The high mortality rate within the first 2 weeks strongly supports the use of empiric antimicrobials in the elderly when bacteremia is well established. Recent studies have shown that outcomes in bacteremic patients are related to the delay before starting treatment with effective antibiotics.11 Empiric antimicrobials should target the most likely pathogens based on the clinical picture and patients’ comorbidities.

The results of misleading blood culture contamination is one of many concerns that can face health care practitioners in different settings, including skilled, long-term nursing facilities, and mixed multilevel geriatric hospitals. Bacteremia is defined as the presence of bacteria in the bloodstream12 and is detectable in practical terms only by obtaining blood culture. Although bacteremia is detectable by other means, there is no “gold standard” with which to evaluate blood culture results.13 According to Aronson and Bor,13 obtaining 2 or 3 blood cultures maximizes sensitivity and specificity. If specimen collectors use a poor collection technique, they can introduce organisms into the blood culture bottle that misleads and adds further confusion to the diagnostic workup. The result can be of significant impact on patient outcome. According to the standards published by the American Society for Microbiology, the rate of blood culture contamination should not exceed 2% to 3%.14 The guidelines of the American Geriatrics Society report that in older adult nursing home residents, blood cultures were demonstrated to have a low yield and rarely to influence therapy; thus, they are not recommended for most residents of long-term care. For most residents suspected of having bacteremia, transfer to an acute care facility is warranted.15

Last, in the environment of rising pressure from increasing acute hospital admissions in the older patient and political imperatives to reduce costs, the multilevel geriatric hospital model presented in the article, although not common in the United States and with few details provided in the article, can be a model for a comprehensive future solution of geriatric care. Frequent transfers through different settings often maximizes the likelihood for complications in the frail older patient. The multilevel geriatric hospital model can be an anchor for multisite care for frail elderly patients including managing complicated medical conditions and providing rehabilitation care at the same time.

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DOI:10.1016/j.jamda.2010.09.012

Influenza Vaccination in Long-Term Care Facilities: More Than Standing Order Programs?

To the Editor:

Bardenheier and colleagues1 report a positive impact of standing order programs (SOPs) in long-term care facilities (LTCF) to increase influenza vaccine coverage in elderly residents (up to 65 years old). They also conclude that there is need of future research to better implement these types of programs because only 41% of residents lived in a facility with an SOP despite ACIP’s (Advisory Committee on Immunization Practices) recommendation to implement SOPs. They perform a well-done study among a large and representative subset of LTCFs (n = 1152) gathering data from 11,939 residents.1 We believe that this kind of program may be helpful in various contexts but several remarks should be made regarding our different experiment in French nursing homes and LTCFs within the same period (2003 and 2004).2 We also performed a large study including 7899 residents from different types of health care facilities in France, including acute care (n = 203), rehabilitation care (n = 923), long-term care (n = 6458), and nursing homes (n = 315). It showed high mean influenza vaccine rates in LTCFs and nursing homes (92.8% and 93.3%, respectively). Fewer than 15% of LTCFs reported less than 85% influenza vaccine uptake despite the absence of an SOP.2 In the same study, we found very low vaccination rates for pneumococcal vaccination (22.9% and 41.0% respectively in LTCFs and nursing homes).
From that study, high influenza and low pneumococcal vaccination rates have been confirmed by a larger study in nursing homes including 44,870 residents from 570 nursing homes; influenza vaccination rates varied from 87.3% to 98.1% and pneumococcal vaccine rates from 0% to 30.0%. The main parameter that may explain the difference between vaccine uptakes was linked to the vaccine policy and the recommendations by a health care worker.

In the present study, the low rates (<70%) of immunization are remarkable, because during this same period of time other authors reported different results in North America. In Canada, in 1999, the mean reported rates of influenza vaccination were 83% among residents with a wide range (10% to 100%) and in the United States, 2006 ACIP reports a mean uptake of 83% in 1998; however, Bardenheier et al already reported lower rates and a worse uptake (58.5%) in a recent study carried out in LTCFs in New York State.

As pointed out by the authors, the rise of influenza vaccine coverage did not appear to be very important despite SOPs; it represents a relative increase rate of 10.5% (67.5%) in LTCFs with SOPs as compared with those without SOPs (61.1%). The authors explain the modest impact by the limitations of the implementation of SOPs. However, if SOPs appear a very simple method to follow-up when already implemented, the limitations to the implementation may be linked to the same reasons for the limitation of influenza vaccine implementation without SOPs. In Bardenheier et al’s study, the limitations for SOPs were associated with misperception from residents, lack of facility leadership, high staff turnover rates, inadequate staffing, and lack of immunization tracking systems, as was seen in other studies looking at the limitation of influenza vaccination in elderly individuals. However, the misperceptions may be directly communicated by the health care workers themselves; especially when there is no clear national or local political willingness in favor of vaccination. The difference between pneumococcal and influenza vaccine coverages found several times in France is probably another argument emphasizing this hypothesis; national yearly media announcements and local reminders, as well as individual invitation from public health authorities are organized for influenza vaccine in France. Meanwhile, there is not a single word related to pneumococcal vaccination even for health care professionals.

Therefore, despite national recommendations for SOP implementation, there is only a modest rise associated with SOPs in influenza vaccine coverage in LTCFs. It seems likely that a better political willingness using national and local campaigns with large support from public health authorities should help in modifying the individual perception (residents, resident’s family, and health care workers) of influenza vaccination, leading to better influenza vaccination coverage.

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DOI:10.1016/j.jamda.2010.12.096

In Reply: Influenza Vaccination in Long-Term Care Facilities: More Than Standing Order Programs?

To the Editor:

We thank Dr Gavazzi for sharing results from his study of influenza and pneumococcal immunization among nursing home residents in France. The French study reports substantially higher influenza vaccination coverage during the same time period compared with our study (93.3% for 6 nursing homes versus 63.7% for 1152 nursing homes, respectively). Also, Dr. Gavazzi remarks that our low immunization rate contrasts with other higher rates of influenza vaccination coverage reported in North America, citing studies reported in the MMWR.

One of those studies cited by Dr Gavazzi was the 1997 National Nursing Home Survey (NNHS). The vaccination coverage reported of 82% included only residents with reported influenza vaccination. However, for approximately 18.5% of residents, influenza vaccination status was unknown. Using methodology comparable to what we presented in our article using the 2004 NNHS, that study also reported 64% vaccination coverage among all nursing home residents. Indeed, the year after the NNHS was conducted in 2004, the Centers for Medicare & Medicaid Services (CMS) started collecting documented immunization data for all CMS-certified homes as part of their residents’ assessments. CMS-certified homes house approximately 98% of long-term care residents in the United States. Influenza vaccination coverage reported to CMS during the 2005–2006 season was comparable to the 2004 NNHS (62.3% versus 63.7%, respectively). Only 3% of residents in the CMS data were missing influenza vaccination status. Taken together, these data suggest that residents in the NNHS 2004 missing vaccination status (18.5%) were likely unvaccinated. In addition, readers should note our different methodology for