

PNEUMOCOCCAL VACCINATION IN ADULTS



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Pneumococcal recommendations for adults

Please note that this is a document based on the SA Pneumococcal vaccine recommendations and CDC

Three pneumococcal vaccines are suitable for use in adults:

- 13-valent pneumococcal conjugate vaccine (PCV13) **OR** 15-valent pneumococcal conjugate vaccine (PCV15)
- 23-valent pneumococcal polysaccharide vaccine (PPSV23)

Please note that higher valent (PCV20) is expected later this year which will impact the recommendations. The tables will be updated accordingly on our website when the higher valent PCV becomes available.

According to the South African pneumococcal document, PCV13 **OR** PCV15 followed by PPSV23 is recommended for all adults from 65 years of age and older.

PCV13 and PPSV23 **should not be administered** on the same day.

PCV13 is recommended to be given first because of a better immune response to the PPSV23 vaccine when given in this sequence.

Once a dose of PPSV23 is given at age 65 years or older, no additional doses of PPSV23 should be administered .

Recommendations and intervals between PCV13 and PPSV23 are individualised based on:

- Age
- Underlying medical history
- Previous history of pneumococcal vaccination

Adults with no previous pneumococcal vaccine history

Population	Initial pneumococcal vaccines recommended	Timing of additional PPSV23 dose	Timing of possible third PPSV23 dose
Adults aged ≥ 65 years	PCV13/PCV15 first + PPSV23 ≥ 1 year later (≥ 8 weeks if immunocompromised or high-risk)	None	None
Adults aged < 65 years with underlying medical conditions (e.g., chronic lung, liver, heart disease, DM, smoking alcoholism)	PCV13/PCV15 first + PPSV23 ≥ 1 year later	Consider additional PPSV23 dose 5 years after last PPSV23 dose at ≥ 65 years	None
Immunocompromised and high-risk adults < 65 years (e.g., CSF leak, cochlear implant, previous IPD, impaired splenic function, HIV infection)	PCV13/PCV15 first + PPSV23 ≥ 8 weeks later	Additional PPSV23 dose 5 years after last PPSV23 dose if < 65 years	Consider additional PPSV23 dose at ≥ 65 years if 5 years after last PPSV23 dose

**Pneumococcal vaccines
for individuals
*65 years of age and older***

No previous pneumococcal vaccine ≥ 65 years



For those who have **not received any pneumococcal vaccines** in the past

PCV13/15

≥1 year apart

PPSV23



Administer 1 dose of PCV13 + ≥1 year later PPSV23 (≥8 weeks for high-risk patients)

Previous PPSV23 at ≥ 65 years



For those who have previously received **1 dose of PPSV23 at ≥ 65 years** and no doses of PCV13/15



Administer 1 dose of PCV13/15 at **least 1 year** after the dose of PPSV23 for all adults, regardless of medical conditions

**Pneumococcal vaccines
for individuals**

19 through 64 years of age

with

underlying medical conditions

Pneumococcal vaccines for adults < 65 years with underlying medical conditions

NO PREVIOUS PNEUMOCOCCAL VACCINES

Underlying conditions

Chronic lung disease
Chronic liver disease
Chronic heart disease
Diabetes mellitus
Smoking
Alcoholism
Long-term care resident

PCV13/15

at < 65 years

→
≥ 1
year
apart

PPSV23

→
≥ 5 years
after last
PPSV23

At ≥ 65 years

Consider final
PPSV23

Key points

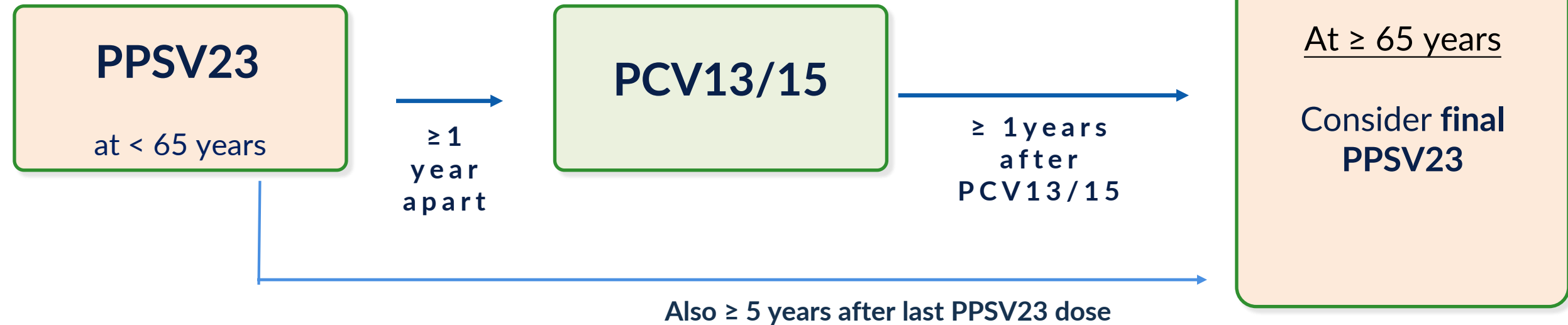
1. Administer 1 dose of PCV13/15 + ≥ 1 year later PPSV23
2. Consider 1 final PPSV23 dose at ≥ 65 years: ≥ 5 years after the most recent PPSV23

Pneumococcal vaccines for adults < 65 years with underlying medical conditions

PREVIOUS PPSV23

Underlying conditions

Chronic lung disease
Chronic liver disease
Chronic heart disease
Diabetes mellitus
Smoking
Alcoholism
Long-term care resident



Key points

- Administer 1 dose of PCV13/15 at least 1 year after PPSV23
- Consider 1 final PPSV23 dose at ≥ 65 years: ≥ 1 year after PCV13/15 and ≥ 5 years after the most recent PPSV23.

**Pneumococcal vaccines
for individuals
19 through 64 years of age
with
high-risk conditions**

Pneumococcal vaccines for adults < 65 years with high-risk conditions

Underlying high-risk conditions

CSF leak
Cochlear implant
Previous IPD
Impaired splenic function

Major haemoglobinopathy
HIV infection
Chronic kidney disease / nephrotic syndrome
Haematological malignancy
Chemotherapy

Metastatic cancer
Organ or bone marrow transplant
Immunosuppressive drugs
Congenital / acquired immunodeficiency

No previous pneumococcal vaccines



Key points

- PCV13/15 + ≥ 8 weeks later PPSV23
- Additional PPSV23: ≥ 5 years from previous PPSV23 (if <65)
- At ≥65 years: Consider 1 final PPSV23 dose, ≥ 5 years after the most recent PPSV23 dose

Pneumococcal vaccines for adults < 65 years with high-risk conditions

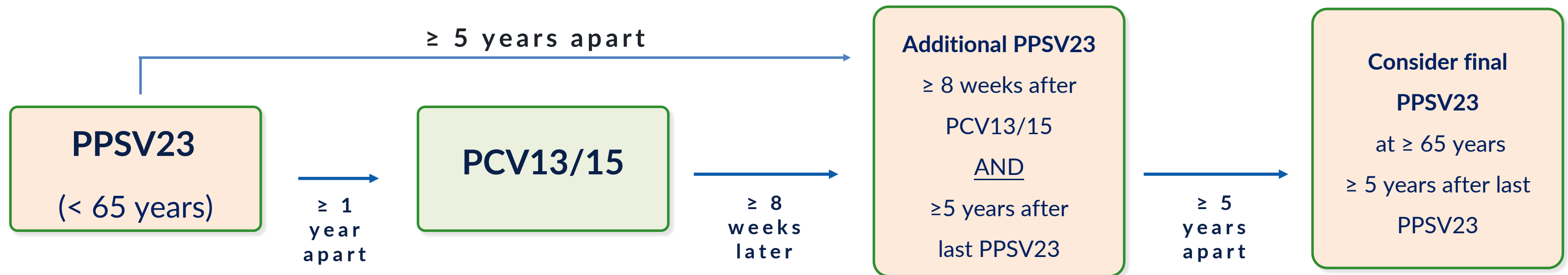
Underlying high-risk conditions

CSF leak
Cochlear implant
Previous IPD
Impaired splenic function

Major haemoglobinopathy
HIV infection
Chronic kidney disease / nephrotic syndrome
Haematological malignancy
Chemotherapy

Metastatic cancer
Organ or bone marrow transplant
Immunosuppressive drugs
Congenital / acquired immunodeficiency

Previous PPSV23; no PCV13/15



Key administration guidance

- 1 dose PCV13/15 ≥ 1 year after PPSV23
- Additional PPSV23 ≥ 8 weeks after PCV13/15 and ≥ 5 years from previous PPSV23
- At ≥ 65 years: Consider 1 final PPSV23 dose, ≥ 5 years after the most recent PPSV23 dose

Important notes:

1. PCV13 alone does not give adequate serotype coverage for South African adults and if the cost of giving both vaccines, or likely compliance with the two-dose regimen is a concern, then PPV23 alone is an alternative in the elderly
2. In severely immune-compromised patients (post-HSCT and CAR-T cell therapy), a more intensive PCV13 administration is advised, as indicated in the section on haematology/oncology (see Ref 1 Feldman *et al*)
3. Consider persons living in confined quarters e.g. prison or barracks and certain occupations ie welders and gold miners as eligible for pneumococcal vaccination
4. Since PCV introduction, South African children <5 years have experienced a 33% decline in mortality from all-cause pneumonia, but there has been no significant decline in all-cause mortality in South African adults.
5. Still a substantial proportion of vaccine preventable pneumococcal disease occurring in adults, particularly in those with underlying comorbidities or risk factors for developing respiratory infections.
6. Due to the lesser impact of infant vaccination on pneumococcal infection in the elderly, both pneumococcal vaccines are recommended with PCV13 followed by PPSV23.

This service has been made possible thanks to the support of the following companies:

Adcock, Aspen Pharmacare, Biovac, MSD, Pfizer and Sanofi.

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Bibliography:

1. Feldman, Charles, et al. "A comprehensive overview of pneumococcal vaccination recommendations for adults in South Africa, 2022." *Journal of Thoracic Disease* 14.10 (2022): 4150.
2. CDC: <https://www.cdc.gov/vaccines/hcp/by-disease/pneumo.html>
3. CDC pink book. Chapter 17: Pneumococcal disease. Available from: <https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-17-pneumococcal-disease.html>

**VACCINE HELPLINE:
0860 160 160**