



Service Priorities and Programmes
Electronic Presentations

Convention ID: 1040

Submitting author: Dr Tuen Ching Chan

Post title: Resident Specialist, TWGHs Fung Yiu King Hospital,

Effectiveness of influenza vaccination in institutionalized older adults: a systematic review

Chan TC(1), Luk JKH(1), Chan FHW(1)

(1)Department of Medicine and Geriatrics, Fung Yiu King Hospital

Keywords:

Influenza

systematic review

meta-analysis

Introduction

Influenza infection is common among institutionalized older adults. Many non-randomized observational studies on influenza vaccination suggested that it could reduce influenza related hospitalizations and mortality in institutionalized older adults. Criticism regarding the effectiveness of influenza vaccine estimated by non-randomized observational studies include the frailty selection bias and use of non-specific outcome like all-cause mortality.

Objectives

We conducted a systematic review of studies of influenza vaccination in institutionalized older adults, to determine the effects on clinical outcomes.

Methodology

We searched for studies from three databases from 1946 to June 2013 assessing effectiveness against influenza infection. During selection process, we selected studies with well comparability between vaccine group and control group. We expressed vaccine effectiveness (VE) as a proportion, using the formula $VE=1-\text{relative risk or } 1-\text{odds ratio}$. We focused on the following outcomes: influenza-like illness (ILI), laboratory confirmed influenza, hospitalizations due to ILI or pneumonia and death due to influenza or pneumonia. We did not include all-cause mortality.

Result

Eleven studies that satisfied the inclusion criteria were identified, representing 11262 institutionalized older adults. After meta-analysis, we found a significant reduction in pneumonia [Vaccine efficacy (VE): 37%, 95% confidence interval (CI): 18%-53%, $p=0.001$] and death due to pneumonia or influenza (VE: 34%, CI: 10%-53%, $p=0.01$). There was no significant heterogeneity between studies. There was no significant publication bias. In conclusion, Influenza vaccination in institutionalized older adults could reduce pneumonia and death due to pneumonia or influenza. Influenza vaccination is recommended for institutionalized older adults.