TITLE: Single-Bed versus Multi-Bed Rooms for the Prevention of Hospital Acquired infections: Clinical Effectiveness and Guidelines

DATE: 28 May 2013

RESEARCH QUESTIONS

1. What is the clinical evidence for the effectiveness of treating patients in a single-bed hospital room compared with a multi-bed room or a hallway bed, in order to prevent or reduce the risk hospital acquired infections?

2. What are the evidence-based guidelines regarding treating patients in a single-bed hospital room compared with a multi-bed room or a hallway bed in order to prevent or reduce the risk of hospital acquired infections?

KEY MESSAGE

One systematic review and four non-randomized studies were identified regarding the effectiveness of treating patients in a single-bed hospital room compared with a multi-bed room or a hallway bed, in order to prevent or reduce the risk hospital acquired infections.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 4), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2008 and May 15, 2013. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One systematic review and four non-randomized studies were identified regarding the effectiveness of treating patients in a single-bed hospital room compared with a multi-bed room or a hallway bed, in order to prevent or reduce the risk hospital acquired infections. No health technology assessments or randomized controlled trials were identified. Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

A decrease in the acquisition and transmission of infectious organisms (including Clostridium difficile, vancomycin-resistant Enterococcus species, and methicillin-resistant Staphylococcus aureus) between patients in intensive care units was observed with the use of single-patient rooms, particularly upon conversion from a multi-bed design.

In the pediatric setting, one systematic review was identified but did not find any evidence to either validate or negate the use of cohorting or room isolation measures in neonates infected or colonized with candida. In contrast, one non-randomized study indicated that a single family room in the neonatal intensive care unit resulted in reduced nosocomial sepsis and mortality.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials
No literature identified.

Non-Randomized Studies


Guidelines and Recommendations
No literature identified.
APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies – Patient Cohorting


Guidelines - Patient Isolation

Guidelines – Methodologies Unclear


Position Statements


Review Articles


Additional References


