Project Title

Holistically Improve Elderly Lives Through Seamless Community Care

Project Lead and Members

Project lead: Tan Kok Heng

Project members: Ms Nur Athirah Binte Azhari, Mr Brent Lacambra, Ms Janah Nogales, Mr Dan Evangelista

Organisation(s) Involved

Thye Hua Kwan Nursing Home Ltd – Home Care Services

Healthcare Family Group Involved in this Project

Nursing, Ancillary Care

Applicable Specialty or Discipline

Home Care Services

Aims

Provide seamless community care, improve the overall health and mental well-being of the elderly; as well as to expand the unit's service capacity by providing a reprieve to the ongoing manpower constraints

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

See poster appended/ below

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Quality Improvement, Workflow redesign

Workforce Transformation

Job Redesign, Upskilling

Keywords

Elderly, Social Isolation, Home-Based Patients, Home-Bound, Tele Consultation, Google Glass

Name and Email of Project Contact Person(s)

Name: Tan Kok Heng

Email: tankokheng@thknh.org.sg
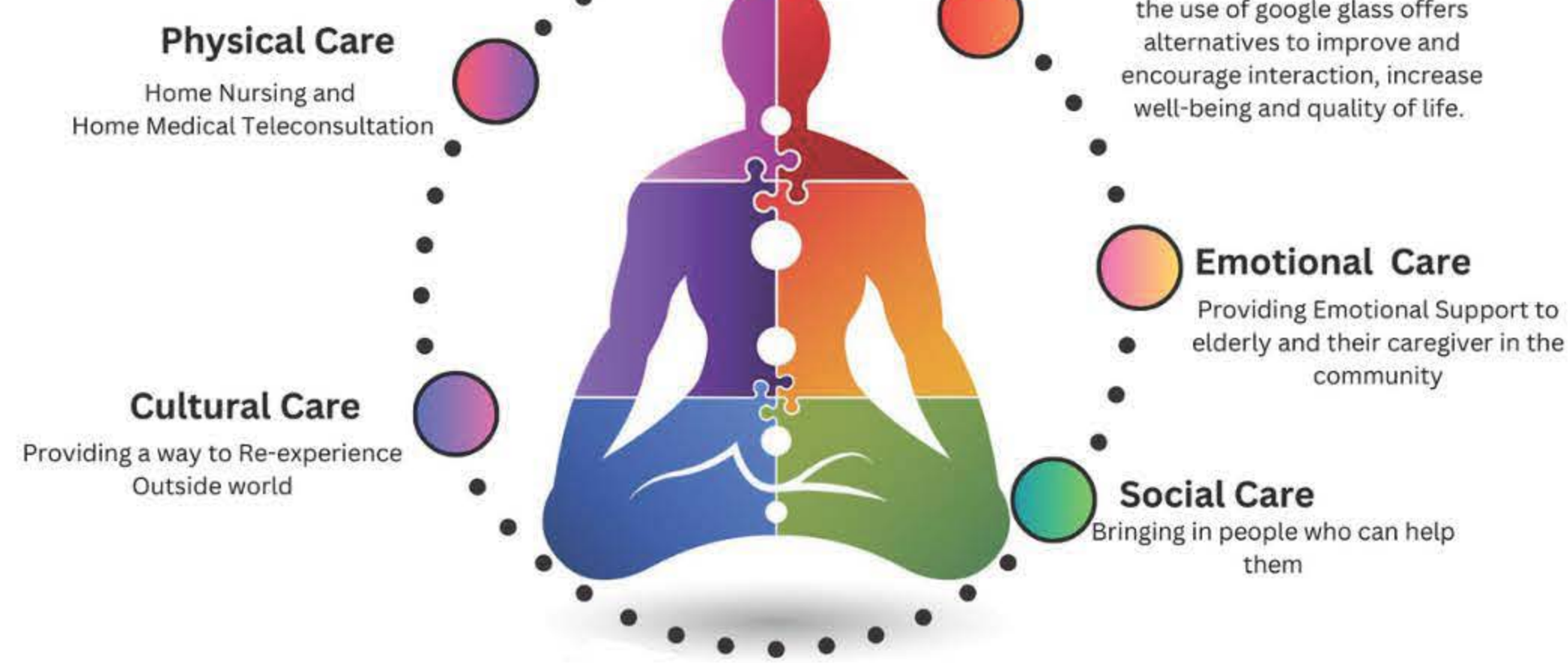
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THKNH - HOME CARE SERVICES

THYE HUA KWAN NURSING HOME LTD

MISSION STATEMENT

The recent COVID-19 pandemic has shed light on issues surrounding social isolation and its detrimental effects on both mental and physical health. However, even as we return to a semblance of normalcy, a significant population still suffers from such isolation – namely, the elderly with mobility issues, compromised immunities and chronic conditions. By tapping on remote technological capabilities and redesigning existing workflows, the team aims to provide seamless community care, improve the overall health and mental well-being of this population and expand the unit's service capacity by providing a reprieve to the ongoing manpower constraints.

Seamless Community Care
THKNH HOME CARE SERVICES

Physical Care
Home Nursing and Home Medical Teleconsultation

Mental Health Care
the use of google glass offers alternatives to improve and encourage interaction, increase well-being and quality of life.

Cultural Care
Providing a way to Re-experience Outside world

Emotional Care
Providing Emotional Support to elderly and their caregiver in the community

Social Care
Bringing in people who can help them

WHO ARE WE?

Thye Hua Kwan Nursing Home (THKNH) Home Care Service (HCS) provides services, such as Home Nursing (HN) and Home Personal Care (HPC), Interim Caregiving Services (ICS)/ Home Based Respite Care (HBRC) to patients who require home-based care covering North- East and East Regions of Singapore.

CATALYST FOR CHANGE

The primary issue that the team aims to resolve is the lack of continued care among home-based patients who are socially isolated or are home-bound, despite the support provided by conventional home care services. 80% of the clients under THKNH HCS fall into this demographic. Essentially, the monitoring needs of these patients are higher than patients with a support system due to the lack of caregivers who are able to provide daily monitoring. This issue will worsen over the next decade, as the patient demographic grows due to an ageing population, exacerbated by a global shortage of healthcare workers.

APPROACH & INTERVENTION

In order to be able to refer patients and detect a decline in health status in a timely manner, there is a need to increase the frequency between care visits as well as the number of staff who are able to flag worrying symptoms prior to a nursing or medical visit. However, the existing global shortage of skilled healthcare workers continued to serve as an obstacle that limited the service capacity of THKNH HCS.

FOUR- PRONG APPROACH

INCREASE PATIENT SURVEILLANCE — **Step 1** Provide better and frequent monitoring. Reduce social isolation & Identification of Social Issues

WORK FLOW, SERVICE REDESIGN AND MANPOWER REPURPOSING — **Step 2** SCA Competency Training. Escalation Protocol for Google Glass Teleconsultation

GOOGLE GLASS ADOPTION — **Step 3** Expand Service Capacity, Improve Service Quality, Nursing Care Process Deconstructed.

RE-EXPERIENCING OUTSIDE WORLD — **Step 4** Cognitive and Memory enhancement activities virtual visit to nostalgic places, increase sense of autonomy

The team implemented a four-pronged approach:

1. Increased surveillance of patients through non-clinical services i.e., Home Personal Services.
•Equipping Nursing Aides (NAs) with Vital signs monitoring kit- basic vital signs monitoring competencies, and increasing the frequency of HPC visits per patient to promote early detection of abnormal parameters.
•Identify social issues at an early stage by Social Workers - Reduce social isolation, increase client satisfaction and shorten the length of time between care visits.
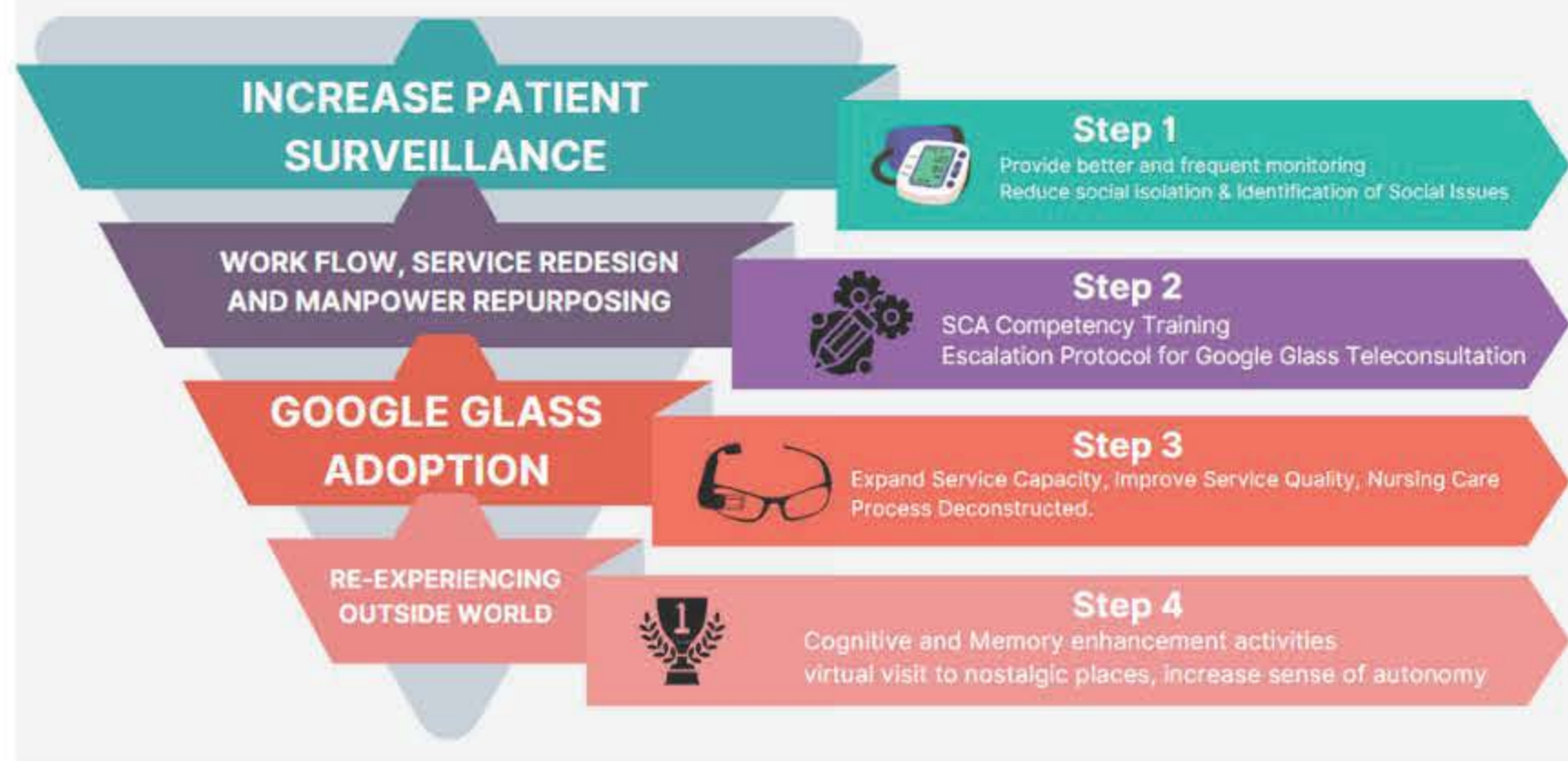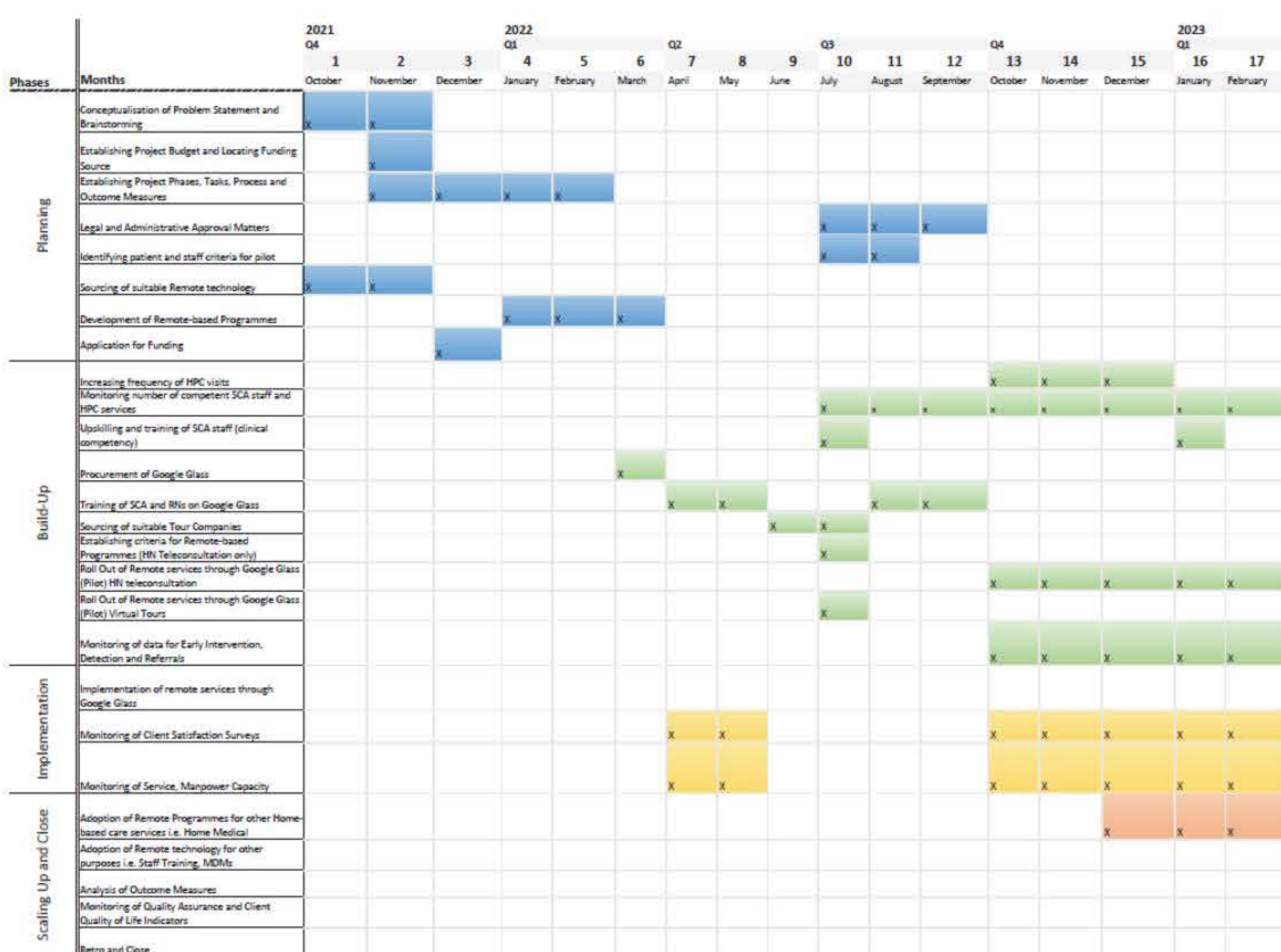
Table 1 Project Gantt Chart

The Gantt Chart for the project is found below. The planning phase lasted from October 2021 to March 2022. The Build-Up phase lasted from March to February 2023. The team is currently transitioning to the implementation phase for Teleconsultations and beginning a new pilot cycle for HPC service enhancements.
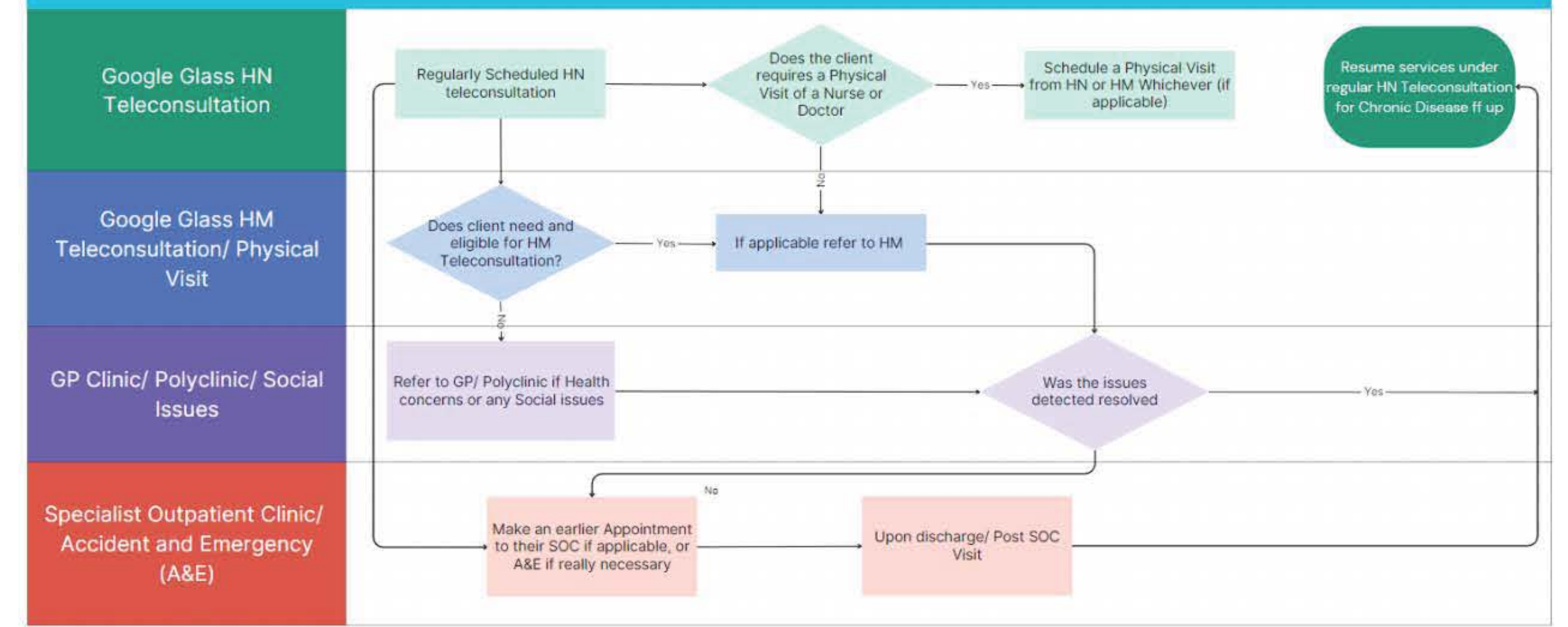
2. Workflow and service redesign & Manpower Repurposing. Competency training was provided to NAs to upskill them with nursing competencies required to perform simple nursing tasks carried out in routine HN visits and identification of abnormal parameters. With this competency, NAs are able to meet the competencies required to support nursing care activities. Escalation Protocol Development during Google Glass teleconsultation.

The first strategy of upskilling NAs involved expanding on their competencies in nursing assistance, to include tasks such as NGT care, IDC care and prevention of pressure injury, as well as oral medication administration, to include tasks such as insertion of suppositories. This directly improves the parameters by which a patient's health is being monitored for early escalation and detection.

The second strategy of adopting remote nursing care and monitoring reduces the dependency on physical consultations with RNs without compromising the need and delivery of nursing care. The elimination of travel time allows the number of patients served by an RN per hour to increase by 250%, from 1 patient to 2.5patients.
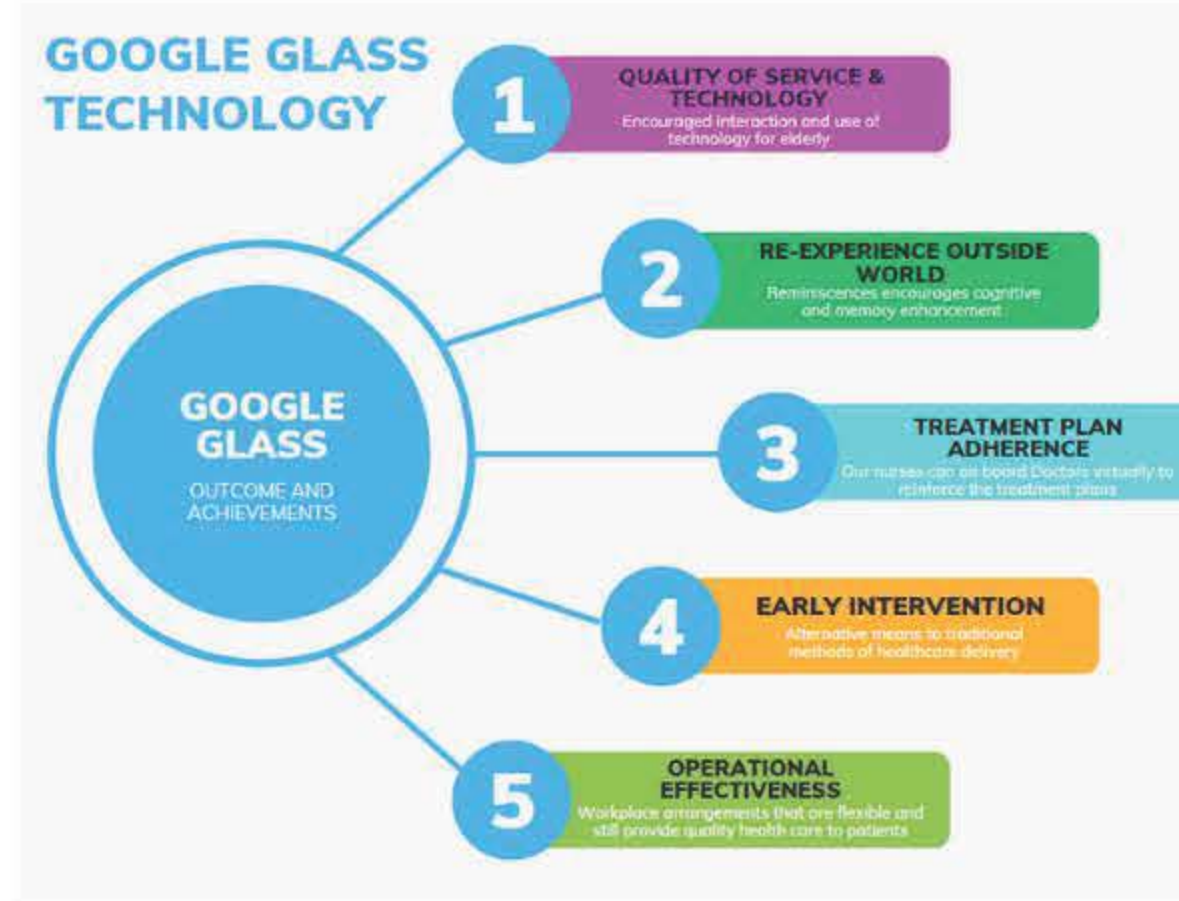
3. Adoption of Google Glass. The third approach works concurrently with the second approach, and was aimed to expand service capacity and improve service quality through adoption of technology.
The nursing care process was then deconstructed – routine nursing care tasks delegated to NAs who have already built rapport with most of the patients. Trained NAs competently perform these tasks at patients' homes while being remotely guided by the Registered Nurses (RN). Eliminating travel time and allowing consecutive visits. Thus, nurses and doctors can provide care for more patients in a day.

Escalation Workflow during Teleconsultation

Google Glass HN Teleconsultation	
Google Glass HM Teleconsultation/ Physical Visit	
GP Clinic/ Polyclinic/ Social Issues	
Specialist Outpatient Clinic/ Accident and Emergency (A&E)	

4. Re-experiencing the Outside World. through introducing remote-based programmes Cognitive and Memory enhancement activities were redesigned from conventional methods which utilise static and repetitive materials. A virtual visit to nostalgic places improves the relatability of topics for the patients, as well as provides a "window" to the current state of society outside the home. Asides from keeping patients aware of the happenings outside their home, it also lends a sense of autonomy to home-bound patients by providing them the opportunity to make simple, everyday decisions. For instance, a virtual visit to a food stall would allow patients to view the food options and choose the food that they want to purchase instead of leaving the decision to the NA running the errand.

OUTCOME AND RESULTS

GOOGLE GLASS TECHNOLOGY
1. QUALITY OF SERVICE & TECHNOLOGY
2. RE-EXPERIENCE OUTSIDE WORLD
3. TREATMENT PLAN ADHERENCE
4. EARLY INTERVENTION
5. OPERATIONAL EFFECTIVENESS

Client Satisfaction Survey Pre and Post Intervention

Image 1. Client Satisfaction Survey BEFORE Interventions

After implementation of remote teleconsultations (image 2), there were general improvements in all parameters, with particular improvements in service hospitality and quality.

The team measured Manpower and Service Capacities as our Process Measures. Manpower Capacity measures the maximum amount of work tolerated by a fixed number of staff, whereas Service Capacity refers to the maximum number of clients the unit can serve, accounting for Manpower Capacity.
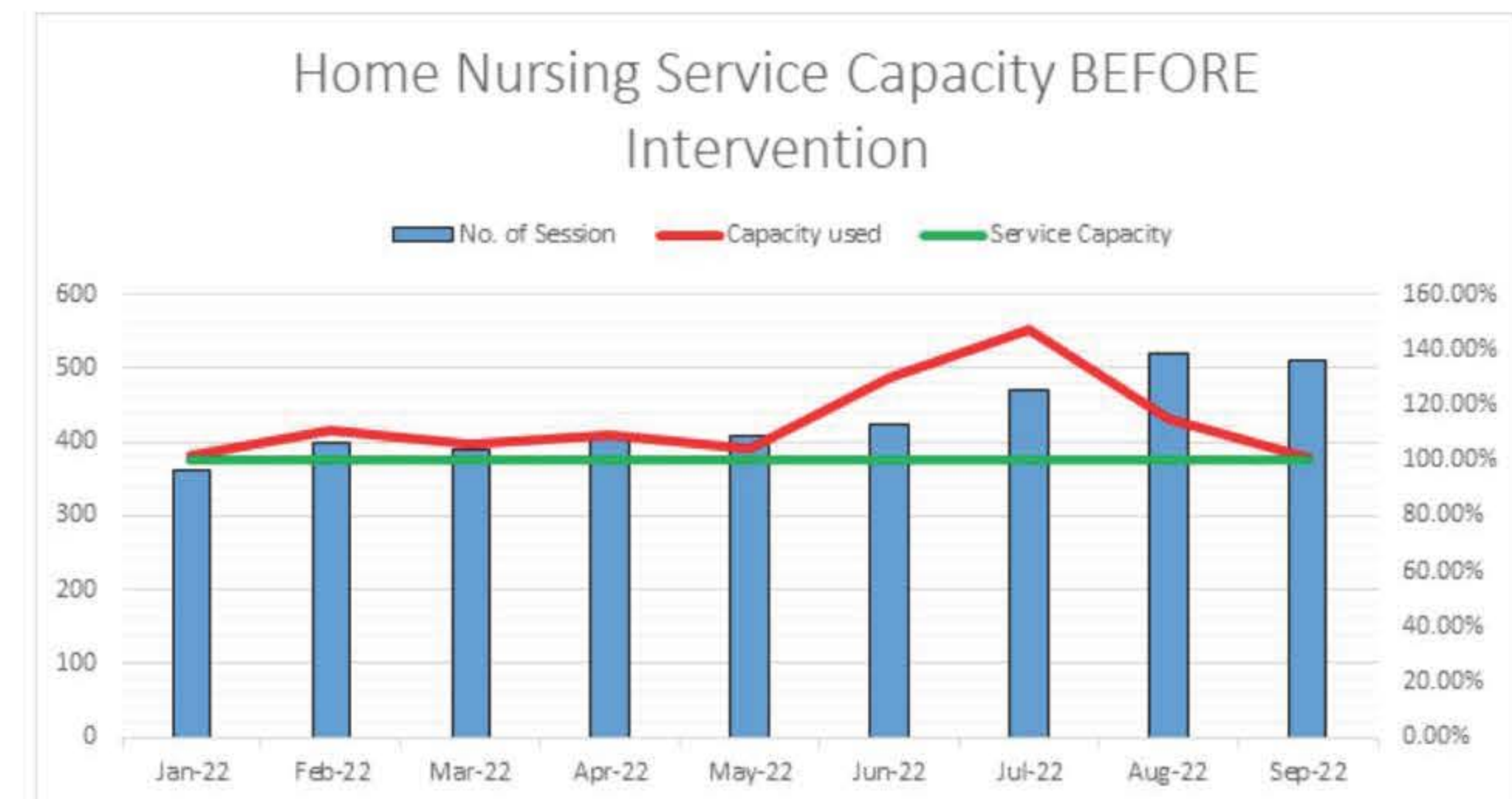
Image 2. Client Satisfaction Survey BEFORE Interventions

Home Nursing Service Capacity BEFORE Intervention

Image 3. HN Service Capacity Before Interventions

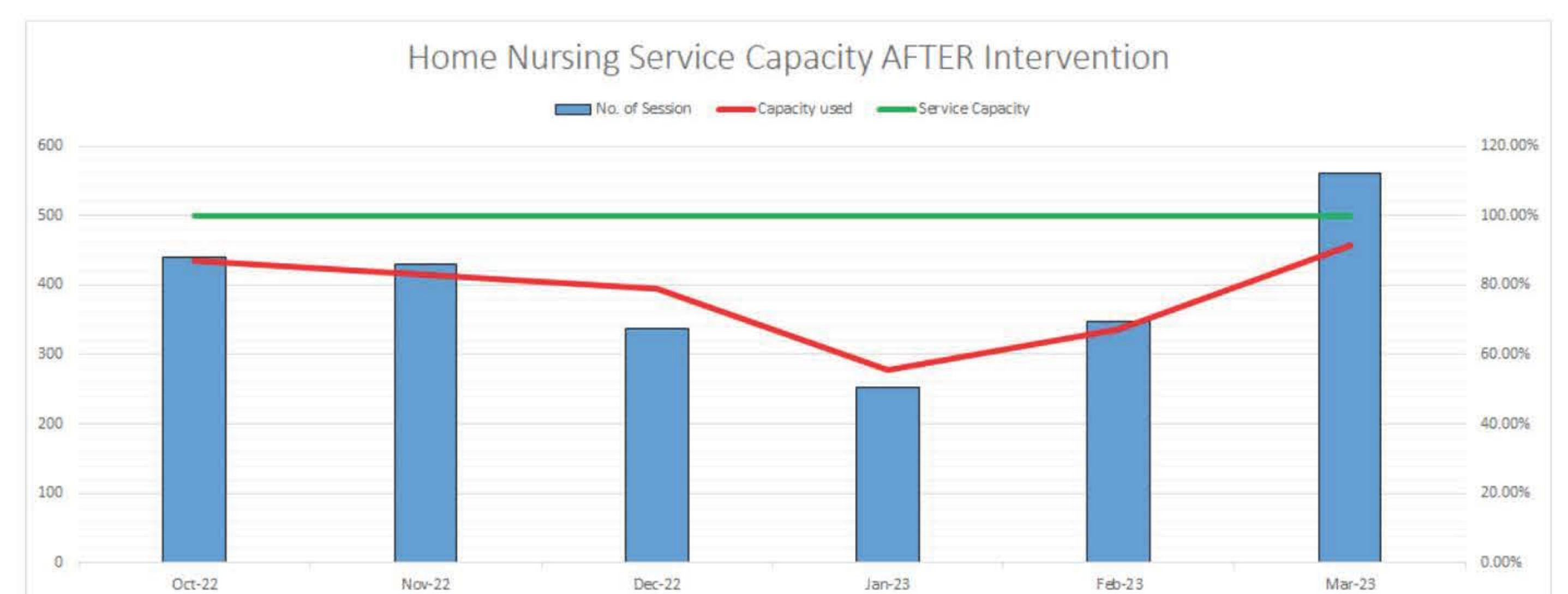**Home Nursing Service Capacity AFTER Intervention**

Image4. HN Service Capacity After Interventions

After implementing teleconsultations (Image 4), the Manpower Capacity fell to an average of 70% at the same workload. Concurrently, Service Capacity at the given number of staff increased from a maximum of 380 clients to 500 clients. Essentially, the unit can now support a greater number of clients with same level of manpower and time with the use of Google Glass teleconsultations.

LESSONS LEARNT

1. With its capabilities and design, Nursing Aides can assist in teleconsultation effectively with its hands-free design.
2. Increasing the monitoring provides more information about patient condition and allows early intervention.
3. Google Glass allows our bed-bound/home-bound patient to re-experience the world beyond the confines of their homes.
4. After careful observation through the google glass, Nurses can guide NAs to perform an early intervention on the spot to arrest and retard any deterioration before the next physical visit.
5. It provides an alternative means for the patient instead of going to GP doctor and A&E through health teaching and nursing interventions.