



## KEY POINT SUMMARY

### OBJECTIVES

The objective of this research study was to determine the role of corridors of a spinal cord injury (SIU) and a brain injury (BIU) rehabilitation units to influence the future design of patient units.

## “Everything Happens in the Hallways”: Exploring User Activity in the Corridors at Two Rehabilitation Units

Colley, J., Zeeman, H., Kendall, E., 2017 | *Health Environments Research & Design Journal*, Volume 11, Issue 2, Pages 1-14

### Key Concepts/Context

This research study focused on recording activities occurring in corridors of a Spinal Cord Injury Unit and a Brain Injury Unit and how the design of the corridor influences the activities affecting patients and staff experience. The study results focused on three factors: mobility/movement, delivery of care and experience of that care, and finally “spillover space” activities (activities occurring in the corridor other than mobility/movement).

### Methods

There were two methodological components to this study: Observation of corridor activities at various intervals, and interviews of staff, patients, and visitors at a “major metropolitan” SIU and BIU. The sample size for the Spinal Injury Unit was 12 patients and 23 staff members, while the Brain Injury Unit was 12 patients and 10 staff members. Analysis of the data was “thematic.” There were three themes identified in this rehabilitation corridor use: movement, delivery and experience of quality care, and “spillover space.” There were no confounding variables identified or controlled in this study.

### Findings

For Observer User Activity, the total number of observations was 1144 for the SIU and 509 for the BIU. In the SIU, staff and patient activities were considered independent 70% of the time, while 30% of the time they were engaged in activities with others. For the BIU, staff and patient activities were considered engaged with others about 56% of the time, while 42% of the time they were engaged in independent activities. More in-depth statistical analysis was not offered.



For the staff and patient interview portion of the study, only thematic results were reported. The three main themes of the interview section were: Moving around, delivery and experience of quality care, and “spillover space.” For moving around: Width of corridors/doorways/elevator button location, hallway congestion, wayfinding, and general layout affected the perception of quality of care. For delivery and experience of quality care: Sight lines which allow viewing of patient rooms by staff, unit design which separates disciplines resulted in meetings occurring in the corridor, supporting privacy, and providing first impressions were important factors identified. For spillover space: Equipment and clutter in the hallway due to a lack of usable space for storage and therapy was identified as a concern.

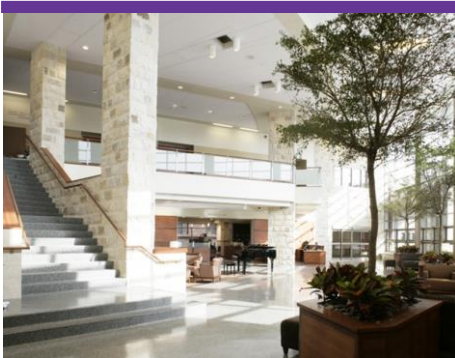
### Limitations

For the Observer User Activity, observer times varied by unit and the mere presence of the observer may have impacted observations. For the interview portion of the study, location of the interviews and the details/severity of the brain injuries were not known to the researcher. Also acknowledged in the study was the small sample size, and the use of only two units limit the generalization of the study results. Additional limitations include when the units were constructed (1980s) vs. the time of the study (2010), any consideration of life safety issues, and national/cultural approach to patient care. (Presumably this study was conducted in Australia where the study was published.)

### Design Implications

Implications for the design from this study include:

- Incorporate bathrooms in patient rooms so patients do not have to cross corridors for personal care.
- Design team areas to allow interaction between healthcare professionals in a confidential secure area, not in a hallway. If conversations/interactions need to occur in a corridor, incorporate alcoves with white noise to promote confidentiality of patient information.
- Provide additional storage areas or alcoves to place equipment such as wheelchairs and other equipment out of the travel pathway.
- For rehabilitation facilities, design corridors to be wider than code minimum and entry/egress points (doorways and elevators) to accommodate wheelchairs. Perhaps a rule of thumb should be that rehabilitation unit corridors are wide enough for two-way traffic.



### The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at  
[www.healthdesign.org](http://www.healthdesign.org)

- Design rehabilitation units without corridors. Perhaps an open architectural concept may eliminate or reduce the number of corridors that patients must contend with. This would imply that medication, clean utility, soiled utility, and staff spaces may be designed to one side of a unit rather than centralized. In addition, placing satellite nurses' documentation areas in proximity to a cluster of patient rooms would allow better staff observation of patient rooms.
- Deinstitutionalize the look and feel of rehabilitation units. One patient comment reported that "hallways give a first impression" of the unit.
- Incorporate therapy services into rehabilitation units themselves or within close proximity to the unit to prevent excessive travel by patients.
- If the unit has an outdoor patio or common area, do not have the access point through a patient room, as reported in the study.
- Use interactive virtual reality (VR) mockups during the design phase of the unit building/remodeling to allow staff and patients input to unit layout.

The Knowledge Repository is a collaborative effort with our partners



Additional key point summaries provided by



RESEARCH DESIGN  
connections