# Investigation of Covid 19 Transmission in the Workplace

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## What is Covid 19?

- COVID-19, short for Coronavirus Disease 2019, is a respiratory illness caused by a novel coronavirus first detected in China in late 2019. COVID-19 can be fatal for anyone, though the greatest percentage of individuals who die are over the age of 65 and living with a chronic disease.
- Information on COVID-19 is rapidly changing, sometimes daily. Refer to reliable sources such as the CDC, OSHA, NIOSH, State Health Departments and peer reviewed science publications. Refer to www.cdc.gov/COVID19

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## Alpha v. Delta

- Alpha –original variant.
- Delta is highly transmissible. You can contract it within 5-10 seconds of exposure and you can pass it on 6 times faster than the Alpha variant. Researchers compare it's transmissibility rate to the chickenpox virus. 90% of cases today are the Delta Variant. It is associated with more severe disease and people with this infection have 2x the risk of hospital admission. However, there is a low risk of hospitalization in vaccinated individuals who contract either variant.

- Twohig, Nyberg, Saidi, et all, Hospital Admission and Emergency Care Attendance Risk for SARS-Co-2 Delta (B.1.617)varientas of concern: A Cohort Study *The Lancet Infectious Diseases* Published Aug. 27, 2021.

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## What are typical symptoms?

- Fever, cough, and shortness of breath;
- Nausea, vomiting, loss of sense of smell and/or taste, fatigue, sore throat, and diarrhea;
- Conjunctivitis;
- Nasal congestion does not appear to be a symptom; and
- Some people are symptom free.

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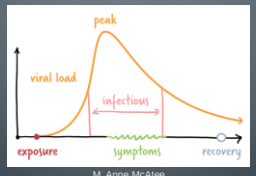
## How long does it take for symptoms to begin after exposure?

- Some people never develop symptoms, however still shed the virus.
- Symptoms usually begin within 3-7 days of exposure, but can be anywhere between 2-14 days. The Delta variant symptoms usually begin in 3 days after exposure.
- People are thought to be most contagious to others a day or two before the onset of symptoms.
- "We know that pre-symptomatic transmission drives a significant amount of spread of this virus. " Dr. Rasmussen, virologist at Columbia University in New York.

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## How is the virus spread?

- Mainly from person to person, primarily through respiratory droplets produced when an infected person coughs, sneezes, or talks. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. Spread is more likely when people are in close contact with one another (within about 6 feet) when not wearing a mask.

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## Aerosols

- In addition to the heavy droplets sneezed or coughed out by infected people, research has shown the coronavirus may drift in the air indoors, held aloft in tiny particles called aerosols. Much like cigarette smoke.

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## Can it be spread on surfaces?

- The Centers for Disease Control (CDC) updated its guidance to emphasize the coronavirus does not spread easily on surfaces, focusing more on human-to-human transmission.
- It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes," the CDC website says now. "This is not thought to be the main way the virus spreads, but we are still learning more about this virus."

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## Risk of Transmission

**Exposure to Virus x Time**
**= Successful Infection****

**In general, the more closely you interact with others and the longer that interaction, the higher the risk of Covid-19 spread**

**The CDC defines "close contact" as anyone who was within 6 feet of an infected person for at least 15 minutes over the course of 24 hours.**

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## Indoor v. Outdoor

Small indoor areas with decreased ventilation =

Increased risk of infection. ↑

Outdoor areas where respiratory droplets dissipate fast =

Decreased risk of infection. ↓

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## Where are people contracting the virus?

- Most frequently in the home.
- Social gatherings such as funerals, weddings, birthday parties.
- Enclosed areas with infected person and speaking. Face to face contact.
- Community spread.

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## **Examples

**Church choir with singing practice, size of volleyball court.**

Singing and yelling, to a greater degree, is worse than talking and aerosolizes respiratory droplets spread extraordinarily well.

Deep-breathing while singing or voice projection facilitated those respiratory droplets getting deep into the lungs.

Two and half hours of exposure ensured that people were exposed to enough virus over a long enough period of time for infection to take place.

Over a period of 4 days –
45 of the 60 choir members
developed symptoms, 2 died.

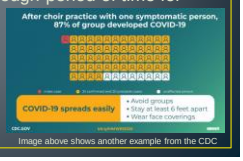


Image above shows another example from the CDC

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## Workplace

- Meat packing: In meat processing plants, densely packed workers wearing hearing protection must communicate loudly with one another in a cold-room virus-preserving environment.

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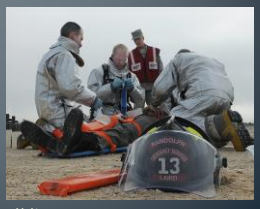
## Workplace exposure

- Health care workers, particularly first responders who may or may not know the patient is suffering from Covid, tend to have very close contact with the patient and may be performing chest compressions where air is expelled from the lungs.



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## What Prevents the Spread?
## 1. MASKS!!


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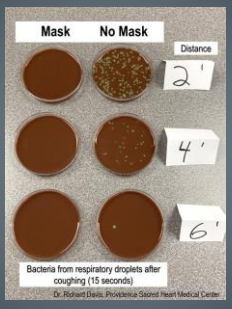
## 2. Distance

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## Testing: Not Always Accurate

***Molecular testing, PCR, Test Iowa**

- *How is it done?* Nasal swabs, throat swabs, and tests of saliva or other bodily fluids.
- *Where can you get this test?* At a hospital, in a medical office, in your car.
- *What does the test look for?* Molecular tests look for genetic material that comes only from the virus.
- *How long does it take to get results?* It depends on lab capacity. Results may be ready the same day, but usually take at least a day or two.
- *What about accuracy?* False negatives — that is, a test that says you don't have the virus when you actually do have the virus — may occur. The reported rate of false negatives is as low as 2% and as high as 37%. The reported rate of false positives — that is, a test that says you have the virus when you actually do not — is 5% or lower.
- A molecular test using a deep nasal swab is usually the best option, because it will have fewer false negative results than other diagnostic tests or samples from throat swabs or saliva.

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***Antigen Testing, Rapid Test**

- *How is it done?* A nasal or throat swab.
- *Where can you get these tests?* At a hospital or doctor's office, drive through or even at home testing is available.
- *What does the test look for?* This test identifies protein fragments (antigens) from the virus.
- *How long does it take to get results?* The technology involved is similar to a pregnancy test or a rapid strep test, with results available in minutes.
- *What about accuracy?* The reported rate of false negative results is as high as 30%, which is why antigen tests are not favored by the FDA as a single test for active infection. However, because antigen testing is quicker, less expensive, and requires less complex technology to perform than molecular testing, some experts recommend repeated antigen testing as a reasonable strategy. According to one test manufacturer, the false positive rate of antigen testing is near zero

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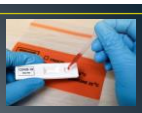
***Antibody test: Antibody tests (also called serologic testing)**



- *How is it done?* A sample of blood is taken.
- *Where can you get these tests?* At a doctor's office, blood testing lab, or hospital.
- *What does the test look for?* These blood tests identify antibodies that the body's immune system has produced in response to the infection. While a serologic test cannot tell you if you have an infection now, it can accurately identify past infection.
- *How long does it take to get results?* Results are usually available within a few days.
- *What about accuracy?* Having an antibody test too early can lead to false negative results. That's because it takes a week or two after infection for your immune system to produce antibodies. The reported rate of false negatives is 20%. However, the range of false negatives is from 0% to 30% depending on the study and when in the course of infection the test is performed.
- Research suggests antibody levels may wane over just a few months. And while a positive antibody test proves you've been exposed to the virus, it's not yet known whether such results indicate a lack of contagiousness or long-lasting, protective immunity.

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Image courtesy of WebMD

## Investigative Questions

- Investigating whether an employee with COVID-19 contracted it through their employment, we suggest you inquire into the following.
- ***Start with the date the Claimant first experienced symptoms and walk backwards through all activities and exposures for the prior 2 weeks, concentrating on the prior 3- 7 days.***
- Keep in mind it is critical to obtain exact dates when the activities or potential exposures have occurred. Symptoms usually begin by day 5 after exposure.

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## What are the symptoms?


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## Were they vaccinated?

- If so: what vaccine and when? Did they have a booster shot?

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## How did they become aware the were positive for Covid 19?

- What type of testing did you have and where?
- Have you been tested more than once?
- Did you receive notice from a person they exposed you?
- Did you receive notice you were exposed through contact tracing?
- Did you develop symptoms with no known exposure?

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Can they identify a person they have been in direct contact with during the course of their employment, who has been diagnosed with COVID-19? If so:

A. What date(s) were you exposed to the infected person?
B. What length of time did you spend with the infected person?
C. What are the dimensions of the space you were in, i.e. small conference room or warehouse? Inside or outside?
D. Did you shake hands or hug?
E. How close were you to the person; within 6 feet?

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F. Was the person coughing? Did they appear ill?
G. Did they share any materials with the person such as pens, computers, paper, etc.? In other words, did they have contact with the same surfaces?
H. Were either of you wearing personal protective equipment (PPE)? If so, what?
I. Did you share a meal with the person?
J. Were other people in the same group or setting? Did they contract Covid-19?

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## Potential for Exposure Outside the Workplace

- Are you in contact with anyone else who has tested positive for Covid 19 or who shows signs of Covid 19?
- Who lives with you? Ages? What do they do outside the home i.e.: school, college, work, travel?
- Have you had people into your home without wearing a mask?
- Have you attended any social functions involving multiple people? In what type of setting?

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- Have you traveled? Where and when? Type of travel, i.e. car, airplane, train? Did you wear PPE?
- What types of activities have you engaged in outside the home?
- What type of testing did you have, deep nasal swab or rapid testing with saliva.
- Has anyone in your house tested positive or shown symptoms of COVID-19? Date of onset of symptoms?
- Has any friend or acquaintance tested positive or shown symptoms of COVID-19? Date you were around them? Date they first showed symptoms.

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- What is the positivity rate in the State while the claimant had Covid-19? The more people to test positive and the greater the community spread in the state, the less likely they can meet their burden of proof they contracted the virus in the work place.
- Illinois –Rebuttable presumption for front line workers and first responders who contract C19 in their workplace
- Exposures between 3/30/2020 and 6/30/21

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## Current Medical treatment

- Have you seen or been examined by a physician?
- Have they prescribed any medication? OTC meds?
- Do you have any pre-existing conditions such as diabetes, high blood pressure, obesity, lung disease, i.e. asthma, COPD, and/or a weakened immune system?
- Have you been hospitalized and what treatment did you undergo? Ventilator?
- Any indication of long term or permanent disability as a result of Covid 19?

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## Iowa W.C. Commissioner Cases

- None published to date.
- MMI date?
- What about long haulers?
- Brain fog, fatigue, muscle weakness and joint pain.
- PPD?

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## Illinois – cases in process

- IL nursing home cases- resident exposed and died of Covid
- No immunity if willful and wanton behavior
- Prisoner claims of being forced to sleep next to C19
  - No PPE provided
- Decedent's husband contracted C19 at work and infected wife
  - Dismissed – no duty to protect the wife
  - Work comp is exclusive remedy for compensable injuries

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## We thought it was the beginning of the end. December 14, 2020.


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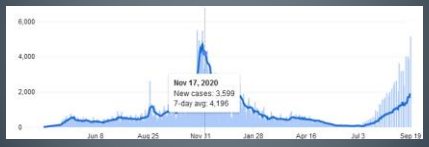
## Spoke too soon

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## Citations


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- **The Risks - Know Them - Avoid Them, Erin Bromage, May 20, 2020, www.erinbromage.com/post/the-risks-know-them-avoid-them
- Images
  - Slide 1: Inorganic Ventures
  - Slide 2: CDC
  - Slide 4: MedPage Today
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  - Slide 15: BuzzFeed News
  - Slide 17: WebMD
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