



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Digital Transformation in the Health and Care Professions
(BMHP6026)

Component 2 Assessment

Student Name: Maria Elisa Jose Dos Santos

Student : Id: 2327313

Lecturer name: Muhammed Khan

Use of AI Acknowledgement

- I can confirm that I use grammar checker

Introduction

- Medication management systems have moved from manual processes to technologically advanced solutions to improve patient safety and treatment outcomes.
- • Smart pill dispensers are electronic devices that are programmed to release prescribed doses on a predetermined schedule, minimizing the need for human memory and manual supervision (WHO 2003).developed in response to one of healthcare's
- • Just one or two patients in developed countries with chronic illnesses regularly take their prescription drugs as directed.
- This disparity emphasizes the critical need for creative approaches that not only improve adherence but also enable patients to take control of their health through individualized support networks and user-friendly technology.





Impact on the Workplace

- In the past, pharmacy technicians filled monitored dosage systems (MDS blister packs) by hand, which took a lot of time (RPS,S, 2022).
- This process requires close attention to detail and takes a long time. • As automated dispensing technology takes over, the technician's function is evolving .
- Helping to maintain and manage dispensing apparatus • Assisting patients with proper device usage
- . Labour-intensive dispensing duties are no longer under the supervision of chemists.
- Training and continuing assistance are necessary to ensure staff can adapt effectively.

- In the past, patients had to be visited by district nurses or carers at each dosage interval.
- According to Nieuwlaat et al. (2014), a programmed dispenser now regulates when the dose is a visual alert and releases only the appropriate compartment at the appropriate time.
- Care workers can concentrate on assessments, developing relationships, and complex needs when there are fewer in-person visits.
- More patients can be served by community pharmacies without requiring unsustainable increases in staff hours.
- Smart dispensers emphasise medication optimisation, which lowers missed doses and increases the efficacy of pharmaceutical treatments. NICE (2015).

Impact on patients and service users

- Dispensers lessen the mental strain of tracking complicated medication schedules for elderly people with several chronic illnesses (NICE 2015).
- Patients with dementia or mild cognitive impairment benefit greatly from structured automated prompting, which promotes independent routines (Alzheimer's Society, 2022).
- Evidence from the UK demonstrates increased confidence, better adherence, and fewer hospital admissions (Royal Pharmaceutical Society, 2022).
- According to Patel et al. (2022), the majority of participants who were carers said that the device was very satisfying and easy to use.
- Individuals who appreciate taking care of their own medication
- Devices must be introduced with true patient consent and sufficient explanation.



Impact on the wider community

- One of the main causes of poor results is poor adherence. In the UK, diabetes, long-term respiratory disorders, and hyper Audis are the main preventable causes of morbidity (WHO, 2003).
- Show that smart dispensers are more than just a practical tool; they are a clinically significant intervention.
- Equal access to smart dispensing technology is necessary to achieve system-level benefits.
- The same benefits might not be available to communities with inadequate digital infrastructure or low levels of digital familiarity (health education).2020,
- England).Investment, policy, and inclusive design are all required to actively address this disparity.

Conclusion

- Supported training is required as the workforce accelerates the transition from manual assembly to clinical engagement and data-informed practice. (RPS 2022).
- Service delivery facilities offer proactive, evidence-based care, and precise adherence data enables earlier intervention (NHS England 2019).
- Benefits to patients are real, but not everyone experiences them. Person-centred and autonomy-respecting implementation is required (NICE 2015).
- Community Patel et al. (2022) and Thielemans et al. (2023) demonstrate high attainable adherence rates and notable reductions in carer burden.

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