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STRENGTHENING HEALTH SPAN THROUGH CLINICAL PHARMACIST-LED ADULT IMMUNIZATION

Introduction

When the Adult Immunization project was first initiated, its mission was to transform the persistent gap between awareness and uptake of vaccines in adults. Started as a preventive care initiative within a single center, now turned into a multi-city public health model. Measurable outcomes captured through documentation, follow-ups, and uptake trends allowed the team to continuously evaluate performance, compare centers, and refine the program for better clinical impact.

This report offers a narrative walkthrough of that journey highlighting the real-world patient profiles we encountered, the counseling strategies that influenced decision-making, the patterns of vaccine uptake observed in clinical practice, and the systematic expansion that followed. For pharmacists and clinicians, it provides not only a scientific overview but also a practical reflection of how clinical pharmacist led immunization services can reshape adult preventive care.

Early Phase: Understanding the Patients

Lifespan describes how long a person lives, while healthspan reflects how many of those years are lived in strength, comfort, and good health without avoidable disease or disability. In modern healthcare, it is no longer enough to focus only on extending lifespan; people need to shift their attention toward improving their healthspan. Adult vaccination plays a central role in this shift by preventing infections that accelerate functional decline, trigger long-term complications, and reduce daily quality of life. By protecting adults from vaccine-preventable diseases, we are not just adding years to life, we are adding healthier, more productive years that truly enhance living.

This focus on healthspan became especially evident during the early phase of the program, when the clinic saw a remarkably diverse group of adults walking in middle-aged individuals managing chronic diseases, young professionals seeking preventive care for the first time, and older adults who had never received a flu or pneumococcal vaccine in decades.

A typical patient profile included:

- Adults aged 18–80 years, with a significant proportion between 35-60
- Individuals with comorbidities such as diabetes, hypertension, chronic lung disease, and cardiovascular disorders
- Adults who are sexually active as well as inactive seeking protection against HPV-related cancers
- High-risk individuals identified during routine clinical visits or pre-travel consultations. Interestingly, nearly 60–70% of these individuals reported no prior adult vaccination, underscoring a longstanding gap in preventive care.

A major turning point in the program's success came from the structured education provided to every patient. Instead of simply recommending

vaccines, the team focused on explaining the science behind each one.

Counseling Strategies That Influenced Decision-Making

In the initial phase, the primary focus was not on vaccine uptake itself but on building awareness. The goal was to ensure that adults first understood the *concept* of adult immunization and recognized its relevance in their everyday lives. Adult Vaccination Advisers aimed to embed this idea into their subconscious thinking, so that vaccination would eventually be seen not as an optional add-on, but as a routine part of adult healthcare. This educational foundation became the cornerstone of the program. Even today, we continue to work on strengthening this awareness, acknowledging that shaping public perception is a gradual, ongoing process that evolves with every counseling interaction and every patient encounter.

As the program progressed, it became clear that effective counseling was the strongest determinant of whether an adult chose to get vaccinated. The team adopted a structured yet conversational approach that addressed both clinical questions and personal concerns. Counseling began with a clear explanation of the individual's risk profile, age, comorbidities, lifestyle factors, and exposure risks so that patients understood why a particular vaccine was recommended for them.

While screening each patient, clinicians systematically assessed age, medical history, comorbidities, medication use, allergy status, and potential exposure risks to determine which vaccines were clinically appropriate. This structured screening process allowed to identify high-risk individuals, address contraindications early, and tailor vaccine recommendations with precision. By grounding every decision in evidence-based criteria, the screening step became a critical foundation for safe, personalized adult immunization.

Using simple, evidence-based language, adult vaccination advisers clarified common misconceptions about vaccine safety, dosing schedules, and expected side effects. Patients were encouraged to share their worries, past experiences, and beliefs, allowing the conversation to be tailored to their comfort level. Visual aids, disease burden statistics, and real-world examples were frequently used to make the information more relatable.

Measurable Rise in Adult Immunization-Evolving Health Consciousness

Key trends observed over time included:

- A steady increase in influenza vaccine uptake, particularly during seasonal peaks. The influenza season in Indian regions is biphasic, with peaks observed during both the monsoon and winter months. Consequently, vaccine uptake is not limited to a single period but occurs across these two high-risk seasons, reflecting both patient awareness and timely clinical recommendations.
- Rising acceptance of pneumococcal vaccines among older adults and individuals with chronic illnesses. Currently, we are working to understand the clinical and practical implications of shifting from the PCV13 to PPSV23 sequential schedule to the PCV20 vaccination strategy. This transition involves evaluating factors such as age-specific recommendations, patient risk profiles, immune response, and potential impact on vaccine uptake.
- A rapid surge in HPV vaccination, especially among adults aged 9-45.

Among all adult vaccines, HPV vaccine demonstrated the highest adoption

- Expansion of Shingrix uptake among adults ≥50 years once post-vaccination experiences were shared. Acceptance of Shingrix has been lower compared to other adult vaccines, with cost emerging as a significant factor influencing patient decisions. Despite its proven efficacy in preventing shingles, the higher price point appears to limit uptake, highlighting the need for targeted counseling and patient education on the long-term benefits versus cost.

Follow-up reminders, standardized documentation, and vaccine certificates improved compliance with second-dose and multi-dose schedules. These shifts in uptake demonstrated not only operational success but also behavioral change driven by strong educational interventions

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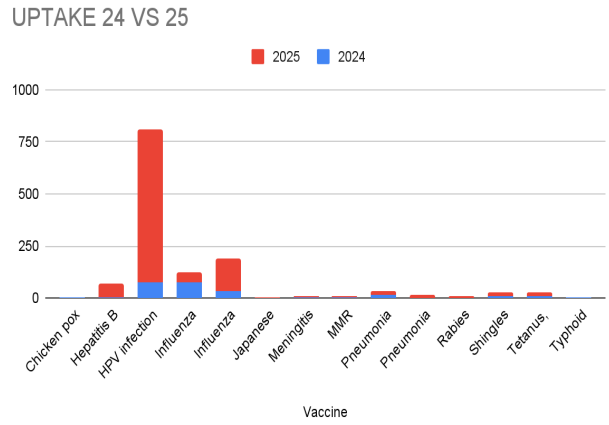

Expansion to Multiple Cities: From a Single Center to a Network

As outcomes improved, the model was gradually replicated in other locations. Bengaluru Adult Vaccination Clinics adopted the same scientific foundation and operational discipline that proved successful in the pilot phase.

The expansion model included:

- Training vaccination advisors at each site
- Implementing tools for screening, eligibility assessment, and documentation
- Maintaining uniform counseling protocols to ensure evidence-based communication
- Conducting periodic audits to evaluate safety, adherence, and reporting

Within months, what started as a local initiative had transitioned into a regional immunization network.

Discussion: Lessons From the Journey

The program's trajectory highlights several scientific and operational insights:

- Data-driven counseling increases uptake.
  Risk-based stratification and structured education directly improved acceptance rates.
- Adult immunization requires continuous engagement.
  Unlike childhood immunization, adults need sustained reminders and active follow-up to complete multi-dose schedules.
- Standardization ensures scalability.
  Uniform protocols allowed the program to expand without compromising quality.
- Behavioral change is as important as clinical recommendation.
  The shift in patient attitudes—from hesitation to informed acceptance—

was a major contributor to the program's success.

Conclusion

The adult vaccination program's progress illustrates how scientific rigor combined with clear, empathetic communication can reshape public health behaviors. By identifying patient needs, providing evidence-based counseling, and maintaining consistent operational standards, the initiative has grown into a multi-city model for improving adult immunization.

The story of this clinical pharmacist-led immunization is still unfolding but its journey so far demonstrates a replicable, scalable, and scientifically sound approach to strengthening preventive healthcare in India.