

Development of a taxonomy of interventions directed at consumers to promote evidence-based prescribing and medicines use: a tool for evidence-based decision-making

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Background

Safe, effective medicines use is a primary goal for health systems internationally. A large body of research on consumers' medicines use reflects growing awareness of the roles for consumers as informed decision makers and as active managers of medicines in partnership with health professionals [1].

There are many interventions which have been used with the broad aim of improving consumers' medicines use. However, this research is not yet well organised and existing theoretical frameworks tend to focus on medicines use in specific populations, diseases, or in relation to specific outcomes (eg adherence). This makes it difficult for decision makers to identify relevant evidence about which interventions work, where there are research gaps, and to understand how or why interventions to promote safe and effective medicines use are - or are not - successful.

Purpose

To describe the development, structure and content of a taxonomy of interventions directed to consumers to improve safe, effective medicines use.

Methods

Systematic search of sources to identify the types and range of medicines use interventions available:

- A taxonomy of interventions for consumer communication and participation developed by the Cochrane Consumers and Communication Review Group (CC&CRG), available at: <http://www.mrw.interscience.wiley.com/cochrane/clabout/articles/COMMUN/frame.html>
- Policy documents; and
- The Cochrane Library (Cochrane systematic reviews and DARE).

Identification of recurring themes associated with the broad objectives of consumer-directed medicines use interventions from these sources. Identified themes were iteratively analysed and taxonomic categories refined based on the identified aims (purposes) of interventions, and comprehensive definitions for each taxonomic category were developed.

Results

Assembled interventions and strategies

Most of the identified literature organised the evidence by:

- different types of interventions (eg. reminder packaging, mass mailings),
- outcomes (eg. adherence), or
- intervention purpose (eg. to educate, inform, support).

Interventions were highly varied:

- of different degrees of complexity,
- directly and/ or indirectly targeting consumers,
- incorporating a range of formats and media, delivery modes and providers, and
- with diverse identifiable purposes.

Intervention taxonomy categories

Using the singular or multiple purpose(s) of interventions as an organising principle, we identified eight major

recurring themes and intervention categories for consumers' medicines use interventions. Each category represents a common conceptual purpose based on the aims of interventions, rather than on the type of intervention, population or outcomes; see **table below**.

Collectively, intervention categories have a wide scope. This reflects an understanding that the purpose of consumers' medicines interventions includes behaviour change (eg improving adherence) but also more widely aims to support informed and skilled consumers – for example, through education and training, support and risk minimisation.

Uses for the taxonomy

The taxonomy has been used in a range of ways:

- **The Rx for Change database** [<http://www.cadth.ca/index.php/en/compus/optimal-ther-resources/interventions>]: as an organised entry point for decision makers to find and access the evidence about effectiveness of a wide range of interventions on consumers' medicines use.
- **Overview of systematic reviews** [1]: as an organising framework for the synthesis of evidence on consumers' medicines use.
- **Understanding of complex interventions on medicines use**: as a tool to disaggregate the evidence of the effectiveness of complex interventions with multiple identifiable aims.
- **Analysis of gaps in the evidence**: as a framework to systematically examine the research evidence on consumers' medicines use and to identify gaps for research and policy.
- **Promoting a broader perspective of interventions on consumers' medicine use**: to encourage researchers and decision makers to move beyond 'adherence' for improving medicines use.

Conclusions

This comprehensive taxonomy of interventions for consumers' use of medicines helps to structure the existing evidence and may improve its accessibility. It may also encourage researchers, policy and decision makers to consider a broad perspective based on the aims of consumers' medicines use interventions.

Acknowledgements

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References

[1] Ryan R, Santesso N, Hill S, et al. (2009) Consumer-oriented interventions for evidence-based prescribing and medicine use: an overview of Cochrane reviews [protocol]. Cochrane Database of Systematic Reviews, Art. No.: CD007508.

INTERVENTION TAXONOMY CATEGORY AND DEFINITION

EXAMPLES OF INTERVENTIONS

To provide information or education

Strategies to enable consumers to know about their treatment and their health. Interventions can be provided to individuals or groups, in print or verbally, or face to face or remotely. Interventions may be simple or multifaceted, and include those seeking solely to educate or provide information; as well as those to promote or manage health or treatment as part of a multifaceted strategy.

- Medicines information sheets or pamphlets
- Patient information materials (eg booklets, newsletters) or educational videos
- Self-management programmes including education
- Tailored education for at risk populations

To facilitate communication and decision making

Strategies to involve consumers in decision making about medicines. Interventions include those which aim to help consumers make decisions about medicines use; to encourage consumers to express their beliefs, values and preferences about treatments and care; and to optimise communication with consumers about medicines use and related issues.

- Delayed prescribing practices
- Checklists or written question lists
- Communication skills training
- Decision aids
- Written action plans

To teach skills

Strategies that focus on the acquisition of skills relevant to medicines use. Interventions may assist consumers to develop a broad set of competencies around medicines use, management or monitoring; or train consumers in the correct use of devices to deliver treatment or the correct use of treatment. Interventions are also aimed at the promotion of health.

- Problem solving skills training
- Self-monitoring or self-medication management training
- Self-management programmes
- Training sessions with providers

To support behaviour change

Strategies which focus on the adoption or promotion of health behaviours and treatment behaviours, such as adherence to medicines. Interventions are at an individual level and address behaviour change for the under-use, overuse or misuse of medicines, and may include practical strategies to assist consumers in taking their medicines correctly.

- Reminder devices (eg refill, packaging, medicines charts, alarms, memory aids)
- Pre-packaged medicines
- Simplified dosing regimens; oral versus injected medicines
- Patient reminder and recall systems
- Pharmacist-led services

To support

Strategies to provide assistance and encouragement to help consumers to cope with and manage their health and related medicines use. Interventions can target patients or carers, as individuals or in groups, and may be delivered face to face or remotely.

- Counselling or therapy
- Peer support or family intervention
- Motivational interviewing
- Collaborative care

To minimise risks or harms

Strategies with a specific focus on preventing or managing adverse events of treatment and complications of disease. Interventions can be for ongoing treatment or related to emergency or crisis events related to a disease or treatment. Strategies can be to minimise risks or harms at an individual level or a population level (eg. reducing medicines use, such as reducing use of antibiotics; or augmentation of medicines use, such as immunisation uptake).

- Action plans
- Consumer reporting of adverse events
- Pharmacist review of medicines
- Self-monitoring, with or without self-adjustment of medicines
- Directly observed therapy

To improve health care quality

Strategies to improve the total package of care, or the coordination or integration of care delivered. Interventions can involve substitution or expansion of one care, and includes interventions that aim to overcome system barriers to medicines use, such as access and financial barriers.

- Financial policies and copayments, financial incentives
- Lay health mentoring
- Comprehensive pharmaceutical care services
- Collaborative care

To involve consumers at the systems level

Strategies to involve consumers in decision-making processes on medicines prescribing and use at a system level, such as in research planning, formulary and policy decisions. Interventions can involve consumers in different roles, such as planning and researching medicines and related issues; and developing information materials to support medicines use.

- Consumer involvement in patient medicines information; policy or guideline development
- Policy committee involvement
- Peer review for governmental and non-governmental research funds