Challenges for Pharmacology and Therapeutics Educators

Peter McLeod

Challenges

• Continuing education
• Assessment strategies
• Rational therapy in practice
• Epidemic of diagnoses
• Transfer of learning

Challenge

Continuing education

Program design and delivery in Canadian CME Drug Therapy Courses

Peter J. McLeod MD; Robert Rangno MD; Can. J. Clin. Pharm. 1999

Content Needs Assessment:
Feedback from previous Peer consultations Committee decisions Personal perceptions

Course Delivery:
Teacher-dominated Passive learning
If formal CME is ineffective, why do physicians still participate?

P.J. McLeod & A.H. McLeod
McGill Centre for Medical Education
Medical Teacher 2004

Far too large a selection of treatment of disease is today controlled by the big manufacturing pharmacists who have enslaved us in a plausible pseudoscience

Formal CME Participation
833 practicing physicians
- Fun
- Combat obsolescence
- Curiosity
- Reassurance

Answers?
- Get the professional organizations involved
- Think about academic detailing
- Think about practice-based learner-driven activities

Challenge
consider ‘newer’ assessment strategies
# Assessment drives learning

<table>
<thead>
<tr>
<th>Assessment methods</th>
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<tbody>
<tr>
<td>- Orals</td>
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<tr>
<td>- MCQs</td>
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<td>- Essay</td>
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<td>- OSCE</td>
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## ‘Newer’ assessment instruments
- Mini CEX
- portfolio assessment
- Script concordance test
- Therapeutics OSCE’s
- Audit of case records

## Challenge
The epidemic of diagnoses

## Diagnoses
- Sadness
- Twitchy legs
- Mood swings
- Insomnia
- Prediabetes
- prehypertension

## Answer?
- Education
### Challenge

**Rational drug use in practice**

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### Defining inappropriate practices in prescribing for elderly people: a national consensus panel

Peter J. McLeod, MD; Allen R. Huang, MD; Robyn M. Tamblyn, PhD; David C. Gayton, MD

*CMAJ*

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### Inappropriate Prescribing

32 member national panel

- 3 categories
  - generally contraindicated
  - drug-disease interactions
  - drug-drug interactions
- 71 prescribing practices

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### Questionable prescribing for elderly patients in Quebec


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### Do Too Many Cooks Spoil the Broth?

**Multiple Physician Involvement in Medical Management of Elderly Patients and Potentially Inappropriate Drug Combinations**

Robyn Tamblyn, PhD; Peter J. McLeod, MD; Michal Abrahamowicz, PhD; Rejean Laprise, PhD

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### Questionable Prescribing

- Two Ca channel blockers 4%
- Thiazide + Thiazide 2%
- BZDP + BZDP 14%
- NSAID + NSAID 5%
- ASA + ASA 3%
- ACEI + ACEI
- K sparer + K supplement
<table>
<thead>
<tr>
<th>Inappropriate Drug Combinations</th>
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<tbody>
<tr>
<td>Direct correlation with number of prescribers</td>
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<tr>
<td>Negative correlation with number of pharmacies</td>
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<tr>
<td><strong>Challenge</strong></td>
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<tr>
<td>Transfer of learning</td>
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<tr>
<th>Use of Standardized Patients to Assess Between-Physician Variations in Resource Utilization</th>
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<tbody>
<tr>
<td>Peter J. McLeod, MD; Robyn M. Tamblyn, PhD; David Gayton, MD; Roland Grad, MD; Linda Snell, MD; Laeora Berkson, MD; Michal Abrahamowicz, PhD.</td>
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<td>JAMA</td>
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<th>Standardized Patients</th>
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<tr>
<td>• 312 total SP visits</td>
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<td>• 112 physicians</td>
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<td>• Extreme variations in cost of management</td>
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<tr>
<th>Does Knowledge of Drug Prescribing Predict Drug Management of Standardized Patients in Office Practice</th>
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<tbody>
<tr>
<td>Roland Grad, Robyn Tamblyn, Peter McLeod, Linda Snell, Alfred Illescas, Don Boudreau</td>
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<tr>
<td>Medical Education</td>
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<th>Knowledge – Performance</th>
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<td>Correlation = 0.22</td>
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</table>
Association between licensing Examination Scores and Resource Use and Quality of Care in Primary Care Practice

Exam success predicts
- Fewer inappropriate prescriptions
- More referrals for consultation
- More disease-specific vs. symptom-specific medications prescribed
- More mammography for >50

Transfer of learning
- Authentic learning
- Use of analogies
- Contrastive learning
- Active, engaged learners
- Use of multiple media
- Reflective learning

Wisdom of the ages

The Epidemic of Diagnoses

The arrival in town of a good clown is more benefit to the people than the arrival of 20 asses laden with medicine

T Sydenham

Assessment

You can observe a lot just by watchin’

Y Berra
Dear Heather. Please walk by me again with a drink in your hand

Leonard Cohen

CME
One of the first duties of the physician is to educate the masses not to take medicine

W. Osler

Transfer of learning
After all, the greatest difficulty in life is to make knowledge effective, to convert it into practical wisdom

W. Osler

Rational therapy
To be a successful practitioner, one needs but 5 drugs

J Ruedy

Sample Combinations
- K sparer plus K supplement
- Two or more Ca blockers
- Two or more ACE inhibitors
- Two or more TCA’s
- Two ASA’s
Faculty Attitudes toward Various Teaching Formats at Two Canadian Medical Schools

P.J. McLeod, M.D., McGill University, Faculty of Medicine, Quebec; N.H. Shear, M.D., University of Toronto Faculty of Medicine, Ontario; S.M. MacLeod, M.D., McMaster University School of Medicine, Ontario

ACADEMIC MEDICINE 1991

Attitudes to Teaching Formats

Enthusiasm for teaching 75%
Enthusiasm for:
• SG clinical teaching 75%
• Seminar format 50%
• Lecture format 13%

Treatment of Benign Prostatic Hypertrophy with Medrogestone


Montreal, Quebec, Canada

Clin Pharm Therap. 1971

BPH Treatment
• Medrogestone works!

Education & Practice Characteristics Predict Inappropriate Prescribing
Excessive LABZ doses
– Recent graduates
– Single medical school
– University affiliation

Academic Detailing
• 5 Pharmacists
• Lectures; education materials; provider profiles; meet 25-50 MDs each
• Prescribing profiles changed to closely follow national recommendations
<table>
<thead>
<tr>
<th>Study Title</th>
<th>Authors</th>
<th>Journal/Publication</th>
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<tbody>
<tr>
<td>Academic Detailing to Improve Antihypertensive Prescribing Patterns</td>
<td>David Siegel, Julio Lopez, Joy Meier, Mary K. Goldstein, Samuel Lee, Bradley J. Brazill &amp; Mazen S. Matalka</td>
<td>Am J HBP 2003</td>
</tr>
<tr>
<td>LABZ Prescribers</td>
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<tr>
<td>Older generalists</td>
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<td>Long term care settings</td>
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<tr>
<td>Graduate of a single school</td>
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<tr>
<td>W. Osler</td>
<td></td>
<td>1909</td>
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