

As healthcare design professionals, we see these exciting trends impacting healthcare facilities positively now and into the future. Here are the trends we see emerging from the pandemic, and others have been evolving over the past decade(s).

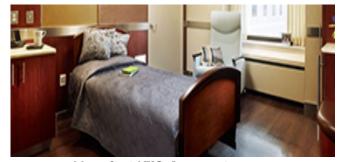
We offer this information to help healthcare leaders and other healthcare architectural designers prepare for the challenging opportunities ahead.

### We've got this!

# 1. Hotel-like Amenities for a Better 'Patient Experience':

For the past decade, this has been a trend, and it doesn't appear to be stopping. Take a look at the deluxe accommodations in Mount Sinai, NYC.

The University of Rochester Medical Center, Strong Memorial Hospital patient amenities: banking; Barnes & Noble; café – full dining; corner store; deli; email/mail for patients; gifts/flowers; gourmet coffee; imaging/lab services for outpatients; library; pharmacy; post office; valet parking; video phone; visiting guest meals.



Mount Sinai, NYC - Luxury patient room



Dr. Phillips Hospital Lobby, Orlando, Florida

### 2. Virtual Waiting Rooms

or

# More Spacious & Welcoming Waiting Rooms:

Although virtual waiting rooms are becoming more and more popular post-covid, healthcare waiting rooms will not be going away any time soon. They will be larger and more spacious with hotel-like seating and nook-like separation.



## 3. Inviting Work/Break Areas for Staff w/ Windows:

The mental and physical effect of covid on our first line of defense – our healthcare workers – is recognized by healthcare leadership. It relates to the ol' oxygen mask theory on planes.

If we do not take care of our medical providers, who will take care of us?



Mount Sinai, NYC - Staff Break/Respite Area

### 4. More Adaptable, Flexible Spaces:

This pandemic has shown us that healthcare facilities need to be able to respond quickly to the changing needs of the patient population.

<u>This means installing dividers or other structures</u> – <u>shell rooms; prefabricated walls; mobile</u> workstations



# Ancionante More

Dell Children's Medical Center of Central Texas in Austin —  $\underline{\text{the}}$  first hospital in the world to achieve LEED Platinum certification.

### 5. More Green Hospitals: LEED & Well Building Stringent Standards:

These are even more important than ever during pandemics due to air quality, material selections, cleaning products, etc. LEED means energy efficiency, water conversation, and reduced environmental impact.

e.g.: SUNY ESF Marshall Hall - Pathfinder Engineers & Architects

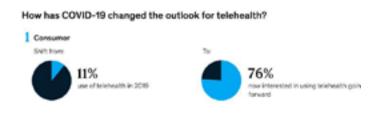
e.g.: <u>NYS Department of Environmental Conservation</u>
<u>Headquarters - Hyman Hayes Associates</u>

<u>WELL Certification</u> is focused on indoor air quality, water quality, natural lighting, thermal comfort, and promoting a healthy lifestyle – physical activity, mental health, nutrition.



### 6. Telehealth:

Patients and doctors seem to be embracing this technology wholeheartedly since the pandemic. Many medical personnel have encouraged this method for decades. It is growing as a more viable option because it decreases one's exposure to other illnesses, and it is less expensive – now only the sickest patients will need to seek treatment in acute settings.





7. Safer, More Easily Cleaned/Sanitized

Everything – Robotic cleaning machines:

Robots do many tasks better than humans, and it is safer for staff.

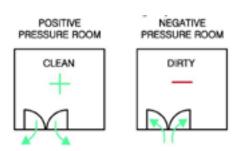
# 8. Clean Room Technology (Negative/Positive Pressure Rooms):

These rooms are instrumental in our fight against Covid. Why don't we have more of these? We will.

e.g.: Western NY Healthcare, Veterans

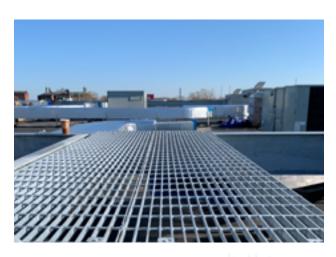
Administration Ward 9C - Pathfinder Engineers &

Architects (pathfinder-ea.com)



### Cleaner and Better Circulated Air (HVAC):

Engineers and architects are helping to fight covid-19 and lessen the effects of future viruses through indoor air quality design guidelines.



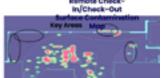


## 10. In Addition to HVAC Guidelines: Simulation Software:

While most mechanical systems are designed to concentrate on the distribution of conditioned air and rely on filtration at the return side to filter out allergens, viruses, and particles, simulation systems are being designed to complement HVAC designs. For example, 'Circulate' is a simulation software that provides predictive modeling of air-born respiratory particles in occupied health care spaces. It goes beyond the traditional concerns of pre-covid designs.

### Results - Remote Check-In/Check-Out Policy







Cornerstone Surgery Center | Rochester, NY

### 11. Nature Heals:

Edward O. Wilson popularized biophilia - 'the love of life and the living world' - in the 1980s. Based on a multitude of studies showing the positive effects of nature on patients, Healthcare Design continues to 'bring in' nature and natural materials, plants, natural light, organic shapes (round) while also expanding outdoor gardens, courtyards, and patios within healthcare facilities.

### 12. Artwork:

The trend is toward a less 'institutional-like' for healthcare facilities; thus, colorful paintings; natural scenes; installation of waterfalls; and atriums reduce the anxiety of staff and patients.

e.g.: Roswell Park Art e.g.: Nathan Littaeur



# Top 6 Touchless Technologies For Healthcare Providers

# 13. Touchless Everything & More Automation; Touchless Tech for Sterilization:

This technology reduces the risk of germs spreading throughout a facility – faucets; doors; self-serve check-in kiosks; etc.



### 14. Light Technology:

Lighting affects human health – our sleep, productivity, and mental health. The lessons learned from the pandemic has prompted healthcare facilities to revisit nearly every aspect of their buildings.

### **UV Lights to Disinfect:**

From the late 1800s to the early 1900s – UVC light was known to kill bacteria, mold, viruses and was used for the successful treatment of tuberculous and municipal water supply. Over the decades, UV lamps have been used in hospitals and food production. New applications are being studied and used in light of the 2020 pandemic.

<u>Color tuning</u> (tracking the sunlight outside and mimicking its color temperature throughout the day inside)

<u>Color shifting</u> (removing the blue light from the spectrum at night to help with your circadian



### 15. Nurse Stations:

Post-Covid trends support the design of small groups of nurses responsible for a limited number of patients distributed within a relatively isolated area of the ward with charting stations outside every room rather than all of the nursing staff gathered behind one large desk.

Some have even suggested that this strategy could limit the potential for contagion spread between staff members: collaborative space, individual work areas, & quiet sections (for phone calls).

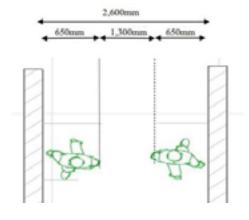
### 16. Better Wayfinding:

Helping staff and patients find their way around a hospital is not just a time-saver; it saves lives.

<u>It also relieves staff from constantly offering</u> directions, and relaxes staff, patients, and visitors.







# 17. Larger Hallways, Hallway Dividers, or One-Way Hallways:

Increasing social distance will be part of the new norm.

Journal of Environmental Health Science and Engineering

### 18. Hospitals – Pharmacies & Labs:

One-stop-shop – who doesn't want that for everything – especially healthcare?



### 19. Outpatient Facilities Increasing & Drivethrough Clinics - vaccinations; basic lab services:

While COVID-19 has accelerated the interest in ambulatory care, this shift began long before the pandemic for several reasons.

Ambulatory Care: Saratoga Hospital | Linear Accelerator (LINAC) Expansion



# **20.** Additional Assigned Entries into Hospitals/Clinics

Highly contagious viruses will continue to make us modify our healthcare system. Keeping those suspected of having the infection vs. those who do not will be necessary.



# 21. Repurposing Older Malls or Freestanding Buildings:

Patients prefer receiving medical care in outpatient settings when they can. It's an easier task than fighting their way to crowded and sprawling hospital campuses.

e.g.: OrthoNY

