



# Using Artificial Intelligence In Patient Safety: A Systematic Review

Reza Abdollahi<sup>1\*</sup>, Zahra Heydari<sup>2</sup>, Esmail Najafi<sup>3</sup>

<sup>1</sup>Urmia University of Medical Sciences, Urmia, Iran

<sup>2</sup>Ardabil University of Medical, Ardabil, Iran

<sup>3</sup>Department of Health Education, Khalkhal Faculty of Medical Sciences, Khalkhal, Iran

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**\*Corresponding Author:**  
Urmia University of Medical  
Sciences, Urmia, Iran

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## ABSTRACT

**Introduction:** Artificial intelligence uses previous algorithms and predictors to predict risk factors that threaten patient safety. The desire to use artificial intelligence in safe and effective patient care has recently increased and is a growing trend. This study aimed to identify and describe the applications of artificial intelligence in safe patient care through a literature review.

**Search Strategy:** his article is a systematic review study that was conducted in 1402 by searching the English language databases Scopus, PubMed, Web of Science, Proquest, EMBASE, and Google Scholar from 2018 to 2024 and Persian databases, Iran Medex, SID and Magiran from 1397 to 1402 using keywords artificial intelligence, patient safety, systematic review, and its English equivalents.

**Results:** From 289 primary studies, 18 articles were included in the final analysis. The results of the study showed that artificial intelligence can identify drug side effects, adverse drug reactions, risk factors of patient falls, side effects after surgery, bed sores, Surgical site infections, urinary tract infections, identification of populations at high risk of drug toxicity, guidance for personal care and integration of predictive diagnostic classifications to increase patient safety.

**Conclusion and Discussion:** According to the results of the above studies, artificial intelligence support systems, when implemented successfully, can help increase patient safety and increase the quality of care by improving error detection, patient classification, and incident prevention and management. Provided to patients and reducing the risk of factors that threaten the safety of patients.

**Keywords:** Artificial intelligence, Patient safety, Systematic review

