





# HOTEL – HOSPITAL Covid-19 response Playbok

April 2020

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#### **PLAYBOOK OVERVIEW**

<b>01</b> Use cases an guidelines	Use cases and	<ul> <li>Definitions of alternate uses for a hotel property</li> </ul>	
		<ul> <li>Guidelines to determine types of alternative use/care sites a hotel property can offer the healthcare system</li> </ul>	5 – 12
02	Non-clinical conversion and operations	<ul> <li>Details the conversion and operations of a hotel to house non- medical patients</li> <li>Information on preparing and operating a hotel property to house COVID-19 crisis responders</li> </ul>	13 – 23
03	Clinical conversion and operations	<ul> <li>Defines the required preparation of a hotel property to house medical (COVID-19 and non-COVID-19) patients</li> <li>Guiding list of relevant staff who can perform operations</li> </ul>	24 – 45
04	Post COVID-19 assistance period	<ul> <li>Information on converting a hotel back to its original purpose</li> <li>Conversion period will require space conversion and a defined waiting period prior to re-opening</li> </ul>	46 – 47
05	Appendix	Playbook references	48 – 49

#### **PRINCIPLES OF THE PLAYBOOK**

#### **Document does...**

- Provide guidance for converting a hotel to and from operating as an alternative care site
- Provide operating guidance for a hotel acting as an alternate care site
- Leverage industry expertise and the latest existing guidelines

#### Document does not...

- Define the type of patient each facility (hotel) should accept
- Define how to triage new patients who arrive at a facility (hotel)
- > Determine the payment model
- Define commercial agreements, leases and other legal terms

#### **REQUIREMENTS CONTAINED WITHIN THIS PLAYBOOK**

- Requirements for the conversion and operations of a hotel property are indicative of what is required/recommended based on our knowledge today
- We leveraged several high-profile resources to collate the requirements/ recommendations

*Note: for a full list of resources see appendix: playbook resources* 



When a property chooses to go through a conversion it will be driven by government agencies; final requirements will be unique by property based on local need and may be led by several agencies

# **USE CASES AND GUIDELINES**

 $\mathbf{01}$ 

#### **THREE ALTERNATE USES FOR A HOTEL PROPERTY**

To support the healthcare industry, there are three potential alternate uses for hotels during the COVID-19 crisis

# **01** House COVID-19 crisis responders

Non-clinical use

- Guests are primarily responders to the COVID-19 situation:
  - Visiting volunteers
  - Healthcare professionals
  - FEMA and other emergency service providers/contractors
- Operations closely resemble business as usual with increased levels of cleaning, social distancing, and contactless operations

#### **D2** Care for non-critical, non-COVID-19 patients (non-isolation)

- Guests are patients who require medical professional oversight and do not require isolation
- Some modifications are required to accommodate patients:
  - Physical space: sleeping rooms, conference space, offices, and public spaces
  - Standard operating plans: updates are required to comply with safety and compliance regulations

# **03** Care for COVID-19 patients with mild symptoms (isolation)

- Guests are patients requiring isolation and medical oversight
- Significant modifications are required to accommodate patients:
  - Physical space: sleeping rooms, conference space, offices, and public spaces require transformation
  - Standard operating plans: significant updates to comply with safety and compliance regulations for treating isolation patients

*Note: A hotel property may become an alternate care site for one or more of the above use cases* 

Clinical use

## WHAT KIND OF ASSISTANCE CAN MY HOTEL PROVIDE

There are key considerations to determine if/what assistance can be provided by a property when considering whether to become an alternate care site to assist in the COVID-19 response



Not all properties are created equal and as such, different properties may lend themselves better to different use cases

Well-located, high sleeping room capacity, full-service properties may be better suited for all the use cases but properties with certain locations (e.g. distance to hospital), property characteristics (e.g. no commercial kitchen), or limited room types (e.g. a small number of accessible rooms) could restrict which use cases can be fulfilled

Each hotel should be considered on an individual basis depending on the current and future needs of the healthcare system

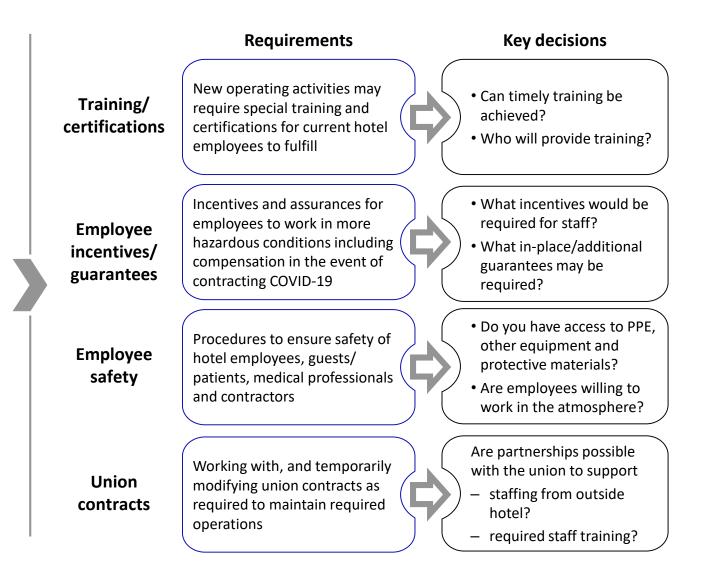
Not exhaustive

Location considerations	Property considerations	Room considerations	Other considerations
<ul> <li>Proximity to healthcare providers such as:</li> <li>Hospitals</li> <li>Pharmacies</li> <li>Diagnostics / labs</li> <li>Ease of access to property</li> </ul>	<ul> <li>Interior versus exterior corridor</li> <li>Number and location of elevators</li> <li>Use and function of common space areas</li> <li>Commercial kitchen for meal preparation</li> <li>Security access points</li> <li>Parking location and number</li> </ul>	<ul> <li>Number of ADA/Accessible rooms</li> <li>Number of adjoining rooms</li> <li>Number of single vs. double bed rooms</li> <li>Type of locking mechanism for rooms</li> </ul>	<ul> <li>Willingness to convert rooms to hospital specifications</li> <li>Ability of hotel staff workforce to support where required</li> <li>Relationship of third-party providers where outsourcing is required</li> <li>HVAC capabilities needed for clinical care (e.g. negative pressure)</li> </ul>

#### **HOTEL EMPLOYEE CONSIDERATIONS**

Prior to converting a hotel, there are several talent related considerations to be taken into account

There are several ways hotel leadership can work to protect and support their employees when operating during the COVID-19 crisis



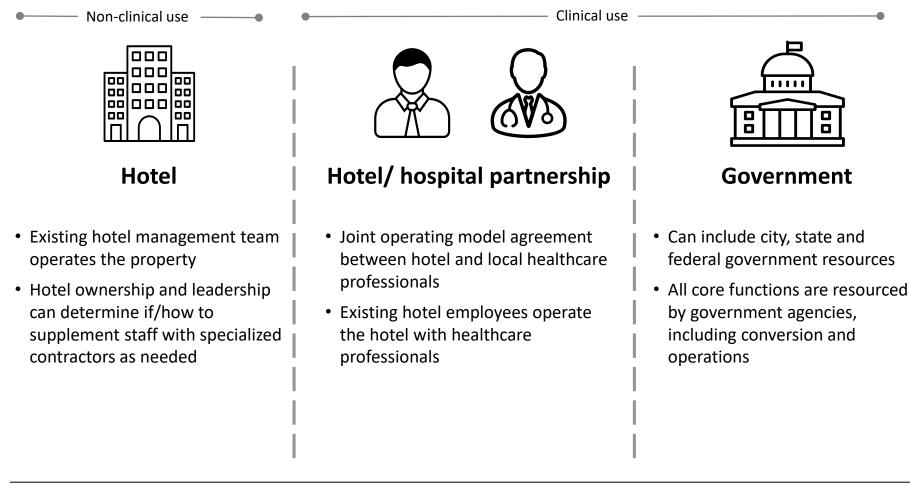
#### ALTERNATE CARE SITE PRE-OPENING OPERATIONS PREP

Prior to opening a hotel property in an alternative manner, there are four critical components of the hotels operations which need to be addressed

HOTEL LEADERSHIP	<ul> <li>Define temporary leadership model to include healthcare professionals for alternate clinical care sites</li> <li>Assign roles and responsibilities of leadership across hotel, healthcare, and government (where applicable)</li> </ul>
SLEEPING ROOM & RATE DEFINITION	<ul> <li>Define operational room types and counts based on capacity recommendations to avoid overcrowding</li> <li>Determine rate rules in conjunction with health experts (e.g. optimal length of stay restrictions) and organizations donating rooms (e.g. room sponsors)</li> </ul>
RESERVATION MANAGEMENT	<ul> <li>Non-clinical sites: Identify channels to accept reservations in non-clinical alternate care site</li> <li>Clinical sites: Determine new patient registration procedures for clinical alternate care sites</li> </ul>
TRAINING	<ul> <li>Identify staff who require additional education or certification required to carry out tasks</li> <li>Provide on-boarding to entire staff on overall operations and department operations</li> </ul>

# **HOTEL OPERATING STRUCTURES**

Depending on the alternate purpose a hotel operationalizes, there are different team structures which can be implemented



HHS specifies that at no time will there be an Alternate Care Site that combines COVID-19 Symptomatic Patients with Asymptomatic Personnel

## **CONSIDERATIONS WHEN ASSIGNING ROLES AND RESPONSIBILITIES**

As you convert your hotel, different requirements will define the type of staff that can handle certain on-property activities and what sub-contacting is required



Hotel employees

Hotel functions will fall into two categories depending on the hotel's alternate function:

- BAU activities that may be performed with existing staff with no training / certification (e.g. on-property maintenance)
- Activities requiring special training / certification (e.g. medical waste removal) which may be undertaken by existing staff who obtain the certification



Government resources

Government appointed resources to operate various portions of a hotel property

- Government agencies may include any combination of city, state, and federal
- Agencies will staff daily operating activities and subcontract function as required (e.g. F&B, laundry services, etc.)



# Healthcare professionals

- Clinical professionals: responsible to provide all medical activities requiring certification and credentials
  - Note: medical professionals will take an active lead in hotel leadership
- Non-clinical healthcare professionals: assist in daily operating activities. Including, but not limited to:
  - Environmental services (EVS)
  - Back of office hospital employees



# Specialized contractors

- **Operations activities:** roles and responsibilities which require additional resources outside hotel employees and healthcare professionals (e.g. security)
- Functions: entire hotel operating functions which cannot be performed by existing hotel infrastructure due to
  - regulations or hotel
- leadership's desire (e.g.
- laundry of linens, F&B
- preparation)

# **HOTEL CONVERSION AND OPERATING FRAMEWORKS**

The conversion of a hotel to act in support of the healthcare industry is divided into a conversion and operating stage

#### Hotel conversion plan framework

Before housing COVID-19 crisis responders and/or patients, the hotel must be converted based on its alternative purpose



#### **General site preparations**

Required and recommended general building infrastructure and utility requirements

#### Ground space conversion

Areas supporting large group congregation (e.g. lobby and conference space) requiring modifications and new equipment

#### **Sleeping room conversion**

Sleeping room transformations for patients use, and other guest floor space to accommodate medical requirements

#### **Converted hotel operations framework**

Before operating as an alternate care sire, modifications to standard operating plans (SOPs) must be developed based on the alternative purpose



#### **Guest services**

*Providing desk services, amenities, general help, and information to its guests / patients* 



#### Housekeeping/environmental services

Maintaining cleanliness and aesthetic upkeep of sleeping rooms, public and back-of-house areas



#### Food & beverage

Preparing food and beverage services to its guests and patients

#### **Engineering / maintenance**

*Performing general, preventative, corrective, and emergency maintenance* 



#### Security, safety, compliance

*Ensuring the alternate care site is secure and incompliance with all relevant regulations* 

The frameworks will be referred to for both the non-clinical and clinical portions of the playbook

# **NON-CLINICAL CONVERSION AND OPERATIONS**

 $\mathbf{02}$ 

#### **HOUSE COVID-19 CRISIS RESPONDERS**

Housing COVID-19 crisis responders requires a minimal amount of required property conversion elements and updates to standard operating plans

**U1** House COVID-19 crisis responders

 Guests are primarily responders to the COVID-19 situation:

Non-clinical use

- Visiting volunteers
- Healthcare professionals
- FEMA and other emergency service providers/contractors
- Operations closely resemble business as usual with increased levels of cleaning, social distancing, and contactless operations

)2

Care for non-critical, non-COVID-19 patients (non-isolation)

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*Note: A hotel property may become an alternate care site for one or more of the above use cases* 

Clinical use

#### MANDATORY REQUIREMENTS FOR GENERAL SITE PREPARATION

Requirement	What does this mean?
Sprinkler system	Building must have complete operational sprinkler system compliant with local fire codes
Fire alarm system	<ul> <li>Building must have complete operational interior fire alarm system compliant with local fire codes</li> </ul>
	<ul> <li>Fire alarm system must include manual stations at exit locations and smoke detection within the sleeping rooms</li> </ul>
	<ul> <li>Fire alarm system must be arranged to transmit alarm automatically to notify the fire department</li> </ul>
Exits	No fewer than two exits per story; compliant with local fire codes
Asbestos-, mold-,	<ul> <li>Building must be asbestos/mold/lead free</li> </ul>
lead-free	<ul> <li>Rough assessment for asbestos/lead can be based on building age</li> </ul>
HVAC	Rooms must be heated and air conditioned; ventilation must be compatible with clinical needs

Original hotel space	Converted space	Conversion requirements
Parking and garage	Parking and garages	<ul> <li>If garage doesn't promote contactless entry/exit, update gate and security system</li> <li>If garage space is leased, work with tenant on updated rules (e.g., in/out privileges)</li> </ul>
Lobby	Lobby	<ul> <li>Install fridge for F&amp;B meal access 24/7</li> <li>Install social distancing signs; use tape to encourage social distancing at elevators, etc.</li> <li>Setup temperature/health monitoring stations at entrance, along with a designated "red zone" if an individual is to not pass the screening</li> </ul>
Dining room	Dining room	Follow environmental cleaning best practices described here: <u>https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf</u>
Fitness and rec. areas	N/A	Close area
Spa	N/A	Close area
Laundry room for guests	Laundry room for guests	<ul> <li>Determine if patient laundry will be laundered on-premises or sent out to vendor</li> <li>If creating an on-premises laundry facility:         <ul> <li>Partition area into a "dirty" area for receiving/handling soiled laundry and a "clean" area for processing washed items</li> <li>Ensure handwashing station is available to workers</li> <li>Ensure equipment is maintained according to manufacturer's instructions to prevent microbial contamination of system</li> </ul> </li> <li>When collecting and processing laundry, please follow these guidelines established by the CDC: <a href="https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html">https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html</a></li> </ul>
Kitchen (Food and Beverage – Back of House) Source: CDC, Oliver Wyman	Kitchen	<ul> <li>Follow and elevate kitchen infection control best practices described here: <u>https://spice.unc.edu/wp-content/uploads/2017/05/09-Infection-Control-Kitchen.pdf</u></li> <li>Order required F&amp;B materials (e.g. trays, utensils) to abide by regulations</li> <li>Setup contactless food delivery system</li> </ul>

#### CHECKLIST FOR CONVERTING SLEEPING ROOMS

Original hotel space	Converted space	Conversion requirements	
Sleeping room	Sleeping room	Remove minibar	
		Remove decorative items (e.g. decorative pillows, etc.)	
		Provide extra linens and towels	
		Provide extra toiletries	
		Provide sanitation supplies for guests to self-clean	

#### **HOTEL OPERATION TEAM**

When housing COVID-19 responders, a property's standard operating plans will remain similar to existing activities, and hotel leadership has the opportunity to utilize their employees

#### **Team summary**

- Operations will be lead by existing hotel management team
- Minimal required personnel assigned by government agencies
- Execution of SOPs will include:
  - Existing hotel employees
  - Special contractors to supplement hotel team, on an as needed basis (e.g. replace existing staff if they are not comfortable)

Hotels leadership can determine the extent of which their employees are involved in operating an alternate use site

# **C**GUEST SERVICES OPERATION ACTIVITIES

	Activity	Non-patient
	Checking in / out of guests or patients	$\bigcirc$
	Triage of incoming patients <sup>1,3</sup>	
	Back of house operations such as assigning sleeping rooms to guests/patients	$\bigcirc$
	Coordinating logistics communication with hospital (e.g. guest or patient arrival / departure) <sup>1,3</sup>	
Guest services	Supporting infection control measures (e.g. wipes, sanitizers, PPE) <sup>1,3</sup>	$\bigcirc$
	Providing social support resources (e.g. TV, WIFI, magazines) <sup>2</sup>	$\bigcirc$
	Completing guest requests via room delivery (e.g. extra towels, toiletries, etc.)	$\bigcirc$
	Paging guests to deliver messages	$\bigcirc$
	Handling package reception, baggage handling and other valet activities	$\bigcirc$
	Monitoring guest and employee health statuses for COVID-19 and other infectious diseases (taking temperatures at door, etc.) <sup>1,2</sup>	

1. CDC – Alternative Care Sites, 2. AON Hotel Industry Perspectives for COVID-19, 3. HKS Response Study, 2020

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# HOUSEKEEPING OPERATION ACTIVITIES

	Activity	Non-patient
	Providing extra linens (bed sheets and towels)	$\bigcirc$
	Disinfecting beds, bathrooms, carpets, etc. <sup>4</sup>	$\bigcirc$
	Removing medical waste <sup>1</sup>	
Housekeeping – Sleeping room	Removing non-medical waste	$\bigcirc$
	Restocking hotel supplies	$\bigcirc$
	Restocking of medical supplies <sup>1</sup>	
	Performing additional turnover cleaning or replacements (e.g. replacing mattress liners) <sup>4</sup>	$\bigcirc$
Housekeeping – Laundry	Laundering of bed sheets and towels <sup>1</sup>	$\bigcirc$
nousekeeping – Launury	Laundering of medical wear / patient clothing <sup>1</sup>	
Unicologning Dublic spaces	Cleaning public spaces (e.g. elevators, hallways)	$\bigcirc$
Housekeeping – Public spaces	Cleaning healthcare command center / spaces <sup>3</sup>	
	Cleaning storage rooms, offices, break rooms	$\bigcirc$
Housekeeping – Back of house	Cleaning of non-medical equipment	
	Cleaning of medical equipment <sup>1</sup>	

Note: frequency of cleaning will likely adjust from normal operations (e.g. increase in public areas and decrease for sleeping rooms)

1. CDC – Alternative Care Sites, 2. CDC -- Cleaning and Disinfecting your Facility; 3. US Army Corp of Engineers, 2020, 4. HKS Response Study, 2020

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) Hotel/ government resource

Healthcare professional

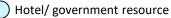
# **FOOD & BEVERAGE OPERATION ACTIVITIES**

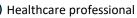
	Activity	Non-patient
	Preparing food and beverage	$\bigcirc$
	Managing diet restrictions and special requests	$\bigcirc$
Food & Beverage – In the Kitchen	Cleaning kitchen equipment	$\bigcirc$
	Clearing soiled trays, utensils, etc.	$\bigcirc$
	Utilizing non-disposable vs. disposable items <sup>1</sup>	$\bigcirc$
	Coordinating patient dietary needs with doctors and/or nurses	
	Taking food and beverage orders	$\bigcirc$
Food & Deverage Other	Preparing and settling bills	$\bigcirc$
Food & Beverage – Other	Delivering and removing food	$\bigcirc$
	Picking up outside food delivery	
	Cleaning staff / HP cafeteria areas <sup>1</sup>	$\bigcirc$

## **ENGINEERING/MAINTENANCE OPERATION ACTIVITIES**

	Activity	Staff assigned
	Maintaining plumbing and electric	$\bigcirc$
	Servicing exhaust systems, dampers, fans continuously <sup>2</sup>	$\bigcirc$
Engineering / Maintenance	Upgrading power distribution when necessary <sup>2</sup>	
	Providing and servicing cameras or other patient visualization equipment <sup>2</sup>	
	Servicing HEPA filter units <sup>2</sup>	
	Creating negative pressure rooms when necessary <sup>2</sup>	
Engineering / Maintenance – Worker Certification Req.	Servicing HVAC systems and other ventilation controls for infection containment <sup>1,2</sup>	
	Maintaining emergency breakdown systems (e.g. generators, power supplies) <sup>2</sup>	
	Maintaining other temporary medical areas (e.g. medical gas storage) <sup>3</sup>	

1. CDC – Alternative Care Sites, 2. HKS Response Study, 2020, 3. US Army Corps of Engineers, 2020, 4. https://www.ashe.org/education/certified-worker





# **DESCURITY, SAFETY, AND COMPLIANCE OPERATION ACTIVITIES**

	Activity	Staff assigned
	Ensuring hotel building security	$\bigcirc$
	Ensuring sleeping room security	$\bigcirc$
Security and Safety	Providing hallway security/safety monitors <sup>2</sup>	
	Maintaining hotel data and technology security	$\bigcirc$
	Ensuring medical records privacy and security (e.g. HIPAA) <sup>3</sup>	
	Removing general waste (non-medical / non-contaminated)	$\bigcirc$
	Removing medical waste (biohazard / contaminated) <sup>1</sup>	
Compliance	Cleaning and disinfecting appropriately (daily and terminal cleaning) <sup>1</sup>	$\bigcirc$
	Providing additional training and certifications <sup>1</sup>	
	Preparing for potential inspections	$\bigcirc$

1. CDC – Alternative Care Sites, 2. OW Research, 3. HKS Response Study, 2020

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# 03

# **CLINICAL CONVERSION AND OPERATIONS**

# HOTEL PROPERTY AS AN ALTERNATE CARE SITE

Hotel property conversion requirements/recommendations are significant and vary based on type of alternate use property; similarly standard operating plans will require significant updates to activities and personnel

**01** House COVID-19 crisis responders

Non-clinical use

- Guests are primarily responders to the COVID-19 situation:
  - Visiting volunteers
  - Healthcare professionals
  - FEMA and other emergency service providers/contractors
- Operations closely resemble business as usual with increased levels of cleaning, social distancing, and contactless operations

#### **D2** Care for non-critical, non-COVID-19 patients (non-isolation)

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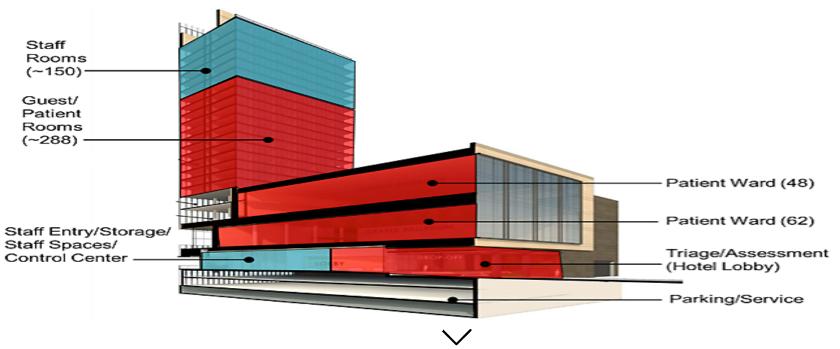
Note: A hotel property may become an alternate care site for one or more of the above use cases

Clinical use

#### **GENERAL SITE PREPARATIONS OVERVIEW**

Prior to conversion, there are both mandatory and preferred building infrastructure and utilities requirements to be checked and met depending on the site's use case(s)

#### Example general site overview for clinical use



- Example mandatory requirements
  - One bathroom per sleeping room, robust IP system, elevator/corridor/door size
- Example preferred requirements
  - 250+ patient sleeping rooms, power capabilities/flexibility, proximity to hospital, ventilation capabilities, in-room entertainment and connectivity

#### MANDATORY REQUIREMENTS FOR GENERAL SITE PREPARATION

Requirement	What does this mean?
Sprinkler system	Building must have complete operational sprinkler system compliant with local fire codes
Fire alarm system	<ul> <li>Building must have complete operational interior fire alarm system compliant with local fire codes</li> </ul>
	<ul> <li>Fire alarm system must include manual stations at exit locations and smoke detection within the sleeping rooms</li> </ul>
	<ul> <li>Fire alarm system must be arranged to transmit alarm automatically to notify the fire department</li> </ul>
Exits	No fewer than two exits per story; compliant with local fire codes
Asbestos-, mold-,	<ul> <li>Building must be asbestos/mold/lead free</li> </ul>
lead-free	<ul> <li>Rough assessment for asbestos/lead can be based on building age</li> </ul>
HVAC	Rooms must be heated and air conditioned; ventilation must be compatible with clinical needs
One room/one bathroom (for isolation care)	<ul> <li>Each room must have one bathroom         <ul> <li>Note: if each sleeping room does not have its own bathroom, site may still be used to house medical professionals and provide non-isolation care, provided bathroom is on floor and accessible</li> </ul> </li> </ul>

#### MANDATORY REQUIREMENTS FOR GENERAL SITE PREPARATION

Requirement	What does this mean?	
Elevator, corridor, and sleeping room entrance size	<ul> <li>If building has multiple stories, an elevator car/cab that can clear: <ol> <li>Ambulance Stretcher (Wide Car Configuration) eg. 6'-8" wide x 5'-3" depth with 3'-6" side opening door; or 7'-8" wide x 5'-4" depth with 4'-0" center opening door</li> <li>Hospital Bed/Gurney (Deep Car Configuration) eg. 5'-8" wide x 8'-5" depth with 4'-6" side opening door</li> </ol> </li> <li>Minimum corridor/hallway width should be 8 feet</li> <li>Doors widths should be capable of accommodating a gurney or stretcher</li> <li>Note: Requirements are needed to get non-ambulatory patients to upper floor levels using large equipment, and ambulance stretcher</li> </ul>	
Robust IP infrastructure to allow telehealth services	<ul> <li>Rooms must have WAP connectivity able to stream videos</li> <li>Each room must have RJ-45 outlets connected to existing telecommunication space</li> <li>Note: This is particularly important when caring for isolation patients from remote sites.</li> </ul>	

#### PREFERRED REQUIREMENTS FOR GENERAL SITE PREPARATION

Requirement	What does this mean?
Available space	Ideal hotel would have capacity of at least 250 patient rooms Note: size of hotel requirements may differ based on requirements and geography
Fire extinguishers	Fire extinguishers must be provided and be compliant with local fire codes
Power – capacity and flexibility	<ul> <li>Floor panel capacity to supply one 20 ampere normal power circuit per bedroom</li> <li>Flexibility and capacity in service panel and transformer to connect roll-up generator</li> </ul>
Proximity to existing, permanent hospital (<30 minutes)	Needed for logistics and support, materials, dirty/clean utilities, nutrition care.
Access to hazardous Disposal	Access to permanent/temporary facilities for med waste, sanitary, soiled linen
Hotel room size	<ul> <li>Minimum bedroom size 140 SF / bathroom 60 SF</li> </ul>
	<ul> <li>Two room configuration is ideal (bedroom with king or two queen beds and bathroom)</li> </ul>
	<ul> <li>Suite rooms with multiple rooms are not preferred for patient care spaces as it</li> </ul>

requires non-standard conversion steps

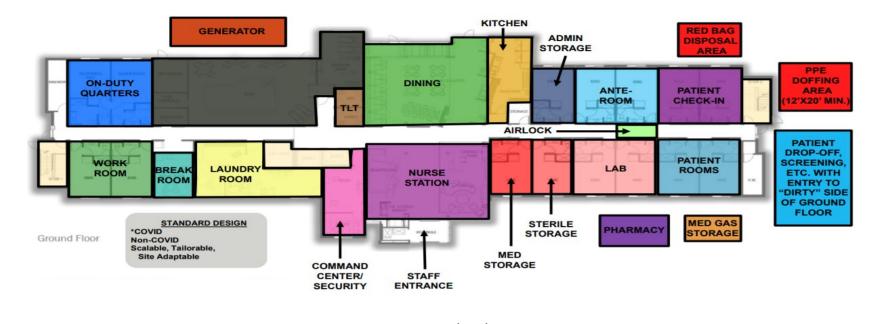
#### PREFERRED REQUIREMENTS FOR GENERAL SITE PREPARATION

Requirement	What does this mean?
In-room entertainment and connectivity	<ul> <li>Sleeping rooms should be equipped with TV and programming</li> <li>All areas should be equipped with WIFI</li> <li>Hotel should have a centrally connected phone system, with phones in each room</li> </ul>
Bathroom exhaust	<ul> <li>Bathroom exhaust must be centralized so that it can be augmented for negative pressure</li> <li>Need sufficient space to upgrade/replace the exhaust AHU to incorporate a HEPA</li> </ul>
	filter pulling ~200cfm per room — Rooftop arrangement is preferred.
	<ul> <li>Lack of centralization would make augmenting exhaust difficult         <ul> <li>It would then be necessary to add additional exhaust system which serves every room which would significantly impact the conversion schedule</li> </ul> </li> </ul>
Supply air handling uni	<ul> <li>Need sufficient space to upgrade or replace the supply air handling unit to provide the additional makeup air</li> <li>Rooftop mounted equipment would likely provide the most flexibility</li> <li>Anticipate an increase of supply air of 100cfm per room</li> </ul>

#### S GROUND SPACE CONVERSION OVERVIEW

Transformation of areas supporting large group congregation (e.g. lobby and conference space) require modifications and new equipment

#### Example ground floor plan for clinical use



- Engineering changes: Make all floor plan additions
- **Reuse with minimal modifications**: Hotel furniture for staff quarters, kitchen, dining, vestibule, CCTV for security, card readers
- **New equipment**: Metal detector, video teleconferencing for command center, controlled access, storage equipment, eye and handwash stations, and signage

Source: US Army Corps of Engineers, 2020 © Oliver Wyman

Original hotel space	Converted space	Conversion requirements
Other patient rooms available on the ground floor	Patient check-in	<ul> <li>Create and place signage designating room</li> <li>Ensure that room is located on the "dirty side" of the airlock, next to patient entrance on side of the hotel</li> <li>Remove bed</li> <li>Install workstation, monitor, printer, and telephone</li> <li>Install chairs for staff and patient seating</li> </ul>
Other patient rooms available on the ground floor	Patient holding room	<ul> <li>Create and place signage designating rooms</li> <li>Ensure that room is located on the "dirty side" of the airlock, next to patient entrance and check-in areas</li> </ul>
Parking and garage	Parking and garages	<ul> <li>If garage doesn't promote contactless entry/exit, update gate and security system</li> <li>If garage space is leased, work with tenant on updated rules (e.g., in/out privileges)</li> </ul>
Guest services area (check-in, etc.)	Nurses station	<ul> <li>Designate original main entrance leading to the guest services area to become the staff entrance by posting appropriate signage</li> <li>Convert guest services area into a nurses station by         <ul> <li>Install additional desks and chairs</li> <li>Install adequate number of workstations with clinical software</li> <li>Install adequate monitors to support workflow</li> <li>Setup printers and scanners</li> <li>Install telephones / paging comms. devices</li> <li>Create storage space for common supplies</li> <li>Ensure workstations have backup power</li> <li>Setup hand sanitizing station(s)</li> <li>Provide access to hotel wide paging system</li> </ul> </li> </ul>

Original hotel space	Converted space	Conversion requirements
Dining room (Food and Beverage – Front of House)	Dining room	Follow environmental cleaning best practices described here: <u>https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf</u>
Valet – guest entrance	N/A	Close area and redirect all patients to side entrance as shown in conversion floor plan map
Fitness and Rec. Areas	N/A	Close area
Spa	N/A	Close area
Meeting and Conference space (or any ground floor room)	Medical storage	<ul> <li>Clear the room to allow for maximum storage space</li> <li>Install shelving in the room</li> <li>Create and place signage designating room</li> </ul>
Meeting and Conference space (or any ground floor room)	Sterile storage	<ul> <li>Clear the room to allow for maximum storage space</li> <li>Install shelving in the room</li> <li>Create and place signage designating room</li> </ul>
Meeting and Conference space (or any ground floor room)	Admin. storage	<ul> <li>Clear the room to allow for maximum storage space</li> <li>Install shelving in the room</li> <li>Create and place signage designating room</li> </ul>
VIP Lounge (or any ground floor room) Source: CDC, Oliver Wyman	Ante-room	<ul> <li>Close area if not located on ground floor</li> <li>Convert into an ante-room for waiting patients and family members</li> <li>Create and place signage designating room</li> </ul>
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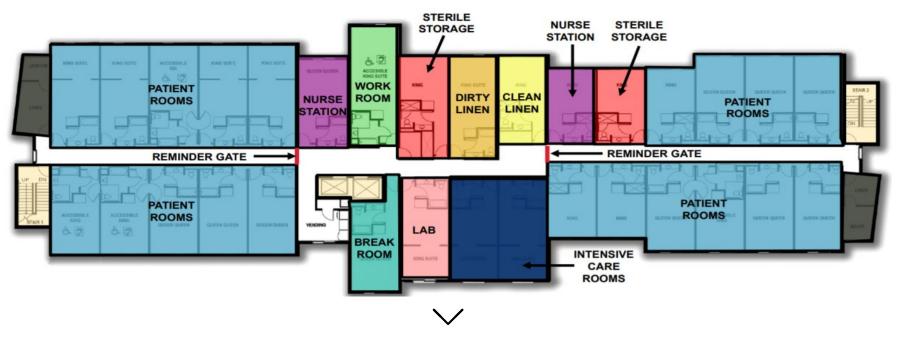
Original hotel space	Converted space	Conversion requirements
Other patient rooms available on the ground floor (double room preferable)	On-duty staff quarters	Create and place signage designating room
Laundry room for guests	Laundry room for staff and patients	<ul> <li>Determine first if medical staff and patient laundry will be laundered on-premises or sent out to vendor</li> <li>If creating an on-premises laundry facility:         <ul> <li>Partition area into a "dirty" area for receiving/handling soiled laundry and a "clean" area for processing washed items</li> <li>If possible, ensure areas receiving soiled textiles are at negative air pressure relative to clean areas</li> <li>Ensure handwashing station is available to workers</li> <li>Ensure equipment is maintained according to manufacturer's instructions to prevent microbial contamination of system</li> </ul> </li> <li>When collecting and processing laundry, please follow these guidelines established by the CDC: <a href="https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html">https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html</a></li> </ul>
Office space	Command center and security monitoring space	<ul> <li>Check that security video equipment is functional and can be monitored from the space</li> <li>Install storage space for administrative supplies</li> <li>Install camera / badging equipment for medical staff</li> </ul>

Original hotel space	Converted space	Conversion requirements
Other patient rooms available on the ground floor	Staff work room	<ul> <li>Create and place signage designating room</li> <li>Remove bed</li> <li>Place additional desks and chairs</li> <li>Install workstations, monitors, printers, and telephones</li> </ul>
Staff break rooms	Staff break rooms	<ul> <li>Install workstation with required clinical software</li> <li>Install fridge, microwave, table/chairs for staff use</li> </ul>
Loading docks	Loading docks	<ul> <li>Ensure ramps, loading equipment (e.g., carts, etc.) exist</li> <li>Create storage space of extra medical equipment (temp. and non-temp. controlled areas if possible)</li> </ul>
Kitchen (Food and Beverage – Back of House)	Kitchen	<ul> <li>Follow and elevate kitchen infection control best practices described here: <u>https://spice.unc.edu/wp-content/uploads/2017/05/09-Infection-Control-Kitchen.pdf</u></li> <li>Order required F&amp;B materials (e.g. trays, utensils) to abide by regulations</li> <li>Setup contactless food delivery system</li> </ul>
Other patient rooms available on the ground floor	Lab	<ul> <li>Create and place signage designating room</li> <li>Remove bed and desk</li> <li>Install workstation, monitor, printer, and telephone</li> <li>Install lab equipment</li> <li>Place chairs for lab staff and patients</li> <li>Install shelving to store lab and other medical supplies</li> </ul>

#### SLEEPING ROOM FLOOR CONVERSION OVERVIEW

Sleeping room transformations for patient use, and other guest floor space to accommodate medical requirements

#### Example sleeping floor plan for clinical use



- Engineering changes: Make all floor plan additions, install pressure monitoring, modify HVAC to isolate by floor, modify elevator controls
- **Reuse with minimal modifications**: WIFI, phone system, network infrastructure, ice-machine, packaged HVAC
- **New equipment**: Nurse call buttons, storage shelfing, workstations, med-dispense units, ventilators, crash carts, eye and handwash stations, signage

Source: US Army Corps of Engineers, 2020

#### CHECKLIST FOR CONVERTING SLEEPING ROOMS

Original hotel space	Converted space	Conversion requirements
Sleeping room	Patient sleeping room	E1 – Storage (for vent.)
	(non-isolation and	E2 – Tel. pump, IV stand
	isolation)	E3 – Stool for provider
		E4 – Over bed table
		E5 – Work stations
		🖵 E6 – Linen hamper
		E7 – Sharps, gloves disp.
		E8 – Hand sanitizer
		E9 – Infectious waste
		🖵 E10 – Privacy curtain
		H1 – Bed (replace linens with medical linens)
		H2, H4 – Desk and Chair
		H3 – Wardrobe
		H5 – Bathroom
		Other – Television, centrally connected telephone, WIFI
		Remove carpet and install vinyl flooring, or install carpet tape
		Remove nonessential furniture and porous surfaces (e.g., upholstered furniture)
		Wrap furniture and mattresses with removable plastic
		Add back-up power and outlets
		Units with multiple beds:
		<ul> <li>Install with at least 6 feet of space in between each bed</li> </ul>
		<ul> <li>Install a physical barrier between beds</li> </ul>
		<ul> <li>Placement of beds should alternate in head-to-toe configuration</li> </ul>
		<ul> <li>Install beds and barriers oriented parallel to directional airflow</li> </ul>
aurce: LIS Army Corps of Engineer	s 2020: CDC – Alternative Care Sites: ASE	JE COVID 10 Personne Concent Study

Source: US Army Corps of Engineers, 2020; CDC – Alternative Care Sites; ASHE COVID-19 Response Concept Study

### CHECKLIST FOR CONVERTING SLEEPING ROOMS

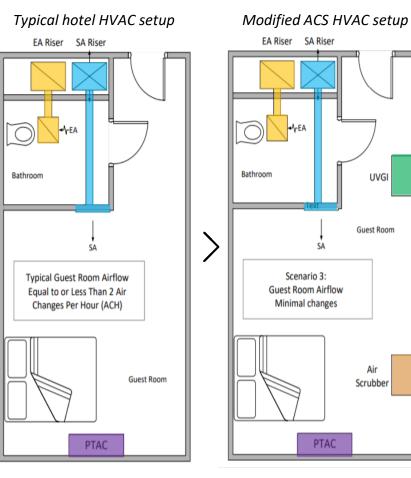
Original hotel space	Converted space	Conversion requirements
Sleeping room	Patient sleeping room	HVAC considerations
	(isolation only)	Replace/modify exhaust fan to pull more air and MUA to increase air flow to guest rooms; dampers/fans should operate continuously at full capacity; confirm bathroom exhaust location is far from accessible areas
		Verify HVAC systems serving common areas don't recirculate air between patient care and staff areas
		PTACS remain for more precise room temperature control
		Upgrade central exhaust system with system able to provide at least negative pressurization to each suite
		To have a converted patient room be at negative pressure, add the UVGI for infection control and the air scrubber for filtration

### CHECKLIST FOR CONVERTING SLEEPING ROOMS WITHIN A HOTEL



#### Sample sleeping room for clinical use

#### Sample HVAC setup for clinical use



## **HOTEL OPERATION TEAM FOR CLINICAL ALTERNATE CARE SITES**

When housing patients (COVID-19 and/or non-COVID-19) significant variations in operating plans may exist across hotel properties based on need, location, and government agency involvement

#### **Clinical care operations**

- Care for non-critical, non-COVID-19 patients (nonisolation)
- Care for COVID-19 patients with mild symptoms (isolation)

Note: alternate care sites can house a mixture of patient types (isolation and non-isolation) depending on situational needs and hotel property layout

#### **Team overview**

- **1. Government appointed resources**: all core operating functions will be conducted by government appointed resources (e.g. FEMA workers, subcontractors, etc.)
- 2. Healthcare workers: Joint agreement on personnel roles and responsibilities with government agencies
- **3.** Hotel employees: Limited back-of-house functions such as property management system operations

Note: HHS specifies that at no time will there be an Alternate Care Site that combines COVID-19 Symptomatic Patients with Asymptomatic Personnel

Hotels leadership can work with government agencies to determine the extent to which their employees are involved in operating an alternate care site

## **C**GUEST SERVICES OPERATION ACTIVITIES

	Activity	Non-isolation patient	Isolation patient	Notes
- Guest services	Checking in / out of guests or patients			
	Triage of incoming patients <sup>1,3</sup>			
	Back of house operations such as assigning sleeping rooms to guests/patients	$\bigcirc$	$\bigcirc$	
	Coordinating logistics communication with hospital (e.g. guest or patient arrival / departure) <sup>1,3</sup>			<ul> <li>Modifications should be made to enable contactless service</li> </ul>
	Supporting infection control measures (e.g. wipes, sanitizers, PPE) <sup>1,3</sup>			<ul> <li>In isolation alternate care sites, employees should be provided PPE</li> </ul>
	Providing social support resources (e.g. TV, WIFI, magazines) <sup>2</sup>			<ul><li>and adequate training on usage</li><li>HHS specifies that at no time will</li></ul>
	Completing guest requests via room delivery (e.g. extra towels, toiletries, etc.)			there be an Alternate Care Site that combines COVID-19 Symptomatic Patients with Asymptomatic
	Paging guests to deliver messages			Personnel
	Handling package reception, baggage handling and other valet activities			
	Monitoring guest and employee health statuses for COVID-19 and other infectious diseases (taking temperatures at door, etc.) <sup>1,2</sup>			

1. CDC – Alternative Care Sites, 2. AON Hotel Industry Perspectives for COVID-19, 3. HKS Response Study, 2020

© Oliver Wyman

Hotel employee

Government resource

## HOUSEKEEPING / ENVIRONMENTAL SERVICES OPERATION ACTIVITIES

	Activity	Non-isolation patient	Isolation patient	Notes	
	Providing extra linens (bed sheets and towels)				
	Disinfecting beds, bathrooms, carpets, etc. <sup>4</sup>			Housekeeping should be minimized	
	Removing medical waste <sup>1</sup>			to reduce risk	
Housekeeping / EVS –	Removing non-medical waste			<ul> <li>Extra linens, towels, and toiletries should be provided</li> </ul>	
sleeping room	Restocking hotel supplies			Cleaning should be focused on	
	Restocking of medical supplies <sup>1</sup>			terminal cleaning rather than daily	
	Performing additional turnover cleaning or replacements (e.g. replacing mattress liners) <sup>4</sup>			cleaning	
Housekeeping / EVS –	Laundering of bed sheets and towels <sup>1</sup>			Laundry services, to meet	
laundry	Laundering of medical wear / patient clothing <sup>1</sup>			regulations, may be contracted out for infectious patients	
Housekeeping / EVS – public spaces	Cleaning public spaces (e.g. elevators, hallways)			<ul> <li>Increased frequency of cleaning for</li> </ul>	
	Cleaning healthcare command center / spaces <sup>3</sup>			<ul><li>common areas</li><li>Disinfectants should be widely used</li></ul>	
Housekeeping / EVS – back of house	Cleaning storage rooms, offices, break rooms			in all shared spaces	
	Cleaning of non-medical equipment			<ul> <li>Gloves and gowns should be worn for all steps in cleaning</li> </ul>	
	Cleaning of medical equipment <sup>1</sup>				

1. CDC – Alternative Care Sites, 2. CDC -- Cleaning and Disinfecting your Facility; 3. US Army Corp of Engineers, 2020, 4. HKS Response Study, 2020

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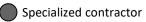
Government resource

Healthcare professional



## **FOOD & BEVERAGE OPERATION ACTIVITIES**

	Activity	Non-isolation patient	Isolation patient	Notes
Food & beverage – in the kitchen	Preparing food and beverage			
	Managing diet restrictions and special requests			
	Cleaning kitchen equipment			<ul> <li>Food and beverage for patients may be provided by outside healthcare food service</li> </ul>
	Clearing soiled trays, utensils, etc.			based on patient special needs
	Utilizing non-disposable vs. disposable items <sup>1</sup>			
Food & beverage – other	Coordinating patient dietary needs with doctors and/or nurses			
	Taking food and beverage orders			
	Preparing and settling bills			
	Delivering and removing food			
	Picking up outside food delivery			
	Cleaning staff / HP cafeteria areas <sup>1</sup>			



## **ENGINEERING / MAINTENANCE OPERATION ACTIVITIES**

	Activity	Non-isolation and isolation patient	Notes	
	Maintaining plumbing and electric			
Engineering/	Servicing exhaust systems, dampers, fans continuously <sup>2</sup>		Number of outside contractors     needed will be determined	
maintenance	Upgrading power distribution when necessary <sup>2</sup>		<ul> <li>based the extent of extensive</li> <li>medical care equipment</li> <li>maintenance</li> </ul>	
	Providing and servicing cameras or other patient visualization equipment <sup>2</sup>		maintenance	
	Servicing HEPA filter units <sup>2</sup>		<ul> <li>Those working in or around</li> </ul>	
	Creating negative pressure rooms when necessary <sup>2</sup>		healthcare facilities should have a Health Care Physical Environment Worker Certification which covers basic	
Engineering/ maintenance – worker certification req.	Servicing HVAC systems and other ventilation controls for infection containment <sup>1,2</sup>			
	Maintaining emergency breakdown systems (e.g. generators, power supplies) <sup>2</sup>		healthcare facility orientation for concepts such as patient privacy, infection control, and	
	Maintaining other temporary medical areas (e.g. medical gas storage) <sup>3</sup>		interim life safety measure <sup>4</sup>	

1. CDC – Alternative Care Sites, 2. HKS Response Study, 2020, 3. US Army Corps of Engineers, 2020, 4. https://www.ashe.org/education/certified-worker

Government resource

## **DESCURITY, SAFETY, AND COMPLIANCE OPERATION ACTIVITIES**

	Activity	Non-isolation and isolation patient	Notes
	Ensuring hotel building security		
	Ensuring sleeping room security		
Security and Safety	Providing hallway security/safety monitors <sup>2</sup>		
	Maintaining hotel data and technology security		
	Ensuring medical records privacy and security (e.g. HIPAA) <sup>3</sup>		
	Removing general waste (non-medical / non-contaminated)		
	Removing medical waste (biohazard / contaminated) <sup>1</sup>		<ul> <li>Electronic medical records may be difficult to implement given</li> </ul>
Compliance	Cleaning and disinfecting appropriately (daily and terminal cleaning) $^{\rm 1}$	propriately (daily and terminal	
	Providing additional training and certifications <sup>1</sup>		paper medical record should be considered in such cases
	Preparing for potential inspections		

1. CDC – Alternative Care Sites, 2. OW Research, 3. HKS Response Study, 2020

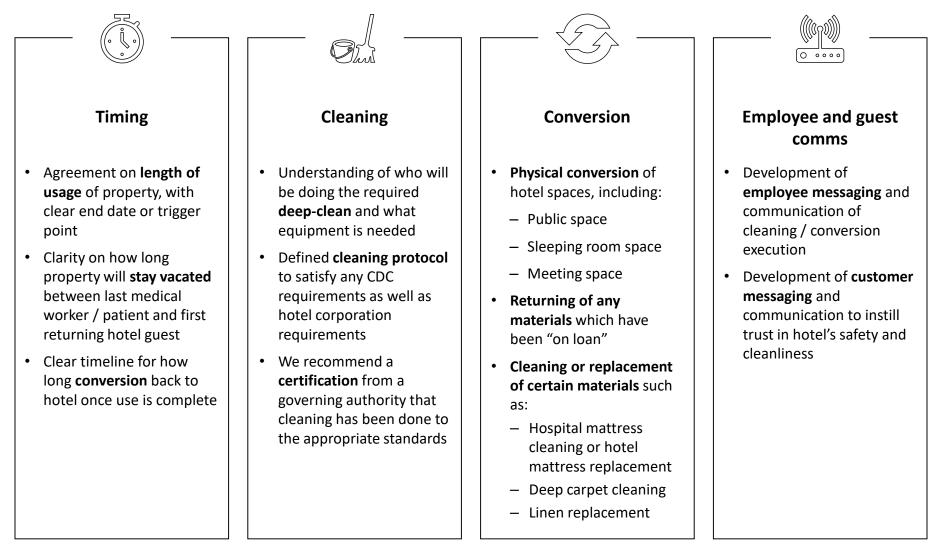
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Hotel employee

# 04 **POST COVID-19 ASSISTANCE PERIOD**

### **POST COVID-19 CONVERSION**

Following the usage of a hotel for COVID-19 purposes, there will need to be a conversion period back to normal BAU operations



## **APPENDIX: PLAYBOOK RESOURCES**

#### **PLAYBOOK RESOURCES**

Publisher	Description	Link	
Akin Gump	Potential Use of Hotels for COVID-19 Medical Car What You Need to Know	https://tinyurl.com/Akin-Gump-COVID19- hotel-use	
American Hotel & Lodging Association	AHLA's Hospitality for Hope Initiative	https://www.ahla.com/ahlas-hospitality-hope- initiative	
American Hotel & Lodging Association	AHLA's Hospitality for Hope Initiative <i>Toolkit</i>	https://www.ahla.com/sites/default/files/Hote ls%20Supporting%20Healthcare%20COVID%20 Toolkit-4.7.20.pdf	
Centers for Disease Control and Prevention	Alternate Care Sites Infection Prevention and Control Considerations	https://tinyurl.com/CDC-alternate-care-sites	
Centers for Disease Control and Prevention	Cleaning and Disinfecting your Facility Everyday Steps, Steps when Someone is Sick, and Considerations for Employers	https://tinyurl.com/CDC-cleaning-and- disinfecting	
Illinois Department of Public Health	Recommended Guidance for Preventing Spread of COVID-19 in Hotels	https://tinyurl.com/IDPH-COVID19-hotel- guidance	
US Department of Health & Human Services	Alternate Care Site (ACS) Toolkit: First Edition	https://tinyurl.com/HHS-ACS-Toolkit	
US Army Corps of Engineers	Alternate Care Sites (ACS) Alternate Care Sites Implementation Process	https://tinyurl.com/USACE-COVID19-ACS	

#### ASHE COVID-19 alternate care site hub: https://www.ashe.org/converting-alternate-care-sites-

#### patient-space-options

AHLA COVID-19 alternate care site hub: https://www.ahla.com/covid-resources