



BRIDGING THE GAP: HOW DIGITAL HEALTH LITERACY TRANSLATES TO MEDICATION ACCESS IN REPUBLIC OF MOLDOVA – Pilot Study

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BACKGROUND

- Digital health tools including *e-prescribing*, *teleconsultations*, *patient portals* and *AI-supported information platforms* – are increasingly shaping how patients access and use medicines.
- To benefit from these tools, patients need sufficient **digital health literacy**: *the ability to find, understand, appraise and apply online health information and AI-generated content to their own treatment*.
- In the Republic of Moldova, digitisation of health services is progressing, *but unequal internet access, varying digital skills and health literacy gaps may reinforce existing barriers* to essential medicines, especially for older adults, people with chronic conditions, rural populations and socio-economically vulnerable groups.
- Little is known about how digital health literacy interacts with AI-driven tools (e.g. symptom checkers, chatbots, medication information apps) and how this combination influences real-life access to medicines and patterns of medication use.

AIM

*To explore how digital health literacy interacts with AI-enabled tools along the prescribing and medication-use pathway and to develop a **conceptual framework** that explains how these factors influence access to prescription medicines.*

MATERIALS AND METHODS

Design: pilot, mixed-methods and conceptual study.

Empirical basis: existing survey data from medicine users and health professionals in Moldova on: preferred sources of information on medicines; use and perception of digital platforms and AI tools; perceived benefits and risks for medication safety and access.

Key constructs: digital health literacy; AI touchpoints along the patient journey (before, during and after consultation); access-to-medicines dimensions (availability, affordability, accessibility, acceptability, appropriate use/adherence).

Analytical approach: mapping survey findings to access-to-medicines dimensions; integrating international evidence on digital literacy and AI in healthcare; building a **pathway model** linking digital health literacy, AI use and medication access, and defining preliminary user profiles.

RESULTS

Data sources → Key constructs → Conceptual pathway model

1. Digital health literacy as gatekeeper

Higher digital health literacy is expected to:

- ✓ improve navigation of e-health services and e-prescriptions;
- ✓ strengthen communication with prescribers and pharmacist;
- ✓ support critical and safe use of AI tools and apps.

Low digital health literacy can:

- ✓ increase reliance on unvalidated online sources;
- ✓ favour risky self-medication and treatment interruption;
- ✓ amplify financial, geographical, and organizational barriers to access to medicines.

2. AI touchpoints in prescribing and medication use

- ✓ **Before consultation:** AI symptom checkers, search engines and social media influence the decision to seek care.
- ✓ **During consultation:** Clinical decision-support tools and e-prescribing systems can improve safety but remain relatively non-transparent for patients.
- ✓ **After consultation:** AI apps for reminders, interaction checkers and side-effect information influence adherence, dose adjustments and when patients seek further help.

3. Hypothesised user profiles

- ✓ **Digitally empowered navigators** – digitally competent and able to critically appraise AI-generated information; they actively use digital resources to optimise their access to medicines and adherence to treatment.
- ✓ **AI-dependent but vulnerable users** – make intensive use of AI tools but have limited capacity to assess the credibility and reliability of the information provided.
- ✓ **Low-literacy, low-connectivity users** – have minimal participation in the digital environment and are at high risk of being excluded from digitalised health services and AI-enabled pathways to medication access.
- ✓ **Caregiver-mediated users** – their access to medicines and the quality of medication use depend largely on the digital skills and engagement of family members or other caregivers.

CONCLUSION

Digital health literacy is a **core determinant** of equitable access to medicines in Moldova in the context of rapid digitalisation and AI expansion. Both patients and health professionals perceive AI tools as promising, but they also report significant risks related to misinformation, unsafe self-medication and delayed appropriate care. Without targeted policies and support, AI and digital tools may unintentionally widen existing inequalities for vulnerable groups (older adults, rural residents, low-income and low-literacy populations). The proposed conceptual model offers a structured basis for future empirical studies and HTA-informed policies on digital and AI-enabled interventions in medicines management.