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Wireless Patient Monitoring System

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INTRODUCTION AND BACKGROUND

The progression in Information Technology and Communications has played a pivotal role in the healthcare sector, amongst the trending technologies wireless communications and wearable sensor technology have caught the attention of the health sector. It has opened up the opportunity of real time healthcare monitoring systems where timely diagnosis and treatment can go a long way in reducing unnecessary loss of lives primarily due to negligence of healthcare givers and due to low nurse-to-patient ratio. The main purpose of the proposed system is to facilitate efficient and timely patient monitoring services to critically ill patients.

RESEARCH OBJECTIVES

1. Implementation of mobile collaboration technology with the use of hand-held mobile devices allowing healthcare professionals to view, discuss and assess patient issues in real time.
2. Improving the health care givers clinical expertise and reduce chances of misdiagnosing patients.
3. Reducing mortality risk due to failure to provide timely assistance to patients.

METHODOLOGY

In this paper a real time patient monitoring system for critically ill patients that are in Intensive Care Unit is being proposed. It is an alarming system based on threshold values. The developed system is comprised of wearable sensors and android handheld device. The system is adaptable and has the ability to extract physiological parameters such as heart rate, blood pressure and temperature of patient. The extracted physiological data is being transmitted to Android handheld device using Bluetooth low energy which is then stored in a database.

EXPECTED OUTCOME

A system that wirelessly monitors a patient's physiological parameters in real time and transmits the data to an android hand held device via Bluetooth of a nurse at real time. Thus, providing audible alerts to the care giver and text message alerts to a doctor upon detection of abnormal patient readings. There is also provision of a distress button in which patients can press for 2 seconds that can immediately alert a doctor and request for assistance.

CONCLUSION

The proposed system framework is a portable primarily based Healthcare system. The scope of this system is the development and implementation of a real-time monitoring system for critically ill patients admitted in hospitals using wireless and IoT technologies.

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