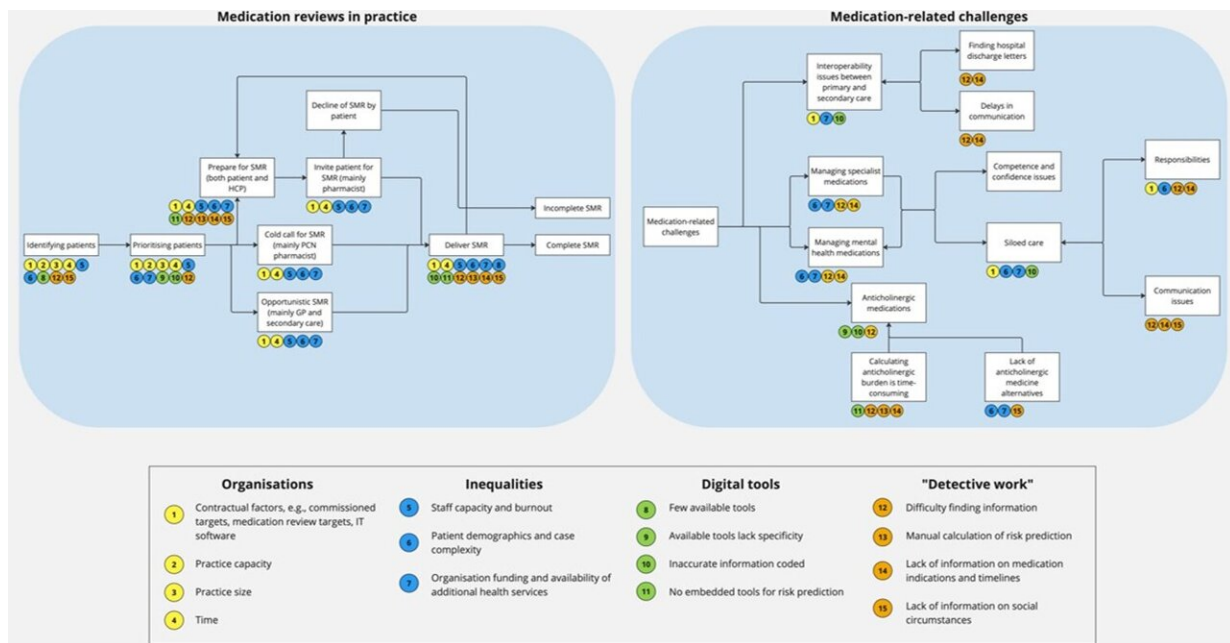


# Researchers explore barriers to effective structured medication reviews

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Interaction of organizational factors, inequalities, digital tools, and investigative efforts in Medication-related Challenges. Credit: *PLOS ONE* (2024). DOI: 10.1371/journal.pone.0299770

Researchers at the University of Liverpool have captured important evidence across primary and secondary care to explore the barriers to implementing effective structured medication reviews (SMRs). These new findings have the potential to help up to 14 million patients across the UK who have multiple long-term health conditions (MLTCs).

The paper, "A qualitative exploration of barriers to efficient and effective Structured Medication Reviews in Primary Care: Findings from the DynAIRx study" was [published](#) in *PLOS ONE*.

SMRs aim to enhance shared decision-making in medication optimization, particularly for patients with MLTCs (two or more long-term health conditions) and polypharmacy (use of multiple medicines). Despite its potential, there is limited observational evidence on the implementation of SMRs, and the challenges faced in the process.

This study forms part of the University's project, DynAIRx (Artificial Intelligence for dynamic prescribing optimization and care integration in multimorbidity), which aims to introduce Artificial Intelligence (AI) to SMRs through novel machine learning and AI visualization tools for people living with MLTCs.

Along with collaborators at the Universities of Glasgow, Leeds, Manchester, Mersey Care NHS Foundation Trust, and Powys Teaching Health Board in Wales, researchers explored how SMRs are currently undertaken and what barriers are experienced by those involved in them. This was done through a series of interviews and focus groups with [health care professionals](#) including GPs, pharmacists, clinical pharmacologists and psychiatrists, as well as people living with MLTCs.

Analysis of the interviews and focus groups found limitations in the efficiency and effectiveness of SMRs in practice including: the scarcity of digital tools for identifying and prioritizing patients for SMRs; organizational and patient-related challenges in inviting patients for SMRs and ensuring they attend; the time-intensive nature of SMRs and the need for multiple appointments and shared decision-making; poor communication and data sharing issues between primary and secondary care; and difficulties in managing mental health medications.

Dr. Lauren Walker, co-lead of the DynAIRx program said, "The DynAIRx project is finding ways that Artificial Intelligence (AI) can help people living with multiple health problems by improving how their medicines are prescribed and reviewed. This paper provides an invaluable building block on which to continue our work.

"Our research shows there is a need for a prescribing support system that can identify and prioritize people who would benefit most from a review of their medicines and reduce the time taken to understand the patient journey. This is particularly difficult for busy clinicians who need to deal with large volumes of disparate clinical information in electronic health records. Continuing to monitor the effects of medication optimization changes would be very helpful for both clinicians and patients."

Capturing and understanding lived experience was a key element of the research. Farheen was a public advisor on the project, as someone who has herself, along with family members, experienced multimorbidity.

She said, "Through this project, we seek to learn more about how to enhance and speed up [medication](#) reviews for patients. I am familiar with the difficulties related to managing our medications, so my observations have helped researchers in understanding the problems in the real world."

DynAIRx is a flagship research program and forms part of the medicines optimization strand of work at the University's Civic Health Innovation Labs (CHIL). CHIL brings together scientists, engineers, residents and health professionals to drive advances in care and well-being. CHIL's unique NHS secure data environment allows researchers to address local and global health challenges by developing new [artificial intelligence](#) (AI) and other data-driven advances.

**More information:** Aseel S. Abuzour et al, A qualitative exploration of barriers to efficient and effective structured medication reviews in primary care: Findings from the DynAIRx study, *PLOS ONE* (2024).  
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