PARTICIPANT HANDOUTS
Health Center Preparedness for Wildfires Webcast

Thank you for attending today’s webcast. By doing so you are strengthening the ability of your community-based and patient-directed health center to deliver comprehensive, culturally competent, high-quality primary health care services.

Presented by:
Marija Weeden, Director of Operations at Mountain Family Health Centers in Glenwood Springs, Colorado.
Eric Henley, MD, MPH, former CMO of LifeLong Medical Care in California East Bay and current Institutional Official for LifeLong’s new Family Medicine Residency Teaching Health Center.

Live Broadcast Date/Time:
Tuesday, June 29, 2021
11:30AM–12:30PM Mountain Time / 12:30–1:30PM Central Time

Target Audience:
Staff involved in emergency preparedness work, clinical leadership, clinicians, and other interested health care staff at Region VIII health centers.

Event Overview:
This 60-minute webcast will provide key points to assist health centers in preparing for a wildfire. Ms. Weeden will discuss her experience during a large wildfire in Glenwood Springs, Colorado in 2020. This operational perspective will include tips for health centers’ emergency planning. Dr. Eric Henley will discuss why wildfires are a pressing concern for health centers, detail health effects of ambient smoke exposure, and provide pointers for patient education.

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CHAMPS ARCHIVES
This event will be archived online. This online version will be posted within two weeks of the live event and will be available for at least one year from the live presentation date.
For information about all CHAMPS archives, please visit www.CHAMPSonline.org/events-trainings/distance-learning.

**DESCRIPTION OF CHAMPS**

Community Health Association of Mountain/Plains States (CHAMPS) is a non-profit organization dedicated to supporting all Region VIII (CO, MT, ND, SD, UT, and WY) federally-designated Community, Migrant, and Homeless Health Centers so they can better serve their patients and communities. Currently, CHAMPS programs and services focus on education and training, collaboration and networking, workforce development, policy and funding communications, and the collection and dissemination of regional data. Staff and board members of CHAMPS Organizational Members receive targeted benefits in the areas of business intelligence, networking and peer support, recognition and awards, recruitment and retention, training discounts and reimbursement, and more.

**For over 35 years, CHAMPS has been an essential resource for Community Health Center training and support!** Be sure to take advantage of CHAMPS’ programs, products, resources, and other services. For more information about CHAMPS, please visit www.CHAMPSonline.org. The Happenings box on the lower left side of the CHAMPS home page highlights the newest CHAMPS offerings, while the CHAMPS Membership box on the lower right side of the page lists current benefits for CHAMPS Organizational Members.

**SPEAKER BIOGRAPHIES**

Marija Weeden is the Director of Operations for Mountain Family Health Centers and has been there for 21 months, fifteen of which have been in the midst of a Global Pandemic. Marija oversees clinical operations for Mountain Family’s four hub sites and six school-based sites, MFHC’s call center, and quality and compliance. Prior to starting with Mountain Family, Marija spent five years at CCHN in the policy department working on FQHC payment and policy, and two years at the National Network for Oral Health leading policy engagement around water fluoridation and dental therapists. Just before the pandemic Marija took up watercolor and the pandemic lead to the idea to draw a children’s book based on her niece’s stories, a task which turned out more daunting than expected but, like elephants, six year-olds never forget. Marija is a Colorado native and now lives in Glenwood Springs, Colorado.

Dr. Henley is a family and public health physician and former CMO of LifeLong Medical, a large FQHC in the East Bay. Earlier in his career, he worked for two and a half years as a rural locums physician, nine years as a commissioned officer in the Indian Health Service on the Hopi and Navajo Reservations and in Albuquerque, and twelve plus years as an academic physician and department chair at the U of Illinois Rockford campus where he taught medical students, residents and public health graduate students and initiated a number of community health programs. Subsequently he changed career paths and for five years was the CMO of North Country HealthCare, a large rural network FQHC with sites across northern Arizona. In 2014, he moved to the East Bay area to become CMO of LifeLong Medical, a large urban FQHC. He retired in 2020 after starting a new family medicine Teaching Health Center Residency at LifeLong and continues part-time as the residency’s Institutional Official. He has been a Board member for nine plus years and Past President of the Western Clinicians Network. He has led Peer Learning programs for clinical leaders at Region IX and Regions VIII and X annual conferences for the past seven years and has a special interest in clinical leadership development and mentoring and coaching clinical and non-clinical staff.
Health Center Preparedness for Wildfires

JUNE 29, 2021
11:30AM-12:30PM MT (12:30–1:30PM CT)

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Community Health Association of Mountain/Plains States (CHAMPS)

www.CHAMPSonline.org
Grizzly Creek Fire

How I learned of the fire:
August 10, 2020

From my office

From the parking lot
Overview

- Started – 9/10/20
- 100% contained – 12/18/20
- Acers burned: 32,631
- Yellow arrow – roughly where it started
- Red/Black line – the perimeter
- Triangles – MFHC facilities

More context
Major Community Impacts

Road Closures
- I-70 closed from August 10 – 24
- Cottonwood Pass closed
- Independence Pass closed

Infrastructure impacted:
- Major power plant for the area threatened
- Structural damage to highway

Food and fuel shortages

Air quality was terrible

River and White River National Forest access closed
- Doubled down on the impact to our economy

Major MFHC Impacts

Stuck Staff and Patients

Poor air quality for COVID testing

More patients needing virtual b/c of shared symptoms with COVID

No staff evacuated
Communications

From Fire Command Center

- County emergency notification system
- Facebook
- Daily live stream updates from the team
- Fire district quickly added Spanish translation to these!
- Expanded beyond just fire quickly
- [https://inciweb.nwcg.gov/incident/6942/](https://inciweb.nwcg.gov/incident/6942/)

MFHC Communications

- Send Word Now
  - App that certain leaders have access to
  - Sends text, call and email to staff
  - Can be all staff or selected based on location, etc

- Daily email updates to all staff

- Decisions:
  - Larger conversations added to our COVID task for calls weekly
  - Interim were me, CFO and CEO
MFHC Actions

- Moved staff locations to match side of fire
- Changed patients to virtual, rescheduled for later, or switched appointments to another site
- Prepared to potentially evacuate
  - Most likely was for part of Glenwood north of the highway to be evacuated
  - Determined that if that happened, we would shut down all GWS sites

Learnings

- First 2020 fire taught me we needed to know who didn’t work in the community they lived in
- Our internet, phones, and EHR and network access are all dependent on Glenwood Springs having power – need redundancies
  - IT evaluated what they would need to move servers out
  - Got together “grab bags” to quickly send people to Rifle to set up a new space
Learnings, Continued

- Staff need to know the evacuation plan, which is: people are the most important.
  - Leave the vaccines, Leave the equipment
  - Let insurance take care of what is replaceable

- COVID had already gotten things in place that helped:
  - Telehealth
  - Remote VPN access for most staff
  - Virtual phones installed on most laptops

COOP and Emergency Plan

- Brought to light that our Continuity of Operations Plan (COOP) had not been finalized – that was BOD approved in January 2021

- Charged Practice Managers with knowing what staff would not make it to work or would need housing if each of the major roads was closed
  - Came into play again at the end of May!

- IT looking at redundant internet options as move admin facilities

- Choose a new patient portal and notification system with the ability to send alerts based on appointment location
Challenges

- Quick decisions were needed and that doesn’t align with our leadership culture
- Dramatically impacted staff moral – Felt like living in Mordor
- There was still a pandemic, and we were the primary testing site for the community
- Some of the stuck staff were leaders
Climate Change, Wildfire Smoke and Health

Eric Henley MD, MPH
FM Residency DIO and Former CMO
LifeLong Medical Care
ehenley@lifelongmedical.org
Impact on Equity

- Disparate impacts on populations, esp. brown and black; disabled and elderly
- Agriculture and service jobs outdoors subjected to extreme heat
- Red-lined and poorer neighborhoods
  - Hotter
  - Closer to freeways and sources of pollution
- Fewest resources to mitigate the impacts, i.e., air conditioning, air purifiers, ability to move to better locations or improve living situation

ecoAmerica National Online Survey (n=1084)

<table>
<thead>
<tr>
<th>Protect our Health</th>
<th>Help Support Thriving Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>77%</td>
</tr>
<tr>
<td>Rural</td>
<td>64%</td>
</tr>
<tr>
<td>Semi-rural</td>
<td>68%</td>
</tr>
<tr>
<td>Suburban</td>
<td>84%</td>
</tr>
<tr>
<td>Urban</td>
<td>79%</td>
</tr>
<tr>
<td>National</td>
<td>73%</td>
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<td>76%</td>
</tr>
<tr>
<td>Urban</td>
<td>78%</td>
</tr>
</tbody>
</table>
Our Responses

- Adaptation and mitigation
- Adaptation (secondary prevention)
  - General pt education – posters, handouts
  - Specific pt education
    - Vulnerable pts
    - Heat waves; wildfires/smoke
    - Pollution: where to find measures of air quality; what to do when air unhealthy
    - Nutritional counsel/dietary change
- Providers – educate ourselves; disaster preparedness
- Mitigation (primary prevention)
  - Advocacy, policy, education, action (individual, local, state and federal)

How do we talk to our patients about climate change?

1. Provide information on climate change and its impacts on health
2. Discuss strategies to limit the health impacts of climate change
3. Empower patients to be a part of the solution
Clinicians can:

- Provide objective information, cultivate trust, follow your patient’s lead
- Inform patients about connection between extreme heat, longer fire seasons, and increased air pollution
- Acknowledge that climate change, including extreme heat and longer fire seasons, can be dangerous for the health of patients and their loved ones

How to share this info with patients:

- Patient appointments
- Patient outreach by clinic staff
- Street outreach
- Posters in waiting room or bathrooms
- Email and/or text message campaigns

Climate change fact sheet:

Health Effects of Wildfires

- The Fire Triangle: fuel, oxygen, and ignition source

- Direct effects
  - To firefighters and people living near the fire
  - Burns, injuries, mental health effects, even death

Xu et al. NEJM (Nov 26, 2020)
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Factors that determine exposure to harmful pollutants during wildfire

- Concentration of the wildfire smoke pollutant near the breathing zone (AQI)

- Rate at which the pollutant is inhaled in the lungs (pulmonary ventilation)

- Duration of exposure
Smoke contribution to overall PM2.5

The Age of Big Wildfires: Confronting an Urgent Health Threat

- Acute: Burns, injuries, death, psychological trauma
- Smoke and Ash: Respiratory & cardiovascular problems, premature death
- Long Term: Poor mental health, chronic exposure to toxins, displacement
Health Effects of Wildfire Smoke

- **Vulnerable populations**: older adults, pre-existing CV and resp conditions, living in low income areas, pregnant women, outdoor workers
- Major pollutants – carbon monoxide, ozone, particulates
- Association between levels of particulates and death but not with specific causes of death
- Exposure to particulates associated with increased risk of respiratory events - ED visits, hospitalizations, outpt visits, asthma med use, COPD
- Limited data support association with adverse preg outcomes (LBW, preterm)
- Data are lacking on long-term risks of wildfire smoke
Strategies to Reduce Exposure

- Stay indoors and close windows
- Avoid high smoke periods ([https://www.airnow.gov/fires/](https://www.airnow.gov/fires/))
- Manage indoor air quality (air filters, operate central fan, close fireplace damp and windows)
- Reduce indoor air pollutants, including cleaning products, frying, incense, candles, etc
- Reduce physical activity
- Consider temporary relocation
- Use approved respirator/mask if necessary and safe (i.e. N95)
- Always have your medications (especially inhalers)

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Reducing Wildfire Smoke Exposure for Children

Recommended actions to achieve safer levels of smoke exposure for children.

- Find somewhere without smoke  
  APPROX. REDUCTION  
  100%
- Stay inside with:  
  • a portable HEPA air cleaner  
  • HVAC/MERV 13 filter  
  APPROX. REDUCTION  
  50-80%
- Stay inside and shut windows  
  APPROX. REDUCTION  
  30%
- Recirculate the air in your car  
  APPROX. REDUCTION  
  80%
- Wear a NIOSH N95 mask correctly  
  APPROX. REDUCTION  
  80%
- Wear a medical mask correctly  
  APPROX. REDUCTION  
  20%

DO NOT spend unnecessary time outside if the AQI is in the unhealthy ranges.

Cloth face coverings (like those for COVID) DO NOT reliably filter out small smoke particles.

For more resources: wspehsu.ucsf.edu
Wildfires pose extreme challenges to homeless people, as well as contribute to homelessness.

- Distribute masks
- Open more shelters
- Extend public library hours
- Help with evacuation/relocation efforts
- Increase awareness around extreme weather warnings
- Mental health, food, shelter, medical care, street outreach
### When this pollutant has an index value above 100 ** ** *

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>Children and people with asthma are the groups most at risk.</td>
</tr>
<tr>
<td>PM2.5</td>
<td>People with respiratory or heart disease, the elderly and children are the groups most at risk.</td>
</tr>
<tr>
<td>PM10</td>
<td>People with respiratory disease are the group most at risk.</td>
</tr>
<tr>
<td>CO</td>
<td>People with heart disease are the group most at risk.</td>
</tr>
<tr>
<td>SO2</td>
<td>People with asthma are the group most at risk.</td>
</tr>
<tr>
<td>NO2</td>
<td>Children and people with respiratory disease are the groups most at risk.</td>
</tr>
</tbody>
</table>

### AQI

<table>
<thead>
<tr>
<th>Air Quality Index Levels of Health Concern</th>
<th>Numerical Value</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0 to 50</td>
<td>Air quality is considered satisfactory, and air pollution poses little or no risk.</td>
</tr>
<tr>
<td>Moderate</td>
<td>51 to 100</td>
<td>Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.</td>
</tr>
<tr>
<td>Unhealthy for Sensitive Groups</td>
<td>101 to 150</td>
<td>Members of sensitive groups may experience health effects. The general public is not likely to be affected.</td>
</tr>
<tr>
<td>Unhealthy</td>
<td>151 to 200</td>
<td>Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.</td>
</tr>
<tr>
<td>Very Unhealthy</td>
<td>201 to 300</td>
<td>Health alert everyone may experience more serious health effects.</td>
</tr>
<tr>
<td>Hazardous</td>
<td>301 to 500</td>
<td>Health warnings of emergency conditions. The entire population is at risk.</td>
</tr>
</tbody>
</table>
Resources for Healthcare workers

Wildfires | CDC


https://www.weather.gov/
BE PREPARED FOR POOR AIR QUALITY

Watch the Air Quality index, or AQI, to know how safe the air is to breathe in your area.

PROTECT YOURSELF FROM WILDFIRE SMOKE

- Stay indoors!
- Shut the windows if you have an air conditioner or portable air cleaner; use them with a HEPA filter.
- Don’t exercise outside.
- Wear a well-fitting N95 mask outdoors.
- Keep inhalers, oxygen, and prescriptions stocked all the time.

For more information, visit www.CHAMPSonline.org.
Thank You for Joining Us!

Your opinions about this webcast are very important to us.

Please complete the event evaluation for this webcast: [https://www.surveymonkey.com/r/2021WildfireEval](https://www.surveymonkey.com/r/2021WildfireEval)

The link is also included in the Handouts which you can download here: [http://champsonline.org/events-trainings/distance-learning/library-of-distance-learning-documents#WF](http://champsonline.org/events-trainings/distance-learning/library-of-distance-learning-documents#WF)

The same links were provided in the reminder email sent out in advance of the event and will be included in a follow-up email to all attendees.

Visit [www.CHAMPSonline.org/Events/DistanceLearning.html](http://www.CHAMPSonline.org/Events/DistanceLearning.html) for information about other live and archived CHAMPS webcasts.

Wildfire Smoke can make you sick

- It can bother your eyes, nose, throat, and lungs and make you cough or wheeze.
- It can make it hard to breathe.
- It can give you headaches and health problems you already have can get worse.

Some people are more at risk from wildfire smoke and should be extra careful:

- Babies and young kids
- Elderly individuals
- Pregnant women
- People with heart problems
- People with chronic obstructive pulmonary disease (COPD) and asthma

Always seek medical help if you are worried about your symptoms.

Source: www.cdc.gov/air/wildfire-smoke/default.htm
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VISIT: WWW.AIRNOW.GOV TO LEARN MORE ABOUT THE AQI

VISIT: WWW.CDC.GOV/AIR/WILDFIRE-SMOKE/DEFAULT.HTM TO LEARN MORE ABOUT HOW TO PROTECT YOURSELF FROM WILDFIRE SMOKE