

Enhancing Government Hospital Resource Management Through Smart Technologies: A Survey of Healthcare Professionals in Sri Lanka

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Inefficiency in resource management is a significant challenge in Sri Lankan hospitals. Novel technologies such as Artificial Intelligence, the Internet of Things, Machine Learning, and Smart Systems have the potential to decrease this; An approach yet to be introduced to the local settings. This survey aimed to assess the need and identify research gaps to enhance resource management in Sri Lankan hospitals using smart technologies. An e-survey was conducted among 59 healthcare professionals, 93.2% working in Government Hospitals. Of the respondents, 35.6% were based in National Hospitals, 30.5% in Teaching Hospitals, 11.9% in Divisional Hospitals, 10.2% in District General Hospitals, 6.9% in Base Hospitals, 1.7% in Provincial General Hospitals and 3.4% in other government Hospitals. Among these professionals, 47.5% were doctors, 28.8% were consultants, and 22% were consultant trainees. A substantial majority, 98.3%, perceived current resource management as inefficient. However, 78% believed that smart technology could improve efficiency, 11.9% were unaware, and 10.2% disagreed. Types of resources inefficiently managed were identified as human resources, medication, consumables, equipment, investigations, spaces, vehicles, electricity, water, food, ward beds, surgical theaters, and ICU facilities. Suggested improvements focus on the development of an updated patient record database, a dynamic resource allocation system for staff, theaters, medications, and consumables that adjusts based on workload, and enhanced tracking systems for medical investigations. Additionally, it recommends a sophisticated stock management systems that automatically reorder medications by analyzing usage patterns, regular maintenance schedules for medical equipment, and the implementation of electronic systems for patient referrals, remote monitoring, outpatient appointments, and clinic management, as well as systems for analyzing trends in hospital admissions. In conclusion, the survey reveals a significant need for integrating smart technologies into Sri Lankan government hospital resource management, suggesting that such advancements could revolutionize the current healthcare system by enhancing efficiency and effectiveness.

Keywords: Resource Management, Sri Lankan Hospitals, Smart Technologies, Healthcare Efficiency

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