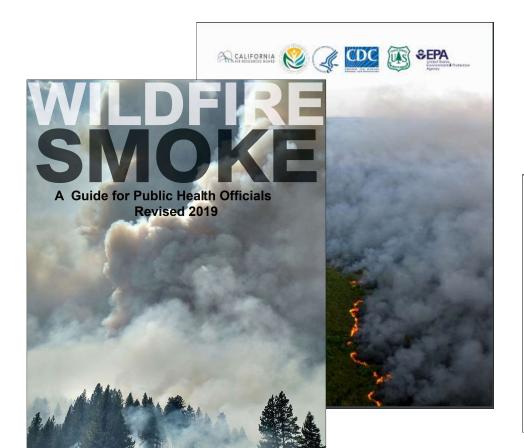
— A Workshop

National Academies of Sciences Engineering and Medicine

National Academies of Sciences Engineering and Medicine September 25, 2020

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# Wildfire Smoke: A Guide for Public Health Officials and Factsheets



# WILDFIRE SMOKE FACTSHEET Indoor Air Filtration Miss

filter (MERV 13-16)

as much as 95 percer

most efficient. Your

heating and air tech your central air syste

efficiency filters will

take to protect your health and Improve the air quality in your home. Reducing Indoor sources of pollution is a major step toward lowering the concentrations of particles indoors. For example, avoid burning candles,

## Filtration Ontions

There are two effective options for improving al system filter, and 2) using high efficiency portable air cleaners. Before discussing filtration options.

Filter Efficiency

# WILDFIRE SMOKE FACTSHEET

# Reduce Your Smoke Exposure

## Reduce smoke exposure indoors

- Stay inside with the doors and windows osed. Whether you have a central air anditioning system or a room unit, use high efficiency filters to capture fine particles from smoke. Ask an air conditioning professional what type of high efficiency
- Seek shelter elsewhere if you do not have
- Do not add to indoor air pollution. Do not burn candles or use gas, propane, wood-burning stoves, fireplaces, or aerosol sprays. Do not fry or broil meat, smoke tobacco products, or vacuum, All of these can increase air pollution indoors.
- Use a portable air cleaner to reduce indoo air pollution. Make sure it is sized for the room and that it does not make ozone, which is a harmful air pollutant. Portable a cleaners can be used along with efficient central air systems with efficient filters to

## to wear a respirator

Have a supply of N95 respirators and how to use them. They are sold at many



Use a portable air cleaner to reduce

# WILDFIRE SMOKE FACTSHEET

**Protect Your Pets from Wildfire Smoke** 





# WILDFIRE SMOKE FACTSHEET

# **Protect Your Lungs from** Wildfire Smoke or Ash

wheeze, and can make it hard to breathe. A respirator is a device (mask) that covers your pose and mouth, fits tightly to your face, and can filter out smoke or ash particles before you breathe them in Respirators are not sized for children

## Protecting Your Health

The most effective way to protect yourself during wildfire emergencies is to stay indoors or limit your time outdoors when there is smoke have heart or lung disease and are at higher risk for adverse health effects. Reducing physical activity and using HEPA-filtered air cleaners exposure, Consider temporary relocation out of the smoky area if possible. By limiting your exposure one of these ways, you may not need

# Respirators Can Help Protect Your



### How Do I Know if I Need to Wear a Respirator?

- People who stay indoors or limit their time outdoors during wildfire emergencies are exposure and may not need to wear a
- People who must be outside for extended periods of time in smoky air or an ashcovered area may benefit from using a tightfitting N95 or P100 respirator to reduce their
- a smoky environment, even if indoors. may also benefit from using a tight-fitting respirator to reduce their exposure.
- · For people who want to wear a respirator learning how to select and correctly use the respirator is important for achieving the

# RE SMOKE FACTSHEET



w how to get ready before a wildfire. Know how to protect your self from

# a Wildfire othat donnt need to

will receive alerts and

If you have heart or lung disease, check with your doctor about what you should do during smoke events. If you have as thma or another lung disease, update your respiratory

# management plan.

improvement stores and online.

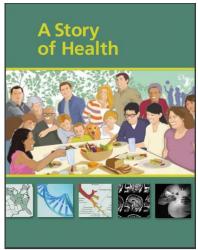
e and know where to go in case you have



# **Health Providers**

- People more likely to act when informed by health providers
  - Few health providers discuss air quality
- Continuing education for health providers
  - EPA/CDC Wildfire Smoke and Your Patients' Health web course
  - Pediatric Environmental Health Specialty Units (PEHSU) CME –
     A Story of Health under development
- Other information sources
  - Health insurance companies direct messages and chronic disease coaches
  - o Enabling agents medical posters, television videos, factsheets





# **Electronic Medical Records**



- Electronic Medical Records (EMR) systems
  - General: preparedness messages information about AQI, exposure reduction measures, symptoms of concern
  - Specific: smoke action plan templates working with medical associations, develop templates for at-risk groups (e.g., asthma action plan)
    - In-person education/planning
    - Document plan in medical records
    - Two-way communication
    - Alerts remind patient about smoke season, or to trigger enactment of smoke action plan with link
    - Follow-up survey about usefulness of action plan and/or update each year

# Schools, Daycares and Camps

# Exposure reduction information

- Expert workgroups underway and 2021 workshop planned to make recommendations to reduce children's smoke exposure: respirator use, improved IAQ in schools, school activity guidelines, and air quality sensor use
  - Deliver exposure reduction information through professional groups and licensing authorities

# **Forecasts**

- Seasonal forecasts stimulate preparation (e.g., school IAQ evaluations)
- Daily forecasts late afternoon and early morning forecasts most useful (think snow days)
  - Generally forecasts generated about 7:30-8 am
  - Incident command → AQ agencies → Health agencies → Schools
  - Too late to make decisions about closures/cancellations
- Hourly forecasts help with decisions about outdoor activities



Photos courtesy of Ali Kamal and Kathleen Stewart, US EPA

# Summary

- Information exchange most important with groups at-risk from smoke exposure
- Most effective way to reach these groups is through health providers
  - Health providers are trusted information source
- Useful tools
  - O Development of Smoke Action Plan tool in-person planning and education
  - EMR systems documentation/communication
  - Clinic materials (medical poster and videos) education
  - o Insurance companies notifications and education
- Reaching schools, daycares, and camps important for protecting children
  - Exposure reduction information being developed
  - Improved forecasts (timing and temporal specificity) would be helpful