Prifysgol Cymru
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University of Wales
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Programme: BSc (Hons) Health and Social Care

Module: Digital Transformation in the Health and Care Professions

Module code: BMHP6026

Assignment Title: Component 1: Written Report

Chosen Technology: Electronic Medication Administration Record (eMAR)

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Introduction

Digital innovation in health and social care refers to the usage of technologies for modifying health services in faster and smarter processes (Kosiol *et al.* 2024). Digital inclusion involves cutting down paperwork followed by human-made errors and automating routine tasks in a more efficient way. In the last five to ten years there is a huge shift in healthcare service generation by including technological innovation.

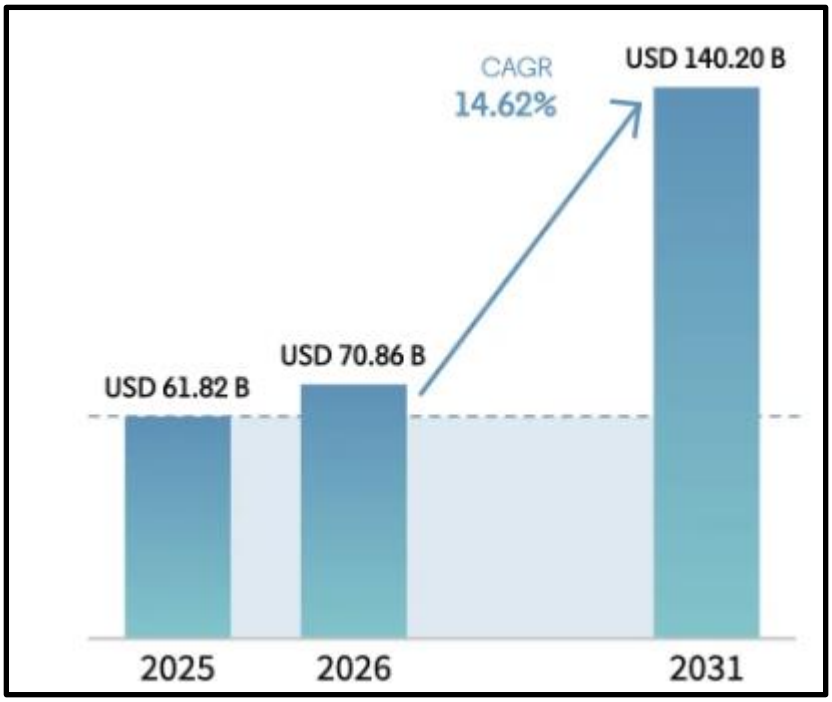


Figure 1: Digital Transformation in the UK Market

(Source: Mordorintelligence, 2026)

For instance, the market size of digital innovation in healthcare services includes 61.82 billion USD which is expected to increase at 140.20 billion USD by 14.62% ***[Refer to Figure 1]***. Further, almost 80% of Care Quality Commission-registered providers use digital social care records (Adapt, 2026). Some major technological innovations applied in healthcare are patient-facing digital access, wearable technology, telemedicine, electronic medication administration record (eMAR) and many more. This value clearly shows a greater interference of digital transformation in the healthcare industry. In this report, digital innovation of Electronic Medication Administration Record (eMAR) is going to be discussed in the healthcare industry by evaluating its impact on workforce, service delivery, service user and community.

Description of One Digital Innovation that has been successfully implemented within Health and Social Care

The Electronic Medication Administration Record (eMAR) refers to a digital version of traditional medication record used in health and social care for tracking medicines given to each patient based on their criteria (Definitivehc, 2026). Application of this digital innovation started to be examined from the late 90s, however, the successful implementation has been started after 2010 in healthcare in order to replace paper-based documentations with digital systems. This technology helps in developing electronic record keeping of medicines in accurate manner through the regular updated record of medication administration. The main purpose of this eMAR is to redesign handwritten charts with electronic records to identify the due date of medication, for whom and the time when it should be administered. Care staff or nurses can receive prompts during the due medicine time, electronic administration recording, overdue of doses or identification of the missed medicine doses or courses (Greenshootscms, 2026). Also, in this record, identities of the staff members, timestamps to create audit trail in each entry. This approach can reduce the risks of illegal handwritten medicine records, transcription errors followed by missed signatures. eMAR integrates with electronic health-record systems allowing authorised healthcare professionals to create better access to current information regarding medicines. Thus, eMAR represents a clear and significant digital innovation to improve clinical safety and accountability.

Evaluation of the Digital Transformation

a. Workforce

The implementation of eMAR shifted medication-related roles within the UK health and social care from paper-based recordings to digital medication management. Nurses, care workers and other authorised staff require significant prompt medication, electronic records and respond to system alerts (CQC, 2023). From this similar source, it has been highlighted that eMAR systems help in integrating personalised care plans, notes, management reports followed by medicine-ordering functions which accelerates staff responsibilities to get accurate digital documentations and monitoring. Workforce in this health and social care industry benefitted from this eMAR application to achieve greater accountability. From the source of Electronicmar (2025), it has been identified that an electronic audit trail can be created that shows proper time and doses of medicines which makes clear responsibilities to healthcare staff. During the shift change, outgoing staff need to

complete medicine records in an appropriate manner in which the incoming staff can better understand the administered medicine records and remain outstanding. Thus, this role seeks immense requirements for the staff to combine medication knowledge through timely digital documentation and effective handover communication. Further, evidence from Karnehed *et al.* (2024), it has been identified that from the Swedish healthcare example where eMAR can influence working practices of nurses and nurse assistants to support medication process, workflow changes and additional documentation demand can lower the effectiveness of eMAR. This similar situation is applicable for the UK health and social care approach as well for the integration of eMAR. As a whole, eMAR cannot effectively eliminate professional responsibilities; instead, it redistributes competency requirements towards digital literacy, communication, system-based decision-making, accurate real-time recording and others. However, successful eMAR implementation in the UK health and social care depends on competency assessment, continuous learning and training followed by protected documentation and leadership support (CQC, 2023). Technological integration may be weakened for the delayed entries, incorrect system usage without effective workforce measures.

b. Service Delivery

Implementation of Electronic Medication Administration Records (eMAR) will impact day-to-day service delivery by providing more accessible, structured and timely information regarding medications. Instead of relying fully on MAR charts, professional checking of medication scheduling, record administration or missed doses can be tracked. One of the significant advantages is enhanced information access, where Electronic records can enable relevant staff to access the most current information more quickly, which can help to facilitate coordinated care and mitigate the risk of making decisions based on outdated information (Health Foundation, 2025). The same benefits of electronic records to enhance access to information and to facilitate better quality of care are suggested by Care Control Systems (2023). As a result, eMAR can help transform how things are done, from looking back at paper charts to real-time monitoring and intervention.

Digitalisation is not a guarantee for better service delivery, however. The Health Foundation (2025) notes that the challenges include disjointed digital systems, interoperability and inconsistent implementation of digital systems across NHS services. Effective communication between eMAR systems and other records is important, as staff may end up entering data twice or navigating between two or more systems, which can actually increase workload. However, eMAR can enhance the service delivery on a daily basis, by allowing for quicker access, easier

documentation and monitoring, dependent on system usability, staff competency, interoperability and organisation implementation. In order to be successful, continuous staff support and good digital governance is needed to make sure that the gains in efficiency will result in safer, higher quality care.

c. Patient or Service User

A patient- or service-user perspective of Electronic Medication Administration Records (eMAR) involves a socio-technical analysis linking clinical safety, technology acceptance and person-centred care. On the positive side, eMAR would be able to achieve medication administration mistake decrements because ambiguous handwritten charts would be substituted with easily accessible and time-stamped computer-based data. According to Stoumpos *et al*. (2023), health technologies are highly accepted based on the perceived usefulness and perceived ease of use; thus, in case service users and practitioners believe that eMAR can benefit medication accuracy, be confident in care, can be better. eMAR would also be able to enhance accountability as the digital records will provide more transparent evidence of medicines that have been administered, omitted or amended. According to CQC (2023), eMAR is one of the digital solutions that can help in maintaining a safer administration of medicines and records in the adult social care. As a result, access to accurate electronic data can aid in supporting service users to have more knowledge about their medicines and could engage in more significant communication about treatment, especially when the records could be accessed by the authorised personnel in an appropriate care environment.

However, this may have a negative impact on the patient experience in case the digital efficiency has an over-intensified effect on people and interpersonal care becomes disregarded. Investigating the role of eMAR in Swedish home care, Karnehed *et al*. (2024) define the work environment alterations in nurses and nurse assistants working in this field of practice, which are linked to the use of digital medication administration, proving that technology has the potential to transform the practice of care instead of merely enhancing it. When practitioners are too focused on screens, alerts as well as documentation, they may lose chances to establish eye contact, talk, and offer comfort. This is especially applicable to older adults, those with cognitive or communication challenges, and people who already have an underlying vulnerability factor in a healthcare setting, service users. Confidentiality, consent and unauthorised access are also concerns that have grounds. Information on medications is sensitive personal data. Thus, the worth of eMAR can be measured not just by the indicators of medication errors but service-user

experience, trust, dignity and engagement as well. It needs to be effectively implemented with digital systems and straightforward explanations, as well as open communication and patient-initiated aspects to voice their concerns or request.

Another aspect is that of the involvement of the service user in shared decision-making (Ozavci *et al.*, 2022). Despite the fact that eMAR is made to work with professionals, information quality generated can determine the level of confidence with which patients talk about medicines, side effects and modifications to treatment. Easy to understand explanations are significant since a technically correct record may not necessarily formulate participation. Introducing digital medication processes to providers should take into account language, sensorial needs, health literacy and communication preferences. In a similar way, community organisations are advised to engage frontline staff and service users in design and evaluation as opposed to implementing the project as a technical one. The participatory style will help identify barriers, enhance trust and make sure digitalisation is responsive to the trends of care and not organisational assumptions.

d. Community

Going down to community level, eMAR must be assessed concerning the situation of integrated care, interoperability, infrastructure and health inequality (Ezeh *et al.,* 2022). One of its significant advantages is that it could enhance continuity as service users switch between hospitals, community nursing, primary care and residential or domiciliary social care. In their argument, Kosiol *et al*. (2024) believe that the digital innovation maintenance can maintain a more interconnected health and social care by enhancing the exchange of information and synchronizing services. In this regard, eMAR could be more helpful to facilitate the medication history across the organisational borders, to identify the medicines, administration logs and treatment amendments. It can promote safer post discharge transitions and avoid unnecessary duplication. The latest NHS England (2024) also identifies the management of digital and interoperable medicines as part of the overall development of connected health and social care services. More highly organized information about medications at the population level can also be useful in service planning, governance and identification of repeated prescribing or administration issues.

Nevertheless, the distribution of these benefits is not even among communities. The Health Foundation (2025) points to the ongoing necessity of a consistent approach to achieve the gains of electronic patient records, and inequity in implementing digital potential can be brought about by disparities in digital capability and investment. Smaller local and community-based care

providers might lack financial, technical and labor resources in comparison to large NHS organisations. Incompatible systems might require staff to copy information, work around or use other records which undermine the perceived gains of eMAR. According to Adapt (2026) insufficient organisational readiness, workforce capability, and conditions of implementation may cause a failure in UK healthcare digital transformation. The resulting digital divide thus assumes an equity aspect: those communities that have better infrastructure might receive more, under-resourced services might face further administrative stress. The implementation of equitable eMAR, in its turn, will demand long-term funding, interoperability, support, planning of workforce and implementation that should reflect various amenities of community organisations.

Conclusion

To sum up, eMAR is a significant digital innovation in UK health and social care as it has the potential to enhance medication safety, documentation, accountability and continuity in care environments. As perceived usefulness of an activity to the patient or service-user, it has benefits and risks, reduced interpersonal interaction and privacy issues and potential disempowerment. EMAR may add to integrated care and more coordinated medicines management at community level, but disparities in infrastructure and digital capability may recreate inequalities that exist. Research evidence suggests that the implementation must incorporate technological ability with governance, training and person-centred practice. Sustainable success suggests sustained socio-technical appraisal to ensures that the digital efficiency enhances safety at the expense of neither undermining dignity, communication or equitable access to good health.

References

Adapt, (2026). *Why digital transformation in healthcare succeeds or fails in the UK.* Available at: https://adapt.digital/insights/digital-transformation-in-healthcare [Accessed: 24 September 2026]

Carecontrolsystems, 2023. *Do Electronic Medical Records Improve Quality of Care?* Available at: https://carecontrolsystems.co.uk/do-electronic-medical-records-improve-quality-of-care/ [Accessed: 23 September 2026]

CQC, (2023). *Electronic medicines administration records (eMAR)*. Available at: https://www.cqc.org.uk/guidance-regulation/adult-social-care/medicines-information-adult-social-care-services/electronic-medicines-administration-records [Accessed: 21 September 2026].

Definitivehc, (2026). *Electronic Medication Administration Record (eMAR).* Available at: https://www.definitivehc.com/resources/glossary/electronic-medication-administration-record [Accessed: 22 September 2026]

Electronicmar, (2025). *How do shift changes affect eMAR charting?* Available at: https://www.electronicmar.co.uk/how-do-shift-changes-affect-emar-charting/ [Accessed: 22 September 2026]

Ezeh, F.E., Gbaraba, S.V., Adeleke, A.S., Anthony, P., Gado, P., Tafirenyika, S. and Moyo, T.M., (2023). Interoperability and data-sharing frameworks for enhancing patient affordability support systems. *International Journal of Multidisciplinary Evolutionary Research*, *4*(2), pp.130-147. https://www.researchgate.net/profile/Tamuka-Mavenge-Moyo/publication/396165240_Interoperability_and_Data-Sharing_Frameworks_for_Enhancing_Patient_Affordability_Support_Systems/links/69015353c900be105cbd6b62/Interoperability-and-Data-Sharing-Frameworks-for-Enhancing-Patient-Affordability-Support-Systems.pdf

Greenshootscms, (2026). *eMAR Explained: What It Means & How It Works | GreenShoots.* Available at: https://greenshootscms.co.uk/guides/emar-explained [Accessed: 12 October 2026]

Health Foundation, (2025). *Why the NHS urgently needs a strategy to reap the benefits of electronic patient records*. Available at: https://www.health.org.uk/reports-and-analysis/analysis/electronic-patient-records-nhs-strategy [Accessed: 21 September 2026].

Health, 2025. *Why the NHS urgently needs a strategy to reap the benefits*. Available at: https://www.health.org.uk/reports-and-analysis/analysis/electronic-patient-records-nhs-strategy [Accessed: 21 September 2026]

Karnehed, S., Pejner, M.N., Erlandsson, L.K. and Petersson, L., (2024). Electronic medication administration record (eMAR) in Swedish home healthcare—Implications for Nurses' and nurse Assistants' Work environment: A qualitative study. *Scandinavian Journal of Caring Sciences, 38*(2), pp.347-357.https://doi.org/10.1111/scs.13237

Karnehed, S., Pejner, M.N., Erlandsson, L.K. and Petersson, L., (2024). Electronic medication administration record (eMAR) in Swedish home healthcare—Implications for nurses' and nurse assistants' work environment: A qualitative study. *Scandinavian Journal of Caring Sciences*, 38(2), pp.347-357. https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/scs.13237

Kosiol, J., Silvester, T., Cooper, H., Alford, S. and Fraser, L., (2024). Revolutionising health and social care: innovative solutions for a brighter tomorrow–a systematic review of the literature. *BMC health services research, 24*(1), p.809.https://link.springer.com/content/pdf/10.1186/s12913-024-11099-5.pdf

Kosiol, J., Silvester, T., Cooper, H., Alford, S. and Fraser, L., (2024). Revolutionising health and social care: Innovative solutions for a brighter tomorrow–a systematic review of the literature. *BMC Health Services Research*, 24(1), p.809. https://link.springer.com/content/pdf/10.1186/s12913-024-11099-5.pdf [Accessed: 23 September 2026]

Mordorintelligence, (2026). *United Kingdom Digital Transformation Market Size & Share Analysis - Growth Trends And Forecast (2026 - 2031).* Available at: https://www.mordorintelligence.com/industry-reports/united-kingdom-digital-transformation-market [Accessed: 23 September 2026]

NHS England, (2024). *Digitising social care: Medication management and safety guidelines*. London: NHS Publications. https://digital.nhs.uk/services/digital-and-interoperable-medicines [Accessed: 23 September 2026]

Ozavci, G., Bucknall, T., Woodward-Kron, R., Hughes, C., Jorm, C. and Manias, E., (2022). Creating opportunities for patient participation in managing medications across transitions of care through formal and informal modes of communication. *Health Expectations*, *25*(4), pp.1807-1820. https://onlinelibrary.wiley.com/doi/pdf/10.1111/hex.13524

Stoumpos AI, Kitsios F, Talias MA. Digital Transformation in Healthcare: Technology Acceptance and Its Applications. Int J Environ Res Public Health. 2023 Feb 15;20(4):3407. doi: 10.3390/ijerph20043407. PMID: 36834105; https://www.mdpi.com/1660-4601/20/4/3407