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[Cochrane Database Syst Rev.](#) 2010 Feb 17;(2):CD005187.

## **Influenza vaccination for healthcare workers who work with the elderly.**

[Thomas RE](#), [Jefferson T](#), [Lasserson TJ](#).

Department of Medicine, University of Calgary, UCMC, #1707-1632 14th Avenue, Calgary, Alberta, Canada, T2M 1N7.

### **Abstract**

#### **BACKGROUND:**

Healthcare workers' (HCWs) influenza rates are unknown, but may be similar to the general public and they may transmit influenza to patients.

#### **OBJECTIVES:**

To identify studies of vaccinating HCWs and the incidence of influenza, its complications and influenza-like illness (ILI) in individuals  $\geq 60$  in long-term care facilities (LTCFs).

#### **SEARCH STRATEGY:**

We searched CENTRAL (The Cochrane Library 2009, issue 3), which contains the Cochrane Acute Respiratory Infections Group's Specialised Register, MEDLINE (1966 to 2009), EMBASE (1974 to 2009) and Biological Abstracts and Science Citation Index-Expanded.

#### **SELECTION CRITERIA:**

Randomised controlled trials (RCTs) and non-RCTs of influenza vaccination of HCWs caring for individuals  $\geq 60$  in LTCFs and the incidence of laboratory-proven influenza, its complications or ILI.

#### **DATA COLLECTION AND ANALYSIS:**

Two authors independently extracted data and assessed risk of bias.

#### **MAIN RESULTS:**

We identified four cluster-RCTs (C-RCTs) ( $n = 7558$ ) and one cohort ( $n = 12742$ ) of influenza vaccination for HCWs caring for individuals  $\geq 60$  in LTCFs. Pooled data from three C-RCTs showed no effect on specific outcomes: laboratory-proven influenza, pneumonia or deaths from pneumonia. For non-specific outcomes pooled data from three C-RCTs showed HCW vaccination

reduced ILI; data from one C-RCT that HCW vaccination reduced GP consultations for ILI; and pooled data from three C-RCTs showed reduced all-cause mortality in individuals  $\geq 60$ .

## **AUTHORS' CONCLUSIONS:**

No effect was shown for specific outcomes: laboratory-proven influenza, pneumonia and death from pneumonia. An effect was shown for the non-specific outcomes of ILI, GP consultations for ILI and all-cause mortality in individuals  $\geq 60$ . These non-specific outcomes are difficult to interpret because ILI includes many pathogens, and winter influenza contributes  $< 10\%$  to all-cause mortality in individuals  $\geq 60$ . The key interest is preventing laboratory-proven influenza in individuals  $\geq 60$ , pneumonia and deaths from pneumonia, and we cannot draw such conclusions. The identified studies are at high risk of bias. Some HCWs remain unvaccinated because they do not perceive risk, doubt vaccine efficacy and are concerned about side effects. This review did not find information on co-interventions with HCW vaccination: hand washing, face masks, early detection of laboratory-proven influenza, quarantine, avoiding admissions, anti-virals, and asking HCWs with ILI not to work. We conclude there is no evidence that vaccinating HCWs prevents influenza in elderly residents in LTCFs. High quality RCTs are required to avoid risks of bias in methodology and conduct, and to test these interventions in combination.

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