

# COVID-19 and Mitigation Strategies: *Where we were, where we are, and where we're headed*

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# Early days of COVID-19

Cases of severe respiratory disease emerging caused by a previously unknown Coronavirus (SARS-CoV-2)

At that time, we had a lot more questions than answers...

How is the virus spreading? How quickly?

Are some people more at risk for becoming infected or having severe outcomes?

What are the common symptoms? Asymptomatic spread?

What mitigation strategies will be most effective?

# Assumptions

If SARS-CoV-2 was similar to influenza and other respiratory viruses:

Spread by aerosols, droplets, and surfaces

Seasonal transmission

Older people with underlying conditions most at risk

Symptoms common with infection

Stay away from others if you feel sick

Recover to full health after infection

# Strategies for outbreak control

Based on those assumptions, early recommendations included:

Temperature and symptom screening

Test symptomatic people to confirm COVID-19

Masks (filtering or otherwise) not much impact

Disinfection of surfaces is important

Poorly ventilated spaces pose significant increased risk

Hand washing important

# Then to Now – What we have learned

Some of the assumptions held up, but many did not...

## Symptoms and Temperature Screening

- Approx. 40-50% of infected are completely asymptomatic
- In college-aged students, that number may be 80%
- Median positive test is Day 5, symptoms may follow

## Testing Strategies

- As community spread increases, asymptomatic testing is critical
- Not all 'tests' are equal (PCR – Antigen – Antibody)

# Then to Now – What we have learned

## Spread of Infectious Particles

- Main route of transmission is direct exchange of larger respiratory droplets between individuals in close contact (6 ft.)
- Aerosols not an efficient mechanism of spread (though possible)
- Contaminated surfaces are very inefficient as a source
- Hand washing is very effective at killing the virus
- Wearing a cloth or other mask that covers the nose and mouth is the single most important mitigation strategy

# Then to Now – What we have learned

## Cleaning and Disinfection

- Virus can remain viable on surfaces for days... under controlled laboratory conditions
- The virus tends to die off quickly when exposed to sunlight, humidity, other outdoor elements
- Virus is easy to kill and remove from surfaces with routine cleaning
- Spot disinfection only for high touch areas (doorknobs, bathrooms, etc.)
- Disinfectants are not benign products, no fogging, misting, spraying

# Then to Now – What we have learned

## Ventilation

- Maximize outdoor air intake (with thermal comfort)
- Building flushing initially advised but probably not critical
- Reducing person-density can be a cheap and effective strategy
- Stand-alone HEPA filter units unlikely to impact infection risk (may be useful for isolation rooms or classrooms with no ventilation)
- UV-C technologies unlikely to impact infection risk
- Importance of ventilation dwarfed by importance of mask wearing

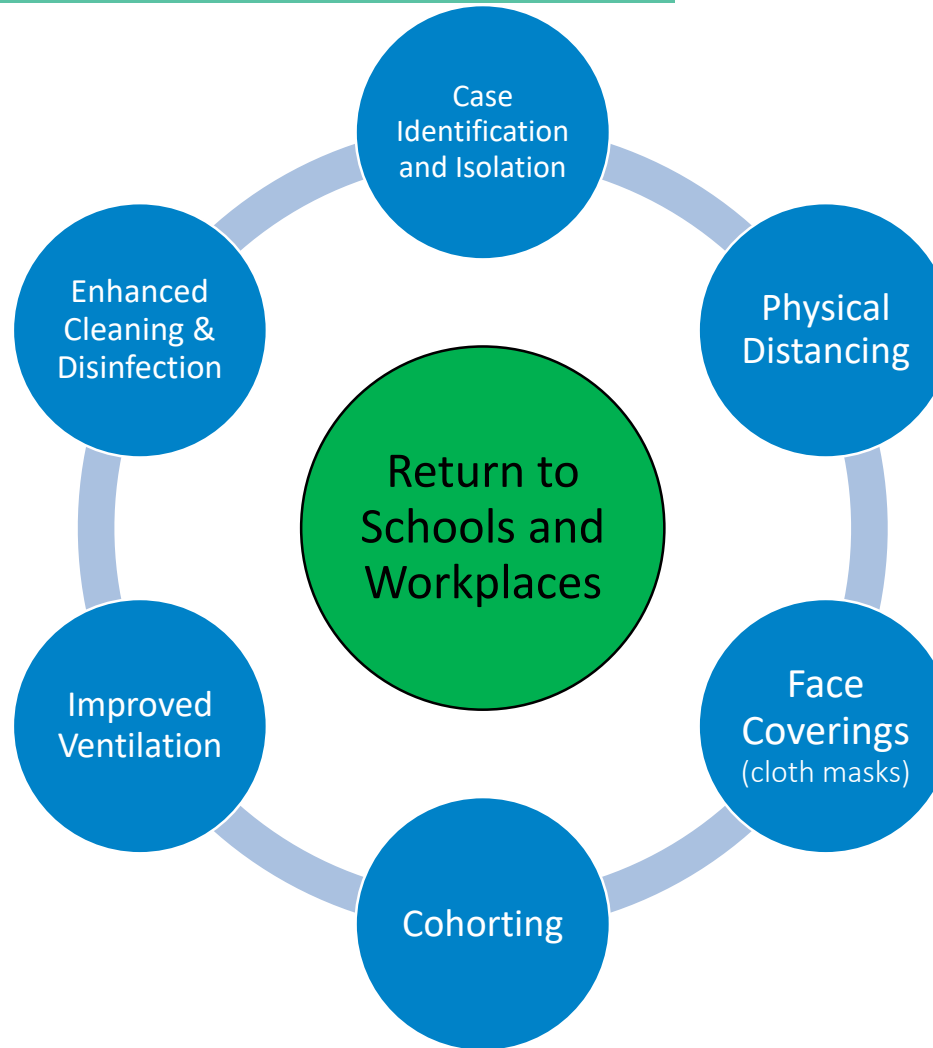


# Mitigation Strategies

Connecticut  
Department of  
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Presentation

COVID-19 and  
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Strategies

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# Where we are headed

Next month or so

Expect to see surge on top of surge (holidays)

March-style shutdowns possible

Hospital capacity possibly exceeded

Jan. 2021 - Spring

Vaccines rolling out (HCW, elderly)

Less activity happening in general post-holidays

Warming weather = more outdoor activity

# Where we are headed

## Spring – Summer 2021

More vaccines available

More outdoor activities

Hope for similar dip as Summer 2020

## Fall 2021

Maybe we put this behind us (somewhat)

Depends on a lot of variables

What is the “new normal” post-COVID?

# Questions?

