How Can We Increase Seasonal Influenza Vaccine Coverage in Nursing Home Residents?

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In the November issue of the Journal, a very interesting letter to the editor reports the results of a questionnaire revealing the reasons why competent Chinese nursing home residents refuse to get the seasonal flu vaccine.1 To the best of my knowledge, this is the only survey to report direct one-to-one answers from nursing home residents, although a similar survey was previously reported in college students.2 Nursing home residents who were mentally competent to answer the questionnaire (mean age 79.0 ± 9.7 years) accepted to be vaccinated depending on the information given by nursing health care workers (nHCWs) and relatives.1 However, a significant number of nursing home residents refused to be vaccinated for 2 main reasons; namely, they perceived influenza infection as “mild/not severe” and considered the vaccine to be “non- efficacious.”3 Surprisingly, no other refusal reason appeared significant, which clearly demonstrates the lack of knowledge of the disease on the part of nursing home residents, their relatives, and nHCWs, whose general lack of information about influenza vaccine likely influences their willingness to promote it among their patients.2 The primary cause of this lack of information is that, until now, vaccines were considered useful only in children, and not in aging and aged adults. However, there are currently 200 times more deaths each year in the United States from vaccine-preventable infectious diseases in older adults than in children.4 This imbalance is striking, and reflects a number of underlying educational, structural, economic, cultural, and political issues.4

Clearly, influenza is much more severe than generally thought. In Europe, the number of excess deaths associated with influenza was estimated to be between 40,000 and 220,000, depending on the seasonal variation strains.5 It is well known that most influenza-related and pneumococcal disease deaths occur in people 65 years or older.6,7 This excess mortality is not only linked to the aforementioned infectious diseases themselves, but also to pulmonary tract re-infections, health care–associated infections and antimicrobial resistance, or cardiac- and neurovascular complications occurring in frail older and disabled adults.8

Indeed, the efficacy of vaccination of older nursing home residents remains debated. The results of cohort studies of vaccination in community older adults are still conflicting, showing either a significant decrease9,10 or a marginal effect11,12 on mortality. This is probably due to a waning immune system (called immunosenescence) that attenuates the ability to respond to influenza virus and/or influenza vaccination. According to recent immunogenicity and clinical studies, it is becoming increasingly clear that components other than humoral-mediated immunity are required to confer protection in the older population.13

It has been shown more recently that influenza vaccination significantly prevents hospital admissions of nursing home residents,13 and depends on the number of nursing home residents accepting to be vaccinated.14 The uptake of the vaccine is itself linked to racial disparities, as has been demonstrated in US nursing homes.15,16 Last, vaccine uptake also depends significantly on rate of vaccine coverage among nHCWS, which remains dramatically low everywhere, not just in the United States.17

A French prospective study clearly demonstrated the significant relationships between vaccine coverage rates among nHCWs and mortality among nursing home residents.18 Double influenza and pneumococcal vaccine coverage in nursing home residents and staff was shown to be extremely effective in the United States.19

These important clues underline crucial nursing home issues, including nHCWs’ deep lack of knowledge about influenza,18 partly explained by their high rate of turnover,20 and suboptimal vaccination educational programs.21 It has been clearly demonstrated that such programs can really change nHCWs’ perception of the disease itself,20 but also their perception of their key role in public health.22 The first step in vaccination education campaigns is therefore to give motivating information to health care workers that the benefits of being vaccinated outweigh the possible inconvenience or adverse reactions (which frightened the nHCWs but not the Chinese nursing home residents1). The information must be complete and accurate.22

Educational programs directed specifically at nHCWs1 were shown to facilitate the implementation of standing order programs for both influenza and pneumococcal vaccinations,22 and results were impressive, significantly increasing the vaccine coverage rate among residents.13,23 Unfortunately, too few nursing homes offer this kind of useful program.24

To end this editorial on a more optimistic note, it has to be mentioned that the Chinese nursing home residents were more willing to get the influenza vaccine if they had previously been vaccinated,1 which clearly shows that vaccines, which represent the
most important public health success of the past century world-
wide, now need to be integrated into a life-course vaccination
program. Such a program would include the promotion of healthy
aging, the improvement of vaccine coverage among health care
workers, thus reinforcing their critical role as vaccination providers,
and expand opportunities for patients to receive vaccination by
improving patient knowledge, attitudes, and beliefs, even in
nursing homes, as demonstrated in the letter to the editor commented on here.

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