

# Pandemics: Changing the Design of Cities and Healthcare Centers

*How will architectural design in the city, especially within healthcare centers, play a critical role in the success of managing the effects of a pandemic?*

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Throughout history pandemics have caused disastrous scourge on cities around the world. They have forced profound effects, and subsequently shine a new light on processes that enable readily responses for emergency preparedness. As seen within the on-going pandemic, there is a lack of effective vaccines and treatments available for the public. It has encouraged society to take action through quarantining and social distancing and thus, the built environment plays a large role in the solution. Architectural design in the city, especially within healthcare centers, is now being approach in a new manner. There are methods of design that have arisen since the onset of the pandemic, with each having its permanent place in history and more firmly within the future.



## Modular Construction

Architecture has always faced the pressuring need of construction speed. Modular construction allows the quick assemblage of emergency facilities, allowing aid to reach an influx of patients. This method of design offers not only speed, but customization of spaces that can shifted or enlarged as an accommodation for treatment centers. Additionally, use of light weight material in modular construction and 3D printing would increase speed and portability to manage demand.



## Qualities of Enclosed Spaces

Enclosed spaces will continue to further embrace ideas of improving the health of people and buildings. This could be accomplished by use of areas with greater natural light, better and advanced ventilation, decreased toxic environmental substances and plants that promote a healthy experience. Each is especially important when a patient or staff is within an enclosed space for extended periods of time. Lastly, the possibility of surfaces that are germ-resistant can allow for a somewhat higher occupancy within an area. Though highly detailed, strategies should be met to provide appropriate HVAC, emergency electrical power and proper communication data infrastructures.



## Adaptive Reuse

Reutilization has been thrust into the spotlight with use of existing buildings to serve newly relevant purposes. Increasingly popular before COVID-19, adaptive reuse is regarded as a quick responding and sustainable approach. And it's proving to be the most efficient way to create emergency facilities. Safe utilization and conversions of large spaces such as stadiums, large warehouses, trailers or cargo shipping containers placed in abandoned parking lots for basic shelter can then be aggregated into patient units. With deep consideration, these alternative spaces must be cautiously approached being that different patient conditions require different physical environments. Time is of the essence.

## Design Beyond COVID

As seen within the increase of digital communication, the world is becoming more interconnected. Architecture can provide a way to become more flexible as people have in the past few months. This pandemic though catastrophic, will have ever-lasting changes on society. It will possibly push architecture to new extents. This time has allowed for society to reassess the built world. This could be a time to call architects and urban designers to be at the forefront when developing real solutions for the health of the public, and to especially be engaged in developing proper solutions for the future. We're not going to completely throw away methods of building our cities. But as our world moves faster and becomes more interconnected, we need to embrace a new set of tools that are more flexible, comprehensive and responsive. **Let's learn from this tragedy. Let's find the silver lining.**