Future Indications for the Built Environment

COVID/Infectious Disease FAQ

As we navigate through this challenging time with our clients, there are several questions that our firm is being asked related to post COVID-19 design. The following are the most frequently asked questions and our responses to date. We understand recommendations and data can change quickly. Our healthcare operational planners have over 50 combined years of experience functioning in the health care environment and are monitoring the current pandemic and data sites daily for new information.

1 What are key design element recommendations for healthcare facilities post COVID-19?

- Flexibility and multiuse of any spaces or rooms is key
- External hookups for electricity, data, airflow, medical gases, and water for potential modular units
- Think of the space for modular or temporary care units as dedicated space within proximity to the hospital (paved area, parking lot etc.)
- Consider a testing space or blood draw space that is on the perimeter of the hospital for the worried well or those with mild symptoms
- Easy conversions of rooms for negative airflow should be in place
- Hands-free communication devices should be considered
- Staff respite/recumbent rest areas with hygiene/showers areas for when staff is at the hospitals for long hours, even days
- Pre-registration process should begin before arrival, and infrastructure for digital registration should be included in design
- A telehealth strategy needs to be included during Master Planning
- Capacity surge strategies need to be included during Master Planning
- Continual monitoring of CDC recommendations
- Flexible space for command center activities should be added.
- Clean and dirty building entry options
- Ways to connect with family/friends when they can't be there physically

- Physical distancing with social/personal connectivity in social and respite spaces (cafes, dining, waiting)
- Biophilia design recommendations – connection to nature

2 What are entry sequence key design element recommendations post COVID-19?

- Consider decreasing the number of entries into the building
- All entries should be controlled, easily locked down if necessary, and signage should be clear
- Emergency departments need to be able to triage patients prior to entering the department - consider space adjacent to ED entries
- Entries should be designed to ensure space can accommodate triage services and patient flow
- Space for PPE should be provided at all entries
- Consider temperature monitoring devices at entrances
- Is there a triage waiting model, progressive waiting model vs. a central waiting model

3 What will inpatients bed predications and needs be after COVID-19?

- Prior to COVID-19, inpatient bed utilization was decreasing, and ICU utilization was increasing due to higher acuity patients
- With the increase in telehealth services to address non-acute care, only the sickest patients will be admitted to inpatient ICU beds, further increasing the need for ICU beds
- The need to accommodate capacity surges increases the need for ICU and acuity adaptable beds
- Flexible acuity adaptable rooms are recommended for ease of surge needs
- At least 30 % of rooms should be adaptable to accommodate surge capacity
- A designated unit or surge area should be preestablished
- Medical gases and suction should meet critical care needs in all acuity adaptable rooms - consider dialysis boxes in some rooms

4 Will my sf/bed metric be reduced or increased post COVID-19?

- If CDC and design recommendations are followed, it will likely result in an increased sf/bed metric due to critical care needs and social distancing
- Support and public space may increase with the need for handwashing stations, PPE stations at the entry of every room, supply and respirator storage, increased EVS storage and supplies, multiple IV pumps in rooms, and longer lengths of stay

5 Are negative airflow units or specialty rooms going to be the new norm in hospitals and healthcare facilities?

- Emergency departments should have a dedicated and segregated area for contagious patients that require negative airflow with separate airflow capabilities
- Inpatient rooms can be grouped, or entire units or wings can be negatively pressurized and separated from the hospital in a pandemic situation. These units will need paths of travel separate from the rest of the hospital for supplies and waste flow.
- Consider anteroom for OR entry for infectious patients
- Consider anterooms in high acuity units
- Consider 100% outside air capabilities

6 What are infection prevention strategies we should consider for the healthcare environment?

- Enhances in cleaning protocols should be developed and ready to deploy in less than 1-2 hours
- Provide easily cleanable design features (non-porous, smooth, seamless and durable finishes)
- Provide finishes that are compatible with the cleaning agents used in the hospital
- Select finishes that are intuitive to clean

and require same/similar cleaning agents and process. Educate on process: clean – disinfect - rinse
- Infection control measures such as UV lighting, cleaning protocols, and room turnover processes should be considered when making design decisions.
- Eliminate carpet in the healthcare environment – would require additional thought into ceiling and wall materials that help absorb sound
- Consider soiled utility room and trash storage for disposable PPE
- Consider reprocessing area for PPE or low-level disinfecting outside of SPD area
- Consider storage/supply alcoves outside of room and limit supplies stored in patient rooms
- Consider supply pass through to prevent healthcare provider exposure when wasting medications or getting supplies for a provider in an infectious room
- Glass doors allow for observation and team patient care activities with a barrier
- Glass or metal doors are cleanable; wooden doors should be avoided in isolation units
- Consider UV lighting decontamination in high traffic or use areas

7 Will increased storage on units and disaster storage be necessary in our space programs?

- Yes, square footage for storage and convenient locations for PPE, respirators, and other disaster equipment needs to be accounted for during programming

8 How are the seven Lean flows in health care applied to a pandemic/infectious disease event?

- Paths of Travel should be extensively reviewed
- Separation of patient/staff/visitor flows is optimal
- Clean and dirty flows for equipment, supplies, trash, food should be considered
- Simple technology flows and communication practices in the care environment is critical
- Medication administration should follow standard practices to minimize exposure for staff

9 What should I do with waiting areas, cafeterias, admin offices, reception desks, and open lobby areas?

- Both inpatient and outpatient public areas should have “safe signage” wayfinding implemented to ensure distancing and traffic flow requirements are easily followed
- Provide design features that aid in social distancing practices- i.e., floor patterns at registration areas
- All finishes, flooring, and fixtures should be evaluated for effective cleaning ability and infection control surfaces
- Flexible shields in the registration and waiting areas should be available for permanent or temporary use. They can be a reminder to remain socially distant and can provide a barrier between staff and the public. Glass, acrylic, or other transparent plastics can be used. Verify facility cleaning practices are compatible with acrylics prior to purchase.
- All hand dryers should be replaced with motion-activated paper towels
- Handwashing stations should be added to all public spaces
- Hand-free controls (faucets, doors, lighting,

shades, elevators, etc.) should be considered to reduce touchpoints and potential contamination
- Waiting rooms need to be designed to accommodate physical separation such as decentralized waiting concepts (such as a consult room type approach)
- Cafeterias should be designed to accommodate social distancing, and traffic and foodservice patterns should follow suit
- All spaces of this nature should be adaptable and considered for surge space for patient care - consideration of medical gases, electricity, IT infrastructure should be considered

10 **What will clinic space allocations look like across the health system if the current traditional clinic model is followed?**

- If traditional clinic model continues, the square footage may increase due to distancing and flexibility needs
- Corridors may be wider to ensure distancing
- Waiting rooms may need to be sized to allow for screening or triage to occur
- Supply chain processes may change and increase storage space needs
- Parking lots may need to enlarge to be able to flex to temporary lab testing areas or registration areas
- The footprint of provider and staff workspace may need to increase to support distancing, and private offices, as opposed to shared space, should be reconsidered
- Self-rooming processes may increase, resulting in the need for on-stage/off-stage layouts
- Clinics may also be used for surge capacity issues from regional hospitals within the system requiring quick exam room conversions

11 **What will clinic space allocations look like across the health system if telehealth model continues and is embraced and financially supported for reimbursement after Covid-19?**

- Designated space for telehealth services should be considered
- Some of the service lines currently using traditional exam room processes could shift to telehealth applications, likely reducing the need for as many current exam rooms
- Physicians could be providing care from remote locations, reducing the need for exams even further

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