Deloitte.

Establishing an Alternate Care Site (ACS)

What to consider when creating a temporary treatment location for providing care during a public health emergency such as COVID-19.

Responding to the surge:
The current landscape

During this unprecedented public health event, Deloitte aims to continuously understand needs, collaborate, and identify ways to help patients, communities, care providers, and health systems. At our core, we hope to bring our best thinking, industry experience, and leverage our solutions to help the world manage the challenges posed by the novel coronavirus, or Coronavirus Disease 2019 (COVID-19).

In order to address the very real challenges that COVID-19 presents to our global health systems, we must innovate the way we work together, the solutions we bring, and the speed with which we operate. Through virtual collaboration and leveraging our collective assets and capabilities, we believe our nation has the ability to "flatten the curve" even in the face of emerging healthcare capacity and resource constraints. To that end, in addition to discussing the key considerations in establishing an Alternate Care Site (ACS), we are providing a high-level checklist and links to other useful, publicly available resources that we believe can help address growing capacity issues.

It is well understood that large-scale health emergencies have the potential to overwhelm local providers and, while planning can and does occur, there are limited opportunities for an individual hospital or health system to prevent the need for patient surge capacity in response to a pandemic like COVID-19. Depending upon the severity of the incident or public health emergency and availability of resources in the community, activation of Alternate Care Sites (ACS) may be considered to address insufficient ambulatory care or hospital capacity, as well as the need to screen and isolate select patients. However, local leaders and providers may not have an effective and efficient operational guide that aligns with everyday operations, incorporates the latest standards and/or leading practices of incident management, and integrates with other appropriate health and medical incident response plans and/or federal, state, and local requirements. The purpose of this guide is to identify factors to help healthcare organizations and local leaders understand what an ACS is, how they can plan for and establish them, whom they should work with, and what resources are currently available.

Issues and assumptions

For emergency situations, experts have designed a number of innovative ways to activate, operationalize, and continuously improve an ACS. Because speed and fidelity are key for the coordinated planning and execution of an ACS, healthcare leaders and professionals must acknowledge the following key issues and/or assumptions:

- Emergency situations can include a variety of events, including weather and natural disasters, pandemics, terrorism, chemical, biological, radiological, nuclear and explosive events, and cybersecurity and technology failures.
- Demand for inpatient treatment, especially critical care, for emergency situations can often exceed capacity in some communities, both rural and urban.
- As with a pandemic like COVID-19, the incident impacts multiple communities and providers simultaneously, and may require screening for infected patients that not only need to be evaluated and treated, but isolated upon entering an acute care facility with a variety of vulnerable subpopulations
- Healthcare and community leaders must balance a plethora of urgent issues and, in order to receive, triage and transfer patients in a timely, effective and efficient manner, an ACS may be required.

- Prior to establishing an ACS, the individual facility or system's internal surge capacity must be evaluated in several areas, including expansion of clinic hours; leveraging teaching staff, supervisors and academic affiliates to expand the pool of available workers; canceling or postponing elective procedures; freeing up beds by transitioning certain patients to other observation areas; converting private rooms to semi-private; and opening closed but licensed beds.
- A high standard of care within an ACS may be temporarily altered to focus on the sufficiency of care (i.e., a crisis standard of care) with the goal of providing quick, essential services to the largest number of people.
- A well-organized command structure will be required to effectively and efficiently manage an ACS, and many other factors must be considered, including advanced care planning, coordination of experts, highly visible leadership, and effective communication across all relevant stakeholders.
- New and novel supply chain, logistics, and staff planning/coordination approaches will need to be leveraged to ensure that an ACS can be activated quickly and provide effective and efficient care.
- Planners can use an ACS to segregate vulnerable populations from potentially infected individuals, either as a screening site or as a facility for lower acuity patients.

Our take: Smart teams and proven tools

Establishing an effective ACS generally requires a multi-disciplinary team of people and tested tools that can be quickly deployed and tailored to the specific community within which it will be placed

The expertise and understanding required to establish an effective ACS include: quality, safety, and improvement standards; clinical operations and governance; supply chain and planning; health facilities commissioning and maintenance; and hospital and health system administration. These areas of expertise are often found through strategic partnerships among hospitals, across health system networks, and with trusted advisors such as Deloitte, who can provide the innovative frameworks, tools, and solutions to effectively plan, launch, and prepare to operate the ACS.

While an ACS can take many forms, there are five basic "Demand Archetypes" that are typically deployed during an emergency response (figure 1). Each of these applies a mixture of techniques and best practices commensurate with the scope and scale of the emergency itself. Regardless of the Archetype deployed, however, there are three critical phases (Plan, Launch, and Prepare to Operate) within which critical considerations and decision need to be made in order to safely and effectively address increased patient load (figure 2). Adhering closely to this three-phase framework will ensure that hospitals and health systems evaluate all of the available options and are more prepared to quickly execute an optimized approach to manage increased capacity and patient flow

.

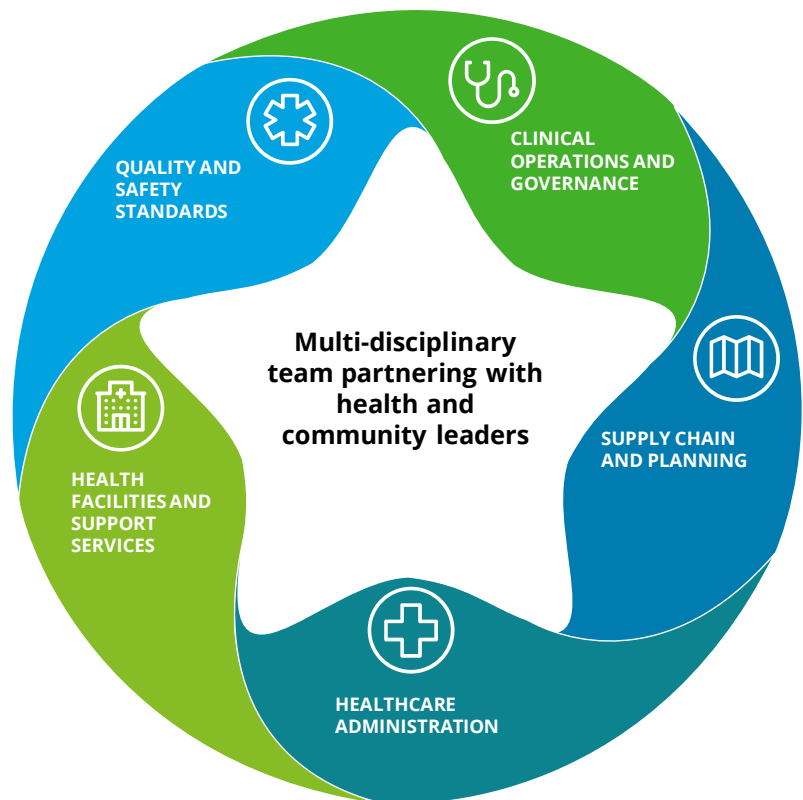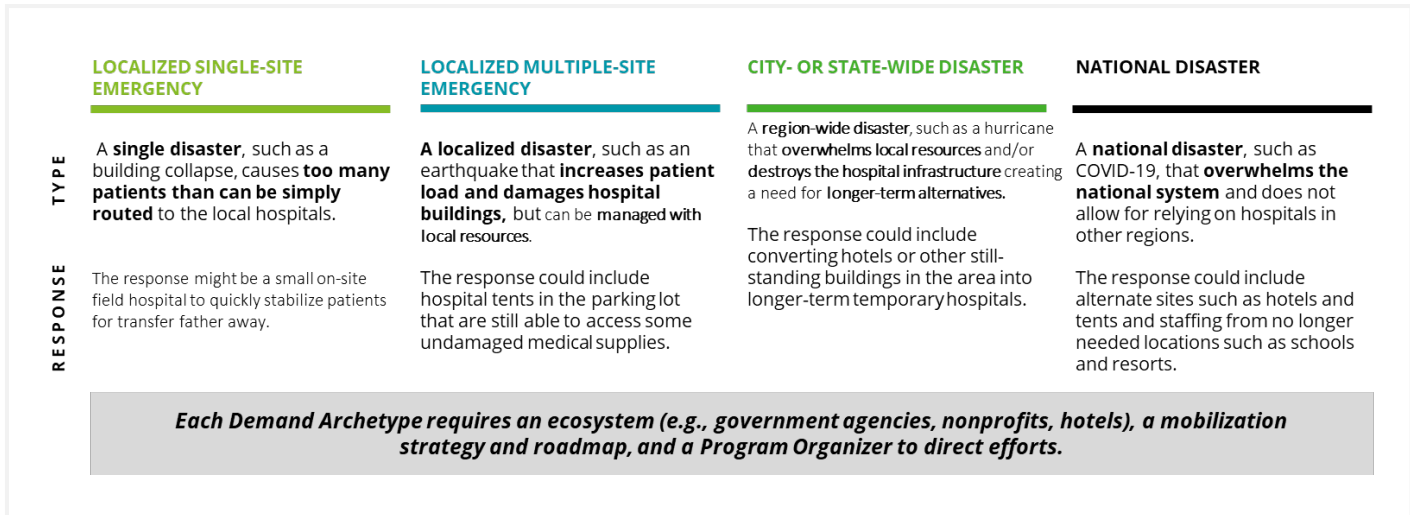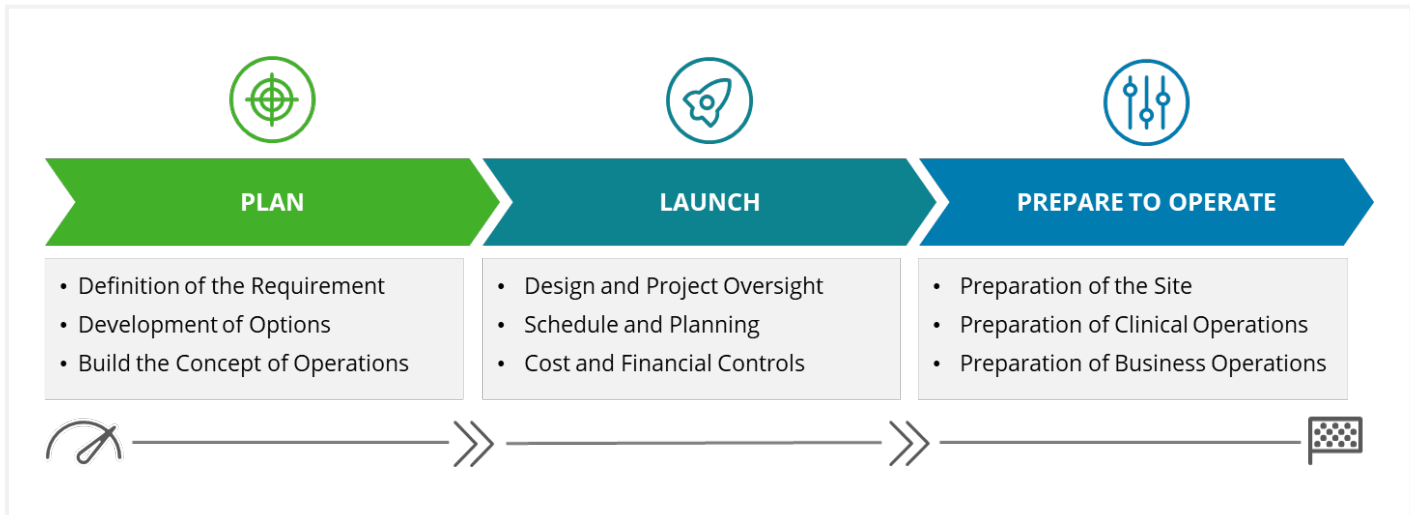**Figure 1. Combining Smart Teams and Proven Tools**

QUALITY AND SAFETY STANDARDS

CLINICAL OPERATIONS AND GOVERNANCE

SUPPLY CHAIN AND PLANNING

HEALTHCARE ADMINISTRATION

HEALTH FACILITIES AND SUPPORT SERVICES

Multi-disciplinary team partnering with health and community leaders

Figure 2. ACS Demand Archetype Overview

LOCALIZED SINGLE-SITE EMERGENCY	LOCALIZED MULTIPLE-SITE EMERGENCY	CITY- OR STATE-WIDE DISASTER	NATIONAL DISASTER
TYPE — A **single disaster**, such as a building collapse, causes **too many patients than can be simply routed** to the local hospitals.	A **localized disaster**, such as an earthquake that **increases patient load and damages hospital buildings,** but can be managed with local resources.	A **region-wide disaster**, such as a hurricane that **overwhelms local resources** and/or **destroys the hospital infrastructure** creating a need for **longer-term alternatives**.	A **national disaster**, such as COVID-19, that **overwhelms the national system** and does not allow for relying on hospitals in other regions.
RESPONSE — The response might be a small on-site field hospital to quickly stabilize patients for transfer father away.	The response could include hospital tents in the parking lot that are still able to access some undamaged medical supplies.	The response could include converting hotels or other still-standing buildings in the area into longer-term temporary hospitals.	The response could include alternate sites such as hotels and tents and staffing from no longer needed locations such as schools and resorts.

Each Demand Archetype requires an ecosystem (e.g., government agencies, nonprofits, hotels), a mobilization strategy and roadmap, and a Program Organizer to direct efforts.

Figure 3. ACS Establishment Decision Framework

PLAN	LAUNCH	PREPARE TO OPERATE
• Definition of the Requirement	• Design and Project Oversight	• Preparation of the Site
• Development of Options	• Schedule and Planning	• Preparation of Clinical Operations
• Build the Concept of Operations	• Cost and Financial Controls	• Preparation of Business Operations

Plan

Definition of the Requirement – A data-driven approach to determine supply and demand is the first step in determining if an ACS is required and for subsequently identifying the needs it must fill. By using the epidemiologic data available to forecast clinical demand, with a specific focus on critical care demand, providers and health systems can prepare for both best- and worst-case demand scenarios. Assessing the demand scenarios against current healthcare capacity and supply of resources in the targeted community also helps to establish an estimate of excess demand and shortfalls in capacity. Given the rapid rate of spread from COVID-19, preference should be given to the use of existing tools that have already shown to be effective in modeling estimated demand for inpatient care by quantifying and localizing populations at increased risk for complication, if infected. Defining the requirements first will help provide a clear outline, plan, and design for the desired outcomes of the ACS—from capacity surge support of patients to alternative housing for front line workers, as well as establishing critical indicators that signal when the ACS can be safely decommissioned.

Development of Options – As discussed above, an ACS can take a range of forms, depending upon the situation it is being stood-up to address. However, not all ACS options will work in every emergency situation. The available options should be community-tailored for the identified requirements, including the provider's current supply and demand facilities, as well as the availability and accessibility of local options (including existing facilities) for ACS adaptation. Each ACS option should include its own staffing, equipment, and construction requirements that should align to the goals of the parent hospital and/or health system. Throughout this process, a strong governance body with open communication across supporting organizations can ease coordination efforts and expedite decision-making to deliver a rapid response, particularly involving the accreditation process and determining which federal, state, and other regulatory waivers are needed.

Build the Concept of Operations – Once the healthcare system has an understanding of its requirements for the ACS and a list of its viable options, it can develop a tailored concept of operations (ConOps). As much as possible, the ACS should leverage existing operational processes, systems, and norms to expedite its operationalization, as well as predictive analytics and forecasting tools. Decisions at this stage in the ACS's development include, but are not limited to the scope of ACS services (e.g., critical care, non-critical care, recovery care); unique needs of patients; governance structures; operational processes; and key roles and responsibilities for staff. While building the ConOps, the facility should also develop a Bill of Materials and Services for the ACS, as well as the acquisition strategy, identifying potential suppliers, their expected supply, and lead times to prepare for short- and long-term orders and management of inventory flows. In the situation that traditional suppliers are constrained, certain assets can be used to quickly identify alternative sources and goods. Mobile applications can also be used to track and assist in inventory management at the ACS. As the ACS acts as a satellite to a parent facility, integration with the main campus' patient administration, business operations, and billing is critical for cohesive operations. A thorough build concept will also include an understanding of the site's limitations and risks that could impede its efficient design, build, and operationalization.

An often-overlooked component of the planning phase is the strategy for decommissioning the ACS and returning to a pre-emergency level of operations. To do this, the parent site or health system should identify critical indicators that determine when the ACS can and should be safely decommissioned. Careful consideration should be given to timing, as well as the evaluation of other options (e.g., mothballing). With COVID-19, for example, the potential for sudden re-emergence of the disease should be evaluated prior to making any dismantling decisions. Once those indicators are met, the ACS can follow pre-determined guidelines and processes to help streamline the return to a steady state. These guidelines include, but are not limited to, when to dismantle the facility in relation to the critical indicators, the type of actions needed to return the site to prior use, and the governance structure around making these ramp-down decisions. Building these policies in the planning stage will allow for a more efficient and effective return to normal operations.

Launch

Design and Project Oversight - Design and project oversight surge support can significantly minimize risk and set facilities up for efficient operation. Health systems can prepare themselves by designing surge capacity templates/checklists for the various ACSs that are being considered. These include templates/checklists for existing non-healthcare facilities, repurposed healthcare facilities, and mobile and makeshift facilities. Having these templates at the ready will cut through the chaos and confusion of what is necessary for construction, equipment, infection control, access control, etc. Additionally, it is important that the health system has the resources available when these disasters strike and is prepared to mobilize their design, construction and operation. There are a number of contracting models and pricing models that could be utilized to eliminate the stress of funding, availability, and efficiency of getting a workforce up and running immediately.

Once the health system has selected a site and a workforce is mobilized, surge support should be put in place specifically for project oversight and management reporting services to support the organizations ability to manage the scale of the project and meet the challenges of the project delivery process. This surge support should focus on the following, so that essential staff continue to have the bandwidth to be as effective as possible:

- Assisting with procurement, contract negotiation, and contract administration.
- Preparing cost forecasts and cash flow analyses.
- Developing project schedules and cost tracking systems.
- Monitoring scope changes and managing change order processes.
- Preparing management reports of key project performance indicators.

Schedule and Planning – During an emergency, focusing on the task at hand becomes a challenge. Executives need a plan to execute using a proactive and data driven approach. The need to expand usable space, modify existing space, or create new space can be well planned out using an Integrated Master Schedule (IMS). An IMS creates a networked and multi-layered schedule used in a rapid response strategy to ensure focus on the most effective path to success.

With an IMS there is the ability to take a holistic view of the potential path ahead and create the detailed tasks required for meeting the program's goals. An IMS will consider all of the activities necessary in the planning, design, and execution of a project, their dependencies on one another, and the milestones and constraints that are critical to achieving delivery. This enables the organization to understand what the expectations are across each department and all stakeholders truly work as a united team throughout the launch of the ACS. Additionally, with a networked schedule, the options of splitting a large facility, or project into phases provides the ability to create usable space as quickly as possible.

A comprehensive IMS provides efficient communication in tracking a projects status and projecting the availability of additional capacity. This communication provides leadership with the necessary knowledge to inform the public, other agencies, and make critical decisions. Providing accurate estimates and updates showcases leaderships competency and instills confidence that the situation is being handled as effectively as possible.

Cost and Financial Controls - During a large-scale epidemic it is essential to maintain controls to ensure that organizations are both efficient and not taken advantage of as these emergencies can prove costly and any reimbursement for emergency funding will need to be justified. Efficient and effective execution of risk-based construction audits and cost assessments enable capital program managers to focus on getting projects completed without slowing down the process for cost reviews. These program managers need trusted advisors with many years of construction industry experience to look for unjustified billings and recoverable costs in order to instill confidence that the critical funding stream is being utilized correctly. These services may require leaders to:

- Evaluate budgets, cost forecasts, and projected cash flow to identify potential shortfalls with additional funding requests, or identify potential surpluses which can be applied for other needs.
- Assess costs incurred compared to performance achieved to determine whether there may be impacts to the budget and/or schedule, as well as determine if the contractor is facing significant unforeseen challenges that could prove detrimental to them or the project.
- Assess financial and management controls that are in place for gaps and suggest improvements that could increase the completeness and consistency of the results.
- Perform financial oversight and identify areas of potential financial risk and explore options for mitigation.
- Evaluate the potential for fraud and work with the client to develop preventive measures.

Prepare to operate

Preparation of the Site – Many moving parts must come together for the ACS to open its "doors" to patients, staff, and the public in a timely manner. Beyond the planning and launch of the site, the parent facility must navigate site acquisition, site construction/setup, equipment installation, and site modification, as in many cases the selected location will not have the care environment in place when a pandemic or national emergency begins. An ACS also requires new supply chains, both with the parent facility and directly with vendors, to ensure the ACS has the clinical and other supplies it needs to meet the demands of its mission. Lastly, as an ACS comes online, it requires the installation and implementation of healthcare technology networks and systems, which should, as often as possible, mirror the systems used at the parent facility to minimize the need for additional training during an active emergency response. Once the site is opened, continued maintenance for facility services and sustainment of the care environment to meet established standards will be required until the ACS is closed.

Another important consideration prior to site selection is the assessment of the overall health status and potential risk of the served population. Understanding the overall health status of a population in a timely manner will provide a clearer picture of the amount and type of specialized resources that will likely be needed (e.g., ventilators) and provide additional time to procure those resources prior to site activation.

Preparation for Clinical Operations – Proper assignment of resources to geographical areas is critical to help ensure the successful delivery of healthcare to those most impacted by a pandemic. Predictive models are essential for identifying those high-risk areas and populations. Once these areas are identified and their populations are quantified, logistical preparations for appropriate clinical operations can begin. There are several variables that should be considered at this point, including, but not limited to alignment of the ACS's clinical care operations to the parent facility (e.g., diagnostic testing, prescriptions, follow-up care, rehabilitative services, etc.); isolation; preparation of a site; strategy for maintaining safety protocols, which includes infection control; quality of care; and post-discharge care.

The availability of adequate numbers of clinical staff often becomes a problem during times of increased capacity and patient throughput. There comes a point at which over-time allowances are no longer sufficient to meet the needs of increasing patient demand. Before this occurs, it is critical for providers to identify and source additional clinical capacity. While typical avenues to fill this need might include the use of Allied Health professionals (i.e., health workers who are distinct from medicine and nursing); activating retired clinicians, and/or the rapid training of community health workers. There are also other more innovative solutions. For example, there are currently large numbers of doctors, nurses, and other medical specialists who are not working due to complete shut-downs of the tourist and travel industries (e.g., cruise ship and vacation resort staff). These individuals would likely require minimal training and may likely be available for the entire time the ACS was in operation.

Volunteers may also be utilized to meet the capacity surge; however, it is important to note that this option brings with it a host of additional challenges relating to overall operation of the ACS, given that these individuals are more likely to be unfamiliar with proper medical emergency response protocols and unaware of the norms, practices, and guidelines that need to be followed by staff at the parent facility.

Preparation of Business Operations – To prepare for the continuity of business operations, the parent site must identify the best way to implement billing, collections, and referral management during a pandemic or emergency situation, including streamlining conventional processes, identifying default billing and referral codes, and ensuring accurate documentation of clinical services provided. This will be particularly important during the COVID-19 response as the parent facility will likely need to navigate federal and state emergency relief funds to monetize room conversions at ACSs, such as hotels. To support business continuity, a communication system back to the parent site must also be considered, especially in locations where cellular reception is limited.

Identifying, obtaining, and training additional staffing resources to operate the ACS is another commonly encountered hurdle. In assessing the site selection options, it is important to consider the availability of personnel that might be repurposed to support the ACS. Repurposing of staff could potentially be accomplished using the emergency relief funds discussed above and would have the added benefit of enabling the selected site to continue employing its staff during a time of significant economic strain. Hotel housekeeping and food service staff, for example, could be utilized to assist in the initial and continued sterilization of ACS patient rooms and to maintain operations for food delivery to patients and staff, respectively. Additionally, other personnel such

as groundskeepers and maintenance workers could be operationalized to assist in the transfer of medical equipment from the parent facility to the ACS and maintain the site during its operations. All of these actions could also help to reduce the time it would take to stand-up the ACS.

Another critical area of consideration when preparing for business operations is the rate of patient flow through the ACS and mechanisms by which it can be increased without impacting the quality of care. Tools that facilitate virtual patient engagement and care team collaboration could provide a rapid response mechanism to address this. Conducting virtual smart exams; virtual video visits; and virtual triage in a secure environment could also fortify the parent facility's imperative to protect patient privacy related to diagnoses. Innovative approaches like this can significantly increase patient flow without sacrificing safety or quality. Enabling providers to treat more patients over a shorter period of time may also reduce the overall number of provider resources typically needed to serve the population size at a particular location, therefore reducing the burden on healthcare providers and increasing access to care for patient populations that are most at risk.

A potential solution:
Agile program management using a rapid action checklist

The considerations and tools discussed in this paper provide an approach for coordinating and executing rapid actions. The important next step is to put it all into practice.

The checklist below highlights important steps to consider in establishing a functioning ACS. It is intended to be used as an initial guide for the critical considerations and decisions that should to be made in order to help safely and effectively address increased patient load during each phase of the decision framework described above.

Plan

Definition of the Requirement

Evaluate epidemiologic data and forecast clinical demand in the community, particularly on critical care	☐
Assess healthcare capacity in the community in relation to forecasted demand	☐
Identify the specific outcomes the ACS needs to produce (type of capacity shift with intended impact to critical shortfalls)	☐
Identify specific shortfalls in capacity the ACS must address	☐
Develop of critical indicators to determine when the ACS can be decommissioned	☐

Development of Options

Identify direct support to the health system governance body's lead for planning	☐
Assess facility options independent of any particular solution—including existing facilities for adaptation	☐
Tailor options to the essential outcomes and timing requirements for the community	☐
Support coordination with accrediting bodies and other stakeholders (Joint Commission, CAP, etc.)	☐
Identify resources required for presentation to governance	☐
Develop detailed staffing requirements	☐

Build the Concept of Operations

Define the scope of services to be provided at the site (critical care, recovery care, etc.)	☐
Highlight the characteristics of patients to be served	☐
Define the governance structure and preferred processes for operations	☐
Define key roles and responsibilities of staff	☐
Integrate with parent facility processes for care, patient administration, and business operations	☐
Integrate with community pandemic response processes	☐

Launch

Design and Project Oversight

Adaptation of the site/facility to a suitable environment of care and for the planned scope of services (e.g., negative pressure rooms and compartmentalized areas for COVID-19)	☐
Accreditation standards for emergency site/facility (e.g., Joint Commission waiver)	☐
Patient transport access to the site/facility	☐
Access controls to the site/facility (sensitive areas, preventing the spread of disease, tracking and preventing the theft of vital healthcare equipment and drugs, and protecting staff/patients)	☐
Establish surge project oversite and management reporting support for a streamlined delivery	☐

Schedule and Planning

Develop an Integrated Master Schedule to track status and project the availability of additional capacity	☐
Establish a regular cadence of communication with leadership	☐

Cost and Financial Controls

Identify trusted advisors to review construction costs throughout the project	☐
Coordination of housekeeping, laundry, and food services	☐

Prepare to Operate

Preparation of the Site

Support equipment acquisition and installation	☐
Support information technology installation (network and electronic health records)	☐
Highlight maintenance services for the facility and sustainment of the environment of care	☐
Establish supply chain processes linked to the parent facility	☐

Preparation of Clinical Operations

Provide clear definitions of patient characteristics served at the site	☐
Develop care processes within the scope of the Concept for Operations	☐
Determine clinical staffing needs and explore options for sourcing the additional need (e.g., overtime allocations, Allied Health, retired clinicians, community health workers, travel industry medical staff)	☐
Coordinate clinical services with those provided in the parent facility	☐

Establish processes for coordinated diagnostic testing (laboratory and radiology), pharmacy, nutritional, and rehabilitative services	☐
Establish processes for safety and quality of care, including infection control and safety of staff	☐
Ensure provision of utilities (power, water, communication equipment/systems) support	☐
Establish processes for biomedical equipment maintenance and repair	☐
Incorporate virtual health services and support to home care, if included in the ConOps	☐
Highlight discharge planning and social worker support	☐
Highlight hospital systems providing administrative support to clinical and patients	☐
Highlight systems for tracking and reporting patients, including special reporting pertaining to the pandemic (e.g., infection, recovery, and morbidity rates)	☐
Ensure standard, continuous, and secure patient information and communication	☐
Develop an external communication strategy to avoid the spread of misinformation or crowding	☐
Integration with parent site and/or provider public affairs functions	☐
Define a process for communications with local and state health departments and, if necessary, public stakeholders	☐
Preparation of Business Operations	
Define policies and processes for billing and collections	☐
Define policies and processes for referral management	☐
Secure necessary federal and state emergency relief funds	☐
Determine staffing and other resource needs and explore options for sourcing additional needs (e.g., overtime allocations, repurposing ACS location staff)	☐
Coordination of housekeeping, laundry, and food services	☐

Additional resources

Thought leadership on combating COVID-19 with resilience: Leaders are responding to one of the most sweeping crises in recent memory, calling for both empathy and action to guide their people and businesses through uncertain times. This collection of Deloitte global insights is designed to help respond to the COVID-19 crisis, and to recover and thrive when it is over.
https://www2.deloitte.com/global/en/pages/about-deloitte/topics/combating-covid-19-with-resilience.html

CentralSight™ supply chain network analytics solution: CentralSight™ is an automated platform that utilizes advanced analytic techniques to rapidly uncover and illuminate multi-tiered, geographically disaggregated supplier networks and enables clients to capture leading indicators and prevent supply chain disruptions before they occur.
https://vimeo.com/395998609

PredictRisk™ database and Health360™ solution: Health360™, Coronavirus Response Management Platform (CRMP) Module is a structured population analytics platform that can leverage social determinants of health factors to rapidly identify those geographic populations that are at highest risk for infection.
https://www2.deloitte.com/us/en/pages/consulting/topics/strategic-health-intelligence-targeted-lead-generation-tools-predictrisk-analysis.html

COVID-19 Rapid Response Tool, ConvergeHEALTH Connect powered by Zyter™ Solution: COVID-19 Rapid Response Tool facilitates secure private virtual patient engagement and care team collaboration through Virtual "smart" exams, patient video visits, secure file sharing, and provider-to-provider collaboration to efficiently manage patient care in a virtual environment.
https://www2.deloitte.com/us/en/pages/consulting/solutions/care-connect-telemedicine-software.html

US Centers for Disease Control and Prevention (CDC) Guidance on ACS and Isolation Sites
https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/alternative-care-sites.html

Authors

Mark Ediger	**Clive Ballard**	**Jason Ormsby**	**Margaret Legerton**
Specialist Executive	**Senior Manager**	**Specialist Leader**	**Consultant**
Deloitte Consulting LLP	Deloitte Consulting LLP	Deloitte Consulting LLP	Deloitte Consulting LLP
maediger@deloitte.com	clballard@deloitte.com	jaormsby@deloitte.com	mlegerton@deloitte.com

Acknowledgments

Deloitte.