COVID-19: Management systems enable workplace health and safety for resiliency now and beyond
Plan: Design a responsive and integrated workforce health and safety management approach for COVID-19

Do: Assess COVID-19 exposure risk at the ground level and implement controls

Check: Collect data and information to continually analyze COVID-19 risk and countermeasure effectiveness

Act: Manage long-term pandemic resiliency with data and continuous improvement through recovery
COVID-19 presented a health, social and economic crisis that the manufacturing industry emergently responded to with critical healthy and safe workplace strategies. While some manufacturers maintained uninterrupted production with an essential workforce, others are now returning employees back to work after significant time away. In either case, managing the hazard of COVID-19 transmission, as well as typical operational inherent risk, requires additional workplace controls. Effectively managing existing and emerging risks will remain a challenge for the months and years ahead. Manufacturers that do so will develop a culture of trust, value and safety with employees, customers and stakeholders for the long term.

As companies emerge from the onset of COVID-19, one of the biggest challenges lies in the need for a flexible, phased and structured strategy. Individual facilities must monitor and plan a strategy based on current local COVID-19 prevalence and exposure risk, recognizing that it may increase and decrease in waves, as well as meet established regulatory guidelines. Information and guidance on COVID-19 risk of exposure and countermeasures are changing daily, with enhancements as the virus is better understood. Enablement technology for COVID-19 testing, antibody testing, social distancing and contact tracing is moving rapidly to offset the transmission hazard. Until organizations can fully protect employees from the virus, business continuity management and workplace controls need to be monitored, adjusted and continuously improved amid a rapidly changing environment.

Business continuity management for COVID-19 requires a coordinated response from leadership, operations and the supply chain, with a strong emphasis on health and safety and human resources and talent. Updates to existing operating models are key in driving risk management efforts. The ideal feedback loop and continuous improvement model to offset risk focuses on existing health and safety management systems that follow a “plan, do, check and act” approach integrated with broader business functions. This approach supports real-time workplace monitoring and the ability to intervene with updated controls as COVID-19 infection prevalence increases and decreases in the coming months and years.

Occupational health and safety management systems support a leading safe work culture

Manufacturing companies began implementing environmental, health and safety (EHS) management systems in the 1980s to manage EHS risk. At the time, this was innovative and helped create safe work cultures and improve EHS performance. Currently, many companies recognize the benefit of this approach and have implemented management systems to improve other business risk functions (e.g., operations, security, quality) and drive comprehensive operational excellence. Taking a health and safety management system approach for COVID-19 will support manufacturing companies with the following benefits:

- Sets the foundation for health and safety leadership
- Integrates health and safety into business functions
- Improves compliance, documentation and tracking
- Provides monitoring and feedback on controls to drive continuous improvement
- Creates a strong culture with high expectations on performance
- Reduces risk when applied across the value chain
Plan: Design a responsive and integrated workforce health and safety management approach for COVID-19

As the workforce continues production or returns to work, it is critical to establish comprehensive governance and a responsive operating system that can command people, processes and technology through the pandemic. The cross-functional components of the plan should link to existing corporate practices to drive compliance, consistency and continuous improvement. COVID-19 policies, playbooks and management approaches that design preventative countermeasures and plans will drive financial stability, workforce resiliency, commercial resiliency and operational continuity.
Market practices for workforce health and safety planning during COVID-19

Leaders are developing COVID-19 playbooks that identify planning and governance for long-term business continuity. They identify the people, processes, technology and performance management requirements for maintaining or ramping up production and returning to work. The playbook should incorporate information and guidance on leading management practices of the virus, as well as evolving government mandates.

A cross-functional leadership team with adequate resources is critical to manage all aspects of business continuity during the COVID-19 pandemic. A command center should be established with specified organizational roles and responsibilities to orchestrate and execute the COVID-19 playbook through pandemic waves. Technical specialists, such as occupational hygienists and safety professionals, must be included to assess workplaces for COVID-19 hazards and implement controls that eliminate or reduce the risk to an acceptable level.

Communications with reliable updates on current workplace status and changes in policies are critical for supporting internal and external stakeholders and driving business continuity through the different waves of the pandemic. Employees need to understand the full scale of leadership commitment to protect their health and safety. Companies are using multiple forms of media and platforms to provide information on health benefits, health and wellness recommendations, and updates in status and to communicate workplace instructions. This is critical as COVID-19 may escalate or change at any given time.

It is equally essential to establish two-way communications throughout the crisis that provide resources for answering questions and surveys that obtain employee feedback. Frequent and intentional communications with the right tone will engage employees and support successful implementation of updated work practice.

The communication plan also must identify key external stakeholder groups (e.g., contractors, supply chains, customers) and include mechanisms for over-communication to respond to changes in market demand and capabilities.

The crisis presents unique challenges with the need for mass-scale return to work measures that support workplace reentry. Resuming production or returning to an office requires significant planning to redesign the workplace and implement critical controls. For most workers, the environment has changed drastically with health screening, protective equipment, traffic flow modifications, workspace redesign and enhanced hygiene procedures. Return to work requires checks and effective communications to support workers with the required behavior changes that this crisis demands.

Plan component | Market practice
---|---
1 COVID-19 playbook or plan | Applicable HR policies (e.g., illness, work from home) must be updated to support COVID-19 response and planning. If applicable, labor relations and unions must be engaged to codevelop and implement necessary changes.
2 Updated HR, employment and labor policies | A risk framework provides a decision-making tool to identify risk levels or phases based on COVID-19 prevalence and local threat of transmission. Each level should set health and safety countermeasures for workplace occupancy, social distancing, health screening, facility disinfection protocol and personal protective equipment (PPE) or mask use.
3 Crisis management team | Business continuity planning must be updated to consider essential functions (operations, personnel, suppliers, customers) and the potential impacts depending on COVID-19 risk. Appropriate measures should be put in place to protect aspects deemed critical and provide contingency plans if those aspects are lost. Contingency planning should consider increased rates of absenteeism, changes to essential operations, and interrupted supply chains or customer demand.
4 Risk management | Leadership must be prepared if or when an employee becomes ill. If at work, protocol supported by trained or medical personnel must be in place to isolate and test the employee. Following appropriate medical treatment, designated personnel must support follow-up of the ill employee and implement procedures to notify potentially other impacted personnel through contact tracing, as well as initiate disinfection protocols. Updated requirements for external reporting to agencies must also be considered.
5 Communications plan | As the playbook or plan needs to be updated throughout the crisis, a management of change process that supports review of updates by cross-functional team members and health specialists will prevent unintended consequences from changes in phase gates or control design.
6 Business continuity and contingency planning | Continuing operations through the pandemic requires effective policy, procedure, communication and control mechanisms. Collection of data and monitoring these mechanisms are critical to support leadership in managing risk through the pandemic. Planning inspections, audits, checks and KPIs for monitoring reports will provide valuable support to the crisis management team and leadership review.
7 Return to work planning | COVID-19: Management systems enable workplace health and safety for resiliency now and beyond
8 Incident management | 10 Performance management strategy
9 Management of change |
Facility managers can evaluate their individualized situations or risk levels based on COVID-19 community transmission risk, worker test results and local government mandates. The risk level then identifies what control measures should be implemented at the facility to minimize direct and/or indirect COVID-19 hazards.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Criteria</th>
<th>Safety protocols</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Zero COVID-19 cases or symptoms in last 2 weeks, vaccine administered</td>
<td>Open for business</td>
</tr>
<tr>
<td>Minimal</td>
<td>Positive COVID-19 symptoms, awaiting test results</td>
<td>Capacity limits</td>
</tr>
<tr>
<td>Moderate</td>
<td>Positive COVID-19 case(s) in the last 2 weeks</td>
<td>Mandated closure</td>
</tr>
<tr>
<td>Substantial</td>
<td>Community risk based on local case/fatality rate</td>
<td>Sample leading practices (reference the following slides)</td>
</tr>
<tr>
<td></td>
<td>Workers test results and vaccine administration</td>
<td>Local government mandate</td>
</tr>
<tr>
<td></td>
<td>CDC guidance: Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission¹</td>
<td>Health screening, temperature monitoring, COVID-19 testing, antibody testing, and antiviral and vaccine administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Depending on local (city, county, state, country) restrictions placed on businesses</td>
</tr>
</tbody>
</table>

Illustrative return to work checklist for offices and industries

- Identify and establish a COVID-19 crisis management team
- Develop a business continuity plan and contingency plan addressing the COVID-19 pandemic
- Develop an exposure control policy and ensure procedures are in place for employees to report illness or symptoms of COVID-19
- Implement procedures for on-site health screening of employees, contractors, and visitors prior to entering the workplace
- Develop procedures for infectious disease preparedness and a response plan
- Develop a training program focusing on COVID-19 safe work practices and preventive measures at the workplace
- Ensure a travel policy is in place and updated to monitor the health of employees who return to work after traveling
- Develop and implement a protocol for handling incoming packages, materials, and supplies
- Develop a disinfection measures protocol to maintain workplace hygiene
- Develop an isolation protocol and contact tracing for employees who become ill at the workplace
- Develop a plan that provides accommodations for vulnerable workers and users of mass transit and for mitigating resurgence
- Identify and list workplace areas that require regular cleaning
- Develop a cleaning schedule and frequency
- Ensure the workplace is disinfected prior to returning to work
- Ensure environmental cleaning and disinfection procedures are followed consistently and correctly
- Prepare an inventory of chemicals and disinfectants used in the workplace and ensure it has safety data sheets
- Ensure cleaning supplies are EPA approved and meet CDC and WHO requirements
- Designate a team to conduct intermediate inspections on the environmental condition and hygiene of the workplace for each shift; identify gaps and implement corrective measures
- Categorize employees based on their occupation: production workers, office workers, cleaning staff
- Identify and list PPE required for each work stream
- Provide PPE to employees based on their occupation on a regular basis
- Develop and implement strict social distancing protocols (e.g., in break rooms, locker rooms, workstations, restrooms) to ensure employees, contractors, and visitors strictly adhere to social distancing at the workplace
- Identify risk-based areas and develop engineering or administrative controls wherever applicable
- Identify and categorize trainings based on employee occupations
- Develop a training program that includes the following: the basics of COVID-19, symptoms and testing, exposure control policy, on-site health screening, housekeeping, use of PPE, types of PPE, social distancing, handwashing, isolation protocol, disinfection protocol, cleaning procedures, hazards of disinfectant chemicals, flexible sick leave policies, travel policy, telework policy, illness and incident reporting, and COVID-19 resources from the CDC and WHO
- Deliver web-based return to work training to employees, which should be completed prior to returning to the workplace

COVID-19: Management systems enable workplace health and safety for resiliency now and beyond
**Do:** Assess COVID-19 exposure risk at the ground level and implement controls

COVID-19 should be approached in the same way as all workplace hazards: with analysis and implementation of controls. COVID-19 hazards have been identified as people in close contact with one another (within about six feet/two meters); transmission of respiratory droplets produced when an infected person coughs, sneezes or talks; and potentially, surface transmission.¹ Health and safety professionals are well suited to implement workplace controls using the Hierarchy of Controls, an effective method to eliminate or reduce risk of injury or illness through elimination, substitution, engineering controls, administrative controls and personal protective equipment (PPE). The Hierarchy of Controls can be used to determine needed controls to support a worker’s safety from COVID-19 through all job tasks. Just like other health and safety hazards, while PPE may be used widely, it should be considered the last line of defense in protecting workers from COVID-19.

Reimagining the manufacturing workplace and making it safe during the COVID-19 pandemic

1. Social distancing in common areas and workstations

2. Medical strategies: COVID-19 testing, antibody testing, antivirals and vaccines

3. Health screening for workers and guests

4. Temperature monitoring

5. Managing sick workers and their return to work

6. Contact tracing

7. Increased ventilation

8. Increased security and staggered checkpoints

9. Physical barriers

10. Increased cleaning and disinfection

11. Hand-washing stations and hand sanitizer

12. No-touch surfaces (electronics, plumbing, payment)

13. PPE (respirators, face shields, gowns and suits, gloves, masks)

14. Standard operating procedures (SOPs)

15. Training

16. Signage

COVID-19: Management systems enable workplace health and safety for resiliency now and beyond
It is vital that employees understand and adopt the new daily COVID-19 routine that includes on-site changes, as well as guidelines for hours away from work. Off-site safety measures, including preparing for work at home, precautions for public transportation, adherence to local social distancing guidelines, and mask protection and symptom monitoring, may be required before a worker enters the facility. In manufacturing especially, COVID-19 changes the workplace and its associated mental stressors will most likely increase the inherent risk of workers. As a result, the risk of working in a production environment with hazards (e.g., tools, machinery, powered industrial trucks (PITs), hazardous materials) is increased and must be reanalyzed and controlled at the ground level. It is crucial to support workers in the adaptation to the new environment with training and coaching, both formally and on the job.

Successful implementation of updated worker guidelines and COVID-19 countermeasures is dependent on changes in worker behavior to support social distancing; respiratory etiquette; hand hygiene; and adherence with new procedures, equipment or technology. Behavior-based safety (BBS) programs are common practice for focusing and correcting daily behaviors that may contribute to taking unnecessary risk when conducting job tasks. A list of critical behaviors, such as social distancing, respiratory etiquette, hand hygiene, adequate use of PPE and following updated procedures, should be identified and improved through a BBS program. Coaching, observing, tracking and measuring behaviors, along with providing feedback, will reinforce positive actions and eliminate at-risk behaviors. Collecting information will support further enhancement of COVID-19 safeguard implementation.

Companies with leading safe work cultures will additionally address workers coping with stress and manage workplace fatigue as a result of COVID-19. The ability of workers to weigh options, assess risks and make better choices for the future is significantly impaired when employees are under stress or mental ill-health. As a result, it is beneficial to provide resources and strategies that will help manage psychosocial risk by enhancing the mental health and cognitive agility of workers. One common approach that companies are currently taking is issuing a survey to collect feedback on workplace controls and worker resources.
Check: Collect data and information to continually analyze COVID-19 risk and countermeasure effectiveness

As manufacturers work to tactically design the new workplace and continue operations, long-term resiliency through the pandemic will depend on continued checks on controls. The playbook and plan design should expect interference from waves in COVID-19 cases and/or disruption to operations. As a result, playbook design should begin with checks on all the controls previously discussed to measure their effectiveness. This may be done using regular inspections, walk-throughs, audits, observations and data analysis. As supplies become available, companies are looking toward mass COVID-19 and antibody testing. These checks support driving the safest workplace in this environment, as well as holding resources accountable with the roles and responsibilities to realize playbook objectives. The checks should be used to provide real-time reporting and review for the crisis management team and leadership. Health and safety digital solutions with COVID-19 content are key enablers in collecting the necessary data on checks and playbook performance monitoring. Checks, data collection and key performance indicators will support decision-makers with standardized reporting to drive necessary changes in risk management and business continuity and to escalate communications as needed.
Illustrative COVID-19 scorecard for monitoring and measuring playbook realization

1. Risk management
   - Risk level
   - Number of COVID-19 cases, lost time and fatalities

2. COVID-19 Illness
   - Contact tracing completion and status
   - Employee quarantines and monitoring
   - Shuttle or isolation events and management

3. Compliance management
   - Employee health self-assessment completion and results
   - COVID-19 testing and antibody results
   - COVID-19 antiviral and vaccine deployment

4. Health surveillance
   - Health and safety observations based on COVID-19 critical behaviors
   - Leadership walk-through completion

5. Job hazard analysis (JHA) and workplace control implementation
   - COVID-19 playbook training completion
   - Specific COVID-19 role (e.g., contact tracing lead, health screening lead, COVID-19 case manager) training
   - COVID-19 playbook communication deployment
   - COVID-19 worker survey completion and results

6. Behavior management
   - Work area and work practice inspection completion
   - Hygiene and cleaning inspection completion
   - Post-infection inspection completion
   - Remote or off-site work practice inspection completion
   - Internal audit compliance with company and governmental policies
   - COVID-19 playbook communication deployment

7. Health and safety audits and inspections
   - Corrective and preventative action implementation
   - Worker concern and feedback issues addressed

8. Training and worker awareness
   - Disinfection completion status
   - Company and governmental COVID-19 policy compliance

9. Continuous improvement
   - CVOD-19 facility risk assessment completion
   - Current COVID-19 control status
   - Resource allocation and facility occupancy
   - Business continuity critical resource, vendor, supply and customer status
   - Communications status
   - Leadership walk-through completion

Lagging □ Leading ▶
Digital solutions can provide real-time data regarding COVID-19 risk management and performance monitoring

Health and safety digital solutions can provide companies with the data and dashboards needed for leadership and the crisis management team to effectively monitor the pandemic through risk monitoring, control implementation, checks and KPIs. These can be integrated with the various technology point solutions being used for contact tracing, social distancing, health screening and wearables. Functionality of a COVID-19 digital solution may include:

- Risk monitoring
  - Communication tracking
  - KPIs
  - Workforce deployment

- COVID-19 testing and tracking
  - Employee quarantine monitoring
  - Health screening assessments
  - Vaccine and antiviral management
  - Respirator fit testing

- PPE adoption
  - PPE supply
  - Disinfection completion

- Infection event reporting and investigation
  - Potentially exposed employee identification and management
  - Significant policy violation events and investigations

- Playbook training or return to work training
  - Changes in HR policy training
  - Disinfection team training
  - Health leads for isolation, screening and contact tracing training

- Compliance with OSHA regulations and CDC guidance
  - Compliance with internal policy

- Work area and work practice inspections
  - Hygiene and cleaning inspections
  - Post-infection inspections
  - Remote or off-site work practice inspections
  - Internal audit compliance

- Wearables
  - Contact tracing
  - Social distancing
An occupational health and safety management system for COVID-19 lays a framework for managing this crisis with controlled and judicious measures. One of its most valuable aspects is the ability to measure and act on planning and controls as the pandemic continuously changes with:

- **COVID-19 cases and transmission**
- **Changes in local community risk due to COVID-19**
- **Scientific hazard information about the virus**
- **Changes in guidance on workplace countermeasures from OSHA and the CDC**
- **Updated mandates and requirements from federal, state and local government**
- **Impacts to business-critical aspects, such as personnel, equipment, vendors, supply chains and customers**

- **Enhanced technology and wearables for contact tracing, as well as social distancing and other critical behaviors**
- **Identification and need to implement leading practices**

Unique changes may come in many forms, but a management system approach with strong governance, controls and monitoring with digital solutions will support managing the risk. Additionally, it will support continuous updates to planning and the sharing of leading practices internally and externally with the community and industry to support driving long-term resiliency through the course of the epidemic. Doing this effectively will build trust with key stakeholders and drive long-term value.
How will strong management of the COVID-19 pandemic support a long-term culture of trust, value and safety?

Trust has become increasingly challenging to gain across key stakeholders as pressure grows to demonstrate safety and health yet maintain operations. Trust will propel organizations to return to normal. Utilizing strong health and safety management systems through the COVID-19 pandemic will build a resilient business that creates long-term value for all of its stakeholders, including:

- A refocus on worker health and safety
- The enablement of strong engagement and communications with stakeholders
- Resiliency that is built into supply chains
- Enhanced risk management frameworks
- A reimagined workplace
- Drive long-term value

All aspects of product interaction drive trust

Based on a recent study of the top trusted brands in the US, these attributes prevailed as the most significant drivers in affecting trust.
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