As rates of new COVID-19 cases have begun to level off in the U.S. – and decline in some areas – policymakers and business leaders have cautiously shifted their attention toward planning a safe return to normal business operations. Some states, such as California, have proposed phased reopening plans that incrementally lift restrictions on businesses and recreational activities based on indicators of risk and need. As restrictions are lifted, business leaders and employers will be challenged not only to stay informed of evolving government policies concerning their business but must also implement these policies appropriately for their operations while remaining cognizant of ongoing risks posed by COVID-19.

Sporting venues introduce unique challenges to reopening efforts during the COVID-19 pandemic due to the sheer magnitude of staffing operations and attendees, seating proximity, the generally high level of contact among athletes, the number of third-party vendors, and the intensity of spectators’ reactions which commonly include physical contact, cheering, etc. The reopening of sporting venues should be approached on a case-by-case basis, with attention to local, state, and federal guidelines. The reopening process should be one component of a venue’s broader Return to Normal Business Operations Plan to be implemented alongside a Case Management Plan, Enhanced Disinfection Protocols, and Worker Hygiene and Best Practices Guidelines. Additionally, the successful reopening of sporting venues and sports leagues in the U.S. will require careful coordination between sporting venue owners and management, league management and administration, athlete associations and athletes, official associations and officials, performers, press/media, vendors, and other third parties which utilize sporting venues.

Owners and managers of these facilities businesses can begin the reopening process by addressing some fundamental questions such as:

- What actions can we take to best maintain and protect the health of staff, visitors, and athletes who work in or visit our venue?
- What health and safety needs should be considered prior to reopening buildings/facilities?
- How do we effectively communicate with staff, visitors, athletes, and communities to promote transparency, and ensure that all groups are fully informed of our ongoing efforts to prevent COVID-19 transmission within our venue?
- What is our plan for case management when a) any of our staff or athletes report close contact with someone testing positive for COVID-19; b) individuals diagnosed with or suspected to have COVID-19 visit our establishment; or c) someone falls ill with or exhibits symptoms of COVID-19 while on our premises?
- What additional supplies and/or medical support should we have in place due to COVID-19 prior to opening?
- What contingency plans should we have in place if our venue is required to close again by law or a resurgence of COVID-19 cases?
- How can we effectively manage and mitigate crowds; how do we put protections in place for athletes and support staff; and how do we identify all the high-touch surfaces for proper disinfection?

The information herein provides general guidance in line with Centers for Disease Control and Prevention (CDC) recommendations and outlines specific considerations for ownership and management of sporting venues when developing reopening plans.
Unique Challenges for Arenas and Stadiums

In addition to the factors summarized above, stadiums and arenas have additional unique challenges to address including but not limited to:

- Number of attendees and density of seating arrangements
- High density of patrons traversing the venue
- Players and fans traveling from other cities, states, and countries
- Social contact (e.g., handshakes, high-fives)
- Player-to-player contact
- Lines and crowding at concessions and restrooms
- Contact during bag inspection and ticket scan
- Sharing of food and beverages (high volume of hand-held foods)
- Stadium ushers and vendor interactions with patrons
- Commentator and press present, oftentimes in tight spaces (e.g., press box)

The following subsections summarize some of these unique factors and challenges as they pertain to reducing health hazards associated with COVID-19, and are intended to help planning for safely reopening sports stadiums and arenas.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Sub-Groups</th>
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<tbody>
<tr>
<td>Grandstands</td>
<td>Sections</td>
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<td>Levels</td>
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<td>Suites</td>
<td>Press Box</td>
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<td></td>
<td>Box seats</td>
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<td>Hospitality</td>
<td>Welcome area</td>
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<td>Help area</td>
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<td>Parking</td>
<td>Tailgating</td>
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<td></td>
<td>Attendee/Patron</td>
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<td></td>
<td>Athletes, Staff, and Vendors</td>
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<tr>
<td>Vendor row</td>
<td>Fixed structure</td>
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<tr>
<td></td>
<td>Roaming vendors</td>
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<tr>
<td>Concessions</td>
<td>Fixed structure</td>
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<td></td>
<td>Roaming concessions</td>
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<tr>
<td>Hallways and concourse</td>
<td>Enclosed and covered</td>
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<tr>
<td>Ground and exterior walkways</td>
<td>To and from arena/stadium, parking, and nearby buildings</td>
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<tr>
<td>Offices</td>
<td>Administration</td>
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<td></td>
<td>Show</td>
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<td>Other</td>
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<td>Field</td>
<td>Athletes</td>
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<td>Officials</td>
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<tr>
<td>Persons</td>
<td>Spectators and participants</td>
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<td>Competitors and their families</td>
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<td>Performers</td>
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<td>Special Guests (e.g., VIPs and elected officials)</td>
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<td>Game Officials</td>
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<td>Vendors</td>
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<td>Sponsors</td>
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<td>Security</td>
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<td>Workers (Event, venue operations/maintenance, management, and staff)</td>
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</tbody>
</table>

The remaining topics addressed are as follows:

- General Guidance
- Tailgating and Parking
- Crowd Control (Dynamic Moving Crowds)
- Crowd Control (Stationary Crowds)
- Athletes and Support Staff
- Press and Third Parties
- Restrooms
- Food and Merchandising
- Intermission and Other Game Pauses
- Arena Downtime Best Practices

While addressing the unique factors, challenges, and categories outlined in this document, owners and managers of sporting venues should consider the different areas and stakeholders that will be affected by a controlled reopening during the COVID-19 pandemic. Each area and stakeholder group has been further divided in the TABLE above and should be considered during the planning and implementation of a return to normal operations plan. These defined groups are consistent with the group designations outlined by the U.S. Department of Homeland Security in their published Evacuation Planning Guide for Stadiums.
General Guidance

The reopening of sporting venues should be approached on a case-by-case basis, with attention to local, state, and federal guidelines. Although each venue and/or sport will have unique challenges, the following can be used as general guidance:

- Reduce number of spectators by controlling the number of tickets available
- Consider foregoing prizes and giveaways during sporting events and games
- Consider holding some sporting events without fans
- Mark distances of six feet in queues (e.g., entrances, concessions, restrooms)
- Electronic forms of payment should be used instead of cash or credit cards if possible
- Employees for all arenas and stadiums should wear masks/coverings and gloves while working
- Patrons should be encouraged to wear masks/coverings when attending sporting events
  - Consider providing season ticket holders with an official team facemask
  - Consider selling masks for those who wish to wear one
- Ticket holders experiencing symptoms of COVID-19 (e.g., cough, shortness of breath or difficulty breathing, fever, chills, repeated shaking with chills, muscle pain, headache, sore throat, new loss of taste or smell) should be encouraged to stay home and abstain from attending any events at the arena or stadium
  - This Information should be made available to ticketholders prior to events via text, email, and/or other forms of communication
  - Consider adding signage to parking lots and entrances discouraging ticketholders and patrons from entering the arena or stadium if they are experiencing any symptoms of COVID-19
  - Consider screening ticketholders for COVID-19 symptoms prior to entry either electronically and/or in person prior to entry (e.g., temperature checks and symptom questionnaires)
  - Medical professionals on site should be prepared to attend to any patron or staff member that falls ill or develops COVID-19 symptoms during an event in accordance with a comprehensive facility Case Management Plan and local emergency medicine guidelines
- Disinfection measures should be enhanced:
  - Identify high-touch surfaces and ensure disinfection is completed routinely
  - As much as possible, personal sporting equipment should not be shared and should be disinfected immediately after use
  - Equipment should be disinfected with Environmental Protection Agency (EPA) approved disinfectants between uses (EPA List N)
  - Consider appointing full-time restroom attendants
  - Consider replacing hand dryers with disposable paper towels
  - Workers involved in cleaning and disinfecting should be properly trained of the chemical hazards and personal protective equipment needed during disinfection
- Consider adding mobile hand wash stations to increase use
- Disinfect entire facility after each event and more often for high touch areas such as restrooms
- Stagger the number of employees in breakrooms to maintain physical distancing
- Signage should be displayed discouraging exchange of high fives and other physical celebratory movements
- Automated hand sanitizer dispensers should be available throughout the facility for patrons and employees
  - Signage should be posted at each hand sanitizer station encouraging its use, and illustrating proper hand sanitizing technique
- Development of a smart phone application to provide announcements, recommendations for safe attendance, maps of the venue, food and beverage ordering, and to meet any other needs patrons may have, will assist in ensuring a safe and fun atmosphere during events
- Encourage event promoters, sponsors, and advertisers to include messaging that reinforces safe practices and behaviors

The general guidelines and examples of practical measures to consider provide a starting point for planning and preparedness prior to reopening. These measures aim to reduce the risk of COVID-19 transmission with the understanding that arenas and stadiums still must adhere to federal, state, and local health authority guidance. Beyond these general guidelines, sporting venue leadership and management will need to consider venue-specific steps to protect the health of staff, visitors, athletes, and communities. The following subsections outline practical measures that can be taken for each unique circumstance to help reduce risk.

Tailgating and Parking

TAILGATING

- Due to the difficulty in controlling congregation and loitering, tailgating should be prohibited until social gatherings are deemed safe and allowed by local and state authorities
  - When deemed safe by authorities, the venue should consider initially reducing capacity of tailgating lots (e.g. 50% capacity or other metric necessary to achieve adequate distance between groups), and designate separate lots for tailgating and regular patron parking
  - Hand washing stations should be distributed evenly throughout the tailgating area along with no-touch garbage and recycle bins
– Additional disinfection and distancing measures should be incorporated for portable toilets:
  ○ Provide adequate handwashing stations and hand sanitizer for each toilet
  ○ Encourage distancing in lines for portable toilets by marking distances of six feet
– Tailgating groups that arrive and tailgate together should number no more than 10 individuals
  ○ Passerby’s and strangers are discouraged from tailgating in a group together
  ○ Food and beverages should not be shared between tailgating groups
– At least one empty parking space should be required between each tailgating vehicle

PARKING
> In accordance with venue capacity, parking lot capacity should be reduced to 50%
  – Patrons should be directed to pre-selected, designated spots to allow for space between cars
  – Consider allowing handicap, special needs, or vulnerable patrons (e.g., older adults, immunosuppressed) to enter early
  – Employees, athletes, and press should also be directed towards specific spots to allow for distance between cars
  – Additional spots should be blocked with traffic cones to ensure distancing guidelines are followed
  – The increased distance between cars discourages the possibility of grouping and socializing while entering the arena or stadium
  – Consider coordinating with nearby parking lots/garages not affiliated with arena to expand parking capacity and encourage distancing for all patrons
  – Increased staffing for parking and crowd management may be needed
  – If individuals pre-purchased season or game parking passes, consider:
    – Offering a refund or credit toward a future season’s parking passes
    – Offering incentives for those willing to give up spaces to promote distancing, such as discounted tickets/concessions at a future game, premier parking spots for a future game, priority for season parking pass lottery, etc.

Crowd Control

DYNAMIC MOVING CROWDS
> Mobile ticket sales and scanners should be used to minimize contact between fans and employees
> The number of spectators at each arena or stadium should be limited and their movement and positioning managed so that likelihood of contact between individuals is decreased
  – Consider allowing entrance of groups by designated zones in the arena or stadium. As shown in Figure 1 on page 7, Crowd Control Diagrams section, Opposite Zones (Zone A and Zone C, for example) can be let in at the same time but staggering Sections (such as even or odd)
> Mass entry and exiting from sports arenas should be controlled and scheduled using announcements, visual aids, ushers, and/or electronic forms of communication
  – Instruct patrons to arrive at different stages, with designated areas for standing to promote adherence to physical distancing requirements
    ○ Consider allowing patrons with disabilities or vulnerabilities (e.g., older adults, immunosuppressed) to enter early
  – Clear and consistent messaging regarding entry and exit procedures should be available to all patrons including those requiring accommodations for communication in order to prevent confusion and maintain physical distance between patrons
    ○ This can be accomplished using a text and/or email notification system along with designated arrival times on tickets and ushers controlling movement into seats
  – Venues should consider opening gates earlier to allow more time for tiered entry and reduce risk of lines/crowding
  – For exiting, consider controlling the exiting of patrons by enforcing social distancing and allowing patrons to leave via multiple designated paths with usher guidance (See Figure 2 on page 7, Crowd Control Diagrams)
> Prohibit bags or install contact-free detectors
> Provide cleaning wipes and hand sanitizer throughout facility (entrances/exits, seating sections)
> Congregating in common areas should be discouraged by signage, stanchions and staff
  – Be sure not to block or restrict emergency exits
STATIONARY CROWDS

> Reduce number of occupied seats in arenas and adjust seating layouts
  > Consider limiting floor seating or ensure distance between spectators from players/staff
  > Stagger seating allowing for an empty row between patrons, and limit groups to 10 people or fewer. Spacing across rows should be maintained (See Figure 3 on page 7, Crowd Control Diagrams)
  > Consider alternating dates for season ticket holders or providing options for selecting a limited number of games to attend assuring spacing and capacity limitations. Potentially offer closer seats to avoid crowding

> Reduce the capacity of boxed seating by at least 50%
  > If food service is allowed to continue, then mobile ordering is recommended, food is carried in on carts, left near the entrance of the box, and the server leaves immediately to prevent lingering or socializing

> Increase crowd control staff and ushers to minimize congregating groups over 10 people.
  > Consider eliminating “standing room only” areas.

> Owners and managers of sporting venues should work in coordination with sports leagues, referee associations, and vendors in order to ensure that third parties utilizing the sporting venue are regularly tested for COVID-19 and screened for COVID-19 symptoms by a healthcare professional

> At a minimum, athletes, referees, staff, and all other third party vendors should be screened for symptoms and fevers prior to all games and practices, and before travel to road games

> Travel of players, game officials, and staff between venues should follow guidelines provided by the CDC, including maintaining distance, wearing a mask, and following personal sanitation practices

Press and Third Parties

> Physical distancing should be maintained to the highest extent possible to minimize interaction with players, venue staff, and patrons

> All movement of press and third-party staff around the arena or stadium should be limited to only those required by their job responsibilities

> In-person interviews before, during, and after games are discouraged
  > For game-side interviews and reporting, a virtual station to interview athletes and coaches can be used to promote physical distancing

> All third parties should have the following COVID-19 related plans in place at minimum prior to starting work in an arena or stadium
  > Infection Control Plan
  > Case Management Plan including notification for confirmed or suspected positive cases
  > Disinfection Procedures

> Press boxes should be reduced to 50% capacity if possible

> Consider transparent partitions for multi-network announcer tables if these roles can’t be relocate to press boxes

> As with guidance described above for indoor rooms, ventilation in third party suites or areas (e.g. Press Box, Security Offices) should be adjusted based on guidelines and recommendations set forth by the ASHRAE for reducing transmission of infectious diseases

> After-game press conferences are discouraged from occurring
  > If they do occur, then a virtual setup between players, coaching staff, and the press is encouraged or virtual conferences

Athletes and Supporting Staff

> Athletes and supporting staff are discouraged from interacting with patrons

> Autographing memorabilia and taking pictures with patrons should also be discouraged

> Cheerleaders should avoid interacting with the crowd and taking photos with patrons

> Athletes should limit interactions with opposing teams to just game play

> Athletes are discouraged from socializing or lingering in locker rooms
  > Locker rooms should be disinfected prior to use, between each use, and immediately after players vacate the room at the end of the game

> Ventilation in all rooms within the facility should be adjusted based on guidelines and recommendations set forth by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) for reducing transmission of infectious diseases

> Supporting staff should use face masks
Restrooms

- Signage in restrooms should be posted encouraging handwashing and illustrating proper handwashing technique.
- While still ensuring complete privacy, doors leading into restrooms should be kept open to eliminate the need to touch the doors and handles.
- If doors leading to restrooms are unable to remain open, then paper towels should be provided inside of restrooms along with trashcans placed next to doors outside of the restroom.
  - This setup allows an individual to open the restroom door using the paper towel without having to touch the door and then immediately discard of paper towels.
  - Restroom guidelines apply to both public/patron and private/employee restrooms.
- Consider adding more staff to ensure bathrooms are kept disinfected and that crowds do not form around restrooms.

Food and Merchandising

- Food and beverage services should be modified to provide enhanced health protections.
  - Food service practices should be aligned with guidelines outlined the Food and Drug Administration.
  - Consider encouraging electronic ordering and/or limiting in-person ordering.
  - Provide no-touch refuse and recycling bins.
  - Offer pre-packaged eating utensils and straws.
- Communal water fountain use should be discouraged, and individual water bottles should be provided.
- Sale of bottled or canned beverages should be prioritized over open cups and soda fountain stations.
- Consider replacing seat-side food vendors with order takers and deliver all concessions.
- Phone applications should be used for food ordering and pick up when possible. When not possible, tape or paint should be used to indicate lines and proper distances patrons should adhere to while waiting for food and drinks.
- Gift shops and other merchandising locations should limit the number of customers entering.
- Tape or paint should be used to indicate lines and proper distances patrons should adhere to while shopping in aisles and waiting in line to checkout.
- When possible, aisles should be converted to one-way to reduce traffic and contact between patrons.
- Mobile pay and credit card payment options should be considered over cash.
- Provide cleaning wipes and hand sanitizer throughout facility (entrances/exits, seating sections).

Intermission and Other Game Pauses

- It is important to limit and control patron travel from their seat during intermission (e.g., halftime, innings, periods, etc.) as much as possible to limit interactions and crowding.
- Arenas and stadiums are encouraged to stagger how patrons leave their seating section as a group, except for emergencies and restroom visits.
- Ushers should be instructed to allow a pre-specified number of patrons to leave at a time by either section or rows within a section.

Arena and Stadium Downtime Best Practices

- Discourage grouping and gathering of employees during down-time.
- In between sporting events, stadiums and arenas should be thoroughly cleaned and disinfected.
- Food service areas, restrooms, locker rooms, shops, and any other areas where people are consistently present should be disinfected routinely.
- Essential personnel on game days and non-game days should be well defined.
- Ensure support staff and third-party vendors have infection control plans and disinfection protocols in place even for non-game day activities.
- Athlete training and support staff should maintain physical distancing as much as possible during down time.
Conclusion

Arenas and stadiums present unique challenges to COVID-19 mitigation because of factors such as the sheer size of attendance, quantity of third-party vendors, seating proximity, the number of high-touch surfaces, the generally high level of contact between athletes, and the intensity of spectators. Owners and managers of these venues should start planning the reopening process, as part of a larger Return to Normal Business Operation Plan, by focusing on aspects of crowd control and mitigation, physical distancing, disinfection and hygiene, and ensure all third parties have adequate infection control, case management and communication plans in place. In addition, the venue should provide multiple layers of protection (e.g., physical distancing; disinfection; communication; and crowd control) to reduce the chances of a single point of failure that places people at risk. Plans also should flexible regarding potential changes that may occur as business life progresses amid the COVID-19 pandemic. Combining layers of protections with such flexibility can position arenas and stadiums to effectively respond, adapt, and adjust, rather than simply react, to ongoing COVID-19 risks.

Resources - General

The EPA has published a frequently updated list of disinfectants for use against SARS-CoV-2: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2.


The CDC and White House have released a phased approached for workplaces: https://www.whitehouse.gov/openingamerica/.


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