

# Interior architecture student creates hybrid COVID-19 treatment model to aid overcrowded hospitals

July 21 2020, by Tatianna Basanta

---



Credit: Florida International University

The United States health care system has been put under tremendous pressure since the outbreak of COVID-19 reached the states earlier this year.

According to the American Hospital Association, the influx of critical patients has forced hospitals and the health system to adapt new operations to best fight the pandemic. Some of these transformations include creating field hospitals, converting large centers, hotels, arenas or closed hospitals into care sites and implementing safe testing locations.

Interior architecture student Njood Bokhari found her own way to potentially help hospitals. Under the guidance of Newton D'Souza, chair for the Department of Interior Architecture and Arthur Brito, director of health and principal of HKS Architects, Bokhari came up with a design proposal called CONT + AID to help provide quick relief to overwhelmed hospitals.

CONT + AID is a hybrid structure facility that serves as a COVID-19 testing station and lab facility—which hospitals can build directly on-site in as little as two to five days. The design of the hybrid structure allows space for intensive care units, exam and treatment rooms, quarantine and isolation units and even surge space for non-critical patients.

The design of the facility is made up of 10-foot shipping containers and prefabricated expandable units. The setup of the structure is designed to be quite simple with minimal on-site preparation, so hospitals can

construct it quickly and efficiently, or even move it if the need arises.

The shipping containers make up the central staff corridors and six to eight prefabricated expandable units surround the staff zone to house the patients. According to Bokhari, this set-up helps limit the spread of infection and keep the different units isolated from each other.

"Since the initial outbreak of COVID-19, the health care system has been under review on how to best handle the situation," says Bokhari. "In order to combat the pandemic, rapidly deployable health care facilities are of major importance."



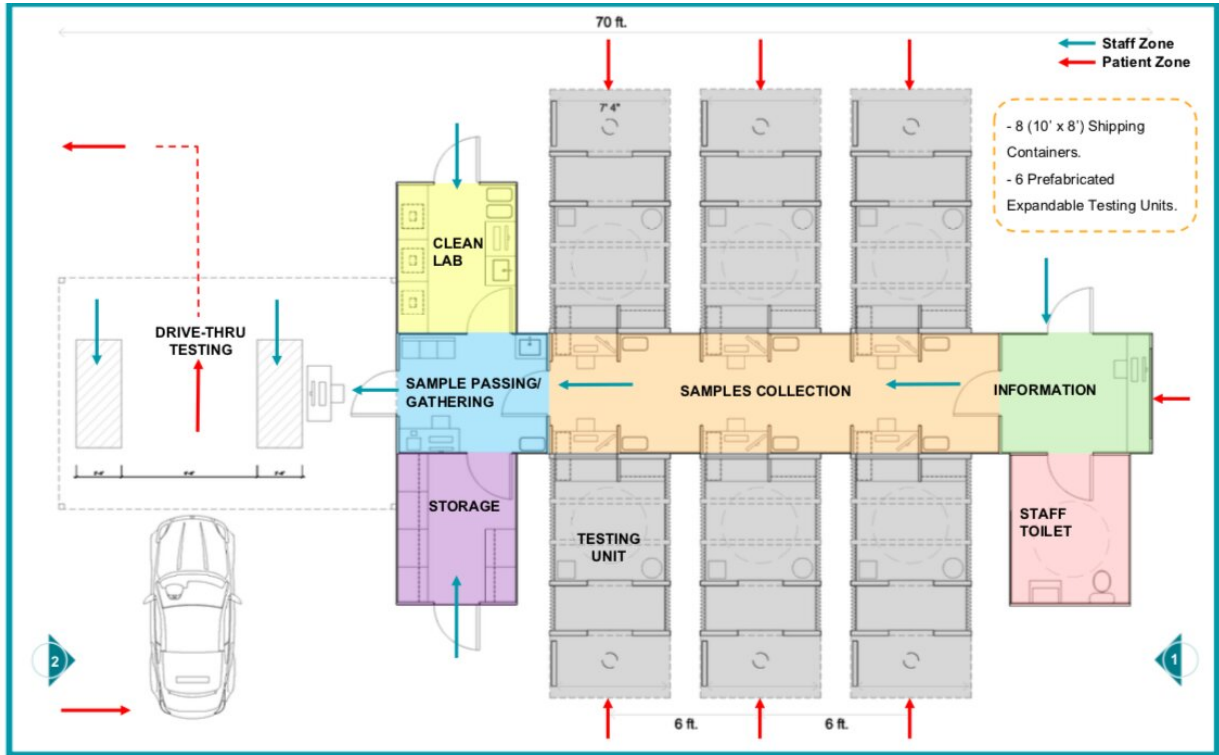
The design of the facility is made up of 10-foot shipping containers and prefabricated expandable units. The setup of the structure is designed to be quite simple with minimal on-site preparation, so hospitals can construct it quickly and efficiently, or even move it if the need arises. Credit: Florida International

University

Bokhari also implemented automatic sliding doors, sensors in high traffic zones, medical-grade finishes on floors, walls and ceilings, the use of robotics in high exposure areas to eliminate staff to patient exposure, UV lights in exit and entry points to aid in disinfection and the integration of a CONT + AID mobile app into her design.

Each aspect of CONT + AID, from the build of the walls to the lab equipment, is designed with the goal of providing easy and safe access to coronavirus testing, reducing the possible spread of infection and extending the hospitals' reach outside the standard clinical setting to treat more patients.

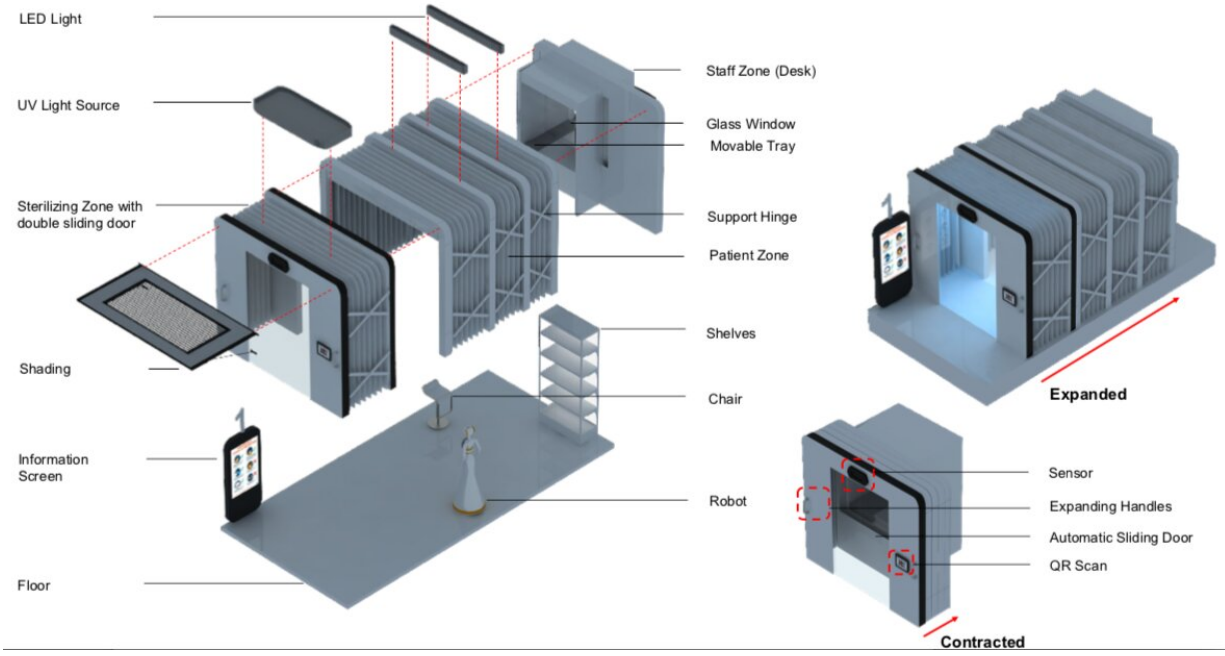
"This new pandemic environment calls for designers to be quick on their feet in providing creative solutions that are flexible, safe and fast," says D'Souza. "Njood's proposal is a good example of an evidence-based design that addresses the well-being of users but at the same time incorporates technology in a meaningful way. Her sustainable use of existing resources and the ability to morph the building in different scenarios is what makes her project pertinent to the times we are living today."



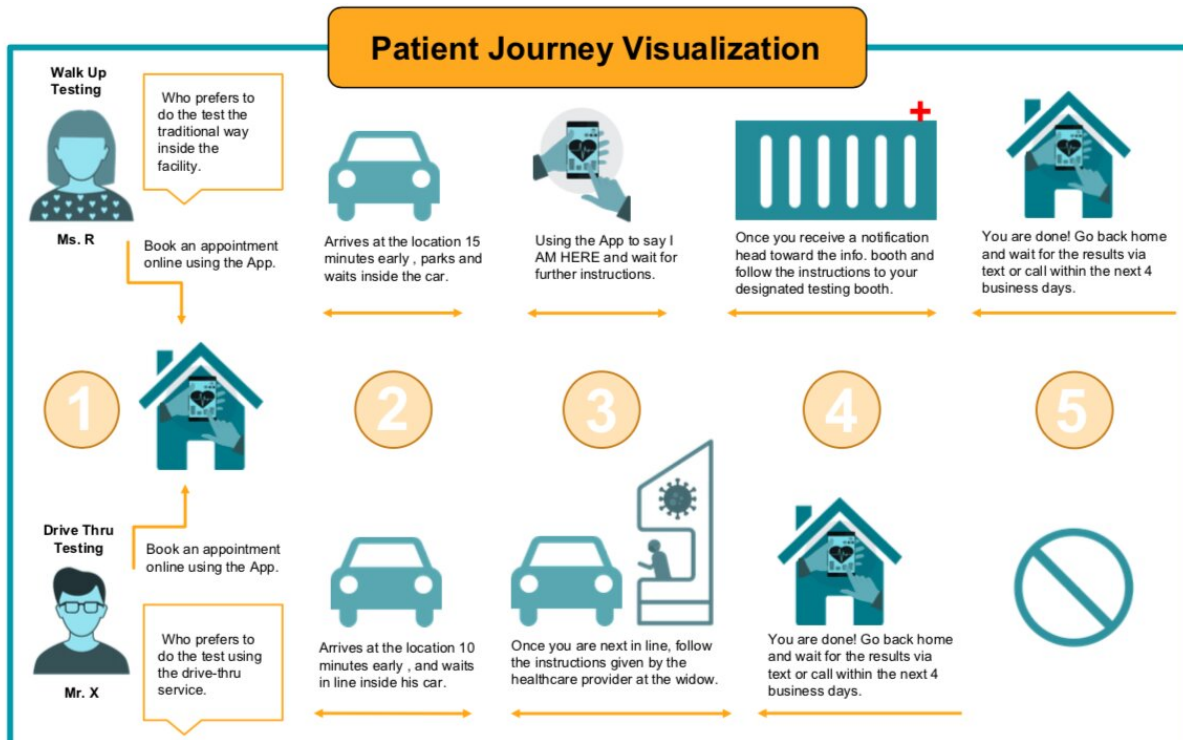
Credit: Florida International University



**Prefabricated Expandable Testing Booth**



Credit: Florida International University



Credit: Florida International University

In designing the COVID-19 testing station, one of the most important aspects Bokhari felt her design needed was to be easily deployable and flexible. To achieve this, the shipping and prefabricated units can be easily folded, stacked and transported, allowing for quick set-up and delivery. Also, due to the flexibility of the hybrid structure, CONT + AID can be installed in open spaces, such as parking lots, just as easily as in enclosed areas like an airport terminal.

In her proposal, Bokhari also includes best practices that CONT + AID employs for both walk-up and drive-through coronavirus testing to limit exposure; a visualization of the entire testing process; and CONT + AIDS mobile app configuration—which allows patients to schedule appointments, view test results and find doctors, locations and latest

COVID-19 updates.

With coronavirus cases still rising, models like Bokhari's could go a long way in helping hospitals safely treat more patients.

Provided by Florida International University

Citation: Interior architecture student creates hybrid COVID-19 treatment model to aid overcrowded hospitals (2020, July 21) retrieved 23 April 2024 from <https://medicalxpress.com/news/2020-07-interior-architecture-student-hybrid-covid-.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.