

**WIRELESS REAL TIME PATIENT  
MONITORING SYSTEM**

---

**ENIGMA ALIFANDIKA  
MAINFORD MUTANDAVARI  
RUMBIDZAI CHITAKUNYE  
EVIDENCE M HUKUIMWE**

# Introduction

---

- The progressions 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.

# Main Objective

---

- 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 the 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 in 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 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, providing audible alerts 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.