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Barriers and Facilitators to Provision of Influenza and Pneumococcal Vaccines in Home Health Care Agencies

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Abstract

The recommendations for influenza and pneumococcal vaccines are widely known yet the rates of both immunizations for home health care patients are 70 percent or less. The purpose of this study was to identify the facilitators and barriers to immunizations ultimately to improve vaccination rates among home health care patients. Using a multi-case study approach with five agencies and one group of administrators, facilitators included providing patients with a vaccine “card” and using the agency electronic medical record (EMR) for decision support/reminders. We determined that there were patient barriers (misperceptions about vaccines in general, difficulty in recalling vaccine status) and provider barriers (misperceptions about vaccines among health care workers, home health care agencies not receiving accurate information from other providers or difficulty in determining vaccine status).

Keywords

home health care; influenza vaccine; pneumococcal polysaccharide vaccine

Introduction

The recommendations for influenza vaccine and pneumococcal polysaccharide vaccine (PPV) are widely known.¹ For older adults in particular, the morbidity associated with influenza is significant and associated with increased rates of hospitalization.² The evidence of PPV for older people indicates that the vaccine reduces invasive pneumococcal disease with less clear effects on mortality.³ In addition, patients with multiple chronic conditions and specific conditions (e.g. smokers) have been identified as higher risk. Patients receiving home health care may be particularly vulnerable to both influenza and pneumococcal disease (PD) as many have multiple chronic conditions.

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Based on national initiatives to improve vaccinations for all Americans, the Centers for Medicare & Medicaid Services (CMS) added several items to the standardized assessment in home health care, the Outcome and Assessment Information Set (OASIS-version C) focused on influenza and pneumococcal vaccine. The items provide agencies a way to “take credit” for providing the vaccines or identifying that the patients have already received the vaccines. Within the OASIS reporting system to Home Health Compare on the Medicare web site, consumers and others can then determine the rates at which home health care agencies follow these best practices.

These process measures are “harmonized” among providers where there is public reporting for these measures on providers from various settings (e.g. home health, nursing homes and hospitals). At the July 2013 update for Home Health Compare, the national averages for these two process measures were 70 percent for influenza vaccine during the current flu season and 69 percent for pneumococcal vaccines. By way of comparison, Nursing Home Compare reports influenza vaccine coverage at 82.9 percent and pneumococcal vaccine coverage at 82.3 percent while Hospital Compare reports 86 percent and 88 percent, respectively, for the same time period. While the differences between facility-based care and home health care clearly are relevant, there also is room for improvement in these rates within home health care. Of note, these rates have improved somewhat in home health care since 2010 when the rates were 67 percent for influenza vaccination and 60 percent for PPV.

However, there has been substantially less research on the issues related to provision of influenza and pneumococcal vaccines and what the facilitators and barriers are to home health care agencies providing these vaccines. Knowledge of vaccination issues is largely anecdotal although the empirical evidence ranges from some agencies achieving higher rates and others with less than average rates. Therefore, the purpose of this study was to use a five agency case study approach to identify variations in agency practices and the facilitators and barriers for provision of these important vaccines.

Methods

Using a five agency case study approach, we arranged for focus groups of clinicians, managers and other types of clinical personnel (e.g. quality improvement coordinators). Agencies were solicited through the Home Care Practice Based Research Network (PBRN), which is an Ohio-based network of home health care agencies associated with but not exclusive to the Ohio home care trade association, the Ohio Council for Home Care and Hospice. As part of agency recruitment, a short explanation of the study was posted in an email blast that was sent to agencies in the routine trade association communications. Agencies then contacted the principal investigator to explore their interest and for study explanation. Once agencies agreed to participate, arrangements were made for the site visit to the agency. Institutional Review Board (IRB) approval was obtained prior to study initiation.

Each focus group was asked the same “grand tour” questions:

1. The most recent national reports are that only 60 percent of eligible home health care patients have received the pneumococcal vaccine. We are interested in what

you think the barriers are to this immunization and what explains this low national rate.

2. The most recent national reports indicate that less than 70 percent of eligible home health care patients receive the influenza vaccine during flu season. We are interested in what you think the barriers are to this immunization.
3. What else do you think we need to know about this topic?

For each question, we then asked additional follow-up (“probe”) questions:

- What do you find when you ask patients about this immunization?
- How do patients respond to this immunization question? What do they tell you?
- Has your agency tried specific strategies to improve this rate? What has been tried? What has worked? What has not worked?
- Sometimes individual clinicians try things to improve things like this. What have you tried? What has worked? What has not worked?
- What do you think would improve this rate?

Finally we arranged for a conference call with only agency administrators from these and other agencies to determine their perspectives of the barriers and facilitators to influenza and pneumococcal vaccine administration.

The focus groups were audio recorded and the audio records were professionally transcribed. Analysis included two investigators independently reviewing and coding the transcripts. The coding was then compared, discrepancies were reconciled and the results categorized.

Results

The five agencies represented urban ($n = 1$), suburban ($n = 2$) and semi-rural agencies ($n = 2$). Two agencies were proprietary, two were non-profit and one was hospital-based. The number of participants at each focus group ranged from five to ten and included RNs, PTs, and mid-level managers (i.e. team leaders, quality/performance improvement).

Facilitators for provision of PPV and influenza vaccines

The participants identified a number of approaches that would facilitate provision of the vaccines. First was giving the patients a wallet card to take with them to the primary care provider that listed when they had received the PPV and most recent influenza vaccine. As most agencies already provide patients with a list of home medications, this was seen as a simple addition to the medication information sheet. Second was adding vaccine administration to the patient-specific start of care orders in the home health care electronic medical record so that the admitting home health care provider did not have to remember to add this order at start of care. Agency participants noted that some hospitals and other referring facilities were better than others at providing this information upon home health care referral. This simplified the home health care agency's responsibility at contacting the primary care provider or the referring facility to determine whether the patient had received

the PPV and/or influenza vaccine during the most recent facility stay. Standardization of this information on referral forms was seen as a facilitator in improving the information flow.

One agency, in a semi-rural area, identified that their local media outlets (TV, radio, newspaper) were a logical venue for health promotion ideas for PPV and influenza vaccine. The participants identified that the Internet was not the best source of information for their patients as many did not use the Internet but relied on the more traditional media sources.

Another agency, with a large proportion of its patients in assisted living facilities, identified that it was much easier to promote both PPV and influenza vaccine among the residents compared to those patients who lived independently, because the facility promoted the importance of vaccines.

Barriers for provision of pneumococcal and influenza vaccines

For pneumococcal vaccine, the findings were broadly categorized as patient-specific and provider-specific issues. For the patient-specific issues, there was identification by every focus group of a lack of knowledge on the part of patients as to what the vaccine is or whether they had ever received it. There was also an issue of patients not knowing or not understanding why this vaccine would be beneficial or why they were at risk. Notably, because this vaccine is administered once after age 65, it was harder for patients to recall receiving the vaccine in comparison to the annual influenza vaccine. The participants also identified that patients rely on their primary care providers to “keep track” of the need for the vaccine.

From a provider perspective, there were provider practice differences where some physicians and primary care providers gave “boosters” of PPV and others did not. There were practical issues identified for obtaining the PPV. Notably, agencies could not get the vaccine from the same organizations that they could obtain other injectable medications and physician offices were reluctant to provide a multi-dose vial for administration of the PPV to one patient as the remaining vaccine would be “wasted.” In addition, the focus group participants identified that there was less community information regarding PPV as compared to influenza vaccine and that it was generally less available in the community in comparison to influenza vaccine. There also were issues regarding payment for PPV if the patient was not a “traditional” Medicare patient. Communication issues across providers were identified: the communication flow between home health care agencies, facilities (hospitals, skilled/extended care facilities) and primary care providers were a barrier to knowing which patients had received the PPV. The other issue that was identified was that home health care agencies, unlike other health care delivery settings, could not use “standing orders” to administer the vaccines according to Medicare regulations.

For influenza vaccine, there were patient-specific factors related to the fear of contracting influenza from receiving the vaccine, identification of past reactions to the vaccine and cultural or belief biases related to all vaccines. These issues were identified by all focus groups. There were also patient-specific barriers related to patients wanting to receive influenza vaccine from their primary care providers or in other sites.

Provider barriers included a belief that the influenza vaccine was hard to obtain, that obtaining the orders and then providing the vaccine required extra home visits (this was particularly difficult for rural patients), that there were reimbursement issues in billing Medicare for influenza vaccine, and that physicians and primary care providers did not provide orders for influenza vaccine. The reimbursement issues for influenza vaccine were primarily related to patients who received the vaccine in a provider setting and also from the home health care agency in the same influenza season which prompted a denial of payment for home health care as providing a duplicate service.

All of the focus groups also identified that there was staff skepticism or misinformation regarding the influenza vaccine where a proportion of the staff within each agency believed that it was possible to contract influenza from the vaccine and/or that the influenza vaccine would “make patients sick.” This skepticism and misinformation resulted in these same staff members resisting obtaining the influenza vaccine themselves and they were either less likely or resistant to offering the vaccine or following up with patients on obtaining the influenza vaccine.

Agency administrators

Agency administrators identified many of the same barriers identified by the clinicians and managers, namely that the health care provider beliefs and experiences influenced how much the health care worker encouraged vaccination among their patients and that there had been slow improvement in health care worker willingness to receive the influenza vaccine. One facilitator to the influenza vaccine among staff was offering the vaccine during staff meetings or when the staff was all on site. Another facilitator, noted by another agency, was making it easy for the staff to get the vaccine (e.g. other sites or providers).

Similarly, agency administrators reported that the flu vaccine was easier for patients to recall as it was given annually whereas PPV was given once at age 65. They also reported wide provider variation in the provision of PPV with some providers giving “boosters” every five or ten years. This provider variation created confusion on the part of patients and the home health care staff.

The agency administrators reported that some facilities were better about providing the PPV and communicating the documentation to the home health care agency which then simplified the work of the home health care agency. They reported the same thing for influenza vaccine where some facilities and assisted living organizations had standing orders for influenza and PPV that facilitated the provision of the vaccines and thus the home health care agency did not have to follow up with additional phone calls or faxes.

A notable difference is that there were at least two agencies that provided the influenza vaccine in their offices. If someone from the community came during the hours that the office was open, a nurse would give the influenza vaccine. Both agencies identified that they did this on a “cost basis” and did not make any additional income. One of the barriers identified for this kind of service was the billing. Medicare billing was described as “cumbersome” and third party billing was difficult if the agency was not a preferred provider. One agency identified that they had never been able to successfully bill Medicaid

for influenza vaccine. The agencies, in some cases, did not bill for these vaccines for these reasons.

Additional points

The participants also identified that most practicing health care providers in home health care, regardless of discipline, had received little education in their basic educational preparation on the importance of adult vaccination. Most of the agencies were aware of the extensive educational materials, many available at no cost, from the Centers for Disease Control and Prevention for both PPV and influenza, but not all had used the materials for staff development or patient education. There were several agencies that routinely used the materials to promote influenza vaccine in particular.

Finally, the investigators noted that there were organizational culture differences between the agencies. One agency was passionate about this topic and their rates for both influenza and PPV were much higher than the other agency rates. Upon additional questions probing organizational culture differences during the focus group session, it was shared that one of the agency managers had taken this topic on as a focus for a quality improvement project and had been able to implement a number of steps to improve rates. The implementation included such things as working with local primary care providers to obtain the vaccines for administration, changing the process during admission to simplify staff effort for obtaining orders and working with the more skeptical staff on the importance of vaccination for older adults.

Discussion

Home health care practice for adult vaccinations is challenged on a number of fronts: traditionally the focus of home health care has been on direct care provision with less emphasis on health promotion and disease prevention, the prohibition against standing orders makes it more difficult for agencies who want to provide vaccinations, and there are reimbursement challenges across payers. Despite these challenges, however, the evidence is clear on the importance of both PPV and influenza vaccine for optimal patient outcomes.

The agencies participating in these focus groups identified common barriers for patient-specific issues, particularly the lack of knowledge or misinformation. These issues are common to all sites of care and there is evidence that persuasive patient teaching can improve willingness to obtain the vaccines.⁴ Similarly, staff misinformation regarding influenza vaccine risks and side effects was common and can also be addressed. While mandatory vaccination for influenza vaccine is controversial, the evidence is clear that it increases staff vaccination rates beyond voluntary policies.^{5;6} None of the agencies in the study had mandatory vaccination at the time of the focus groups, although several identified this as a point of discussion in the agency. One hospital-based agency identified that they had not been required to follow the hospital policy of either receiving the influenza vaccine or wearing a mask while providing patient care but were anticipating increasing pressure to follow hospital policy.

There were practical suggestions made to facilitate the provision of the vaccines including giving patients immunization wallet cards and working with local media to improve patient and family knowledge regarding the issues. Within the agency processes, adding the immunization order to the start of care order set within the electronic medical record was identified as a facilitator to staff having to remember to add this.

There were some issues that are not as easily addressed at the agency level. Specifically, information flow between providers, whether primary care providers, facilities or home health care, remains a challenge. The expansion of the electronic health record or the personal health record shared among providers will simplify this issue but the time frames for completion of this national effort remain uncertain. Standardization of the information on referral forms is one intermediate step in improving this challenge but depends on the providers. The lack of home health care agencies being able to use standing orders for PPV and influenza also remains a barrier. The other sites of care (hospitals and nursing home facilities) that use standing orders for this intervention have been identified by the home health care agencies as having a positive effect on the rates of vaccination. Changing this, however, would require a policy change within Medicare regulations to allow for standing orders in home health care.

Limitations to this study include the voluntary nature of participation: agencies with the lowest rates of PPV and influenza vaccine were not specifically recruited so we do not know how similar or different they are from the agencies participating. Second, the participants' views may or may not represent official policy regarding such issues as to how easy or hard it was to obtain vaccine. Their perspectives were what we sought and we did not attempt to re-educate participants regarding misconceptions or misunderstandings. Finally, we cannot generalize beyond this group of five agencies and one group of agency administrators to suggest that these findings can be applied to other agencies.

Conclusion

Improvement in national provision rates of PPV and influenza vaccine requires the concerted efforts of all parts of the health care system. Home health care agencies have a part to play in this important national initiative and there are practical steps that agencies can take to improve their rates. While there are substantial barriers, with health care provider beliefs, patient and family suspicions, and payment barriers, there also are effective strategies to promote this important intervention.

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