

## **Envisioning your future in a nursing home**

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Ask any gathering of people – if they had to move into a nursing home tomorrow, would they want to share a room with someone they had never met before? Especially if the room looked like a hospital room with the beds separated by a piece of fabric? I have done this, and I can tell you the answer is a resounding, “NO!”

Ask the family members of someone who has just passed away in a nursing home whether they didn't visit as often, or as long, or whether some family members did not come at the end, because there wasn't enough space in the room, and they felt like they were impinging on the rights of the roommate to have their own room. Or whether the presence of the roommate kept them from being able to say the things that needed to be said before this individual died. Or whether they were disturbed because the roommate had dementia, and kept coming over and interrupting conversations and picking up things they had brought.

Ask the roommate how she felt, wanting to go into her room to take a nap but not wanting to disturb the family who was gathering, also knowing they didn't want to disturb her or disrupt her routine. Or how she felt 3 months ago when her roommate couldn't make it to the bathroom, and so used a commode chair next to the bed, but couldn't pull the curtain either. Ask her how embarrassed she was when her roommate did this in front of her visitors.

Ask the staff how much time they spend trying to manage roommate conflict. When one person likes to stay up late and watch TV, with the volume so loud the roommate can't get to sleep. When one prefers music to game shows, or when the person near the thermostat (and who therefore controls the thermostat) likes the room warmer than the roommate, or when the person near the bed likes the curtains closed all day so she can sleep, and the roommate complains to everyone who will listen, and even to those who don't listen anymore, because they're heard it all before and there's nothing they can do about it anyway. The "complainer" complains louder and louder, and then her family starts complaining, so the social worker tries to make peace, but fails. So they decide to move the complainer, but the only person she'll share a room with already has a roommate, so the facility has to force 2 other residents to move, just to keep the peace and stop the complaining. Ask staff how they feel about all this.

These are all commonplace events in the daily life of the majority of nursing home residents who share a bedroom with a stranger.

## **History**

Originally conceived of as sub-acute hospitals, nursing homes were built on the same institutional model. Large open wards were thought to be the most efficient, in those early days before call bell system, because staff could see all the patients who stayed in bed most of the time. Over time, the wards became smaller, to the point where 4 and 6-person bedrooms were the norm. At the same time, patients in nursing homes were being encouraged to get out of bed and go to the central “day room” (another institutional concept) to socialize. But problems persisted. Several studies show that people in shared rooms, particularly rooms without a clearly defined territory for each individual, are less social in shared or public areas of the unit, and more territorial in claiming space, be it a section of the hallway or a chair in the day room (Kinney, Stephens, & Brockman, 1987; Lipman, 1967; Nelson & Paluk, 1980). In other words, when people do not have sufficient privacy and personal territory provided through the physical environment, they create their own social and psychological privacy by limiting their interactions with other people.

## **Private vs. semi-private**

CMS Tag F460 (§483.70(d)(1)(iv)) states that bedrooms “be designed or equipped to assure full visual privacy for each resident.” The interpretive guidelines suggest that “full visual privacy” means that residents have a means of completely withdrawing from public view while occupying their bed (e.g., curtain, moveable screens, private room).” Typically, when a room is shared with one or more persons, it is described as semi-private. What is semi-private? It is an oxymoron. It is a little like being “slightly

pregnant.” Let’s start with an examination of privacy. The American Heritage dictionary defines private as “secluded from the sight, presence, or intrusion of others; designed or intended for one's exclusive use” (American Heritage nd). Dictionary.com defines it as “without the presence of others; alone” (Dictionary.com, nd).

Semi-private, on the other hand, is defined as “of, receiving, or associated with hospital service giving a patient more privileges than a ward patient but fewer than a private patient” (Merriam Webster, nd) or “shared with usually one to three other hospital patients” (American Heritage, 2000). In both of these definitions, semi-private is defined in terms of being in a hospital, whereas the definitions for privacy never mentioned being in a hospital. Thus, it is reasonable to question how “semi-private” came to be defined solely in terms of being in a hospital. One definition refers to “privileges” though it is unclear what those privileges are. The reality is that privacy, in a semi-private room, refers only to visual privacy (as stated in CMS Tag 460). That’s what a so-called (or mis-named) “privacy” curtain does—limits visual privacy. It does nothing to protect the privacy of auditory or olfactory information, or control over who comes into a space.

There are clearly different kinds of privacy- as the current concern over identity theft proves. Identity theft is loss of control over one’s personal information. Identity theft is not dissimilar from what happens in a nursing home when staff discuss diagnoses and personal care issues with a person on their side of a room, when the roommate is present separated only by a piece of fabric. Despite the intentions of HIPPA, it is just not practical to keep all diagnostic and care issues private from a roommate. So it can be

argued that care in a shared room will almost certainly involve HIPPA violations. If there is more than one roommate (CMS Tag F457 states bedrooms must accommodate no more than 4 residents), HIPPA violations are virtually guaranteed.

In reality, though, keeping information private is generally not at the top of the list of issues or concerns to people living in shared rooms. Much more important to them is adjusting to the day-to-day routines, behaviors and activities of another person. Hearing someone moaning constantly, seeing them use their bedside commode, listening to their TV shows, not being able to set the temperature the way you want, not be able to keep the door open (or closed) as is your preference, having their clothing take up more than half of the closet—these are the everyday irritants that cause friction among roommates. These are issues of basic control over the environment. A resident can't even keep people out of their room, if the roommate wants to let them in.

Not being able to have a private conversation is cited by family members as an important issue. Many nursing homes have few shared social spaces and they are often occupied, so finding a location other than the bedroom to have a private conversation can be difficult. Furthermore, nursing home residents are frail and tire easily, so it may be more convenient to visit in the bedroom. But if there is a roommate, this can stifle the ability to spend quality time together. Bedrooms tend to be so small that there is seldom room for more than one person to visit at a time or more than one chair, limiting the number of people who can visit, or impinging on the space of the roommate. CMS Tag 248 gives minimum requirements of 80 square foot per person in a shared room and 100 square foot

for a private room, but with furniture and wheelchair and other mobility devices, possibly oxygen or other medical support devices, there is barely room for a single chair, much less two to have a conversation with a visitor. This is an especially sensitive issue at end-of-life. Families and loved ones want to gather at the bedside of the dying individual. But there is tension between wanting to have everyone important there and knowing that the presence of large numbers of people is even more disruptive to the roommate. In most cases, the roommate is equally unhappy by the situation, feeling awkward and forced to be an unwilling participant in what ought to be a private time for families. This problem is compounded with there are more than two people sharing the room. It is even less likely that a gathering family can find any time alone with their dying relative.

Having a roommate is not necessarily always a completely negative experience.

Anecdotally, administrators, nurses and social workers will say that there are some people who really prefer not to live alone, who do better with the companionship of a roommate. One research project specifically explored the relationship between roommates in nursing homes (Bitzan, 1998). In this study, 22% of residents interviewed indicated an overall strong or positive emotional bond with their roommate (which is higher than in many other studies), although this means that 77% had moderate or weak emotional bond with their roommate. Overall, 80% denied having problems getting along with their roommate. However, 80% also denied any intimacy of sharing problems or concerns with their roommate. The majority of roommates did not enjoy spending time with their roommate, did not perceive their roommate to be sensitive to their feelings, and agreed they got along best when they kept their feelings and activities to

themselves. Another study (Terakawa, 2004) explored satisfaction of residents who lived in shared rooms and then moved into a new building with all private rooms. Although 39% of the residents initially indicated complete satisfaction with having a roommate and did not want to have a private room, by eight months after the move, 100% of the residents were completely satisfied with having a private room. This suggests people may tolerate and even accommodate to having a roommate, when it's necessary (making the best of it), but once they've had the opportunity to experience living in a private room, that's what they prefer.

### **Other Factors**

Satisfaction is only one factor that is impacted by being in a private or a shared room. There are also clinical consequences, most notably in the area of nosocomial infections. Virtually every study that has explored this topic, both in hospitals and in nursing homes, found patients/residents living in shared rooms were at a significantly higher risk of nosocomial infections (clostridium difficile-associated diarrhea, antibiotic-associated diarrhea, methicillin-resistant staphylococcus aureus, influenza A, acute nonbacterial gastroenteritis and pneumonia) than their counterparts in private rooms (Boyce, Potter-Bynoe, Chenevert & King, 1997; Drinka, Krause, Nest, Goodman, & Gravenstein, 2003; Harkness, Bentley & Roghmann 1990; *State Ombudsman Data: Nursing Home Complaints*, 2003). Nursing home residents contract more than 1.5 million infections annually, have a median incidence rate of 1 to 1.2 per 1,000 patient-days, and each resident faces a 5% to 10% risk per year of infection (Furman, Rayner & Tobin, 2004; Zimmerman, Gruber-Baldini, Hebel, Sloane & Magaziner, 2002). These infections

(primarily pneumonia and influenza A) account for almost 1/4 of hospitalizations of nursing home residents (Zimmerman, Gruber-Baldini, Hebel, Sloane & Magaziner, 2002). One study followed all nursing home admissions to 59 nursing homes in Maryland over a 2.5 year period. Of 2,153 admissions, there were 4,903 episodes of infections in 1,267 residents, of which 375 (7.6%) required a hospital admission (Boockvar, Gruber-Baldini, Burton, Zimmerman, May & Magaziner, 2005). Another study specifically looked at the differential risk of acquiring influenza A in private and shared rooms, and found “those who lived in double rooms with roommates who were identified as cases had a higher relative risk of acquiring influenza A of 3.07 (95% confidence interval, 1.61 to 5.78) compared with those who lived in single rooms” (Drinka, Krause, Nest, Goodman, & Gravenstein, 2003). Finally, a study conducted in 1994 estimated that the average cost of hospitalizing a nursing home resident to treat pneumonia to be \$7500 (Lave, Lin, Hughes-Cromwick & Fine, 1999). Since most of these infections are difficult and expensive to treat, and increase risk of mortality, this is a particularly significant issue for both patients and the health care system at large.

There are other financial implications. Preliminary research also suggests that it is more difficult to market a shared bedroom, resulting in significant lost revenue when people choose a different facility because it has a private room available. The impact of this can be seen in the construction cost analysis conducted by Calkins and Cassella (2007). After analyzing 189 bedroom plans and developing a detailed cost analysis, the average cost of construction plus capital costs (debt) of a traditional, side-by-side shared room was found to be \$41,012 or \$20,506 per person, while the average cost of a private room was

\$36,515 (2005 dollars). Thus, it costs \$16,009 more per person to build private versus traditional shared rooms. Stated another way, it costs \$32,018 more to build two private rooms than one shared room. This would seem to support those who say that private rooms are too expensive to build. But taking a life-cycle costing approach, it can be demonstrated that this difference in construction cost is not as great as it might appear. Based on a large national study, the average daily cost of a private room in a nursing home is \$23 more than a shared room. If the beds are all occupied, assuming a \$23 dollar a day difference, it would take 1.9 years to recoup the cost differential of building 2 private rooms versus 1 shared room. However, if the facility cannot fill a bed in a shared room, the lost revenue is not \$23, but \$167 per day—the average daily cost of a shared bedroom. At \$167 a day it takes only 6.4 months to recoup the construction and debt differential (Calkins & Cassella, 2007).

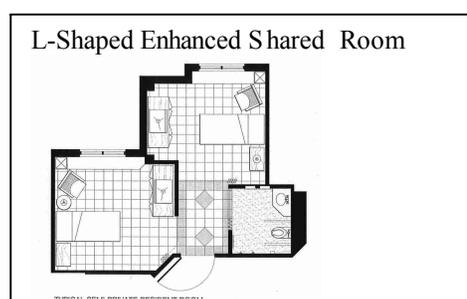
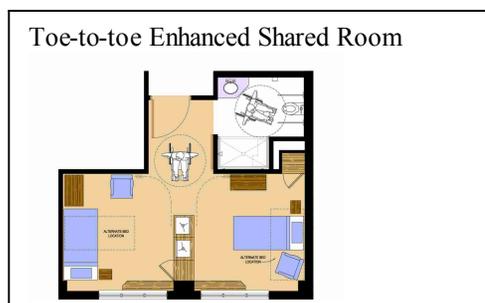
Medicaid, which is the largest payor source for nursing homes, in general will not pay more for a private room. However, in Michigan, the legislature approved a \$5/day higher reimbursement for nursing homes that constructed private rooms. Even with a higher reimbursement of just \$5/day, the construction/capital cost differential is recouped in less than 9 years, meaning the facility is ahead financially for 21 years (calculations assumed a 30 year mortgage). Thus, if a facility is concerned about their long-term finances, it may make more sense to have more private rooms than shared rooms.

### **Staff Factors**

There is some evidence, albeit slim, that staff also prefer it when more residents are in private rooms. Calkins and Cassella (2007) conducted focus groups in nursing homes, where direct care workers said they had a easier time with residents who lived in private rooms than in shared rooms. Maintenance and housekeeping also suggested their activities took longer in shared rooms, possibly because the rooms were more crowded or because residents in shared rooms felt like the space was more “public” (especially the bathroom) and didn’t work to keep it clean, whereas residents in private rooms treated it more like their own bathroom at home, keeping it cleaner. There is also some evidence that staff turnover may be lower in units with a higher percentage of private rooms (Degenholtz, 2007). Both of these factors should be examined more carefully. Given the estimates that construction accounts for about 6% of the life-cycle cost of a nursing home and consumables 11% to 16%. staffing accounts for roughly 66%-78% (Hiatt 1989). Therefore, spending more money on construction in ways that increase staff efficiencies and reduce staff costs could save money in the long run.

### **Other Alternatives**

Thus far, the discussion has been about traditional, side-by-side shared rooms versus private rooms. In fact, there are other alternatives. There are a variety of shared bedroom configurations where each person has their own space, their own territory, their own window, but share a bathroom. The figures below show two examples of these different configurations.



None of the research reported above on satisfaction or nosocomial infections addressed the style of the shared room, so there is not empirical data on how these “enhanced” shared rooms are perceived by residents and family, or might impact the spread of various infections. There is some anecdotal evidence that staff and residents prefer these enhanced rooms over traditional shared rooms (reported in Calkins & Cassella, 2007). In one interview, a resident was asked how she liked this shared room arrangement, and she replied that she “didn’t have a shared room, though I do have to share the bathroom, which is sometimes a problem. But I have my own room here” (Calkins, 2005). It is not possible at this time to do a similar cost analysis as was done above for traditional shared and private rooms, because there is no cost information available on these enhanced shared rooms.

## **Summary**

There is clear and convincing evidence that the traditional shared bedroom, with two beds along the same wall, is associated with poor clinical and psychosocial outcomes in nursing home residents. The financial cost to the healthcare system of treating nosocomial infections is substantial. The average cost (in 1994 dollars) of hospitalization for an infection was \$7500, and this has undoubtedly increased in the intervening years. But even at \$7,500, it only takes 4 ½ hospitalizations to recoup the cost differential of constructing two private rooms instead of one traditional shared room. Given the high rate of nosocomial infections in nursing homes in general, and the high relative risk

(3.07) of acquiring an infection when living in a shared room over being in a private room (Drinka, Krause, Nest, Goodman, & Gravenstein, 2003), it is likely that these healthcare costs might be recouped within a few years with private rooms.

Unfortunately, because nursing homes do not pay for the costs of these hospitalizations, the potential cost savings serve as less of an incentive to them. Policy makers, however, should be concerned with the potential for significant cost savings. The savings to Medicare of these prevented hospitalizations is significant. More research that specifically examines rates of infections and hospitalizations by room type (private, traditional shared or enhanced shared) is needed.

It is more difficult to put a concrete price on the lower satisfaction of residents in shared rooms. Certainly, low satisfaction is contrary to the goal of maximizing quality of life for residents in nursing homes, which is at the very heart of the culture change movement. It also has some financial implication for facilities, in lower census and therefore lost revenue because people refuse to move into a shared room.

Given these findings, regulators should give serious consideration to revising codes to disallow new construction of the traditional, side-by-side shared room. The enhanced shared rooms may be an acceptable alternative, but there has simply not been enough research that examines this style of bedroom to say definitively one way or the other how they impact psychosocial and clinical outcomes and costs. There are sufficient differences within this style or category of room in terms of layout, which impacts degree of auditory privacy and territoriality, that research needs to be very specific in what

variables it considers. Finally, those facilities that are looking to position themselves as the place of choice for the coming Baby Boom generation will do well to provide a significant majority of private rooms.

## **Recommendations**

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- 1) Change regulations to prohibit new construction of traditional, side-by-side shared rooms.
- 2) Change regulations to disallow 4-person rooms.
- 3) Change regulations to prohibit the use of a “privacy” curtain as an allowable separator between people who share a room. Privacy should be defined to include acoustic privacy and the right and ability to close a door between two separate parts of the shared room.
- 4) Increase minimum room size to 125 square foot for a private, and 125 per person in a shared room (exclusive of toilet room)
- 5) Fund research to examine in greater depth the differences between traditional shared, enhanced shared rooms (accounting for differences in layout that affect privacy and control) and private rooms across the following variables/outcomes of interest:
  - a. Rate of nosocomial infections
  - b. Rate of hospitalizations
  - c. Rate of falls
  - d. Resident, family and staff satisfaction
  - e. Staff turnover
  - f. Census
  - g. Operational cost factors (differentials in staff time for care and cleaning/maintenance)

- 6) Develop easy-to-use MDS analytic tool that facilities can use to track differential outcomes and costs associated with their different bedroom configurations
- 7) Modify Medicaid/Medicare funding calculations to take into account cost savings accrued to the system from reduced infections and hospitalizations of individuals in private rooms.
- 8) Culture Change Coalitions and other advocates should work to educate state legislators (who often control state codes) on the value of private versus shared rooms for both quality of life and quality of care/costs.
- 9) Teach surveyors/give regulators the tools to more deeply assess satisfaction with roommate situation by room type. Of critical concern is control/lack of control residents have over whether they have a roommate and who that individual is.
- 10) Use results of research (#2, above) examining the life-cycle costs of constructing larger and/or more private rooms, to revise building codes and reimbursement formulas to support the least expensive life-cycle costs with acceptable outcomes (satisfaction and quality of life), not just the least expensive initial construction costs.

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