

# Rx for Change

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# Rx for Change



The *Rx for Change* database aims to summarize evidence about the effects of interventions to improve the quality of prescribing and healthcare delivery.

## Rx for Change Database: Content

- Over 300 systematic reviews
- Quality assessed using AMSTAR scale
- Includes:
  - overall summary of interventions
  - summaries of individual reviews
  - quality assessments
  - links to included and excluded reviews
- Browse by categories or search by keyword

## Rx for Change Database: Value added

- Provides decision makers with reliable, up-to-date, evidence-based information
- These resources assist in:
  - the improvement of drug prescription and use
  - the selection of strategies that promote the optimal use of medicines from a professional and consumer perspective

The screenshot shows the RxforChange website interface. At the top, there is a search bar and navigation links. The main content area displays a search result for 'Professional Intervention: Reminders - General'. A sidebar on the left lists various categories like 'Professional', 'Consumer', 'Organisational', 'Financial', and 'Regulatory'. The main article, 'Care delivery and self-management strategies for adults with epilepsy', is highlighted. The article's title is circled in red. Below the title, there is a summary of the article, including its definition, effectiveness, and funding sources. The article is authored by Bradley PM, Lindsay B. and published in the Cochrane Database Syst Rev 2008 (1):1-24. The article's abstract is visible, starting with 'BACKGROUND Various models of service provision have been developed in response to perceived deficiencies in the quality of care for people with epilepsy. This review considered a number of organisational interventions: revision of professional roles - the use of a specialist epilepsy nurse; continuity of care - case management and nurse-based liaison services between primary (GP) and secondary/tertiary (hospital-based) care and clinical multidisciplinary teams.'

## Two sections:

1. Professional, organisational, financial and regulatory interventions
2. Consumer interventions

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## Example of Interventions

Browse

Intervention category

Professional

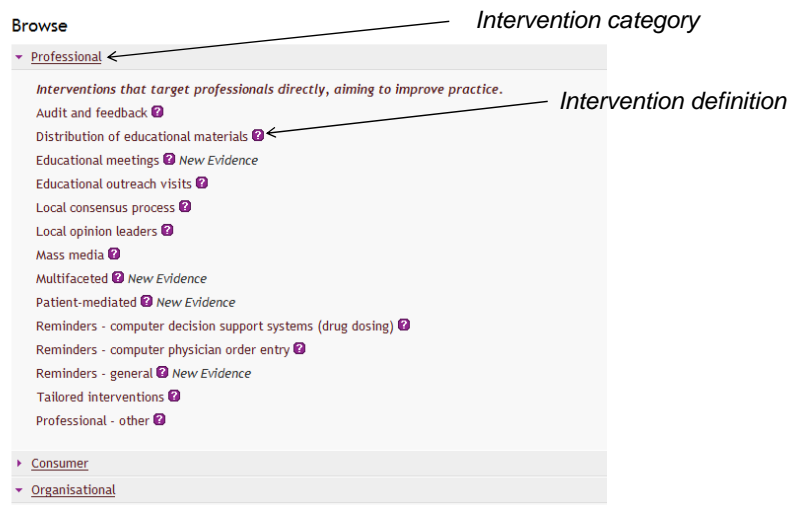
Intervention definition

Interventions that target professionals directly, aiming to improve practice.

- Audit and feedback
- Distribution of educational materials
- Educational meetings
- Educational outreach visits
- Local consensus process
- Local opinion leaders
- Mass media
- Multifaceted
- Patient-mediated
- Reminders - computer decision support systems (drug dosing)
- Reminders - computer physician order entry
- Reminders - general
- Tailored interventions
- Professional - other

Consumer

Organisational



## Some effective interventions:

- ▶ Educational outreach visits
- ▶ Distribution of educational materials
- ▶ Audit and feedback
- ▶ Expanding the role of the pharmacist
- ▶ Formulary
- ▶ Financial
- ▶ Tailored interventions

## Multifaceted Interventions

### Some surprising findings ...

- **Multifaceted interventions:** include two or more distinct components
- Multifaceted interventions are more likely to target multiple barriers in the system



- Smaller effect with multifaceted approach (5.7% unifaceted, 1.9% multifaceted) (Shojania, 2009)

## Size of Effects

- When calculatable....
- Small (between 6 and 10%)
- Considering magnitude of problem, even small effect is helpful.

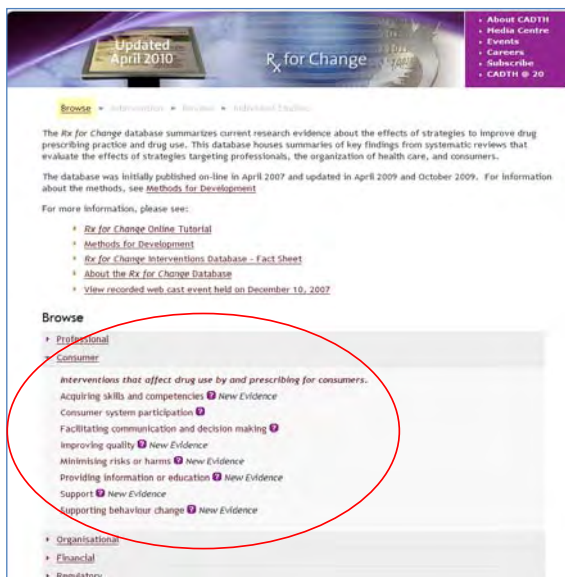
## Summary

- A variety of interventions can change health professional behaviours
- There are 'No Magic Bullets' – effects of interventions differ across targeted behaviours, professionals and settings
- Feasibility of interventions and resources for their execution also vary
- Choice of interventions should include consideration of:
  - Potential barriers to evidence based prescribing
  - Potential mechanism of action of intervention
  - Evidence of effectiveness and efficiency of intervention
  - Practical and logistical considerations

## Two sections:

1. Professional, organisational, financial and regulatory interventions
2. **Consumer interventions**

## Interventions to consumers



The screenshot shows the 'Rx for Change' website. The main heading is 'Interventions to consumers'. Below the heading, there is a list of interventions, each with a 'New Evidence' icon. The list is circled in red. The interventions are:

- Interventions that affect drug use by and prescribing for consumers.
- Acquiring skills and competencies **New Evidence**
- Consumer system participation **New Evidence**
- Facilitating communication and decision making **New Evidence**
- Improving quality **New Evidence**
- Minimising risks or harms **New Evidence**
- Providing information or education **New Evidence**
- Support **New Evidence**
- Supporting behaviour change **New Evidence**

Below the list, there are navigation links for 'Professional', 'Consumer', 'Organisational', 'Financial', and 'Regulatory'.

A wide range of interventions target consumers' use of medicines

### Interventions:

- Simple or complex; single or multiple aims
- Work in different ways
- Affect a range of outcomes - not only adherence

# Effective interventions to consumers

## Some surprising findings ...

- Some are simple
  - Simplified dosing (eg 4x to 2x daily)
  - Reminders, patient financial incentives (immunisation)
- Some are complex
  - Self-monitoring +/- self- adjustment
  - Lay health worker intervention
  - Pharmacist-led services/ review
- Patterns emerging across reviews are important

# Interventions to consumers

## Some surprising findings ...



Browse » Consumer: Providing information or education » Reviews » Multifaceted studies

### Consumer Intervention: Providing information or education

**Definition:** strategies enabling consumers to know about their treatment and their health. Interventions include those to educate, provide information or to promote health or treatment. Interventions may be simple or multifaceted, and include those seeking solely to educate or inform consumers about treatment or health. They also include those seeking to educate, inform or promote health as part of a multifaceted intervention for managing health or treatment.

**Effectiveness:** Overall there is insufficient evidence to support the use of interventions that provide information or education as a single component to improve adherence, knowledge or clinical outcomes - they are generally ineffective. There is some evidence that interventions including a patient education or information component in conjunction with other interventions improve immunisation rates - they are generally effective. There is also some evidence that including a patient education and information component in combination with other interventions such as self-management skills training, or counselling may improve adherence and other medicines use outcomes, but results are mixed, and effects on clinical and other outcomes generally unclear. There is insufficient evidence on the effects of including information and education as components of interventions other than self management or counselling - they are generally ineffective.

**Summary of Findings Related to Prescribing:** 42 reviews focussing on information provision or education relevant to medicines use were identified, 24 of high quality. Reviews most often assessed multifaceted strategies providing information or education as a component of interventions, but in some cases information or education were provided alone. Three reviews focussed on information or education provided as single strategies, reporting few effects on adherence, medicines use or clinical outcomes, and mixed effects on knowledge (Johnson 2002, Johnson 2003, Woodson 2009). Several other reviews, while focussing on a broader range of interventions overall, included selected studies assessing information or education as single strategies, and also reported significant improvements in only a minority of studies for adherence, clinical outcomes or knowledge (Bradley 2006, Schellhaas 2004, Schellhaas 2004, Tapp 2007, Vermeire 2005). Reviews of multifaceted interventions incorporating information or education components, such as psychoeducation (Pekjala 2002), action plans for COPD or asthma (Toelle 2004, Turnock 2006), enhanced counselling (Wagner 2006), pharmacist-based patient services (Bany 2000) or providing education in hospital rather than outpatient settings (Car 2007), showed mixed effects or improved outcomes (adherence, medicines use, clinical outcomes or knowledge) in only a minority of studies. In contrast, education or information provided in conjunction with self-management skills or training or counselling more consistently improved medicines use (Bradley 2006, Deakin 2005, Sueda 2006), although effects on clinical outcomes were typically mixed; and there was not enough information to identify an optimal asthma self-management education strategy from among programs (Powell 2002), interventions incorporating education or information with late patient access to follow up patients not attending for tuberculosis treatment significantly improved treatment completion, interruption and failure but not mortality, in single studies reporting these outcomes (Lui 2008), interventions incorporating patient education or information components increased immunisation rates (Levin 2006, Stone 2002), and patient information materials developed with consumer involvement increased medicines-related knowledge without increasing anxiety (Helen 2006).

## Information and educational interventions

- Appear largely ineffective when delivered alone
- May be effective as a component of some multifaceted interventions

## Interventions to consumers

### Some surprising findings ...

Ineffective interventions can inform decisions

- Some interventions appear ineffective
- Or evidence of effectiveness is mixed or uncertain
- Can narrow the range of options for decision making

## Effective interventions to consumers

### Intervention aims also determine 'effectiveness'

What is the purpose - to

- Improve knowledge?
- Change behaviour (adherence and use)?
- Improve skills (to use devices, to self-manage)?

# Interventions to consumers

## Some surprising findings...



### Self-monitoring of oral anticoagulation: a systematic review and meta-analysis

Honeghan C, Alonso-Castro JM. Self-monitoring of oral anticoagulation: a systematic review and meta-analysis. *Lancet* 2006; 367(9508):404-411. [PubMed]

Sources of funding: Scientific Foundation Board of the Royal College of General Practitioners, UK. No perceived conflict of interest.

Main author affiliation: Honeghan C, Department of Primary Health Care, Centre for Evidence-based Medicine, University of Oxford, Headington, Oxford, UK.

Q: Does self-monitoring and self-management of oral anticoagulation improve the quality of anticoagulation and patient outcomes?

#### Table of Results

Outcome	Outcome	n	Analysis	Results
Self-monitoring vs standard monitoring	Mean INR within target range	11	Vote counting	6 studies significant increase; 5 studies non-significant increase
Self-monitoring vs standard monitoring	Proportion of time within therapeutic range	7	Vote counting	2 studies significant increase; 2 studies non-significant increase; 3 studies non-significant reduction
Self-monitoring vs standard monitoring	Thromboembolic events	13	Meta-analysis	ARD = 2 fewer people out of 100 (95% CI: 4 to 2 fewer)
Self-monitoring vs standard monitoring	Death	10	Meta-analysis	ARD = 2 fewer people out of 100 (95% CI: 2 to 1 fewer)
Self-monitoring vs standard monitoring	Major haemorrhage	12	Meta-analysis	ARD = 1 less person out of 100 (95% CI: 2 to 0 fewer)
Self-monitoring vs standard monitoring	Total number of tests	9	Descriptive only	Increased
Self-monitoring vs standard monitoring	Dropout rates (unable to complete treatment)	8	Range of effect sizes	Mean = 22% (range 9 to 43%)

### Self-monitoring for oral anticoagulation

Improves important outcomes:

- decreases adverse events
- decreases deaths

But not all people can complete

## Summary

- A range of interventions can change consumer behaviours and other outcomes related to medicines use
- No single intervention is uniformly effective
- Choice of interventions should include consideration of evidence of effectiveness for identifying:
  - Promising interventions – to adopt
  - Interventions where evidence indicates ineffectiveness/uncertainty – to narrow the range of options

## Learn more?

- See display of database at breaks
- Posters:
  - Changing Professional Behaviour: An Updated Overview of Systematic Reviews
  - Assembling, evaluating and presenting the evidence on interventions directed to consumers to improve medicines use
  - Development of a taxonomy of interventions directed at consumers to promote evidence-based prescribing and medicines use: a tool for evidence-based decision-making
- Browse website: [www.rxforchange.ca](http://www.rxforchange.ca)
  - Online tutorial
  - Methods for development

## Who can use Rx for Change? When? Why?

### Policy-makers...

- “What evidence exists about regulatory and financial interventions?”
- “Which strategies to promote consumers’ adherence to medicines are ineffective or unproven?”

### Managers...

- “What type of continuing medical education program should I implement in my hospital department?”

### Researchers...

- “How many randomized controlled trials have been done on audit and feedback interventions?”
- “What outcomes might be affected by a multifaceted intervention to promote medicines self-management?”

### Clinicians...

- “What strategies could I suggest to my patients to help them manage their medicines more effectively?”