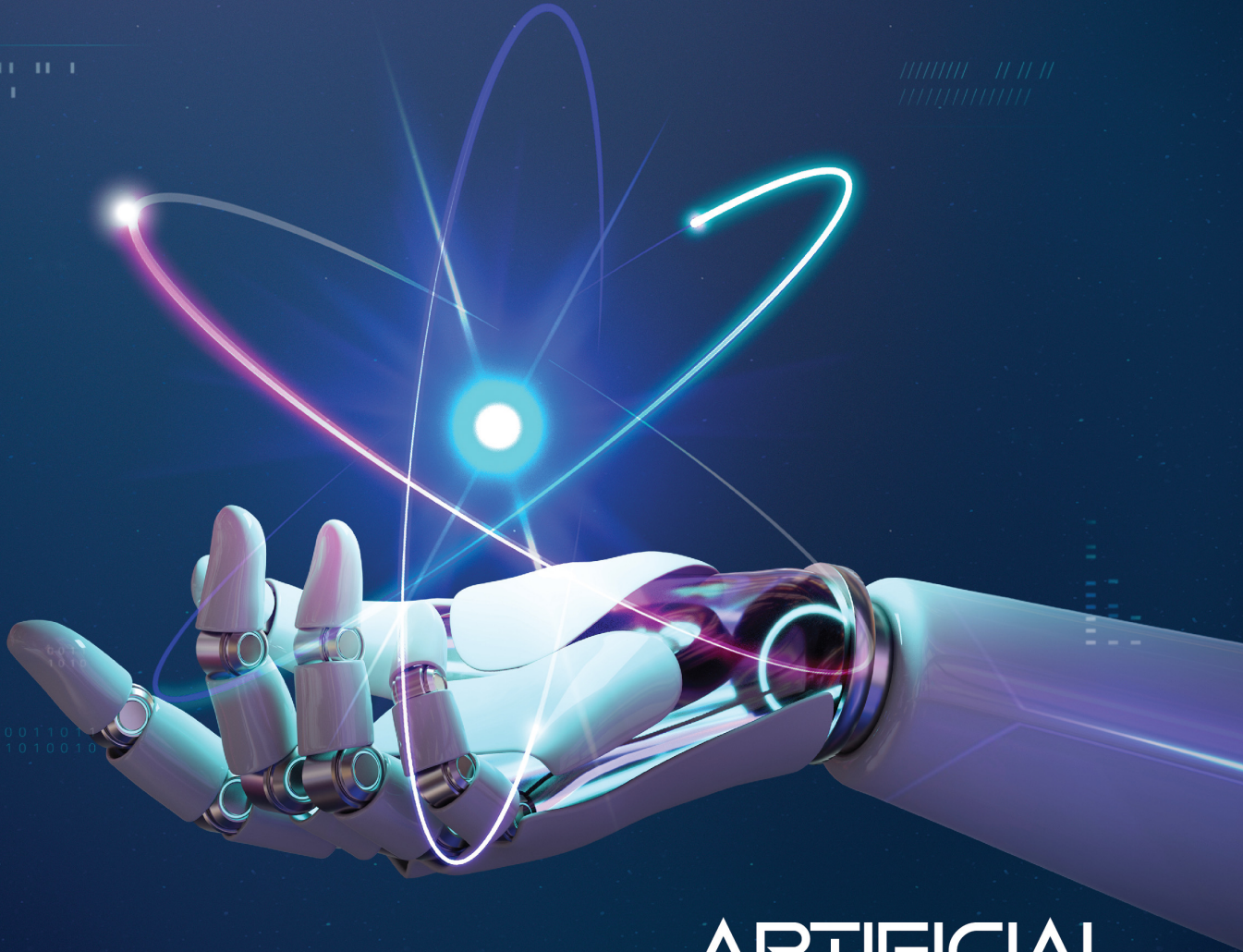


RISE

Catalysing Global Research Excellence



ARTIFICIAL
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ABOUT THE MAGAZINE

RISE Magazine is published by Office of the Deputy Vice-Chancellor (Research and Innovation) with aims to highlight a research and innovation on multidisciplinary expert of fields in UiTM. It serves as a platform for researcher to showcase their high quality and impactful findings, activities and innovative solution through publication. Contribution of these ideas come from academicians, researchers, graduates and universities professionals who will enhance the visibility of research and stride to elevate Universiti Teknologi MARA to global standards. This is an effort to promote research as a culture that is accepted by all expertise.

ABOUT UiTM

Universiti Teknologi MARA (UiTM) is a public university based primarily in Shah Alam, Malaysia. It has grown into the largest institution of higher education in Malaysia as measured by physical infrastructure, faculty and staff, and student enrollment. UiTM is the largest public university in Malaysia with numerous campuses throughout all 13 states in Malaysia. There is a mixture of research, coursework and programmes offered to the students. The Office of the Deputy Vice-Chancellor (Research and Innovation) also known as PTNCPI (*Pejabat Timbalan Naib Canselor (Penyelidikan dan Inovasi)*) serves as a *Pusat Tanggungjawab* (PTJ) for navigating the research and innovation agenda of the university to achieve UiTM's goals. The PTNCPI office strives to mobilize faculty and campuses, fostering collaboration among researchers, with the aim of transforming the University into a Globally Renowned University by 2025

The Implementation of Artificial Intelligence (A.I.) in the Hospital Pharmacy:

The Application of Quality Assurance/Quality Initiatives (QA/QI) Cycle (The Problem-Solving Approach)



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In recent years, there has been a noticeable surge in interest in the applications of A.I. technology for understanding and analysing several significant areas of pharmacy, including drug development, dosage form design, polypharmacology, and hospital pharmacy. Several countries are currently embracing the regular deployment of A.I. in their hospital pharmacies. This is because there are four key functional segments that constitute the foundation of A.I.-based online hospital pharmacy services: online drug list retrieval, prescription preview, drug dispensing and distribution, and online medication consultation. These segments play a crucial role in ensuring the safe and rational use of medications while also saving patients' time and money.

Furthermore, applying the QA/QI cycle is crucial to better understand the issues that A.I. is intended to tackle, thereby improving its utilization in hospital pharmacy systems. It is essential to recognize that different hospitals may face different problems and require tailored solutions. The QA/QI cycle involves identifying issues with the way care is delivered and implementing corrective measures to address them. The majority of QA/QI efforts are reactive and retrospective, with improvement efforts focused on raising the level of quality to meet predefined standards.



A.I. is currently one of the leading solutions to increase the quality of healthcare services, particularly in hospital pharmacy settings. Moreover, A.I. can significantly help in reducing the incidence of medication errors (MEs). The prevalence of MEs is a global issue that poses significant risks for negative clinical outcomes, both for healthcare professionals and policymakers. Traditionally, the main causes of MEs were attributed to staff errors, with the majority of them being detected and reported by pharmacists. By effectively applying appropriate guidelines and current preventive techniques, the reduction and elimination of MEs can be achieved, thereby enhancing clinical procedures and ensuring patient safety.

Identifying the key problems is essential as not all issues may necessitate a solution for adopting the use of A.I. The primary obstacle hindering the implementation of A.I. in hospital pharmacies is the constrained allocation of budgets. Additionally, the lack of skilled personnel to manage and operate A.I. systems is another constraint that limits its usage. Furthermore, due to the need for specific skills to utilize this technology, its application is restricted to a particular group of patients who are better educated and younger.

As a result, while there are numerous benefits to implementing A.I. in hospital pharmacies, several considerations need to be taken into account. Nevertheless, with careful consideration and the application of the QA/QI cycle methodology, it is possible to demonstrate the critical role and solid justifications for the significant impact that A.I. plays in enhancing patient safety and the efficacy of their prescriptions.

