



# Increasing rates of influenza Vaccination in Solid Organ Transplant (SOT) Recipients in an Outpatient Transplant Centre

Singapore Healthcare Management 2017



Singapore General Hospital

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## 1. Background

Influenza can lead to significant morbidity and mortality in solid organ transplant recipients (SOTR) due to greater risk of developing influenza related complications such as pneumonia. Therefore, it is pertinent to increase the influenza vaccination rates among our SOTR as the present rates are low.

## 2. Mission Statement

To increase the rate of influenza vaccination among SOTR from 25% to 50% in 3 months

## 3. Analysis

Currently SOTR are encouraged by their physicians to get their annual influenza vaccination from their healthcare providers of their choice, usually at a community setting.

There are no specified healthcare personnel to ensure that SOTR received their annual influenza vaccination. Also, SOTR commonly have misconception on the indication, adverse effects, and cost of the influenza vaccination.

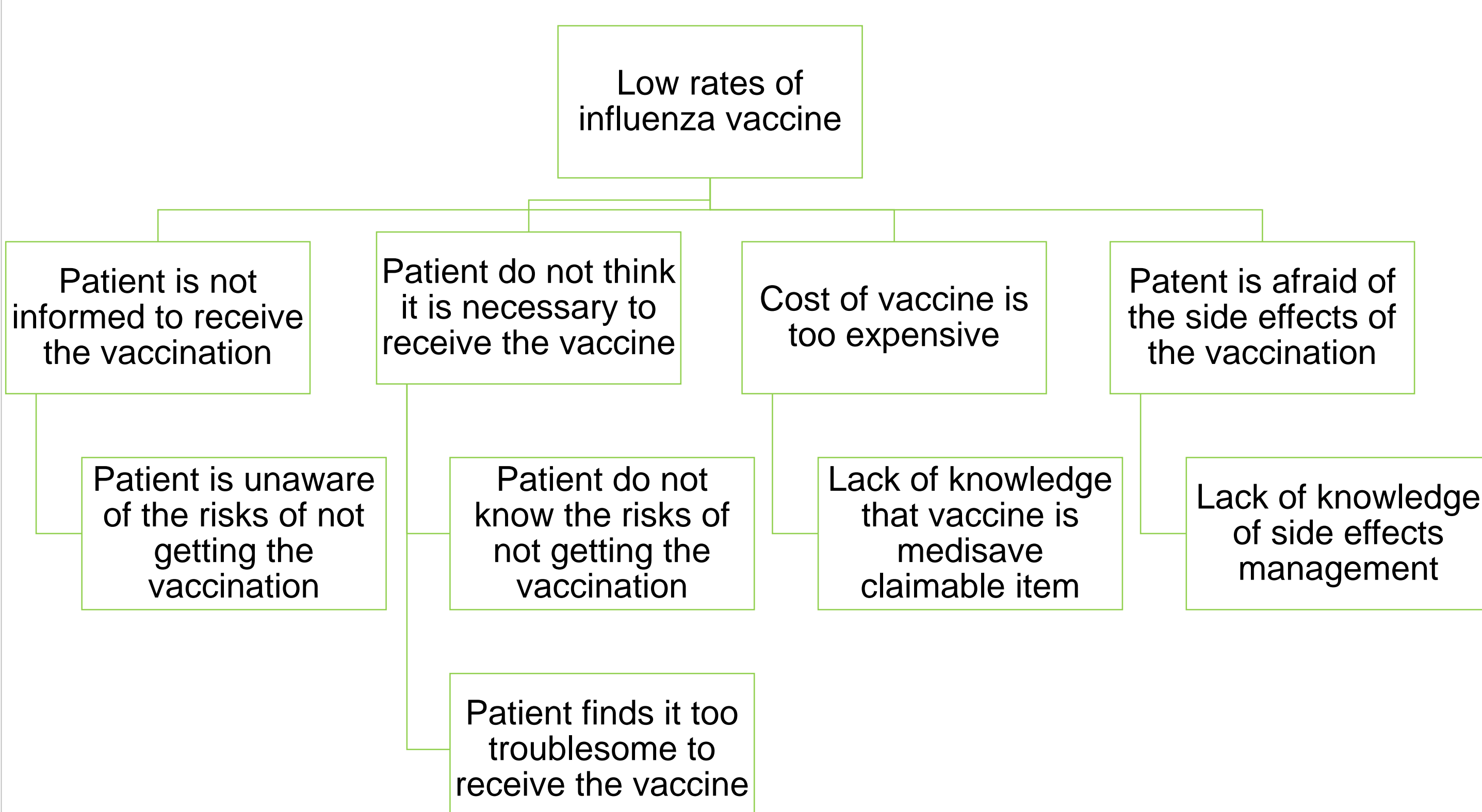


Figure 1: 5 Why Diagram

We followed up with a baseline survey conducted on 124 patients to validate the root causes identified in the 5 why diagram. From our survey results we identified the potential barriers to receiving vaccination:

No.	Potential Barriers	n (%)
1	I was not informed to receive the vaccination	89 (71.8)
2	I don't think it is necessary to receive the vaccination	37 (29.9)
3	I am afraid that there will be side effects from the vaccination	14 (11.3)
4	The cost of the vaccination is too expensive	7 (5.6)
5	I find it is too troublesome to receive the vaccination	5 (4.0)
6	I don't know I can get the vaccination in the clinic	3 (2.4)

Table 1: Potential barriers to receiving annual influenza vaccination

## 4. Intervention(s)

**PDSA cycle 1**, the influenza vaccination education materials were created. Pharmacists and nurses will educate SOTR regarding the importance of annual influenza vaccination, potential side effects and management of side effects.

**PDSA cycle 1a**, education materials were translated to Chinese to meet the language needs of most of our patients.

**PDSA cycle 2**, transplant clinic made arrangements to bring in the vaccines. Billing of influenza vaccination was set up, allowing the patients to pay through Medisave.

**PDSA cycle 2a**, a recommendation template was created for pharmacists and nurses to inform physicians to prescribe influenza vaccine if patient is deemed medically fit.

## 5. Results

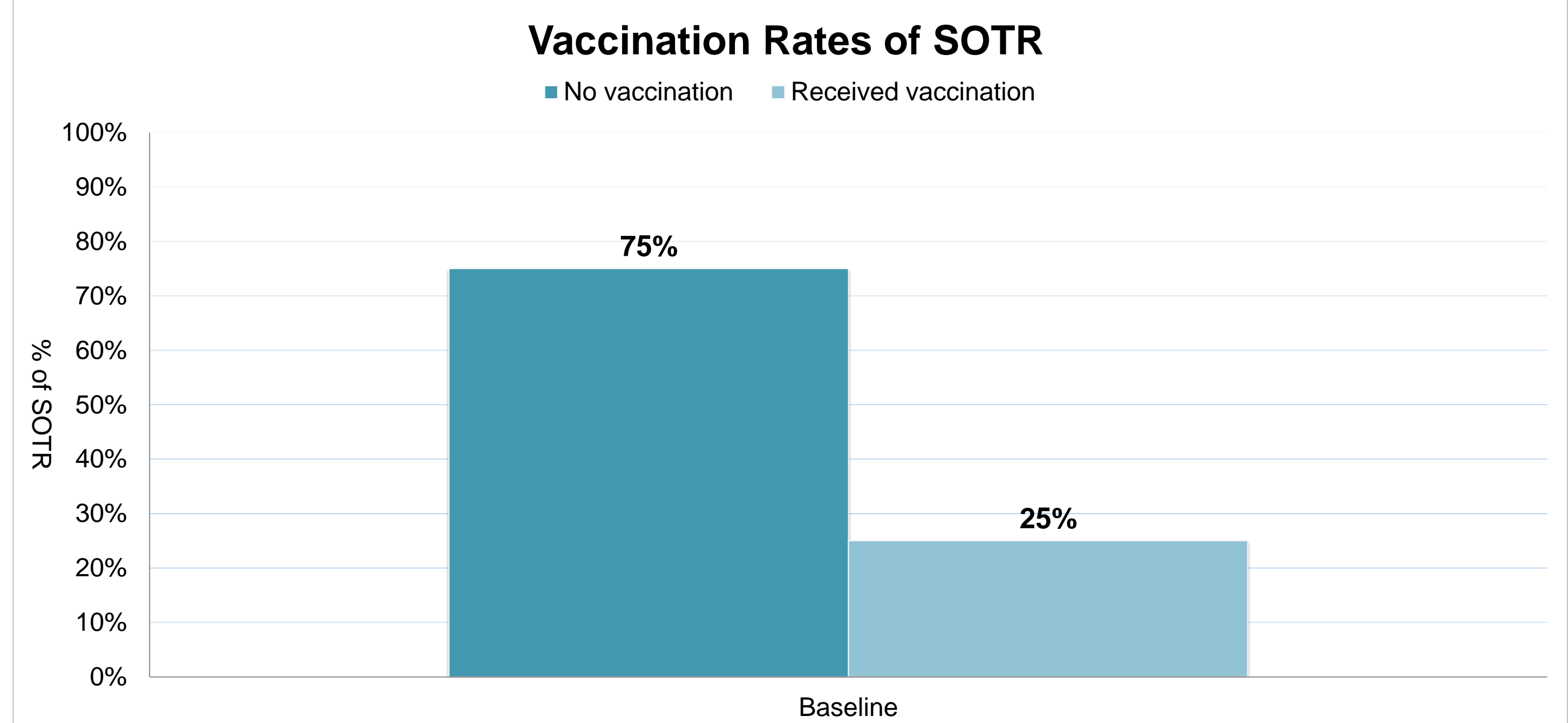


Figure 2: Vaccination rates at baseline

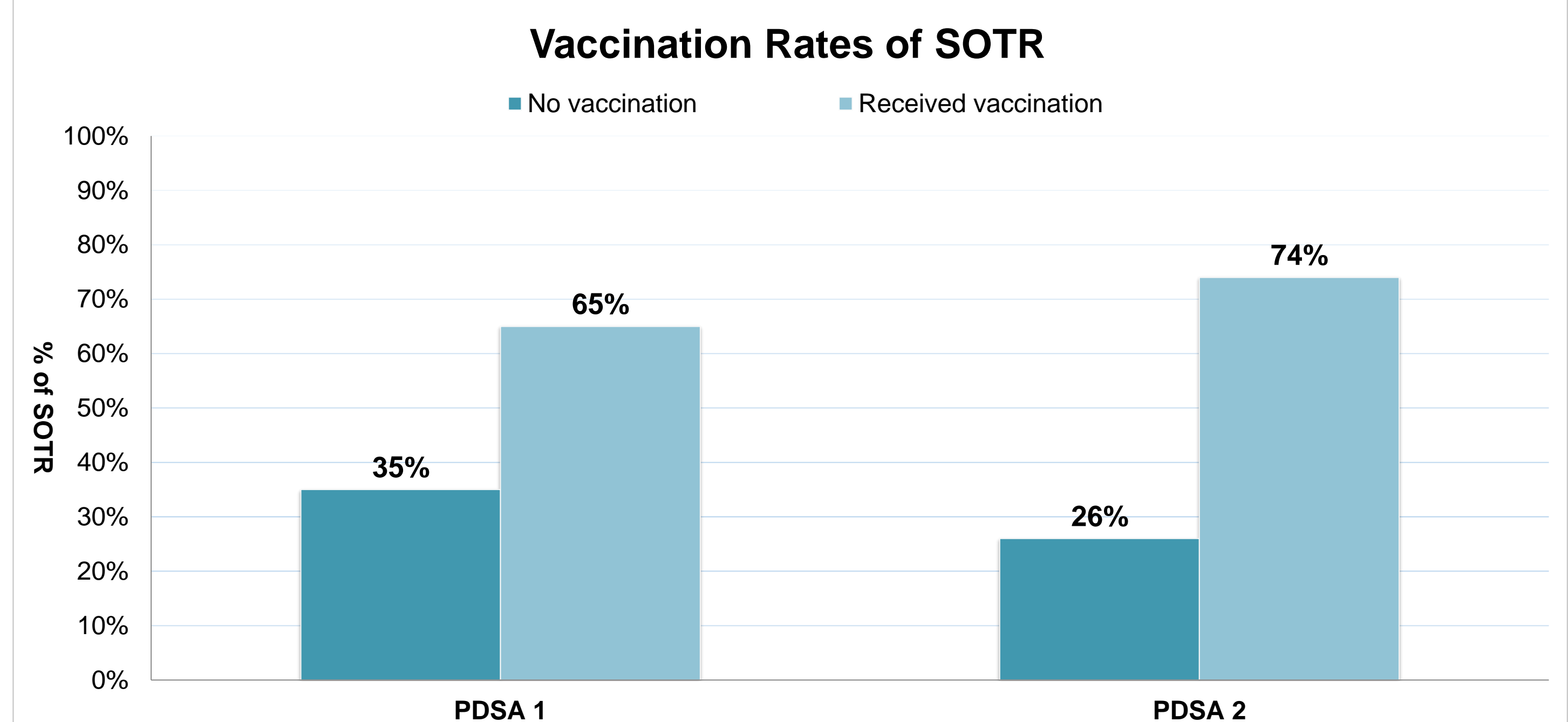


Figure 3: Vaccination rates post-implementation

- Only 25% (41) received annual influenza vaccination at baseline
- After patient education and informing patients that they are able to receive the vaccination in the same clinic visit, 65% (81) of the SOTR who did not have previous vaccination received the vaccination.
- Implementation of one stop influenza vaccination service at the transplant clinic increases the vaccination rates further to an overall 74%.
- Some of reasons why patients still did not receive the vaccines despite intervention include “they prefer to get it from their family physicians”, “they experience adverse effects previously” or “they find the cost of vaccine expensive”.

## 6. Conclusion & Sustainability Plans

- After the implementation of one stop vaccination service, we increased the vaccination rates among SOTR who did not receive previous vaccination to 74%.
- Patient's knowledge gap was bridge after the implementation of patient education by pharmacists and nurses
- Patient's have access to influenza vaccination after the implementation of one stop service in the transplant centre
- As a continuation of the service, transplant nurses and pharmacists will keep track of the patient's annual vaccination status and inform the physician if the patient is due for next vaccination.