

A photograph of a modern rehabilitation gym. In the foreground, a white car is on a silver hydraulic lift. A wooden handrail with silver posts runs across the middle ground. In the background, there are wooden stairs, a blue exercise machine, and a windowed wall. The floor is light wood with blue mats under the lift and machine.

## CONTINUUM OF CARE

HOW INPATIENT AND RESIDENTIAL REHABILITATION  
POSITION PROVIDERS FOR OUR FUTURE REGULATORY  
AND DEMOGRAPHIC ENVIRONMENT





Readmission penalties under Medicare's Hospital Readmissions Reduction Program (RRP) could amount to 3% of an individual hospital inpatient Medicare reimbursement by 2015, and that is before you consider the cost of providing the readmission care for free.

**As providers seek opportunities to reduce readmission rates, two emerging facility types offer enhanced care coordination between the hospital and home.**

Inpatient and residential rehabilitation facilities help reduce hospital readmissions by supporting patients and their care partners as they re-establish the ability to function at home. However, the current facility inventory will not keep pace with demand for post-acute services given the aging demographics of our population and the incidence of chronic disease. This represents a prime opportunity for providers to stake a claim in the continuum of care.



#### **SKILLED NURSING + RESIDENTIAL REHABILITATION**

A provider in the Southeast selected FreemanWhite to develop more than 10 skilled nursing and residential rehabilitation facilities for locations throughout their service region. Our designs range from 60 to 120 beds and from 1 to 3 stories to meet the needs of different locations, operations, and services. Unlike a traditional long term care facility, these projects attract a younger demographic frequently with shorter stays to recover from surgery, a stroke, or an illness. Should they continue to require assistance caring for themselves, they then become long-term residents.

As CMS and Medicare Advantage compress Medicare reimbursements, our designs enhance providers' ability to balance their reimbursement revenue with their expenses. Because CON requirements prohibit skilled nursing and inpatient rehabilitation from adding more beds to increase revenue, cost savings instead are gained through staffing efficiency and the design of the facility. We distribute supplies and documentation areas to provide shorter walking distances for staff, which increases time spent at the patient bedside. Through the use of our proprietary Lean modeling tools, we can test multiple arrangement and staffing scenarios to provide data driven efficiency. Studies show that shorter walking distances translate to reduced staffing needs and costs. Because we implement facility design features that allow reduced travel distances for staff, they can spend more time with the patient and increase the valuable time needed for treatment and therapy.



Several of the projects have a rehabilitation component designed to simulate situations the patient will encounter at home or in the community. As part of a multi-week intensive curriculum of physical and occupational therapy, patients practice daily chores, such as cooking and washing clothes, grocery shopping, visiting an ATM, and getting in and out of a car. Therapy modules incorporate common obstacles including curbs, steps, doorways, ramps, and texture changes. The home-like environment provides a residential scaled kitchen, bedroom, bath, and living room to help patients relearn daily living skills in order to regain independence and confidence. Although there is a cost to producing this simulated environment, the advantage of a real life scenario in a controlled environment is safer for patients and staff and more efficient to monitor, resulting in a short payback period.

This approach is extremely flexible from a clinical perspective. When residential rehabilitation patients graduate from the program, they can utilize facility's outpatient services for testing and checkups. This is both convenient for the patient and fiscally advantageous for the provider. In-home visits offer the advantages of training patients in their real-life environments and allowing their therapists to assess their individual challenges as they complete rehabilitation training.



## **BRAIN, STROKE, AND TRAUMATIC INJURY REHABILITATION**

At FreemanWhite, our rehabilitation experience and expertise spans from the simplest to the most complex clinical challenges. In addition to experience in activities of daily living, a recent 40-bed freestanding inpatient rehabilitation facility design allowed us to assist a provider in creating an exceptional patient experience for post-acute transitional brain, stroke, and traumatic injury patients.

The new facility is part of a nationwide trend to move some of our most complex rehabilitation patients out of traditional hospitals and into more focused care environments. The benefits include patient rooms designed with rehabilitation in mind and open spaces dedicated to physical, occupational, and neurological therapy that traditional hospitals or skilled nursing facilities aren't typically equipped to

provide. It allows the additional advantages of family convenience, a residential scale, and the enhanced ability to incorporate nature and views into patient environments.

Freestanding inpatient rehabilitation facilities also help reduce hospital readmissions by retraining patients to live independently. After appropriate rehabilitation has occurred at the rehab facility, patients practice household chores, such as cooking and washing clothes, in a full-scale, furnished transitional living apartment onsite. Along with their families, patients may also spend the night in the apartment sleeping in a residential bed. These accommodations offer patients and families a chance to practice functioning in real life environment before discharging to home-based care.

**The freestanding inpatient rehabilitation facility was designed to be efficient from staffing, patient volume, and spatial standpoints using our proprietary operational process improvement tools. One such tool is the Time Travel dashboard.**



## TIME TRAVEL DASHBOARD

		Existing		Option 1			
		Average Daily Census <b>32.0</b> <small>(Click on value to change)</small>					
		Patient/RN Ratio <b>6.0</b> <small>(Click on value to change)</small>					
		Patients per Shift <b>5.3</b>					
		RNs per Shift <b>5.5</b>					
Round Trip Room to...	Average Distance (ft)	Trips Shift/Pt	Total Distance Traveled per Pt by Shift (ft)	Average Distance (ft)	Trips Shift/Pt	Total Distance Traveled per Pt by Shift (ft)	% Change (Total Distance)
RN Station	216	8	1728	159	8	1272	-26%
Nourishmt	268	4	1072	136	4	544	-49%
CI Utility	276	5	1380	136	5	680	-51%
Soil Util	262	3	786	278	3	834	6%
Eq/Storage	251	3	753	313	3	939	25%
Meds	257	7	1799	125	7	875	-51%
Day Room	348	5	1740	266	5	1330	-24%
Gym	389	2	778	365	2	730	-6%
ADL	339	1	339	322	1	322	-5%
X-Ray	328	0.5	164	403	1	202	23%
Food Svc	459	1	459	502	1	502	9%
<b>Total</b>	<b>2267</b>	<b>40</b>	<b>10036</b>	<b>1778</b>	<b>40</b>	<b>7204</b>	<b>-28%</b>
<b>Average Distance per RN (ft)</b>		<b>53,525</b>		<b>Average Distance per RN (ft)</b>		<b>38,421</b>	
<b>Average Distance per RN (mi)</b>		<b>10.1</b>		<b>Average Distance per RN (mi)</b>		<b>7.3</b>	
<b>Total Distance - All RNs (miles)</b>		<b>55.8</b>		<b>Total Distance - All RNs (miles)</b>		<b>40.0</b>	

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Staff time spent going from space to space to “hunt and gather” standard supplies can not only be a significant waste of time, but it also exposes caregivers to interruptions. Our proprietary TimeTravel dashboard gives us the ability to track staff walking distances in an interactive format. This dashboard allows clients to see the impact of design decisions in the amount of movement required by staff and, ultimately, the amount of time staff can devote to care. To reduce staff walking distances between patient rooms and supplies, our team was able to recommend decentralized nurse stations with quantifiable data for the amount of staff time saved.



## ABOUT THE AUTHOR

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Mark is an adjunct professor at Cornell University co-teaching a course on the intersection of policy and design in the School of Design and Environmental Analysis. The course investigates Evidence Based Design (EBD) with the intention of clarifying the uncertainty regarding scientific evidence and the investment in facilities. This experience provides FreemanWhite access to world class research and a unique perspective regarding the components of EBD that are most beneficial to Healthcare.

**Healthcare providers are currently facing a dizzying array of strategic and facilities challenges. At FreemanWhite, our approach integrates data, research, and best practices into our architectural solutions to help you balance cost and value.**



