INFECTION CONTROL AND PREVENTION: HEALTHCARE FACILITY PREPAREDNESS RECOMMENDATIONS

SSOE understands our healthcare clients are diligently working to address and treat COVID-19 patient needs. As such, we want you to know how much we appreciate your efforts. In keeping with SSOE's vision to design and build the future for our clients, colleagues, and communities, we would like to offer our assistance to help reduce the burdens you are experiencing in dealing with the COVID-19 pandemic.

SSOE is prepared to assist in locating and converting existing patient rooms and wings into isolation and quarantine units. We can also assist you in finding, engineering / retrofitting, and preparing other local structures to use as temporary healthcare facilities in order to address hospital bed shortages.

Our seasoned healthcare team has worked together to provide the following facility preparedness recommendations to assist you as you continue to fight the COVID-19 virus. Thank you once again for your continued efforts to serve our communities.

1. Signage at all entrances with instructions for individuals with symptoms of respiratory infection.

a. Provide facemasks for these patients.

b. Provide alcohol-based hand sanitizer at entrances and common areas.

c. Provide separate, well ventilated waiting space with easy access to respiratory hygiene and cough etiquette supplies for patients presenting with symptoms of respiratory infection.

d. Confirm all triage personal are trained on appropriate processes to rapidly identify and isolate suspect cases.

2. Facility has a process to ensure patients with confirmed or suspected COVID-19 are rapidly moved to an Airborne Infection Isolation Room (AIIR).

a. Confirm number and location of all existing AIIR within facility.

b. Identify additional areas or wings of the facility that can be easily isolated and separated for temporary AIIR use from the rest of the facility population.

i. Restrict access to this area or wing to properly trained medical personal and restrict visitation to rooms of patients with confirmed or suspected COVID-19 or the facility on a whole.

ii. Utilize a physical barrier like smoke or fire doors that can be closed with signage added indicating restricted access.

iii. Provide a prep space prior to entry into unit that allows for staff to properly don required Personal Protective Equipment (PPE)

iv. Corridor beyond the physical barrier and prep space should potentially double the minimum exhaust rates from 2 Air Changes per Hour (ACH) to 4 ACH to create a negative pressure differential between it and the rest of the hospital.

v. It is recommended that these temporary or new AIIR identified spaces be on the top floor or with roof access above to allow for the addition of mechanical ventilation systems as required to accommodate the desired air changes per hour.

*- based on CDC Coronavirus Disease 2019 (COVID-19) Resources for Healthcare Facilities

vi. Patient rooms in the new / temporary AIIR area need to be negative pressure in relation to the corridor. The minimum requirement for a patient room is 4 ACH, and the minimum threshold for an AIIR is 6 ACH with the recommendation being 12 ACH if it is able to be achieved with existing systems or supplemental mechanical system installation.

vii. A protocol is established, which specifies that aerosol-generating procedures that are likely to induce coughing (e.g., sputum induction, open suctioning of airways) are to be performed in an AIIR using appropriate PPE.

3. Mechanical System Recommendations:

a. Document that each AIIR has been tested and is effective (e.g., sufficient air exchanges, negative pressure, exhaust handling) within the last month. The AIIR should be checked for negative pressure before occupancy.

b. Verify each AIIR meets the following criteria:

i. Minimum of 6 air changes per hour (12 air changes per hour are recommended). A typical hospital room minimum requirement is 4 ACH, so additional air may be required to be added to achieve this goal.

ii. Air from these rooms should be exhausted directly to the outside or be filtered through a high-efficiency particulate air (HEPA) filter before recirculation.

iii. Room doors should be kept closed except when entering or leaving the room, and entry and exit should be minimized from rooms.

iv. When occupied by a patient, the AIIR is checked daily for negative pressure.

4. Initial steps that can be incorporated to meet recommended strategies:

a. Facility leadership including the chief medical officer, quality officers, hospital epidemiologist, and heads of services (e.g., infection control, emergency department, environmental services, pediatrics, critical care) has reviewed the Centers for Disease Control and Prevention's COVID-19 guidance and implements education and job specific training. https://www.cdc.gov/coronavirus/2019-nCoV/guidance-hcp.html

b. Develop, or review, your facility's emergency plan. A COVID-19 outbreak in your community could lead to staff absenteeism. Prepare alternative staffing plans to ensure as many of your facility's staff are available as possible.

c. Facility has plans to minimize the number of HCP who enter the room. Only essential personnel enter the AIIR. Facilities should consider caring for these patients with dedicated HCP to minimize risk of transmission and exposure to other patients and HCP.

d. Facility has a process (e.g., a log, electronic tracking) for documenting HCP entering and exiting the patient room.

e. Consider the strategies to prevent patients who can be cared for at home from coming to your facility potentially exposing themselves or others to germs, like:

f. Using your telephone system to deliver messages to incoming callers about when to seek medical care at your facility, when to seek emergency care, and where to go for information about caring for a person with COVID at home.

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g. Adjusting your hours of operation to include telephone triage and follow-up of patients during a community outbreak.

h. Leveraging telemedicine technologies and self-assessment tools.

i. For those that do come to your facility, rapidly identify and isolate patients with confirmed or suspected COVID-19.

5. Visitor access and movement within the facility:

a. Plans for visitor access and movement within the facility have been reviewed and updated.

b. Visitors are screened for symptoms of acute respiratory illness before entering the hospital.

How can SSOE help you?

- SSOE can assist you by surveying the potential wing(s), report on the existing physical conditions, and make recommendations on the selected site and the required modifications.
- SSOE will work with you on assessing existing mechanical equipment for the selected site.
- We will work with your facilities and if needed local contractor(s) to determine the existing units' capabilities.
- As required, SSOE can provide design and construction documents to upgrade existing systems to address recommendations.
- We can coordinate with local jurisdictions to expedite permitting requirements, as well as coordinate with manufacturers to understand equipment availability to potentially reduce delivery and installation times.
- SSOE can also provide you with a plan on how to convert the selected area(s) back to previous use, after the threat is gone.

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