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Factors Associated With Seasonal Influenza Vaccination in Chinese Nursing Home Older Adults

To the Editor:

Nursing home older adults have high infection-related hospitalization and mortality.1 Influenza vaccination can decrease hospitalization and mortality.2–4 In Hong Kong, annual seasonal vaccination is given to those who have given informed consent. For those who are mentally incompetent, consents are given by their guardians. There have been different studies about factors associated with influenza vaccination, but those studies mainly focused on community-dwelling older adults.5–7 To our knowledge, there is no study examining factors associated with influenza vaccination in nursing home older adults. Hence, we performed a cross-sectional study using a questionnaire based on the Health Belief Model (HBM) in older adults living in Chinese nursing homes.8

The study was conducted in May 2013 in the Hong Kong West Cluster (HKWC) of the Hospital Authority. In HKWC, there are 70 nursing homes taking care of 6000 residents. Nine nursing homes with 705 residents were selected for this study. The questionnaire was given through individual face-to-face interviews by the principal investigator to residents who had mental capacity to provide consent and agreed to participate in the study. The questionnaire included whether the resident would like to receive the influenza vaccination in 2013 and his or her perception toward influenza and influenza vaccination (Table 1). Other questions included the resident’s source of advice in receiving influenza vaccination. For this question, the participant could choose more than one answer. During univariate analysis for factors associated with influenza vaccination.
vaccination, one of the answers in each question was used as the reference group. Factors univariately associated with influenza vaccination were used as input for multiple stepwise logistic regression to derive the multivariate odds ratio. This study was approved by the ethics committee of the HKWC, Hospital Authority.

Among 705 residents, 23 were hospitalized, 490 did not have the capacity to give consent, and 37 refused to participate. Finally, 155 residents (age 79.0 ± 9.7, 69% female) agreed to participate. Of the participants, 67.7% planned to receive an influenza vaccination in the coming year. Response to questions and factors associated with the participants, 67.7% planned to receive an influenza vaccination if they (1) had received influenza vaccination in the past, or (2) a relative or nursing home health care worker (nHCW) had advised them to receive influenza vaccination. In this study, although 72.9% of the participants had received advice in receiving influenza vaccination from mass media, 40% of the participants either thought influenza vaccination was non-efficacious or had no knowledge of the efficacy; 40% of the participants thought influenza infection was mild and not severe. Moreover, advice from mass media was not a predictor of influenza vaccination. Although mass media is the main channel to deliver information regarding influenza vaccination, those results suggested information delivered through this channel was inadequate and our results concurred with many previous studies. More emphasis should be put on the severity of influenza infection, and the efficacy and adverse effects of influenza vaccination. Moreover, the importance of health advice from relatives to older adults in receiving influenza vaccination should be emphasized, as it is an independent predictor of influenza vaccination.

Another important finding was that advice from nHCWs was an independent predictor of influenza vaccination, as nHCWs are in day-to-day contact with residents. Health advice from nHCWs would be important and influential to the residents if they maintain a close rapport. More information regarding influenza vaccination,
especially efficacy and adverse effects, should be delivered to nHCWs. Prevaccination talks should be arranged in nursing homes or locations convenient for nHCWs. Information leaflets should be distributed to every nHCW. The nHCWs should also be encouraged to deliver advice on receiving influenza vaccination to residents. For nursing home older adults, compared with promotion through mass media, promotion through nHCWs is more likely to be effective. For residents who are socially isolated, this measure is even more important because nHCWs may be their main social contact.

There were several limitations in this study. Only 27.2% of residents of the involved nursing home had the mental capacity to give consent. This is a common phenomenon faced by an intervention trial and questionnaire study for this population. Our results may not be generalizable to all nursing home older adults. However, among those with the mentally capacity for providing consent, the response rate was more than 80% and our result may be generalized to mentally competent residents. Further studies should be performed for the guardians of those mentally incompetent residents. In conclusion, inadequate information regarding efficacy of influenza vaccination and severity of influenza infection were major barriers to receiving influenza vaccination in Chinese nursing home older adults. Health advice from relatives and nHCWs was an independent predictor.

References


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