

# *From Transaction to Infrastructure*

SUSTAINING VACCINE  
CONFIDENCE AND  
CLOSING IMMUNIZATION  
GAPS THROUGH  
INDEPENDENT  
COMMUNITY PHARMACY

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# Executive Summary

Vaccination remains one of the most effective and economically efficient preventive interventions in health care. Yet, despite clear clinical recommendations and broad coverage policies, immunization gaps persist across the lifespan. While access barriers in rural areas continue to threaten pediatric coverage rates for routine and seasonal vaccines, recent data demonstrates only 17.3 percent of adults report receipt of the 2025-26 COVID-19 vaccine and 45.5 percent for influenza.<sup>1</sup> These gaps are not primarily the result of insufficient access points or lack of patient awareness. Instead, they reflect a deeper structural challenge: vaccination services are still largely financed and managed as a transaction, while successful gap closure requires durable infrastructure. This shift aligns with the framework of the “Quintuple Aim,” which emphasizes that advancing health equity requires structural improvements to the care experience rather than isolated interventions.<sup>2</sup>

Independent community pharmacies have emerged as indispensable vaccination access points particularly for older adults, rural populations, and individuals who engage with the health system intermittently.<sup>3</sup> Pharmacies routinely demonstrate the ability to identify eligible patients, build trust through repeated interactions,<sup>4</sup> and deliver vaccinations in pharmacy and at offsite settings.<sup>5</sup> However, these outcomes often depend on extraordinary effort rather than intentional system design. When alignment exists during public health emergencies or time-limited pilots, performance improves. When that alignment fades, capacity contracts, and progress stalls, exacerbating workforce conditions that serve as a “canary in the coal mine” for the entire profession.<sup>6</sup>

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***“We’ve proven we can do this when everything lines up. The problem is that it only lines up during emergencies or pilots and then it goes away.”***

— Pharmacy Network Leader

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From a payer and infrastructure perspective, this misalignment produces avoidable inefficiency. Preventable hospitalizations and downstream complications associated with vaccine preventable disease continue to drive cost, even as proven access points remain under-supported. Administrative friction, inconsistent reimbursement pathways, and unstable payment timelines suppress uptake and constrain scale.<sup>7</sup> In many cases, missed vaccinations are incorrectly attributed to patient reluctance rather than to breakdowns in delivery design.<sup>8</sup>

This white paper argues that closing immunization gaps at scale requires a deliberate shift: from vaccination as a transactional service to vaccination as health system infrastructure.<sup>2</sup> This shift reframes community pharmacies not as episodic vaccinators, but as longitudinal prevention partners supported by aligned financing, standardized workflows, interoperable data, and sustainable workforce models.<sup>6</sup> Importantly, this transition does not require new facilities or novel clinical authority. It requires aligning incentives with how vaccination occurs. On Dec. 3, 2025, a roundtable of independent community pharmacy experts convened in Alexandria, Va. to examine these issues and propose actionable strategies.

# 1 | Vaccination Outcomes Depend on Sustainable Infrastructure

Vaccination gaps persist not because recommendations are unclear, but because successful vaccination programs depend on sustained access, continuity, and operational follow through. Independent community pharmacies often serve as the most consistent point of contact for populations that are older, rural, or intermittently engaged with traditional care settings.<sup>3</sup> This infrastructure is under threat; between 2003 and 2021, the number of independently owned community pharmacies decreased by 16.1 percent in small rural areas.<sup>9</sup> Yet vaccination programs targeting these populations are frequently structured as episodic campaigns rather than embedded services.<sup>5</sup> Episodic design creates volatility. Short-term initiatives tied to seasonal demand, grant funding, or emergency alignment may produce temporary gains, but they rarely persist. Once external support ends, staffing contracts and inventory risk increase, and clinical vaccination capacity erodes. Systems are then forced to repeatedly rebuild infrastructure rather than benefit from cumulative investment.<sup>6</sup>

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*“If this only works when there’s a special program or emergency funding, then it’s not really a model, it’s a temporary alignment.”*

— Pharmacy Network Leader

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An infrastructure-aligned model treats vaccination as a standing service line. Pharmacies maintain consistent staffing, workflows, and inventory readiness throughout the year, allowing vaccination opportunities to be captured across multiple patient encounters.<sup>5</sup> For payers, this shift reframes success from short-term volume to reliable completion over time, particularly among populations with historically lower uptake.<sup>3</sup> Embedding vaccinations as infrastructure improves durability of outcomes while reducing reliance on reactive, high intensity interventions.

# 2 | Administrative Friction Is a Primary Driver of Missed Vaccinations

Across immunization settings, patients rarely decline vaccination outright. Instead, vaccinations fail to occur because of administrative barriers embedded in the care journey. Unexpected cost sharing, benefit routing confusion, referrals to alternate sites, and delays requiring additional appointments all introduce friction that suppresses completion.<sup>7</sup> These barriers disproportionately affect older adults, individuals with transportation limitations, and patients managing multiple chronic conditions. Importantly, when vaccinations are abandoned due to friction, underperformance is often misattributed to hesitancy rather than to delivery design.<sup>8</sup> Psychological science demonstrates that interventions designed to facilitate vaccination directly (by reducing barriers and establishing defaults) are often more effective than attempts to change patients’ thoughts and feelings.<sup>8</sup> This misdiagnosis leads to investments in education or outreach while leaving structural barriers unresolved.

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*“People don’t come in saying they don’t want the vaccine. They stop when they hit a copay, a denial, or get sent somewhere else.”*

— Independent Community Pharmacy Leader

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Reducing friction requires alignment between benefit design and point-of-care delivery. This is critical for pediatric populations; roundtable experts noted families are often forced to visit multiple locations to ensure all family members are up to date. Furthermore, independent pharmacies increasingly serve as the primary access point for pediatric seasonal vaccines when local pediatricians fail to stock them due to inventory costs.

In an infrastructure-aligned model, vaccinations could be simple, predictable, and completable at the first point of contact whenever clinically appropriate.<sup>8</sup> For payers, reducing friction increases the yield on existing coverage policies by converting eligibility into completion without expanding benefit scope. The result is improved patient experience alongside the more efficient use of preventive care investment.

### 3 | *Payment Alignment Enables Scale and Stability*

Most reimbursement models recognize vaccine product cost and a narrow administration fee but exclude the operational work that determines whether vaccination actually occurs. Outreach, scheduling, documentation, reporting, inventory management, and off-site clinic operations are frequently unpaid or inconsistently supported.<sup>7,10</sup> Current analysis of Medicaid policies indicates that median physician reimbursement rates for adult vaccines often fall below private sector rates; for example, reimbursement for Hepatitis A and HPV vaccines were found to be 89 percent and 94 percent of private sector rates, respectively.<sup>11</sup>

For independent community pharmacies, this creates financial asymmetry: providers assume upfront costs and working-capital risk, while the benefits of successful vaccination accrue across the broader health system.<sup>10</sup> As seen in broader health care revenue cycle management, denial rates and administrative complexity erode margins<sup>12</sup>; for pharmacies specifically, this is compounded by retroactive fees and reimbursement rates that often fail to cover the cost of drug acquisition.<sup>13</sup>

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***“What made it work was that they paid us for the time and the travel. Once that was covered, we could actually do the clinics.”***

— Independent Community Pharmacy Leader

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Aligning payment with the full immunization service model reframes vaccination as a viable service line. Currently, legal authority alone is insufficient; in states with commercial provider status laws, less than 0.01 percent of vaccination visits included a billed health service claim, highlighting a massive gap between policy enactment and operational implementation.<sup>14</sup> Distinguishing products from service and tying payment to documented completion enables pharmacies to plan staffing, manage inventory responsibly, and invest in workflow improvements.<sup>10</sup> For payers and infrastructure leaders, payment alignment stabilizes capacity, reduces churn, and supports repeatable performance across seasons and populations.

## 4 | *Data and Network Design Determine Whether Programs Scale*

Reliable vaccination programs depend on accurate immunization history, timely documentation, and meaningful feedback loops. Fragmented data systems and inconsistent interoperability limit pharmacies' ability to identify gaps, confirm completion, and demonstrate impact particularly for mobile populations and individuals covered by multiple payers over time.<sup>6</sup>

Isolated excellence at individual sites does not translate into system-level improvement without coordination. Network-based models enable shared workflows, standardized reporting, and centralized contracting while preserving local access.<sup>15</sup> For example, the Pennsylvania Pharmacists Care Network successfully delivered 125,706 enhanced services across 114 pharmacies by leveraging a clinically integrated network model.<sup>15</sup> For payers, engaging with networks reduces transaction costs and enables population-level performance measurement aligned with quality and risk objectives.<sup>16</sup>

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***“One pharmacy doing this well doesn’t move the needle. You need networks, shared workflows, and consistent data otherwise it never scales.”***

— Pharmacy Network Leader

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Intentional data and network design transform vaccination from a collection of isolated encounters into a scalable system function. Over time, this enables more sophisticated contracting approaches tied to outcomes rather than volume alone.

## 5 | *Workforce Sustainability Is Foundational to Long-Term Success*

Vaccination programs that rely exclusively on pharmacists without delegation, workflow standardization, or staffing support place unsustainable strain on the workforce.<sup>6</sup> Financial pressures and workforce shortages are driving closures that create pharmacy deserts; currently, 94.5 percent of identified pharmacy desert tracts contain zero pharmacies, leaving residents with no immediate access to care.<sup>3</sup>

Workforce instability undermines every other dimension of vaccination services. Programs that succeed clinically, but exhaust staff, ultimately fail to persist. Sustainable models integrate team-based delivery, leverage authorized support personnel, and align throughput expectations with available capacity.<sup>6</sup>

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***“We can keep doing vaccines, but if we’re barely breaking even and burning out staff, that’s not a model, it’s a countdown.”***

— Independent Community Pharmacy Leader

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Protecting workforce sustainability reinforces access, experience, and outcomes. When delivery models respect staffing realities, vaccination becomes a reliable function of care rather than an episodic burden.

# Key Insights

Across all themes, several cross-cutting insights emerged:

1. Vaccination gaps are primarily driven by system design challenges rather than by lack of demand alone. Administrative friction, misaligned payment, and episodic infrastructure (not patient refusal) are the primary drivers of underperformance.
2. Community pharmacies already function as de facto prevention infrastructure. The limiting factor is not capability but lack of durable support.
3. Payment stability drives operational stability. When real delivery costs are covered, pharmacies can scale services responsibly and consistently.
4. Network enabled models outperform isolated efforts. Scale, data reliability, and performance measurement require coordination beyond individual sites.
5. Workforce sustainability is non-negotiable. Any model that generates burnout is inherently unsustainable.

Together, these insights point toward a clear blueprint: align financing, reduce friction, support networks, and protect workforce capacity to transform vaccination from a transactional service into durable infrastructure.<sup>2</sup>

## METHODS AND ACKNOWLEDGMENT

This white paper reflects the perspectives shared during the Dec. 3, 2025 roundtable, convening the expert participants listed in the table below. A structured facilitation guide was developed with five open-ended, thematic questions to ensure the participants were able to share their insights and anecdotes without guiding their ideas to expected conclusions.

### KEY QUESTIONS:

1. What does a successful, sustainable vaccination program look like from the pharmacy, patient, and public health perspectives?
2. What does a patient's pharmacy experience look and sound like at critical touchpoints, and how do these specific elements build trust and lead to vaccination? What are the barriers to building that trust?
3. What are the most significant operational, financial, and technological hurdles that currently limit the scalability of your successful programs?
4. What are the most readily implementable changes that yield the greatest results?
5. How can professional well-being be supported with the rapidly evolving vaccine landscape?

The facilitators prompted participants to discuss program models, logistics, patient experience, payment models, lessons learned, and qualitative examples of what success looks like. Participants were provided with a list of questions in advance to prepare them to respond to the key questions. The facilitators' objective was to elicit participants to share real-world examples that could be applied by other independent community pharmacy owners looking to create sustainable programs for vaccine access and vaccine gap closure.

NCPA is grateful to the independent community pharmacy leaders, network representatives, and industry participants whose insights informed this analysis.

The willingness of participants to share both successes and constraints underscores the urgency and feasibility of moving from transactional vaccination models toward durable prevention infrastructure. Thank you to Sanofi for their sponsorship and support, which enabled a productive, solutions-oriented discussion.

## ROUNDTABLE PARTICIPANTS

Name	Affiliation
Jake Galdo, PharmD, MBA, BCPS, BCGP	CPESN Community Health
Amanda Applegate, PharmD, BCACP	Kansas Pharmacists Association; CPESN Kansas
Annie Eisenbeis, PharmD, MBA	Missouri Pharmacy Association; CPESN Missouri
Lindsey Ludwig, RPh	CPESN Iowa
Stephanie McGrath, PharmD	Pennsylvania Pharmacists Care Network
Rebecca Brown, PharmD	Family Pharmacy of Amelia and Farmville
Dayna Wong-Otis, PharmD, CDCES	KTA Super Stores Pharmacy; CPESN Hawaii
Meredy Ayers, CPhT-Adv, CHW	Bremo Pharmacies
Hunter Phillips, CPhT, CHW-C	OneroRx
Hannah Fish, PharmD	National Community Pharmacists Association
Rebecca Snead, BPharm	National Community Pharmacists Association
Jacqueline Estes, PharmD	National Community Pharmacists Association
Charlotte Nazar, PharmD	National Community Pharmacists Association
Lee Feinman, PhD	Sanofi
Kristen Thorson, PharmD	Sanofi
Amanda Cohn, MD	Sanofi
Diana Yassanye, MSeD	Parasol Health Consulting, LLC
Lori Moore, PharmD	Parasol Health Consulting, LLC

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