عنوان مقاله:

Artificial intelligence solutions for risk Prediction of healthcare associated infections during and after COVID-۱۹ pandemic: a systematic literature review

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نویسندگان:

Azadeh Saki - *Associate Professor of Biostatistics, Department of Biostatistics, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran.*

Zahra Ebnehoseini - *Ph.D. Medical Informatics, Psychiatry and Behavioral Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.*

خلاصه مقاله:

BackgroundHealthcare-associated infections (HAIs) pose a significant challenge to patient safety and healthcare systems worldwide. These infections, acquired during medical care, can lead to prolonged long hospital stays, increased morbidity and mortality, and substantial healthcare costs. Identifying and managing risk factors associated with HAIs is crucial for effective prevention and control strategies.Aim This study aims to systematically review the application of artificial intelligence (AI) techniques in Healthcare Associated Infections (HAIs).Methods A systematic review was performed that follows the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. PubMed was used to search for HAI publications with an emphasis on AI that were published during and post-COVID-۱۹ pandemic. The terms "artificial intelligence" and "HAIs" were used to search for the publications.Results A total of ۲۹ articles were included in the systematic review. The most commonly studied healthcare-associated infections (HAIs) were ventilator-associated pneumonia (VAP) and hospital-acquired pneumonia (HAP). However, other HAIs such as hospital-acquired bloodstream infections (BSI), urinary tract infections (UTIs), surgical site infections (SSIs), Klebsiella pneumonia bloodstream infections (Kp-BSI), incubator infections, skin infections, central nervous system infections, meningitis, central line-associated bloodstream infections (CLABSIs), and tracheobronchitis were also examined, although to a lesser extent.ConclusionsBy providing a comprehensive overview of the current landscape of AI solutions in HAI research, this review seeks to facilitate knowledge exchange, promote further research collaborations, and ultimately contribute to the development of effective strategies for preventing and managing HAIs.

کلمات کلیدی:

Algorithms Artificial intelligence, Electronic Health Records, infection, Inpatient, Machine learning

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