



## KEY POINT SUMMARY

### OBJECTIVES

This study was conducted to explore the impact of all single-patient rooms on staff and patient experience, safety outcomes, and cost.

Is single room hospital accommodation associated with differences in healthcare-associated infection, falls, pressure ulcers or medication errors? A natural experiment with non-equivalent controls.

Maben, J., Griffiths, P., Penfold, C., Simon, M., Anderson, J.E., Robert, G., Barlow, J. 2010 | *BMJ Quality & Safety, Online First.*

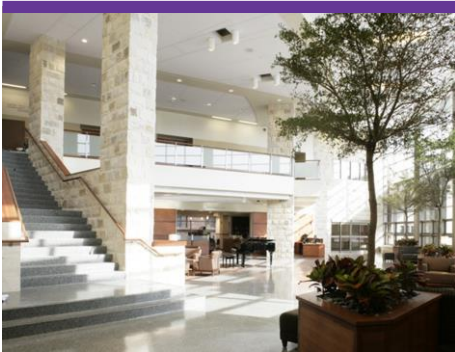
### Key Concepts/Context

Authors indicate that despite the trend to adopt single-patient rooms, there is a dearth of strong evidence regarding its effect on healthcare quality and safety. When a hospital in England moved to a new building with 100% single rooms, a before-and-after move study was conducted on patient and staff experience, safety outcomes, and cost analysis.

### Methods

The study used a mixed-methods evaluation before and after a move to a new building. Elements evaluated included patient and staff experience, safety outcomes, and cost. To evaluate patient and staff experience, data were collected through interviews, observations, surveys, and pedometers. Participants were administrators, clinicians, staff, and patients. Pedometers were used to measure the distances walked. Personal digital assistants (PDAs) using HandBase software were used to record observation data. The observation, pedometer, and staff survey data were analyzed using descriptive and parametric statistics. To evaluate the safety outcomes, two control hospitals were used – one that moved to a new building with an increase in single-patient rooms (new build control) and the other where no move was involved (steady state control). Data relating to patient safety events – infections, falls, pressure ulcers, and medication errors were collected from January 2010 to December 2012. The comparative cost analysis data included information on occupancy, cleaning costs, nurse staffing, payroll, length of stay, and build costs.

### Findings



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Single rooms were preferred by two-thirds of all patients. While staff preferred shared accommodations for patient visibility, teamwork, and shorter walking distances, it was acknowledged that private rooms were more conducive to patient privacy and rest. No evidence of reduced rates of infection was noted with single-patient rooms.

### Limitations

Very sick patients and patient families could not be interviewed. There was a weak causal inference because of the before-and-after design of the survey.

### Design Implications

If a shift to all single-patient rooms is planned, nurses must be prepared to adapt work practices including teamwork and communication patterns. While nurses did not prefer a 100% single-patient room unit, patient preference for private accommodations cannot be ignored.

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