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**DESIGN OF A MOBILE APP TO ASSIST POST-MYOCARDIAL INFARCTION PATIENTS IN ADHERING TO MEDICATION AND THEIR FOLLOW-UP**

*Gunasekara BAPL<sup>1</sup>, Gunasekara GBN<sup>1</sup>, Gunathilake HANH<sup>1\*</sup>, Gunawardana WAN<sup>1</sup>, Handugala HDMA<sup>1</sup>, Ranaweera RKPS<sup>2</sup>, Wickramage SP<sup>3</sup>*

*<sup>1</sup>Faculty of Medicine, University of Moratuwa; <sup>2</sup> Department of Mechanical Engineering, Faculty of Engineering, University of Moratuwa; <sup>3</sup> Department of Physiology, Faculty of Medicine, University of Moratuwa*

*\*Corresponding author: [gunathilakehanh.20@uom.lk](mailto:gunathilakehanh.20@uom.lk)*

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**Background:** Myocardial infarction (MI) can result in irreversible death of heart muscles due to prolonged hypoxia. Recurrent MI significantly increases mortality and morbidity, negatively affecting patients' quality of life. Our research aims to improve medication adherence and follow-up care for post-MI patients by addressing key issues such as forgetfulness, medication side effects, complex drug regimens, and low health literacy through the proposal of a mobile application with innovative features to support post-MI patients.

**Methodology:** The research methodology is based on three interconnected objectives. First, a comprehensive literature review was performed to identify the causes of poor medication adherence and explore existing solutions. Next, we conceptualized potential systems by brainstorming intervention techniques and evaluating effective models from other healthcare systems. Finally, a comprehensive framework was designed for the mobile app, incorporating strategies for patient education and engagement. The app was designed to improve medication adherence and follow-up care for post-myocardial infarction patients. Technological solutions were explored and integrated to address identified gaps in adherence and compliance.

**Deliverables:** Considering all the possible interventions we explored, we decided to create a mobile app, "MICare", with more extensive features than many currently available apps. Our platform brings together all parties, patients, doctors, and caregivers on a single platform. In addition to these 3 conventional roles, we incorporated a virtual doctor to assist in decision-making within the app.

**Conclusion:** We aimed to address major issues identified earlier, developing a tool that promotes patient empowerment and encourages active involvement in their own healthcare. This includes improving medication adherence. In conclusion, our ultimate goal is to help create a healthcare environment where better adherence leads to improved health outcomes for post-MI patient.

**Keywords:** Medication adherence, Mobile app, Myocardial infarction (MI), Myocardial infarction recurrence (MIR), Patient monitoring