

Unité des Rickettsies, Faculté de Médecine,  
27 Boulevard Jean Moulin, 13385 Marseille  
Cedex 05, France

- 1 Shang A, Huwiler-Müntener K, Nartey L, et al. Are the effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy. *Lancet* 2005; **366**: 726–32.

## Influenza vaccination in elderly people

We applaud T Jefferson and colleagues (Oct 1, p 1165)<sup>1</sup> for calling attention to problems and contradictions in what has been published about the benefits of influenza vaccination in elderly people. We would like to amplify their comment that high estimates of influenza vaccine effectiveness for severe outcomes are best explained by an unrecognised selection bias in cohort studies.

We believe that the vaccine effectiveness estimates derived from cohort studies reporting on mortality, for example, are—literally—unbelievably large. Jefferson and colleagues compile cohort study results for prevention of death from all causes, and find a vaccine effectiveness of 47% in community-dwelling elderly people. But because the periods during which the underlying cohort studies record mortality typically include the entire winter season, this estimate implies that influenza is involved in about half of all winter deaths among elderly people, which in turn would mean that influenza is the leading contributing factor to winter mortality in this age-group. This figure is in stark contrast to the finding from our excess-mortality study, which showed that influenza is associated with an average of about 5% of all winter deaths in this age-group.<sup>2</sup>

To explain this contradiction, we postulated that an unrecognised subpopulation of undervaccinated, frail elderly people in the cohort studies could have caused the cohort studies to seriously overestimate vaccine

effectiveness for a non-specific outcome such as all-cause mortality.<sup>2</sup> We further noted that an innovative cohort study from the UK that controlled for such self-selection bias by comparing vaccine effectiveness estimates for the peri-influenza and influenza seasons found zero all-cause mortality benefit.<sup>3</sup>

Given that our bias hypothesis has proved to be controversial,<sup>4</sup> we very much welcome the conclusion of Jefferson and colleagues that selection bias probably affected many of the cohort studies they surveyed. Testing this hypothesis is the natural next step, and could be accomplished by an extended analysis of cohort study databases already collected.

The good news is that the recent twists in our understanding of influenza vaccination of elderly people open up new possibilities for protecting this at-risk population against severe influenza outcomes. If the current vaccine could actually prevent more than half of all winter deaths among elderly people, a more potent vaccine would be hard to imagine. But if this, as we argue, is not the case, investigation of other options for influenza control, including greater use of antivirals, development and head-to-head testing of more immunogenic vaccines, and indirect protection of elderly people through transmission-reducing measures such as vaccination of children, becomes much more urgent.

In closing, we want to emphasise that, despite the current scientific debate about the benefits to elderly people of influenza vaccination, these individuals should continue to get vaccinated against influenza every year. The burden of influenza in this group is substantial and even modest protection for severe outcomes—such as a 30% reduction in confirmed influenza-related hospital admissions<sup>5</sup>—is certainly better than none at all.

We declare that we have no conflict of interest.

\*Lone Simonsen, Cecile Viboud,  
Robert Taylor

lsimonsen@niaid.nih.gov

National Institute of Allergy and Infectious Diseases (LS, RT) and Fogarty International Center (CV), National Institutes of Health, Bethesda, MD 20892, USA

- 1 Jefferson T, Rivetti D, Rivetti A, Rudin M, Di Pietrantonio C, Demicheli V. Efficacy and effectiveness of influenza vaccines in elderly people: a systematic review. *Lancet* 2005; **366**: 1165–74.
- 2 Simonsen L, Reichert TA, Viboud C, Blackwelder WC, Taylor RJ, Miller MA. Impact of influenza vaccination on seasonal mortality in the US elderly population. *Arch Intern Med* 2005; **165**: 265–72.
- 3 Mangtani P, Cumberland P, Hodgson CR, Roberts JA, Cutts FT, Hall AJ. A cohort study of the effectiveness of influenza vaccine in older people, performed using the United Kingdom general practice research database. *J Infect Dis* 2004; **190**: 1–10.
- 4 Fedson DS and Nichol K. Should we question the benefits of influenza vaccination for the elderly? *Infect Dis News* 2005; **18**: 6–8.
- 5 Simonsen L, Viboud C. Respiratory syncytial virus infection in elderly adults. *N Engl J Med* 2005; **353**: 422–23.

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## Department of Error

López-Ríos F, Illei PB, Rusch V, Ladanyi M. Evidence against a role for SV40 infection in human mesotheliomas and high risk of false-positive PCR results owing to presence of SV40 sequences in common laboratory plasmids. *Lancet* 2004; **364**: 1157–66—In this Mechanisms of Disease paper (Sept 25, 2004), the Acknowledgments section should have stated that this study was funded by the family of an individual who died of pleural mesothelioma; the family wishes to remain anonymous.

Kaiser C, Brunner-La Rocca HP, Buser PT, et al, for the BASKET Investigators. Incremental cost-effectiveness of drug-eluting stents compared with a third-generation bare-metal stent in a real-world setting: randomised Basel Stent Kosten Effektivitäts Trial (BASKET). *Lancet* 2005; **366**: 921–29—In figures 4 and 5 of this Article (Sept 10), “cheaper” and “more expensive” should be transposed for every occurrence in the labels on the right-hand vertical axes.