



# Community Telehealth Service: Lowering Barriers to Health Monitoring Technologies from the Ground-up

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## BACKGROUND

- ✓ **Health system**
  - disrupted by Covid-19 globally<sup>1</sup>
- ✓ **Routine chronic care affected by**
  - deferment of healthcare services<sup>2</sup>
  - fear of infection
- ✓ **Telehealth**
  - alleviate the health system burden
  - promote health
  - prevent disease<sup>3</sup>
- ✓ **Digital divide**
  - > 1/10 households digitally outcast in SG<sup>4</sup>

## OBJECTIVES

- ✓ Connect residents with a convenient telehealth infrastructure and an active follow-up system
- ✓ Promote health & well-being and prevent disease & disability in a resilient and pandemic proof manner
- ✓ Complement the health system from an Assets-Based Community Development Approach.

## SERVICE DESIGN

- ✓ **Booth Location**
  - distant from healthcare institutions
  - near neighbourhood shops & public utilities
  - next to the digital ambassadors
- ✓ **Priority Group**
  - Merdeka Generation & Pioneer Generation card holders
  - CHAS (blue & orange) card holders
- ✓ **Personnel & Data Safety**
- ✓ **Booth**
  - for swabbing test - biosafety
  - modular design - adaptability
- ✓ **Ownership**
  - student & community volunteers
  - community partners
  - corporate partners



Figure 1. Booth overview

## MATERIALS AND METHODS

- ✓ **Pilot Duration**
  - 9th Jan 2021 - 28th Feb 2021
- ✓ **Venue**
  - Punggol 21 Community Club, Singapore
- ✓ **Health Modalities**
  - BMI, body fat & muscle
  - blood pressure & heart rate
  - blood glucose level
  - eye (severe cataracts, moderate to severe glaucoma, referable retinal disease)



Figure 2. Event photo and a sample health report

COMMUNITY TELEHEALTH SERVICE			
Name			
DOB	23/03/2003		
Gender	Male		
Age	17 years		
<b>Blood Pressure</b>	<b>Heart Rate</b>	<b>Eye</b>	<b>Eye Refractive Error</b>
Systolic (mmHg)	120	Left Eye	Normal
Diastolic (mmHg)	77	Right Eye	Normal
HR (bpm)	66	<b>Visual Acuity</b>	Distance Normal
		Near	Normal
<b>Body Mass Index (BMI)</b>	18.5	<b>Cardiovascular Disease</b>	Normal
Weight (kg)	65		
Height (cm)	175		
<b>Notes</b>	Patient is healthy and well. No signs of COVID-19. All vital signs are within normal limits. No eye abnormalities detected. Patient is advised to continue with regular eye check-ups.		

## RESULTS

- 236 working hours, 627 completed appointments
- 230 waitlisted users
- 26% referred to follow-up care
- 66 volunteers trained
- > 90% satisfied with the overall experience
- 98.5% will continue using CTS

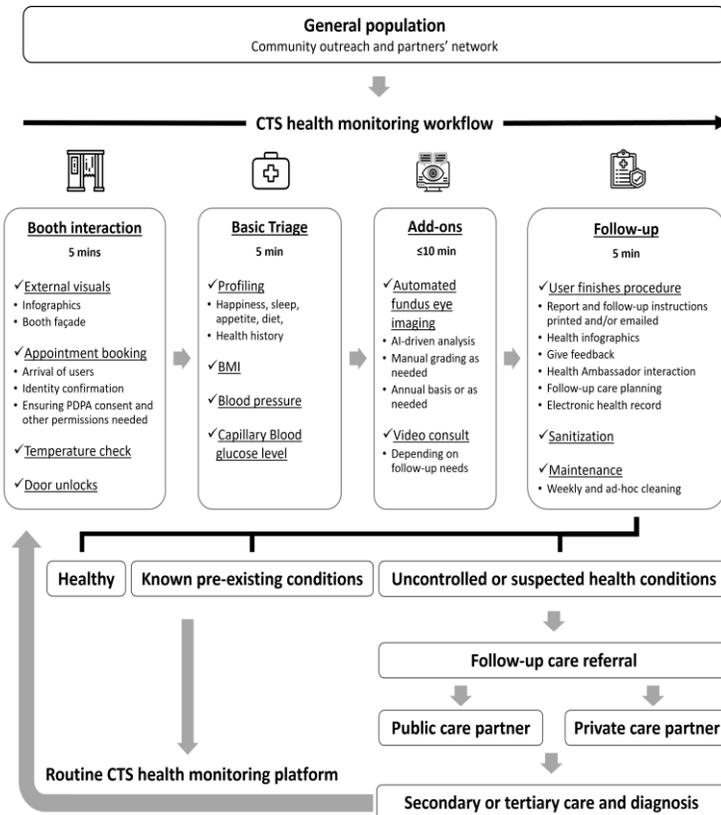


Figure 3. User experience and care flow

## CONCLUSIONS

- ✓ **Pilot**
  - a successful proof of concept
  - a unique hybrid digital-physical platform
- ✓ **Future phases**
  - include more modalities
  - provide accessible and scalable community telehealth assets
  - accelerate the uptake of telehealth as a novel community care model.



Figure 4. Future phases of CTS

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## PARTNERS



## REFERENCE

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