

Community Pharmacists on the Frontline

SDIC KICK THE FLU SUMMIT

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Goal

Inform healthcare providers and community stakeholders about the roles of community pharmacists as frontline providers in triaging vaccination screening and opportunities, handling and storing flu vaccines, and alleviating barriers to provide comprehensive care to patients

Outline

1. How far we've come: Travel through Time
2. Our Current Impact
3. Essential Role of Community Pharmacies
4. Influenza 2022-2023 and ACIP Recommendations
5. Pharmacists Duties and Workflow
6. Pharmacist Limitations
7. Future

Travel through time

1800s

- Pharmacy served as a source of storage. Pharmacists prepared and distributed vaccines.

1994

- The first organized immunization training for a group of 50 pharmacists was held in Seattle, Washington.

1996

- The American Pharmacists Association (APhA) established its Pharmacy-Based Immunization Delivery program, which is endorsed by CDC.

2009

- As of October 2009, Maine became the last state to allow pharmacists to administer immunizations.

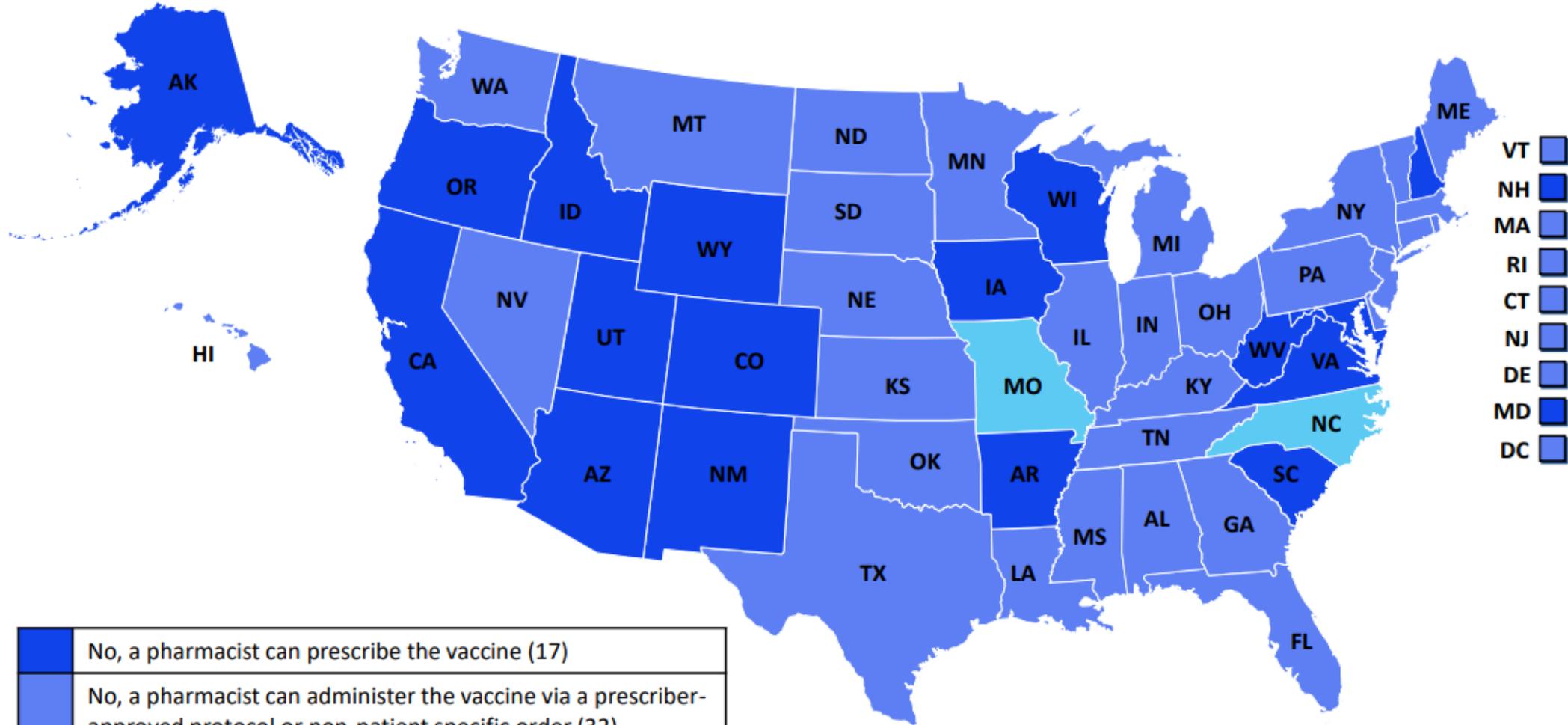
Present

All graduated pharmacists are certified to deliver immunization through the APhA's Pharmacy-Based Immunization Delivery Training Program.

Pharmacies and pharmacists are becoming the location and front line provider to triage and administer vaccines.

In respect to the pandemic, more than 262.2 million doses of COVID-19 vaccine have been administered and reported by Federal Retail Pharmacy Program participants in the US.

DOES A PATIENT NEED A PRESCRIPTION FOR A PHARMACIST TO ADMINISTER A VACCINE ON THE ADULT IMMUNIZATION SCHEDULE?



Dark Blue	No, a pharmacist can prescribe the vaccine (17)
Medium Blue	No, a pharmacist can administer the vaccine via a prescriber-approved protocol or non-patient specific order (32)
Light Blue	A prescription is needed for certain vaccines, ages, or circumstances (2)

Pharmacists in all 50 states can administer all vaccines included on the CDC recommended adult immunization schedule. Pharmacists in the District of Columbia can administer all vaccines on the adult immunization schedule except MMR and varicella vaccines.

Collaborative Agreement

- Bus & Prof Code section 4052

Independent

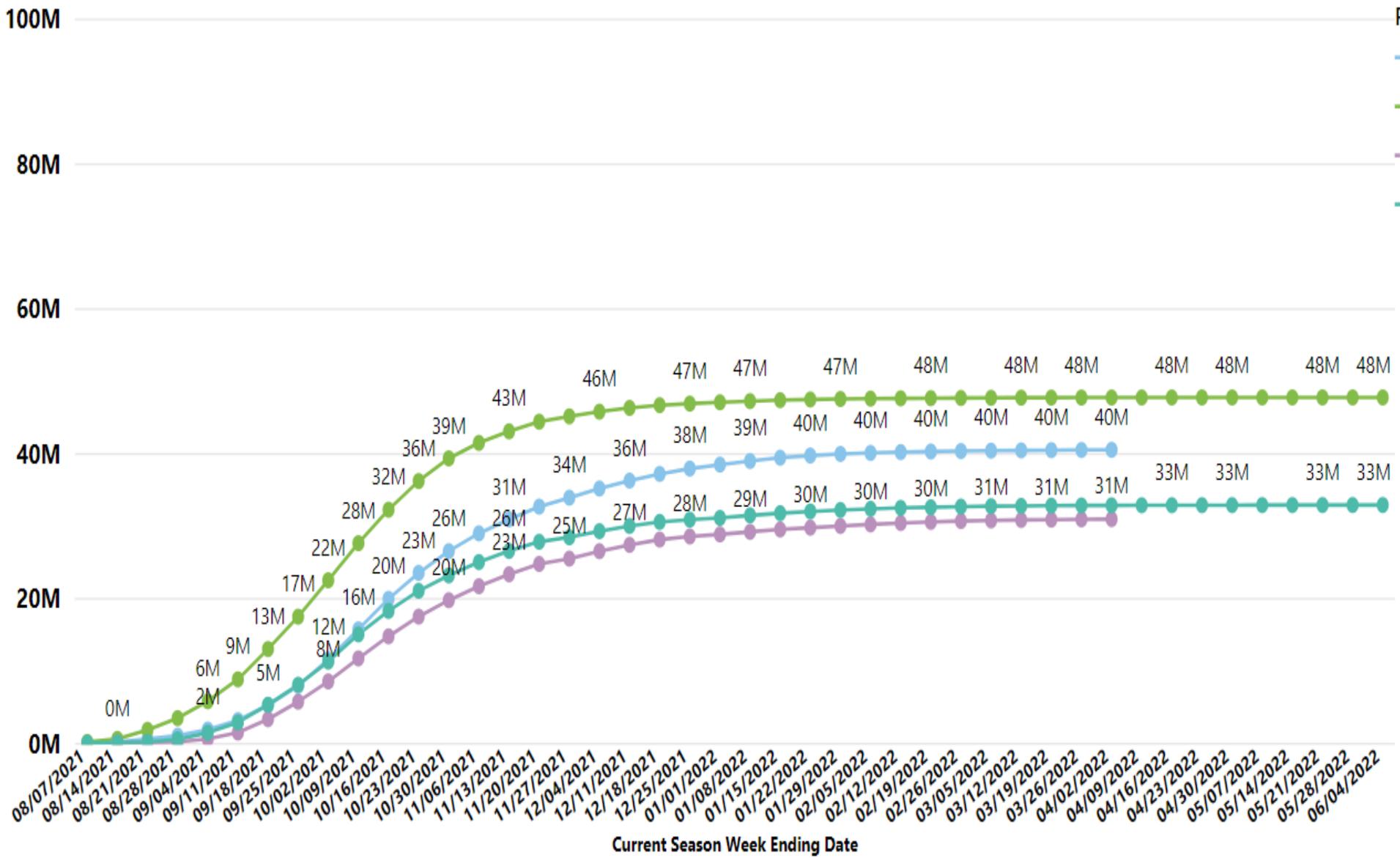
- Bus & Prof Code section 4052.8 and California Code of Regulations [CCR], Title 16, section 1746.4

Increased
Vaccinations

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graph TD; A[Collaborative Agreement] --> C((Increased Vaccinations)); B[Independent] --> C;
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The diagram illustrates two regulatory paths leading to increased vaccinations. On the left, a box titled 'Collaborative Agreement' lists 'Bus & Prof Code section 4052'. On the right, a box titled 'Independent' lists 'Bus & Prof Code section 4052.8 and California Code of Regulations [CCR], Title 16, section 1746.4'. Arrows from both boxes point towards a central circle labeled 'Increased Vaccinations'.

Dose Administered (in millions)



Place of Vaccination and Flu Season

- Pharmacy 2021-2022
- Pharmacy 2020-2021
- Physician Medical Office 2021-2022
- Physician Medical Office 2020-2021

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Impact of Community Pharmacists during Pandemic

- Increased testing services that were previously underutilized
- Authorized prescribing capability for Paxlovid
- Optimized front line roles and responsibilities in the community

Table 1. Pharmacist Interventions and Anticipated Outcomes in Contributing to Population Health^a

Intervention	Anticipated Outcomes
Prevention	
Medication monitoring	<ul style="list-style-type: none"> • Provide appropriate preventive medications • Address medication access issues in the face of pandemic restrictions
Patient education	<ul style="list-style-type: none"> • Educate patients about preventing coronavirus disease 2019 (COVID-19) infection and symptoms of the disease • Provide education on over-the-counter medications • Increase patient self-efficacy and reduce adverse outcomes from medications
Vaccinations	<ul style="list-style-type: none"> • Reduce novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission when a vaccine becomes available • Prevent outbreaks of vaccine-preventable diseases
Point-of-care testing	Increase access to COVID-19 testing and reduce transmission by early detection and quarantine of detected individuals
Management	
Medication monitoring	Increase treatment success
Patient education	<ul style="list-style-type: none"> • Educate patients about COVID-19 disease • Increase patient self-efficacy and reduce adverse outcomes from medications
Medication therapy review	Optimize patient medication adherence and quality of life
Disease self-care and support	<ul style="list-style-type: none"> • Ensure access when medical facilities are not accepting patients • Empower patients, increase pharmacist role in multidisciplinary team, and improve population health
Point-of-care testing	Provide real-time point of care screening results for chronic disease management

^a Based on Greer N, Bolduc J, Geurkink E, Rector T, Olson K, Koeller E, et al. Pharmacist-led chronic disease management: a systematic review of effectiveness and harms compared with usual care (7).

The Essential Role of Community Pharmacies in Expanding Access to Vaccines

- Initial point of contact
 - Identify target groups for certain vaccinations
 - Ease the fears of patients through education on the importance and risks associated with not being vaccinated
- Accessibility
 - Patients usually do not have to make an appointment
 - Experience shorter waiting times
 - Pay nothing out-of-pocket for the visit with valid insurance
 - Expanded hours translates to patients' increased access to vaccination services
- Pharmacists can readily connect the dots for patients
 - Offering education, advice, and guidance to providing the venue for and the administration of important vaccinations
 - Provides a more filtered transition of care to the provider

Influenza 2022-2023

Influenza Vaccine for the 2022-2023 Season

- Ages less than 65 years
 - No Preferential recommendation
 - All Flu Vaccines are Quadrivalent now

- Ages 65 years or older and high risk patients
 - 3 Flu Vaccines available on the market are preferred
 - Fluzone High-Dose Quadrivalent (0.7mL)
 - Flublok Quadrivalent (0.5mL)
 - Flud Quadrivalent (0.5mL)

Influenza Vaccine for the 2022-2023 Season

- Influenza virus strains were selected based on the influenza vaccine production method
 - Egg-based
 - Cell/Recombinant-based
- A quadrivalent influenza (flu) vaccine is designed to protect against four different flu viruses, including two influenza A viruses and two influenza B viruses.
 - Adding a B virus from the second lineage was done to give broader protection against circulating flu viruses

ACIP Recommended Quadrivalent Formulation

Egg-based

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus
- an A/Darwin/9/2021 (H3N2)-like virus
- a B/Austria/1359417/2021-like virus (B/Victoria lineage)
- a B/Phuket/3073/2013-like virus (B/Yamagata lineage)

Cell- or Recombinant- based

- an A/Wisconsin/588/2019 (H1N1)pdm09-like virus
- an A/Darwin/6/2021 (H3N2)-like virus
- a B/Austria/1359417/2021-like virus (B/Victoria lineage)
- a B/Phuket/3073/2013-like virus (B/Yamagata lineage)

	Egg – Based Vaccine	Cell/Recombinant – Based Vaccine	High Dose Vaccine	Live, Attenuated Influenza Vaccine (LAIV)
Products available	Afluria Fluarix Flulaval Fluzone Fluad (Adjuvanted)	Flucelvax Flublok	Fluzone HD	Flumist
Dosage	0.5 mL (15 µg)	0.5 mL (15 µg) Flublok 0.5 mL (45 µg)	0.7 mL (60 µg)	0.2 mL
Storage	Refrigerated at 2° to 8°C (35° to 46°F) Protect from light Do not freeze. Discard if has been frozen	Refrigerated at 2°C to 8°C (35°F to 46°F) Protect from light. Do not freeze. Discard if has been frozen	Refrigerated at 2°C and 8°C (35°F and 46°F). Do not freeze. Discard if has been frozen.	Refrigerated at 2°C to 8°C (35°F to 46°F). Protect from light. Do not freeze. Discard if has been frozen.
Supplied	Package of 10 single-dose, prefilled syringe without needle or in Multidose Vials that require to be drawn up	Package of 10 single-dose, prefilled syringe without needle or in Multidose Vials that require to be drawn up	Package of 10 single-dose prefilled syringes	Package of 10 single-dose intranasal sprayers
Route of Administration	IM only	IM only	IM only	Nasal
Availability	Most vaccines are available from various wholesalers or directly from manufacturers around July for purchase Usually, Pharmacies will try to have some product on hand by August			
When can we pre-order	Pre-order process starts early, between March-May the year prior. Pharmacies need to anticipate how many vaccines they will administer for the next year about 6 months earlier to have enough product on their shelf at a decent price			

Timing Flu Vaccination

- September and October are the best time to get flu shot, and ideally everyone should be vaccinated by the end of October
 - However, if unable to receive vaccination until later, it is still recommended to get as soon as possible
 - Flu most commonly peaks in February
- Those 65 years and older, should not get vaccinated too early (July and August)
 - Protection decreases over time
- Some children requiring two doses
 - 1st dose as soon as available
 - 2nd dose at least 4 weeks later
- Third trimester of pregnancy
 - Early vaccination should be considered
 - Help protect their infants during first months of life

Pharmacist's Duties

Intake	Administration
Review Vaccine Consent Form <ul style="list-style-type: none"> • Are you currently sick? • Allergies & Past Reactions • Neurological disorders • Pregnant, breast feeding, or plan to become pregnant • Immunocompromised • Anticoagulants • Most recent vaccine administrations 	Private room or private area
Process specific vaccines <ul style="list-style-type: none"> • Submission of vaccination to CAIRs (as of 2016 for California) • San Diego used SDIR, recently switched to CAIR2 	All pharmacists are BLS certified
Provide appropriate Vaccine Information Sheet(s)	Anaphylaxis Kit on hand
Patients must remain in the pharmacy for 15 minutes after receiving a vaccine for observation of side effects	

Pharmacist's Duties

Protocol for Anaphylaxis

- Epinephrine: 1 for adults and 1 for children
 - All pharmacists are trained on how to properly administer an EpiPen
- Diphenhydramine – usually liquid form

- Alcohol wipes
- Stethoscope
- Blood pressure monitor
- Tongue Depressor
- Access to a defibrillator (AED device)

If itching or swelling occurs at the injection site:

- Monitor patient closely for 15-20 minutes for symptoms of anaphylaxis
- May administer diphenhydramine to relieve itching or hives

If anaphylaxis symptoms are present:

1. Instruct another associate to call 911
2. The pharmacist must stay with the patient to assess symptoms
3. Administer epinephrine intramuscularly using the weight appropriate dose
4. Continue monitoring the patient until emergency medical services arrives
5. Perform CPR if necessary and monitor blood pressure and pulse every 5 minutes

Pharmacist must report event to Vaccine Adverse Event Reporting System (VAERS)
Remind patients and caregivers to report any adverse events that happens at home

Pharmacist Workflow

- Pharmacists can promote proper immunization by identifying patients in need of immunization
 - Gathering immunization histories
 - Encouraging use of vaccine profiles
 - Issuing vaccination records to patients
 - Preventing immunologic drug interactions
 - Screening patients for immunization needs
- Pharmacist-provided patient vaccine education, screening, and recommendations have been shown to increase vaccination rates

Pharmacist Workflow

- The screening for and recommending of vaccinations are part of the pharmacist's responsibility in monitoring drug therapy includes:
 - Identification of lack of therapy and preventative measures such as routine and recommended vaccinations
- Pharmacists have access to patients' medication history from the patient's pharmacy profile and prescription history in the pharmacy information management system (PIMS)
- Along with patient interviews, pharmacists are the ideal provider for identifying patients at risk for vaccine preventable diseases
 - Pharmacists and their staff can review prescription records and surmise vaccination needs

Role of Pharmacists in the Community

- Community pharmacies are located in most communities in the United States, and more than 90% of the US population live within 5 miles of a pharmacy
- Patients visit their community pharmacist 12 times more frequently than their primary care provider

**Role of Pharmacist as
Immunizer**

Details

Distributor

Supply and distribute vaccines and immunization products

Improve vaccine-related literacy

Educator

Promote the importance of vaccination and increase the awareness of the benefits of the immunization practice and vaccine uptake

Facilitator

Hosting healthcare providers (pharmacy-based clinics and similar health-related settings)

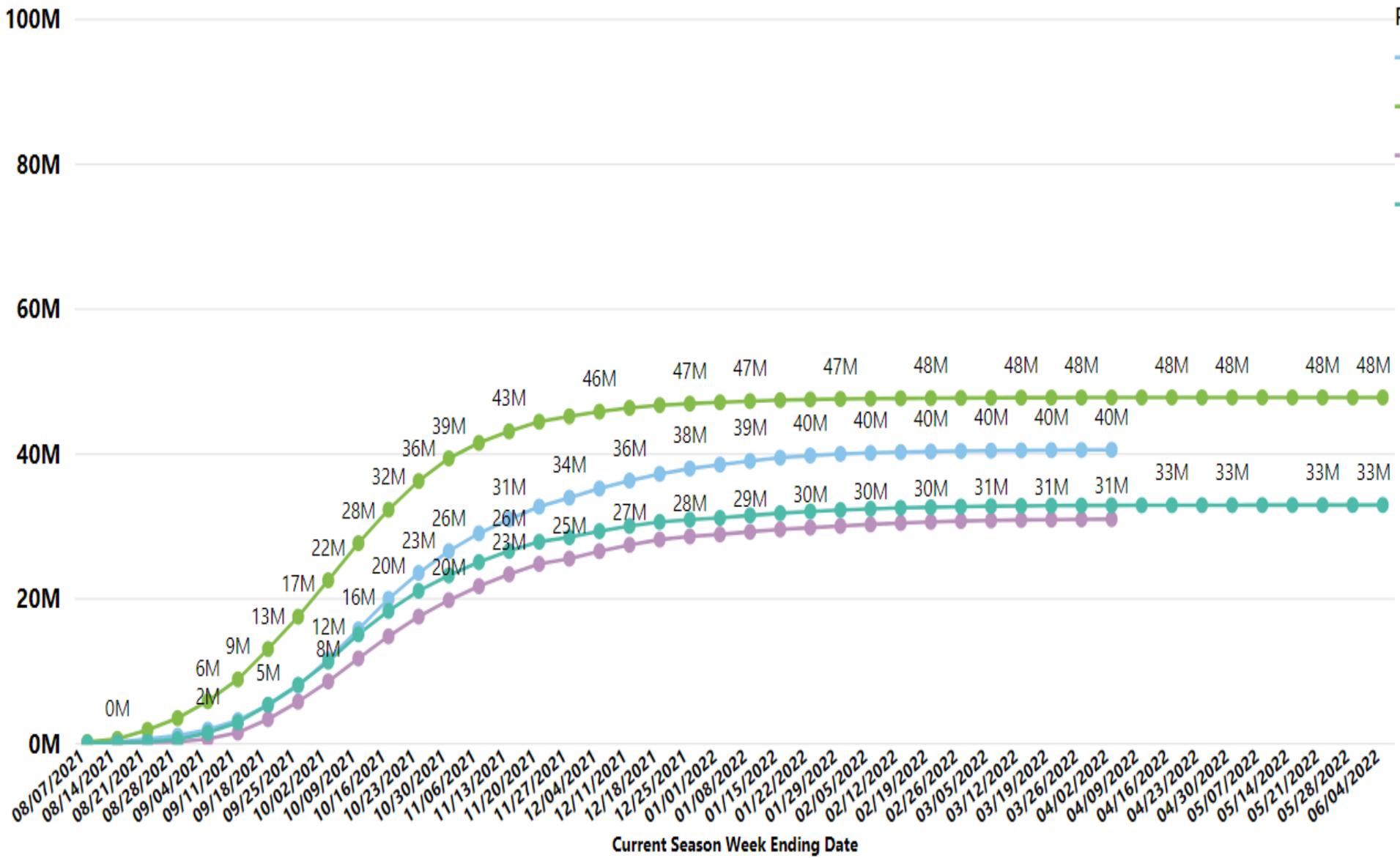
Administrator

Directly immunize subjects

The available scientific evidence concerning the involvement of pharmacists as immunizers.

Impact of Pharmacist as Immunizer	Details	Reference
Feasibility, acceptability and general effectiveness of PBIS	Highly accepted by patients and community pharmacy staff members	[9]
Vaccine uptake and immunization coverage rate	RR from 2.64 [95% CI 1.81–3.85] to 2.96 [95% CI 1.02–8.59]; pooled RR 2.74 [95% CI 1.58–4.74]	[10,11]
Economic savings	\$2.3 million saved in direct healthcare costs and lost productivity at the province level	[12]

Dose Administered (in millions)



Place of Vaccination and Flu Season

- Pharmacy 2021-2022
- Pharmacy 2020-2021
- Physician Medical Office 2021-2022
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Limitations

- Lack of accessibility to universal EMR
- Relatively underutilized resource
- Lack of incentivization for clinical services
- Almost “invisible” in recent health care policies

Future

- Where we fit in the collaborative space
- Where do YOU see us fit in?
- What can we do to help YOU enhance patient care?
- What can we do TOGETHER?