



# COVID-19: Keeping Manufacturing Employees Safe & Engaged

MARCH 31, 2020



# Best practice Manufacturing companies taking holistic approach to COVID-19 prevention & safety



## Modularizing Operations

- "Air" gaps between shifts, ensuring no cross-shift transmission / vectors
- Organize operations into small groups
- Designate areas for groups to travel



## Incoming Temperature Checks

- Incoming temperature screen for all employees / contractors / logistics providers



## Rules / Designated Areas for Logistics Providers

- Truck drivers not allowed to leave cabs
- High-risk drivers (e.g., from NYC) not being permitted on-site; logistics providers asked to pre-screen drivers
- Designated facilities (e.g., mobile restrooms) for drivers



## Sick Pay, Hazard Pay

- Paid sick leave, disability for all employees (incl. hourly) to encourage self-reporting
- Hazard pay for employees conducting self cleaning, working close to others in confined spaces without masks, face shields, etc.

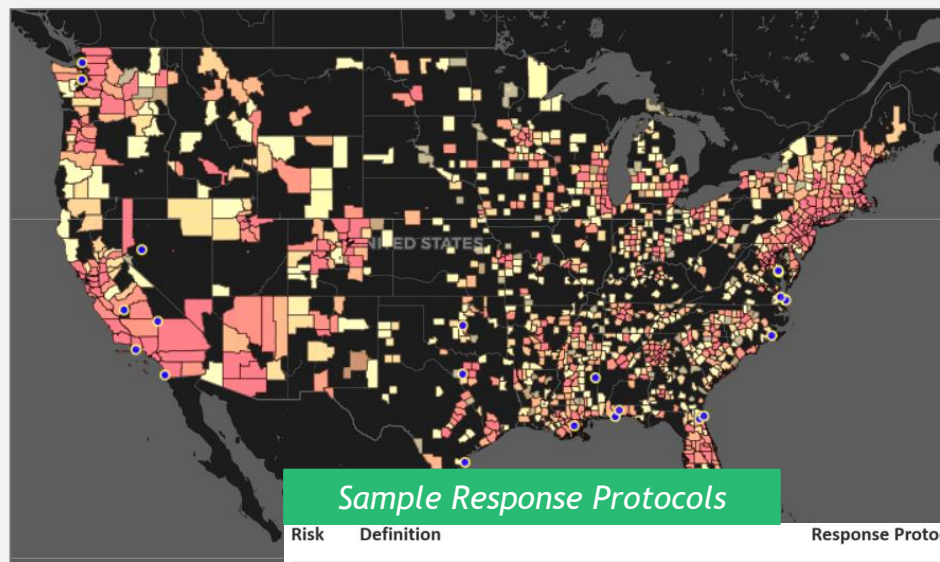


## Medical Support / Telemedicine

- Contracted doctors being onboarded to corporate "Rapid Response Teams" to support screening of employees & information
- Telemedicine services (e.g., Teladoc) being provided to full workforce

# Situational awareness is key for leadership to react early to potential outbreaks near site

BCG working with clients to map COVID-19 outbreaks across counties and assess risk levels at each site



## Sample Response Protocols

Risk	Definition	Response Protocol
None	<ul style="list-style-type: none"> <li>No COVID-19 cases in county</li> <li>No COVID-19 cases in neighboring counties</li> </ul>	No change to operations, maintain frequency of cleanings
Low	<ul style="list-style-type: none"> <li>No COVID-19 cases in county</li> <li>COVID-19 cases in neighboring counties</li> </ul>	Create plans for potential shutdown, increase frequency of cleanings
Medium	<ul style="list-style-type: none"> <li>COVID-19 cases in county</li> </ul>	Begin preparations to shut down operations, implement temperature screening
High	<ul style="list-style-type: none"> <li>COVID-19 cases in county reach 20%+ growth per day</li> </ul>	Shut down operations

Leadership engaged daily with updates on COVID progression, people "heat maps"

## Daily COVID reporting by state, county

State	COVID-19 risk			
	Cases (3/21)	Cases (3/22)	Growth rate	Risk
Arkansas	1	3	200%	High
Pennsylvania	24	32	33%	High
Wisconsin	11	13	18%	High
Oregon	18	19	6%	Medium
Wisconsin	6	6	0%	Medium
Texas	1	1	0%	Medium
South Carolina	2	2	0%	Medium
Illinois	548	805	47%	Low
Arkansas	1	7	600%	Low
North Carolina	2	6	200%	Low
California	10	17	70%	Low
Massachusetts	24	37	54%	Low
Maryland	19	28	47%	Low
Wisconsin	126	182	44%	Low
Indiana	7	10	43%	Low
Florida	169	227	34%	Low
Colorado	97	125	29%	Low

## "Heat Map" tracking quarantined employees by site, operation / department, and shift

Site	Operation	# Emp/OS	Avg Emp/ Pod	Critical Pods (w/ Constraints)			Total Pods		
				#	% Full	% Cap.	#	% Full	% Capacity
1	A	X	X	X	X	X	X	X	X
	B	X	X	X	X	X	X	X	X
	C	X	X	X	X	X	X	X	X
2	A	X	X	X	X	X	X	X	X
	B	X	X	X	X	X	X	X	X
	C	X	X	X	X	X	X	X	X
3	All	X	X	X	X	X	X	X	X
4	All	X	X	X	X	X	X	X	X
5	All	X	X	X	X	X	X	X	X

# Companies enacting modularization protocols to avoid rapid spread of disease & forced closure

Sample Protocol

## Modularization ensures...



Barriers to exponential transmission / infection



Rapid ability to respond to, contain confirmed cases



Protection of most critical staff members



Ability to maintain production in event of shift-wide outbreak



1. 30 minute gap between all shifts (including at the management level), with no employees being assigned across shifts until further notice. Managers need to decide which Operating shift they will be on-site with, and show up / leave with that shift
2. Robust protocols need to be in place to wipe down machines upon shift starts
3. Where operations are continuous, outgoing / incoming shifts assigned face masks and shields. Do not come closer than 6 ft, and incoming shift wipes down all surfaces, door handles, etc.
4. Within each area, designate teams of 15 people. Each team is assigned specific areas they can occupy and visit dedicated to them for that shift, including the following. Teams can **ONLY** occupy their designated areas, and barriers will be erected to ensure compliance
  - a. Bathrooms / locker rooms (if used)
  - b. Break rooms
  - c. Meeting rooms
  - d. Sinks + hand washing areas on-site
5. If there are not multiple break rooms or meeting rooms, the same one can be used however times must be agreed (e.g., A team gets break room from 1-2 and B team from 3-4) with cleanings in-between.
6. EACH TEAM MUST UNDERSTAND THEIR ROSTER, AND NOT PHYSICALLY INTERACT WITH MEMBERS OF OTHER ROSTERS. Team designations are applied to management as well. This is CRITICAL to avoid cross-team transmission
7. Special rules must be applied to employees in at-risk categories (over 60 years of age, diabetes, etc.). These employees should get dedicated bathrooms and break areas where possible
8. Full list of shift staff & teams must be shared with the Central Response Team with contact information for all employees (cell phones) so that potentially infected individuals can be notified immediately if another in the team tests positive for COVID-19



# Comprehensive approach to communications critical to keep workforce engaged, up to date, and safe



Central e-mail boxes, hotlines established for employee questions / self reporting



Daily meetings held with plant leadership to discuss latest best practices, guidance from regulatory agencies, etc.



Some companies deploying public websites to ensure access to resources, latest policies, and information with no restrictions

**CARPENTER TECHNOLOGY**

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## COVID-19 Information for Carpenter Technology Employees

SAFETY is a core value at Carpenter Technology Corporation and our commitment to safety includes providing updates on the ongoing COVID-19 pandemic. Our employees, customers and suppliers (and all their families) are geographically dispersed and as the situation evolves, our team will continue to update this channel for your use. However, please be sure to follow regional and national news outlets for latest information regarding this crisis.

We are including a number of content areas on the site to help inform and provide assistance and guidance to those Carpenter Technology employees who need it. For those with questions, reach out to us at [covid19@cartech.com](mailto:covid19@cartech.com).

**See our Health Resources**

For the latest information on the symptoms of Coronavirus and ways to avoid, please familiarize yourself with content from the Centers for Disease Control and Prevention (CDC).

**CDC Coronavirus (COVID-19) Website** **CDC YouTube Channel**

### Latest Updates

**UPDATED 5:30 PM EST / March 30, 2020**

- "Updated Self-Reporting Requirements" on the [Company Alerts page](#)
- "Layers of Protection" on the [Company Alerts page](#)
- Best practices for working remotely and utilizing bandwidth can be found on the [Tech Support page](#).
- Updated Cybersecurity information on [Tech Support page](#).
- New [Tech Support guides](#) for working remotely with Skype, Teams and home bandwidth usage.

# Common challenges faced by manufacturing companies across the US

## Best Practices / Instruction:

- No consistent guidelines on best practices for preventative measures in Manufacturing (*e.g., Italy has issued comprehensive guidelines*)

## Testing Availability:

- Limited ability to test employees, leading to potential for asymptomatic spread on-site, and unnecessary self isolation

## Communication:

- Significant misinformation present on how disease spreads, symptoms, etc.
- Policies & regulations changing multiple times per week

## Equipment / PPE Availability:

- Critical shortage of consumables (masks, face shields, sanitizer, etc.)
- Infrared Thermometer shortages

## Employee Relations:

- Resistance to new policies & preventive measures



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