

## Why Do Some Dialysis Patients Refuse the Pneumococcal Vaccine?

Insights from NKF Malaysia's Cross-Sectional Study

September 2025

Haemodialysis (HD) patients are among the most vulnerable to infections due to their weakened immune systems and regular exposure to healthcare settings. Pneumonia, particularly from *Streptococcus pneumoniae*, remains a serious threat. While both the Malaysian Ministry of Health and KDIGO strongly recommend pneumococcal vaccination for this group, uptake has not been optimal.

In 2024, the NKF launched a free pneumococcal vaccination programme across its centres, offering patients the PCV13 vaccine followed by PPSV23. Despite this, only 79.6% of patients completed the full course, with refusal persisting in many cases. To address this gap, NKF conducted a survey to better understand the barriers to vaccine acceptance.

### The Study

A cross-sectional survey was conducted across 32 NKF dialysis centres, with 649 patients responding. Questionnaires were available in Malay, English, Mandarin, and Tamil to capture perspectives across Malaysia's diverse dialysis population. The survey assessed demographics, awareness levels, refusal reasons, trusted information sources, and concerns about vaccination.

### Key Findings

#### Awareness

- **36.1%** of patients had never heard of the pneumococcal vaccine.
- **63.9%** were aware of it.

#### Willingness

- **58.1%** were willing to be vaccinated.
- **41.9%** said they would accept vaccination if given a proper explanation.

#### Trusted Sources

- **56%** trusted doctors as their main source of vaccine information.
- **20%** trusted nurses.
- **24%** relied on other sources (family, friends, media).

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## Refusal Factors

Vaccine refusal was **multifactorial**, but the leading reasons included:

- Fear of adverse effects
- Misinformation and myths
- Low awareness of the vaccine's importance

## What This Means

The findings highlight the importance of culturally sensitive, nurse-led education and consistent communication by healthcare providers. With doctors and nurses seen as the most trusted sources, tailored counselling and patient engagement could help dispel myths and address fears, especially among underprivileged groups where refusal rates are higher.

*Understanding refusal patterns is not about blame — it is about building trust and ensuring that every patient has the knowledge and reassurance they need to make informed decisions.*

## Moving Forward

Improving vaccine uptake among dialysis patients requires more than offering the vaccine — it requires listening, educating, and engaging with empathy. By addressing patient concerns and ensuring inclusivity, NKF can help strengthen protection against pneumococcal infections and improve outcomes for this high-risk group.

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# Understanding Pneumococcal Vaccine Refusal Among Dialysis Patients: A Cross-Sectional Study from NKF Malaysia

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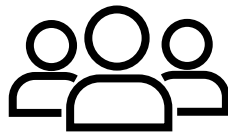
## ABSTRACT

Haemodialysis (HD) patients are among the most immunocompromised groups, placing them at high risk of pneumococcal infections. Despite strong recommendations from the Malaysian Ministry of Health and KDIGO, vaccine uptake among these patients remains suboptimal. To address this gap, the National Kidney Foundation (NKF) Malaysia introduced a free pneumococcal vaccination program in 2024, offering PCV13 followed by PPSV23 across its dialysis centres. Of 1,366 patients who received the initial PCV13 dose, only 79.6% completed the full course. Vaccine refusal persists, particularly among underprivileged groups, underscoring the urgent need to understand the underlying barriers in order to improve patient outcomes.

## METHODS



Cross-sectional survey across 32 dialysis centres.



649 responses



Multilingual questionnaire:

- Malay
- English
- Mandarin
- Tamil

- Assessed:
  - Demographics



- Awareness



- Refusal reasons



- Trusted sources

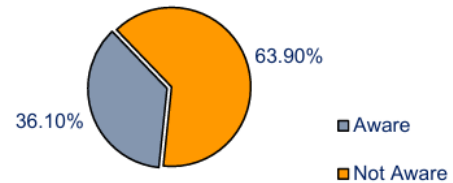


- Concerns

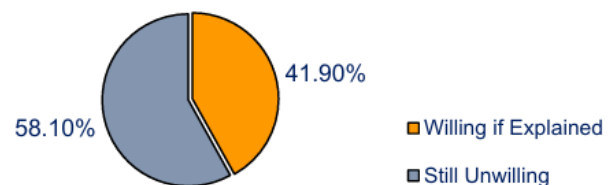


## RESULTS

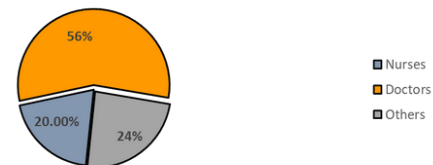
### Awareness of Pneumococcal Vaccine



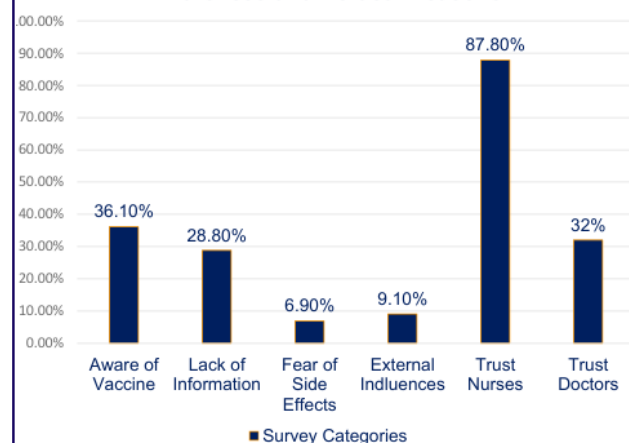
### Willingness to Accept Vaccine



### Trusted Source



### Survey Results on Pneumococcal Vaccine Awareness and Refusal Reasons



## CONCLUSIONS

Refusal of pneumococcal vaccination among Malaysian dialysis patients is multifactorial, driven primarily by low awareness, fear of adverse effects, and misinformation. Addressing these barriers through culturally sensitive, nurse-led education and consistent engagement by healthcare providers may enhance trust and vaccine uptake. Understanding these refusal patterns is crucial to improving public health outcomes and shaping inclusive, patient-centred immunisation strategies, especially for underserved populations.

## REFERENCES

1. Hooi LS and Ong LM (Eds). 2025. Thirty-first Report of the Malaysian Dialysis and Transplant 2023, Kuala Lumpur.
2. Ministry of Health Malaysia. 2018. National Action Plan for Healthy Kidneys (ACT-KID) 2018-2025