Redesigning the workflow to process and communicate home delivery requests

Nur'Ain Bte Abdul Manan, Clara Ching, Bukit Batok Polyclinic Pharmacy

National Healthcare Group PHARMACY — Adding years of healthy life

National Healthcare Group — Adding years of healthy life

Mission Statement

To reduce the time taken **to confirm and communicate home delivery requests** by **25%** (stretch target 30%) within **1 year**.

Team Members

	Name	Designation
Team leaders	Nur'Ain Bte Abdul Manan Clara Ching	Senior Pharmacist Senior Pharmacy Technician
Team members	Koh Ying Pei Neo Ying Fang Alice Chin & Lenny Nuramalina Evelyn Soh & Lee She Ink Natasha Amalina Binte Bujang, Yang Jun Ying, Belinda Lee, Ong Poh Ching Siti Nur Afrinah	Senior Pharmacist Pharmacist Pharmacy Technician Executive Senior Pharmacy Technician Pharmacy Technician
Facilitator	Sanisah Binte Mohd	Principal Pharmacist

Evidence for a Problem Worth Solving

Problem:
- **Long fulfilment time** for home delivery requests
- Staff are **overwhelmed** by sharp increase in requests due to COVID-19 restrictions
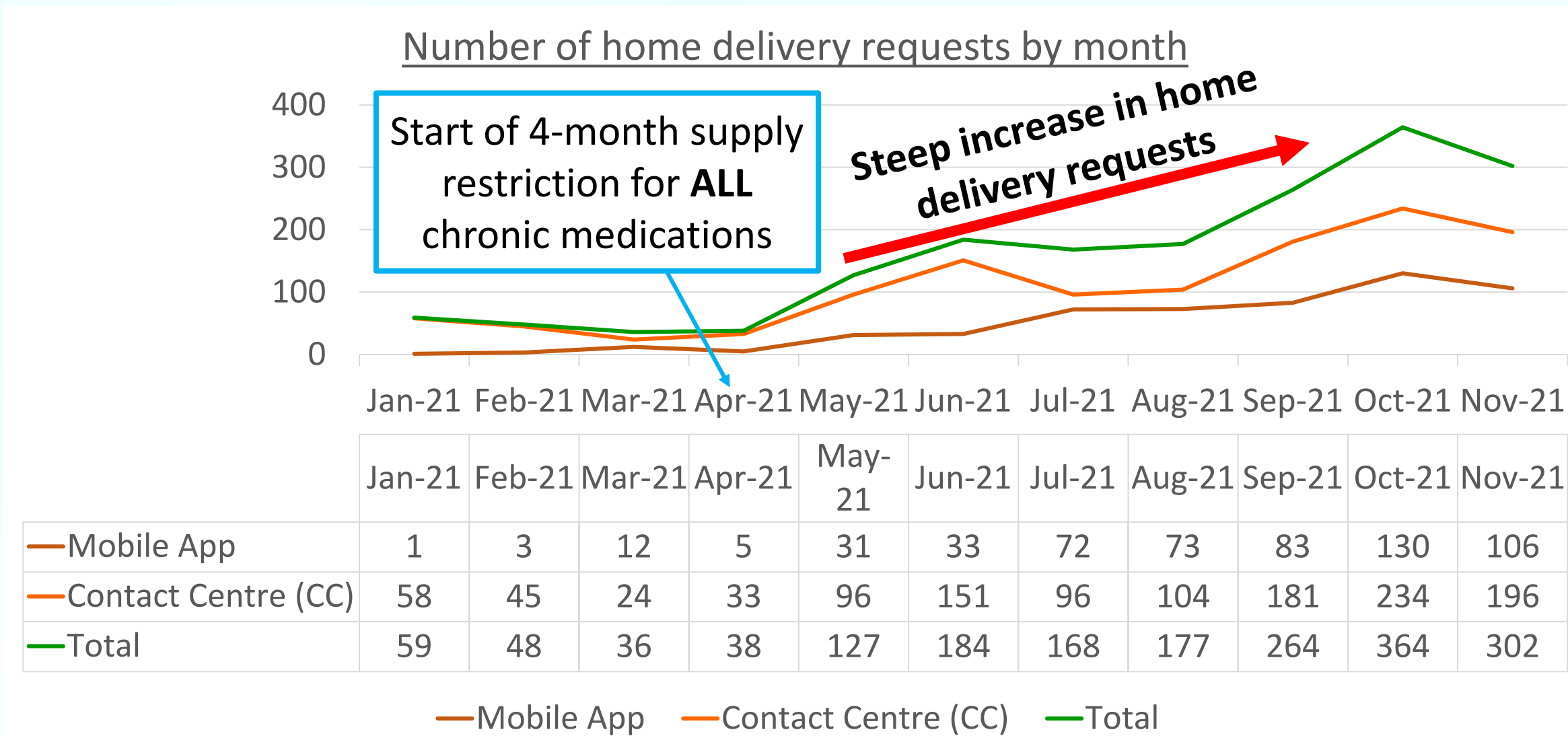
I know this is a problem because:
- Since the COVID-19 pandemic, there is **surge in home delivery requests** due to rescheduling of appointments and medication supply restrictions. For **all delivery cases**, regardless of the source of request, pharmacy staff are **required to call the patients** to confirm the request and communicate on delivery details
- Average time recorded for verification and communication of request **is approximately 5 min/patient** across staff in the request fulfilment team.
- For unanswered calls, staff would attempt to call twice a day for 3 days before closing the case. Time spent on **no response cases can be up to 3 minutes per case**.
- As significant time is taken to verify the sheer number of simple delivery requests, staff has **less time for more essential duties.**
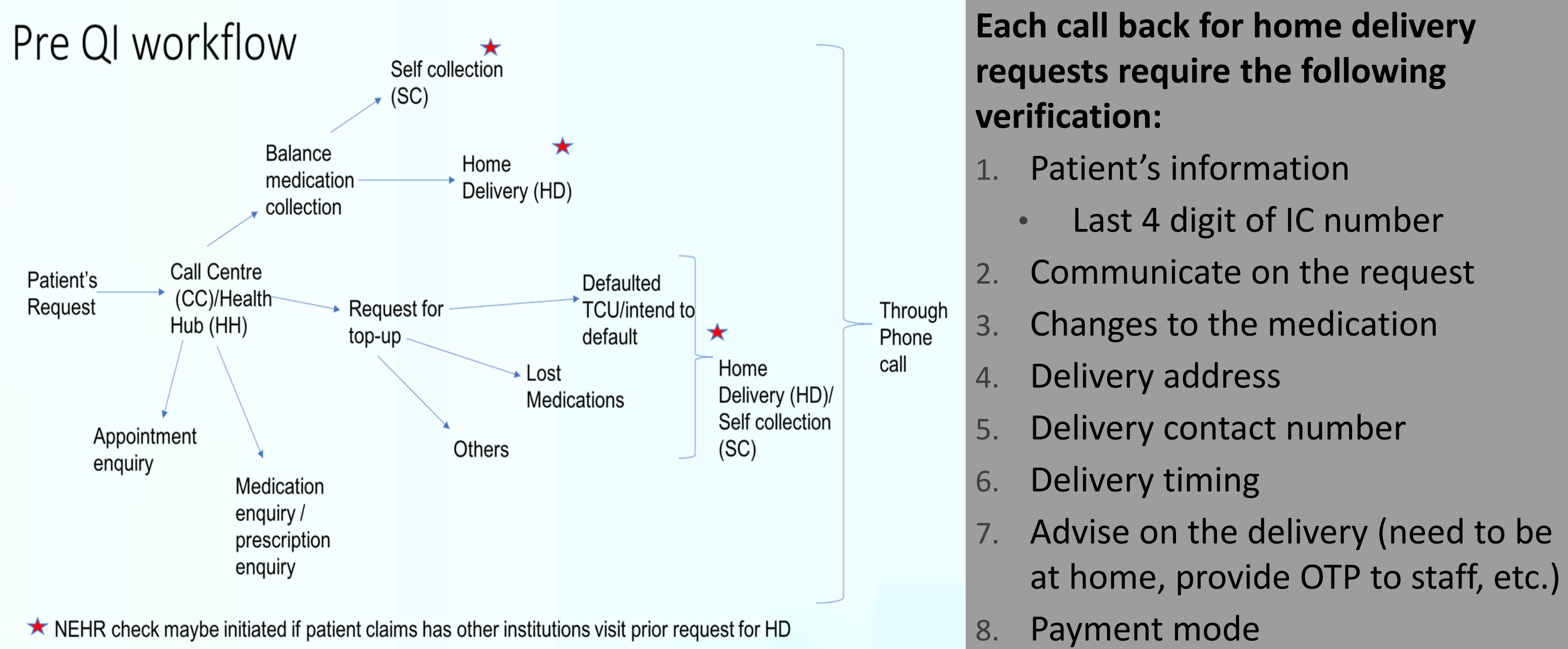
This problem happens: On a daily basis

Current Performance of the Process

Number of home delivery requests by month

Start of 4-month supply restriction for **ALL** chronic medications

Steep increase in home delivery requests

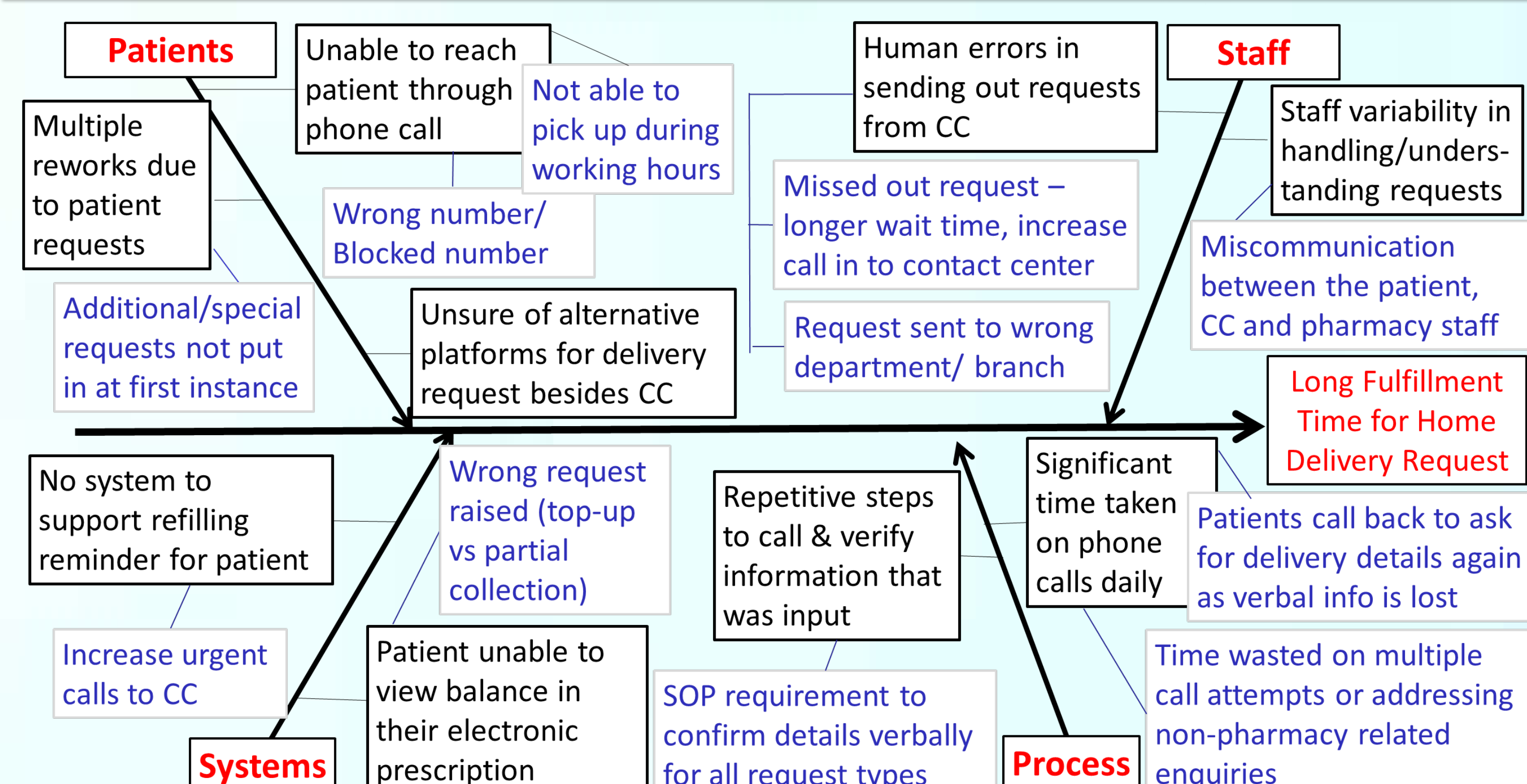|	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Mobile App	1	3	12	5	31	33	72	73	83	130	106
Contact Centre (CC)	58	45	24	33	96	151	96	104	181	234	196
Total	59	48	36	38	127	184	168	177	264	364	302

— Mobile App — Contact Centre (CC) — Total

Average Pre-QI data (Jan to Mar 21):
- Mobile app usage: **14%** (86% - CC)
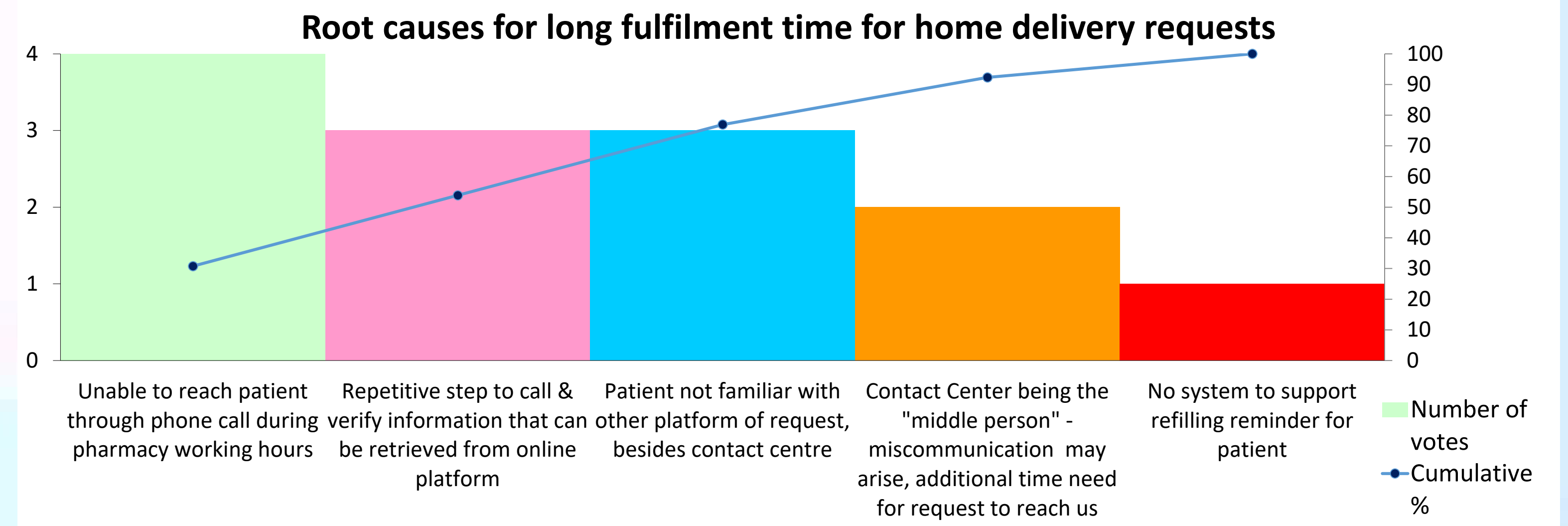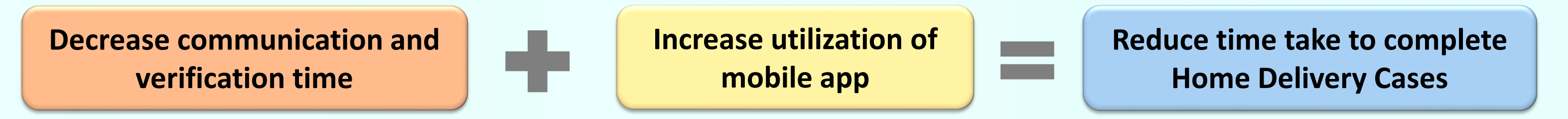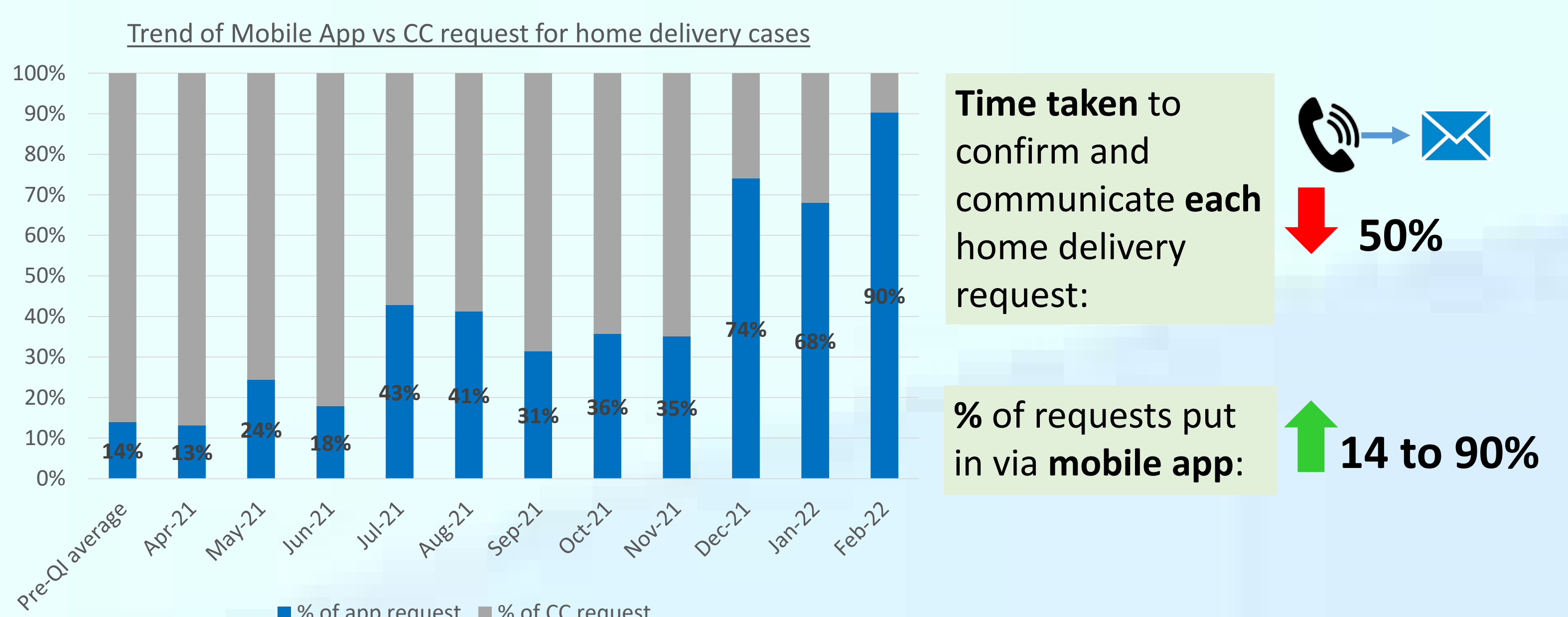- Time spent calling each patient: **5 mins**

Flow Chart of Process

Pre QI workflow

Patient's Request → Call Centre (CC)/Health Hub (HH)

- Balance medication collection → Self collection (SC) ★ / Home Delivery (HD) ★
- Request for top-up → Defaulted TCU/intend to default / Lost Medications / Home Delivery (HD) / Self collection (SC) ★ → Through Phone call
- Appointment enquiry
- Medication enquiry / prescription enquiry
- Others

★ NEHR check maybe initiated if patient claims has other institutions visit prior request for HD

Each call back for home delivery requests require the following verification:
1. Patient's information
   - Last 4 digit of IC number
2. Communicate on the request
3. Changes to the medication
4. Delivery address
5. Delivery contact number
6. Delivery timing
7. Advise on the delivery (need to be at home, provide OTP to staff, etc.)
8. Payment mode

Cause and Effect Diagram

Patients
- Unable to reach patient through phone call
- Not able to pick up during working hours
- Wrong number/ Blocked number
- Multiple reworks due to patient requests
- Additional/special requests not put in at first instance
- Unsure of alternative platforms for delivery request besides CC

Staff
- Human errors in sending out requests from CC
- Staff variability in handling/understanding requests
- Missed out request – longer wait time, increase call in to contact center
- Miscommunication between the patient, CC and pharmacy staff
- Request sent to wrong department/ branch

Systems
- No system to support refilling reminder for patient
- Increase urgent calls to CC
- Wrong request raised (top-up vs partial collection)
- Patient unable to view balance in their electronic prescription

Process
- Repetitive steps to call & verify information that was input
- SOP requirement to confirm details verbally for all request types
- Significant time taken on phone calls daily
- Patients call back to ask for delivery details again as verbal info is lost
- Time wasted on multiple call attempts or addressing non-pharmacy related enquiries

→ Long Fulfillment Time for Home Delivery Request

Pareto Chart

Root causes for long fulfilment time for home delivery requests

- Unable to reach patient through phone call during pharmacy working hours
- Repetitive step to call & verify information that can be retrieved from online platform
- Patient not familiar with other platform of request, besides contact centre
- Contact Center being the "middle person" - miscommunication may arise, additional time need for request to reach us
- No system to support refilling reminder for patient

Number of votes / Cumulative %

Implementation

Root Causes	Countermeasures
Unable to reach patient through phone call during pharmacy working hours	1. Use **email** as main communication tool 2. **SMS** to communicate straightforward requests e.g. pick up at pharmacy **[7/8/21]**
Repetitive step to call & verify information that can be retrieved from online platform	To call patient only if there are ambiguities or missing required information.
Contact Center functions as the "middle person" who transcribes patient's request. May misunderstand requests or transcribe info wrongly	1. **Reduce** number of requests taken by CC 2. **Increase** requests from **mobile app** → more accurate information coming from patients themselves, less tendency for rework.
Patient not familiar with other platforms of request, besides contact centre	Increase promotion of mobile app use • Verbal promotion of Medication Refill on Health Hub (HH) app to patients **[12/4/21]** • Design step-by-step guide to use med refill function on HH and distribution of brochures **[01/09/21]** • Distribution of OneNUHS Brochure with step-by-step guide for med refill **[01/10/21]** • Sending of OneNUHS brochure in home delivery parcel **[01/12/21]**

Sample of email template used

Compulsory to input all **delivery information** for online request

Decrease communication and verification time **+** Increase utilization of mobile app **=** Reduce time take to complete Home Delivery Cases

Results

Trend of Mobile App vs CC request for home delivery cases

% of app request: Pre-QI average 14%, Apr-21 13%, May-21 24%, Jun-21 19%, Jul-21 43%, Aug-21 41%, Sep-21 31%, Oct-21 36%, Nov-21 33%, Dec-21 75%, Jan-22 68%, Feb-22 91%

■ % of app request   ■ % of CC request

Time taken to confirm and communicate **each** home delivery request: **↓ 50%**

% of requests put in via mobile app: ↑ 14 to 90%

Cost Savings

Average time recorded to complete home delivery screening and verification for
- CC requests = **5 mins**
- Mobile app requests (from both Health Hub and OneNUHS) = **2.5 mins**

Thus, time savings for processing mobile app request vs CC request = **2.5 mins**
Taking the average manpower cost for PTs and PAs per = $25.08 / hour
Manpower savings for every 100 requests via mobile app = 2.5min x 100 x $25.08/ 60 = $104.50

Total number of home deliveries from Mar 21 to Feb 22 = 1877
Annual savings is estimated to be = 78.2 hours/ year or $1961.50/year

Problems Encountered

- Managing requestor expectations on the multiple modes of communication.
- Unable to tell if receipt of email/SMS is successful e.g. email may be sent to patient's junk mail, thus not read by patients
- There were still instances where patients input the wrong request category on the app, due to unfamiliarity with app usage

Strategies to Sustain

- Continue to promote the function of the mobile app to patients
- Create more communication templates for other types of requests or outcomes
- Spread the initiative to different branches