Slipping Through The Cracks: Suboptimal Immunization Rates in a Rural ALF Population

Victoria Mullin, PharmD Candidate 2021;1 Cassandra White, PharmD, BCACP, BCGP;1 Annette Beyea, DO, MPH;2 Carlen Smith, MD;2 Isaiah Meyer, GNP2

1. Husson University School of Pharmacy, Bangor, ME; 2. Geriatrics, Maine Dartmouth Family Medicine Residency, Augusta, ME

BACKGROUND

- Higher immunizations rates are associated with reduced incidence of vaccine-preventable diseases.
- Immunizations have been shown to reduce morbidity and mortality, direct and indirect healthcare costs, and necessity for increasing levels of care.1
- Limited knowledge exists regarding immunization rates for older adults in assisted living facilities (ALFs).
- This prospective quality improvement study aimed to quantify immunization rates for rural adults aged ≥65 years residing in ALFs in a rural Northeast community.
- A secondary objective was to identify barriers and facilitators to vaccine administration in this setting.

METHODS

- Inclusion criteria: patients aged ≥65 years established with a rural geriatric medicine primary care practice residing in ALFs in December 2020.
- Immunization data included the following: influenza vaccine, pneumococcal polysaccharide vaccine, 23-valent (PPSV23), pneumococcal conjugate vaccine, 13-valent (PCV13), tetanus toxoids and diphtheria and acellular pertussis (Tdap) or tetanus toxoids and diphtheria (Td) vaccine, zoster vaccine live (ZVL), and recombinant zoster vaccine (RZV).
- Immunization status was determined by reviewing the practice’s electronic health record (EHR), and contacting ALFs and community pharmacies via telephone. Data was de-identified and stored in a secure platform, and used to inform pre-encounter, encounter, and post-encounter workflows with the goal of improving vaccine administration.

RESULTS

| Baseline characteristics: | Gender: 74.6% female, 25.4% male |
| | Age: 65-74 years (14.6%), 75-84 years (33.8%), 85-94 years (45.4%), 95+ years (6.2%) |
| Primary objective: | Quantify immunization rates (Table 1) |

<table>
<thead>
<tr>
<th>Table 1. Overall Immunization Rates</th>
<th>Goals 2</th>
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<tbody>
<tr>
<td><strong>Influenza</strong>: IIV3, IIV4, RIV4, LAIV4</td>
<td>83.8% (109)</td>
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<tr>
<td>PPSV23: &lt; 65 y, ≥ 65 y</td>
<td>10% (13)</td>
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<tr>
<td>PCV13</td>
<td>44.6% (58)</td>
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<tr>
<td>Tdap, Td</td>
<td>36.9% (48)</td>
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<tr>
<td>RZV: 1 dose, 2 doses</td>
<td>10.8% (14)</td>
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<tr>
<td>ZVL</td>
<td>23.1% (30)</td>
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Secondary objective:
- **Barriers**: inconsistent communication pathways; variable tracking mechanisms and documentation of vaccine administration; specific reason for deferral not documented; reimbursement models; and vaccine dosing frequency.
- **Facilitators**: prioritization of vaccine administration, pre/post-encounter workflows, EHR, pharmacy support, education.

DISCUSSION & CONCLUSIONS

- Current immunization rates for older adults residing in ALFs in a rural Northeast community are below national goals.
- These findings led to prioritization of vaccine administration during practice meetings, optimization of pre and post-encounter workflows, and engaging pharmacy support to improve vaccine administration in the ALF setting.
- Next step includes quantifying immunization rates at six months from baseline data collection.
- Future opportunities might include the following:
  - Central electronic repository in the state with legislation and regulation that require reporting of vaccine administration,
  - Clear documentation for vaccine hesitancy or deferral to guide targeted education and other interventions,
  - Addressing the limitations surrounding reimbursement models.

DISCLOSURES & REFERENCES

We have no conflicts of interest to disclose.