**Abstract**

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# INTRODUCTION

## General Overview

In today’s digital era, healthcare industry is not confined to doctors and patients only, additionally there is another important supplement currently connected to it, i.e. technology. However, we know that the technology and science is rapidly evolving reaching to the next level but it can’t stop people from ageing, diseases or increasing population. It can make healthcare easier, faster, cheaper, and accessible anytime anywhere, as well as it is easy in pocket. As an emerging technology, **Internet of Things (IOT)** on other hand has opened up world of possibilities in health care environment, when connected to the internet health as well as medical devices collects critical data, give depth information about symptoms and trends, enables remote care and monitoring resulting patients for more control over their lives and treatments. The implementation of IOT in healthcare can done through using various IOT enabled health care devices, wearables , hearables, smart pills, computer added technologies and so on. The benefit of IOT enabled health care system over traditional health care system are *lower treatment cost and saves time, better patients experience and drugs management, improve outcomes of the treatment and reduces the error, early detection of symptoms and trends.*

## 2.2 Problem Statement

Health care and support must be considered as very important for each and every individual in today’s world as there are rise of many health problems and new diseases. As the number of patients are increasing rapidly day by day, it has become challenge for limited doctors to treat large number of patients resulting half of the population delayed or ignored from getting health care and services. There is a complete dependent of patient to doctor for health care and treatment. Keeping all this issue in mind, health sector has started to implement IOT in health care environment which will definitely open up new possibilities and benefits in health care sector as well as it will bring the challenges which need to be tackled wisely.

## 2.3 Research Question

*1. How the benefits of using IOT in healthcare environment overweigh the challenges it presents?*

2*. How can IOT support Health care staff to enhance their performance and efficiency?*

3. *Role of IOT health devices in detecting symptoms and trend?*

## 2.4 Aim and objectives

* The main aim of this research is to determine the benefits of using IOT in health care sector and to solve the challenges it presents.
* To identify the role of IOT devices in Health care and treatments.

## 2.5 Outline of Thesis

* **Introduction**: It includes the introduction of topic, problem statement and research question that the research will answer. It also includes aim and objective and structure of the report.
* **Literature Review**:
* **Methodology**:
* **Discussion and Implication of research** :
* **Conclusion**:

# LITERATURE REVIEW

1. **Wearable and Internet of things for health** (Metcalf, Milliard, Gomez, & Schwartz, 2016)

* The main purpose of this research paper was to demonstrate the customer driven innovation and actual pros of interconnecting things in health environment in order to achieve triple aim of better, cheaper and faster health care solution.
* The use of modern wearables such as Fitbit health monitor, google glass innovates new personalized form of the health care where consumers are themselves self-monitoring , analyzing and managing their health whereas the providers works to enhance consumers experience of health care.
* Implementation of IOT enabled wearables enhances the quality of health care as it helps in shortening the transition time between ambulance and emergency room as well as eliminates any complexity that could arise in transition.

1. **The Internet of Things for basic nursing care** (Mieronkoski et al., 2017)

* Its main idea is to introduce concept of Internet of things to nursing audience by illustrating the state art of IOT based technology and devices that are used in Nursing Care environment.
* IOT helps in automation of patients as well as hospital environment so as to collect and manage data that could enhance the quality of health care as well as safety of patients.
* With implementation of IOT in health care, it opens up some of the challenges such as privacy and transparency of new technology among the stakeholders of health sector.

1. **The Internet of things for Health Care: A comprehensive survey** (Riazul Islam, Daehan, Humaun Kabir, Hossain, & Kyung-Sup, 2015)

* It is a survey based research which survey the advances in IOT based technologies and review the state of art of network architecture, application as well as industrial based IOT healthcare solution.
* Technologies such as cloud computing, Grid computing, AI, Big data, wearables and networks has opened a world of possibilities in health care sector.
* With implementation of IOT its security requirement such as Privacy, Confidentiality, Integrity, availability. Authorization, authentication and so on must be fulfilled to maximize its benefit and enhance quality of physical as well as mental health.

1. The Internet of Things in Health care Oxford (Eysenbach et al., 2018)

* This article mainly focused on providing the overview of landscape for healthcare through IOT used in Oxford as well as highlighting the current position of IOT and its key challenges.
* Implementing Wearables and devices as a part of IOT could give patient the sole ownership of their health that could detect proactive health behavior changes which could prevent health and better management satisfaction of own health.
* Implementation could face challenges such as computation and energy limitation, scalability, multiplicity of devices and so on.

# METHODOLOGY

# DISCUSSION AND IMPLICATIONS OF RESEARCH

# CONCLUSION

# REFERENCES