Vaccination & Ventilation: A Conversation about Next Steps in COVID-19 Prevention

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The information included in this webinar is thought to be accurate as of January 28, 2021. For the most up-to-date information on COVID-19 visit www.cdc.gov.

The contents are solely the responsibility of the authors and do not necessarily represent the official views of CPWR or NIOSH.

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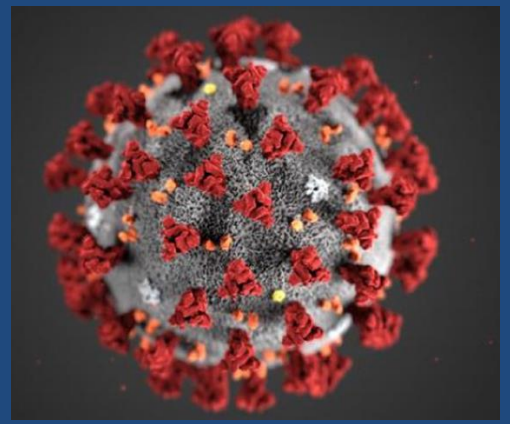

SARS-CoV-2 and Construction Workers

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Centers for Disease Control and Prevention
U.S. Department of Health and Human Services

January 2020

CONSTRUCTION COVID-19 SAFETY CHECKLIST

FOR EMPLOYERS

Accessible version: https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/construction-worker-checklists.html

CDC offers the following checklist to share ways employers can protect construction workers and slow the spread of COVID-19. This tool aligns with *What Construction Workers Need to Know about COVID-19*.

HAZARD ASSESSMENT	
○	Conduct a hazard assessment to determine potential sources of exposure to SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19), such as close contact between coworkers or between workers and members of the public with COVID-19.
○	Use the COVID-19 exposure control planning tool. • Check where your employees could be exposed to SARS-CoV-2 and the control measures in place to mitigate potential exposure. • Check appropriate CDC procedures for screening of employees and dealing with sick or exposed workers. • Consider incorporating a tiered testing strategy for COVID-19.
Name of hazard assessment point person(s):	
E-mail:	Phone:

CONTROLLING AND PREVENTION	
○	Implement the appropriate hierarchy of controls, including elimination, substitution, engineering and administrative controls, and personal protective equipment (PPE) selected as a result of an employer's hazard assessment. • Implement engineering controls wherever possible (e.g., physical barriers/shields to separate workers, enhanced ventilation). • Implement administrative controls wherever possible (e.g., staggering work shifts, limiting breakroom capacity, practicing social distancing, ensuring workers wear face masks). • Encourage appropriate PPE, identified through hazard assessments and in accordance with OSHA's standards at 29 CFR 1910, Subpart I, and OSHA and CDC guidance on use of PPE. (***Note:*** *face masks are not PPE and should not be used in place of NIOSH-approved respirators*).
PROMOTING SOCIAL DISTANCING AND FACE MASKS	

CLEANING, DISINFECTION, AND HAND HYGIENE

- ○ Implement hand hygiene and cleaning/disinfection procedures:
  - Provide soap, water, and paper towels for workers and visitors to wash their hands, and encourage frequent and proper (for at least 20 seconds) handwashing.
  - Provide hand sanitizer with at least 60% alcohol and encourage workers to use it frequently when they cannot readily wash their hands.
  - Explore alternate ways to promote hand hygiene if difficulty sourcing hand sanitizer and running water is not available. Examples include mobile hand washing stations, large (5+ gallon) buckets with a lid and tap to provide water, and multiple handwashing stations.
  - Identify high-traffic areas and surfaces or items that are shared or frequently touched, that could become contaminated. Target them for enhanced cleaning and disinfection using EPA-registered disinfectants.

MANAGING SICK WORKERS

- ○ Identify and isolate sick employees including practices for worker self-monitoring or screening, and isolating and excluding from the workplace any employees with symptoms of COVID-19 or had contact with a person known to have COVID-19.
  - Employees who appear to have symptoms upon arrival at work or who become sick during the day should immediately be separated from other employees, customers, and visitors, and sent home.
  - Have a procedure in place for the safe transport of an employee who becomes sick while at work. The employee may need to be transported home or to a healthcare provider.
- ○ Be familiar with local COVID-19 testing sites in the event your employee(s) develops symptoms. These may include sites with free testing available.
- ○ Inform employees of their possible exposure to COVID-19 in the workplace but maintain confidentiality. Workers with close contact (within six feet for a cumulative total of 15 minutes or more over a 24-hour period) to a person with COVID-19 should quarantine for 14 days after last exposure. (Although CDC continues to recommend a 14-day quarantine, options are provided to shorten the quarantine period to after Day 7 or after Day 10.) Quarantine keeps someone who *might have been exposed* to the virus away from others. Follow CDC and state/local guidance on what to do when someone has a known exposure.

RETURN TO WORK AFTER WORKER EXPOSURE TO COVID-19

- ○ Employees should be advised about the returning to work procedures.
  - Avoid sharing objects and equipment with other employees, including phones, desks, or other workbenches, work tools and equipment, when possible.
  - Clean and disinfect frequently touched objects and surfaces, like shared tools, machines, vehicles and other equipment, handrails, ladders, doorknobs, and portable toilets. Dirty surfaces can be cleaned with soap and water before disinfection. To disinfect, use these EPA-registered disinfectants.
  - Follow CDC guidance for discontinuing self-isolation and returning to work after illness or discontinuing self-quarantine and monitoring after exposure, as appropriate for the workplace.
  - Utilize CDC guidance for resuming business toolkit for Coronavirus Disease 2019 (COVID-19).

CONSTRUCTION COVID-19 SAFETY CHECKLIST

FOR EMPLOYEES

Accessible version: https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/construction-worker-checklists.html

CDC offers the following checklist to share ways construction workers can protect themselves, staff, and communities, and slow the spread of COVID-19. This tool aligns with *What Construction Workers Need to Know about COVID-19*.

	MONITORING
○	Watch for symptoms of coronavirus 2019 (COVID-19) such as cough, shortness of breath or difficulty breathing, fever, chills, muscle pain, sore throat, or new loss of taste or smell.
○	Do not go to work if you have any of the above symptoms.
○	If you are sick with COVID-19 or think you have COVID-19, you should isolate (separate yourself from others in a separate room) and follow CDC-recommended steps to help prevent the spread of COVID-19. Isolation keeps someone who is infected with SARS-CoV-2, the virus that causes COVID-19, away from others, even in their home.
○	• If you have had close contact to a person with COVID-19 (within six feet for a cumulative total of 15 minutes or more over a 24-hour period), you should quarantine* for 14 days after last exposure. (Although CDC continues to recommend a 14-day quarantine, options are provided to shorten the quarantine period to after Day 7 or after Day 10 based on certain conditions, including test results.) Quarantine keeps someone who *might have been exposed* to the virus away from others: • Stay home for 14 days (see above) after last contact with the confirmed COVID-19 case. • Maintain social distance (at least six feet from other people). • Self-monitor for symptoms (check temperature twice a day, watch for fever (feeling feverish or a measured temperature of 100.4°F or higher), cough, or shortness of breath). • Avoid contact with people at increased risk for severe illness from COVID-19 such as older adults and people with medical conditions. • *Contact your human resource and/or worker health unit coordinator.*

Name of human resource and/or worker health unit point person(s):

E-mail:	Phone:

SOCIAL DISTANCING AND FACE MASKS

○ Utilize social distancing guidelines and face masks guidelines:

- Maintain at least six feet distance (about 2 arms' length) between workers, wherever possible.
- Maintain social distancing during breaks and when eating.
- Avoid enclosed areas like trailers and tight/confined spaces.
- Wear face masks in worksites, especially when social distancing is difficult to maintain.
- Wear a mask that covers your nose and mouth for maximum protection (Don't put the mask around your neck or up on your forehead).
- Don't touch the outside of the mask when wearing it, and, if you do, wash your hands or use hand sanitizer with at least 60% alcohol to disinfect.
- Be careful not to touch your eyes, nose, and mouth when removing your mask and wash hands immediately after removing unless hands have been recently washed.
- ***Face masks are not replacements for respiratory protection when respirators are required.***

MENTAL HEALTH

○ Recognize factors that can add work- or home-related stress. Common factors that can add to stress during a pandemic:

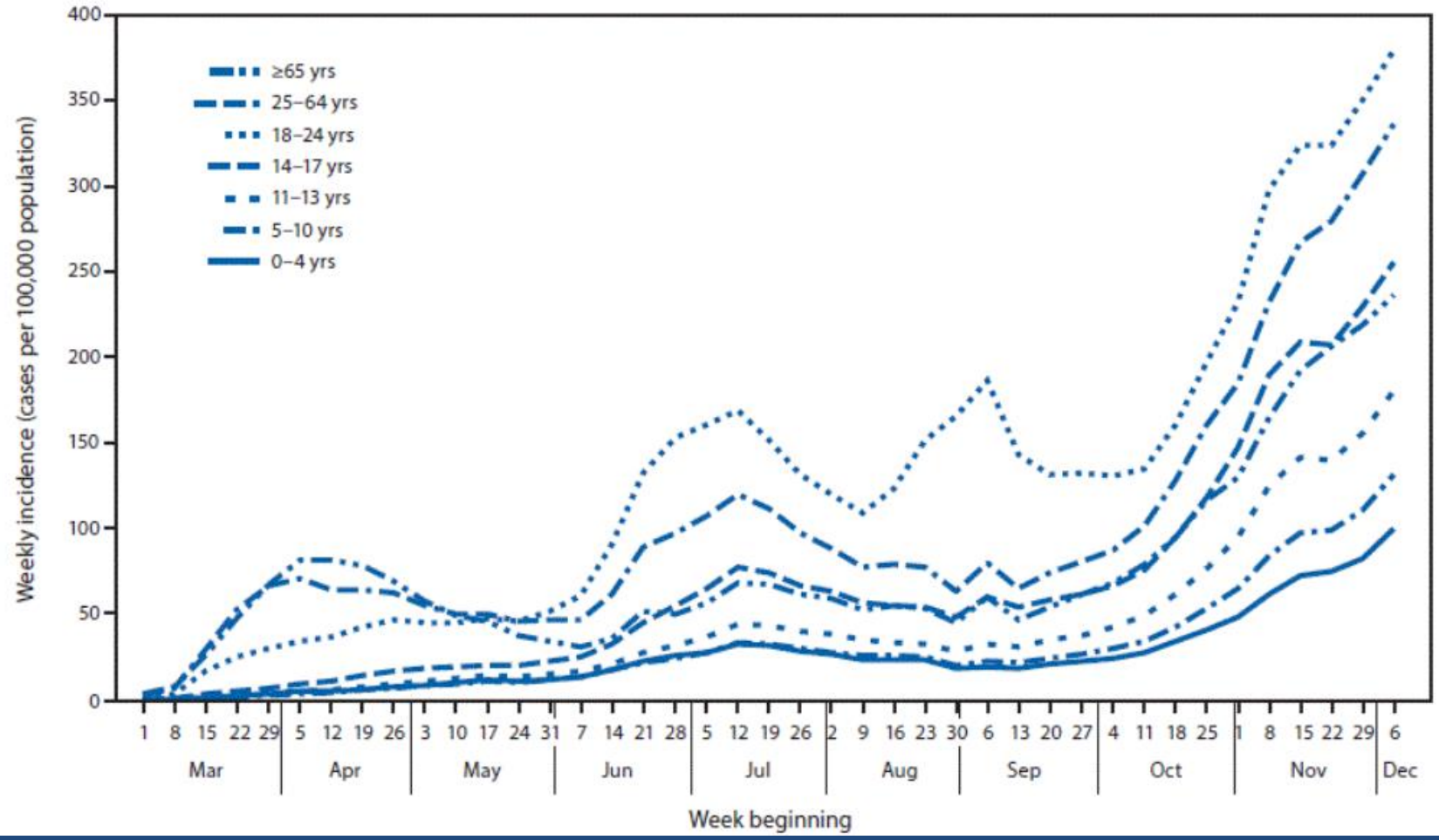
- Concern about the risk of being exposed to the virus at work.
- Lack of access to the tools and equipment needed to perform your job.
- Conflict at home
- Failure to take time to relax
- Feelings that you are not contributing enough to work or guilt about not being on the frontline.
- Uncertainty about the future of your workplace and/or employment.
- Adapting to a different workspace and/or work schedule.

Some ways to address stress and build resilience include:

- Keep a regular sleep schedule.
- Take breaks from work to stretch, exercise, or check in with supportive colleagues, coworkers, family, and friends.
- Spend time outdoors, either being physically active or relaxing.
- Practice mindfulness techniques.
- Know the facts about COVID-19. Be informed about how to protect yourself and others. Understanding the risk and sharing accurate information with people you care about can reduce stress and help you make a connection with others.
- Connect with others. Talk with people you trust about your concerns, how you are feeling, or how the COVID-19 pandemic is affecting you. Also considering using employee assistance programs or other resources that may be available to you.

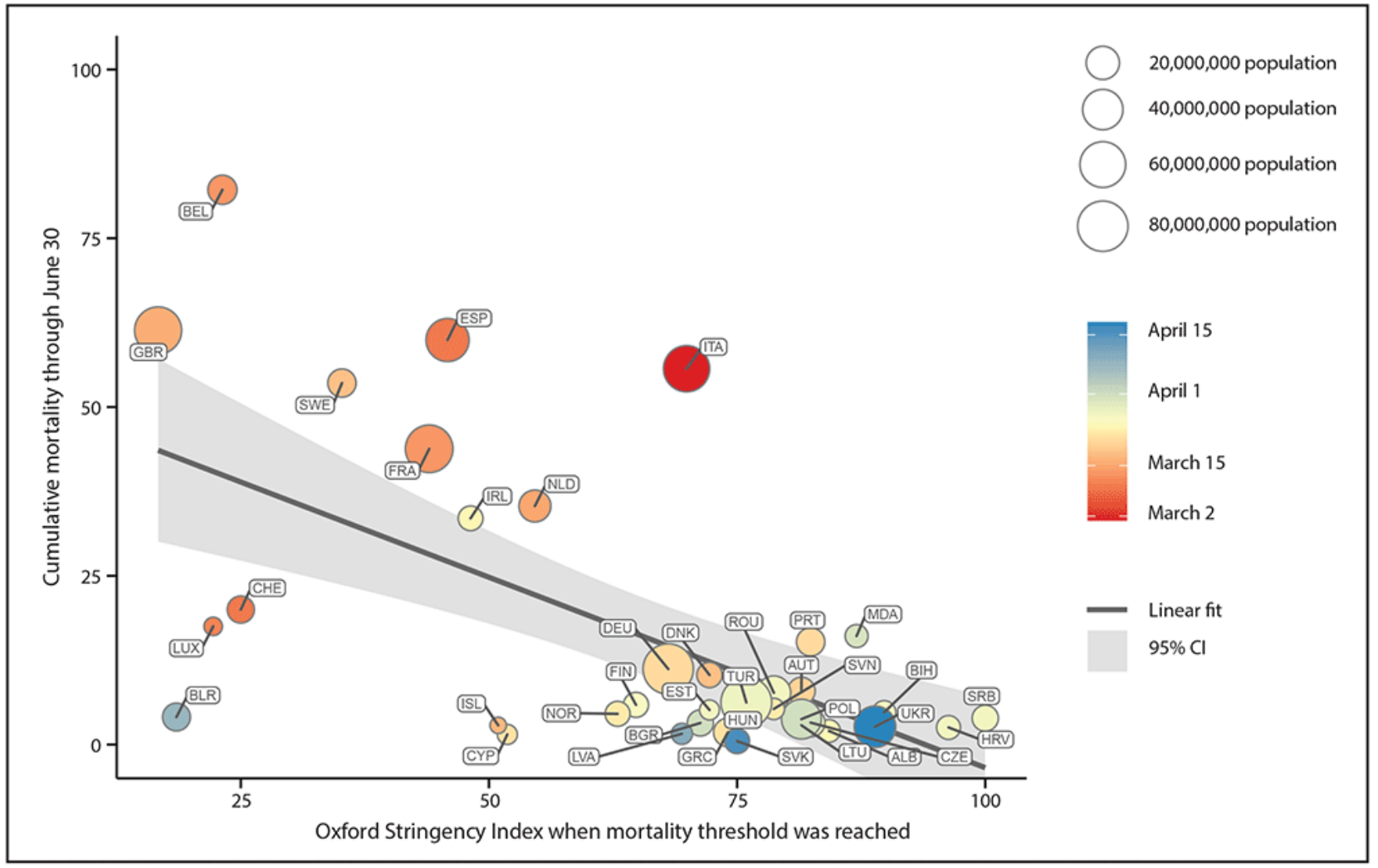
COVID-19 Trends Among Persons Aged 0–24 Years — US, March 1–Dec 12, 2020

FIGURE 1. COVID-19 weekly incidence,*,† by age group — United States, March 1–December 12, 2020§



Mitigation Policies and COVID-19–Associated Mortality – 37 European Countries, January 23–June 30, 2020

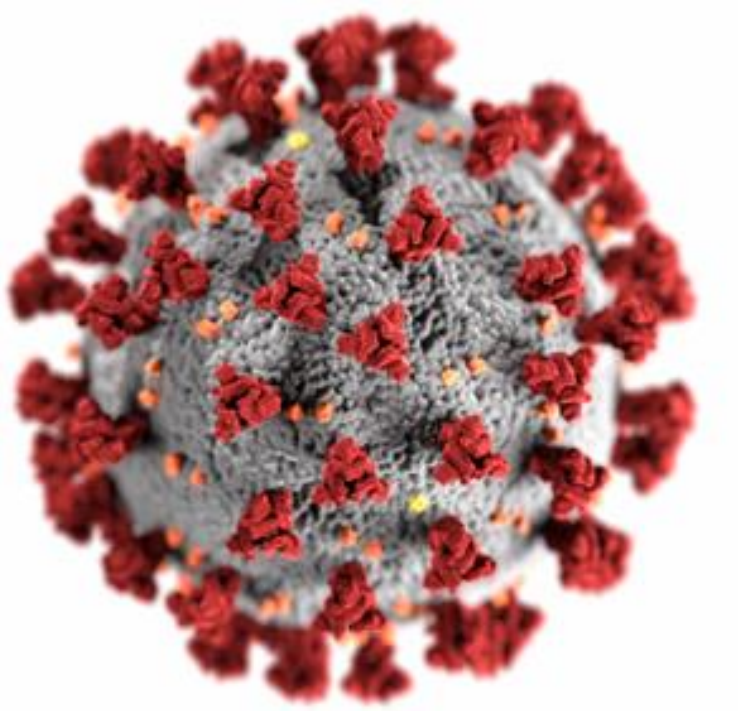
FIGURE. Early policy stringency* and cumulative mortality† from COVID-19 — 37 European countries, January 23–June 30, 2020



Trends in County-Level COVID-19 Incidence in Counties With & Without a Mask Mandate — Kansas, June 1–Aug 23, 2020

For More Information

- CPWR COVID-19 Clearinghouse _http://covid.elcosh.org/
- CDC COVID-19 Construction: https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/construction-workers.html
- CDC Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 website: www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html
- CDC Prepare your Small Business and Workers for the Effects of COVID-19 website: www.cdc.gov/coronavirus/2019-ncov/community/guidance-small-business.html
- NIOSH Directory of Construction Resources https://www.cdc.gov/niosh/construction/default.html
- OSHA COVID-19 website: www.osha.gov/SLTC/covid-19/controlprevention.html
- CDCINFO: 1-800-CDC-INFO (1-800-232-4636) | TTY: 1-888-232-6348 | website: www.cdc.gov/info



Ventilation for COVID-19 in Construction

Jessica Bunting
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CPWR
January 28, 2021

Working with NIOSH's NORA COVID-19 Work Group

- Survey on ventilation challenges & solutions
- Ventilation guidelines for construction

Ventilation Survey

- December 11-18, 2020
- 105 respondents
  - **56%** construction safety & health director/manager
  - **30%** construction contractor/employer
  - **10%** construction safety & health consultant
  - **3%** project owner

Ventilation Survey Results

- **75%** using guidance
  - 47% OSHA
  - 30% NIOSH/CDC
  - 25% Other
- **25%** using temporary structures
- **56%** doing enclosed work

Ventilation Survey Results

Strategies Most & Least Likely to Be Used

Most:

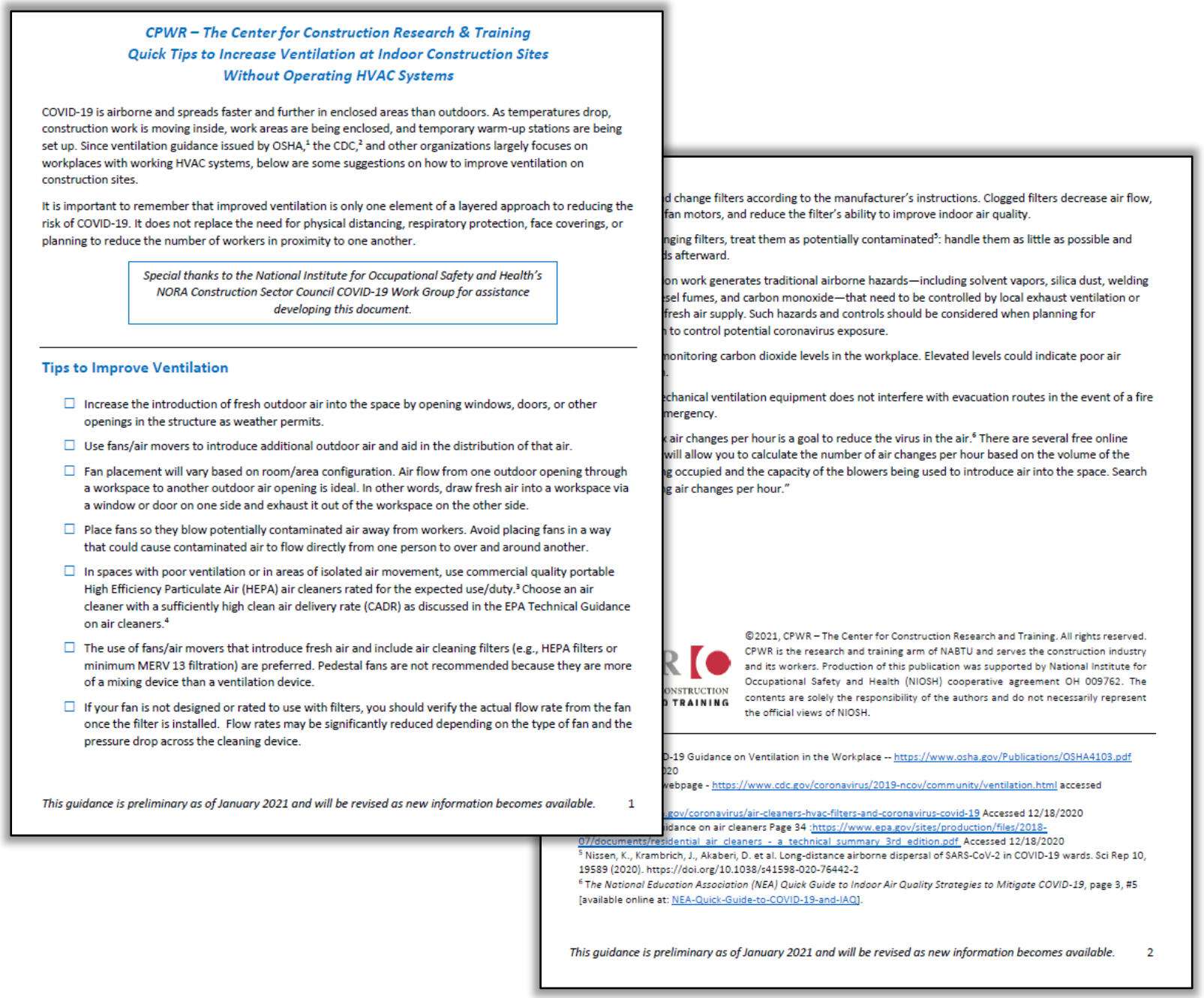
- opening windows or other sources of fresh air
- local exhaust ventilation
- making sure unit ventilators are clean
- using fans and making sure they are blowing away from workers

Least:

- air cleaning technologies such as Ultraviolet Germicidal Irradiation (UVGI),
- portable room air cleaners,
- providing maximum ventilation rates before and after shifts,
- taking steps to maintain humidity of 40%-60% in the work area.

Preliminary Guidance Document

www.cpwr.com/covid-19-resources



CPWR – The Center for Construction Research & Training
Quick Tips to Increase Ventilation at Indoor Construction Sites Without Operating HVAC Systems

COVID-19 is airborne and spreads faster and further in enclosed areas than outdoors. As temperatures drop, construction work is moving inside, work areas are being enclosed, and temporary warm-up stations are being set up. Since ventilation guidance issued by OSHA,[1] the CDC,[2] and other organizations largely focuses on workplaces with working HVAC systems, below are some suggestions on how to improve ventilation on construction sites.

It is important to remember that improved ventilation is only one element of a layered approach to reducing the risk of COVID-19. It does not replace the need for physical distancing, respiratory protection, face coverings, or planning to reduce the number of workers in proximity to one another.

Special thanks to the National Institute for Occupational Safety and Health's NORA Construction Sector Council COVID-19 Work Group for assistance developing this document.

Tips to Improve Ventilation

- ☐ Increase the introduction of fresh outdoor air into the space by opening windows, doors, or other openings in the structure as weather permits.
- ☐ Use fans/air movers to introduce additional outdoor air and aid in the distribution of that air.
- ☐ Fan placement will vary based on room/area configuration. Air flow from one outdoor opening through a workspace to another outdoor air opening is ideal. In other words, draw fresh air into a workspace via a window or door on one side and exhaust it out of the workspace on the other side.
- ☐ Place fans so they blow potentially contaminated air away from workers. Avoid placing fans in a way that could cause contaminated air to flow directly from one person to over and around another.
- ☐ In spaces with poor ventilation or in areas of isolated air movement, use commercial quality portable High Efficiency Particulate Air (HEPA) air cleaners rated for the expected use/duty.[3] Choose an air cleaner with a sufficiently high clean air delivery rate (CADR) as discussed in the EPA Technical Guidance on air cleaners.[4]
- ☐ The use of fans/air movers that introduce fresh air and include air cleaning filters (e.g., HEPA filters or minimum MERV 13 filtration) are preferred. Pedestal fans are not recommended because they are more of a mixing device than a ventilation device.
- ☐ If your fan is not designed or rated to use with filters, you should verify the actual flow rate from the fan once the filter is installed. Flow rates may be significantly reduced depending on the type of fan and the pressure drop across the cleaning device.

d change filters according to the manufacturer's instructions. Clogged filters decrease air flow, fan motors, and reduce the filter's ability to improve indoor air quality.

nging filters, treat them as potentially contaminated[5]: handle them as little as possible and ds afterward.

on work generates traditional airborne hazards—including solvent vapors, silica dust, welding sel fumes, and carbon monoxide—that need to be controlled by local exhaust ventilation or fresh air supply. Such hazards and controls should be considered when planning for to control potential coronavirus exposure.

nonitoring carbon dioxide levels in the workplace. Elevated levels could indicate poor air

chanical ventilation equipment does not interfere with evacuation routes in the event of a fire mergency.

air changes per hour is a goal to reduce the virus in the air.[6] There are several free online will allow you to calculate the number of air changes per hour based on the volume of the g occupied and the capacity of the blowers being used to introduce air into the space. Search g air changes per hour."

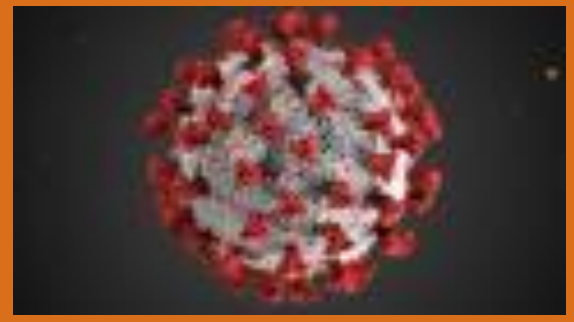
D-19 Guidance on Ventilation in the Workplace -- https://www.osha.gov/Publications/OSHA4103.pdf
020
webpage - https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html accessed

.gov/coronavirus/air-cleaners-hvac-filters-and-coronavirus-covid-19 Accessed 12/18/2020
idance on air cleaners Page 34 :https://www.epa.gov/sites/production/files/2018-07/documents/residential_air_cleaners_-_a_technical_summary_3rd_edition.pdf Accessed 12/18/2020

[5] Nissen, K., Krambrich, J., Akaberi, D. et al. Long-distance airborne dispersal of SARS-CoV-2 in COVID-19 wards. Sci Rep 10, 19589 (2020). https://doi.org/10.1038/s41598-020-76442-2

[6] *The National Education Association (NEA) Quick Guide to Indoor Air Quality Strategies to Mitigate COVID-19*, page 3, #5 [available online at: NEA-Quick-Guide-to-COVID-19-and-IAQ].

Vaccination:
A Conversation About Next Steps in COVID-19 Prevention



Jeffrey L. Levin, MD, MSPH, DrPH in collaboration with CPWR
January 28, 2021
COVID-19 IPA, CDC Assignment Agreement 20IPA2014106

UTHealth
The University of Texas
Health Science Center at Tyler

Presentation Outline

- COVID-19 mRNA vaccine technology
- Vaccine safety
- Benefits of vaccination
- Facts about receiving the COVID-19 vaccine
- Common side effects and tips
- Continuing public health measures
- What is our group doing in Tyler?
- Questions/Conversation

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What are mRNA Vaccines?

- Carry genetic material that teaches our cells how to make a harmless piece of “spike protein,” which is found on the surface of the SARS-CoV-2 virus
- Genetic material from the vaccine is destroyed by our cells once copies of the spike protein are made and it is no longer needed
- Cells display this piece of spike protein on their surface, and an immune response is triggered inside our bodies. This produces antibodies to protect us from getting infected if the SARS-CoV-2 virus enters our bodies
- Do not affect our DNA; mRNA does not enter the cell nucleus
- Cannot give someone COVID-19
- Use technology that is new but not unknown

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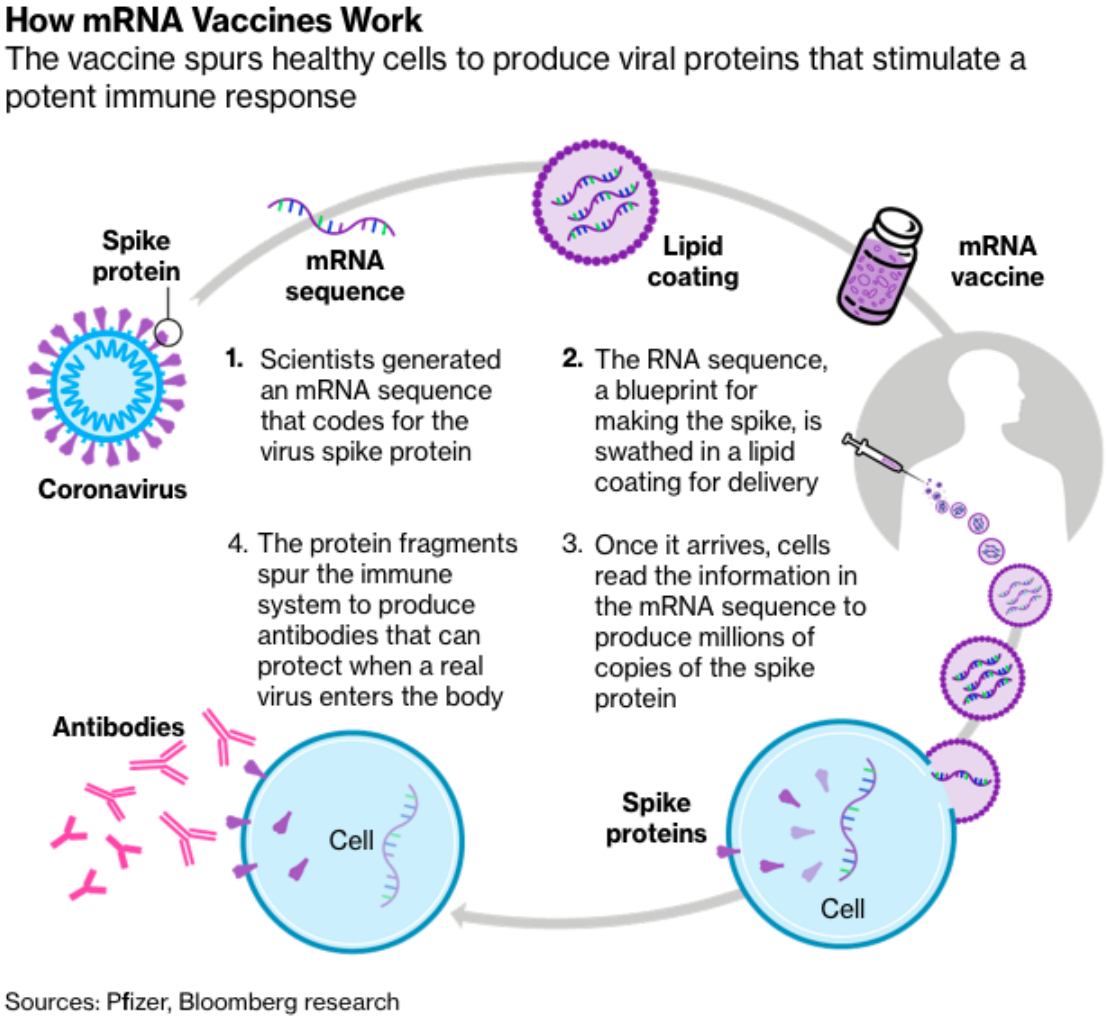

From: https://www.bloomberg.com/news/articles/2020-11-16/moderna-pfizer-vaccines-look-strong-here-s-how-they-stack-up

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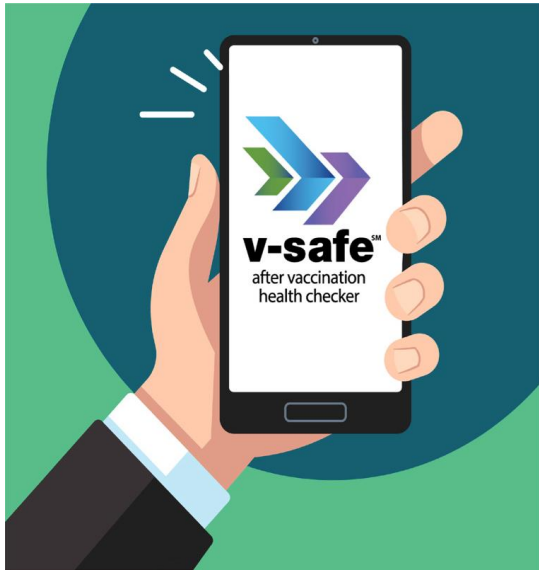
Pathway to Vaccine Safety

- Multiple phases of clinical trials
- FDA issues EUA if vaccine is safe, effective, and benefits outweigh the risks
- ACIP reviews data and makes vaccination recommendations
- COVID-19 vaccines are held to the same safety standards as all other vaccines
- Ongoing vaccine safety monitoring systems like VAERS and v-safe
- The safety of COVID-19 vaccines is a top priority



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Benefits of Getting Vaccinated

- Will help keep you from getting COVID-19 (90+% efficacy for Pfizer and Moderna)
- Depending on the specific vaccine you get, a second shot (of the same vaccine) 3-4 weeks after your first shot is needed to get the most protection the vaccine has to offer
- COVID-19 vaccines that require 2 shots may not protect you until a week or two after your second shot
- May help keep you from getting seriously ill even if you do get COVID-19
- A safer way than natural immunity to help build protection
- An important tool to help stop the pandemic through development of robust herd immunity

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Receiving the COVID-19 Vaccine

- Can be administered to individuals with immunocompromising medical conditions/treatments (effectiveness may be blunted)
- Contraindication – Severe or Immediate Allergic Reaction
  - Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components
  - Immediate allergic reaction (up to 4 hours) of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components (including polyethylene glycol [PEG])
  - Immediate allergic reaction of any severity to polysorbate (due to potential cross-reactive hypersensitivity with the vaccine ingredient PEG)
- Unknown at this time (discuss with your physician)
  - Pregnant
  - Lactating individuals
- Observation – 15 minutes; persons with a history of anaphylaxis (a severe allergic reaction) due to any cause should be observed for 30 minutes
- Cost is not an obstacle - The federal government is providing the vaccine free of charge to people living in the United States. However, your vaccination provider may bill your insurance company, Medicaid, or Medicare for an administration fee.

Photo credit: National Foundation for Infectious Diseases

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Common side effects

- A normal sign that your body is building protection:
- Pain and swelling at the injection site
- Fever
- Chills
- Tiredness
- Headache

Tips to remember

- Over-the-counter medicine such as ibuprofen or acetaminophen
- Apply clean, cool, wet washcloth
- Call doctor if redness or tenderness increases or symptoms do not disappear after a few days
- Get second shot even if minor side effects from the first (other than anaphylaxis)

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Continuing Public Health Measures

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THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

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Information and Image Sources

- Centers for Disease Control and Prevention. COVID-19 Vaccines. Last update 12-22-2020. Website last accessed 01-05-2021 at https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html .

- CDC COVID -19 Response Vaccine Task Force. Vaccinate with Confidence: Building Vaccine Confidence in Health Systems and Clinics - *Tips for Immunization Coordinators*. December 2020. Presentation last accessed 01-05-2021 at https://www.cdc.gov/vaccines/covid-19/downloads/VaccinateWConfidence-Immunization-Coordinators_508.pdf .

- COVID-19 Vaccine Communication Toolkit for Essential Workers: Getting Started. Website last accessed 01-28-2021 at https://www.cdc.gov/coronavirus/2019-ncov/vaccines/toolkits/essential-workers.html .

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What is our group doing in Tyler?

- Participants: J. Levin, V. Casanova, K. Moore, D. Nessim, T. Ochran
- Develop a list of frequently asked questions likely to surround COVID-19 vaccines.*
- Use a consensus list of questions to prioritize and develop response messages.
- Collaborate with CPWR to develop these response messages, e.g., FAQs, infographics, cartoons/animation, videoclips. Consider availability in Spanish.

*Input drawn from NORA AFF Sector Council, CPWR R2P, NIOSH Construction, NORA Construction Sector Council and COVID-19 Workgroup, NIOSH vaccine survey workgroup, CDC COVID-19 Vaccination Communication Toolkit, https://www.cdc.gov/vaccines/covid-19/health-systems-communication-toolkit.html).

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Questions/Conversation

TIOSH

https://www.uthct.edu/texas-institute-of-occupational-safety-health

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