

Sustainability Phase: PCV13 Vaccination for Elderly Patients aged ≥65 years on Follow Up with TTSH Integrative Family Physician Clinic

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Mission Statement

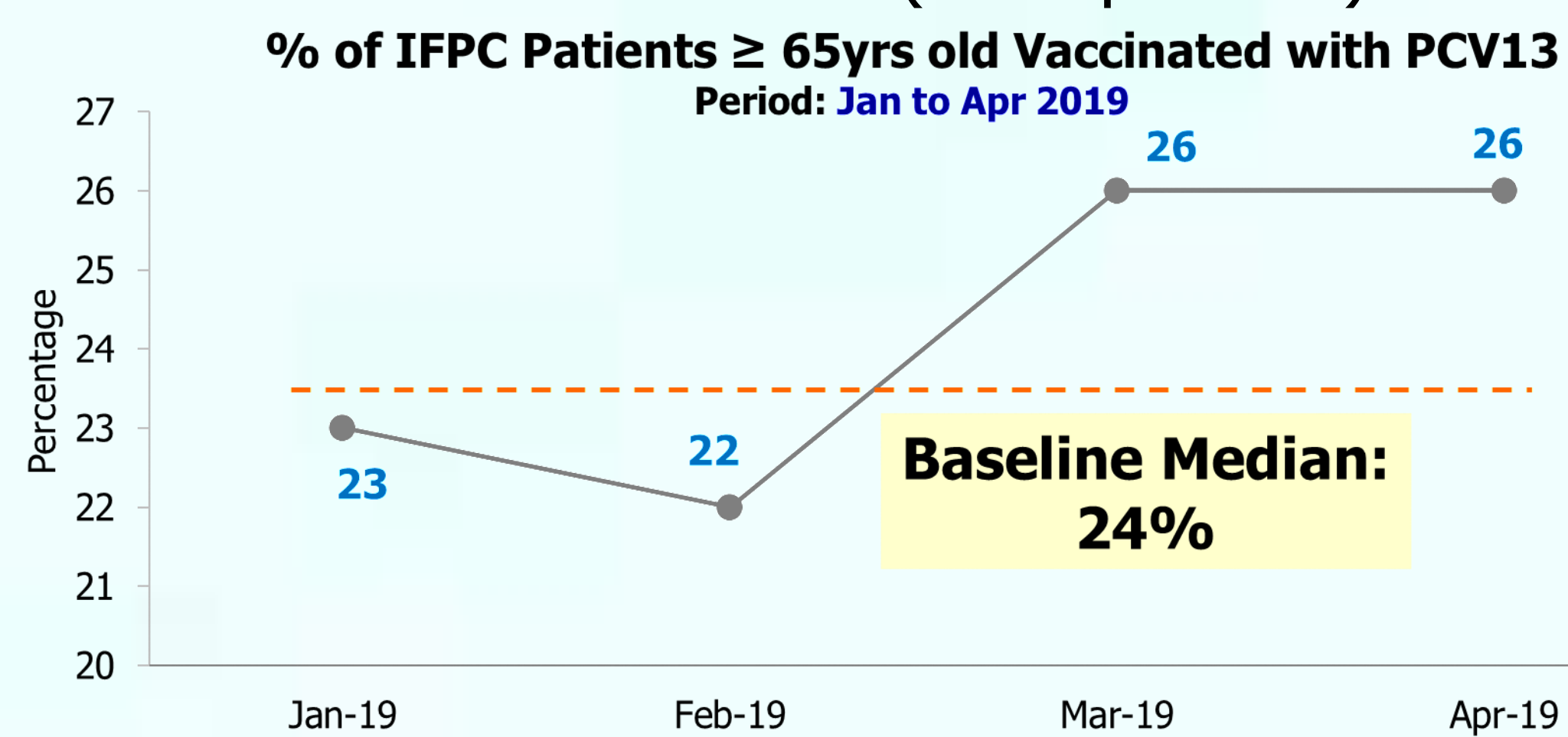
To increase the monthly percentage of elderly patients aged 65 years and above on follow-up with TTSH Integrative Family Physician Clinic who had been vaccinated with PCV13 (Pneumococcal Conjugate Vaccine 13-Valent) from 24% to 70% over a sustained period

Team Members

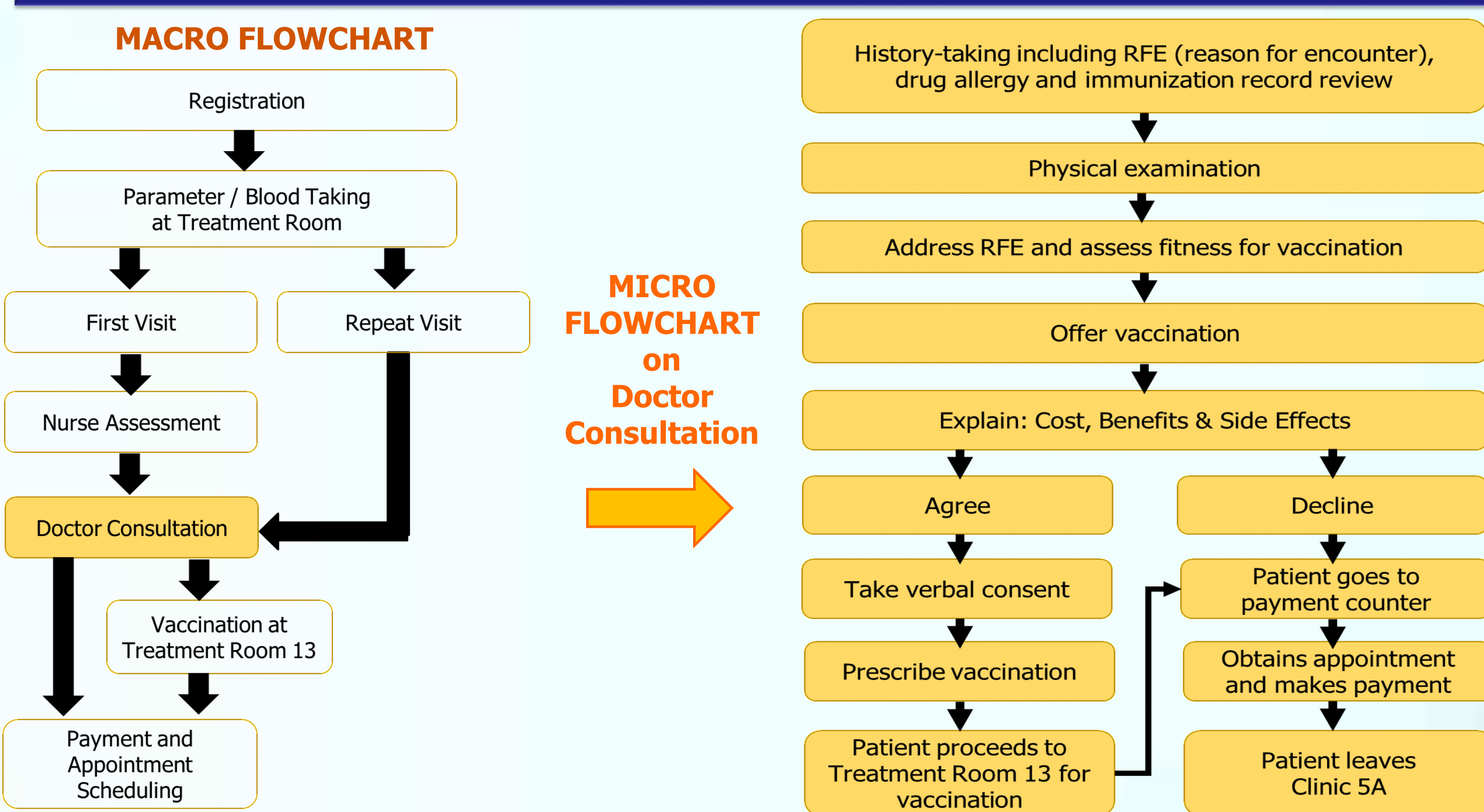
	Name	Designation	Department
Team Leader	Adj A/Prof Wong Teck Yee	Family Physician, Senior Consultant	CCC
Team Members	Ms Zhang Jin (till 9/2019)	Nurse Clinician	CCC
	Ms Liu Yu (till 5/2020)	Senior Staff Nurse	CCC
	Ms Zhou Hui Ling	Senior Staff Nurse	CCC
	Ms Avril Ho (till 9/2019 & since 5/2020)	Executive	Operations (DICC)
	Mr Tan Zong Rui (10/2019-5/2020)	Executive	Operations (Community Health)
Sponsor	Adj Asst Prof Tan Kok Leong	Head of Department & Senior Consultant	CCC
Mentor	Adj A/Prof Julie George		

Evidence for a Problem Worth Solving

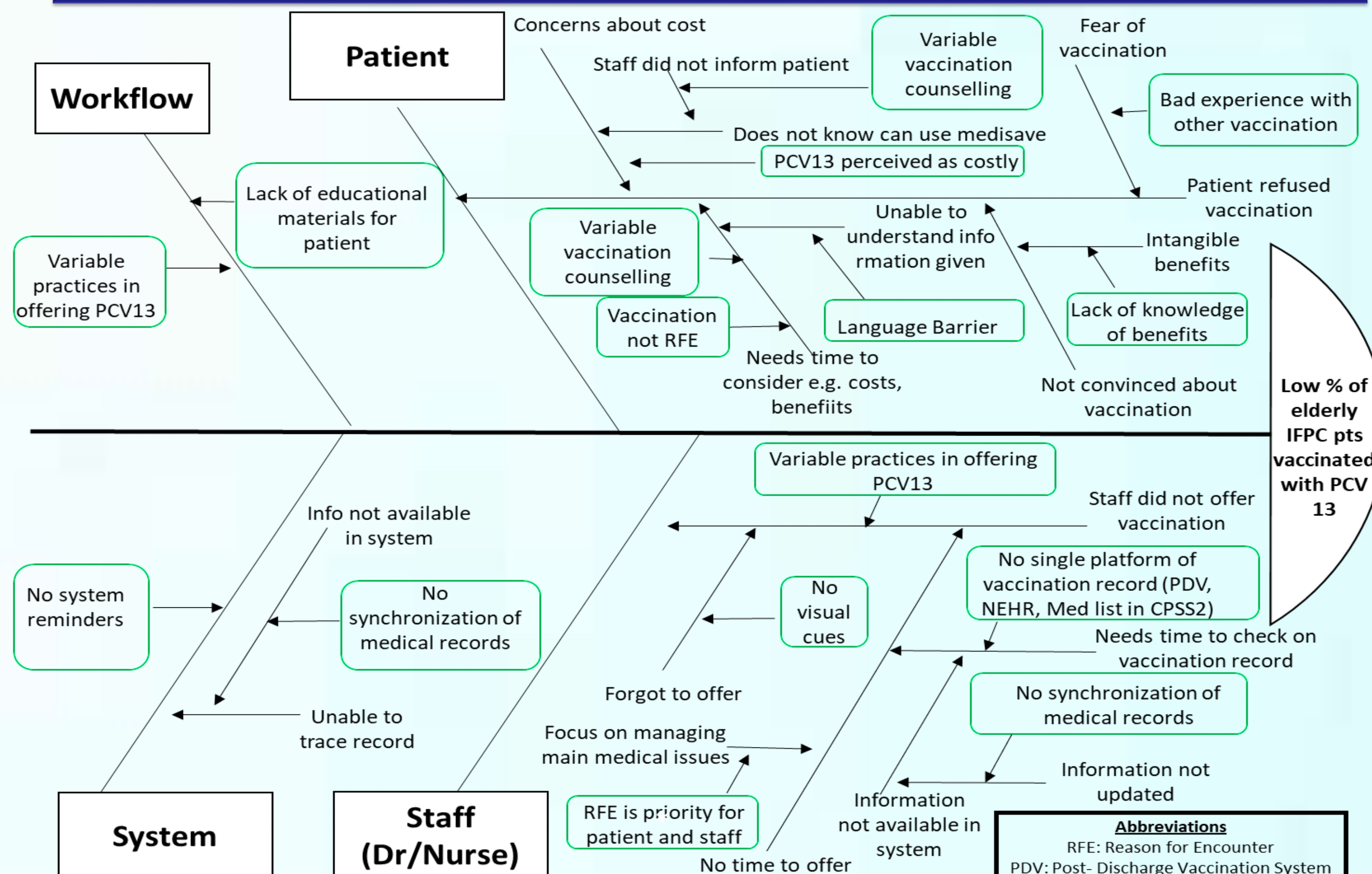
- Vaccination coverage in USA: National Health Interview Survey, 2018: Pneumococcal vaccination among adults ≥ 65 years old = 68.9%
- Low monthly percentage of IFPC elderly patients aged ≥ 65 years old vaccinated with PCV 13 = 22 - 26% (Jan-Apr 2019)



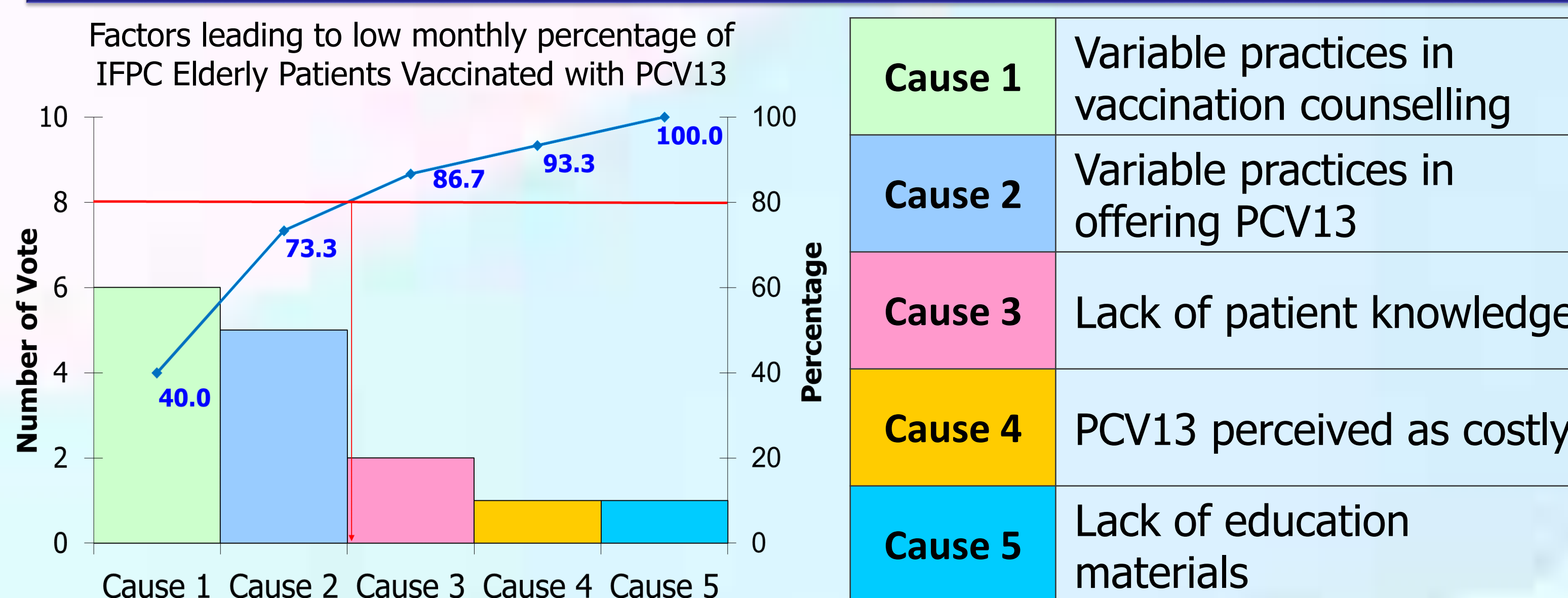
Flow Chart of Process



Cause and Effect Diagram



Pareto Chart

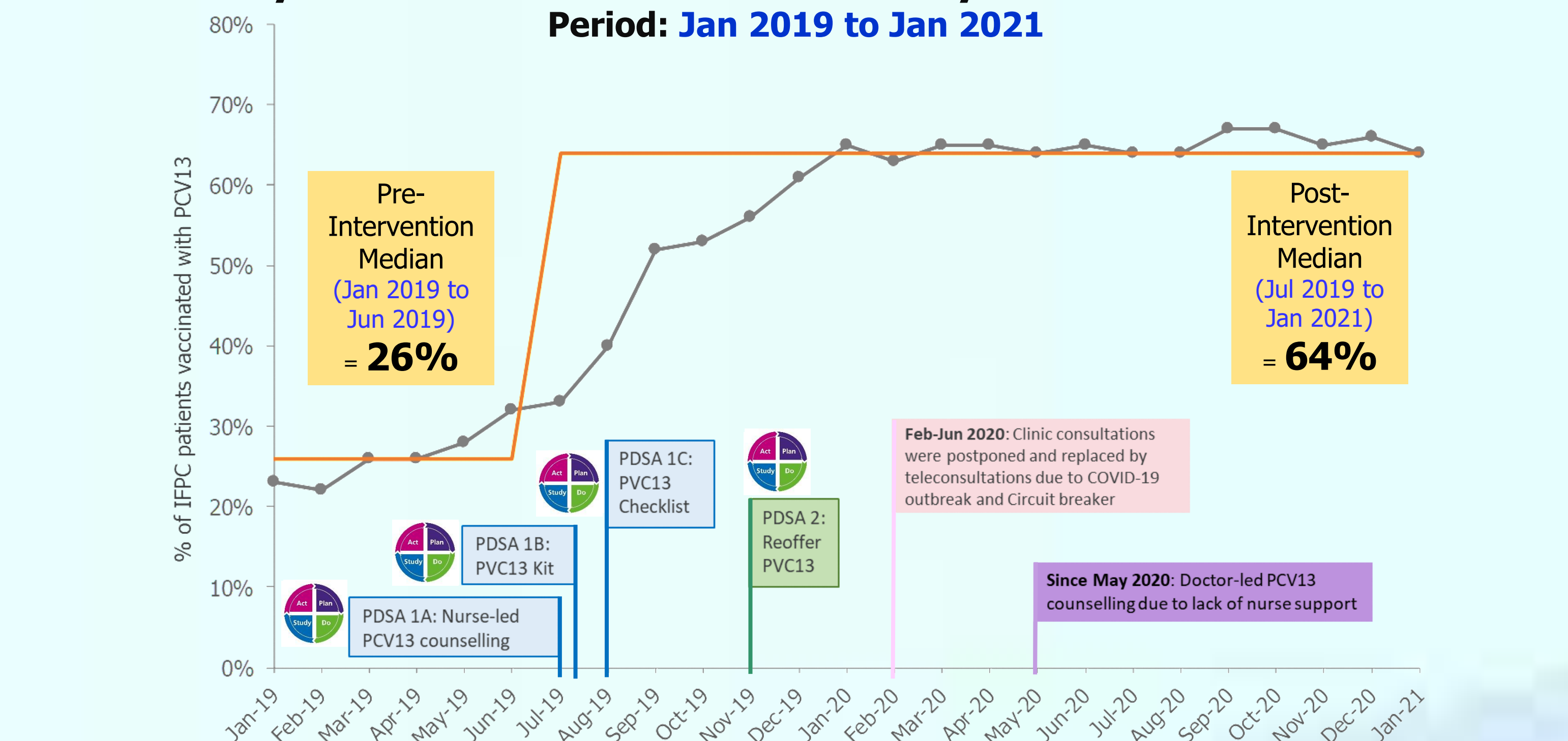


Implementation

Root Cause	Intervention	Implementation Date
Cause A: Variable practices in vaccination counselling	PDSA 1A: New workflow to include PCV13 counselling by nurses prior to doctor's consultation	1 st Week Jul 2019
	PDSA 1B: Create PCV13 kit (Vaccine Information Sheet & brochures in various languages & PCV13 Cost Illustration Card)	3 rd Week Jul 2019
	PDSA 1C: Use of Pneumococcal Vaccination Checklist in C-Doc	1 st Week Aug 2019
Cause B: Variable practices in offering PCV13	PDSA 2: Offer vaccination 1 more time at next review visit	1 st Week Nov 2019

Results

Sustainability Phase: % of IFPC Patients ≥ 65yrs old Vaccinated with PCV13



Month	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
Numerator	17	16	19	19	21	23	24	28	37	37	40	43	45	45	46	46	46	47	47	47	49	49	49	49	49
Denominator	75	72	74	73	74	73	73	70	71	70	71	70	69	71	71	71	72	72	73	73	73	73	75	74	77
%	23	22	26	26	28	32	33	40	52	53	56	61	65	63	65	65	64	65	64	64	67	67	65	66	64

Since Year 2021, the interventions have been incorporated as part of the TTSH Integrative Family Physician Clinic (IFPC) daily workflow. Compliance to all interventions was ensured with regular briefings and roll calls. Random audit will be done to ensure compliance to interventions. PDSA cycles will kick in to make refinement to the existing intervention when necessary.

Cost Savings

Class A Ward Accommodation	Estimated Total Bill for Standard Case (\$)	Estimated Total Bill for Complex Case (\$)
Geriatric Medicine 14 days admission	9,029	24,419
Respiratory & Critical Care Medicine 7 days admission	5,939	23,325
General Medicine 5 days admission	6,098	24,091
Cost of PVC13 (\$)	98	
Potential cost savings to patient per admission prevented	\$5,841 to \$8,931	\$23,227 to \$24,321

Problems Encountered

- Challenging to advocate PCV13 as it is not as commonly known and more costly (cf. influenza vaccination) → more effort needed for patient acceptance
- Patients generally opt not to have more than 1 vaccination at the same time → prefer influenza vaccination over PCV13 when they are due for influenza vaccinations → PCV13 postponed to subsequent visits

Strategies to Sustain

- Regular tracking of quality indicator
- Monthly updates on the progress of the project to the team and engaging team members for discussions on continuous improvement & sustaining performance