



## KEY POINT SUMMARY

### OBJECTIVES

To understand how the comprehension of a residential care facility's physical layout affects patient-reported satisfaction and health, and what can be done to improve patients' comprehension of facility floor plans.

## Legibility of floor plans and wayfinding satisfaction of residents in Care and Attention homes in Hong Kong

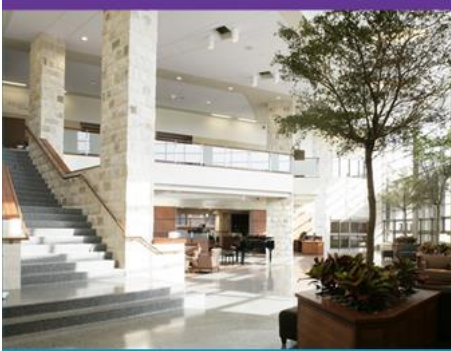
*Tao, Y., Gou, Z., Lau, S. S.-Y., Lu, Y., Fu, J. 2018 / Australasian Journal on Ageing, Volume 37, Issue 4, Pages E139-E143*

### Key Concepts/Context

This study takes place in Hong Kong, where “Care and Attention” homes are defined as healthcare facilities treating patients with moderate mental and physical impairments. Hong Kong's high population density directly affects healthcare infrastructure; accordingly, this study focuses on a high-density, high-population Care and Attention home. Architects and healthcare providers alike are interested in learning how these facilities can be better designed to accommodate large numbers of patients with mental and physical impairments, especially with regard to how the physical layout of these facilities can be better navigated by patients. The authors define the “legibility” or “wayfinding” of a given space as the ease with which patients can find their way around a facility, and remember their pathways in the future.

### Methods

Nine different Care and Attention homes were involved in this study. All nine homes were located within high-rise, high-density residential districts in Hong Kong. The majority of these facilities had individual patient rooms, which bordered a central common area. The authors make use of a measurement known as an “integration value,” which gauges how integrated a given space is to the general configuration of a building. For example, when a patient is first learning the layout of a Care and Attention facility, they are most likely to gravitate towards common-space corridors or spaces. These spaces provide access to many other spaces in the building, thus giving the space a high “integration value.” A total of 181 patients answered questionnaires regarding their experiences with navigating Care and Attention homes and the care received within these facilities. Survey results were



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analyzed in the context of the different integration values attributed to the spaces mentioned by patients in each Care and Attention facility.

## Findings

Analysis of survey results found that the average length of stay for patients across all nine Care and Attention homes was two years. Familiarity with building layouts did not seem to affect overall levels of patient satisfaction with wayfinding in the facilities. However, the correlation between integration values ( $> 0.9$ ) and patient satisfaction proved the authors' hypothesis that increasingly complex floor plans erode patients' ability to navigate facilities and thus negatively impact their experience. This is especially true for older patients, who may suffer from vision or memory degradation.

## Limitations

The authors note that all of the patterns of patient movement observed in this study were horizontal, meaning they always took place on a single designated floor. In many other cases, patient movement patterns might incorporate vertical movements up or down stairs, elevators, or escalators. This study focuses on very specific architectural restrictions emerging from a densely populated environment; some of the findings or research methods may not be relevant to facilities with lower levels of population density.

## Design Implications

The overall floor plan of a healthcare facility should work to make wayfinding and navigation for patients as easy and comfortable as possible, especially in healthcare environments where patients are receiving treatment for mental or physical ailments. This study suggests that these kinds of facilities should focus on implementing more communal areas that connect to personal spaces.

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