Reviewer’s report

Title: Perceptions of and Willingness to Engage in Public Health Precautions to Prevent 2009 H1N1 Influenza Transmission

Reviewer: Michaël Schwarzinger

Marc Kiviniemi and coll. present the results of a cross-sectional telephone survey about the perception of protective behaviors recommended against A/H1N1 2009 pandemic-influenza. About 24% (n=807) adults responded to the telephone survey between October 14th and November 24th, 2009, and sampling weights were used to obtain results more representative of the adult population of New York State. Substantial variability was observed in the interpretation of protective behaviors other than getting vaccinated, while respondents were significantly less willing to get vaccinated than willing to engage in other recommended protective behaviors. The paper is well presented, although I have two major problems with the study methodology.

Major Compulsory Revisions

1) A selection bias of respondents is very likely even after using sampling weights. About 60% of respondents were willing to get vaccinated during the pandemic vaccination campaign; it is about 3 times higher than the vaccine uptake estimate of 18.3% for adults of New York State (MMWR 2010;59:12). Such selection bias may be explained by the 24% response rate. Gender, age, race, educational attainment, and region of the state were used to compute sampling weights from the 2006-2008 U.S. Census American Community Survey, but there is no report of differences on recorded characteristics between respondents and individuals of New York State (Table 1). Otherwise, well-known explanatory variables of protective behaviors that could have been used to adjust study results were not recorded, e.g., healthcare workers and other adults identified as priority groups for pandemic vaccination (MMWR 2010;59:12).

2) While the authors do not mention it, the Health Belief Model seems at the root of their measurement strategy linking perceptions to protective behaviors. However, the authors used a measurement approach that is quite different from usual practices in the field. Only binary variables were used instead of Likert scales to measure protective behaviors; therefore, the very high willingness of respondents to engage in protective behaviors other than vaccination may be interpreted above all as a social desirability bias (86% to 98%; Table 3). While Likert scales were used to measure risk perceptions about A/H1N1 (perceived risk, perceived severity, and perceived worry) and efficacy of protective behaviors, they are expectedly correlated with each other and belong to two dimensions. While such principal component analysis could be carried out, the
reader is left with the interpretation of 28 univariate associations in Table 4. It seems even more odd that a multivariate analysis was conducted separately on individual characteristics.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests