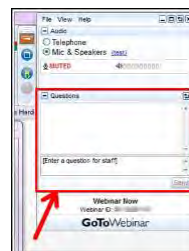


Have Questions?



Type them into questions box!

**“Why am I muted?”**

Don't worry. Everyone is muted except the presenter and host. Thank you and enjoy the show.

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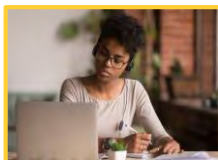


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We have a collection of career resources to support you during this global pandemic:



Professional Education



Virtual Career Consultants



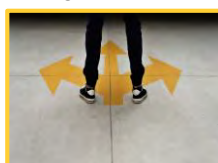
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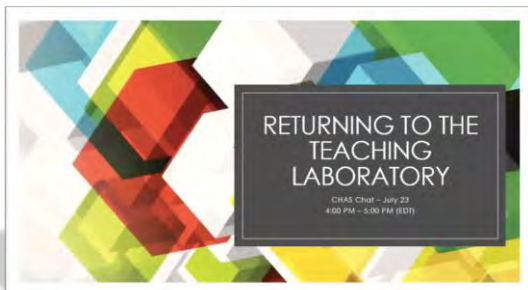
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# COMMUNITY PROTECTION STRATEGIES



THIS ACS WEBINAR WILL BEGIN SHORTLY...

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## Community Protection Strategies in the COVID Era



**Robin Izzo**

Executive Director of Environmental Health and Safety, Princeton University and Chair, ACS Division of Chemical Health and Safety



**Frankie Wood-Black**

Principal,  
Sophic Pursuits



**Ralph Stuart**

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## Why is COVID such a Big Deal?



**37,000** US car deaths per year



**39,000** US gun deaths per year

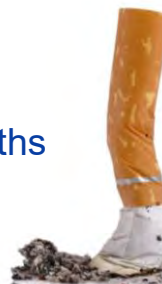
Second hand smoking:  
**41,000** US deaths per year

Primary smoking:  
**480,000** US deaths per year



**Covid-19 Deaths: 150,000 in 5 months**

COVID-19 is on track to be the **3<sup>rd</sup> Leading Cause of Death** in the US – behind only cancer and heart disease.



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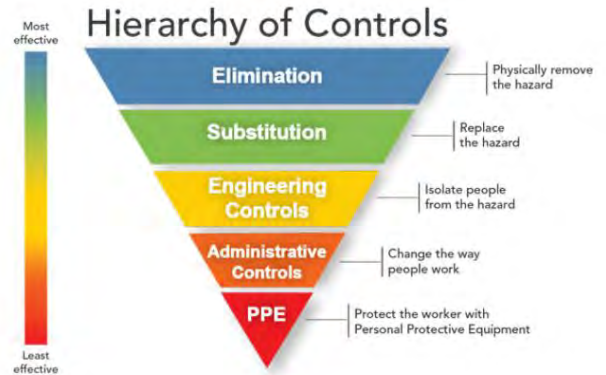


# Community Protection in 2020

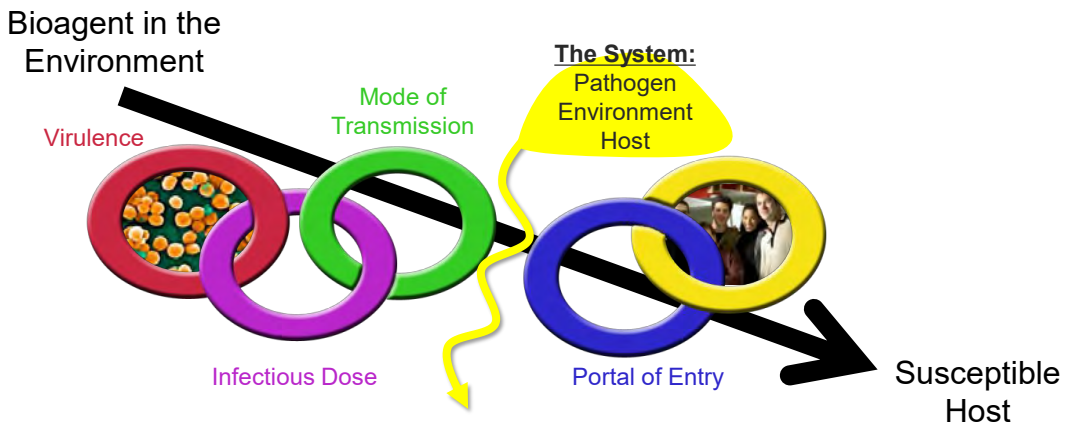
This webinar will discuss how the hierarchy of controls can be applied to the campus community setting in the COVID era.

- **We'll be discussing:**
  - The advantages and challenges of using personal protective equipment for community protection
  - Best practices in physical distancing and peer coaching in the teaching and research settings
  - Ventilation considerations in managing COVID concerns
- **The Bottom Line:**

Due to the lack of scientific data about how the coronavirus is transmitted between people, we need to use **all practical methods** to protect ourselves and others.



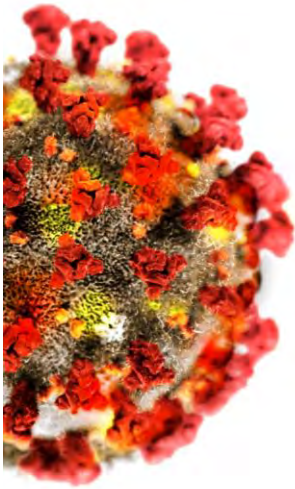
## The Biosafety Model: The Chain of Infection *(rather than the dose makes the poison)*



The coronavirus has multiple modes of transmission, so different strategies are needed to reduce the does that is transmitted between people



## COVID-19 Challenges



- The coronavirus can be **spread through the air or by touching surfaces** that were contaminated between 4 hours and 3 days ago
- **Asymptomatic** individuals can spread the disease
- This means that “**superspreader**” events and/or people drive the spread of the virus
- We don't know what the **long-term impacts** of the disease will be

### Social Challenges

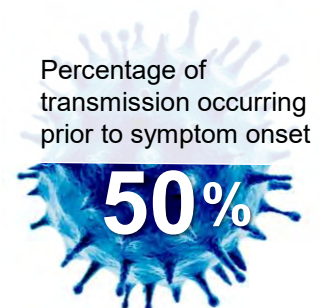
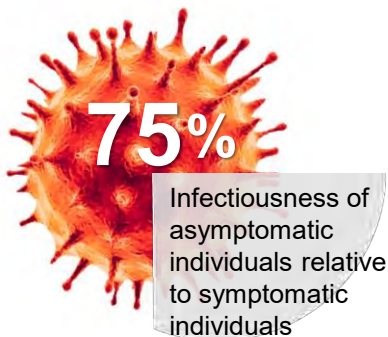
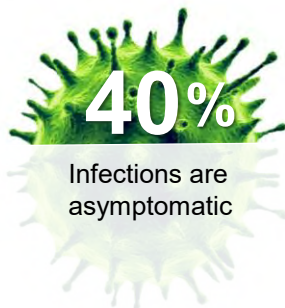
- Lack of personal history with infectious disease
- Conflicting reports in Social Media
- Real Time Science confuses the policy process



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## More Challenges

Current Best Estimate CDC Planning Scenario based on data received by June 29, 2020 indicates:



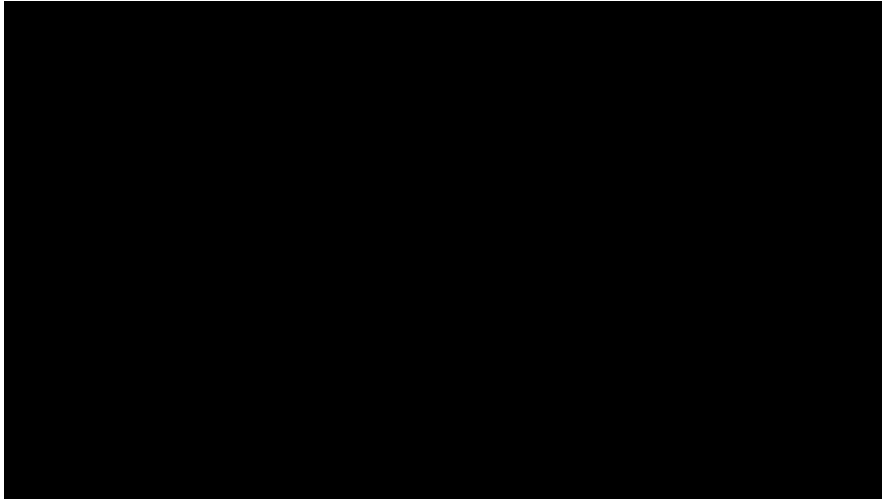
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/planning-scenarios.html>



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# How Do Virus Particles Move in the Air?

*We're not sure, but we have some clues.*



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## So, What do we do?



### To protect yourself

- Know how it spreads
- Wash your hands often
- Avoid close contact
- Cover your mouth and nose with a mask when around others
- Cover coughs and sneezes
- Clean and disinfect
- Monitor your health daily



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<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

## To Mask or Not To Mask?

Homemade, cloth, surgical, etc. masks – are **not personal protective equipment** in the same way that other masks and shields are:

They aren't intended to protect you from others, but to

### Protect OTHERS from YOU

They are likely to reduce the dose you get from others

The New York Times | <https://nyti.ms/3f4vPIK>

### Masks May Reduce Viral Dose, Some Experts Say

People wearing face coverings will take in fewer coronavirus particles, evidence suggests, making disease less severe.



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## Community Protective Equipment takes Practice *(The Don'ts...)*

DON'T: Wear the mask below your nose.



DON'T: Wear your mask so it covers just the tip of your nose.



DON'T: Push your mask under your chin to rest on your neck.



DON'T: Leave your chin exposed.



DON'T: Wear your mask loosely with gaps on the sides.



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# Wearing Community Protective Equipment Well Protects Others

DO: Wear your mask so it comes all the way up, close to the bridge of your nose, and all the way down under your chin. Do your best to tighten the loops or ties so it's snug around your face, without gaps.



## Ergonomic Challenges of wearing masks:

- Heat accumulates under your mask; different masks will contain different amounts of heat (paper vs. cloth)
- You're breathing used
- Eyewear often fogs up when you're wearing a mask
- Communication cues disappear

Plan to take a break from the mask on a schedule basis

Wash your cloth face coverings in a **washing machine** to keep them fresh and working well



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## Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



**How many people do you observe wearing masks in a way that protects others?**

- More than three-fourths
- Less than three-fourths, but greater than half
- Less than half, but greater than a quarter
- Less than a quarter
- Other (tell us more in the chat)



*\* If your answer differs greatly from the choices above tell us in the chat!*

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## Physical Distancing Tools



- Staggered work **schedules**
- **Specific work areas** to specific people – remember, 6 feet may not be enough for more than 15 minutes
- Develop **disinfection** teams and procedures – include type of disinfectant and kill times as part of the procedures
- **Frequent check-ins** with co-workers



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## Controlling the Spread

### *Disinfecting Your Hands and Shared Work Surfaces*

- Practice careful and frequent hand hygiene
- Wipe down common work surfaces with appropriate disinfectant before your work with them and at the end of the day
- Consult with others in your work area to be sure you know what equipment and disinfectants other people are using



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# The Princeton Plan and Current Research Situation

- Princeton has decided not to hold classes on campus this semester, but research laboratories are active
- Princeton EHS maintains ongoing oversight of lab COVID practices and is observing good compliance
- See <https://ehs.princeton.edu/health-safety-the-campus-community/covid-19-information-and-resources> for specific details

## COVID-19 Information and Resources



The EHS website has available a number of resources for the campus community as we work together to manage the COVID-19 pandemic.

**Resources**

- Poster: Campus Face Covering Notice
- Masks: Understanding the Various Types
- Wash Hands
- Facility Modification
- Guide



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## The Role of the Leader *Rethink Your Goals and Practices*



### Managing in the New Normal

Masks offer limited protection, and work better when combined with hand washing and social distancing. "It's not that one excludes the other," said Dr. Siddhartha Mukherjee, assistant professor of medicine at Columbia University. "They compound the effects of the other."

You will need to rethink your expectations and work practices and communicate them



30

## Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



### What disinfectants are you using on your lab equipment?

- Alcohol based solutions
- Bleach based solutions
- Quaternary ammonium compounds
- A mixture of these based on manufacturer recommendations
- Other (tell us more in the chat)



*\* If your answer differs greatly from the choices above tell us in the chat!*

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## The Role of Ventilation in Controlling Transmission



1. Outside of BSL-3 and BSL-4 labs, ventilation systems are **not designed to control airborne biohazards**. Other ventilation systems control 1) temperature, 2) odors and 3) chemical concentrations. They are not easy to re-purpose for particle control. See the **ASHRAE FAQ** page for some details of this challenge. <https://www.ashrae.org/technical-resources/frequently-asked-questions-faq>
2. Ventilation effectiveness is **dependent on direction of air flow**, which will vary with air speed. Sometimes, more air change are not better.
3. Air cleaning technologies such as **ionization, UV systems and HEPA filters rely on a known source** to control the spread of particles.



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## 3 Things to Know about COVID Safety

1. **A safe community** requires specialized staff and plans
2. **We're all in this together:** you are expected to protect yourself and protect others
3. **There is no final exam in COVID protection** - ongoing situational awareness is key to your and others' health and safety



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### Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



#### How comfortable are you returning to campus this fall?

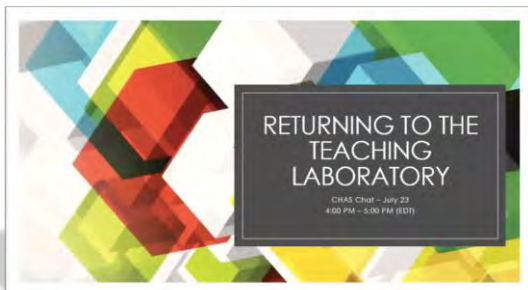
- **Very** – I'm excited to get back to work
- **Pretty** – I'm ready to work, but nervous about the pandemic
- **Somewhat** – I'm willing to give it a try, but expect things to change throughout the fall
- **I'm not** – I feel that the situation is not under control enough to start work again
- **Other** (tell us more in the chat)



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