



RESEARCH BRIEF

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Translating evidence into practice: A multi-approach methodology for developing a complex intervention to facilitate appropriate prescribing

Research article: Using multiple approaches to develop a physician-pharmacist collaborative care intervention to facilitate appropriate prescribing for older adults with multimorbidity. *Published in Archives of Gerontology and Geriatrics in December 2023. Click [here](#) to view the published article online.*

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KEY FINDINGS

1. Implementation science can inform intervention development by addressing both clinical effectiveness and implementability.
2. The integration of theory and evidence-based, implementation-based and partnership approaches facilitates the development of an intervention that is theoretically sound and contextually relevant, increasing its likelihood of being accepted by healthcare professionals.
3. Systematic development of interventions enhances replication and dissemination of research.

IMPLICATIONS AND SIGNIFICANCE OF FINDINGS

1. Implementation science helps implementers to systematically identify and address contextual factors that may impact intervention success in a healthcare setting
2. Adopting published guidance adds coherence and rigour to the intervention development process.
3. Though more resource-intensive, a partnership approach to co-create the intervention with stakeholders such as physicians and pharmacists enhances feasibility and encourages their buy-in.
4. Intervention development requires balancing theory, evidence, best practices, and stakeholders' pragmatic considerations.
5. Systematic planning and reporting of intervention development enhances replication efforts and reduction of research waste.

BACKGROUND

Polypharmacy, or the use of multiple medications, is prevalent among older adults, especially those with multimorbidity. It is associated with increased risk of adverse events including drug reactions, drug interactions and medical non-adherence disability. Such multi-drug consumption has been identified as a key risk factor for potentially inappropriate prescribing among older adults, in which the use of medications may pose more risks than benefits. Given the ageing population in Singapore, reducing potentially inappropriate prescribing is a healthcare priority.

There are various interventions reported in existing literature, which facilitate appropriate prescribing for older adults, although few are informed by theory. Additionally, effective interventions may not be successfully adopted in clinical practice. Applying implementation science to intervention development possibly addresses this gap because it involves the evaluation of both clinical effectiveness and feasibility, and creating strategies to reduce the likelihood of intervention failure.

FOCUS OF PROJECT

The objective was to design an intervention to facilitate appropriate prescribing for older adults with multimorbidity at the geriatric medicine outpatient clinics in public acute hospitals in Singapore. The study combined theoretical, evidence-based, implementation-based and partnership approaches to develop the intervention. The findings were synthesised to create an intervention that enhances collaboration between physicians and pharmacists and improves communication and documentation of prescribing decisions.

FRAMEWORKS

Generally, the intervention development was guided by the UK Medical Research Council's framework, supplemented by the Framework of Actions for Intervention Development and a taxonomy of intervention development approaches. Specifically, the Behaviour Change Wheel and Theoretical Domains Framework were employed during the planning phase; and the APPEASE criteria and RE-AIM framework were utilised during the design phase.

STUDY DESIGN

The study encompassed three scoping reviews, two modified Delphi studies, and engagement of stakeholders in co-creation of a context-specific intervention.

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