

MyVisit app - Transforming Outpatient Visit and Improving Patients' Experience



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Background

With an ageing population and the rising burden of chronic diseases, more patients are expected to utilize healthcare services. By 2030, a quarter of Singapore's population will be above the age of 65 and the number of outpatient attendances in the SingHealth cluster has been increasing with a compound annual growth rate of 3.45% from 2016 to 2020. This upward trend in attendances is coupled with evolving patient needs and increasing healthcare expenditure. In a post-pandemic world, reducing the dwell time in the hospital to reduce potential exposure to infection is a new priority. In this new normal, care providers need to reimagine and transform outpatient visits to better serve patients and their caregivers.

A typical outpatient journey would involve some waiting time and several service points for patients and their caregivers prior to a doctor's consultation. During the consultation, doctors review test results, advise patients on the proposed treatment plan, share relevant educational materials and prescribe medications. Focus group interviews with patients revealed that patients tended to experience information overload during consultations, experienced difficulties recalling and adhering to medical advice from their doctors, and remembering instructions pertaining to their subsequent consultations.

The Future Outpatient Journey Task Force was set up to transform the end-to-end outpatient journey, from triage in the primary care setting to specialist consultations in tertiary hospitals, spanning the care continuum. One of the initiatives from the Task Force is a patient-centric outpatient app -- MyVisit app, which has proven useful in both the pre- and post-pandemic settings.

Methodology

A multidisciplinary team comprising doctors, nurses and personnel from Operations, Communications, Future Health System, Marketing Communications, Information Technology and the Office for Service Transformation, was involved in app development. The team utilized the iterative Agile Development methodology for the purpose of developing user-centric services. A total of 8 Agile sessions were facilitated by Scrum Master from IHIS. The sessions helped the team to gather requirements, brainstorm, conceptualise, design and develop a patient-centric solution.

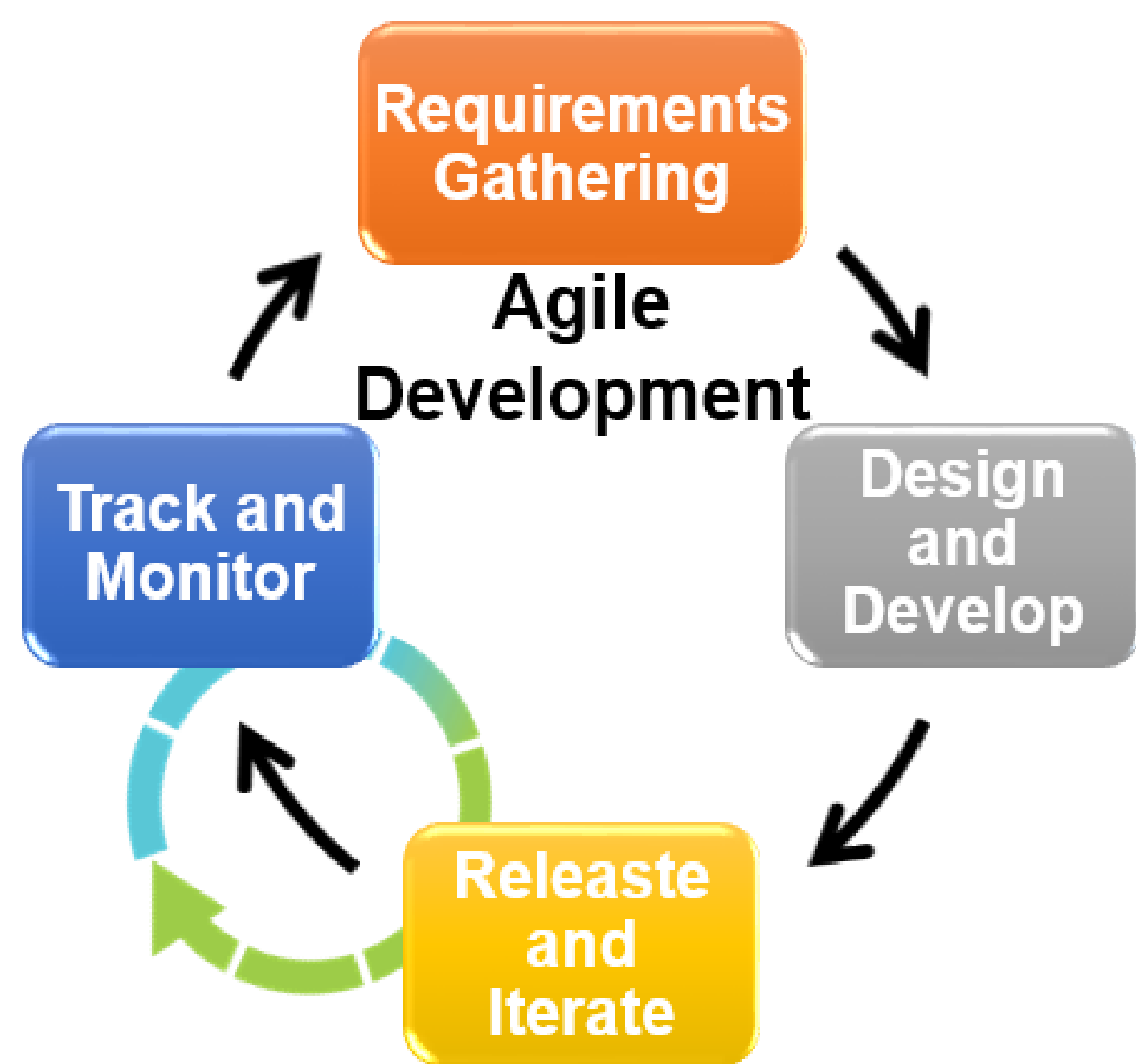
Requirements Gathering
 The business requirements were defined, and supplemented with user stories through active involvement of stakeholders. Requirements were prioritised, and the team focused on executable requirements and performance indicators.

Design and Develop
 The team executed the design and developed in parallel. Inputs were gathered for the design as the team developed the solution.

Release & Iterate
 Released initial solution to a larger group of users and iterate the solution. Defined the tracking / monitoring mechanisms and success factors for the solution.

Track and Monitor
 Collected data was compared to the expected outcomes, and areas for improvement were identified. Appropriate plans were determined to achieve the intended results.

Patient interviews were conducted to evaluate the initial solution and assess users' receptiveness to the proposed functional components of the mobile app. These components included the different placement of icons that were put on wireframe, as the team aimed to roll out an efficient, user-friendly and patient-centric solution to engage and empower patients in their care journey. Development activities also involved the review of workflow processes to support the MyVisit app, and marketing plan to raise awareness, as the team was cognizant that buy-in from staff and relevant stakeholders was crucial for the success of new initiative.

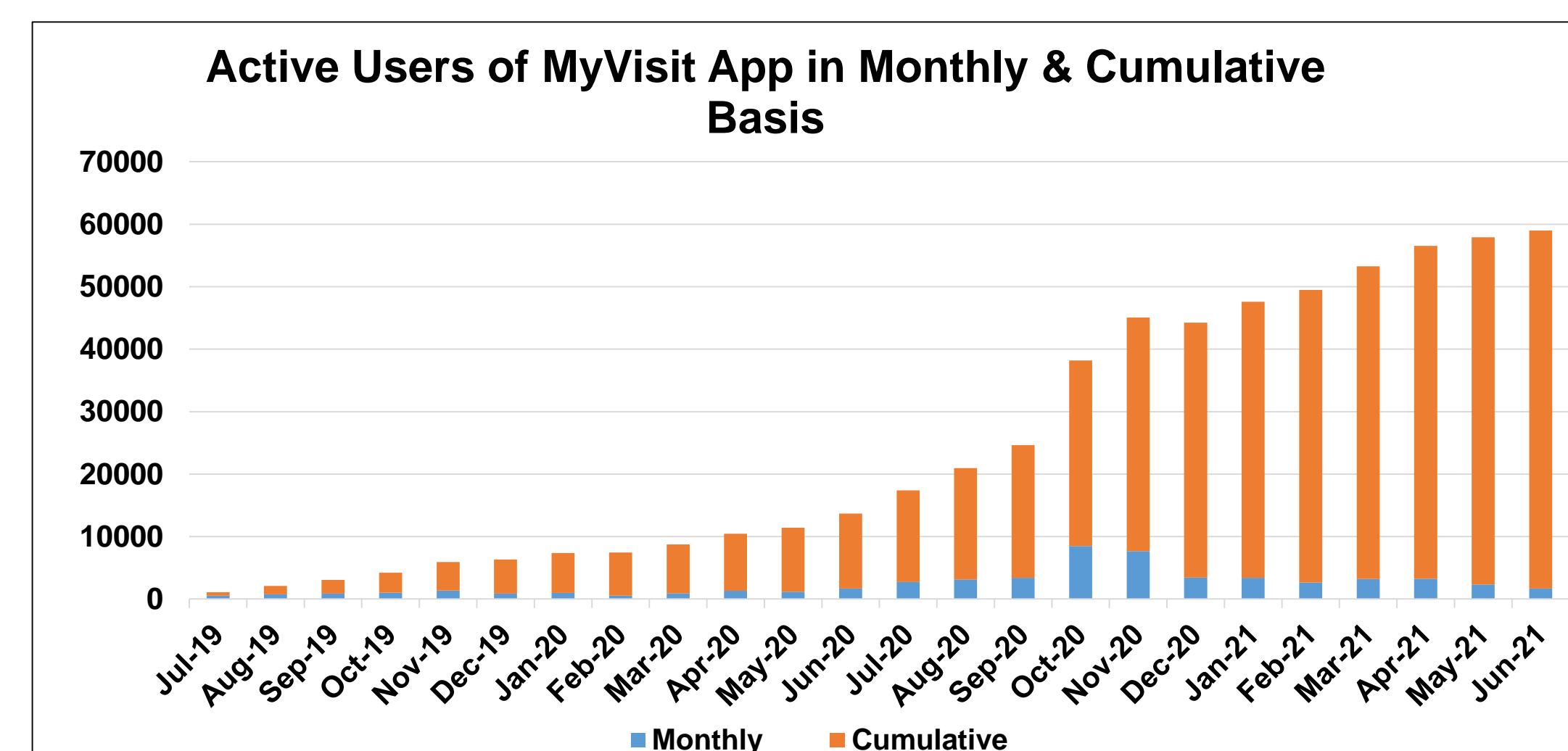
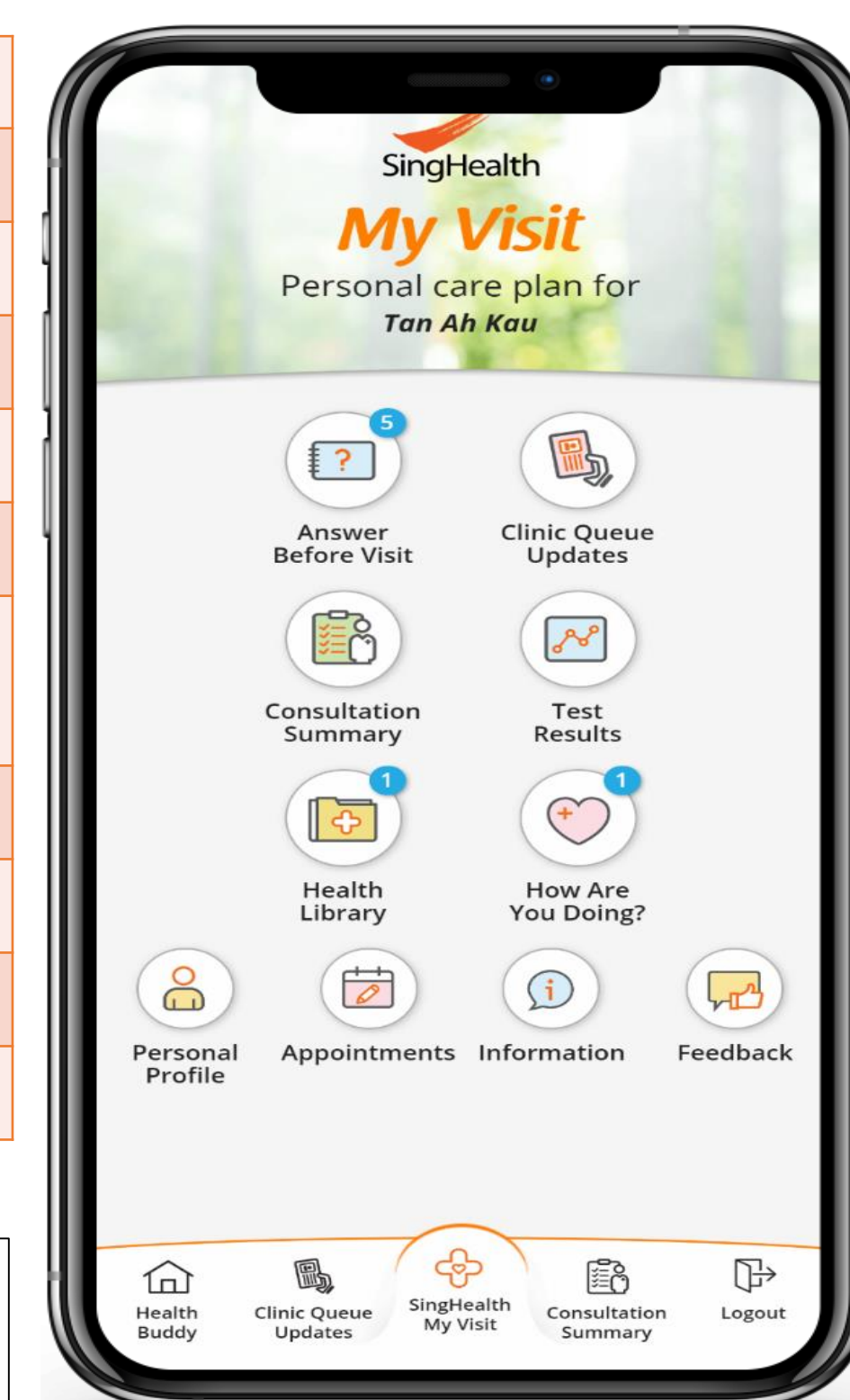


Results

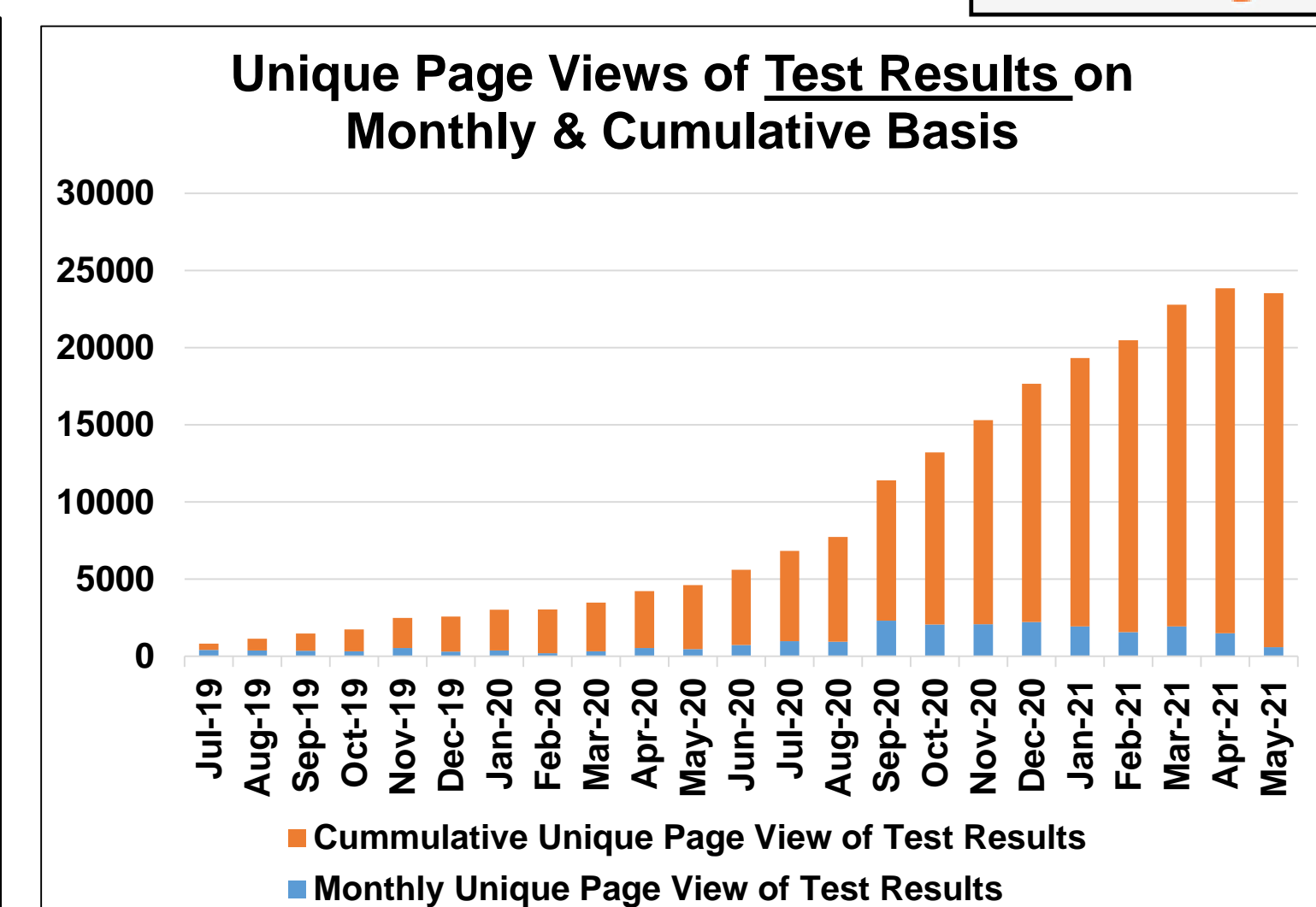
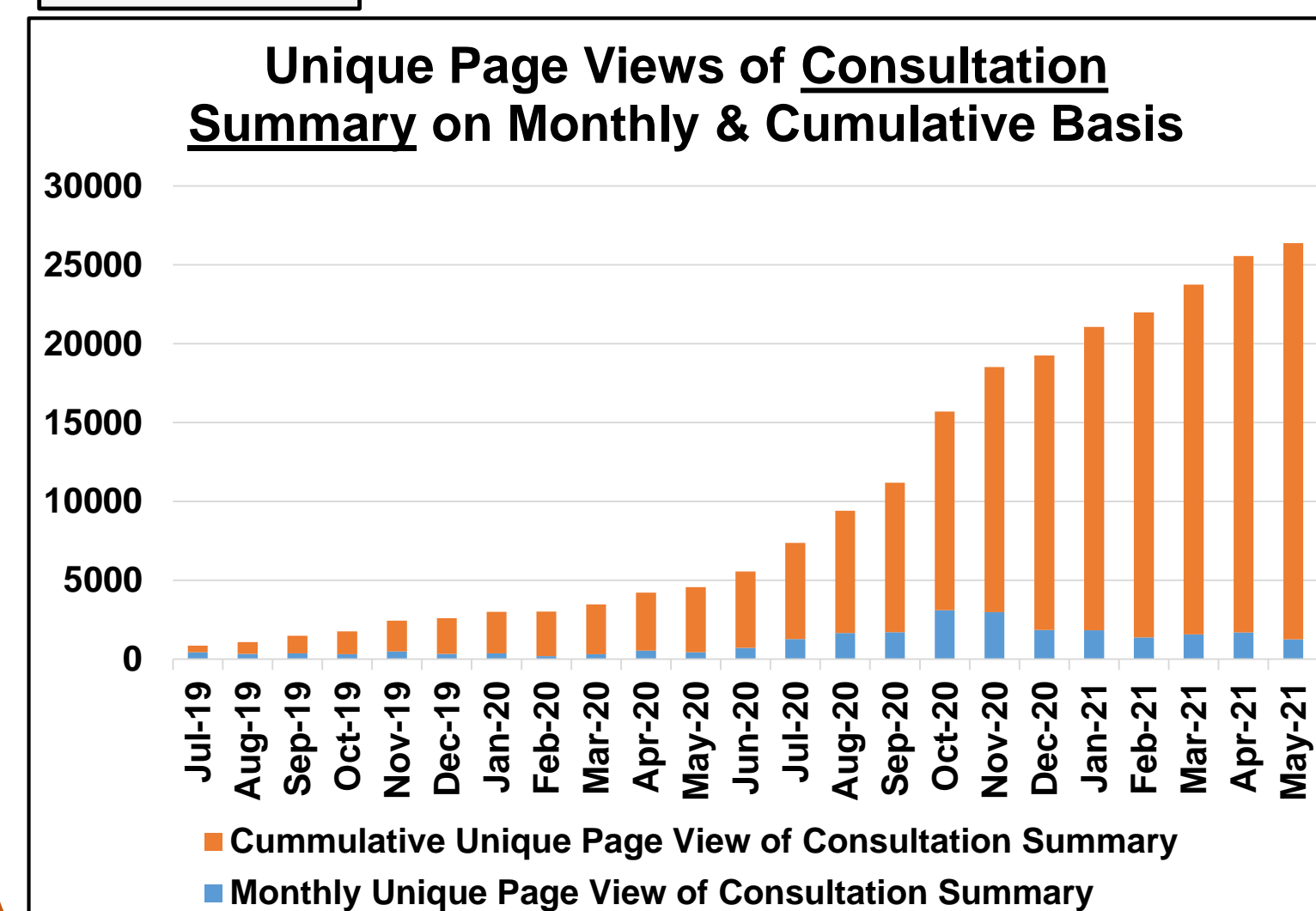
Through Agile Development, the project team developed a slew of functional components within an app that aimed to cover the key elements of an outpatient visit (Table 1). The finalized version of the MyVisit app was piloted at Level 3 of SGH Diabetes & Metabolism Centre.

| Feature | Description |
|-----------------------|--|
| Answer Before Visit | A pre-consult questionnaire on patients' health status |
| Consultation Summary | Summary of important points discussed at consultation |
| Health Library | Curated educational materials |
| Clinic Queue Updates* | Clinic queue status |
| Test Results | Diabetes-related test results with viewable trends |
| How Are You Doing | Patient-reported outcome measures (PROMs) questionnaires |
| Personal Profile | Allows patient to update personal details |
| Appointments* | Allows patients to view or change appointments |
| Information | General information about SGH |
| Feedback | Patient feedback |

*Pre-existing feature



Most popular features include Consultation Summary and Test Result Trending.



Conclusion

The Agile methodology has allowed the team to develop the patient-centric MyVisit app which has garnered **positive feedback from patients and their caregivers**. The **most frequently used features** of the app include the **Consultation Summary** and **Test Results** features. These features of the MyVisit app have transformed and improved patients' experience which **allowed patients to share information about their conditions with their family members and caregivers**, and **have empowered patients to care for their own health and wellbeing**.

The app has proven **useful to patients and their caregivers**, particularly at the peak of the ongoing COVID-19 pandemic, a period which saw a surge in active users of the MyVisit app. Using the various features of the **MyVisit app may have helped patients to reduce their dwell time in the hospital and risk of exposure to infection**. The team is also mindful of the evolving needs of patients and their caregivers, and will need to reassess these at regular intervals to ensure that the app continues to meet these changing needs.