

## **Project Title**

Glaucoma Community-based Augmented Review & Empowerment (G-CARE)

## **Project Lead and Members**

Project lead: Dr Chee Wai Kitt

Project members: Bastari I, Yong C.1, Lan R, Sarifah S, Lim L.L, Toh Y.C., Yip C.C.

## **Organisation(s) Involved**

Yishun Health

## **Healthcare Family Group(s) Involved in this Project**

Allied Health, Medical

## **Applicable Specialty or Discipline**

Ophthalmology, Optometry/Optometrists

## **Project Period**

Start date: not indicated

Completed date: not indicated

## **Aims**

To improve the current screening method by introducing new screening mechanism at the First-level Community Eye Screening (FiLCES) & Second-level Eye Consultation Team (SeLECT)

## **Background**

The current community eye screening (i.e. via MOH Project Silver Screen (PSS)) is unable to detect one of the common causes of vision loss, glaucoma (often asymptomatic in the early stages)

## **Methods**

See poster appended/below

## **Results**

See poster appended/below

## **Conclusion**

G-CARE contributes to help keep the population healthy and focus on resident/patient wellness, self-care education, early detection & prevention of eyediseases. A system thinking approach is key to shaping up the G-CARE model to enhance CHESS. CHESS + G-CARE continues to be a feasible & cost- effective eye care model to screen and manage eye conditions including glaucoma more comprehensively in the community.

## **Project Category**

Care & Process Redesign

Quality Improvement, Design Thinking

## **Keywords**

Vision Loss, Screening, Glaucoma, Eye Condition, Technology, Blindness, Sustainability

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# Glaucoma Community-based Augmented Review & Empowerment (G-CARE)

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## Background/Aim

### Background

The current community eye screening (i.e. via MOH Project Silver Screen (PSS)) is unable to detect one of the common causes of vision loss, **glaucoma** (often asymptomatic in the early stages)

### Aim

To **improve the current screening method** by introducing new screening mechanism at the **First-level Community Eye Screening (FILCES) & Second-level Eye Consultation Team (SeLECT)**

**Better detect the common causes of vision loss especially glaucoma**

**Improve the screening tests**

**Train and expand the skills of community nurses & optometrists**

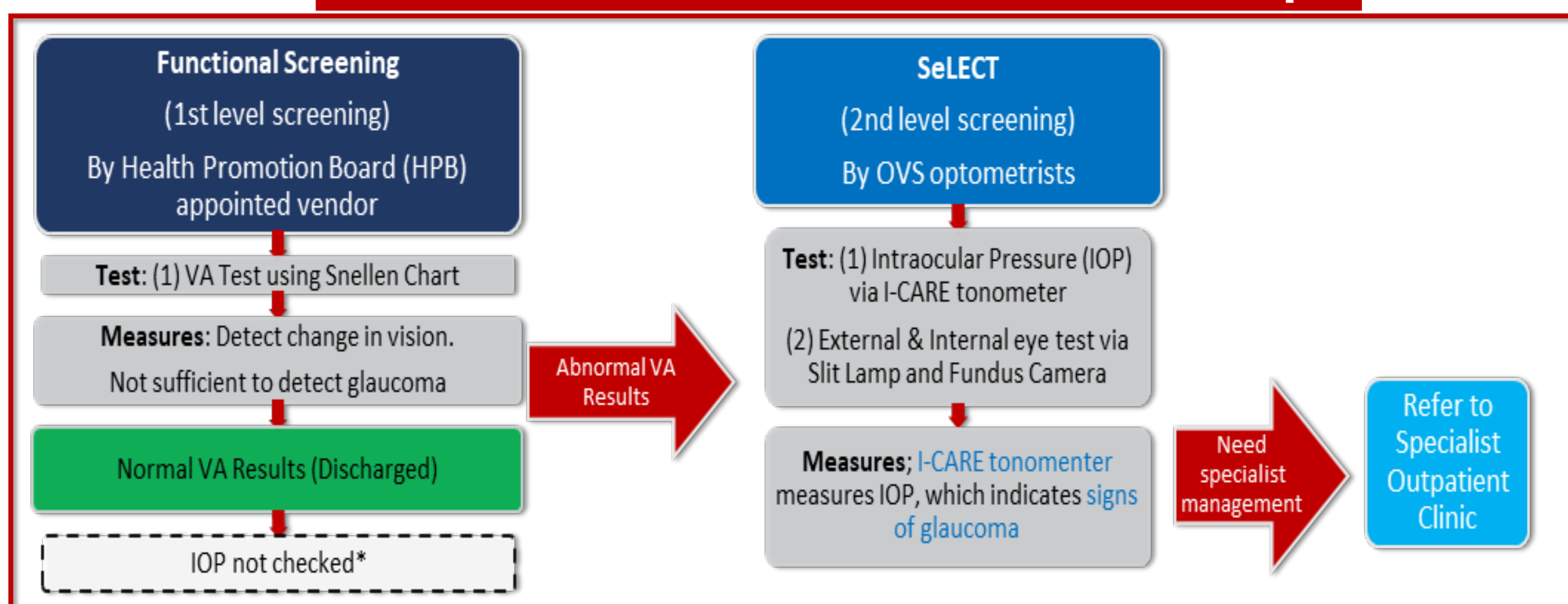
**Maintain the cost-effectiveness and right-siting of eye care**

## Methodology/ Solutions

### Gap Analysis:

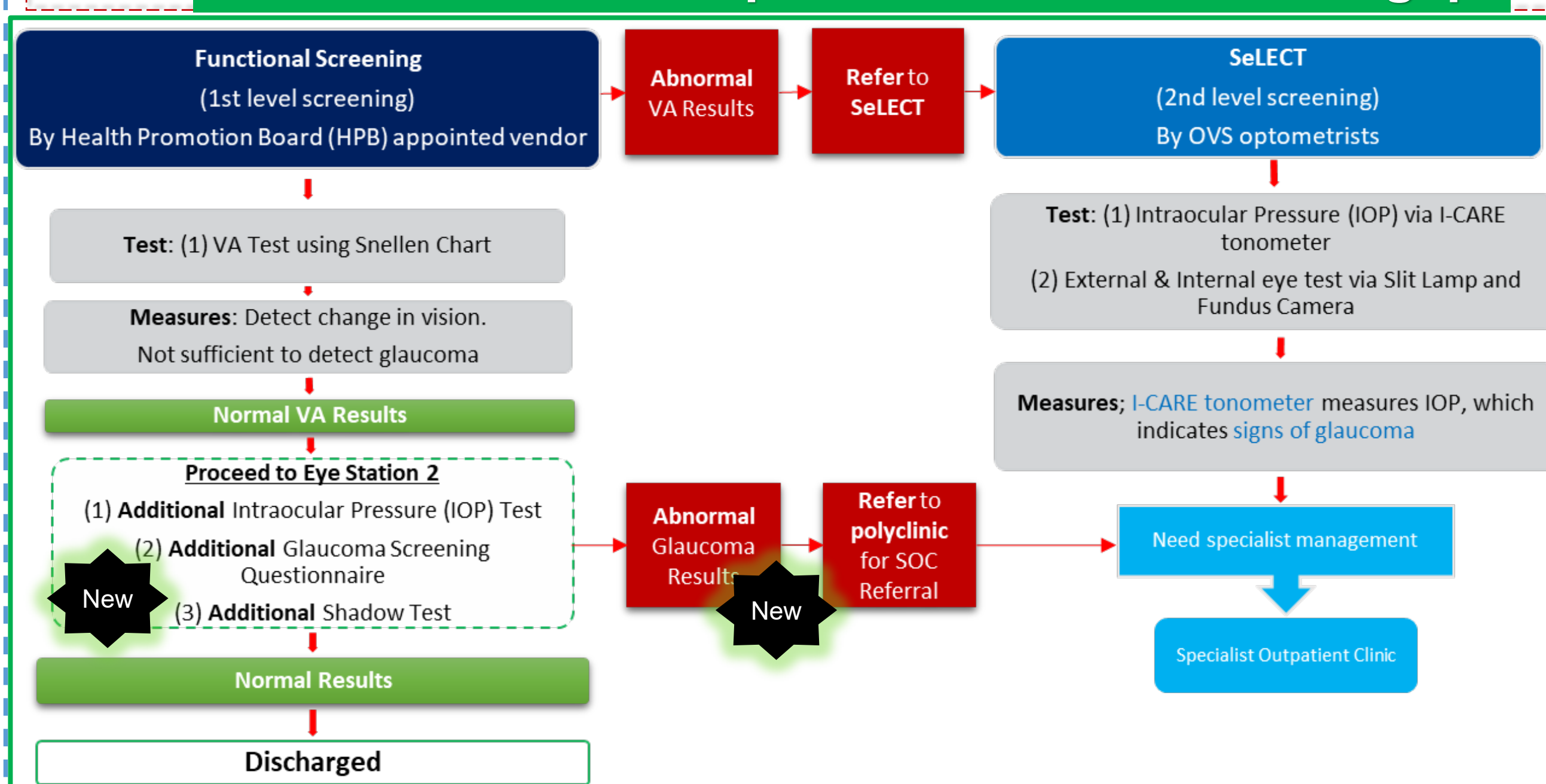
Assess the current workflow & identify areas to improve

### As-Is Workflow: Assessment of Gap



❗ **Flaw** : Seniors with normal Visual Acuity (VA) **DO NOT** get their IOP measured. There is a need for **additional tests** to screen for glaucoma.

### To-Be Workflow : Improvements to close the gap



## Methodology (Continue)

The team incorporated G-CARE into the Functional Screening with the following strategies:

**G** – Glaucoma screening tests are added to the current CHES programme

**C** – Community-based setting leveraging on community partners e.g. Wellness Kampung volunteers

**A** – Augment current Functional Screening tests to improve glaucoma screening in the community

**R** – Review & manage patients with stable eye condition through Functional Screening + G-CARE in the community

**E** – Empower patients & the public alike through engagement, education & technology enablers.



## Results & Project Impact

- G-CARE is able to better detect glaucoma due to the improved screening mechanism.

Seniors Referred for GCARE*	Pass GCARE	Fail GCARE	% Abnormality
210	196	14	7%

### Clinical outcome:

- 7% of seniors** with normal VA have abnormal glaucoma assessment



### Functional outcome:

- Seniors identified to be at risk of developing glaucoma were referred to SOC for assessment and early treatment to prevent blindness

### Experience outcome:

- Residents get a more comprehensive screening with G-CARE

### Cost-to-patient outcome:

\$10-\$39 per patient	Indirect cost
<ul style="list-style-type: none"><li>By avoiding polyclinic or SOC visits</li></ul>	<ul style="list-style-type: none"><li>In manpower cost-savings, by training community nurse to conduct screening, instead of optometrist</li></ul>
	
Short-term Benefits	Long-term Benefits
<ol style="list-style-type: none"><li>Easy access to community eye care</li><li>Improved management of uncomplicated eye conditions in the community obviating hospital referral</li><li>Early detection of eye conditions especially glaucoma for timely treatment and improved outcome</li></ol>	<ol style="list-style-type: none"><li>Reduced healthcare costs &amp; continued right-siting of eye care</li><li>Lowered manpower costs</li><li>Promoting eye care by community nurses and optometrists as ophthalmologist extenders in the community</li></ol>

## Sustainability & Follow-up

**Sustainability:** (1) **Standard operating Procedures (SOP)** for various steps and **standardized work processes** (2) Regular **competency assessment** (3) Findings by community nurse compared to findings from optometrist to **check for concurrence** (4) Ad hoc **in-service training**.

**Follow-up:** Seamless workflow incorporating GCARE at level 1 screening without an additional station.

## Conclusion

G-CARE contributes to help keep the population healthy and focus on resident/patient wellness, self-care education, early detection & prevention of eye diseases. A **system thinking approach** is key to **shaping up the G-CARE model** to enhance CHES. CHES + G-CARE continues to be a **feasible & cost-effective** eye care model to **screen and manage eye conditions including glaucoma more comprehensively** in the community.