MOHT | MOH OFFICE FOR HEALTHCARE TRANSFORMATION

NiU National Improvement Unit Singapore

IMPROVEMENT GUIDE

FOR PRIMARY CARE NETWORKS

01

IMPROVEMENT GUIDE FOR PRIMARY CARE NETWORKS

Adopting Diabetic Foot and Eye Screening (DFS/DRP) Scalable Process

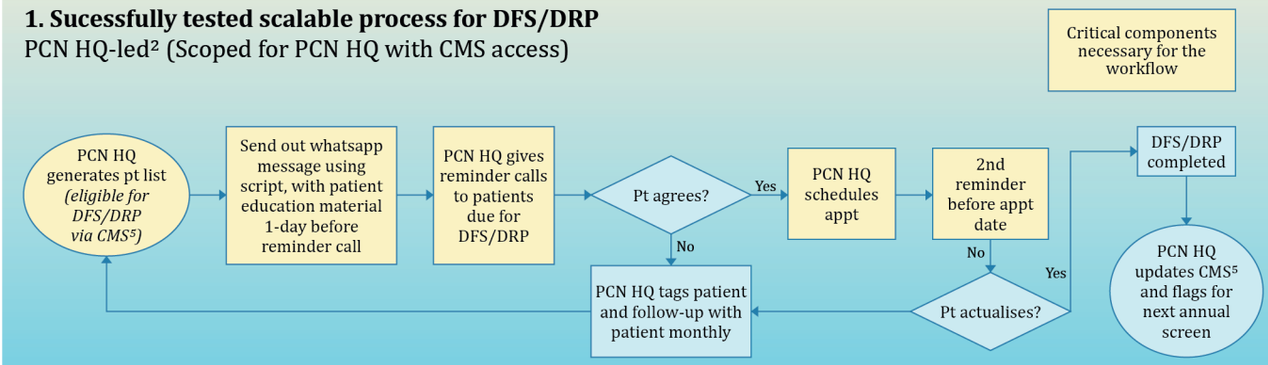
Scaling Diabetic Foot and Eye Screening (DFS/DRP) in Primary Care

About this guide:
This guide offers a simple, tested process that clinics can adapt to improve uptake regardless of whether the model is Clinic-led, HQ-led[2] or Hybrid[3]. A structured, team-based workflow to ensure timely Diabetic Foot Screening (DFS) and Diabetic Retinopathy Screening (DRP) for HSG[4]-enrolled patients.

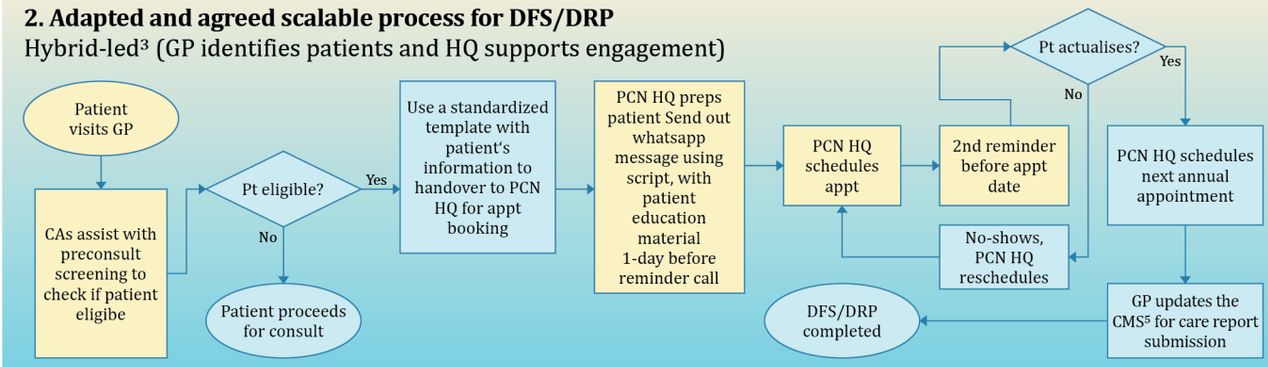
What is the DFS/DRP Workflow?
Key Components:
- Identifying eligible patients
- Proactive engagement of eligible patients with standardized patient education
- Appointment booking
- 2nd reminder before appointment date

Adaptable DFS/DRP Workflow

1. Sucessfully tested scalable process for DFS/DRP
PCN HQ-led[2] (Scoped for PCN HQ with CMS access)



2. Adapted and agreed scalable process for DFS/DRP
Hybrid-led[3] (GP identifies patients and HQ supports engagement)



Outcomes from Initial Testing

HSG Indicator	Baseline Median	New Median	Improvement
DFS Uptake	60	90	+50%
DRP Uptake	47	81	+72%

** Results from 25 clinics within one PCN over 12 months*

Monitor & Sustain

Adoption Measure
- Number of clinics that have adopted the scalable DFS/DRP process

Outcome Measure
- Uptake rate of DFS & DRP in adopting clinics

Scaling and spreading the DFS and DRP workflows means ensuring that every clinic adopts the same simple, proven process so that all patients with diabetes receive annual foot and eye checks. By standardising reminders, booking, and Clinic Management System (CMS) updates, GPs help reduce preventable complications, cut down unnecessary hospital referrals, and build a sustainable system of care across the Primary Care Networks.

Footnote:
[1] *Clinic-led: Refers to initiatives, programs, or operations that are primarily driven by individual clinics.*
[2] *HQ-led: Refers to initiatives or strategies that are driven by headquarters (HQ) — the central, organizational, or corporate office.*
[3] *Hybrid: Refers to initiatives or operations that are jointly driven by clinics and headquarters.*
[4] *HSG: Healthier Singapore*
[5] *CMS: Clinic Management System*

Purpose of this Guide: Diabetic Foot and Eye Screening

This guide provides two simple, tested, and adaptable workflows that clinics can adopt to ensure patients with diabetes consistently receive their annual Diabetic Foot Screening (DFS) and Diabetic Retinopathy Screening (DRP). Whether the process is led by the clinic[1] or centrally by the PCN HQ[2], the steps are structured to be team-based, proactive, and sustainable.

Why Adopt This Workflow

Early detection of complications through DFS and DRP significantly reduces preventable issues such as amputations or vision loss. By adopting a standardised process, clinics can:

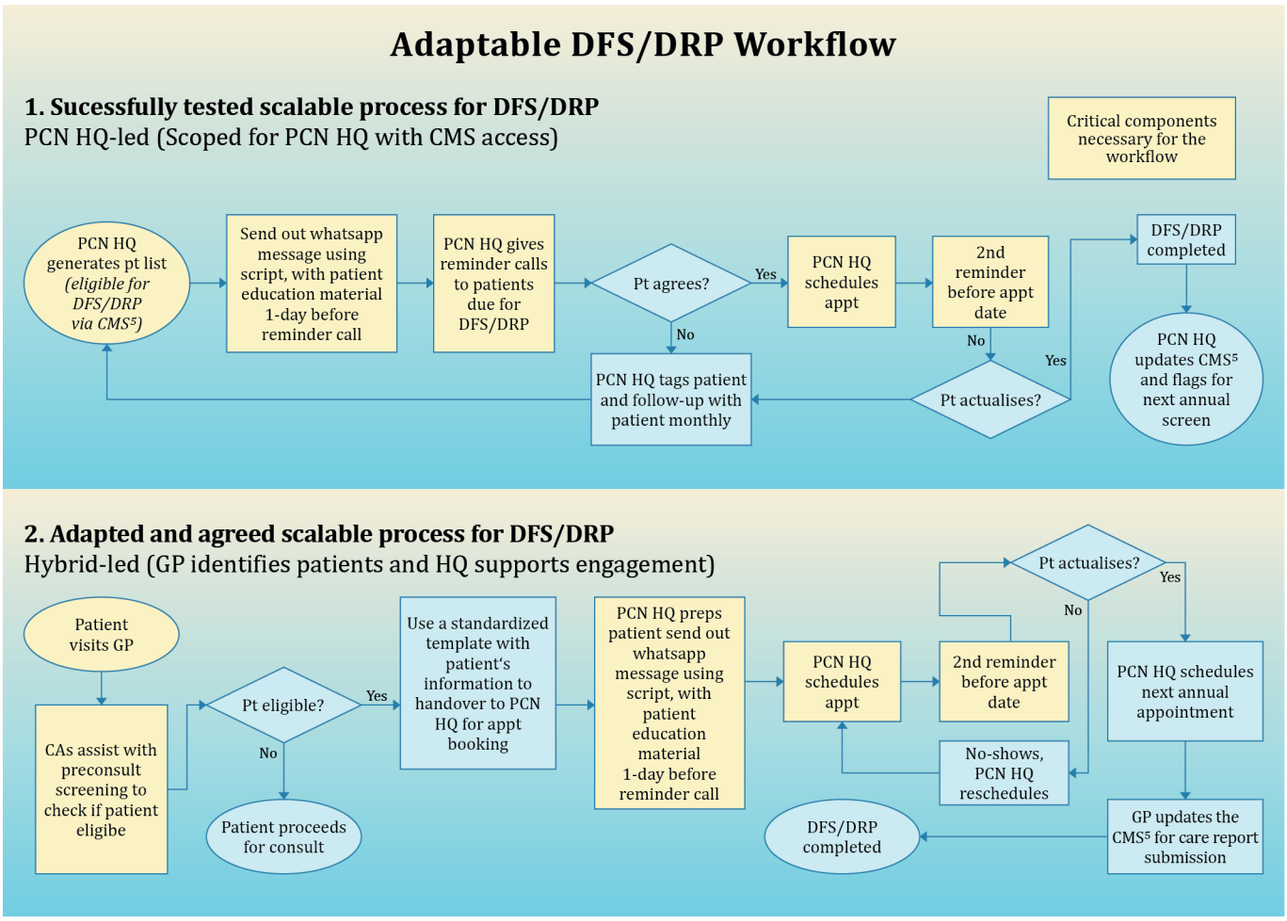
- Improve patient health outcomes.
- Reduce unnecessary hospital referrals.
- Support a system-wide, sustainable approach across the Primary Care Network (PCN).

What Change Ideas Were Tested

The following driver diagram for increasing uptake of DFS/DRP screening outlines the primary goal of achieving higher screening rates, supported by key drivers such as patient identification, patient engagement, and workflow efficiency. Change ideas include systematically identifying eligible patients, providing reminder calls with standardised educational materials, facilitating appointment booking, and optimising workflow processes to ensure smoother implementation. Collectively, these strategies aim to reduce missed screenings, improve overall patient participation, and improve patient health outcomes.

Scalable Processes (Diabetic Foot and Eye Screening)

The improvement team tested scalable processes focused on systematically identifying eligible patients, delivering reminder calls with standardised educational materials, and streamlining appointment booking within optimised workflows. These processes were designed to be adaptable across different primary care contexts, and their scalability potential was further assessed through feedback from various PCN representatives, including both Cluster-led and GP-led PCNs. This contextual evaluation helped identify enablers and barriers to wider adoption, ensuring that the interventions could be efficiently implemented across diverse practice settings.



Core Components of the Workflow

Every clinic adopting this process should ensure these critical steps are consistently applied:

1. Identify Eligible Patients

- Clinic assistants (CAs) or HQ staff conduct pre-consultation checks to determine if the patient is due for screening.

2. Proactive Patient Engagement

- Actively inform and encourage eligible patients to book their DFS and DRP appointments during their visit or follow-up through Reminder Call.
- Sending of customised message via SMS or Whatsapp to enhance pick-up rates of calls by patients.

Customised script for use:

"Hello, this is ABC Primary Care Network (PCN) reaching out on behalf of (Clinic). Dr. XXX has asked our care team to help arrange your Diabetic Eye and Foot Screening. The screening will take place at the clinic on (DATE). We'll be giving you a call soon to book your appointment—please look out for a call from Tel: 6XXXXXXX. If you have any questions, feel free to reply to this message or call us at Tel: 6XXXXXXX. We look forward to supporting your care."

- Use a common patient education leaflet to help patients understand the significance of screening.

3. Appointment Booking

- Secure appointment slots promptly, preferably during the same visit, to reduce missed opportunities.

4. Second Reminder

- Send a timely reminder before the appointment date to maximise attendance.

5. Documentation in CMS

- Update the Clinic Management System (CMS) consistently to ensure accurate tracking and follow-up.

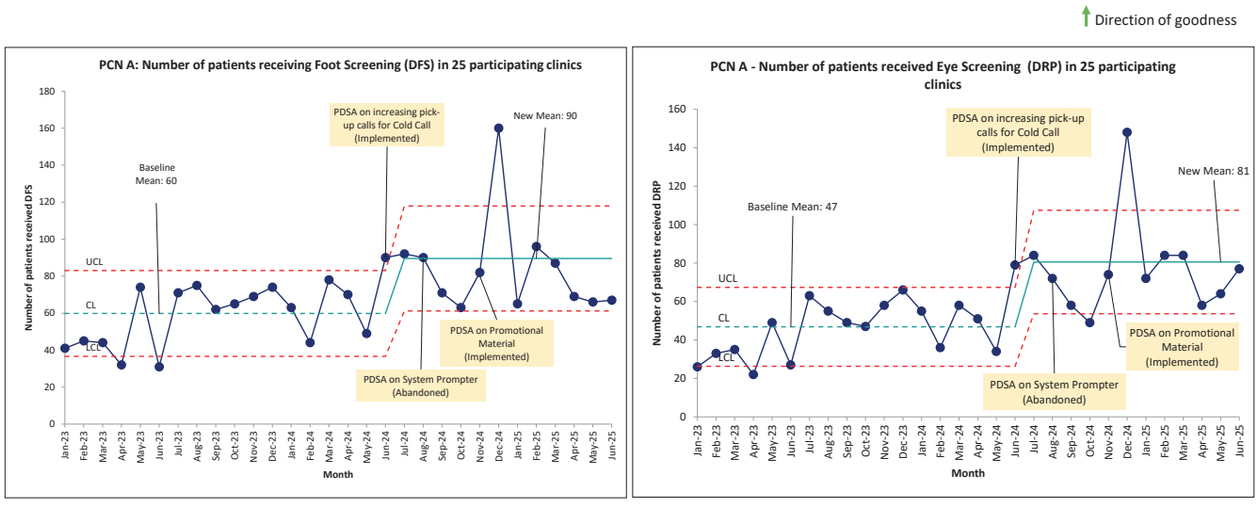
Results

This workflow was **tested across 25 clinics in one PCN over 12 months,** showing significant improvements in uptake and consistency. The mean number of DFS screenings increased from 60 to 90, while DRP screenings rose from 47 to 81.

Lesson Learned: System Prompter on CMS

A system prompter was tested within the CMS to remind GPs about DFS/DRP opportunities. However, the approach was eventually abandoned, as GPs reported that the system already contained several types of alerts (e.g., medication checks, chronic care reminders). Adding another vaccination prompter increased the volume of alerts.

Small-scale tests showed strong potential for wider adoption and scaling, indicating that focused improvement efforts can drive measurable outcomes across PCNs.



Footnote: Data plotted over time. Results shows sustained improvement.

Key Takeaway for Clinics

Adopting this standardised workflow ensures that **every eligible patient receives timely, life-saving screenings.** By making this a **routine, team-based process,** your clinic contributes to better patient outcomes and a stronger, more resilient healthcare system.

- **Accurate pre-identification of patients:** the right patients are identified, and reminders are systematically given to patients.
- **Effective patient messages with clear call to action:** Standardised scripts and brief education information for patients.
- **Reduced workloads of individual clinics:** Pre-identification & scheduling done by HQ allows GP to focus on daily clinic operations.

This combination of precision, consistent messaging, and reduced operational strain has proven effective and is ready to be adapted for wider scale.

02

IMPROVEMENT GUIDE FOR PRIMARY CARE NETWORKS

Adopting Vaccination Scalable Process (Influenza & Pneumococcal)

Scaling Interventions to Vaccination Uptake in Primary Care

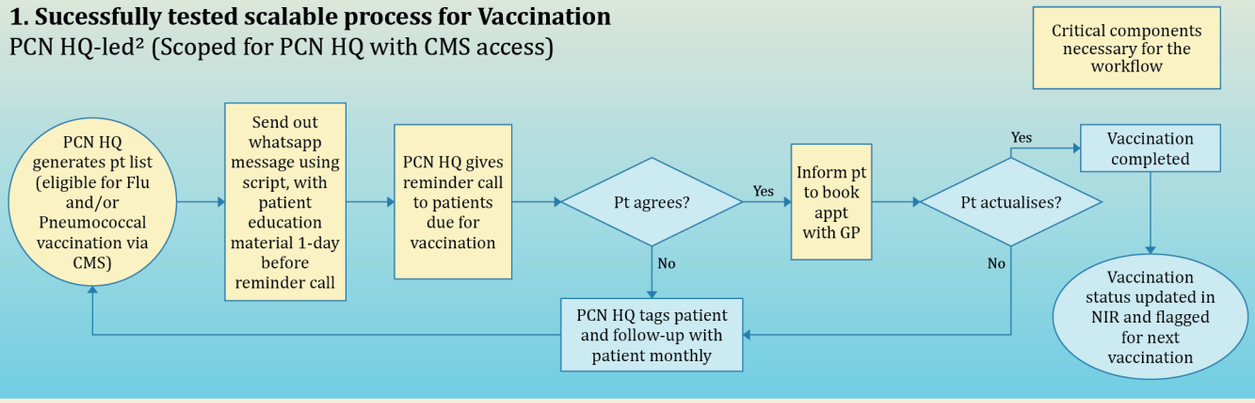
About this guide:
Vaccination is a key preventive service under HSG[4]. This guide outlines a simple, tested process that PCNs can adapt to boost flu and pneumococcal vaccination uptake whether in Clinic-led[1], or HQ-led[2] supported clinics.

What is the Vaccination Workflow?
Key Components:

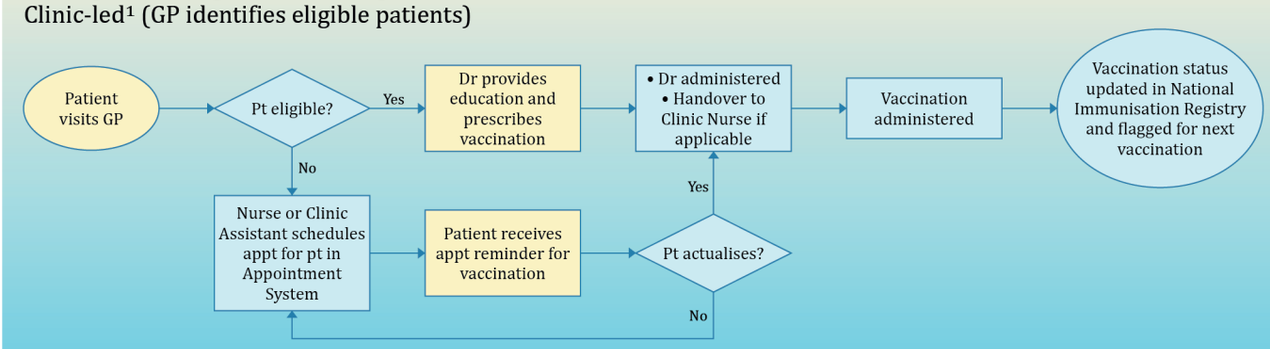
- Identifying eligible patients
- Proactive engagement of eligible patients with standardized patient education
- Appointment booking

Adaptable Vaccination Workflow

1. Sucessfully tested scalable process for Vaccination
PCN HQ-led[2] (Scoped for PCN HQ with CMS access)



2. Adapted and agreed scalable process for Vaccination
Clinic-led[1] (GP identifies eligible patients)



Outcomes from Initial Testing

HSG Indicator	Baseline Median	New Median	Improvement
Flu/ Pneumococcal Uptake	6.94%	15.4%	+8%

** Results from one clinic over 12 months*

Monitor & Sustain

Adoption Measure

- Number of clinics that have adopted vaccination scalable process

Outcome Measure

- Uptake rate of Vaccination in adopting clinics

Vaccinations are key to proactive health management in primary care. Through a tailored approach to preventive care, scheduled immunisation and patient education, primary care providers play an essential role in keeping both individual and communities protected.

Footnote:
[1] *Clinic-led: Refers to initiatives, programs, or operations that are primarily driven by individual clinics.*
[2] *HQ-led: Refers to initiatives or strategies that are driven by headquarters (HQ) — the central, organizational, or corporate office.*
[3] *Hybrid: Refers to initiatives or operations that are jointly driven by clinics and headquarters.*
[4] *HSG: Healthier Singapore*
[5] *CMS: Clinic Management System*

Purpose of the Guide: Vaccination Scalable Process

This guide provides GP clinics with practical, tested processes to systematically increase uptake of influenza and pneumococcal vaccinations. It draws on scalable workflows trialled in PCNs and can be adapted across both Clinic-led[1] and HQ-led[2] clinics, supporting national HSG[4] preventive care efforts.

Why Adopt This Workflow?

Scaling and embedding vaccination workflows protect patients from preventable complications such as severe respiratory illness, pneumonia, and hospitalisation. Proactive reminders, streamlined booking, and timely documentation improve patient outcomes while positioning your clinic as a trusted provider of preventive care. Aligning with Healthier SG strategy and providing these vaccinations, demonstrates your commitment to holistic quality care.

What Change Ideas were tested

The driver diagram for increasing vaccination uptake highlights the primary goal of improving vaccination coverage, supported by key drivers such as systematic patient identification, proactive engagement, and streamlined clinic workflows. Change ideas tested include identifying eligible patients through the clinical management services, sending reminder calls or WhatsApp messages with standardised educational materials, facilitating convenient appointment booking, and embedding vaccination into routine chronic care visits. Together, these strategies reduce missed opportunities, enhance patient participation, and ultimately improve health outcomes by protecting patients against preventable infections and complications.

Scalable Processes (Vaccination)

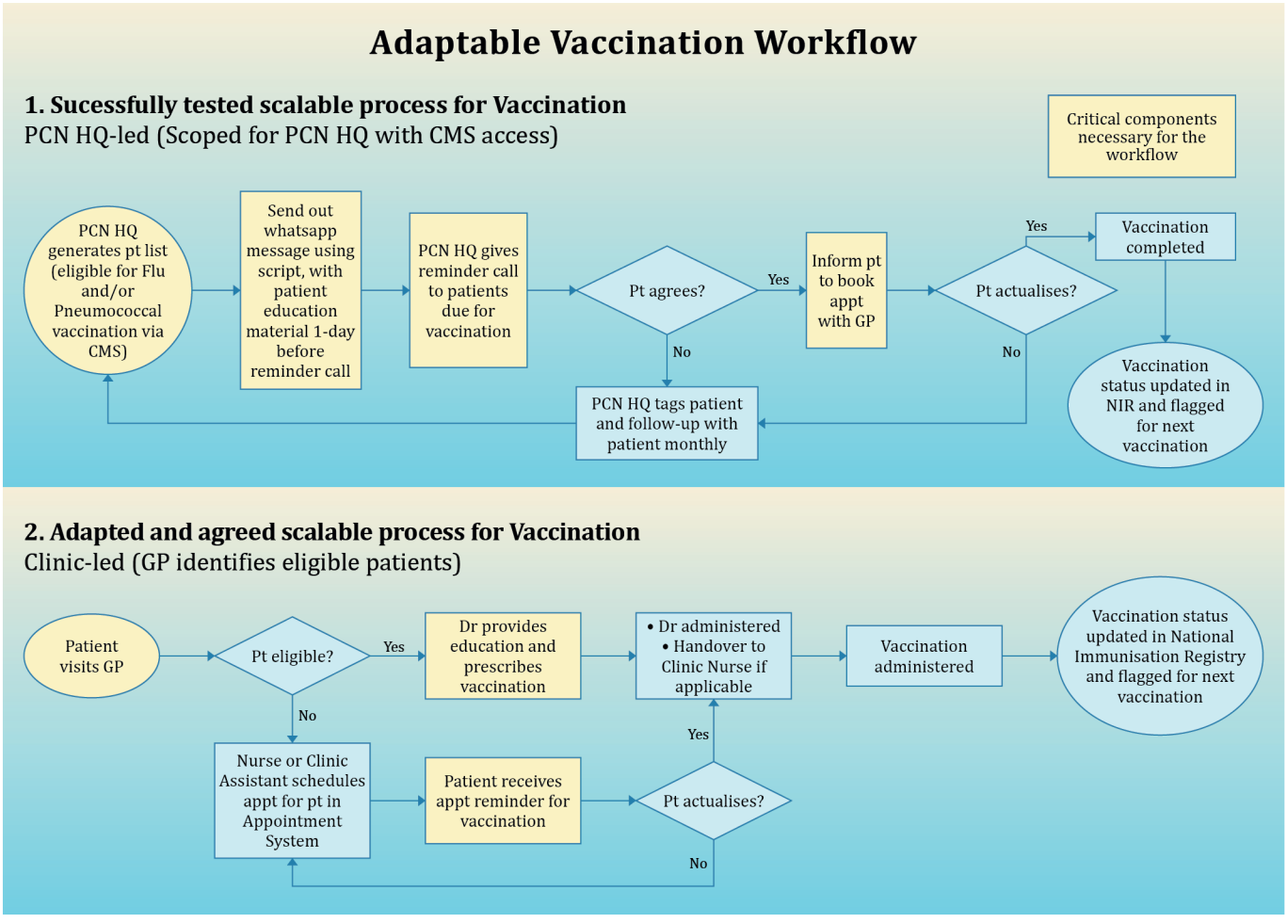
The improvement team tested scalable processes to increase influenza and pneumococcal vaccination uptake. The focus was on systematic identification of eligible patients, reminder calls reinforced with standardised educational materials, and streamlined appointment booking integrated into clinic workflows. These processes were intentionally designed to be flexible and adaptable across different primary care contexts. Their scalability potential was further evaluated through feedback from PCN representatives, including both Cluster-led and GP-led Primary Care Networks, which helped surface enablers and barriers to adoption. This ensured that the workflows could be effectively implemented and sustained across diverse practice settings.

PCN HQ–Led Model

- HQ generates lists of eligible patients via CMS[5].
- HQ sends educational messages and reminder calls.
- HQ tracks completion monthly and follows up with patients who missed appointments.

Clinic-Led Model

- GP or clinic team identifies eligible patients during visits.
- The doctor provides education and prescribes vaccination.
- A nurse or care assistant schedules appointments in Clinic Management System / Health Appointment System.
- Patients receive reminders, vaccinations are administered, and the status is updated in National Immunisation Registry.



Core Workflow Components

1. Identifying Eligible Patients

- Use National Immunisation Registry / Clinic Management System or Care Report-generated lists to flag patients due for vaccination.
- Maintain an updated registry for tracking and follow-up.

2. Proactive Patient Engagement

- Conduct reminder calls to reinforce importance and address concerns.
- Send WhatsApp/SMS reminders with standardised patient education material.
- Sending of customised message via SMS or Whatsapp to enhance pick-up rates of calls by patients

Customised script for use:

"Hello, this is ABC Primary Care Network (PCN) reaching out on behalf of (Clinic). Dr. XXX has asked our care team to help arrange your influenza/pneumococcal vaccination. The vaccination will take place at the clinic on (DATE). We'll be giving you a call soon to book your appointment—please look out for a call from Tel: 6XXXXXXX. If you have any questions, feel free to reply to this message or call us at Tel: 6XXXXXXX. We look forward to supporting your care."

- Use a common patient education leaflet to help patients understand the significance of vaccinations.

3. Appointment Booking & Scheduling

- Offer to book appointments during reminder calls or routine chronic care reviews.
- Train nurses and care assistants to manage booking within Clinic Management System / Health Appointment System.

4. Improving Clinic Workflow

- Offer vaccination opportunistically during routine chronic disease visits.
- Train nurses and care assistants to perform pre-consult screening.
- Enable nurse-led processes where doctors provide education and prescribe vaccination.
- Update National Immunisation Registry / Clinic Management System immediately to reflect vaccination status and flag the next due dose.

Reference scripts to adopt:

- Script for pre-consult screening for eligible patients

(Pneumococcal)

"Hello, Mr./Mrs. [Patient's Last Name]. Today, I'd like to talk with you about an important vaccine called the pneumococcal vaccine. This vaccine helps protect you against serious infections caused by a bacteria called pneumococcus.

Pneumococcus can lead to illnesses such as pneumonia (an infection of the lungs), meningitis (an infection of the brain), and sepsis (a severe blood infection). These illnesses can be especially serious in older adults.

The pneumococcal vaccine is safe and helps your body build protection against these infections. To be fully protected, you will need two doses. The second dose is given about one year after the first, which ensures your body has strong, lasting protection.

The vaccine is given as a shot in your arm. Following the recommended schedule is important to get the best protection.

Do you have any questions or concerns about the pneumococcal vaccine? I'm here to provide information and help you feel comfortable with your decision."

(Influenza)

"Hello, Mr./Mrs. [Patient's Last Name]. I'd like to talk with you about the influenza, or flu, vaccine. This vaccine helps protect you against the flu, which is a contagious respiratory illness that can sometimes lead to serious complications, especially for older adults or people with certain health conditions.

The flu can cause fever, cough, body aches, and fatigue, and in some cases, it can lead to pneumonia or hospitalisation. Getting vaccinated each year helps your body build protection against the flu and can make the illness milder if you do get sick.

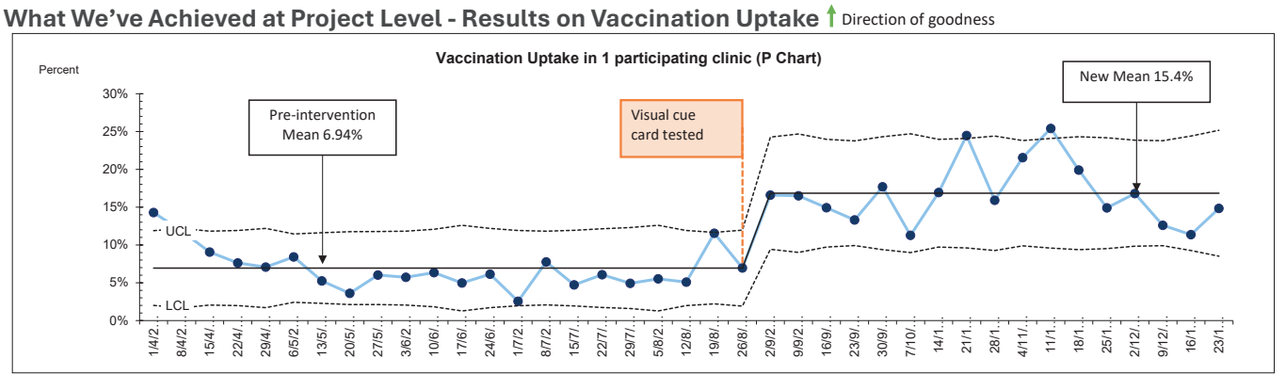
The vaccine is given as a shot in your arm and is recommended annually because flu viruses change every year.

Do you have any questions or concerns about the flu vaccine? I'm here to provide information and make sure you feel comfortable with your decision."

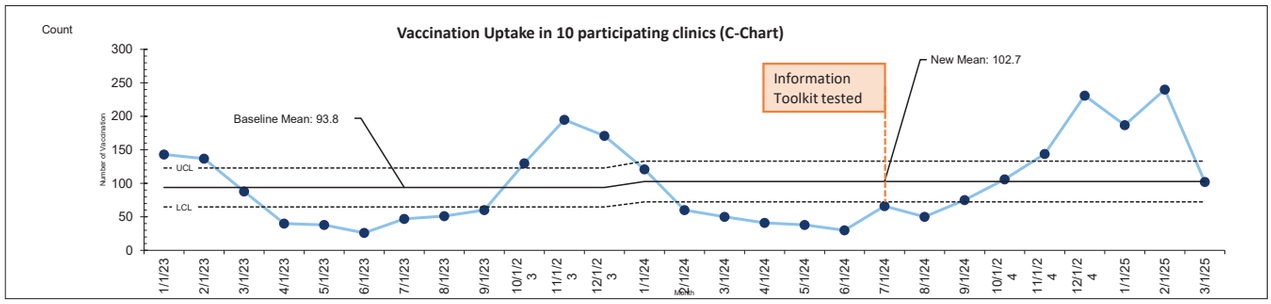
Results

This workflow was tested in over 10 clinics in two PCNs over 12 months, showing improvement in uptake mean.

What We've Achieved at Project Level - Results on Vaccination Uptake ↑ Direction of goodness



Footnote: Data plotted over time. Results shows sustained improvement.



Footnote: Data plotted over time. Results moving towards direction of goodness.

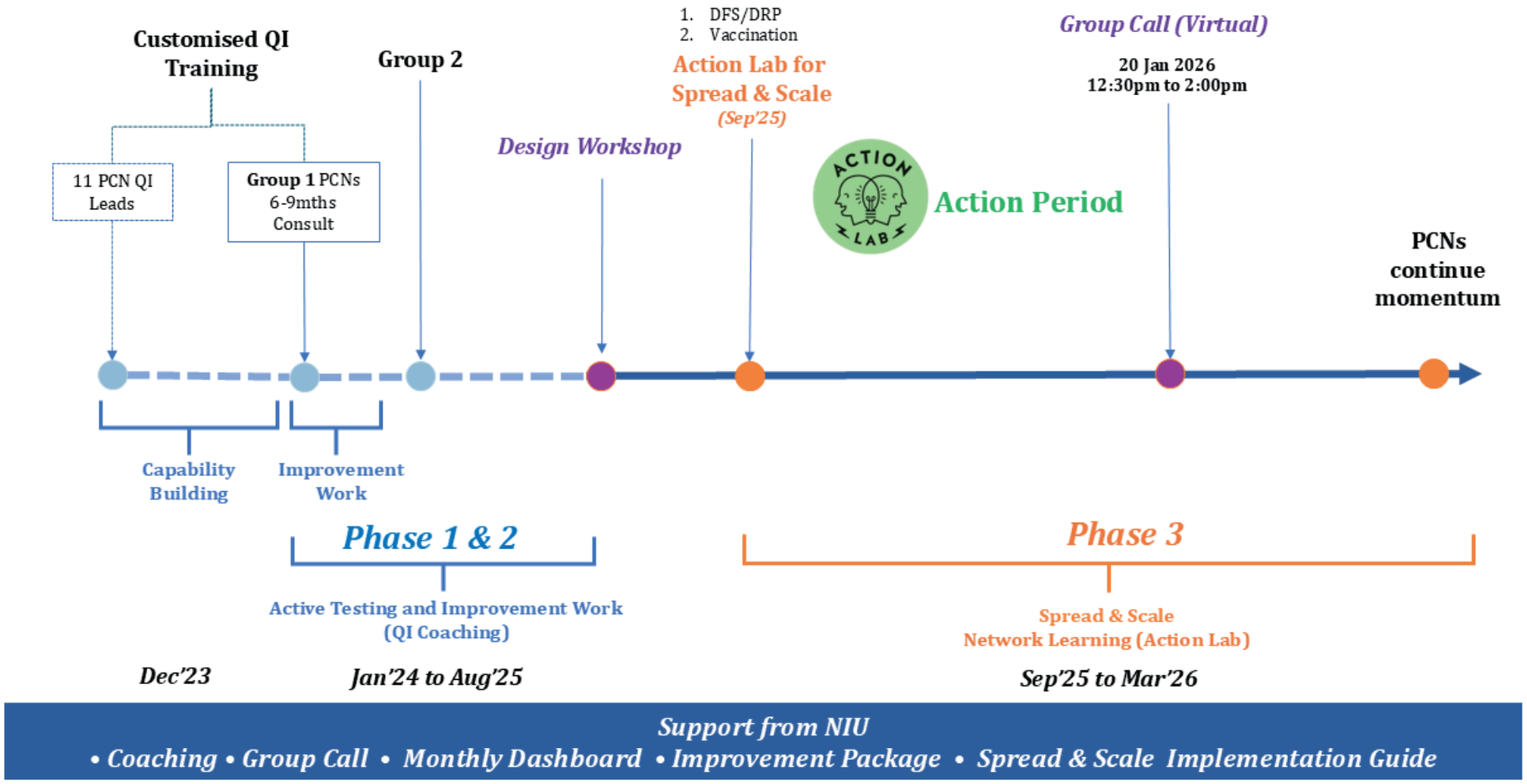
Monitoring and Sustaining Adoption

- **Process Measure (PCN-level):** Number of clinics adopting the workflow.
- **Outcome Measures (NIU-level):**
  - o Uptake rate of influenza and pneumococcal vaccinations.
  - o Number of vaccinations completed per month.

Conclusion

The improvement guide offers practical, step-by-step strategies to increase DFS/DRP screening and vaccination (Influenza and Pneumococcal) uptake, including patient identification, reminder calls with standardised education, streamlined appointment booking, and optimised workflows. By implementing these tested and scalable processes, GP clinics can boost patient engagement, reduce missed screenings, and enhance overall care quality. We encourage all practices to adapt these approaches to their local context and join the broader effort to make screening and vaccination more accessible and effective for every patient.

DFS/DRP & Vaccination Action Lab Milestone & Timeline



Support from NIU

• Coaching • Group Call • Monthly Dashboard • Improvement Package • Spread & Scale Implementation Guide

Spread and Scale Framework (Action Lab)

Action lab is designed to support teams in actively adopting and implementing tested change ideas that have demonstrated success in similar contexts. It provides a structured, hands-on environment to assess readiness, adapt solutions, and create actionable plans for spreading and scaling improvements.

Identify Team and participating Clinics → **Pre-work** → **Action Period** (*Adaptation* → *Spread* → *Scale*)

Preparation | ***Start with participating clinics*** | ***(2 months) – spread to 30% clinics*** | ***(4 months) – spread to remaining 70% of the clinics***

Jul'25	Aug'25 [pre-work]	27 Sep'25 [Launch Action Lab]		Oct'25	Nov 25	Dec 25	Jan 26	Feb 26	Mar 26
		Week 1 and 2	Week 3 and 4	Week 1 to Week 4					
• Send out customized email to invite PCNs for Action Lab • Bring together team leads/PCN ops of similar projects to curate and co-design for next level of improvement	• Engagement with Teams • Baseline for **10%** of participating clinics [Jan 2025 to Jun 2025] • Adapted process • Develop spread plan • Identify clinics for spread	• Use Tools to identify the early adopters and early majority clinics *(submit final clinics identified to NIU by 5th Oct)* • Develop Spread and Comms Plan • Implement adapted process to **Early Adopters** clinics	• Continue tracking data • Engage and have the feedback mechanism with clinics • Ensure success in spread plan milestone and 1st wave	• Prepare to engage next wave **(Early Majority)**	• Execute Spread Plan to ensure success of spread • Track outcome measures (Uptake of indicator and Adoption) • Adoption measure to be provided by PCN HQ (Spread Team) – 5th of every month (Final list of identified clinics for Action Lab period by 5th Oct, subsequent info from Nov) • NIU will provide monthly Progress Report on Measures – 15th of every month, starting 15th Nov				

Spread Aim:

Adoption Measures

1. By 31 Mar 2026, 50% of clinics in the PCN Xxx will adopt the new ***DRP/DFS process.***
2. By 31 Mar 2026, 50% of clinics in the PCN Xxx will adopt the new ***Vaccination process.***

Clinical Outcome Measures

1. To improve percentage mean of ***Diabetic Foot and Eye Screen*** by 20% in X number of participating clinics (PCN Xxx) by 31 Mar 2026.
2. To improve percentage mean of ***Influenza and Pneumococcal Vaccination*** by 20% in X number of participating clinics (PCN Xxx) by 31 Mar 2026.

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