

Obstacles to influenza vaccination in the frail elderly receiving home care: the primary care physician's perspective

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Background

In Switzerland, 400 to 1000 people die every year from influenza complications [1]. The population of persons older than 65 years, living in the community and receiving home care, is particularly susceptible to this infection [2]. Thanks to collaboration between public health institutions and health-care professionals, vaccination coverage of the geriatric population in the Canton of Geneva has increased from 31% in 1991 to 59% in 2000, but this rate still remains insufficient [3]. It is therefore important to better identify barriers to and potential facilitators for increasing immunisation rates. Surprisingly, little information is available on the opinion of physicians about vaccinations' limiting factors, so, we performed the present study to explore practitioners' knowledge and behaviour regarding factors which facilitate or hinder influenza immunisation in elderly patients receiving home care.

Methods

We mailed a self-administered questionnaire to 443 primary care physicians: all board-certified general practitioners (184) and internists (259) in the canton of Geneva, Switzerland. Survey questions focused on different domains: (a) physician's knowledge of the efficacy of influenza immunisation in a population of elderly people receiving care from home health services; (b) obstacles to immunisation in this population; (c) potential facilitators for increasing immunisation and the role that home care services could play in this process; (d) organisational physician's practice issues related to immunisation.

There is no conflict of interest to this article.

Table 1

Predictors of vaccination rate >90% in logistic regression models according to clinical practice and characteristics of physician.

	Univariate		Multivariate	
	OR	95% CI	OR	95% CI
Female sex	2.65	[1.53-4.63]	2.95	[1.49-5.83]
Age >50yr	1.11	[0.86-1.43]	0.84	[0.43-1.64]
Internal Medicine	1.89	[1.07-3.37]	1.66	[0.87-3.22]
Group practice	1.0	[0.73-1.34]	0.71	[0.36-1.39]
Using a list reminder	2.31	[1.18-4.51]	2.26	[1.05-4.87]
Physician vaccination status	5.16	[1.19-22.50]	3.44	[0.72-16.30]
Patient's home as the most suitable place for vaccination	2.72	[1.50-4.92]	2.42	[1.23-4.75]

Results

After two mailings, 278 of 443 physicians (63%) responded. Their mean (SD) age was 52 (8.6) years, 69% were males, 59% were board certified in general internal medicine and 41% in family and community medicine, and 41% worked in group practices. Sixty-four percent (64%) of respondents indicated that more than 75% of their patients older than 65 and receiving home care were immunised against influenza. However, only 27% of respondents reported that more than 90% of their patients were immunised.

According to physicians, the main obstacles to patients' vaccination were patients' refusal (81%) and insufficient patient information (35%). However, physicians probably also contribute to a lack of vaccination: 28% of physicians recognised difficulties in identifying high risk patients but, paradoxically, only a minority (18%) used a reminder system for vaccine delivery. Furthermore, a significant proportion (28%) of responders thinks that vaccination is not required for all patients over 65 years of age, which contrasts the Swiss Federal Office of Public Health (OFSP) recommendations [1]. Factors influencing vaccination status as compared to physicians' characteristics are reported in the table below. In a multivariate analysis, a vaccination rate >90% was associated with female gender, with the possibility for vaccination to take place at the patient's home, and with the use of a list as a reminder system.

Sixty-nine percent of respondents reported that home care services should inform patients about vaccination but only 45% consider that their role is to identify patients who are not vaccinated. The subgroup of physicians who had the best vaccination coverage of their patients (>90%) was more likely to collaborate with home health care services (OR 1.8; 95% CI 1.08-3.17) and indicate that improvement of vaccination rate could be obtained by the introduction of fax order reminder system between themselves

and the home care agency (37% of respondents) or by obtaining a list of their common patients (51% of respondents) from the home care service.

Discussion

This study showed that the majority (64%) of the surveyed primary care physicians have more than 75% of their frail, home-cared, elderly patients vaccinated against influenza. Although the surveyed physicians identified patient refusal as the main barrier to immunisation, physicians might miss many opportunities to provide influenza vaccination to their high-risk patients. A disturbingly high proportion of responders fail to strongly recommend influenza vaccination for all patients older than 65 years, which will likely have a negative impact on the immunisation rate. Indeed, several studies have shown that physicians' awareness of current recommendations and their influence on patients' decision to get vaccinated is clearly associated with increased vaccination rates [4-6]. We identified unvaccinated, male general practitioners as being less prone to follow current guidelines; therefore, continuing medical education should more specifically target this population of physicians.

Strikingly, most practitioners did not use any strategies or reminders to facilitate vaccination even though this type of practice has already been demonstrated to successfully increase the vaccination rate [7-9]. This should encourage physicians to adopt support systems such as a computerised registry, electronic reminders, or standing orders to facilitate vaccine delivery. Finally, physicians with a high vaccination rate among their patients are more inclined to collaborate with the home health care services. Better coordination between attending physicians and the home care services, therefore, could make a large impact with a small investment of resources. Possible interventions methods include using fax system reminders, sharing a

common list of patients between primary care physicians and home care workers, and considering the patient's home as an alternative place for vaccination.

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References

- 1 Office fédéral de la santé publique (OFSP) Bulletin 38 Grippe saisonnière; 2006 18 septembre 2006.
- 2 Thompson WW, Shay DK, Weintraub E, Brammer L, Cox N, Anderson LJ, et al. Mortality associated with influenza and respiratory syncytial virus in the United States. *Jama* 2003; 289(2):179-86.
- 3 Toscani L, Gauthey L, Robert CF. The information network of senior citizens in Geneva, Switzerland, and progress in flu vaccination coverage between 1991 and 2000. *Vaccine* 2003;21(5-6):393-8.
- 4 Zimmerman RK, Santibanez TA, Janosky JE, Fine MJ, Raymond M, Wilson SA, et al. What affects influenza vaccination rates among older patients? An analysis from inner-city, suburban, rural, and Veterans Affairs practices. *Am J Med* 2003; 114(1):31-8.
- 5 Nichol KL, Lofgren RP, Gapinski J. Influenza vaccination. Knowledge, attitudes, and behavior among high-risk outpatients. *Arch Intern Med* 1992; 152(1):106-10.
- 6 Nichol KL, Zimmerman R. Generalist and subspecialist physicians' knowledge, attitudes, and practices regarding influenza and pneumococcal vaccinations for elderly and other high-risk patients: a nationwide survey. *Arch Intern Med* 2001;161(22):2702-8.
- 7 Szilagyi PG, Bordley C, Vann JC, Chelminski A, Kraus RM, Margolis PA, et al. Effect of patient reminder/recall interventions on immunization rates: A review. *Jama* 2000; 284(14):1820-7.
- 8 Kellerman RD, Allred CT, Frisch LE. Enhancing influenza immunization. Postcard and telephone reminders and the challenge of immunization site shift. *Arch Fam Med* 2000; 9(4):368-72.
- 9 Briss PA, Rodewald LE, Hinman AR, Shefer AM, Strikas RA, Bernier RR, et al. Reviews of evidence regarding interventions to improve vaccination coverage in children, adolescents, and adults. The Task Force on Community Preventive Services. *Am J Prev Med* 2000; 18(1 Suppl):97-140.