The influenza vaccine: essential insights for pharmacists in South Africa

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Abstract

Influenza remains a significant cause of seasonal illness and complications in South Africa, particularly among high-risk populations. This article reviews the influenza vaccination pathway from global strain selection to patient counselling, with a focus on the 2026 southern hemisphere vaccine composition. Key topics include identification of priority groups, optimal timing of vaccination, expected effectiveness, and the safety profile of inactivated influenza vaccines.

Practical guidance on vaccine administration and strategies for addressing common misconceptions are also discussed. Strengthening understanding of these elements supports informed clinical recommendations and may improve vaccine uptake, ultimately reducing the burden of influenza.

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The influenza vaccine: from strain selection to patient protection in South Africa

Influenza remains a significant and recurring public health challenge in South Africa, with seasonal peaks typically occurring between May and September. While often perceived as a mild, self-limiting illness, influenza can lead to severe complications, hospitalisation, and death, particularly in a population with a high burden of comorbidities such as HIV, tuberculosis, diabetes, and cardiovascular disease.[1]

Improving vaccination uptake requires more than simply making vaccines available. It depends on a clear understanding of how influenza vaccines are developed, who is most at risk, when vaccination should occur, and how to communicate effectively with patients. A strong grasp of the full pathway, from global strain selection to individual patient counselling, enables more confident recommendations and ultimately contributes to better public health outcomes.[2]

From global surveillance to local protection: understanding the 2026 vaccine

Influenza viruses are constantly evolving. Small genetic changes, known as antigenic drift, allow the virus to evade immunity from previous infection or vaccination.[3] This is why influenza vaccines must be updated annually.

The World Health Organization (WHO), through the Global Influenza Surveillance and Response System (GISRS), monitors circulating influenza strains across more than 140 laboratories worldwide. Data from these centres, including South Africa's National Institute for Communicable Diseases (NICD), is analysed to predict which strains are most likely to dominate in the upcoming influenza season.[3]

For the 2026 southern hemisphere influenza season, the recommended vaccine is trivalent, containing:

- A/Missouri/11/2025 (H1N1)pdm09-like virus
- A/Singapore/GP20238/2024 (H3N2)-like virus
- B/Austria/1359417/2021 (B/Victoria lineage)-like virus

The exclusion of the B/Yamagata lineage reflects its absence from global circulation since 2020.[3]

Once strain selection is finalised (typically in February for the southern hemisphere), vaccine manufacturers begin production, a process that must be completed in time for distribution before the winter season.

In South Africa, vaccine composition aligns with WHO recommendations, ensuring relevance to local epidemiology and circulating strains.

Understanding this process reinforces a key message: annual vaccination is essential because both the virus and immunity change over time.[1,4]

Who should be prioritised for vaccination?

Although influenza vaccination is recommended for everyone aged 6 months and older, certain groups are at significantly higher risk of severe disease, complications, and hospitalisation should they become ill with influenza.

High-risk groups include:

- Pregnant women, at any stage of pregnancy and postpartum
- People living with HIV, due to impaired immune responses
- Individuals with chronic medical conditions, including:
  - Diabetes mellitus
  - Chronic lung disease (asthma, COPD)

- Cardiovascular disease
- Tuberculosis
- Chronic kidney disease
- Obesity

- Older adults (≥ 65 years)
- Children under 5 years, especially those younger than 2 years
- Healthcare workers, due to occupational exposure[1,4-6]

South African surveillance data show that influenza-associated hospitalisation is highest among young children and individuals with HIV or TB, reinforcing the need for targeted vaccination strategies.[1]

It is also important to recognise less commonly highlighted risk groups, such as individuals with neurological conditions or severe obesity (BMI ≥ 40), who may also experience worse outcomes.[7]

Identifying these individuals often occurs during routine interactions, reviewing medication histories, identifying chronic therapies, or recognising pregnancy. These encounters provide important opportunities to recommend vaccination.

Vaccination also contributes to herd immunity, reducing transmission within communities and protecting vulnerable individuals.[5]

Timing and seasonality: when should vaccination occur?

The timing of influenza vaccination is critical to ensure optimal protection during peak transmission.

In South Africa:

- Vaccines are typically available from mid-March.
- Influenza activity usually peaks between May and September.[1]

Vaccination should ideally occur before the onset of peak transmission, allowing time for immunity to develop.

Key counselling points:

- Protective antibodies develop approximately two weeks after vaccination.[4]
- Early vaccination provides optimal protection and will last for the entire flu season and no additional vaccine doses are recommended.[8]
- Vaccination remains beneficial even later in the season.[8]

Annual vaccination is required because:

- Influenza viruses mutate continuously.[5]
- Vaccine-induced immunity declines over time.[4]

Even when strains remain similar, waning immunity reduces protection without revaccination.

Vaccine effectiveness: setting realistic expectations

The influenza vaccine does not provide 100% protection, and its effectiveness varies by season, circulating virus strains, age, health status, and how well the vaccine viruses match those circulating. However, it consistently reduces the risk of severe flu illness, medical visits, hospitalisations, complications, and death, making it a valuable public health intervention even if imperfect.[4]

Vaccine effectiveness (VE) is usually calculated in observational studies (e.g., test-negative design) as the percentage reduction in laboratory-confirmed influenza risk among vaccinated people compared to unvaccinated ones, often among those seeking outpatient care or hospitalised.[9]

Evidence shows:

- 40–60% effectiveness in preventing illness in healthy adults[4]
- Approximately 50% reduction in hospitalisation and severe outcomes[3]

In older adults and immunocompromised individuals, effectiveness may be lower due to weaker immune responses. However, vaccination still significantly reduces the risk of severe illness and complications.[4]

A key counselling point is that influenza vaccination reduces severity, even if infection occurs. This distinction is essential in addressing patient expectations and improving confidence in vaccination. A good analogy is that the flu vaccine is like a seatbelt or helmet, not an impenetrable shield. It gives a substantial risk reduction but does not take the risk away completely.[10]

It is important to recognise that timely vaccination is only one component of comprehensive influenza prevention. Reinforcing standard infection prevention and control measures, such as appropriate hand hygiene, minimising close contact with symptomatic individuals, and advising patients to remain at home when unwell, plays a critical role in reducing transmission and protecting both individual patients and the broader community.[11]

Vaccine characteristics and safety

Influenza vaccines used in South Africa are inactivated vaccines, meaning they contain killed virus particles and cannot cause influenza.[5,11]

For the correct dosing information consult the package insert for the product that is available as dosing can change from year to year and is also dependent on the product being used.

Generally, the following doses are recommended:

- Adults and children ≥ 9 years: 1 dose (0.5 mL IM)
- Children 6 months–8 years (first vaccination): 2 doses, ≥ 4 weeks apart; thereafter a single dose per season[8]

Depending on the product, half doses (0.25ml IM) may be prescribed for children 6 months up to 3 years of age. It is important to consult the relevant package insert.

Safety profile

The influenza vaccine has an excellent safety profile, supported by decades of use in hundreds of millions of people worldwide and continuous monitoring.[5]

Most side effects are mild and short-lived (1–2 days) and include soreness/redness at the injection site (common), low-grade fever, malaise, headache, or muscle aches. Serious events like anaphylaxis are rare and occur in a very small number of cases.[4]

The vaccine is considered safe for pregnant people, children ≥ 6 months, older adults, and those with chronic conditions.[8,11]

Contraindications and precautions

Contraindications

- Severe allergic reaction to a previous influenza vaccine or its components.[4] Egg protein allergy is not a contraindication to influenza vaccine.[11]

Precautions

- Moderate or severe acute illness with or without fever (defer until resolved).[8,11]
- History of Guillain-Barré syndrome within 6 weeks of previous flu vaccination.[8]

From recommendation to administration: practical considerations

Effective vaccination requires attention to both clinical and operational detail.

Screening

Assess:

- Eligibility and age
- Pregnancy status
- Comorbid conditions
- Previous vaccination history
- Contraindications

Administration

- Dose: 0.5 mL intramuscular injection for adults and confirm dose for children in package insert
- Site: deltoid (adults), anterolateral thigh (young children)

Storage

- Maintain cold chain (2–8 °C).
- Avoid freezing.

Post-vaccination

- Observe for immediate reactions.
- Counsel on expected side effects.
- Document appropriately and report any adverse events to the manufacturer of the vaccine.

Effective patient counselling: building confidence and uptake

Clear and confident communication is essential to improving vaccine uptake.

Address common misconceptions

- "The vaccine gives me flu."
  → It is an inactivated vaccine so it cannot cause disease. The side effects after the vaccine are a normal sign of the body's immune system responding to the vaccine.[4,12]
- "I got vaccinated and still got sick."
  → Influenza vaccination reduces severity and complications, even if infection occurs.[4,12]

Use every opportunity

Routine interactions, such as chronic medication collection or seasonal consultations, provide valuable opportunities to recommend vaccination.

A strong, clear recommendation remains one of the most effective drivers of vaccine uptake.[13]

Conclusion

Influenza vaccination is a critical and cost-effective intervention for reducing the burden of seasonal influenza in South Africa. From global strain surveillance and vaccine formulation to local administration and patient counselling, each step in the process contributes to protecting individuals and communities.

A thorough understanding of this continuum enables healthcare professionals to move beyond passive provision towards active advocacy. By identifying high-risk individuals, ensuring timely vaccination, and communicating effectively, meaningful improvements in vaccination coverage can be achieved.

Ultimately, influenza vaccination is not only about preventing infection—it is about reducing severity, preventing complications, and saving lives. Strengthening vaccination efforts each season plays a vital role in building more resilient healthcare systems and healthier communities.

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