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THE ECONOMIC IMPACT OF SERIOUS FLUOROQUINOLONE-RELATED ADVERSE EVENTS

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OBJECTIVES: The aim of this study was to estimate the annual health care costs of serious fluoroquinolone-related adverse events in Finland.

METHODS: Serious fluoroquinolone-related adverse event types were identified from the Finnish Pharmaceutical Insurance Pool's pharmaceutical injury claims and the Finnish Medicines Agency's Adverse Reaction Register. A decision tree model was built in order to predict annual costs associated with serious adverse events. The population of the model was represented by the number of reimbursed fluoroquinolone prescriptions from the Social Insurance Institution of Finland's database, which was multiplied by the probability of a serious adverse event. Tendon injuries, *clostridium difficile* infections, toxic epidermal necrolysis, anaphylactic reactions, hepatic coma, hepatitis, photophobia and seizures were among serious adverse events included in the model.

RESULTS: Early findings of the study suggest that serious fluoroquinolone-related adverse events frequently required long-term hospitalization with the highest annual health care costs of an individual adverse event adding up to 3,383,070€. Several fluoroquinolone-related adverse events were life threatening, but over-all mortality was low.

CONCLUSIONS: Although fluoroquinolones continue to be generally well tolerated antimicrobials, serious adverse events cause long-term impairment to patients and high health care costs. Therefore, the risks and benefits should be weighed carefully.