

# Self-reported influenza vaccination uptake in people with chronic diseases: data from Progressi delle Aziende Sanitarie per la Salute in Italia (PASSI)

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## Abstract

**Background** Influenza is an important public health problem, with potential severe consequences among people with chronic diseases. The aim of this study was to obtain reliable measures of seasonal influenza vaccine uptake in this population, otherwise not available in Italy.

**Methods** Progressi delle Aziende Sanitarie per la Salute in Italia (PASSI) is a nationwide surveillance system of health-related behaviours and acceptance of preventive interventions (including influenza immunisation) offered by the Italian National Health Service. Data are collected with telephone interviews at local health unit level for supporting local activities. The survey sample is randomly selected from local health unit lists of adult residents. The trend of annual vaccine coverage since 2008 was estimated for people aged 18–64 years who reported having at least one chronic disease. To obtain a sufficient sample size in subgroups, we analysed the characteristics of vaccinated people in the 2010–13 cumulative dataset. Univariate, multivariate, and logistic regression analyses were undertaken.

**Findings** In 2008–13, 13 659 individuals with at least one chronic disease were interviewed. Vaccination coverage fell significantly from 29·7% (95% CI 27·2–32·4) in 2007–08 to 19·9% (18·0–22·1) in 2012–13. During 2010–13, the overall proportion of vaccinated people with a chronic disease was 25·6% (24·5–26·7). Vaccine coverage of people with diabetes (34·3%, 31·7–36·9) or cardiovascular diseases (31·8%, 29·6–34·2) was greater than that of people affected by renal failure, respiratory diseases, tumours, or chronic liver diseases (26·5% [22·5–30·7], 24·9% [23·2–26·7], 22·2% [20·0–24·6], and 20·6% [17·5–24·6], respectively). Vaccination coverage increased with age (from 13·1% [11·0–15·5] in the 18–34 year age group to 33·4% [31·9–35·1] in people aged 50–64 years); it was higher among people with a low educational level than among those with a high educational level, higher in those having economic difficulties than in those with no economic difficulties, and higher among Italian citizens than among non-citizens.

**Interpretation** In the past few years, prevalence of influenza vaccination in Italian adults with at least one chronic disease was well below the Ministry of Health's goal (75% minimum) and showed a downward trend. A major reason of this evolution is probably the changing public perception of the benefits and risks of vaccines. PASSI is a source of useful data not otherwise available for public health intervention.

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### Contributors

FV and GC wrote the abstract with the help of SB and SS. LS carried out the statistical analysis with the assistance of LB, GF, and VM. SB, NB, SC, MM, AD, PFM, AP, EQ, MR, MOT, and SS developed the questionnaire and the analysis plan with the help of BC and LP. All authors have seen and approved the final version of the abstract for publication.

### Declaration of interests

We declare no competing interests.

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