

# **Research Trends in Asset Management Systems in Healthcare: Key Areas and Priorities with Recommendations for Implementation**

Dalibor Stanimirović, Lan Umek, Dejan Ravšelj

Faculty of Public Administration, University of Ljubljana, Slovenia

**Abstract:** Asset Management Systems (AMS) are increasingly recognised for their potential to enhance operational efficiency, cost-effectiveness, and sustainability across asset-intensive sectors. In healthcare, however, the implementation of AMS remains fragmented, despite mounting pressures to improve medical equipment usage and maintenance, infrastructure reliability, and service delivery. This study presents a literature review supported by a bibliometric analysis of 248 documents on AMS research in healthcare, published up to 2024 and indexed in the Scopus database, examining the evolution of AMS research with a specific focus on healthcare applications. Using Python and VOSviewer, the bibliometric analysis focuses on scientific production, geographical coverage, and major research clusters. Findings highlight a growing global interest in AMS, with the United States and the United Kingdom leading in research output and impact, and emerging contributions from Asia. Thematic analysis reveals six research clusters including smart technologies, risk management, operational systems, performance value in logistics, strategic capital planning, and patient centered factors, reflecting a shift toward digitalization and strategic integration in healthcare. We synthesise these insights into a set of key areas and priorities, offering evidence-based recommendations to support more effective AMS adoption in healthcare. By mapping both the current research landscape and implementation challenges, this study contributes to bridging the gap between AMS potential and its practical application in healthcare systems.

**Keywords:** Asset management system, healthcare, medical equipment, research trends, bibliometric analysis.