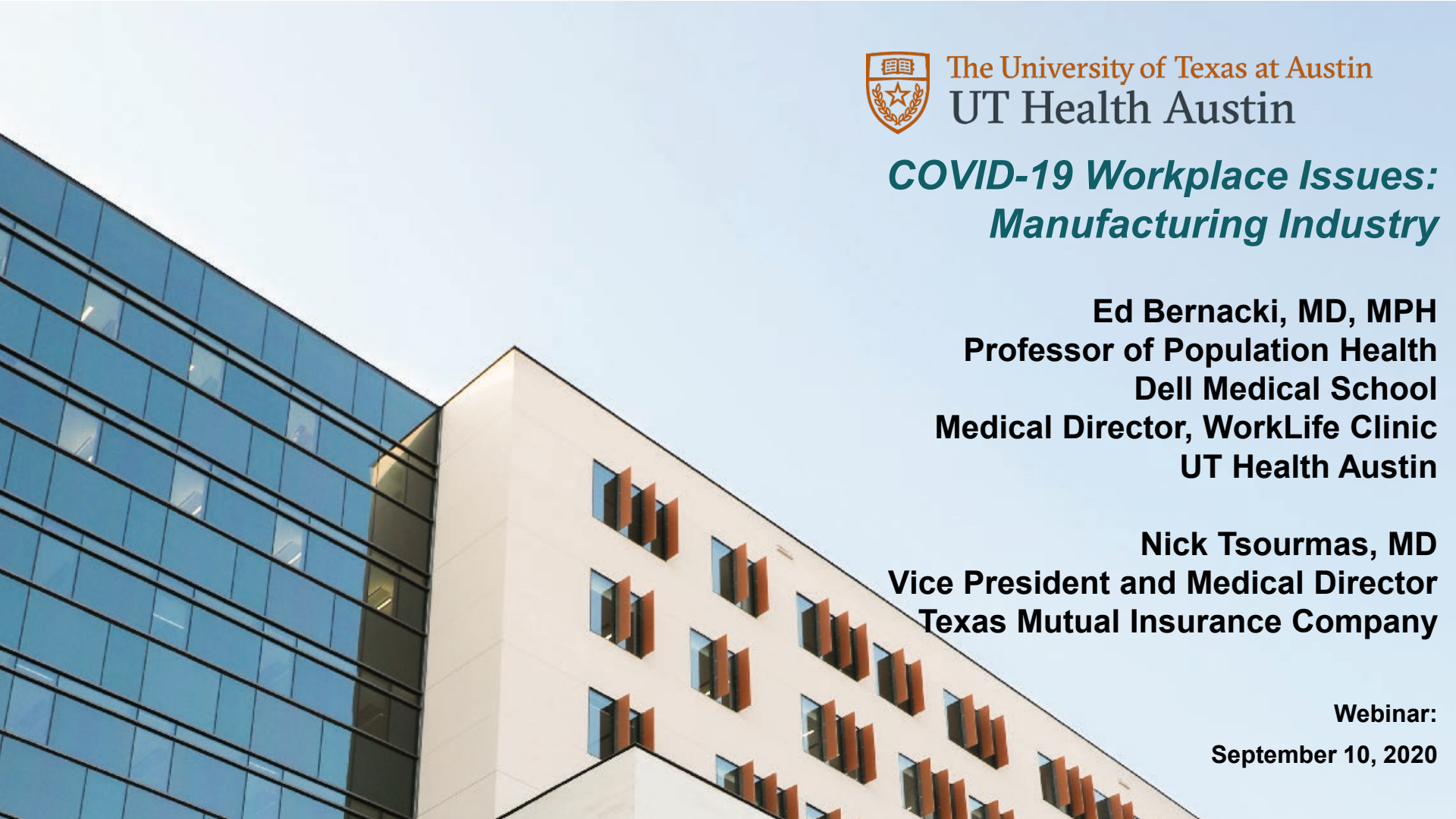

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COVID-19 Workplace Issues: Manufacturing Industry

Ed Bernacki, MD, MPH
Professor of Population Health
Dell Medical School
Medical Director, WorkLife Clinic
UT Health Austin

Nick Tsourmas, MD
Vice President and Medical Director
Texas Mutual Insurance Company

Webinar:

September 10, 2020

Agenda

- COVID-19 Facts
- Occupational Risk
- Controlling COVID-19 at the Worksite
- Workers' Compensation Issues

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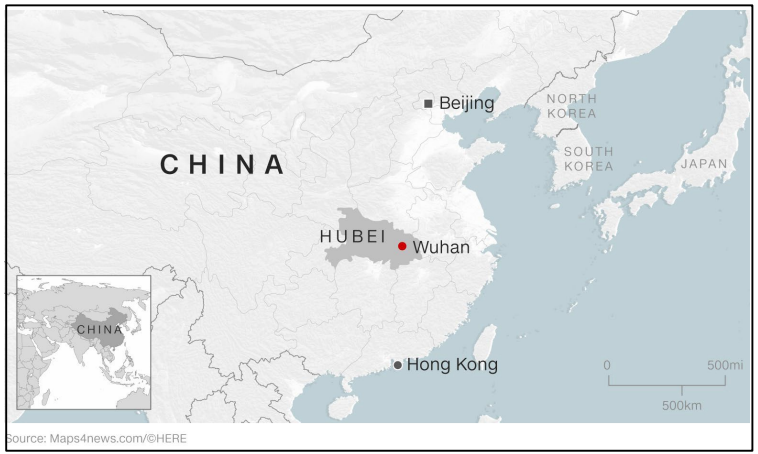
2019 Novel Coronavirus



December 31, 2019

- Cluster of pneumonia cases of unknown etiology identified in Wuhan, China

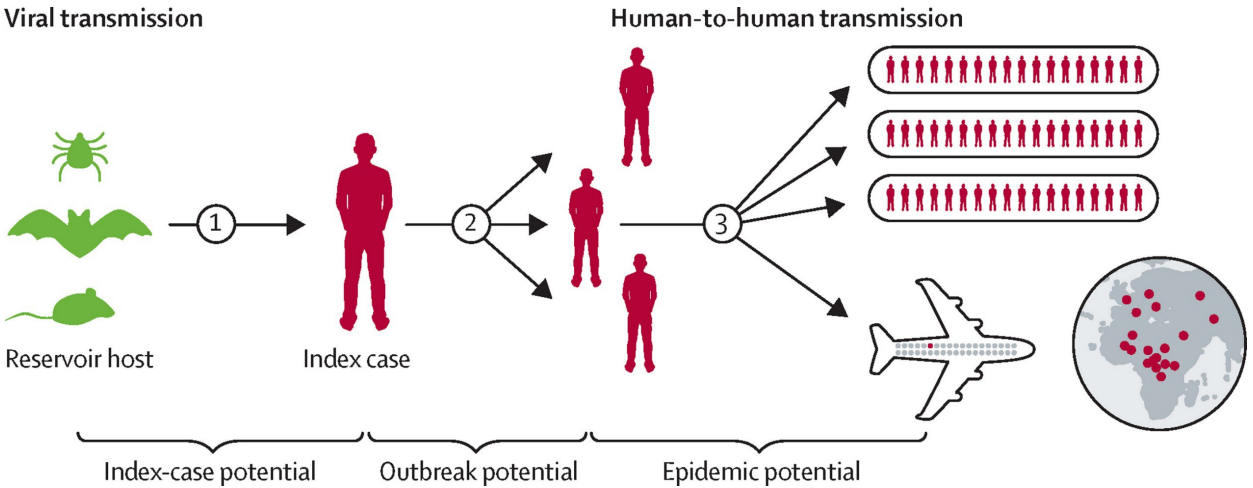
January 7, 2020

- Confirmed that the cluster was associated with a novel coronavirus, 2019-nCoV

- **COVID-19**
  - COVID-19 – name of the disease
  - SARS-CoV-2 → virus causing COVID-19

Sources: World Health Organization. Pneumonia of unknown cause-China. www.who.int/csr/don/05-january-2020-pneumonia-of-unkown-cause-china/en/ World Health Organization. Novel coronavirus-China. www.who.int/csr/don/12-january-2020-novel-coronavirus-china

Travel Related Exportation of Cases



Source: The Lancet Published online October 11, 2017 *Lancet*. doi: https://doi.org/10.1016/S0140-6736(17)32092-5

COVID-19 Basics

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Symptoms and Signs

- Fever (low or high grade) (80-88%)
- Dry cough (63-69%)
- Loss of appetite (39-84%
- Fatigue (38-46%)
- Sputum production (33-42%)
- Chest pain or pressure (28-36%)
- Dyspnea (shortness of breath) (19-35%)
- Myalgia and/or arthralgia (muscle and joint pain) (15-33%)
- Sore throat (12-14%)
- Headache (11-15%)
- Chills (6-11%)
- Nausea or vomiting (5-10%)
- Diarrhea (4-29%
- Nasal congestion (4-5%)
- Abdominal pain (4%)
- Anosmia and dysgeusia (loss of smell and taste) (85% moderate/severe)

Infectious 10 days from onset

Spread

- Droplets (Airborne)
  - Close contact (6ft)
- Asymptomatic 10-35% (young)
- Pre-symptomatic transmission (freq.)
- Transmission Rate=1.5 (Measles=18, Flu=1.6)

Incubation Period?

- 2 days

Proportion of + tests: Austin 10%
Prevalence: 2-25 %

Fever

Cough

Difficulty Breathing

Source: www.michigan.gov/documents/mdhhs/nCOV-2019_General_Fact_Sheet_v2-4-20_680266_7.pdf

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Tests for COVID-19

	RT-PCR Tests	Antigen Test	Antibody Test
Intended Use	Detect current infection	Detect current infection	Detect past infection
Analyte Detected	Viral RNA	Viral Antigens	Detects IgG and IgM Antibodies
Specimen Type(s)	Nasal Swab, Sputum, Salvia	Nasal Swab	Blood Draw
Sensitivity	High	Moderate	Generally High
Specificity	High	High	Generally High
Authroized for Use at the Point-of-Care	Most devices are not	Yes	Most devices are not
Turnaround Time	Ranges	Approximately 15 minutes	Ranges
Cost/Test	Moderate	Low	Moderate

https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7368663/

Duration of Infectious COVID-19

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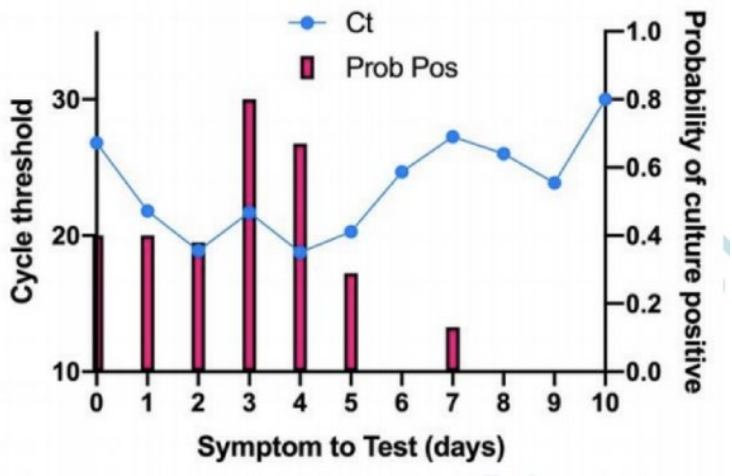

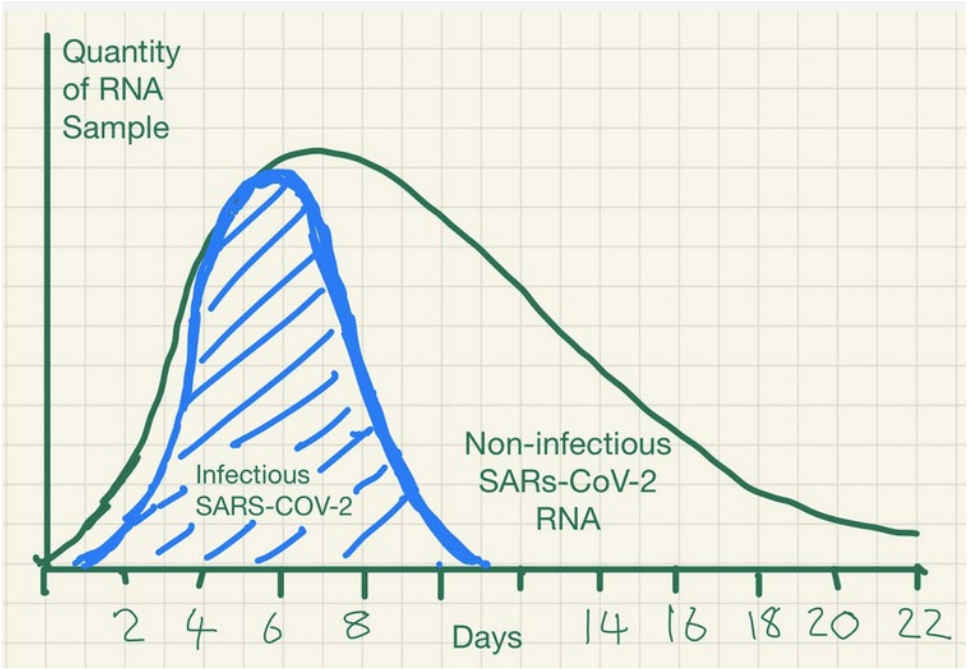

SOURCE: https://www.cebm.net/covid-19/infectious-positive-pcr-test-result-covid-19/

Secondary Transmissions of Coronavirus Disease from Pre-symptomatic Persons

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Variable	No. contacts	No. infected	Attack rate, %	Relative risk
Index case-patient status*				
Asymptomatic	119	1	0.8	Referent
Mild symptoms	141	5	3.5	4.3
Moderate symptoms	87	5	5.7	7.2
Severe symptoms	22	1	4.5	5.6
Contact mode				
Social interaction with friends or relatives	66	1	1.5	Referent
Lived together	62	10	16.1	12.5
Worked together	119	0	0	0
Social interaction with strangers	122	1	0.8	0.5
Contact frequency†				
Rare	149	1	0.7	Referent
Moderate	159	1	0.6	0.9
Frequent	61	10	16.4	29.0

Source: https://wwwnc.cdc.gov/eid/article/26/8/20-1142-t1

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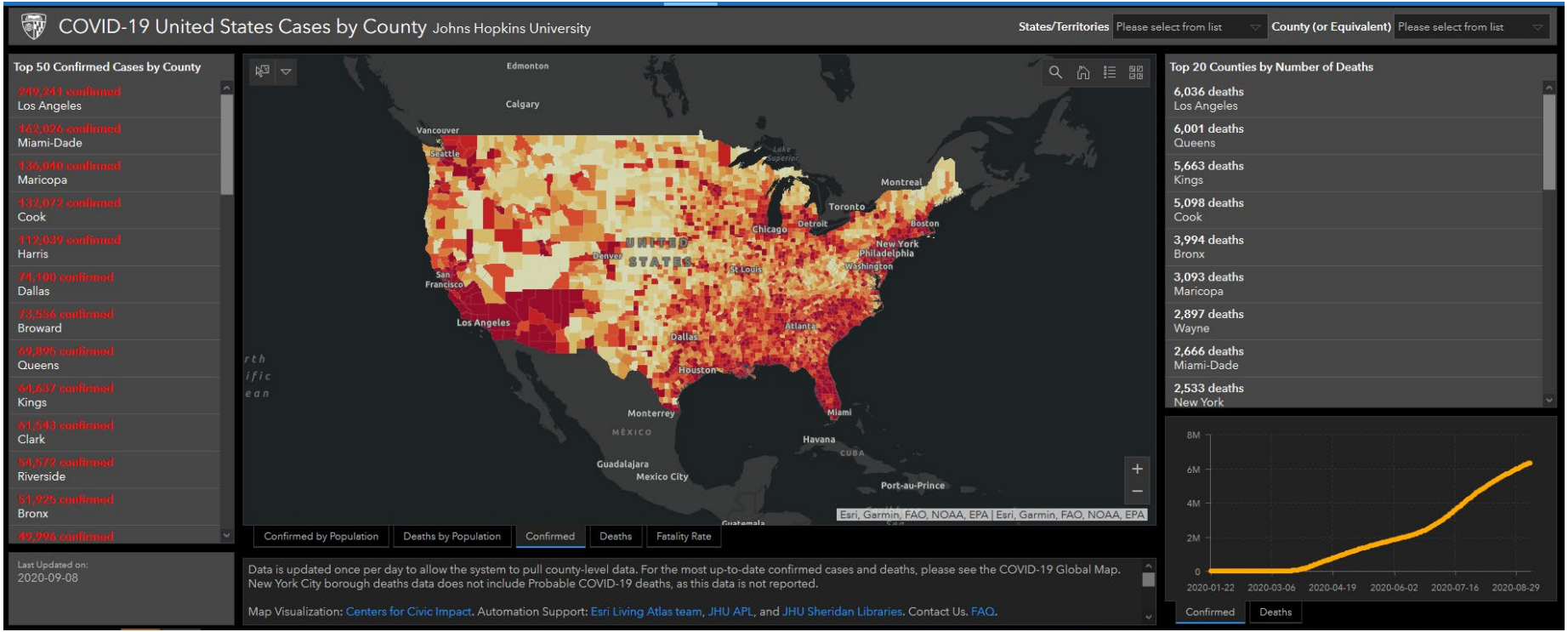

https://coronavirus.jhu.edu/us-map

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R_t COVID-19

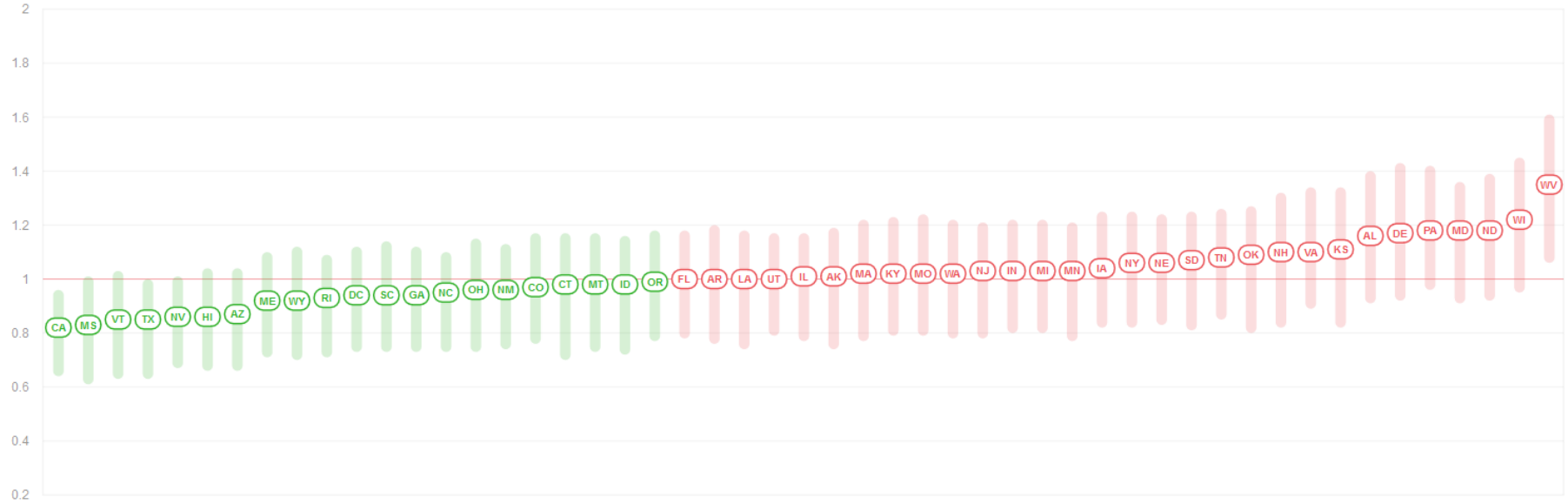
Tweet Share

These are up-to-date values for R_t, a key measure of how fast the virus is growing. It's the average number of people who become infected by an infectious person. If R_t is above 1.0, the virus will spread quickly. When R_t is below 1.0, the virus will stop spreading. Learn More.

See details about the spread in **Texas**

Data Last Updated: 9/9 at 10:06AM

Latest | 2 Weeks Ago | 1 Month Ago | 2 Months Ago | 3 Months Ago | Filter



Source: https://rt.live/

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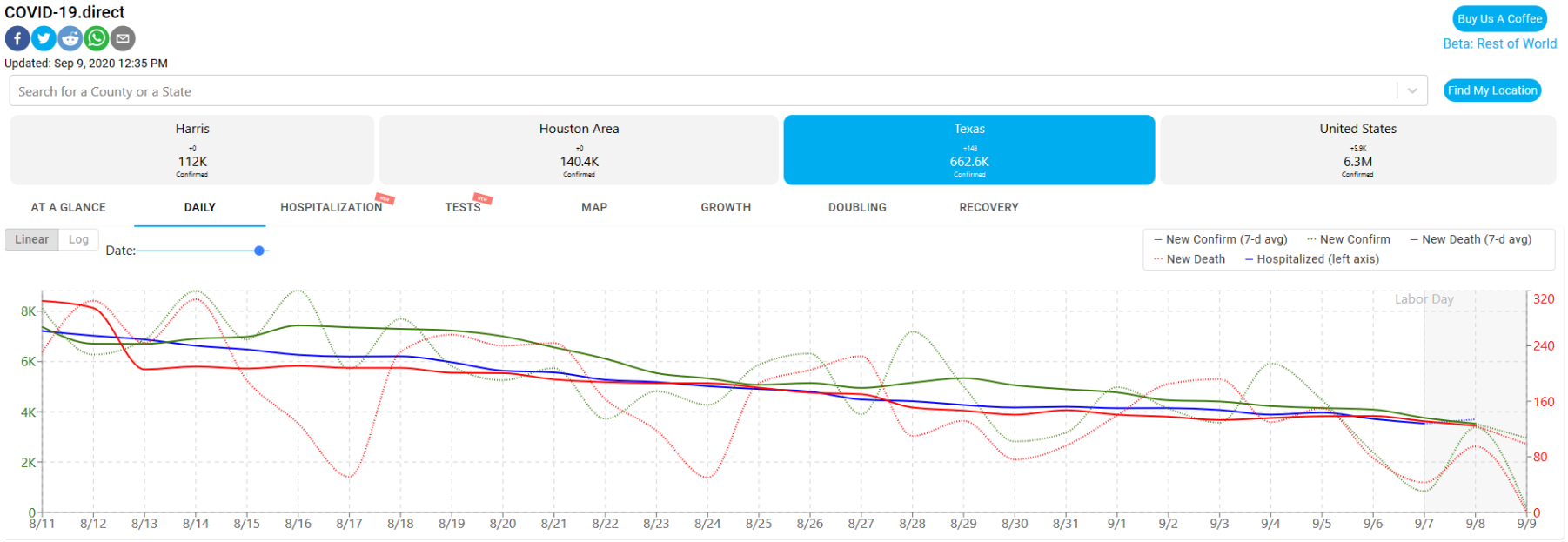

Source: https://covid-19.direct/US?tab=daily

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Cases and Deaths Associated with COVID-19

by Age Group in California

September 8, 2020

Age Group	No. Cases	Percent Cases	No. Deaths	Percent Deaths	Percent CA Population
<5	16,059	2.2	0	0.0	5.8
5-17	59,323	8.0	3	0.0	16.7
18-34	260,323	35.2	207	1.5	24.3
35-49	183,583	24.8	783	5.7	19.3
50-59	102,823	13.9	1,436	10.5	12.5
60-64	37,043	5.0	1,142	8.3	5.9
65-69	25,498	3.5	1,401	10.2	5.0
70-74	17,632	2.4	1,534	11.2	4.1
75-79	12,258	1.7	1,547	11.3	2.7
80+	24,088	3.3	5,672	41.3	3.9
missing	897	0.1	2	0.0	0.0
Total	739,527	100.0	13,727	100.0	100.0

https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-19-Cases-by-Age-Group.aspx#.XvysRDBkMMo.mailto

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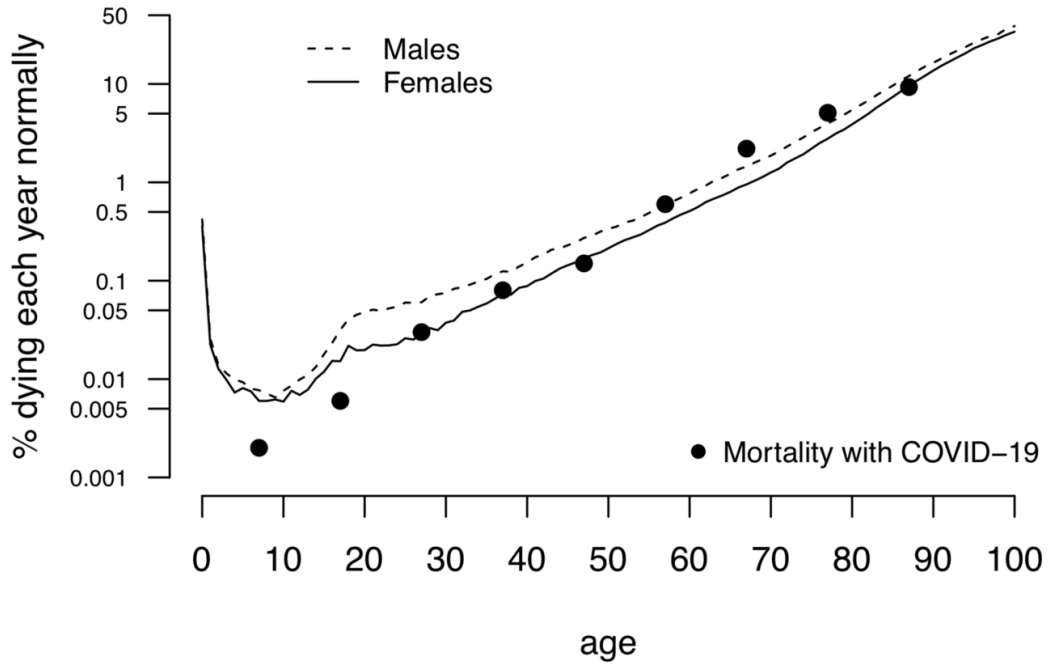
The mortality Risk with COVID-19 Superimposed on Background Annual Risk



Source: https://medium.com/wintoncentre/how-much-normal-risk-does-covid-represent-4539118e1196

Mortality Rate

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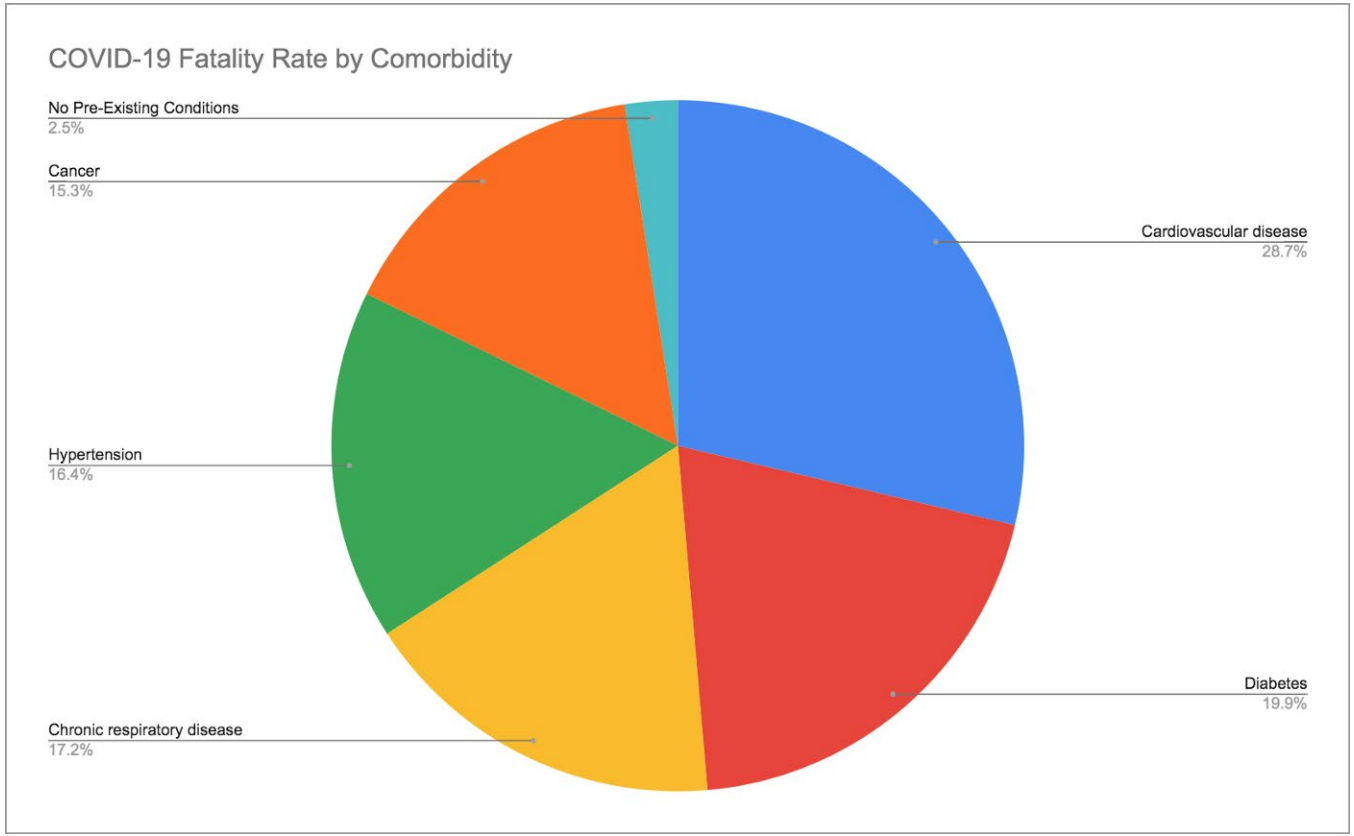
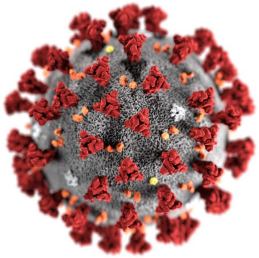


Source: https://medium.com/@eolszewski/the-data-on-your-chances-of-dying-from-covid-19-coronavirus-394276153b83
https://www.tomsguide.com/news/coronavirus-calculator



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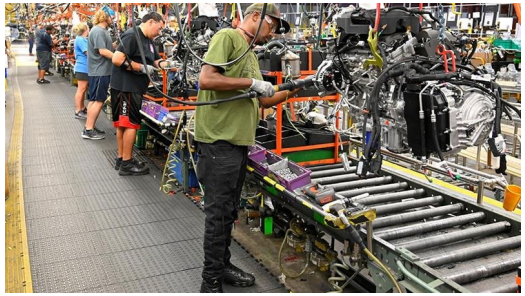
Factoids

1. Belgian Hospital Study: 5% of hospital staff tested positive for past infection,-only community or household contact (JAMA) June 15, 2020 letter.
2. Wuhan, China: RT-PCR survey of 30K asymptomatic hospital workers, 18 or 0.06%-were positive-all contacts tested negative by RT-PCR or serology. (https://wwwnc.cdc.gov/eid/article/26/9/20-1848_article)
3. In Baltimore/Washington Study- 43% of Latinos tested positive for COVID-19 vs 9% whites and 18% blacks. (JAMA, June18th)
4. Age and smoking are biggest predictors of severe disease.
5. Built environment and households influences the contracting SARS-CoV-2!!

Workplaces and Occupations



Worker Exposure Risk to COVID-19

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Occupational Risk Pyramid for COVID-19

VERY HIGH EXPOSURE RISK

Jobs with a high potential for exposure to known or suspected sources of COVID-19 during specific medical, postmortem, or laboratory procedures. Workers include:

- Healthcare and morgue workers performing aerosol-generating procedures on or collecting/handling specimens from potentially infectious patients or bodies of people known to have, or suspected of having, COVID-19 at the time of death.

HIGH EXPOSURE RISK

Jobs with a high potential for exposure to known or suspected sources of COVID-19. Workers in this category include:

- Healthcare delivery, healthcare support, medical transport, and mortuary workers exposed to known or suspected COVID-19 patients or bodies of people known to have, or suspected of having, COVID-19 at the time of death.

MEDIUM EXPOSURE RISK

Jobs that require frequent/close contact with people who may be infected, but who are not known or suspected patients. Workers in this category include:

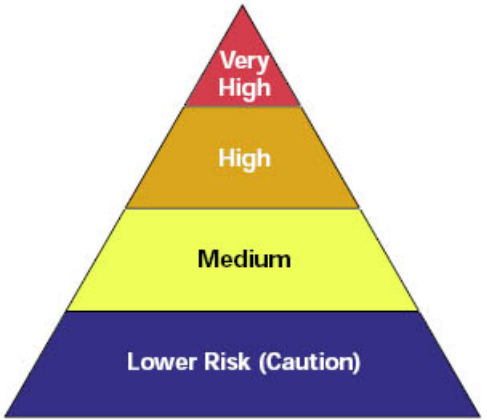
- Those who may have contact with the general public (e.g., schools, high-population-density work environments, some high-volume retail settings), including individuals returning from locations with widespread COVID-19 transmission.

LOWER EXPOSURE RISK (CAUTION)

Jobs that do not require contact with people known to be, or suspected of being, infected.

- **Workers in this category have minimal occupational contact with the public and other coworkers.**

For more information, see the *Guidance on Preparing Workplaces for COVID-19*.



The four exposure risk levels represent probable distribution of risk.

https://www.osha.gov/Publications/OSHA3993.pdf

Occupations with Most COVID-19 cases in Washington State

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Industry Sector	Count	Precent	Precent of WA employed population
Healthcare and Social Assistance	2375	37%	13%
Manufacturing	605	9%	9%
Retail Trade	501	8%	12%
Accommodation and Food Services	458	7%	9%
Agriculture, Forestry, Fishing and Hunting	368	6%	3%
Construction	356	6%	6%
Transportation and Warehousing	339	5%	4%
Public Administration	235	4%	4%
Administration and Support and Waste Management and Remediation Services	243	4%	5%
Professional, Scientific, and Technical Services	214	3%	6%
Educational Services	204	3%	9%
Other Services (exempt Public Administration)	160	2%	3%
Finance and Insurance	111	2%	3%
Arts, Entertainment, and Recreation	80	1%	2%
Real Estate and Rental and Leasing	77	1%	2%
Information	43	1%	4%
Wholesale Trade	32	<1%	4%
Utilities	14	<1%	1%
Mining, Quarrying, and Oil and Gas Extraction	3	<1%	0%
Management of Companies and Enterprises	1	<1%	2%
Total	**6441**		

Source: https://www.ncwlife.com/state-releases-report-on-occupations-with-the-most-covid-19-cases/

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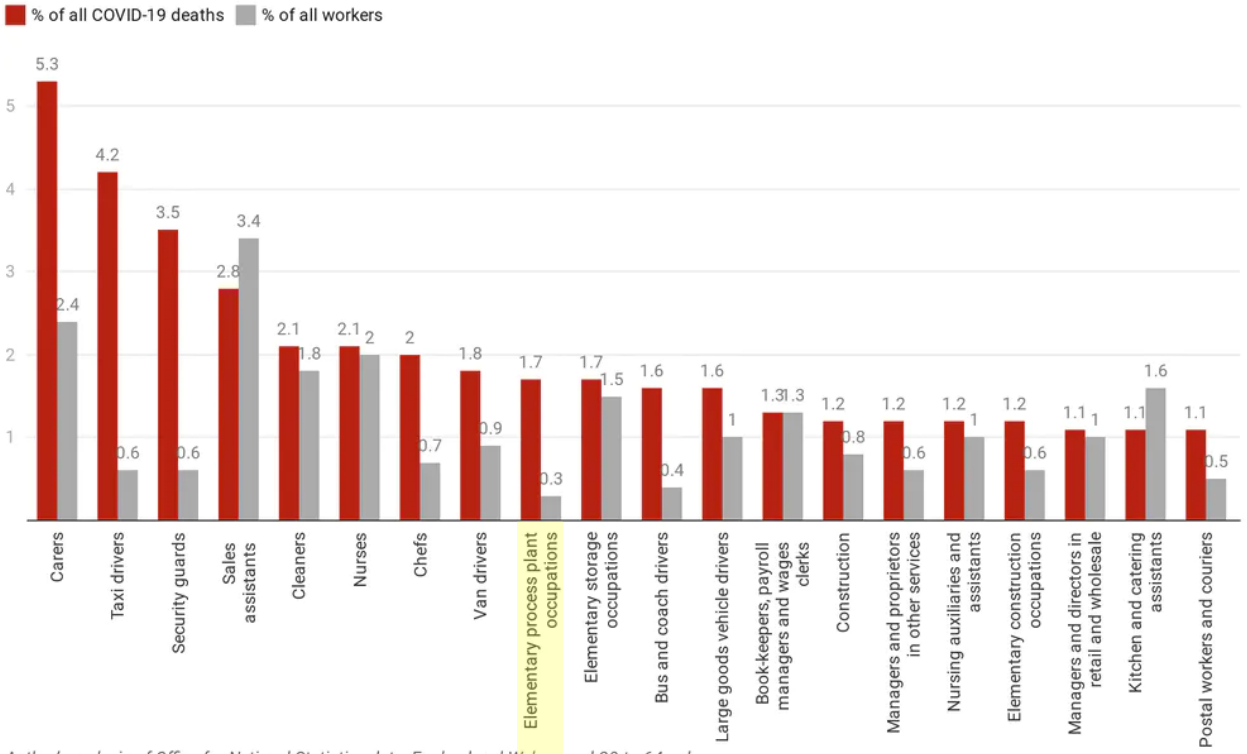
COVID-19 deaths in England & Wales by ONS job classification



Author's analysis of Office for National Statistics data. England and Wales aged 20 to 64 only.

Chart: The Conversation • Source: ONS

https://theconversation.com/coronavirus-class-divide-the-jobs-most-at-risk-of-contracting-and-dying-from-covid-19-138857

Business Considerations

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Actions an employer can take to mitigate the risk of COVID-19 infection related to potential respiratory and contact spread:

1. Employee issues (e.g., education and medical surveillance)
2. Travel issues
3. Social distancing methods
4. Disinfection practices and contact spread measures
5. Personal protective equipment (e.g., masks, gloves, and face shields)
6. Ventilation issues
7. Policies and procedures
8. Industry-specific recommendations

Source: http://www.mdguidelines.com

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Employee Issues: COVID-19 Surveillance

Screening to avoid having workers with potential COVID-19 symptoms to enter the workplace:

- Daily/periodic questionnaires and/or temperature measurements. If positive, restrict employee from workplace and advise evaluation by a healthcare provider. RTW when cleared by provider

- Screen subcontractors, suppliers, and visitors

Source: http://www.mdguidelines.com

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Employee Issues: Sick Employees with Possible COVID-19 Symptoms

- **Sick employees should stay home-** to eliminate all contact between the healthy workers and anyone with potentially infectious symptoms

Source: http://www.mdguidelines.com

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Personal Protective Equipment

PPE measures (masks, gloves, and face shields) help to slow spread of the COVID-19 virus:

- Mainly indicated to prevent spread from infected to non-infected persons!!!

- Use face shields where there is potential for human-related splashes or droplet exposures

- Appropriate PPE for cleaning a workspace contaminated by the virus is a face mask and gloves

Source: http://www.mdguidelines.com

How Well Do Masks Work? (Schlieren Imaging in Slow Motion)

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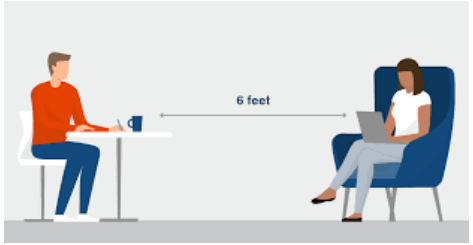
To view video click on link

https://www.youtube.com/watch?v=0Tp0zB904Mc



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Social Distancing Methods

- Consider rotating workers between home and work settings to reduce workplace population densities.
- Increase distances between workers, installing temporary barriers, marking 6-foot distances on the floor between co-workers.
- Consider: social spacing in cafeterias, closing cafeterias or having workers eat their own food at their workstations.
- Consider one-way walkways through a workplace.
- Reorganize shifts to spatially and temporally, spread workers.
- Provide barriers for employees whose who interact with the general public.
- Consider discouraging carpooling and mass transit (encouraging the use of masks if using either of those options).
- Minimize reasons for external individuals and the public to enter a workplace.

Source: http://www.mdguidelines.com

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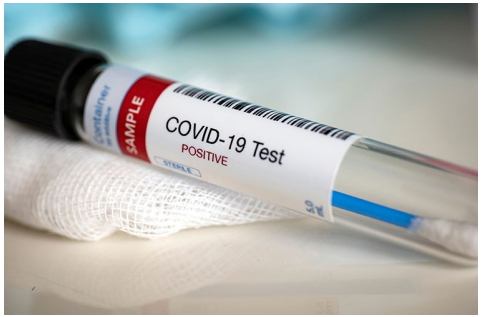

Employee Issues: RTW for Employees COVID-19 (CDC)

According to the newest (July 19, 2020) CDC recommendations, for an employee who has been exposed or recovered from COVID-19, re-entry into the workplace should consist of one of the following:

- At least **10 days** have passed since they first had symptoms, or **10 days** have passed since an initial positive test for COVID-19 if they had no symptoms.
- Be fever-free for **24 hours** without the use of fever reducing medications such as acetaminophen or aspirin.
- All other COVID-19 related symptoms have improved.

Source: https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html

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Disinfection Practices and Contact Spread Measures

- Clean commonly touched worksite surfaces frequently (e.g., hourly or between shifts), including machine controls, door handles, bathroom doors, bathroom fixtures, faucet handles, lunch tabletops, breakrooms, etc.

- Avoid shared equipment when possible (e.g., keyboards), and clean common surfaces between shifts or between worker usage.

- Clean surfaces with an **EPA-approved viricidal agents**. Use agents containing **62-71% ethanol, 0.5% hydrogen peroxide, 0.1% sodium hypochlorite** for at least 1 minute. Clorox=5.25% sodium hypochlorite solution.

  The EPA has a list of products active against human coronavirus, with recommendations for the duration of contact time.

- Provide ample hand sanitizer and hand-sanitizer stations (<60%) and encourage frequent hand washing.

Source: http://www.mdguidelines.com

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Ventilation Issues

Increased ventilation (general and local) has been underutilized as a potential COVID-19 control:

- Use local ventilation to supply clean air to a worker's workspace.
- Utilize increased air exchanges in the HVAC system to dilute the general ambient air including High Efficiency Particulate Air (HEPA) filters in the HVAC system.
- Where possible, use portable HEPA filtration systems for small work areas.

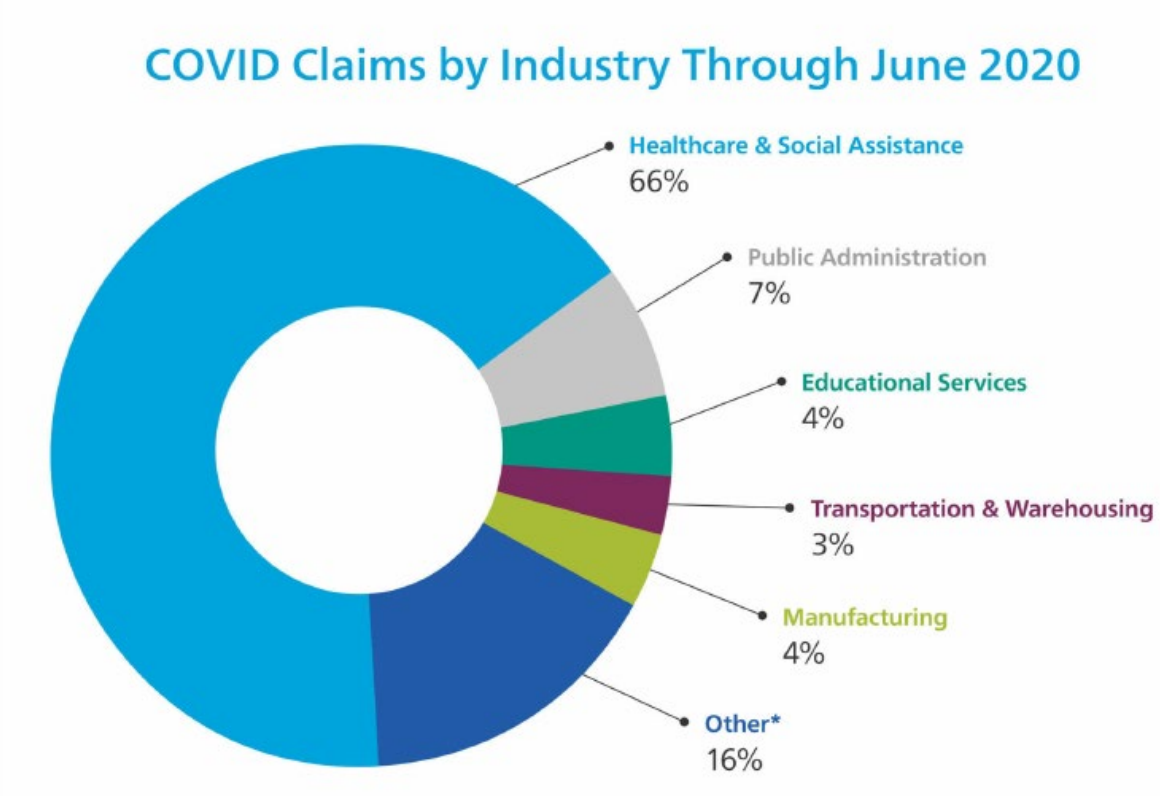
Source: http://www.mdguidelines.com

Workers' Compensation Issues

Work Related or Not?
Occupational Disease or Ordinary Disease of Life.
Burden of Proof on Insurance Carrier/Policyholder or Employee?

Burden of Proof on Employer/Insurance Carrier-Presumed Work-Related: Essential Workers, First Responders and Healthcare Workers in Washington (EO),California (EO), Hawaii (EO), Mass.(Comm.), So. Carolina (Comm.) No. Carolina (Comm.), Federal (TSA), MD (Comm.)
Occupational Disease: New York

Texas—not an occupational illness, burden of proof on employee.



Source:
https://www.mpower.mitchell.com/workers-compensation-covid-19-claims/?utm_campaign=8.11.20%20PS%20&%20CSG%20WC%20mPower%20Emailer&utm_medium=email&utm_source=Eloqua

Distribution of Calif WC Healthcare Claims by Employee Class Code
COVID-19 vs. Non-COVID, Jan-July AY 2019 and AY 2020

Job Description	Employee Class Code	% of 2020 Healthcare COVID-19 Claims	% of 2019 Healthcare Non-COVID Claims	% of 2020 Healthcare Non-COVID Claims
Skilled Nursing Facility Workers	8829	32.8%	15.8%	16.6%
Hospital Workers	9043	20.2%	16.8%	18.9%
Physician Practice/Outpatient Clinic	8834	17.7%	16.0%	15.7%
Residential Care – Elderly	9070	10.8%	12.5%	13.0%
Home Care Service Workers	8827	4.1%	7.0%	7.3%
Clerical Office Employees	8810	2.9%	3.8%	3.9%
Residential Care - Develop. Disabled	9085	1.7%	2.3%	2.1%
Ambulance Services	7332	1.7%	1.6%	2.0%
Dentists/Dental Surgeons	8839	1.1%	5.0%	4.1%
Day Care Centers	8823	1.0%	5.2%	3.3%
Residential Care – Children	9059	1.0%	1.9%	2.4%

Source: CWCI COVID-19 Interactive Data Tool. WCIS Jan-July AY 2019 & 2020 Claim Counts as of 8/10/20

Overview of Testing for SARS-CoV-2 (COVID-19)

August 24, 2020

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CDC Mitigation Protocols

CDC recommends the following measures to mitigate the spread of the virus and to protect vulnerable populations: social distancing, wearing a mask when social distancing is not possible, avoiding crowds, avoiding indoor crowded spaces, and washing or sanitizing hands frequently.

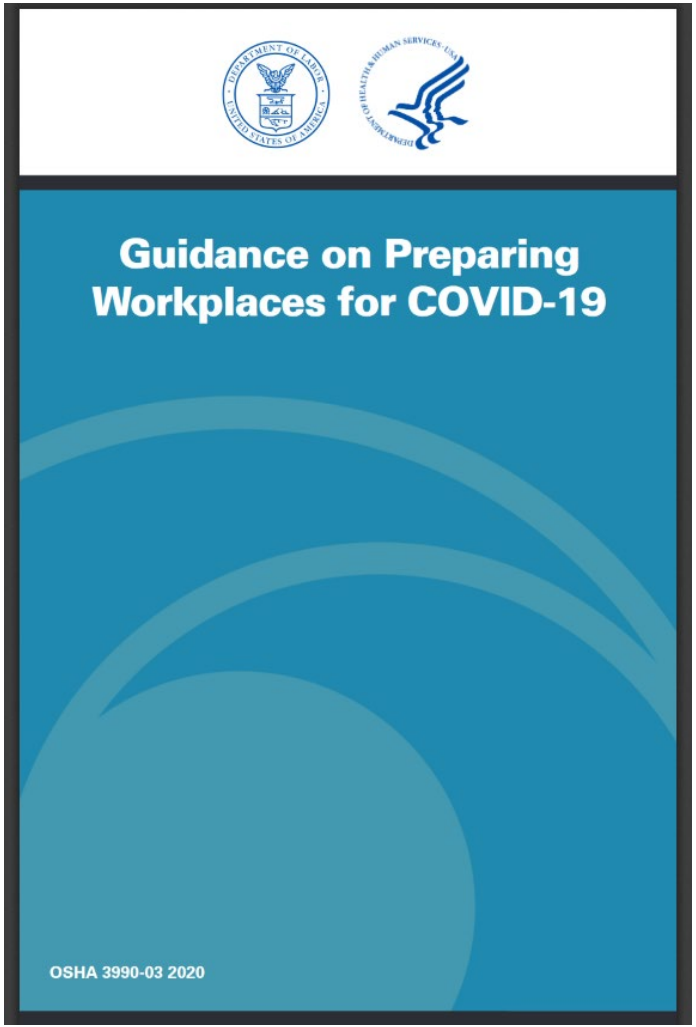
COVID-19 Diagnostic Testing

If you have symptoms of COVID-19:

- If your symptoms are mild:
  - Your health care provider may advise a COVID-19 test.
  - If you test positive for COVID-19 or do not get tested, you should self-isolate for at least 10 days after symptom onset and at least 24 hours after the resolution of any fever.
  - If you live with a vulnerable individual, they should be tested.
- If your symptoms are severe or become severe, you should contact your health care provider immediately or seek emergency care.
- If you take a test and test positive, you do not need to repeat a test and can return to normal activities (e.g., work or school) after the passage of 10 days from the onset of symptoms and 24 hours from when any fever has subsided on its own.

- **If you have been in close contact (within 6 feet) of a person with a COVID-19 infection for at least 15 minutes but do not have symptoms:**
  - You do not necessarily need a test unless you are a vulnerable individual or your health care provider recommends you take one.
  - You should monitor yourself for symptoms.
  - You should strictly adhere to CDC mitigation protocols, especially if you are interacting with a vulnerable individual.
- **If you do not have COVID-19 symptoms and have not been in close contact with someone known to have a COVID-19 infection:**
  - You do not need a test.
    - A negative test does not mean you will not contract an infection at a later time.
- If you decide to be tested, you should self-isolate at home until your test results are known, and then adhere to your health care provider's advice.
- **If you are in a high COVID-19 transmission area and have attended a public or private gathering of more than 10 people (without widespread mask wearing or physical distancing):**
  - You do not necessarily need a test unless you are a vulnerable individual or your health care provider or State or local public health officials recommend you take one.
    - A negative test does not mean you will not develop an infection from the gathering or contract an infection at a later time.
  - You should strictly adhere to CDC mitigation protocols, especially if you are interacting with a vulnerable individual. You should adhere to CDC guidelines to protect vulnerable individuals with whom you live.
  - If you are tested, you should self-isolate at home until your test results are known, and then adhere to your health care provider's advice.
- **It is important to realize that you can be infected and spread the virus but feel well.**

Source: https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-overview.html



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Source: https://www.osha.gov/Publications/OSHA3990.pdf

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What we offer:

- Team-based approach to caring for employers and employees.
  - DOT and pre-placement physicals
  - Drug testing
  - Immunizations
  - Workers' Compensation - clinical and claims management
- Pro-active case management and integrated medical care (occupational medicine, orthopedics and case management linked).
- Real-time progress reporting through our employer portal.
- Exceptional value delivery derived from evidence-based medicine standards and ODG guidelines.

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Meet Our Providers

Edward Bernacki, MD, MPH
WorkLife,
Occupational Medicine

Henry Guevara, PhD, FNP-C
WorkLife

Karl Koenig, MD
Musculoskeletal Institute,
Lower Extremity

Jeffrey Sanuik, MSN, FNP-C
WorkLife

Mark Queralt, MD
Musculoskeletal Institute, Back and Neck Pain

Emmy Feeler, MSN, FNP-C
WorkLife

AJ Johnson, MD
Musculoskeletal Institute,
Sports and Injury Clinic

David Ring, MD, PhD
Musculoskeletal Institute,
Upper Extremity

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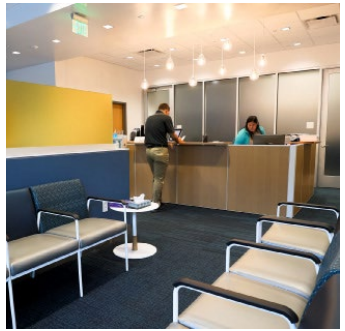
We are located



HEALTH TRANSFORMATION BUILDING
1601 TRINITY ST., BLDG. A,
AUSTIN, TEXAS 78712

Parking for the Health Transformation Building is available in the attached Health Center Garage.

DRIVING DIRECTIONS:

Hours of Operation
Monday- Friday
8:00 am to 5:00 pm

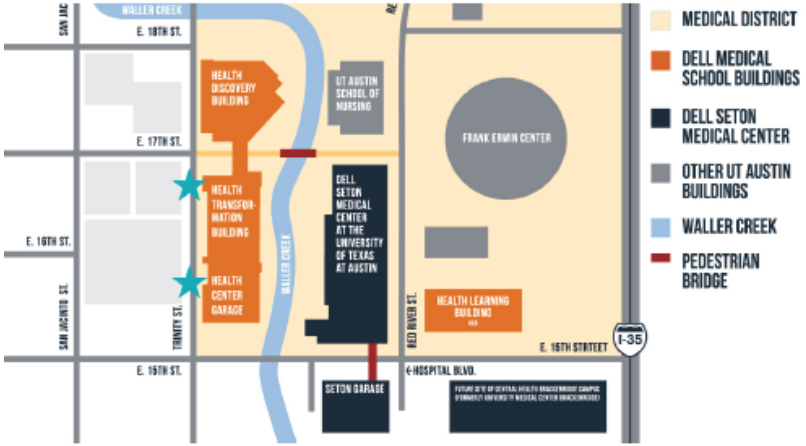
Call Us:
1-833-UT-CARES

FROM NORTHBOUND 1-35

Follow I-35 N to Exit 235A. Proceed onto I-35 Frontage Road. Turn left on 15th Street. Turn right onto Trinity Street. The entrance to the Health Center Garage will be immediately on your right.

FROM SOUTHBOUND 1-35

Follow I-35 S to Exit 235A. Turn right on 15th Street. Turn right onto Trinity Street. The entrance to the Health Center Garage will be immediately on your right.



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QUESTIONS?

Ed Bernacki, MD, MPH
ed.bernacki@austin.utexas.edu

WorkLife Occupational
Health and Injury Clinic
512-495-5900
uthealthaustin.org

Nick Tsourmas, MD
Ntsourmas@texasmutual.com

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