Health Professionals, Decision Makers and Optimal Prescribing: Toward an Effective Strategy for All

Dr. Sam Shortt
Director of Knowledge Transfer & Practice Policy
Canadian Medical Association
Context

- Evidence of a problem
  - Over use
  - Under use
  - Inappropriate use

- Recent Canadian approaches

- Evidence for effective interventions
  - Academic detailing
  - Point-of-care reminders
  - Audit & feedback
So What Can a Medical Organization – e.g., CMA – Do About Optimal Prescribing?

- Relationship building/collaborations
- Awareness raising (public and profession)
- Education (physicians, others)
- Provision of clinical supports/other services
- Research/synthesis
- Policy development
- Advocacy/lobbying
- Monitoring/reporting

Conclusion: Influence, not power; works best through partnerships
Part of a Broader Safe Drug Therapy Agenda at CMA

- EAC VHP; Bill 51
- Optimal Prescribing; Scopes; CME; CPGs
- Ethics
- CPSI
- Knowledge The Best Medicine; Health Literacy

- producing
- prescribing
- dispensing
- administering
- consuming

- Pharmaceutical companies; Health Canada
- Physicians
- Pharmacists
- Nurses
- Patients; family
Proposed Framework for a Canadian Coalition on Optimal Prescribing
(June 2009 - )

WHO

Professional Organizations
CPhA
CMA

Educ. & Reg.
CFPC
RCPSC
AFMC
FMRAC

Not-for-Profits
CPSI
CADTH

Others
Academic Detailers
CMPA
Researchers

CAPACITIES

Co-op

Research

Raise Awareness

Educate

Advocate

Regulate

Other?

Example Activities

CCOP

Academic Article

Peer-reviewed Commentary

Online CME

National Pharma. Strategy

Assisted by funds from CIHR
Health Professionals, Decision Makers and Optimal Prescribing:

Toward an Effective Strategy for All

2010 CADTH Symposium
Barb Shea
Senior Vice-President, CADTH
CADTH’s Broad Role in Optimal Prescribing

- Home of the first pan-Canadian program that identifies and promotes optimal prescribing and use
- Examines health technologies that have been on the market for some time
- Identifies knowledge and practice gaps
- Delivers optimal therapy recommendations, intervention tools, advice and support to help decision-makers implement optimal drug therapy
- Coordinates a national approach – supports implementation
- Actively seeking partners to help promote optimal therapy
Approach to Identifying Optimal Therapy

Clinical-effectiveness data
Cost-effectiveness data
Recommendations
Current practice and utilization
Practice and knowledge gaps
4 key messages
Intervention tools

Systematic Reviews
Economic Report
Optimal Therapy Recommendations
Current Practice and Utilization Reports
Gap Analysis & Key Messages Report
Intervention Tools

CADTH ACMTS
Approach to Promoting Optimal Therapy

Identify evidence-based optimal therapy
- Evidence-based review
- Recommendations

Provide strategies and tools
- Interventions
- Tools
- Rx for Change

Implementation

Improved prescribing and use

CADTH

Decision Makers
Support for Optimal Therapy

Intervention tools

- Designed to influence prescribing behaviour, our tools are adapted and used across Canada.
  - Fully accredited CME presentations
  - 3,200+ downloads of online physician self-audit tool
  - Used by academic detailing programs across Canada to promote key messages
  - Development of two POEMs (Patient-Oriented Evidence that Matters) based on our work

Rx for Change Interventions Database

- Provides evidence about the effectiveness of programs designed to improve prescribing and use.
Examples of Uptake

**Proton Pump Inhibitors (PPIs):**
- Informing policy changes (6 jurisdictions)
- Evidence and tools used by 4 academic detailing programs
- Launch of free online CME through MDcme.ca

**Diabetes Management:**
- **Insulin Analogues**
  - Informing policy changes (3 jurisdictions)
  - Evidence and tools used by 4 academic detailing programs
  - Publication in *Canadian Medical Association Journal*

- **Self-Monitoring of Blood Glucose (SMBG)**
  - Suite of tools released in January 2010
  - Early partnerships for implementation and adaptation of tools
  - Publication in *Canadian Medical Association Journal*
  - Rollout of *Café Scientifique* discussion forums
  - Sparking a national dialogue about the changing role of SMBG in diabetes self-management
Example of Potential Impact

Total Spending in Canadian Publicly and Privately Funded Drug Plans on Blood Glucose Test Strips Exceeded $330 Million* in 2006

*This estimate is based on data from eight publicly funded drug plans in Canada (British Columbia, Manitoba, Newfoundland and Labrador, Non-Insured Health Benefits, Nova Scotia, Ontario, Quebec, and Saskatchewan) plus data from 67% of privately funded drug plans that submitted data to Brogan Inc. Some patients in the dataset could not be classified by province or territory; therefore, the estimate is understated.

The Canadian Agency for Drugs and Technologies in Health (CADTH) is an independent not-for-profit agency that provides Canada’s federal, provincial, and territorial health care decision makers with credible, impartial advice and evidence-based information about the effectiveness and efficiency of drugs and other health technologies.

Patients with diabetes who are using insulin $144,000,000

Patients with diabetes who are not using insulin $188,000,000

If practice changes to reflect the evidence, more than $150 million* would be freed up to be spent elsewhere. Patient health will not be affected negatively.

The Essentials of Prescribing (in 7 minutes or less)

Neil J. MacKinnon, Ph.D., FCSHP
Professor, Dalhousie University
College of Pharmacy & Faculty of Medicine
Pharmaceutical Trends in Canada

- In 1996, 234 million Rxs were dispensed in Canada. By 2008, this had increased to 453 million or an average of 14 Rxs per Canadian. (IMS Health)
- In 1998, the retail value of all of the prescriptions dispensed in Canada was $8.4 billion. By 2008, it was $21.4 billion. (IMS Health)
- In 1999, the total drug bill on Rx and OTC drugs was $13.3 billion. By 2008, it was $29.8 billion. (CIHI)
- Rx drugs is THE most common treatment modality
- These are the trends, but what does it all mean. Is “more” better or worse?
## The Prescribing Matrix

<table>
<thead>
<tr>
<th>Prescription written</th>
<th>Prescription indicated (needed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>Quadrant III</td>
</tr>
</tbody>
</table>

- There are large problems in Quadrant II (no indication but Rx anyway), Quadrant III (indication but no Rx) and even in Quadrant I (choice of Rx, etc.).
- The decision not to prescribe can be one of the most courageous acts a physician makes.
- The failure not to recognize the need for pharmacotherapy can be one of the costliest mistakes a physician makes.

Prescribing is important, but...

“The medical literature supports the assertions that prescribing 'the drug of choice' does not guarantee good patient outcomes and that poor outcomes probably have more to do with what happens after a drug is prescribed.”

- Segal and Wang, 1999, *PPMQ*
Essential Elements of a Safe and Effective Medication-Use System
(from Safe and Effective, 2007)

① Timely problem recognition and diagnosis
② Safe, accessible, cost-effective medications
③ **Appropriate prescribing**
④ Distribution and tailored patient advice
⑤ Patient participation and intelligent adherence
⑥ Monitoring
⑦ Documentation and communication
⑧ System evaluation, measurement, and improvement

For more information on Safe and Effective, go to: http://www.pharmacists.ca/content/products/safe_effective.cfm
A Medication-Use System

Recognize Patient Problem
Define & Resolve Problems
Monitor Patient Progress

Prescribing Evaluation
Prescribing Influence (Education, Formularies)

Solve Pt Problem (Diagnose)

Therapeutic Plan (Rx)
Implement Therapeutic Plan (Dispense, Advise)
Implement Therapeutic Plan (Administer, Consume)

Hepler and Grainger-Rousseau, 1995
"Whoa—way too much information!"
Rx for Change Database

Alain Mayhew, MSc
Managing Editor, Cochrane Effective Practice and Organisation of Care Group
Purpose

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

- Educational outreach visits
- Distribution of educational materials
- Organisational (Provider) other

- Audit and feedback
- Patient-mediated
- Expanding the role of the pharmacist
- Formulary

- Financial
- Tailored interventions presc
Multifaceted Interventions

• **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.
Limitations

• Data collection from reviews, not individual studies
• Reviews included studies of different designs, different foci
• Often reanalysis was required
Learn more?

• See display of database at coffee breaks

• Presentation: **Changing Professional Behaviour: An Updated Overview of Systematic Reviews** (Concurrent Session 12)

• Browse website: [www.rxforchange.ca](http://www.rxforchange.ca)
Academic Detailing

Dr. Michael Allen
Associate Professor
Director, Evidence-based Programs
Dalhousie University CME

DALHOUSIE UNIVERSITY
Inspiring Minds
Academic Detailing

• Continuing education in which a trained health care professional visits clinicians in their practice settings to provide evidence-informed education

• Usually one-on-one but may be in small groups

• Essential components
  – Information is informed by evidence
  – Provides balanced information
  – Interactive
  – Meets the learning needs of individual clinicians
The Canadian Academic Detailing Collaboration: Bringing Evidence to Practice


BC Provincial Academic Detailing Service

Academic Detailing Alberta Health Services (Calgary)

RxFiles Academic Detailing – Saskatchewan

Prescription Information Services of Manitoba (PrISM)

Best Practice Support Service – Toronto

Personalized Academic Detailing – Hamilton Family Health Team

Dalhousie Academic Detailing Service – Nova Scotia

F. Best Practice Support Service
- start date: September 2007
- # physicians served: 113
- # other HCPs served: 52
- detailer FTE: 2
- recent topic: management of complex issues in Type 2 diabetes
- www.effectivepractice.org

G. Dalhousie Academic Detailing Service
- start date: 2001
- # physicians served: 360
- detailer FTE: 1.8
- recent topics: hormone replacement therapy, osteoporosis, COPD, statins, clopidogrel, proton pump inhibitors, diabetes, acne
- http://cme.medicine.dal.ca/ADS.htm

Future direction
- start date: February 1, 2003
- # physicians served: 60-100
- # other HCPs served: 100-200
- recent topics: proton pump inhibitors, statins, insulin analogues, medication safety, congestive heart failure
- detailer FTE: 1
- www.prisminfo.org

Conclusion
- start date: May 1
- # physicians served: 57
- # other HCPs served: 11
- recent topic: smoking cessation
- detailer FTE: 5.8 (not all of their time is spent detailing)
- www.hamiltonfht.ca

Coordination of the effects of academic detailing (2008-2011); funding primarily provided by Canadian Institutes of Health Research.
Survey and Interviews

Value of academic detailing compared to other forms of CME

Perccent responses

<table>
<thead>
<tr>
<th>Perception</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much lower</td>
<td>1</td>
</tr>
<tr>
<td>Somewhat lower</td>
<td>7</td>
</tr>
<tr>
<td>Equal</td>
<td>24</td>
</tr>
<tr>
<td>Somewhat higher</td>
<td>47</td>
</tr>
<tr>
<td>Much higher</td>
<td>22</td>
</tr>
</tbody>
</table>

N = 217

BMC Medical Education 2007 Oct 12;7:36
## Acne Evaluation

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consider benzoyl peroxide or a topical retinoid as 1st line therapy for mild to moderate acne</strong></td>
<td></td>
</tr>
<tr>
<td>127</td>
<td>76</td>
</tr>
<tr>
<td><strong>It is necessary to wait 8 to 12 weeks before changing therapies</strong></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>92</td>
</tr>
<tr>
<td><strong>Resistance to antibiotics may be minimized by using topical and oral antibiotics for the shortest time possible and using benzoyl peroxide with both</strong></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>147</td>
</tr>
<tr>
<td><strong>Comparative studies of oral antibiotics in acne have generally shown no significant differences between them</strong></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>117</td>
</tr>
</tbody>
</table>
• Academic Detailing Evaluation Partnership Team
  – Objectively measure effects of academic detailing by combining data from 5 provinces over 3 years
  – Interviews with family physicians to determine what leads them to change practice based on evidence-based messages
  – Funded by CIHR – Partnerships for Health System Improvement (PHSI) program
  – Led by University of Victoria
Suggestions for Optimal Prescribing

1. Work toward medical education that is independent of industry influence

2. Teach HTA in medical school and CME

3. Develop methods to routinely measure effects of optimal prescribing strategies

4. Explore effect of industry on guidelines, specialist physicians, and patient advocacy groups
Final Thoughts

- What are your ideas to promote optimal prescribing?

- What are the barriers to optimal prescribing?

- What are the enablers of optimal prescribing?