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Title **Efficacy of Patient Isolation for the Control of Airborne Infections in Hospitals**

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Aim

To review the evidence for the effectiveness of isolation measures in reducing the incidence of some important airborne infections in hospitals.

Conclusions and results

Most studies were observational studies, few with a prospective design.

Tuberculosis: The risk of tuberculosis infection is higher among healthcare workers compared to the general population, but implementation of control measures, including isolation, shows significant reduction.

Methicillin resistant Staphylococcus aureus (MRSA): Implementation of control measures, including isolation, shows reduction of cases.

Severe Acute Respiratory Syndrome (SARS): Implementation of strict control measures protect against transmission of the SARS virus. Procedures like resuscitation or intubation of patients increases the incidence of SARS among healthcare workers.

Most of the studies identified included multiple simultaneous interventions, and it was not possible to assess the relative contribution of individual measures. However, intensive concerted interventions including isolation were shown to reduce nosocomial infection of the various diseases. In addition, a higher incidence of diseases like tuberculosis, measles, and SARS was found among healthcare workers than in the general population.

Methods

The report consists of a systematic review of studies published from 1966 to July 2005. Relevant databases searched were the Cochrane Library, Database of Abstracts of Reviews of Effectiveness (DARE), International Network of Agencies of Health Technology Assessment (INAHTA) database, Ovid CINAHL, National Guidelines Clearinghouse, MEDLINE, and EMBASE. In total, 293 potentially relevant studies were assessed, whereof 60 were included.

Further research/reviews required

Most studies included in the report were observational studies, few with a prospective design. Randomized controlled studies are not suitable for this topic, so such a design will be difficult to obtain. However, studies with a prospective design will give stronger evidence on the issues described.

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