



KEY POINT SUMMARY

OBJECTIVES

The objective of this letter to the editor of the journal is to report on the decline of Clostridium difficile infection after a hospital located to a new building with single rooms.

DESIGN IMPLICATIONS

Findings from the study suggest that single patient rooms in newly-built healthcare facilities may help reduce the incidence of hospital-acquired CDI.

Decline in incidence of Clostridium difficile infection after relocation to a new hospital building with single room

Heddema, E. R., & van Benthem, B. H. B. 2011 | *Journal of Hospital Infection*. Volume 79, Issue 1, Pages 93-94

Key Concepts/Context

The authors report that the most common risk factors for Clostridium difficile infection (CDI) are age (≥ 65 years), comorbidities, and the use of antibiotics. They point out that it is a challenge to control the risk factors and that preventive measures have not been particularly helpful. In 2009, a hospital in Geleen, the Netherlands, moved to a newly constructed building. Single-patient rooms were the highlight of the new building – effectuating increased infection control and decreasing room transfers being the key objectives. Data were examined pertaining to occurrence of hospital-acquired CDI prior to and after relocation to the new building. This comparative study found that CDI had reduced noticeably in the new building which the authors attribute to the use of single-patient rooms.

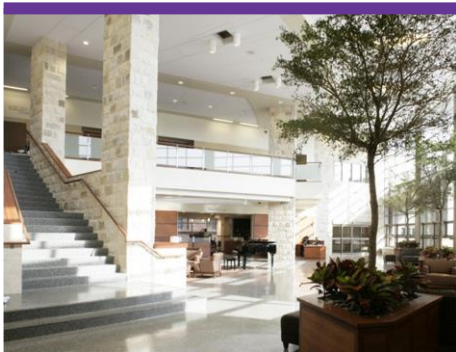
Methods

A comparative analysis of data pertaining to the incidence of CDI before and after the move to the new building was conducted. The before-move data used in the comparison was for three years preceding the relocation; the after-move data was from the first year following relocation. Data from the month before and after the relocation was not included in the analysis. Acquisition of CDI after 48 hours of admission till 28 days after discharge was considered nosocomial. Cleaning and infection control procedures were the same in both facilities.

Findings

The study yielded the following findings:

- The occurrence of hospital-acquired CDI was significantly higher in the before-move period as compared with the after-move period.



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- Incidence of nosocomial CDI per 10,000 patient days was 2.33 between March 2009 and February 2010, compared with 3.16 in 2006, 3.36 in 2007, and 4.38 in 2008. There was a relatively higher risk of acquiring nosocomial CDI (per 10,000 patient days) during 2006-2008 than in the after-move period ($P=0.03$).
- Incidence of nosocomial CDI per 10,000 admissions was 14.06 between March 2009 and February 2010, compared with 20.89 in 2006, 21.66 in 2007, and 26.56 in 2008.

Limitations

The authors indicate that the antibiotic use in both hospitals were varied and may have some influence on the risk factors. They do not indicate any other limitation to their study. However, they do suggest that it was essential to study the incidence of hospital-acquired CDI in other relocated hospitals (with both single and multi-patient rooms) to ascertain if single rooms were effective in reducing CDI. One other limitation may be the assumption that patient type was similar given that the new hospital building was in the same area as the old one.

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