Integrating Pharmacists into the BC Ministry of Health Primary Care Home Model

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Associate Member, Department of Emergency Medicine, Faculty of Medicine

Presentation to the General Practice Services Committee, June 26, 2017
Outline

• Context
• Prototyping at UBC Pharmacists Clinic
• Primary Care Proposal
• Integration with Primary Care Strategy in BC
• Questions/Discussion
The Health Care Continuum
Health Care Costs in Canada (2014)

- Hospitals: $63.5 billion (29.6%)
- Prescribed Drugs: $28.8 billion (13.4%)
- Physicians: $33.2 billion (15.5%)
- Non-Prescribed Drugs: $5.1 billion (2.4%)
- Capital: $8.9 billion (4.1%)
- Public Health: $11.5 billion (5.4%)
- Administration: $6.7 billion (3.1%)
- Other Health Spending: $13.0 billion (6.1%)
- Other Institutions: $22.2 billion (10.3%)
- Other Professionals: $21.8 billion (10.1%)

ADEs: $21 billion (est.)
Non-adherence: $7-9 billion

$33.9 billion (+$2.9B since 2010)

National Health Expenditure Database, 2015, Canadian Institute for Health Information
Adverse Drug-Related Events in Canada

Opportunities in Primary Care

• Patient attachment to pharmacists
• Physician-pharmacist collaborative relations
• Reduces pressure on physicians with complex patients
• Bridge the gap of pharmaceutical care throughout the continuum of care
• Further optimize medication use and implementation of evidence-based therapies
• Reduce preventable ADEs and associated health care resource consumption
## Canadian Perceptions & Attitudes

<table>
<thead>
<tr>
<th>Statement</th>
<th>Respondent Agreement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacists working with other members of the health care team to provide care to patients with chronic conditions would result in <strong>better health outcomes</strong></td>
<td>84</td>
</tr>
<tr>
<td>If pharmacists were included as members of health care teams, patients overall <strong>quality of life</strong> would improve</td>
<td>82</td>
</tr>
<tr>
<td>If pharmacists worked more closely with doctors, it would <strong>reduce overall health care costs.</strong></td>
<td>79</td>
</tr>
</tbody>
</table>

Canadians, Canadian Pharmacists Association, Feb 2015
## Patient Opinions in British Columbia

<table>
<thead>
<tr>
<th>Questions</th>
<th>Respondents</th>
<th>Yes responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you support the concept of patients receiving care from <strong>primary health care teams</strong> located in communities across the province?</td>
<td>44</td>
<td>44 (100%)</td>
</tr>
<tr>
<td>Do you support the <strong>inclusion of pharmacists</strong> on these primary health care teams?</td>
<td>44</td>
<td>42 (96%)</td>
</tr>
<tr>
<td>Do you think that pharmacists working with other members of a health care team to provide care to patients with chronic diseases would result in <strong>better health outcomes</strong>?</td>
<td>43</td>
<td>42 (98%)</td>
</tr>
</tbody>
</table>
Other Jurisdictions in Canada

• ~200 pharmacists in Family Health Teams, Ontario
  • provide on-site, in-office care to patients
  • lead quality improvement efforts focused on better prescribing and medication use
  • documentation is part of the electronic medical record
• >50 pharmacists in Primary Care Networks, Alberta
• ~25 pharmacists in Primary Health Teams, Saskatchewan
• ~300 pharmacists (target) on Family Medicine Groups, Quebec


Joint Policy Statement on General Practice Based Pharmacists

This document outlines the guiding principles for the evolving role of pharmacists working in GP practices to ensure patients obtain maximum benefit from the complementary skills and expertise of both professions, working together as part of the wider primary care team.
Prototyping at UBC
UBC Pharmacists Clinic

• Established innovative practice model
  – pharmacists integrated & working to maximum scope in primary care practice sites

• Prepares learners for inter-professional collaborative practice
  – students and pharmacists

• Site for practice innovation and research
Approach

• Relationships, trust, respectful collaboration
  – UBC Pharm Sci and Medicine
  – pharmacists and physicians as clinicians
  – existing pharmacist-patient relationships are supported and enhanced

• Value proposition
  – standardized service, expertise, time
  – focus on outcomes, unmet patient needs

• Funding

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Service Models

• Pharmacist located at UBC Pharmacists Clinic
  – pharmacist as consulting clinician
  – virtual inter-professional collaboration
  – patients seen in-person, telephone, telehealth

• Pharmacist co-located in physician’s office
  – patients scheduled for 1:1 appointments
  – direct inter-professional collaboration
  – patients seen in-person, phone follow-up option
# Metrics

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Months in operation</td>
<td>5</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>Clinical Pharmacists*</td>
<td>1.2 FTE</td>
<td>1.8 FTE</td>
<td>2.8 FTE</td>
<td>3.2 FTE</td>
<td>3.2 FTE</td>
</tr>
<tr>
<td>Patients**</td>
<td>768</td>
<td>1460</td>
<td>1694</td>
<td>2086</td>
<td>6008</td>
</tr>
<tr>
<td>Patients/month (av)</td>
<td>154</td>
<td>122</td>
<td>141</td>
<td>174</td>
<td>147</td>
</tr>
<tr>
<td>Referral Source</td>
<td>64% physician, 36% other (pharmacist, hospital, patient self-referral)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Model</td>
<td>68% consultation, 32% co-location</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

* FTE
** Most patients have multiple appointments

Nov/13 – Mar/17
Current Co-located Model

• 3 Divisions (Fraser Northwest, Vancouver, Richmond)
• Once or twice monthly visit – 6-12 patients per day
• Referral for:
  – polypharmacy/deprescribing
  – chronic disease management
  – adverse drug events
  – new patients/diagnoses
  – patient questions/education

• Physician-Pharmacist collaboration customized for site:
  – case conference at end-of-day
  – case conference with patient
  – all care documented and shared
# Co-Location Prototype Snapshot

<table>
<thead>
<tr>
<th>Co-located pharmacist workload</th>
<th>Count (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>317</td>
</tr>
<tr>
<td>Mean medications/patient</td>
<td>9.6</td>
</tr>
<tr>
<td>Mean Drug Therapy Problems (DTPs)/patient</td>
<td>2.7</td>
</tr>
<tr>
<td>Drug Therapy Problems (851)</td>
<td></td>
</tr>
<tr>
<td>Adverse reaction</td>
<td>147 (17%)</td>
</tr>
<tr>
<td>Adherence</td>
<td>94 (11%)</td>
</tr>
<tr>
<td>Drug needed</td>
<td>160 (19%)</td>
</tr>
<tr>
<td>Dose too low</td>
<td>90 (12%)</td>
</tr>
<tr>
<td>Dose too high</td>
<td>114 (13%)</td>
</tr>
<tr>
<td>Drug not needed</td>
<td>165 (19%)</td>
</tr>
<tr>
<td>Drug interaction</td>
<td>13 (2%)</td>
</tr>
<tr>
<td>Ineffective drug</td>
<td>59 (7%)</td>
</tr>
</tbody>
</table>

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Success Factors

• Physician
  – relationships and trust
  – champion

• Pharmacist systems, process, resources

• Administrative
  – physical space, Wi-Fi, access to printer
  – practical information for physicians and MOAs
  – reports (billing or other) to identify patients
  – patient booking procedures
  – PMH Division personnel
  – customization based on the practice
## Physician Feedback

<table>
<thead>
<tr>
<th>How would you rate your overall satisfaction with</th>
<th>Satisfied or Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pharmacist services provided in your office?</td>
<td>10/10 (100%)</td>
</tr>
<tr>
<td>The opportunity to be included in discussions about your patients?</td>
<td>9/9 (100%)</td>
</tr>
<tr>
<td>The way your patients were included in discussions about their medications?</td>
<td>10/10 (100%) *</td>
</tr>
<tr>
<td>The timeliness with which you received information from the pharmacist?</td>
<td>10/10 (100%)</td>
</tr>
</tbody>
</table>

Using a 5-point Scale - very satisfied (5), satisfied (4), neutral (3), unsatisfied (2), very unsatisfied (1)

*one respondent did not participate in the discussions involving the patient and pharmacist.
Exit Interviews - Patients

• Impact of the co-located pharmacist on your health?
  “I’m on better medication for my condition”
  “My treatment is more tailored to my needs”
  “I’m more confident with my medications and taking them”

• What you like best?
  “Personalization of my care”
  “Doctor able to understand my needs better”

• Suggestions for improvement?
  “Make service available to anyone with chronic pain”
  “Educate others on how this service helps patients”
Primary Care Proposal
PHARMACISTS IN COMMUNITY-BASED PRIMARY HEALTH CARE TEAMS IN BRITISH COLUMBIA

A New Model of Integrated Care

Submitted to
Barbara Walman, Assistant Deputy Minister
Medical Beneficiary and Pharmaceutical Services Division
British Columbia Ministry of Health

Submitted by
Dr. Peter Zed, Associate Professor and Associate Dean, Practice Innovation
Faculty of Pharmaceutical Sciences
University of British Columbia
May 29, 2015
Practice Innovation Model

• Pharmacists in primary health care teams to collaborate in the care of high need patients
  – based on pharmacist co-location model at PC
  – focus on prevention & early intervention, CDM, shifting from secondary to primary care settings

• Pharmacists integrated into 35 Divisions of Family Practice across the Province

• Integration with community and health authority providers for care collaboration and education
Scope

• Project Scope
  – pharmacists (1 FTE each) employed by UBC
  – pharmacists paid salary, no claims submitted to MOH
  – 35 Divisions of Family Practice in BC
  – focus on patient care services to complex patients

• Out of Scope
  – services provided by pharmacists in community pharmacies
  – services provided by specialist physician offices
  – services provided on long-term care facilities
  – service to patients in sites operated by Health Authority
  – administrative or project work at physicians offices
Administration of the Program

• UBC Faculty of Pharm Sci provides provincial oversight
  – human resources, finance, and communications support
  – operational support from the Pharmacists Clinic

• Quality Assurance
  – working in a system that expects quality and excellence
  – overseen and mentored by exemplary clinicians

• Training by UBC available to all pharmacists in BC

• Research and Evaluation
Without Administrative Support

- Pharmacists often depend on other team members to assist in their integration, creating additional work for nurses and physicians
- Difficulties in collaborating successfully
- Physician resistance, lack of pharmacist assertiveness, inadequate pharmacist support, lack of space and inadequate pharmacist training
- Lack of role clarity
- Unclear expectations of the pharmacists’ responsibilities
- Lack of workflow, appointments, communication systems, documentation system and standardized service delivery
- Poor utilization of pharmacist skills and knowledge
- Less direct patient care provided
- Less value-add outcomes
- Challenges with quality assurance, evaluation and outcome assessment

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CPJ 2013:146:342–352
Benefits

• Patient-centered, team-based care
• Pharmacist focus on managing drug therapy problems and preventing/reducing adverse drug events
• Quality assurance
• Optimize health outcomes
• Better physician-pharmacist relations in primary care
• Better pharmacist-pharmacist collaboration in the primary health care continuum
Benefits

• Existing patient-pharmacist relationships are respected and preserved
• Pharmacists work together across primary care and community pharmacy sites
• Collaboration in patient assessment, care planning, follow-up and evaluation
• Pharmacist access to clinical and education support for continued professional development
• Network of pharmacists across acute care, primary care, tertiary care and community-based practice
Benefits

• Improving the patient experience
  – quality, timeliness, satisfaction
  – patient engagement and education
  – team-based care
  – improving drug therapy outcomes
Evaluation

Inputs
- Advisory Committee
- BC Ministry of Health
- UBC Faculty of Pharmaceutical Sciences
- Stakeholders (Regulators, Physicians, Pharmacists, Patients)

Inputs
- Data Sources
  - Internal – EMR, PharmaNet medication profile, participant surveys and interviews, observations
  - External – administrative databases

Evaluation Methods
- Descriptive Summaries
- Quantitative Methods
- Qualitative Methods

Model Impacts
- Patient-level Outcomes
- Practice-level Outcomes
- System-level Outcomes

Evaluation Outputs
- Reports
- Peer-Reviewed Publications
- Knowledge Translation Strategy

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Stakeholder Support

- UBC Health Executive
- Doctors of BC
- Society of General Practitioners of BC
- BC College of Family Physicians
- Vancouver Division of Family Practice
- Fraser Northwest Division of Family Practice
- Chilliwack Division of Family Practice
- South Okanagan Similkameen Division of Family Practice
- Richmond Division of Family Practice
- Rural and Remote Division of Family Practice
- First Nations Health Authority
- College of Pharmacists of BC
- BC Hospital Pharmacy Directors Council
- Better PharmaCare Coalition
- Parkinson’s Society of BC
Next Phase

• Integrate pharmacists into Patient Medical Homes
  – collaboration with the Divisions of Family Practice
  – based on the pharmacist co-location model

• Collaboration in the care of high need patients

• Integration with community and health authority providers for care collaboration and education
Integration with Primary Care Strategy in BC
POLICY OBJECTIVE 1 - ESTABLISH PRIMARY CARE HOMES

Regional Health Authorities in partnership with Family Physicians establish a population and patient centred, integrated primary care system of community based "primary care homes" (PCHs) across Local Geographic Service areas by building formal linkages between family physician primary care practices and health authority primary care services to create an interprofessional team of primary health care providers that will meet the primary care needs of the community population through providing continuity of care, access to a full menu of quality (effectiveness, access, acceptability, appropriateness, and safety) primary care services, and as required timely access to quality specialized health care services.

EXPECTED OUTCOMES AND IMPACTS – PATIENT POPULATION AND SERVICE ATTRIBUTES

- Patient experience is improved through access to coordinated, comprehensive, and quality primary care with continuity of care between patient and primary care providers and continuity of information through shared charting.
- Population health including illness prevention and decreased mortality is improved. The health system will see reduced pressure on emergency departments and acute care utilization.
- Experience of delivering care for providers and support staff is improved through teamwork, mutual support and improved professional learning and development opportunities.
- Access to quality primary care homes across all geographic service areas (metro, urban/rural, rural or remote) will be fully implemented.
- Effective and appropriate services are provided and based on a population needs based per capita cost.

PRINCIPLES AND VALUES

Core principles and values to be reflected by PCHs:
- Patient-Centered: Population and patient health needs determine the services delivered and team skill sets with patients and their families engaged as full partners in maintaining their health and managing their health care needs.
- Inter-professional: A team of providers works and collaborates together to support the health goals of patients and the health needs of their community population.
- Integrated: The primary care home is designed to create seamless and streamlined services through a single point of access and patient centered processes and pathways.
- Comprehensive: Access is provided to a range of quality (effectiveness, access, acceptability, appropriateness, and safety) primary care services to meet all the primary care needs of the population.

February 17, 2016
Overall goal: Patient centred, whole-person care

Team-based care

Structural enablers of care
- Information technology enabled
- Education, training and research
- Evaluation and quality improvement
- Internal and external supports

Service attributes
- Coordination of care
- Continuity of care
- Comprehensive care
- Contact (timely access)
- Commitment
- FP networks supporting practice
- PMH networks supporting communities
- Relational enablers of care

Patient Medical Home in BC
September 20, 2016
“I think that, in the future, we will see team-based health care – multidisciplinary practices where a doctor, nurse, nurse practitioner, clinical pharmacist, social worker and physiotherapist might all work together to provide patient primary care.”

Dr. Alan Ruddiman, BC Business Dec/Jan 2017
Integrating Pharmacists into the BC Ministry of Health Primary Care Home Model

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