

Pharmacy at the University of British Columbia : Committed to a Partnership Shaping the Future of Health in British Columbia

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The Canadian Health Act of 1984 states that “All Canadians should have reasonable access to quality care regardless of where they live and how much they make.” Yet, higher drug prices, a continuing switch to newer drugs, and an overall increase in prescriptions all contribute to the increase in drug expenditures. This presentation provides an overview of the Canadian health care debate along with the British Columbia perspective. Academic pharmacy is unique because we are factually conversant and practically capable to contribute to the entire life of a drug, from bench to bedside and back. A detailed discussion highlights some roles academia can play in helping to assure quality, sustainable health care and innovation. These roles include patient care, education, outcomes, research, innovation, bioinformatics, and health policy.

The presentation closes asking the following questions:

What are our next steps?

How do we forge productive, synergistic, and lasting partnerships among government, academia, the health professions, and industry?


What role can international collaborations play?

Faculty of Pharmaceutical Sciences

PHARMACY AT UBC:
**Committed to a Partnership Shaping
 the Future of Health in BC**

Asian Conference on Clinical Pharmacy
 Seoul, South Korea, July 24, 2004

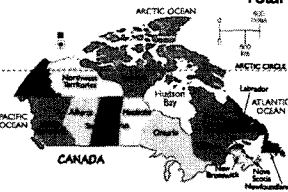
research internationalization people
 community learning




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CANADA

- CANADIAN HEALTH CARE ACT- 1984
 - "All Canadians should have reasonable access to quality care regardless of where they live and how much they earn."
- Total health care costs = 9.3% of GDP
 - ~30 million population
 - \$3574/person (2002)
 - 15% of total are drugs
 - 2% of worldwide Rx sales
 - \$1.18B in Rx-related R&D
 - Romanow and Kirby Reports




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**CANADA:
 PHARMACEUTICAL CARE**



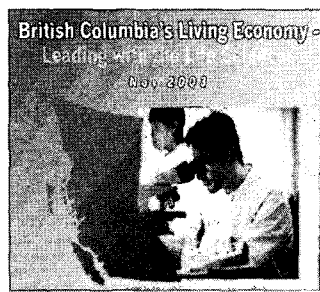
- People concerned for quality of their health care
- New drugs recognized as very valuable in achieving quality health care
- Drug importance, aging population, newer drugs = Increasing health care costs!
- Medicare assures access to core physician and hospital services with NO user fees = public expectation.
 - Contrary to Rx value recognized and public expectations, no systematic provision or funding of Rx → leads to concern and access issues

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BRITISH COLUMBIA




- All provinces and territories differ
- 56 health regions
- >2001 formed 5 RHA, 16 health service delivery areas, 1 PHSA
- VERY concerned about drug costs! (~65% of total provincial revenue)

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NATIONAL CHAIN PHARMACY



>3,950 stores (43 states + PR)
 Plan 6,000 stores by 2010
 Fiscal 2002 =>\$29.9 billion




>4000 stores (32 states + DC)
 Growth ~250 stores/year
 Fiscal 2002 =>\$24.2 billion

(Pharmaprix in Quebec)
 Canada's largest retail drug store
 >800 stores
 Fiscal 2002 =>\$5.4 billion (\$3.6)

SHOPPERS DRUG MART

~40 new B.C. pharmacists in 2004

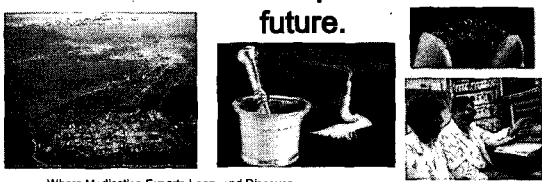
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ACADEMIA

- We create new knowledge.
- We disseminate new knowledge.
- We educate for the present and for the future.



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FACULTY COLLABORATION

Collaboration between the Faculty and our partners has been a significant factor in our success!

- Academia, the Profession, Industry, and Government
 - National
 - International
 - Provincial




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ACADEMIC PHARMACY IS UNIQUE



A unique discipline: factually conversant and practically capable to contribute to the entire life of a drug from bench to bedside and back.

Target discovery, lead discovery, lead optimization/preclinical development, clinical evaluation, dispensing, evidence-based pharmaceutical patient care, postmarketing outcomes research in real patient populations, and pharmaceutical policy development

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OUR COMMITMENT

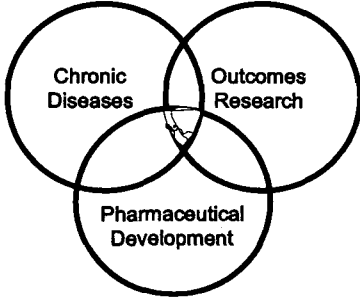
The Faculty of Pharmaceutical Sciences is working to enhance the health and well-being of the residents of our province, Canada, and beyond.

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STRENGTHS


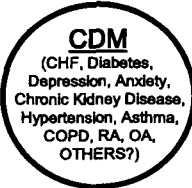



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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

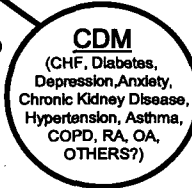
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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

1. Patient Care (Health Care Providers, BCMA, BCPhA, Patient Advocacy Groups)



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INNOVATIVE CARE PARTNERSHIPS

- ❖ Individualized medication and disease state counselling;
- ❖ Individualized medication schedules and action plans for patients;
- ❖ A reassessment and follow-up of drug therapy outcomes with patients and physicians;
- ❖ Medication history and allergy assessment;
- ❖ Adverse drug reaction reporting; and
- ❖ Provision of drug information to health care professionals.

❖ PILOT FOR CHANGE IN GOVERNMENT POLICY

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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

1. Patient Care
2. Education (Interprofessional, Patient, Policy Makers, the Public)

CDM
(CHF, Diabetes, Depression, Anxiety, Chronic Kidney Disease, Hypertension, Asthma, COPD, RA, OA, OTHERS?)

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EDUCATIONAL MATERIALS- SPEP


ASTHMA ACTION PLAN (Peak Flow Monitoring)

1 | DOX

The Benefits Leukotriene Receptor Antagonists (LTRAs) for Asthma ... what should you know?

ASTHMA MANAGEMENT WORKSHOP FOR PHARMACEUTICALS

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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

1. Patient Care
2. Education
3. Outcomes

CDM
(CHF, Diabetes, Depression, Anxiety, Chronic Kidney Disease, Hypertension, Asthma, COPD, RA, OA, OTHERS?)

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PHARMACEUTICAL OUTCOMES RESEARCH

(pharmacoepidemiology, pharmacoconomics, clinical outcomes, quality of life, etc.)

↓ Functions

Design/Implement Credible Pharm. Outcomes Evaluations
Generate Evidence
Disseminate Information and Educate
Influence Rational Drug Policy
Facilitate Innovation and "Best" Practice

↓

Reformation of Primary Care;
Practitioner Paradigm

↓

Reduction of Drug Related Morbidity & Mortality

↓


Management of Chronic Diseases

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COR_x UBC

- Purpose:
 - To evaluate population-based as well as prospective, patient-specific outcomes (clinical, economic and quality-of-life) of drug therapy, under conditions of routine clinical care.
 - To assist patients, health care practitioners, educators and policy makers to maximize the benefits and minimize the risks of drug therapy.
- Pharmacists Network; investing \$3,000,000 over next 3 years

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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

1. Patient Care

2. Education

3. Outcomes

4. Value of Research

CDM
(CHF, Diabetes, Depression, Anxiety, Chronic Kidney Disease, Hypertension, Asthma, COPD, RA, OA, OTHERS?)

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REAL WORLD HEALTH

- **Women's Health**
 - Significant gaps in knowledge about influence of gender and effects of certain aspects of female physiology on drug disposition and action (e.g., menstrual cycle, pregnancy, menopause)
- **Use of Evidence of Drug Effectiveness in the Real World - Drug Policy Innovation & Evaluation**
 - CIHR-funded modeling research: asthma drug effectiveness - Trends and regional variation in asthma medication and health resource use
- **Diabetes and Cardiovascular Disease**
 - Investigating mechanisms contributing to cardiac and vascular dysfunction that is a major cause of the morbidity and mortality in diabetes

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FOR EXAMPLE: CHRONIC DISEASE MANAGEMENT

1. Patient Care

2. Education

3. Outcomes

4. Value of Research

5. Innovation to Improve Health

CDM
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PREDICTING DRUG RESPONSE

April 14, 1998 *JAMA* meta-analysis of existing studies estimated:
2.2 million experience ADR in hospitals/year U.S.; 100,000 Deaths in US/year; estimated cost of \$1.56-4.0 billion (US)
In Canada translates to 7,000-10,000 hospital deaths/year

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Potential of Pharmacogenomics

All patients with same diagnosis

1 Genetic profile for non-response or toxicity
Treat with alternative drug or dose

2 Genetic profile for favorable response
Treat with conventional drug or dose

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GENOTYPE-SPECIFIC APPROACHES TO THERAPY IN CHILDHOOD (GATC)

- \$6.4 million 'adverse drug reactions in children' project, led by Drs. Bruce Carleton and Michael Hayden (CMMT) funded by Genome Canada
- trans-disciplinary consortium of nationally and internationally recognized experts from hospitals, universities, research institutes and children's advocacy groups and Health Canada
- expertise in pharmacogenomics, proteomics, genetics, pediatric pharmacology, and pharmacokinetics

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**FOR EXAMPLE:
CHRONIC DISEASE MANAGEMENT**

1. Patient Care

2. Education

3. Outcomes

4. Value of Research

5. Innovation to Improve Health

6. Bioinformatics
(Create New Technologies, Implementation Protocols, Disseminate New Knowledge)

7. Health Policy
(Innovation & Evaluation, health geography, health IT)

CDM
(CHF, Diabetes, Depression, Anxiety, Chronic Kidney Disease, Hypertension, Asthma, COPD, RA, OA, OTHERS?)

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CREATE ACTION PLAN

What are our next steps?
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What role can international collaborations play?

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THANK YOU!

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