

The Secret to a Successful Transition from Semi-Private to Private Patient Rooms

Financial challenges top the list of concerns for any hospital executive with patient safety and the quality of their experience also ranking high on the short list¹. For safety, quality and economic reasons, many hospitals have identified transitioning their semi-private rooms to private rooms as a top priority: however, not as many have a clear understanding of the significant limitations they may face based on the hard realities of their current infrastructure.

While any renovation process is defined by compromise, forethought and ingenuity are key to avoiding surprises, delays and associated cost overruns. A clear and detailed knowledge of existing circumstances is the critical first step toward realizing updated rooms that function efficiently for care providers and improve the patient experience.

The Road to Privacy

Historically, this shift toward more privacy in the hospital environment is consistent. Before WWII, most patients were cared for in wards accommodating upwards of 26 patients at a time; but, by the 1950's, wards were generally only housing four beds.² The Hill Burton Act of 1946 spurred a huge increase in hospital construction and furthered the trend away from the ward model toward semi-private patient rooms.

Rooms that prevail from this growth boom combine with various hospital expansions through the 1980's to define the challenges faced by today's hospitals interested in converting semi-private to private rooms.

Semi-Private rooms built in the United States in the 1950's and 1960's following Hill Burton typically followed this model:

- 12' wide by 20' to 25' deep
- 3' clearance to the footwall, sidewall and between beds
- 15' to 16' headwall
- 3'-8" entry doorways

¹ Beckers Hospital Review <http://www.beckershospitalreview.com/hospital-management-administration/10-most-concerning-issues-for-hospital-ceos.html>

² Healthcare Design Magazine <http://www.healthcaredesignmagazine.com/article/history-hospitals-and-wards?page=3>

Some hospitals remodeled these rooms in the 1980's by introducing air conditioning, additional power and gases and even computer hook ups. However, the rooms do not offer updated functionality or the potential to provide for visiting family.

While a limited number of private rooms have been available for years, originally created exclusively for the wealthy who could pay for such a luxury, post-war iterations were often quite small compared to current standards with showers outside the room and shared by other rooms on the floor. In contrast to today's guidelines, the design of these rooms was influenced by:

- Resistance to private rooms due to a perceived higher cost from Certificate of Need (CON) and insurance companies.
- Physician control of hospital selection; consumer choice did not yet widely exist.
- The perspective that patient rooms were holding spaces for the convenience of doctors and clinical staff, not for treatment.

Defining Contemporary Private Rooms

Today, there is no typical private room model although all rooms are larger and feature showers in expanded toilet rooms, a family area and designated work space for attending care providers. While some modern private rooms are minimally functional, others are luxuriously well appointed with solid wood paneling and finishes, moldings, coffered ceilings and private balconies.

Current codes and standards dictate a room be at least 12' x 25'. Simple items like standard furnishings have contributed to this increase as well as other room design evolutions. For example, today's standard hospital bed is 4" wider and well over a foot longer - taking up 25% to 35% more floor space - than beds used in 1975. Add clearance standards around the bed and, without significant renovations, new beds simply cannot be used in many older rooms.

The design of a contemporary private room is shaped by additional codes and standards that now demand a sink in both the patient room and toilet room and toilet rooms that are 50 square feet which is double the standard only 25 years ago. Doorways have increased from 2'- 8" in the mid-1970's to 3'- 4" and wider today to accommodate the Big Boy wheelchairs. Of course HIPPA is a significant factor in all patient care and private rooms present an array of positive solutions over a semi-private environment.

Beyond codes and standards, our population and the way we provide care has changed profoundly with direct consequence to both the purpose and function of patient rooms. Hospital capacity - defined as the number of beds per 1000 in the population (beds/1000) - grew significantly following the Hill Burton Act of the 1940's which set a goal of 4.5/1,000. In 1980, this ratio peaked at 6/1000 but has since steadily dropped to only 2.6/1000 in 2011³.

During this same period, inpatient (IP) admissions have also been in dramatic decline. In 1980, IP admissions were 160/1000, decreasing to 114/1000 by 2010⁴. Similarly, the number of patient days in the hospital has also diminished from 1209/1000 in 1980 to only 614/1000 in 2010.

These trends directly reflect the strong shift in healthcare toward an outpatient care model. Only 45 years ago, it was relatively common for a patient to be admitted to the hospital with a severe cold. This is strongly contrasted by the fact that patient admission today is reserved for those with considerably more acute illnesses.

Hospitals Respond and Evolve

The response by hospitals to these trends is resounding with new spaces designed to better focus on acute care needs with an emphasis on staff and patient safety, infection control, privacy and patient satisfaction. Many hospital leaders are also identifying resources to transition their outdated semi-private rooms to private rooms, some leveraging the added opportunity of having held a sizable excess in their bed count.

Too often, renovation goals are set and resources committed before the existing infrastructure is thoroughly assessed and the realities of potential solutions considered. The emphasis on outcomes - updated facilities offering improved care and economics - obscures the challenges inevitably presented by the existing facilities limitations.

³ Avalere Health analysis of American Hospital Association Annual Survey Data, 2011, for community hospitals. PDF download from web

⁴ Avalere Health analysis of American Hospital Association Annual Survey data, 2011, for community hospitals. US Census Bureau: National and State Population Estimates, July 1, 2011. Link: <http://www.census.gov/popest/data/state/totals/2011/index.html>.

Achieving optimal care and critical economic goals through a major facilities update is possible with a detailed understanding of the current infrastructure that then fuels the development of appropriate and resourceful solutions. The following examples illustrate how three very different circumstances resulted in a highly successful transition from semi-private to private rooms.

Renovation A: Puzzle Mastering

A large, academic medical center set a simple goal for the renovation of one of its existing, 1960's era patient facilities: to realize as many private rooms as possible. The current semi-private rooms were small and narrow by any standard, with a sink in the patient room and not the toilet room.

A comprehensive assessment of the existing building revealed a narrow structural system and low floor-to-floor height, a significant challenge that would define this hospital's transition to private rooms by compromise. The narrow room required a custom headwall solution to maximize the useful depth and fit the extensive gas, power and data requirements of an acute care step down unit.

A cabinet was created outside the patient's door to house PPE gear. Hand washing sinks are nested in the hall between the rooms and the toilet room wall is angled to facilitate bed and equipment transfer. The existing HVAC system was an in-wall, ventilator system that lacked acceptable filtration, so an entirely new distributed ductwork variable air volume (VAV) system was designed. HVAC and other horizontally distributed services were installed in zones to maintain acceptable ceiling heights and deliver modern services. While the structural limitations of the original building keeps the private rooms small for today's standards, ingenuity successfully realized the hospital's goals.

Renovation B: Ease in Flexibility

This typical suburban community hospital also wished to achieve the maximum number of private rooms possible within their existing patient facility. Fortunately, the prevailing semi-private rooms were generous in size and already featured a shower ensuite. The infrastructure was also less rigid than the previous example allowing much more flexibility in determining the ideal solution.

The outcome of this renovation was highly successful because the infrastructure provided for more significant alterations of the existing environment. The new layout accommodates space for an in-room nurse work area, a family area and a roll-in shower

within the generous ensuite toilet rooms. The existing HVAC system was a distributed ductwork system that was converted to VAV to improve individual room control, efficiency and overall comfort. The existing structure and infrastructure for this project supported an outcome more in keeping with current standards for private patient rooms.,

Renovation C: Affordable Trade-Offs

This hospital had once served an industrial town that, over time, transitioned into a lakeside resort community. This shift left the hospital with far too many beds for the current market creating a unique opportunity for significant trade-offs when the decision was made to convert from semi-private to private rooms. The goal of this project was also different from the other examples. This hospital had recently completed a new patient facility and wanted the renovated building to provide an equivalent contemporary patient environment.

The infrastructure assessment confirmed that the hospital's goal was achievable if they were willing to trade three current semi-private rooms to realize two private rooms. While this was a high cost, it was one that this over-built facility could easily afford. Today, only slight modifications distinguish the newly renovated patient rooms with those in the brand new facility, both of which feature highly functional staff work areas separate from the patient care and family care spaces in generously appointed rooms.

Streamline Renovation: Know Infrastructure

These examples well illustrate the consequential impact that infrastructure will have on a renovation project. Once a hospital identifies the desire to transition its existing semi-private rooms to private rooms, the next step is a detailed infrastructure assessment to determine both the potential challenges and opportunities that need to be considered before budgets, timelines or designs are established. While all of the solutions presented here were successful, each offered a unique set of structural circumstances that dramatically influenced the outcomes.