

Publication

A systematic review of the cost effectiveness of herpes zoster vaccination.

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The varicella zoster virus (VZV) can cause two infections: chickenpox or herpes zoster (HZ). Whereas chickenpox infections are normally mild but common among children, HZ infections are common among elderly people and can give rise to post-herpetic neuralgia (PHN), a severe and painful complication.; This review aimed to summarize the literature available on the cost effectiveness of HZ vaccination and to summarize key issues for decision makers to consider when deciding on the reimbursement of HZ vaccination.; We conducted a literature search of the databases PubMed and EMBASE using EndNote X4 from Thomson Reuters. The following combinations of keywords were used: 'herpes zoster vaccine' AND 'cost(-)effectiveness' or AND 'economic evaluation', 'herpes zoster vaccination' AND 'cost(-)effectiveness' or AND 'economic evaluation', 'varicella zoster vaccine' AND 'cost(-)effectiveness' or AND 'economic evaluation', and 'varicella zoster vaccination' AND 'cost(-)effectiveness' or AND 'economic evaluation'.; A total of 11 studies were identified and included. Cost-effectiveness analyses of varicella zoster vaccination were excluded. The quality of the included studies ranged from 'moderate' to 'moderate to good' according to the British Medical Journal guidelines of Drummond and Jefferson and the Quality of Health Economic Studies (QHES) score of Ofman et al. Most studies evaluated the cost effectiveness of universal HZ vaccination in adults aged 50 years or 60 years and older. Data sources and model assumptions regarding epidemiology, utility estimates and costs varied between studies. All studies calculated costs per QALY, which allows comparing costs of interventions in different diseases. The costs per QALY gained and the incremental cost-effectiveness ratio (ICER) differed between studies depending on the age at vaccination, duration of vaccine efficacy, cost of vaccine course and economic perspective. All but one of the studies concluded that most vaccination scenarios are cost effective and the vaccination of specific subgroups such as the older age group is most cost effective.; Model input parameters such as age at vaccination, vaccine costs, HZ incidence, PHN length and duration of vaccine efficacy had a great impact on the estimated cost effectiveness of HZ vaccination. To compare the results of different cost-effectiveness studies of HZ vaccination, uniform methods should be used and the most important input parameters used for the different models should be critically assessed.

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