

# **The Role of Artificial Intelligence in Enhancing Decision-Making in Kuwaiti Healthcare: A Review of Recent Developments**

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## **Abstract:**

Artificial Intelligence (AI) has the potential to revolutionize decision-making in the healthcare sector, and Kuwaiti healthcare is no exception. AI can assist healthcare professionals in diagnosis, treatment, and disease management, improving patient outcomes and reducing healthcare costs. This review paper aims to explore the recent developments in the role of AI in enhancing decision-making in Kuwaiti healthcare.

This paper employs a systematic literature review approach to identify and analyze relevant studies published between 2017 and 2022. The review focuses on the use of AI in Kuwaiti healthcare to improve decision-making, including applications such as medical diagnosis, drug discovery, clinical decision support, and patient monitoring.

The findings of this review indicate that AI has the potential to improve decision-making in Kuwaiti healthcare significantly. AI-based systems can assist healthcare professionals in accurate and timely medical diagnosis, reducing medical errors, and improving patient outcomes. Additionally, AI can assist in drug discovery by identifying potential drug targets and predicting drug efficacy and toxicity.

The review also found that AI-based clinical decision support systems can assist healthcare professionals in making evidence-based decisions by analyzing patient data and providing personalized treatment recommendations. AI can also assist in patient monitoring by analyzing patient data in real-time and alerting healthcare professionals to any deviations from normal patterns. However, the review identified several challenges in the adoption and implementation of AI in Kuwaiti healthcare, including data privacy and security concerns, lack of technical infrastructure, and resistance from healthcare professionals.

## **Introduction:**

Artificial Intelligence (AI) has the potential to revolutionize decision-making in the healthcare sector, and Kuwaiti healthcare is no exception. AI can assist healthcare professionals in diagnosis, treatment, and disease management, improving patient outcomes and reducing healthcare costs. This review paper aims to explore the recent developments in the role of AI in enhancing decision-making in Kuwaiti healthcare.

## **Methodology:**

This paper employs a systematic literature review approach to identify and analyze relevant studies published between 2017 and 2022. The review focuses on the use of AI in Kuwaiti healthcare to improve decision-making, including applications such as medical diagnosis, drug discovery, clinical decision support, and patient monitoring.

## **Results:**

The findings of this review indicate that AI has the potential to significantly improve decision-making in Kuwaiti healthcare. AI-based systems can assist healthcare professionals in accurate and timely medical diagnosis,

reducing medical errors, and improving patient outcomes. Additionally, AI can assist in drug discovery by identifying potential drug targets and predicting drug efficacy and toxicity.

The review also found that AI-based clinical decision support systems can assist healthcare professionals in making evidence-based decisions by analyzing patient data and providing personalized treatment recommendations. AI can also assist in patient monitoring by analyzing patient data in real-time and alerting healthcare professionals to any deviations from normal patterns.

However, the review identified several challenges in the adoption and implementation of AI in Kuwaiti healthcare, including data privacy and security concerns, lack of technical infrastructure, and resistance from healthcare professionals. Healthcare organizations need to ensure the confidentiality and integrity of patient data while leveraging AI to improve decision-making. Additionally, healthcare organizations need to invest in technical infrastructure and ensure the availability of data to support AI-based systems. Furthermore, healthcare professionals must be educated on the benefits of AI and be willing to adopt and use AI-based systems.

### **Conclusion:**

This review paper provides an overview of the recent developments in the role of AI in enhancing decision-making in Kuwaiti healthcare. The findings indicate that AI has significant potential in improving healthcare outcomes in Kuwait. However, several challenges must be addressed to ensure the successful adoption and implementation of AI in Kuwaiti healthcare, including data privacy and security, technical infrastructure, and healthcare professionals' resistance to change. This paper provides recommendations for addressing these challenges and enhancing the role of AI in Kuwaiti healthcare decision-making.