Real-World Co-Administration Strategies in People Aged ≥65, During Respiratory Season 2024

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BACKGROUND

Effective population-level vaccine administration requires strategies that are acceptable to individual risk-profiles and that work within the healthcare ecosystem in which they are to be delivered.

Co-administration strategies, recommended by CDC[1] (same appointment, different anatomical site), are adopted to opportunistically engage patients and improve their coverage during respiratory season, but are also used to deliver less well-established vaccines alongside the well-accepted annual influenza vaccine.

We analyzed the strategies employed in the medical home for the 2024 respiratory season. All vaccines were delivered as part of a network of vaccine administrators supported by a central distribution, technology, and billing solution effectively leveling barriers to access and improving the ability to analyze the adopted vaccine co-administrations across the contiguous US.

OBJECTIVE

This analysis was undertaken to **better understand the strategies adopted at scale by clinicians** as they navigate a busier annual vaccine schedule and **increase the coverage for older patients** while no specific guidelines exist for the optimal selection of antigens for older patient vaccination strategies.

METHOD

Time Period

Respiratory Disease Season 2024

Data Source

VaxCare LLC (FIGURES 3, 4, & 5)

The data analyzed were available for those patients who were vaccinated as part of the proprietary integrated network of VaxCare, comprising practices across the nation designated as the medical home of the patient.

Analysis

Analysis of the nationwide, deidentified, tokenized dataset was undertaken for individuals identified aged ≥65 as of 1/1/24 and recorded as having received at least one vaccine in the medical home during the following 365 days.

The limitations of this analysis include the lack of information about vaccine administration outside the medical home, though this is mitigated somewhat by the scope of the analysis, limited to same appointment, different anatomical site vaccine administration.

All analyses were conducted within HIPAA safe harbor guidelines and no patient identifying features are considered as part of this analysis. Data was analyzed in Databricks.
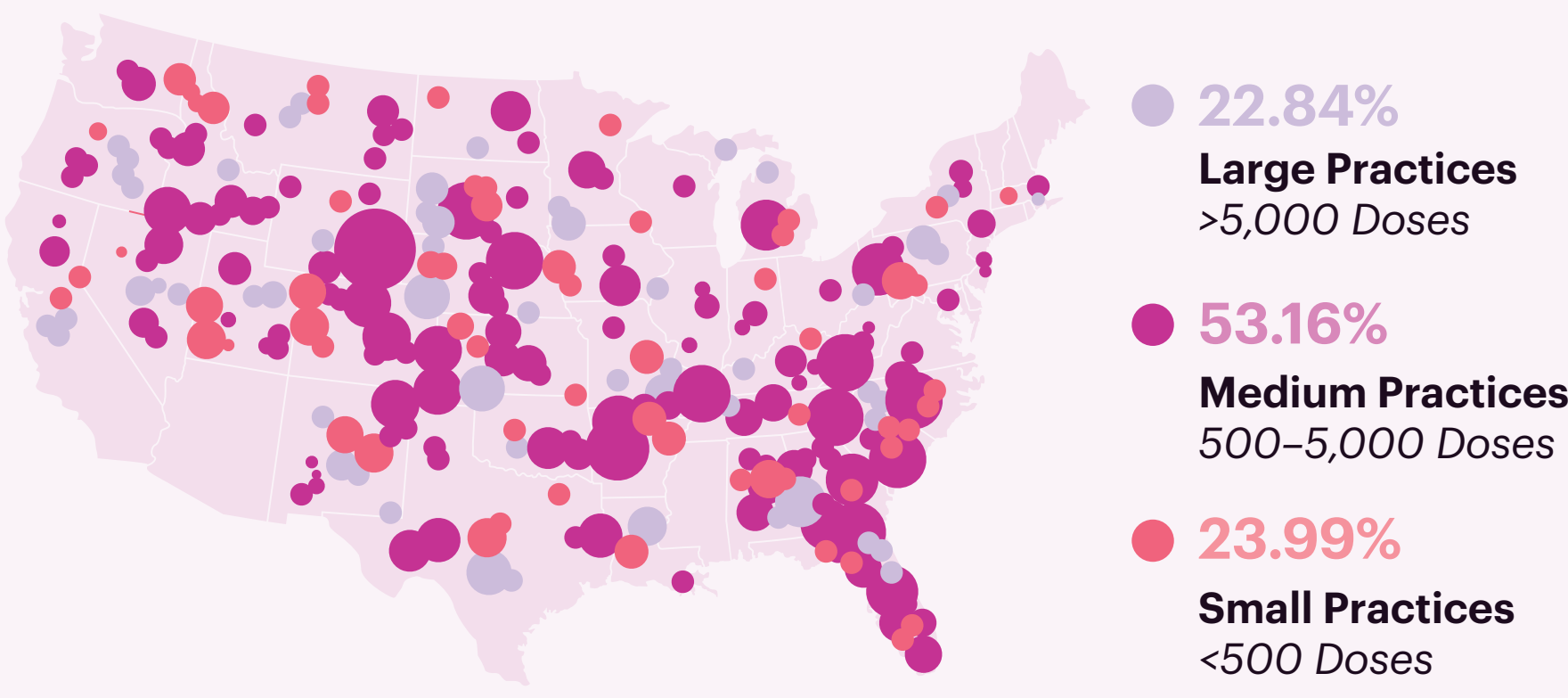
Study Population

FIGURE 1: Description of study participants.

638,051 Patients

≥65 Patient Age (Years)

With Medicare Coverage

45% Male **55%** Female

FIGURE 2: Description of participating practices and practice types.

Practices include: private clinics, integrated health departments, public health and health systems but entirely exclusive of the retail pharmacy setting.

Practice size is determined by the number of doses administered annually.

5K+ Practices Nationwide

22.84% Large Practices >5,000 Doses

53.16% Medium Practices 500–5,000 Doses

23.99% Small Practices <500 Doses

Data Sourced From the Largest Nationwide Vaccinator Network

This study utilized data from a dedicated end-to-end vaccine management platform (VaxCare LLC, Orlando, Florida). VaxCare automates the entire workflow for physicians and their clinical staff, creating a fully integrated vaccination ecosystem.

Complete, Single-Source & Multi-dimensional Data

4M+ Vaccines Administered Annually

40+ States with VaxCare Clinics
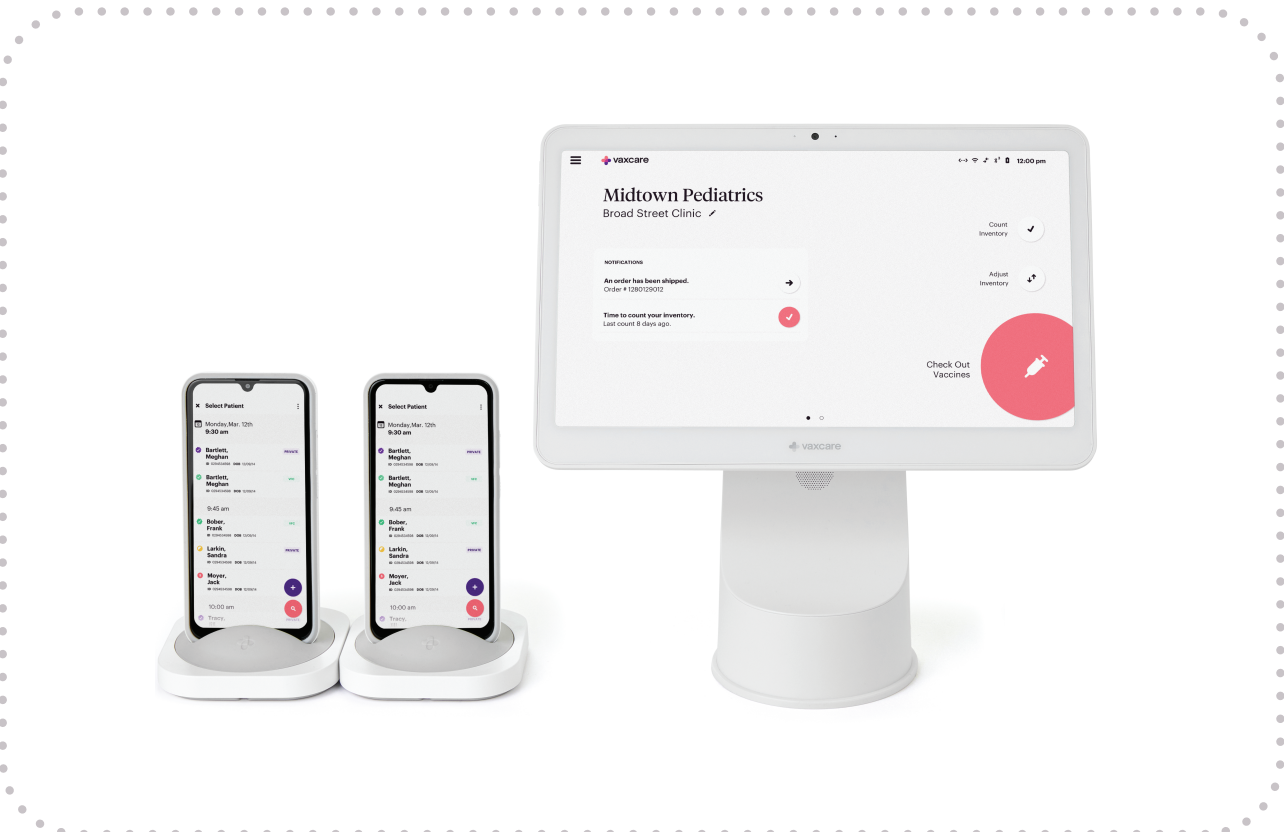
VaxCare's vaccine platform, along with their ever-growing clinic network and their practice EMRs, provides uniquely comprehensive insights into every aspect of the vaccination workflow, including shipping and inventory data, provider and patient data, administration data, and claims data.

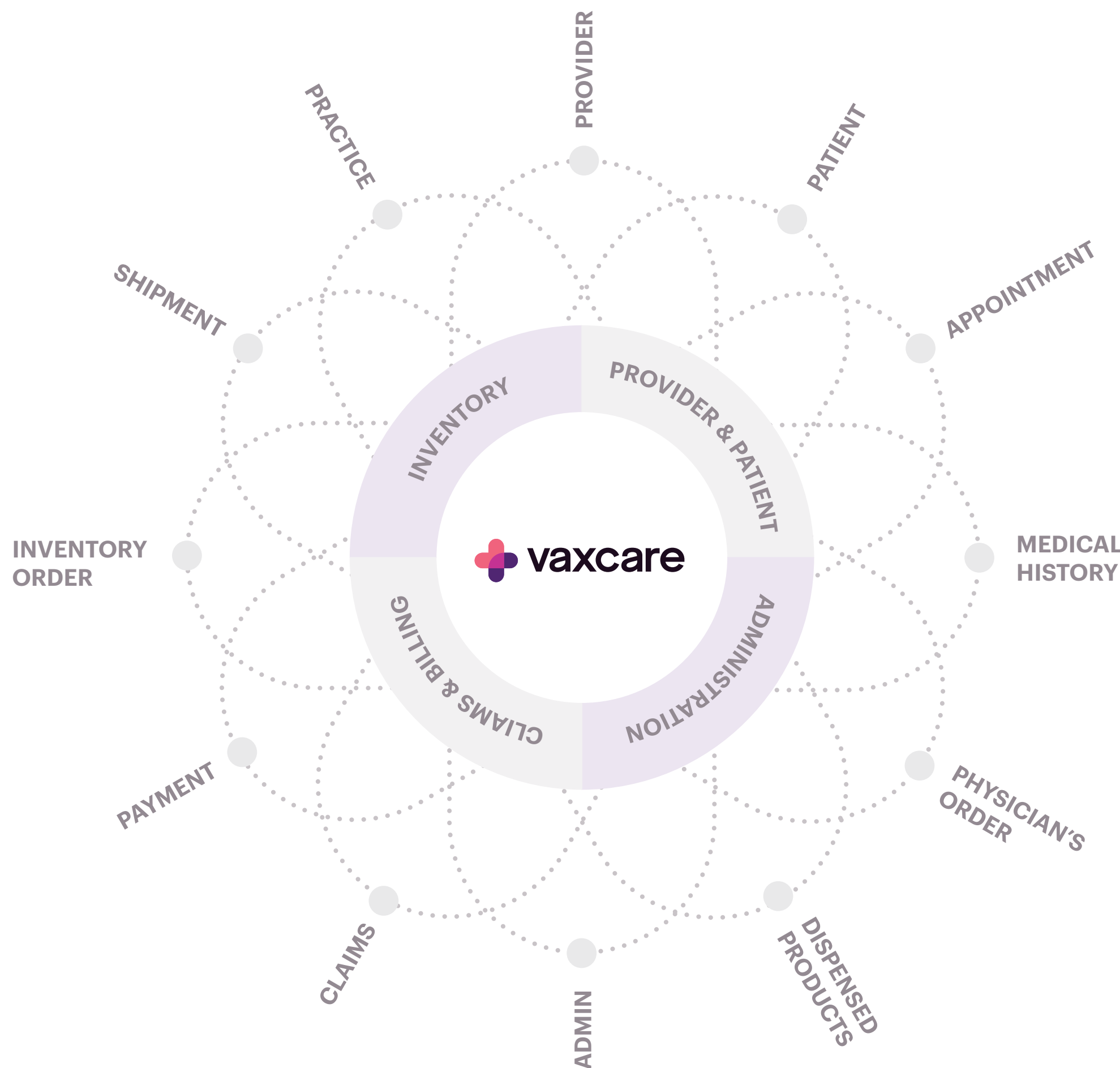FIGURE 3: VaxCare's technology platform.

VaxCare Data is the new industry standard for a single and complete source of data that's credible and versatile in it's use. With data that's updated daily, VaxCare provides you both historic and real-time data for vaccination across the nation.

Real Time, Precise & High-Fidelity Data

SAMPLE DATA SET
INVENTORY ORDER

Provider: Dr. Jane Doe **Qty:** 20
Clinic Name: Main Street **Manufacturer:** Pharma
Patient: John Smith **Product:** Flu
Order: #541123 **NDC #:** 0005-4121-01
Date: 2024-01-23 **Presentation:** 10x1 PFS

All data is deidentified, tokenized to preserve patient privacy in accordance with HIPPA regulations.

17K+ Providers in VaxCare's Network

11M+ Patients Vaccinated

VaxCare's high resolution data includes unique datapoints that only VaxCare can provide, such as CPT and NDC billing info, commercial and public vaccine data (including VFC), administration date of service, and more.

FIGURE 4: VaxCare's multi-dimensional data offering.

FIGURE 5: VaxCare's sample data set.

RESULTS

845,977 Total vaccines administered across a population of 638,051.
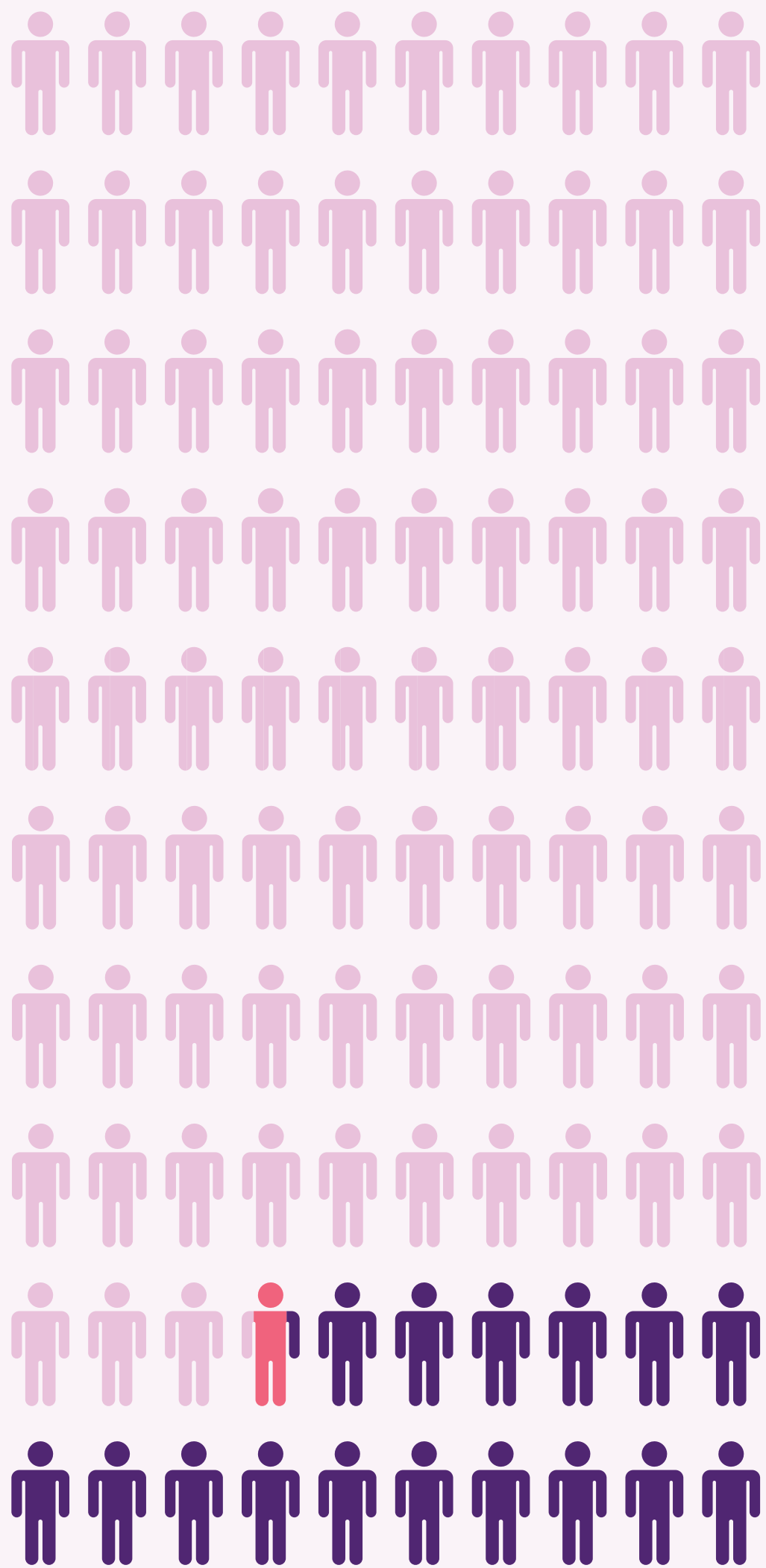
FIGURE 6: Total vaccines administered.

67% of co-administrations took place in large practices representing the majority of episodes—likely to represent both a larger patient base, more resources and institutional decision-making driving protocolized care.

FIGURE 7: Percentage of co-administration by practice.

16.23% 103,563 patients recieved Flu + another vaccine from a population of 638,051.

0.53% 4,517 patients recieved Flu + 2 or more vaccines from a population of 638,051.

FIGURE 8: Percentage of patients who recieved more than one during the same appointment.

Flu, COVID, RSV, Tdap, Pneumococcal, Zoster

Top Six Vaccines in the Portfolio

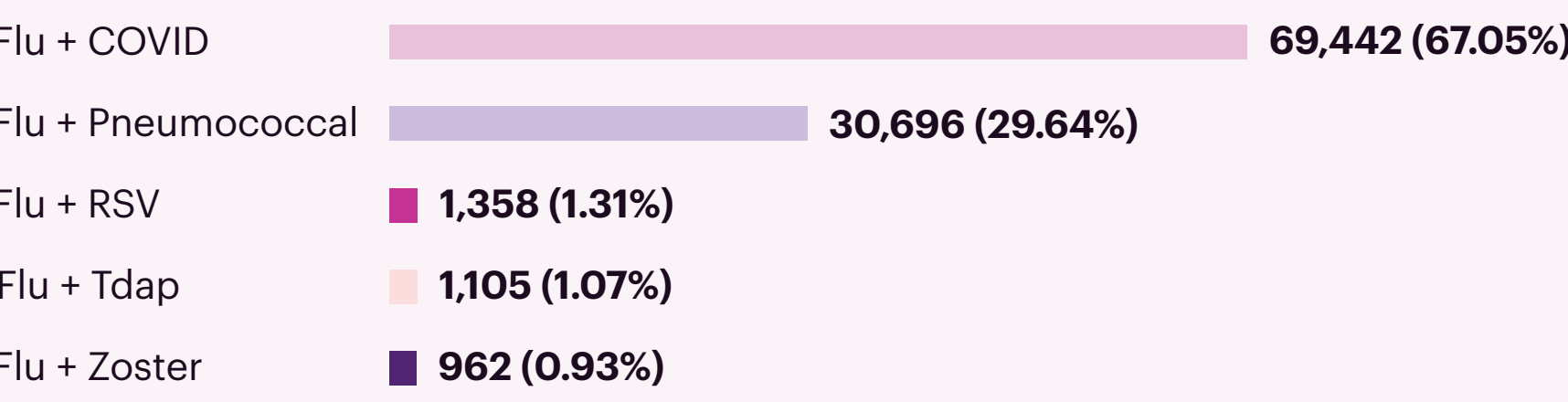| Vaccine	Count (%)
Flu + COVID	69,442 (67.05%)
Flu + Pneumococcal	30,696 (29.64%)
Flu + RSV	1,358 (1.31%)
Flu + Tdap	1,105 (1.07%)
Flu + Zoster	962 (0.93%)

FIGURE 9: Number of patients who recieved co-administrations by type of vaccines, in the total patient population (103,563) who recieved co-administration of flu + another vaccine.

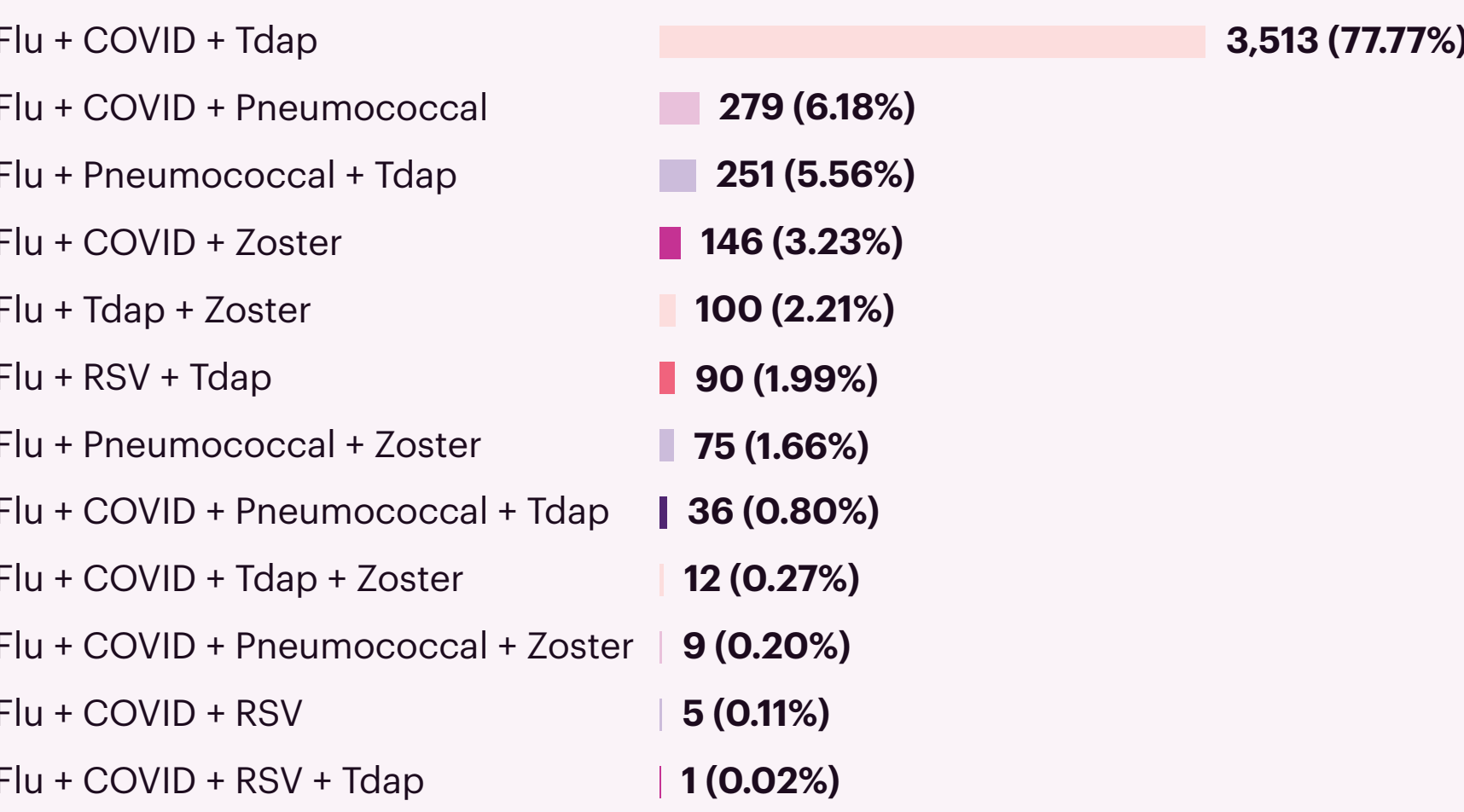| Vaccine	Count (%)
Flu + COVID + Tdap	3,513 (77.77%)
Flu + COVID + Pneumococcal	279 (6.18%)
Flu + Pneumococcal + Tdap	251 (5.56%)
Flu + COVID + Zoster	146 (3.23%)
Flu + Tdap + Zoster	100 (2.21%)
Flu + RSV + Tdap	90 (1.99%)
Flu + Pneumococcal + Zoster	75 (1.66%)
Flu + COVID + Pneumococcal + Tdap	36 (0.80%)
Flu + COVID + Tdap + Zoster	12 (0.27%)
Flu + COVID + Pneumococcal + Zoster	9 (0.20%)
Flu + COVID + RSV	5 (0.11%)
Flu + COVID + RSV + Tdap	1 (0.02%)

FIGURE 10: Number of patients who recieved co-administrations by type of vaccines, in the total patient population (4,517) who recieved co-administration of flu + 2 or more vaccines.

FINDINGS

Co-administration is a **well-adopted** strategy amongst patients aged 65 or older.

Co-administration is mostly confined to **only 2 vaccines** with a vanishingly small proportion (0.5%) of individuals receiving more than 2 in the same visit.

In the majority, the primary vaccines administered simultaneously are **respiratory vaccines** (especially influenza with COVID and influenza with Pneumococcal).

Opportunistic vaccination appears commonly to include respiratory vaccines with an additional **time-sensitive vaccine** such as **Zoster or Tdap.**

Potential Takeaways for Future Research

This study focused on the current **definition of co-administration by the CDC: same appointment, different anatomical site.**[1]

However, analyzing the patterns of co-administration across a **broader seasonal timeframe** could supply insights as to the vaccination strategies employed by clinicians to ensure patient comfort and mitigate concerns about enhanced side effect profiles.

REFERENCES: 1. CDC. Timing and Spacing of Immunobiologics. https://www.cdc.gov/vaccines/hcp/imz-best-practices/timing-spacing-immunobiologics.html.