Rethinking Design And Operational Strategies For Post-Pandemic Senior Housing

By Michael E. Liu and Anthony Vivirito | October 23, 2020

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Outdoor areas are more important than ever. The Atria McCandless project in Pennsylvania has courtyard amenity spaces that can be easily reconfigured to support safe social gatherings.

Over the last several decade, independent living and assisted living communities have increasingly adopted a hospitality-like aesthetic with an emphasis on social and recreational design features. This has been a necessary response to competition within the industry as well as with the broader residential market. Concurrent with this change has been an increase in resident acuity as residents tend to be frailer than they were a decade ago. The need to protect them from infection has never been greater, as recent events have proven.

While the COVID-19 pandemic has added a health security aspect of paramount importance, it shouldn't replace the desire for a socially rich residential lifestyle. Rather, communities and design teams will need to focus on minimizing disease transmission and maximizing safety measures while maintaining the non-medical, hospitality-styled residential model families have come to expect.

Here are four considerations that can help independent and assisted living providers balance the dual imperatives of lifestyle appeal and safety:

1. Designing for compartmentalization and containment
COVID-19 has shown that the ability to physically segregate residents from one another is critical to reducing the impact of acute infectious events. Within existing facilities, temporary or demountable screens and partitions can be deployed as an immediate precautionary intervention to limit the spread of infection while preserving flexibility.

In new construction, a rethinking of common amenity space layouts seems in order. While not abandoning the open-plan feel associated with contemporary hospitality design, subtle modification to allow compartmentalization should be possible. For example, custom furnishings can be designed to allow the addition of half- or three-quarter-height decorative partitions to confine aerosol dispersion within larger common spaces. Outdoor spaces can be designed with moveable planters to create segregated areas.

Similarly, an ability to provide for segregated dining and lounge areas that might limit occupancy to eight to 10 residents during an infectious event could be achieved by providing flexible, convertible spaces that were initially provided for a different program (i.e. a library space with direct service access to the commercial kitchen).

Additionally, managing resident activities to limit the number of people in a given activity and space, controlling the movement of residents and staff within the facility, and reorganizing existing spaces such as converting existing rooms or units to visitation suites can significantly minimize overall facility exposure during an infectious event.

2. Touchless controls and better HVAC systems
Moving forward, facilities management will provide a critical first line of defense against infection in new projects and retrofits. We anticipate that design teams will focus on reducing touchpoints with leverless door hardware and touchless elevator controls, faucets, paper towel, and soap dispensers for common restrooms.

As the science of pathogen propagation develops, mechanical systems will become more sophisticated relative to infection control. We anticipate mechanical systems may be retrofitted to add more robust filtration and/or ionization systems to existing HVAC equipment to remove germs, while UV irradiation components may be added within existing air plenums to destroy them. In the case of COVID-19 (and some other airborne pathogens), there's evidence that transmission rates may be affected by humidity level, which could lead to greater control over humidification, whether generalized or focused on the creation of separate humidity-controlled suites or rooms.

Under current building codes, large areas of connected common spaces may share the same air distribution system, but future best practices will likely require limits on areas served to reduce the range of possible airborne pathogen dissemination. Additionally, a certain number of individual residential units can be designed to convert to isolation rooms with discrete HVAC systems capable of delivering 100 percent outside air and humidification control, or switchable between positive and negative pressure, depending on resident health status.

3. Safe gathering areas
The current pandemic has underscored the need to find ways to preserve residents' interactions with friends and family members. For instance, outdoor areas have become more important than ever to

support social gatherings and should be enlarged or designed to allow for multiple safe groupings and social distancing.

Inside, safe visitation rooms or suites can be created. Ideally, these would be located on an exterior wall permitting visitors to come directly into a secure area without walking through the facility and have dedicated HVAC systems to segregate supply and return air within these defined, smaller areas. Glass partitions can be used to allow face-to-face visitation in a common room while minimizing disease transmission among participating parties or between the visitor and the wider resident community.

Some of our clients opt to incorporate such spaces in the base design while others prefer the flexibility of areas within the building that can be modified to allow conversion as part of contingency planning. Planning for such flex spaces requires stubbing out (or making provisions) for future MEP connections in the event of an infectious outbreak. Where in-person visitation is not possible, dedicated teleconferencing rooms with robust technology platforms may become a standard program element.

4. Return to neighborhood-focused models
When planning new communities, owners and operators may consider alternative design approaches, such as clusters of discrete individual buildings like the Green House model or the replication of such models within larger facilities. This neighborhood approach typically supports eight to 12 residents with their own common living and dining spaces. Besides the obvious epidemiological advantages of segregating a larger community into smaller groupings, such arrangements make it easier for the same caregivers to work with the same group of residents, reducing the chance that staff will transport infection from one part of a community to another.

Implementing short-term solutions is critical to deal with the immediate crisis precipitated by COVID-19 to make existing facilities as safe as possible for residents, visitors, and staff. Exploring and implementing new ways of approaching space planning and mechanical systems, together with management and staffing strategies, will be essential to ensuring the long-term health and viability of the industry as we design senior living communities for the future.

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