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Title **Effect of Oseltamivir (Tamiflu®) for the Prevention and Treatment of Influenza During an Influenza Pandemic**

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Aim

- To assess the effects of the neuraminidase inhibitor oseltamivir (Tamiflu®) in preventing and treating influenza.
- To evaluate the cost effectiveness of oseltamivir, with special reference to an influenza pandemic.

Conclusions and results

Oseltamivir reduces the duration and severity of illness in previously healthy adults and children with laboratory-confirmed influenza. The frequencies of secondary complications such as bronchitis, sinusitis, otitis media, and pneumonia, in addition to antibiotic use, were also reduced in the study population. Using oseltamivir for prophylaxis provides a protective effect of 55% to 89% against laboratory-confirmed influenza in healthy adults and children. The adverse events (nausea and vomiting) of oseltamivir were transient and were mild to moderate. Oseltamivir prophylaxis for 6 weeks, covering the entire Norwegian population, implies a cost of 1900 million Norwegian kroner (NOK), whereas treatment for 5 days (attack rate 40%) implies a cost of NOK 180 million.

Methods

The report consists of a systematic review of studies published from 1980 to October 2004. Relevant databases that were searched were the Cochrane Library, Database of Abstracts of Reviews of Effectiveness (DARE), International Network of Agencies for Health Technology Assessment (INAHTA) database, National Guidelines Clearinghouse, MEDLINE and EMBASE. In total, 66 potentially relevant studies were assessed, and 15 studies and 2 sets of guidelines were included in the report.

Further research/reviews required

Studies on resistance to oseltamivir are insufficient, in particular among patients treated with oseltamivir. It is important to know if oseltamivir-resistant mutants are infectious.

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