

MYPRESTASI.KKM: QLL45 THE APP THAT MEASURES YOU

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INTRODUCTION

MyPrestasi.KKM is an application designed to provide an objective assessment of clinicians' performance, with a focus on accurately reflecting their clinical skills. Developed for clinicians in Malaysia, the app offers a user-friendly interface that simplifies data entry, requiring only essential information to be overseen by supervisors. The performance indicators are tailored to specific areas of medical practice. For the initial phase, the focus is on cardiothoracic surgery, with Coronary Artery Bypass Graft (CABG) selected as the primary skill for performance monitoring.

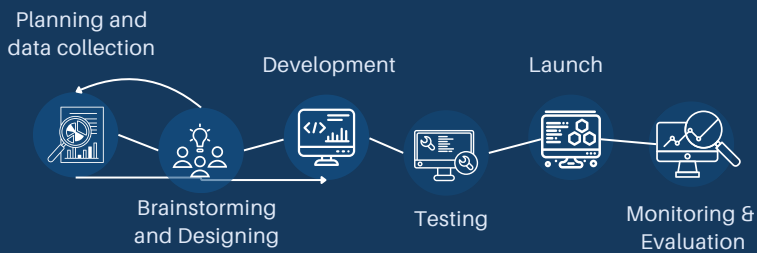


METHODOLOGY

MyPrestasi.KKM was developed in-house using Python and the Django framework, designed to streamline data entry while automatically generating Cumulative Sum (CUSUM) graphs (Figure 1) for precise and insightful performance evaluation. Drawing from data meticulously collected between 2017 and 2022 from a leading cardiothoracic center, the app ensures accurate and meaningful assessments for healthcare practitioners.

The app tracks two key performance metrics: Cardiopulmonary Bypass (CPB) time which is practiced to deliver blood using a mechanical pump and Cross-Clamping (CCT) time (Figure 3) which is duration of cross-clamp placed across the ascending aorta during CABG to prevent blood from entering the heart chambers for a dry motionless area. Research has consistently shown that shorter CPB and CCT times lead to better patient outcomes, making these indicators central to the objective of MyPrestasi.KKM to enhance the individual clinical performance and patient care.

PROJECT PHASE



RESULT

The skills being monitored must be relevant and justifiable to surgeons, with careful consideration of factors beyond surgical control, such as patient demographics and underlying co-morbidities (Figure 2). For this project, the focus is on implementing a risk-adjusted CUSUM model. Currently, the CUSUM graph generated is non-risk adjusted due to limitations in available data. However, MyPrestasi.KKM is designed for prospective data entry, allowing future integration of risk-adjusted CUSUM as more comprehensive data becomes available.

The initial benchmark set within MyPrestasi.KKM will evolve over time as continuous data entry enables refinement and adjustment, ensuring the tool remains responsive to ongoing clinical insights.

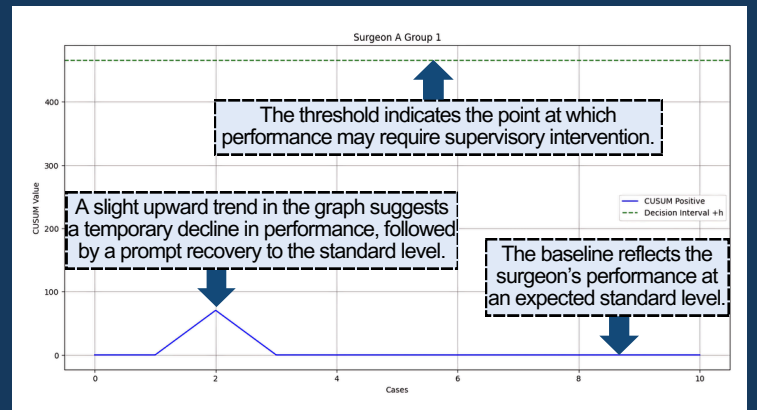


Figure 1: Sample of CUSUM graph of a surgeon's performance. Disclaimer: The data presented is for illustrative purposes and does not represent real data.

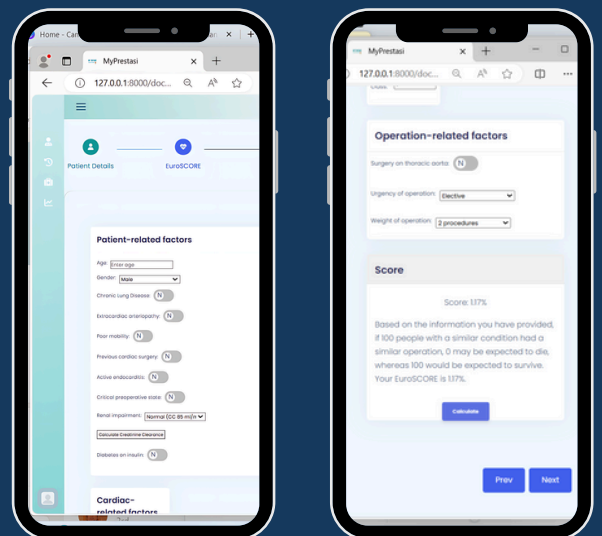


Figure 2: MyPrestasi.KKM on a mobile phone displaying EuroSCORE calculator which is used worldwide as a risk evaluation tool.

DISCUSSION

MyPrestasi.KKM is designed to benchmark individual clinical skills through continuous data revision, ensuring that the evaluation evolves in line with the clinicians' developing expertise. The app's flexible framework can be adapted to various medical specialties, offering a versatile tool for monitoring and enhancing clinical skills across different fields in the future.

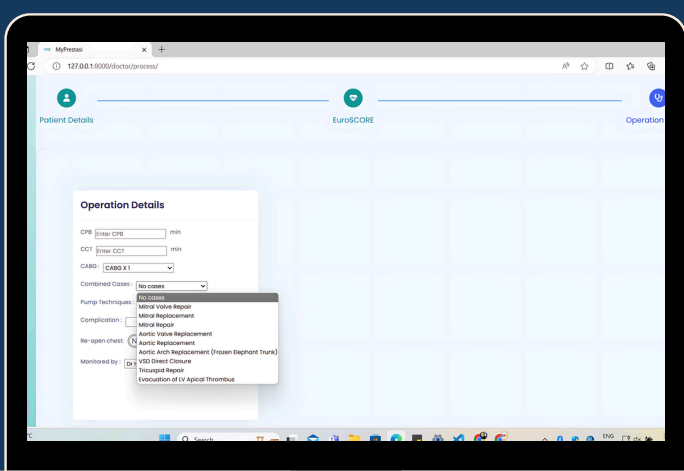


Figure 3: Details of the surgery including CPB and CCT which are the main indicators.

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