

## PD75 Using The Quality-Adjusted Life-Year For Economic Evaluations Of Public Health Interventions: Benefits And Criticisms

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**Introduction:** The number of economic evaluations of public health intervention is gradually increasing, which corresponds to the increasing interest of policymakers in public health interventions. However, there are some methodological challenges and debates regarding economic evaluations of public health interventions due to the nature and complexity of public health programs. One of the challenges is related to the outcome measure used.

**Methods:** This narrative review explored the advantages and disadvantages of using the quality-adjusted life-year (QALY) as an outcome measure in economic evaluations of public health interventions.

**Results:** The QALY is a preferred outcome measure in cost-utility analyses because of its simplicity, clarity, face validity, and ease of application. The QALY provides a measure of overall health and allows for comparability across different cases. However, there are some criticisms of using the QALY in economic evaluations of public health interventions. Many public health programs aim to affect not only health outcomes, but also other aspects such as participation and empowerment. In addition, public health programs might have positive externalities. The QALY is unable to detect minor changes resulting from community-based health interventions and does not capture equity aspects of public health interventions.

**Conclusions:** It is necessary to establish a common framework for a transparent and consistent decision-making process that accounts for the multidimensional and complex outcomes of public health interventions.

## PD76 Cost-Effectiveness Analysis Of An Influenza Vaccination Program In Algeria, Egypt, Saudi Arabia, Turkey, and the United Arab Emirates

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**Introduction:** Influenza causes seasonal epidemics and is a significant burden. Annual vaccination is an effective way to prevent influenza and its complications. However, vaccination coverage remains low in North Africa and the Middle East. Quadrivalent vaccines offer protection but require monetary investments. This study aimed to quantify the costs and benefits of subunit quadrivalent influenza vaccination among healthy adults in the selected countries.

**Methods:** A decision tree was used to model the costs and outcomes of treatment with an inactivated subunit quadrivalent vaccine, compared with no vaccine, in healthy adults from the societal and payer perspectives. Outcomes measured include productive days gained through reduced absenteeism and the proportion of the population acquiring influenza. Each country's expected health resource utilization costs for influenza were determined through literature searches and consultations with clinical experts. Deterministic and probabilistic sensitivity analyses were undertaken to characterize the effects of parameter uncertainty on our results.

**Results:** We found that in every country the proportion of people who acquired influenza was 2.4 times lower in vaccinated individuals than in the unvaccinated. This resulted in between 0.9 and 1.5 more productive days worked for vaccinated individuals. The average cost savings from the societal perspective ranged from USD12.36 to USD276.85 per person. Deterministic sensitivity analysis indicated that influenza prevalence was the strongest driver of the model results. A probabilistic sensitivity analysis of over 1,000 simulations resulted in cost savings 54.4 to 99.3 percent of the time.

**Conclusions:** Vaccination with a subunit quadrivalent influenza vaccine results in cost savings when compared with no vaccination in every country studied. We therefore conclude that, in terms of cost effectiveness, vaccination with a subunit quadrivalent influenza vaccine is dominant over no vaccination in Algeria, Egypt, Saudi Arabia, Turkey, and the United Arab Emirates.