

## Hospital Room Design and Health Outcomes of the Aging Adult Abstract

Susan Garzon Lorenz, DrNP, RN and H. Michael Dreher, PhD, RN

**Objective:** To determine differences in the rate of falls, healthcare-acquired infections (HAIs), and the degree of social isolation in hospitalized older adults admitted to private versus semiprivate rooms.

**Background:** The American Institute of Architects recommends that private rooms become the industry standard for all new construction of acute care hospitals. Healthcare design researchers contend that private rooms decrease infection, facilitate healthcare workers' efficiency, provide space for families, and afford greater access to privacy. Although links between room type and health outcomes have been described in the literature, the actual relationship between these two variables has not been determined, nor is it clear whether a one-size-fits-all approach to hospital design is appropriate for all patient populations, particularly older adults.

**Methods:** This retrospective case comparative design utilized a sample of patients admitted to the University Medical Center of Princeton in 2006 and received full internal review board approval. Patient records were randomly selected through the admission/discharge/transfer system of the hospital and then divided into two groups based on room type. Data collected included demographics, incidence of falls, HAIs, and risk of social isolation.

**Results:** All patients were more than 65 years old and had been admitted to the hospital for a variety of diagnoses. Length of stay was between 3 and 10 days. There was no significant difference between the type of room and the likelihood of falling ( $p = .37$ ), however the relative risk of falling in a private room was 4.01. There was no significant difference in the occurrence of HAIs based on room type ( $p = 1.0$ ). The risk-of-social-isolation variable was unable to significantly affect which hospitalized older adults would suffer a negative outcome, fall, or HAI ( $p = .52$ ).

**Conclusion:** Room type may play a role in the occurrence of falls in hospitalized older adults, but room type alone does not increase the chance of acquiring an infection in the hospital. Nor does the risk of social isolation affect the likelihood of an adverse outcome.