COMPUS

- Funded by Health Canada (2004)
- Identifies optimal therapies in drug prescribing and use
- A pan-Canadian, collaborative service
- One of only a handful of programs of this nature in the world
- Supports optimal therapy amongst policy makers, educators, health care providers and consumers
- Jurisdictional and expert advisory committees provide advice and guidance
<table>
<thead>
<tr>
<th>Identify evidence-based optimal therapy</th>
<th>Evaluate current use</th>
<th>Identify gaps</th>
<th>Provide strategies and tools</th>
<th>Support &amp; encourage informed decision making</th>
<th>Build networks &amp; partnerships</th>
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<td>Evidence-based recommendations</td>
<td>Understand current practice in Canada</td>
<td>Highlight where current practice differs from the evidence</td>
<td>• Evidence-based intervention (behaviour) tools • <strong>Rx for Change</strong></td>
<td>• Implementation support • Communications</td>
<td>CADC, EPOC, CDA, MPUP, Rx for Change</td>
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**CADC**: Cdn Academic Detailing Collaboration  
**CDA**: Cdn Diabetes Assoc.  
**MPUP**: Medication Prescribing & Use Project  
**EPOC**: Cochrane Effective Practice and Organisation of Care Group
Rx for Change
interventions database
What is the *Rx for Change* database?

- First-in-class tool promoting optimal therapy
- Publicly accessible “go to” place
- Unique source of evidence about what works to improve prescribing and use
- Assists health care policy makers and health care professionals
- Guides decision makers when targeting resources
- May provide information on areas where further research is needed
Rx for Change – Why?

Traditional knowledge transfer approaches have emphasized publication in peer-reviewed journals

Consistent evidence of failure to translate research findings into clinical practice

- 30-40% patients do not get treatments of proven effectiveness
- 20–25% patients get care that is not needed or potentially harmful

Schuster, McGlynn, Brook (1998). *Milbank Memorial Quarterly*
Grof R (2001). *Med Care*
When should you use *Rx for Change*?

If you have questions, such as:

*Would group education sessions change my staff’s prescribing practices?*

*How beneficial is it to establish a committee to implement a new therapy program?*

*How do we improve vaccination rates for influenza?*

The evidence component of your answer will be found on *Rx for Change*. 
Rx for Change contains summaries of the key findings of systematic reviews of interventions to promote evidence-based prescribing and drug use.

Focus on interventions directed to:

- Professionals
  - Cochrane Effective Practice and Organization of Care group (EPOC)
- Consumers
  - Cochrane Consumers and Communication Review Group (CCCRG)
Strengths of *Rx for Change*

- Broad range of interventions
- Taxonomy developed and used by the two Cochrane Review Groups
- Organization of information
- Method for data extraction
- Transparency of methods
- Quality assessment
- Availability of individual studies
Limitations of *Rx for Change*

- Potentially missing information due to publishing dates
- Contract with two Cochrane groups to update and maintain *Rx for Change* is underway
- Systematic search to identify relevant systematic reviews included: Cochrane Database of Systematic Reviews, DARE, MEDLINE and EMBASE
- No head-to-head comparisons
Selection of interventions

Key Messages

Target Audiences

Barriers

Interventions

Current Interventions Analysis

Interventions Database

Canadian Agency for Drugs and Technologies in Health
Agence canadienne des médicaments et des technologies de la santé
Educational meetings

Health care providers who have participated in conferences, lectures, workshops or traineeships – may be interactive or didactic

- Interactive workshops and mixed interactive-didactic activities were generally effective for improving appropriate care
- Mixed effects were observed for didactic sessions

Educational outreach

Use of a trained person who meets with providers in their practice settings to give information with the intent of changing the provider’s practice. The information given may include feedback on the performance of the provider(s).

- Prescribing behaviours - median effect across 17 comparisons 4.8% absolute improvement, interquartile range 3.0% to 6.5%
- Multi-faceted educational outreach visits were generally effective for improving appropriate care
- Relatively expensive, though may still be efficient

Reminders

Patient or encounter-specific information, provided verbally, on paper or on a computer screen, which is designed or intended to prompt a health professional to recall information. This would usually be encountered through their general education; in the medical records or through interactions with peers, and so remind them to perform or avoid some action to aid individual patient care. Computer-aided decision support and drugs dosage are included.

- Range of effects -1 % to +34% absolute improvement in care
- Median effect across studies +14.1% absolute improvement
- Reminders generally effective

Multi-faceted interventions

Interventions including two or more components - more likely to target different barriers in the system.

- Likely more costly than single interventions
- Need to carefully consider how components likely to interact to maximize benefits
PPI supporting tools

Delivery of 11 intervention tools to support Optimal Therapy Reports

- Academic Detailing Newsletter
- Quick Reference Prescribing Aid
- Alternate Prescription Pad
- COMPUS/RxFiles Pearls Document
- Upskilling Document
- Evaluation Framework
- Physician Self Audit Tool
- Didactic Presentations for Pharmacists and Physicians
- Interactive Presentations for Physicians and Pharmacists
Summary: selecting interventions

• Variety of interventions to change health professional behaviour
• However – ‘No Magic Bullets’ – effects of interventions appears to vary across targeted behaviours, professionals and settings
• Choice of interventions should be based on consideration of:
  • Potential barriers to evidence based prescribing
  • Potential mechanism of action of intervention
  • Evidence of effectiveness and efficiency of intervention – *Rx for Change*
  • Practical and logistical considerations
Rx for Change - demonstration

www.rxforchange.ca
Summary: *Rx for Change*

**Rx for Change provides:**
- evidence or information that is a very important part of the decision making process when selecting an intervention
- sense of the overall evidence available, and therefore how effective the intervention may be

Remember, there is no “magic bullet”. There is a lot of judgment involved in selecting an intervention, to make the choice that is right for you and that will fit into your setting.
Connect with COMPUS

- Register for the *COMPUS Communiqué*
- Participate in stakeholder consultations and web casts
- Contribute to the *MPUP Collection*
- View the *Rx for Change* web cast from December 10: [www.rxforchange.ca](http://www.rxforchange.ca)
- Visit us at [www.cadth.ca](http://www.cadth.ca)
Questions?
The Rx for Change database summarizes current research evidence about the effects of strategies to improve drug prescribing practice and drug use. This database houses summaries of key findings from systematic reviews that evaluate the effects of strategies targeting professionals, the organization of health care, and consumers.

For more information, please see:

- **Rx for Change Interventions Database - Fact Sheet**
- **About the Rx for Change Database**
- **Methods for Development**
- **View recorded web cast event held on December 10, 2007**
- **Professional**
- **Consumer**
- **Organizational**
- **Financial**
- **Regulatory**
Methods for Development

Two key objectives of the Canadian Optimal Medication Prescribing and Utilization Service (COMPUS) are to identify and evaluate the clinical and economic evidence supporting the use of a drug/treatment to make optimal drug therapy recommendations and then to promote the adoption and use of the optimal drug therapy recommendations by health care professionals and consumers. To meet these objectives, COMPUS is building on existing evidence using information from systematic reviews and guidelines. Rx for Change contains summaries of the key findings of systematic reviews of interventions to promote evidence-based prescribing and drug use. There are two facets: interventions directed to professionals (Professionals) and interventions directed to consumers (Consumers).

Organization of the database

The reviews of interventions directed to professionals are organized according to the intervention classification scheme of the Cochrane Effective Practice and Organization of Care group, with accompanying definitions from that classification scheme. Broadly, interventions are categorized into professional, organizational, financial, regulatory, and structural. There was not a comparable classification scheme for interventions directed to consumers available. During the project a classification system plus definitions involving seven intervention categories was developed. The Browse page allows you to access reviews using these classification schemes. The categories of interventions are listed from top to bottom based on the amount of information provided.

Searching for reviews

Potentially relevant systematic reviews were identified by detailed electronic and hand searches. Key systematic reviews were identified based on consideration of being up to date and their methodological quality.

Detailed information on the methodology used for searching for and identification of reviews can be viewed for the Professionals or Consumers subcomponents.

Data collection

A standardized data extraction form was developed and refined via consultation and piloting. The form summarized the evidence, methodologic quality, and key characteristics for each review.
Fact Sheet - Rx for Change Interventions Database

A first-in-class tool promoting optimal drug therapy

Rx for Change is a publicly accessible database for health care policy makers and health care professionals. It provides easy access to current research evidence about the effectiveness of strategies and programs to improve drug prescribing and use.

Reliable information readily available

There is much research offering new approaches on the clinical aspects of useful and efficient patient care, but changing clinical practice is often based on beliefs, rather than on scientific evidence. Rx for Change provides decision makers with reliable, up-to-date, evidence-based information to assist in the selection of behaviour-change strategies that promote the optimal use of medicines.

How to use Rx for Change

If you are looking to implement or initiate strategies to promote optimal drug therapy:

1. Visit the CADTH web site at www.cadth.ca or access the database directly at www.rxforchange.ca.

Here’s an example for its use: An organization or jurisdiction decides to address a specific concern regarding the prescribing of antibiotics. It sets aside funds to send out thousands of flyers to prescribers to influence prescribing behaviour. Before earmarking this money for flyers, the Rx for Change database can be used to determine if such a strategy actually affects behaviour. If the organization finds out that it does not — that there is evidence to indicate that it may be ineffective, or that...
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- **Professional**
- **Consumer**
- **Organizational**
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- **Regulatory**
Interventions that target professionals directly, aiming to improve practice.

- Educational Meetings
- Audit and Feedback
- Educational Outreach Visits
- Patient-Mediated
- Local Opinion Leaders
- Mass Media
- Reminders - Computer Decision Support Systems (drug dosing)
- Reminders - Computer Physician Order Entry
- Reminders - General
- Tailored Interventions
- Distribution of Educational Materials
- Local Consensus Process
- Professional - other

Interventions that affect drug use by and prescribing for consumers.

- Providing information or education
- Supporting behaviour change
- Acquiring skills and competencies
- Support
- Facilitating communication and decision making
- Minimising risks or harms
- Improving quality
- Consumer system participation
For more information, please see:

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### Professional

*Interventions that target professionals directly, aiming to improve practice.*

**Educational Meetings**

Health care providers who have participated in conferences, lectures, workshops or traineeships.

- Audit and Feedback
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### Consumer

*Interventions that affect drug use by and prescribing for consumers.*

- Providing information or education
- Supporting behaviour change
Professional Intervention: Educational Meetings

Definition: Health care providers who have participated in conferences, lectures, workshops or traineeships.

Effectiveness: Four high quality reviews were identified that focused on educational meetings (Jamvedt, Arnold, Thomas, O’Brien). One review reported that educational meetings combined with audit and feedback were generally effective for appropriate care. Two reviews reported mixed effects for appropriate care, and one review had insufficient evidence for appropriate care. For prescribing outcomes, one review reported that educational meetings combined with audit and feedback were generally effective for appropriate use, and one review reported that educational meetings were generally ineffective for appropriate use. The other two reviews had insufficient evidence for prescribing outcomes. Two high quality reviews (Beney, Parkes) had an insufficient number of studies to draw any conclusions about the intervention.

Summary of Overall Findings from Reviews: Educational meetings had mixed effects or were generally effective for appropriate care.

Summary of Findings Related to Prescribing: Educational meetings may be generally effective or be generally ineffective for prescribing outcomes.

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<th>Quality Assessment Tool: AMSTAR Score (of 11 points)</th>
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<td>Beney J, Bero LA, Bond C. Expanding the roles of outpatient pharmacists: effects on health services utilisation, costs, and patient outcomes. Cochrane Database Syst Rev 2003 (2):CD002326.</td>
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Audit and feedback: effects on professional practice and health care outcomes


Sources of funding: No funding or perceived conflict of interest.

Main author affiliation: Dr. G. Jamtvedt, Norwegian Health Services Research Centre

Q: What is the effect of audit and feedback on provider and patient outcomes?

BACKGROUND
For the purpose of this review, audit and feedback was defined as "summary of clinical performance of health care over a specified period of time".

INCLUSION
Individual studies from systematic review

SEARCH FOR EVIDENCE: Up to Jan 2004

INCLUDED STUDIES: 118

STUDIES RELATED TO PRESCRIBING: 55

STUDY DESIGN: RCT.

STUDY CHARACTERISTICS:
- Target population: Any kind of health care professional.
- Intervention(s): Audit and feedback, Multifaceted.
- Setting: Any kind of organisation.

RESULTS - OVERALL
The authors assessed the effectiveness of audit and feedback with different comparisons. The authors combined the outcomes into a measure for the continuous variables and a score for the categorical variables. This method provided an overall rating of the effectiveness of audit and feedback in the trial. In all comparisons, audit and feedback alone compared to no other interventions (n=38), audit and feedback with educational meetings compared to no intervention (n=9), audit and feedback as part of a multifaceted intervention compared to no intervention (n=41) and audit and feedback combined with complementary interventions compared to audit and feedback alone (n=24), and audit and feedback compared to other interventions (n=8), audit and feedback was found to be generally effective.

RESULTS - RELATED TO PRESCRIBING
In order to assess this review's findings on prescribing data, the individual studies which were relevant to prescribing were identified and analyzed similarly the authors methods of analyzing the larger data set. For the prescribing studies within the review, mixed effects were found. Studies that included feedback within the overall grade.
Audit and feedback: effects on professional practice and health care outcomes


Individual Studies

The *Rx for Change* database summarizes current research evidence about the effects of strategies to improve drug prescribing practice and drug use. This database houses summaries of key findings from systematic reviews that evaluate the effects of strategies targeting professionals, the organization of health care, and consumers.

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