Development of SERA, A Patient Centred App to help Patients Navigate Their ERAS® Colorectal Surgical Journey

kwang_yeong_how@ttsh.com.sg

How K.Y, Kong L.P, Hu Y, Lin J, Norafida I, Chi H.J.A, Li Jennifer (Geriatric) Darmawirya P, Sng N.J.A, Wang B, Goh Cheng Cheng (Stoma), Lim Zi Wei, Allister Tham, Teo Kaiting, Hou Meng Chong (Pharmacist) Poh Bee Lian (PACE), Soh Yee Man (OPAT), Yang Yang (OT) Rash Tan Sock Teng (PSA) Lim V.Q.

Tan Tock Seng HOSPITAL

Problem Statement

Development of perioperative care has significantly improved patient surgical outcomes. However, this also means that the perioperative care journey has become more complex for both the patient and care provider.

ERAS® is a good example of a perioperative care program in Tan Tock Seng Hospital (TTSH).

Compliance to the many care elements of ERAS® is crucial to optimize outcomes. The ability to regularly remind and monitor patients' involvement in the surgical journey can help improve compliance to ERAS®.

Project Aim

To develop a patient-centred digital application, SERA, to remind and monitor the patient's compliance to tasks they have to perform before surgery and after discharge.

Ensure that information in the app is patient specific and derived form a single source of truth.

Ensure continuous support for the app for sustainability and scalability.

Lessons Learnt

The use of EPIC has allowed faster deployment of the surgical patient journey app. It also enabled for a single source of truth.

However, it is limited by the inbuilt functions of My Chart Care companion and language limitations (No Chinese) .

The use of EPIC by several institutions also means that future iterations, improvements and scaling may be restricted and hampered by the need for approvals at

Poor digital literacy in the elderly, which is the majority in this patient group, means recruitment is slow.

Potential Solutions

Designing a patient-centred digital Surgical Enhanced Recovery Assistant (SERA) for patients in the ERAS® Colorectal Surgery program in TTSH, to remind them of tasks and monitor their compliance and progress in their surgical journey.

Coordinator's View to Monitor Patient Compliance

This app leverages on the functions of MyChart Care Companion, the patient facing module of EPIC, to ensure that there is a single source of truth, continuous support and sustainability to improve the app. Success of this module can provide a framework to scale to other surgeries or be a use case for other patient journey conditions.
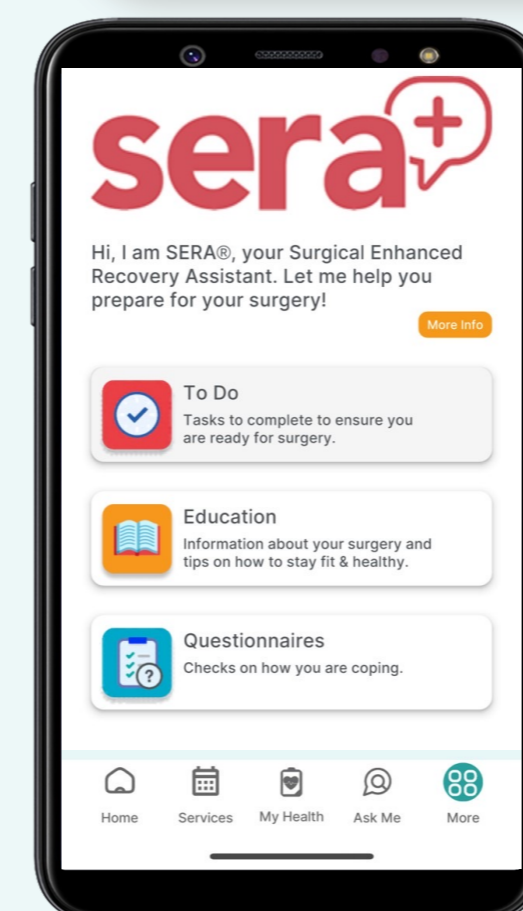
Outcomes & Impacts

The first iteration of SERA has been released in May 2023.

Recruitment of patients is ongoing.

Future Works

Future iterations of the app are already in progress based on patient and provider feedback, with improved functions such as patient entered data and vital signs monitoring.

The target is to recruit 50 patients and to perform a patient satisfaction survey by 2nd quarter of 2024.

Future goals include to improve app's user experience.

Extend app to patients from other ERAS® Subspecialties.