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

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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

Participants: N=130
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 1. Overall Immunization Rates			Goals[2]
Influenza: IIV3, IIV4, RIV4, LAIV4	83.8% (109)		90.0%
PPSV23: < 65 y, ≥ 65 y	10% (13)	51.5% (67)	90.0%
PCV13	44.6% (58)		
Tdap, Td	36.9% (48)		n/a
RZV: 1 dose, 2 doses	10.8% (14)	5.4% (7)	30.0%
ZVL	23.1% (30)		

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.

1. Orenstein WA, Ahmed R. Simply put: Vaccination saves lives. Proc Natl Acad Sci USA. 2017;114(16):4031-4033.
2. Office of Disease Prevention and Health Promotion. Healthy People 2020. Accessed March 15, 2021. https://www.healthypeople.gov/2020