

Where Goes The Toilet?

Inboard vs.
Outboard;
Headwall vs.
Footwall;
Same-handed
vs. Mirrored

POSITION STATEMENT

The benefit of same-handed rooms from a “safety” perspective is still in debate. While standardization is critical- this related more to how the space is organized with consistency in where different furniture and equipment is located in relationship to each other.

Where same-handed rooms may have an advantage are 1. Noise mitigation (no shared headwall), and 2. Use of Pre-Fab units (for mass production all rooms would need to be exactly the same). If these are not driving forces, then the mirrored room provides a comparable alternative.

Outboard toilets provide easier access to patient, ease in patient transfer, and reduction of pinch-points at the entry way. This is at the cost of the family space and the view to the exterior- both key considerations.

In-board toilets provide an additional buffer for sound, easier access for housekeeping, and clear staff, family and patient zones. However, the high pressure at the entrance makes real estate for key clinical activities an issue.

The headwall-footwall issue is really about the number of steps and supported pathway (handrail) to the bathroom. Research indicates that visibility to toilet, and uncluttered access may be more important than the handrail which is often obstructed by equipment.

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EVIDENCE OVERVIEW

As concerns with patient safety grow, same handed rooms have gained popularity with the argument of standardization. Yet research tells us that standardization is a relative concept- i.e. the consistent layout where spaces and objects are placed in a consistent relationship to *each other* (Pati, et al. 2010). In other words, a mirrored configuration could also be standardized if the bed, side table, toilet etc. were all consistently placed in relationship to each other. A continued discussion on the topic reveals that it is not patient safety, but perhaps patient satisfaction (lower noise due to walls that are not shared) and scope of modularization (pre-fab and use of modular units is easier in same-handed rooms) that could drive this decision.

According to a 2009 report on a symposium conducted by Pati and colleagues, outboard bathrooms were rated to be most suitable by nurses, followed by nested and inboard ones for patient care and patient transfer. Also, bathrooms located at the footwall of the patient were more suitable than those located at the headwall. (Pati, et al. 2009). Patients on the other hand rated inboard configurations higher based on access to view, light and larger family zone.

In a 2012 study funded by the Center for Health Design (Calkins, Biddle, & Biesan, 2012), significant relationships between falls and physical environment characteristics were found for the following:

1. Ability to have Toilet Door open and have direct line of sight to toilet
2. Presence of a family zone
3. At least 18 inches of opening on each side of the bathroom
4. Toilet on the side wall (next to bathroom door) with continuous handrail from door to toilet
5. Two grab bars on both sides of toilet

Interestingly, in this study it was found that there was a larger incidence of falls when toilet was on the headwall compared to footwall. Author argued about the critical need for visibility to the toilet door and the toilet itself. There was no data in the study on use of hand rails.

Based on the evidence till date, there is little to support the use of handrails at the headwall. The issue must be investigated further. In the meanwhile the following considerations take precedence:

1. Clear line of sight to toilet
2. Uncluttered/ unobstructed access
3. Minimal walking
4. Support from bathroom door to toilet
5. Space to accommodate family

REFERENCES

- Calkins, M. P., Biddle, S., & Biesan, O. (2012). Contribution of the designed environment to fall risk in hospitals: Center for Health Design.
- Pati, D., Cason, C., Harvey, T. E. Jr., & Evans, J. (2010). An Empirical Examination of Patient Room Handedness in Acute Medical-Surgical Settings. *Health Environments Research & Design Journal*, 4(1), 11-33.
- Pati, D., Harvey, T. E. Jr., Reyers, E., Evans, J., Waggener, L., Serrano, M., . . . Nagle, T. (2009). A Multidimensional Framework for Assessing Patient Room Configurations. *Health Environments Research & Design Journal*, 2009 Winter(2 (2)), 88-111.
- Pati, D. & Harvey, T. E. Jr. (2009). Impact of Patient Room Physical Design Configuration on The Care Process, Caregivers and Patients. Report to Integris Baptist Medical Center. (Unpublished)

The Table Below Summarizes the Pros and Cons of the Different Room Configurations

	Same Handed- Headwall	Mirrored- Headwall	Same Handed- Footwall	Mirrored- Footwall
In Board Family Space and Patient Experience Advantage	<ul style="list-style-type: none"> Fewer steps to bathroom Fewer steps for Cleaning Smaller Staff/caregiver footprint in the room Exterior Wall opened up for views More patient privacy Standardization for Pre-Fab Noise mitigation (no shared wall, bathroom acts as buffer) More Family Space Low visibility from corridor Low Visibility to bathroom Pinchpoint at entry for urgent care scenarios/ code Less space to accommodate handwashing sink, supplies etc for staff. Plumbing risers along corridor making it difficult to renovate 	<ul style="list-style-type: none"> Fewer steps to bathroom Fewer steps for Cleaning Smaller Staff/caregiver footprint in the room Exterior Wall opened up for views Noise mitigation (no shared wall, bathroom acts as buffer) Cost-savings of plumbing efficiencies Less Family Space Low Visibility to bathroom Pinchpoint at entry for urgent care scenarios/ code 	<ul style="list-style-type: none"> Fewer More steps to bathroom High Visibility to bathroom Fewer steps for Cleaning Smaller Staff/caregiver footprint in the room Exterior Wall opened up for views Standardization for Pre-Fab Noise mitigation (no shared wall, bathroom acts as buffer) Pinchpoint at entry for urgent care scenarios/ code Less space to accommodate handwashing sink, supplies etc for staff. 	<ul style="list-style-type: none"> Fewer More steps to bathroom High Visibility to bathroom Fewer steps for Cleaning Smaller Staff/caregiver footprint in the room Exterior Wall opened up for views Cost-savings of shared piping Noise mitigation (no shared wall, bathroom acts as buffer) Pinchpoint at entry for urgent care scenarios/ code Less space to accommodate handwashing sink, supplies etc for staff.
Outboard Patient Transfer Advantage	<ul style="list-style-type: none"> Larger staff area Adequate space for clinical needs in the front of the unit More visibility from corridor Fewer steps to bathroom Standardization for 	<ul style="list-style-type: none"> Larger staff area Adequate space for clinical needs in the front of the unit More visibility from corridor Fewer steps to bathroom Cost saving due to 	<ul style="list-style-type: none"> Fewer More steps to bathroom Adequate space for clinical needs in the front of the unit High Visibility to bathroom for Pre-Fab Noise mitigation 	<ul style="list-style-type: none"> Fewer More steps to bathroom Adequate space for clinical needs in the front of the unit High Visibility to bathroom Cost-savings of shared piping

<ul style="list-style-type: none"> • Pre-Fab • Noise mitigation (no shared wall, bathroom acts as buffer) • Easier Renovation • Less Family Space • More steps for Cleaning • Larger Staff/caregiver footprint in the room • Smaller views • Less patient privacy 	<ul style="list-style-type: none"> • plumbing efficiencies • Easier renovation • Noise mitigation (no shared wall, bathroom acts as buffer) • Less Family Space • More steps for Cleaning • Larger Staff/caregiver footprint in the room • Smaller views • Less patient privacy 	<ul style="list-style-type: none"> • (no shared wall, bathroom acts as buffer) • More space to accommodate handwashing sink, supplies etc for staff. • More steps for Cleaning • Larger Staff/caregiver footprint in the room • Smaller views 	<ul style="list-style-type: none"> • Noise mitigation (no shared wall, bathroom acts as buffer) • More space to accommodate handwashing sink, supplies etc for staff. • More steps for Cleaning • Larger Staff/caregiver footprint in the room • Smaller views
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