Driving Clinical Innovation in Alberta Strategic Clinical Networks (SCNs)

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for our partners and networks

Canadian Association of Health Services & Policy Research

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Outline

- Alberta & Alberta Health Services in context
- Root causes of health system problems
- Structures to drive clinical innovation and change
- Processes of the Strategic Clinical Networks
- Projects of SCNs
- Partnership for Research & Innovation in the Health System (PRIHS)
- Early outcomes & capability/maturation
- Risks
The Goal
Alberta to have a sustainable health system that creates the healthiest population and best health outcomes in Canada

One Health System:
- 5 Zones
- 4.2 million lives
- 100,000 employees
- 8,400 doctors
- 13.4 B budget
Compared to Other Provinces

Alberta
• Not less expensive (highest per capita, higher service intensity & higher unit costs)
• Not more accessible (maybe less)
• Not the country’s best quality for most outcomes (with clear exceptions)
• Not the longest, or health-adjusted, length of life
AHS Leading but not alone

+ NFPs, community groups, industry, etc
Non-sustainable cost increases in Canada *not due to population increases*

1975 to 2010

- Expenditure increases = 3.5 fold
- Population increases = 1.5 fold

23.4M people

34.2 M people
Root Cause 1: Complexity of care is increasing *(driving waste + inefficiency)*

Solution: Make it "a System"
Root Cause 2: **Complexity** = conflicting goals

*a formula for paralysis*

Solution = Simplify Directions
can’t do everything at once
Root Cause 3: “The Blame Game”
‘Passing of the Buck` Between Groups

Solution = “Care Teams” Across Barriers ‘Care Pathways’ to help Enable
Root Cause 4: non-malicious consumerism by un-engaged patients and providers **who ‘want’ >‘need’**

**Problem Solution = Say “NO” because it all!**

Using Good Evidence
Root Cause 5: data missing + choices difficult

Sustainability requires ‘real-time balance’ of all three

Solution = Data to Inform all Three

COST – if known (lowest cost possible)

ACCESS – if known (satisfactory or not)

QUALITY – if known (all dimensions)
Root Cause 6: Research into Care is Slow
Shouldn’t be..... in 2014

New Treatments

Adopted Slowly

Solution = Engage Research on Team
all Pillars can be engaged
Root Cause 7: Clinicians Frustrated/Not Engaged and patients not involved either

Solution = Engage Them!!
NEW APPROACHES REQUIRED

NEED NEW STRUCTURES AND FUNCTIONS
Collaboration Key: Strategic Clinical Networks aligned with a common purpose with research ‘embedded’
Designed to engage with core members elected to lead eventually engage every Albertan as a “Network Member”

Core team
Clinicians+ Admin + pts + Zones + Res

Support teams – Working Groups
AHS + AHN + Zones

Front Line Teams-
Wider public + patients, HAC’s, community groups and other external stakeholders
Strategic Clinical Networks: Our Central Goals

- Achieve the best outcomes
- Practice the highest quality of clinical care
- Seek the greatest value from resources used
- Engage clinicians in all aspects of this work
- Put patients at the centre
Planned Support and Resources for SCNs

• Each SCN- Dedicated Business Intelligence Unit
  – Project management, clinical analytics, case costing, quality improvement, pathway development, patient safety, knowledge management, health technology assessment
• Embedded research capability and expertise
• Education & skills development for leaders
• Funding including:
  – Seed money for innovation, initiatives, and research
  – Remuneration of core members
  – Opportunities to retain savings that are realized
13 High-level SCN Functions Supported by Evidence

In partnership with Zone and other Clinical Leaders, SCN's will:

1. Improve value for money in AHS by improving quality and sustainability (invest/reinvest) with evidence,
2. Define appropriate allocation of available resources,
3. Develop evidence-informed, best practice-based care models and pathways (and implement),
4. Develop and disseminate measures and performance across all 6 quality dimensions,
5. Assess & reassess technologies & enable evidence development,
6. Prioritize outcomes & interventions for improvement across care continuums,
13 High-level SCN Functions (continued) Supported by Evidence

In partnership with Zone and other Clinical Leaders. SCNs will:

7. Undertake a long-term view of needs and service developments
8. Support and - where applicable - lead population and public health
9. Engage clinical experts, users, researchers, patients and members of the public in achieving SCN goals
10. Implement, evaluate & optimize innovative service delivery models
11. Within the AHN, proactively develop and use research to solve clinical problems of importance
12. Identify innovations and, with AHN and government partners, initiate commercialization
13. Develop outcome improvement agreements in accordance with AHS & Zone strategic & planning processes (resources & change management)
1. Obesity, Diabetes and Nutrition - SCN
2. Seniors Health - SCN
3. Bone & Joint Health - SCN
4. Cardiovascular and Stroke - SCN
5. Cancer - SCN
6. Addiction & Mental Health - SCN
7. Emergency - SCN
8. Critical Care - SCN
9. Surgery – SCN
10. Respiratory - SCN

11. Primary Care & Chronic Disease
12. Maternal, Newborn, Child & Youth Health
13. Kidney
14. Diagnostics (Imaging/Lab Medicine)
15. Gastrointestinal
16. Neurosciences, Vision, ENT
Proposed SCN Launch Sequence

Primary Care & CDM – July 2014
Maternal, Newborn, Child & Youth – July 2014
Kidney – July 2014

Diagnostics & Laboratory – 4th Quarter, 2014/15

Gastrointestinal – 2015/16
Neurosciences, ENT, Vision – 2015/16
Unique Processes
Novel Use of Business Methods

rigorous development of business cases for each SCN

- Business plans with evidence
- Costs were considered
- Capacity was considered
- Feasibility was considered
- Zone Supports were considered
6 ‘Dimensions’ of Quality (HQCA)

Considered for All

**Accessibility**
Health services are obtained in the most suitable setting in a reasonable time and distance

**Acceptability**
Health services are respectful and responsive to user needs, preferences and expectations

**Effectiveness**
Health services are provided based on scientific knowledge to achieve desired outcomes

**Efficiency**
Resources are optimally used in achieving desired outcomes

**Safety**
Mitigate risks to avoid unintended or harmful results

**Appropriateness**
Health services are relevant to user needs and are based on accepted or evidence-based practice

**Accessibility**

Novel ways of Engaging Patients

• Patient Engagement Researchers
• Patient Advisors
• Patient Advisory Councils (2)
• 10 networks – all with combinations of above
## How is PER Different?

<table>
<thead>
<tr>
<th>Traditional Patient Advisor</th>
<th>Patient Engagement Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient represents <em>individual story</em> - personal perspective</td>
<td>1. Patient researcher represents <em>general analysis</em> of collective patient perspective</td>
</tr>
<tr>
<td>2. Patient input is based on <em>solid individual knowledge</em>, expertise</td>
<td>2. Patient researcher’s input is based on patient experience + <em>credible unbiased research</em></td>
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<tr>
<td>3. Trained by the AHS on <em>how to contribute effectively</em></td>
<td>3. Trained in conducting <em>valid research and reporting results without bias; rigorous training</em></td>
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<tr>
<td>4. Capacity <em>to convey</em> patient expertise</td>
<td>4. Capacity <em>to engage other</em> patients and public and capture their ideas</td>
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<tr>
<td>5. Advisory contribution</td>
<td>5. Potentially, consulting-type contribution</td>
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<tr>
<td>6. Time commitment: individual presence</td>
<td>6. Time commitment: <em>hours invested in skilled research work</em> to make contribution</td>
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</tbody>
</table>
PER Progress

- 5 Manuscripts
- 8 members on 10 networks
- PACER program established & 3rd cohort being trained
- Distance program being developed
- PER involved with 10 research units
Measuring Our Capability

MATURITY FRAMEWORK

&

EXTERNAL EVALUATION:

Dr. Deborah White & Research Team
SCN Capability Framework

Transforming the Health Care System & Improving the Health of Albertans

Transformational Leadership

Strategic Alignment

Innovation

Planning & Priority Setting

Evidence Informed Decision Making

Stakeholder Engagement & Relationship Management

Program and Project Management

Performance Management and Measurement

Knowledge Management and Translation

Organizational Culture

SCN - Transforming the Health Care System & Improving the Health of Albertans
## SCN Assessment Scorecard

<table>
<thead>
<tr>
<th></th>
<th>Transformational Leadership</th>
<th>Strategic Alignment</th>
<th>Innovation</th>
<th>Network and Stakeholder Engagement</th>
<th>Project Management</th>
<th>KM/KT</th>
<th>Performanc e Management &amp; Measurement</th>
<th>Planning &amp; Priority Setting</th>
<th>Evidence Informed DM</th>
<th>Culture</th>
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<td>Emerg</td>
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Scale: 1 = Initiating, 4 = Fully Mature / Need completion of all indicators at each Level to move to the next level
Partnership for Innovation & Research in the Health System

The Researcher

Users of Knowledge

On the same team creating value for money
Partnerships for Research & Innovation in the Health System (PRIHS) - Objectives

• Support SCN research & innovation that focus on (re)assessing technologies, services and processes in AHS

• Build relevant applied health research capacity in Alberta

• Support high value research in the health system focused on the six dimensions of quality

• Encourage collaboration of research and innovation activities between Alberta’s academic institutions, SCNs and AHS operations to achieve measurable / sustainable impacts in the health system.
PRIHS 1 - 10 Funded Projects

• Critical Care:
  - Intensive Care Unit Capacity Strain in Alberta
  - Reassessing Practices in the Daily Care of Critically Ill Patients

• CVS - Cardiovascular Implantable Electrical Devices in Alberta: Performance Evaluation & Rhythm Follow-up Optimization (PERFORM)

• ODN - Care and Rehabilitation for Patients with Severe Obesity

• Senior’s - Optimizing Seniors’ Surgical Care: The Elder Friendly Surgical Unit

• ED - Improving the Stewardship of Diagnostic Imaging Resources

• Bone & Joint:
  - Optimizing Centralized Intake to Improve Arthritis Care for Albertans
  - Spine Access Alberta: An Innovative Health Service Delivery Model

• Surgery - Enhancing Patients' Recovery After Surgery (ERAS)

• Cancer - Rectal Cancer Care Clinical Pathway
Snapshot of first 10 SCN Projects & Pending Projects

Cardiovascular Health and Stroke SCN
- Vascular Risk Reduction C-CHANGE**
  - Insulin Pump criteria**
  - Enhancing recovery after surgery

Obesity, Diabetes & Nutrition SCN
-appropiat e use of antipsycho tics

Seniors’ Health SCN
-Fragility & Stability

Bone & Joint SCN
-E-referral Lung, Breast & Hip & Knee

Cancer SCN
- Depression Pathway

Addiction & Mental Health SCN
-Surgery

Emergency

Critical Care

Respiratory Health

Awaiting 14/15 Funding Approval

Transition to Operations – 1st Q 14/15
Early Results
EARLY QUALITY IMPROVEMENTS – SCN Projects – Bone & Joint Hip & Knee Plan

Accessibility
- Average wait for consult 59% faster than 2005
- Average wait for surgery 67% faster than 2005
- Faster access avoids $22.7M/yr out-of-pocket for patients (wages etc) + ~$2.5M system costs

Efficiency
- Surgical volume up 73% since 2004/05
- Inpatient bed use up only 5% since 2004/05
- 32,000 bed days gained since 2010 (a resource productivity gain of ~$32.8M)

Safety
- 30 day readmission rates down to 4% from 5%
  - so now avoiding ~$1M/year of inpatient costs
- Now a focus by provincial clinical committee on other safety improvements pending

EXAMPLE of QUALITY IMPROVEMENTS that are POSSIBLE
ONE and JOINT: HIP and KNEE PROGRAM
~20,000 patients now assessed for 9,600 surgeries per year
EARLY QUALITY IMPROVEMENTS – SCN Projects – Bone & Joint Hip & Knee Plan

www.albertahealthservices.ca
De-identified, aggregated to produce zone reports

First in Canada

Executive Summary

Table 1. Executive Summary

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<tbody>
<tr>
<td>1</td>
<td>Primary elective volume</td>
<td>116</td>
<td>138</td>
<td>109</td>
<td>101</td>
<td>avg, per surgeon</td>
<td></td>
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<tr>
<td>2</td>
<td>Age (mean±SD)</td>
<td>65.7 ± 9.7</td>
<td>65.4 ± 10.4</td>
<td>65.9 ± 10.8</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Female (%)</td>
<td>54.7</td>
<td>53.2</td>
<td>57.3</td>
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<tr>
<td>4</td>
<td>BMI (mean±SD)</td>
<td>31.7 ± 7.6</td>
<td>31.0 ± 6.3</td>
<td>31.9 ± 6.5</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>ASA 6 ± 3 (%)</td>
<td>21.1</td>
<td>14.7</td>
<td>28.2</td>
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<td>6</td>
<td>Pre-surgery WOBQ-PAIN (mean±SD)</td>
<td>51.6 ± 12.8</td>
<td>61.2 ± 19.6</td>
<td>0-100% pain, 100% = no pain</td>
<td></td>
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<tr>
<td>7</td>
<td>Pre-surgery EQ5D moderate/severe PAIN (%)</td>
<td>57.3</td>
<td>46.6</td>
<td>46.4</td>
<td></td>
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<tr>
<td>8</td>
<td>Access: Wait for consult ≤ 8 wks (%)</td>
<td>4.3</td>
<td>6.7</td>
<td>35.9</td>
<td></td>
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<td>9</td>
<td>Access: Wait for surgery ≤ 14 wks (%)</td>
<td>56.1</td>
<td>30.5</td>
<td>68.9</td>
<td></td>
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<td>10</td>
<td>Efficiency: Total LOS ≤ benchmark (%)</td>
<td>55.8</td>
<td>60.0</td>
<td>51.7</td>
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<td>11</td>
<td>Safety: Readmit at 30 days (%)</td>
<td>2.6</td>
<td>2.3</td>
<td>6.4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>Safety: Mechanical events (%)</td>
<td>1.6</td>
<td>0.7</td>
<td>2.8</td>
<td></td>
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<tr>
<td>13</td>
<td>Safety: Medical events (%)</td>
<td>1.6</td>
<td>1.4</td>
<td>0.2</td>
<td></td>
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</tr>
<tr>
<td>14</td>
<td>Effect: WOBQ-PAIN 3 months post (mean±SD)</td>
<td>71.09 ± 16.3</td>
<td>27.39 ± 15.8</td>
<td>70.09 ± 15.8</td>
<td>N/A</td>
<td>0-100% pain, 100% = no pain</td>
<td></td>
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<tr>
<td>15</td>
<td>Effect: EQ5D PAIN 3 months post (%)</td>
<td>4.0</td>
<td>1.5</td>
<td>3.4</td>
<td></td>
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<td>16</td>
<td>Effect: Report severe pain 3 months post (%)</td>
<td>13.8</td>
<td>N/A</td>
<td>N/A</td>
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<td>17</td>
<td>Access: Patients dissatisfied (%) (Rate)</td>
<td>3.7</td>
<td>1.3</td>
<td>1.1</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"Your Performance" Legend

- My results are above Alberta average
- My diff from average is not statistically significant
- My results are below Alberta average
- My diff from average is statistically significant

Results reported in 16 KPIs across all dimensions of quality

Recent additions:
- Blood transfusion
- Wait for surgery from ready-to-treat
- Derived benefit from surgery at 90 days

Confidential Continuous Improvement Reports for surgeons

www.albertahealthservices.ca
**Appropriate Use of Antipsychotics**
- **11 Early Adopter sites** with High Inappropriate Use
- Sites reduced use from 38% to 20%,
- 657 beds impacted, 35% of clients removed from Medication
- Planning to spread to 14,000 LTC beds by 15/16

**Safe Surgery Checklist**
- **59 Surgical Sites** in Alberta all participating
- Follow WHO standard – *brief, timeout, debrief*
- 2012/13 observed compliance = 43%,
- March 2014 observed compliance = 91%

**Enhanced Recovery after Surgery**
- 2 early adopter sites – **LOS** reductions from 14 days to 5 days, mean is 2.64 days.
- **Reductions** in complications
- 6 sites implementing in 14/15
EARLY QUALITY IMPROVEMENTS – SCN Projects

Vascular Risk Reduction
- C-Change Guideline Harmonization – 1000 FP’s trained (TOP)
- Risk Reduction Clinics established
- 78 Pharmacies engaged
- 1 Major Worksite

Fragility & Stability
- Acutecare Fracture Care pathway implemented
- 75% of patients to OR within 48 hours
- Post Acute Pathway - under development
- Catch a Break program implemented with Health Link Alberta

E- Referral
- Defined e-referral workflow across continuum
- Launch with Breast & Lung Cancer – specialist to specialist consultation
- Launch with Hip & Knee Arthroplasty – GP to Specialist
EARLY QUALITY IMPROVEMENTS – SCN Projects

**Adult Coding & Triage System**
- Diagnostic coding of all surgical subspecialties across all hospitals in Alberta to determine in / out window waiting period for all Surgery
- All 5 Zones implementing – 3 waves of implementation – completed 15/16

**Stroke Action Plan**
- 15 smaller regional / rural sites in Alberta
- Implementing *Stroke Equivalent Care & Early Supported Discharge & Rehabilitation* protocols

**Adult Depression Pathway**
- RCT in Edmonton Zone Primary Care – 4 pronged approach to determine different levels of treatment options
- Spreading to Calgary Zone Primary Care networks in 14/15
SCNs: Risks to success

- Failure to focus
- Failure to meet expectations
- Failure to manage perceptions
- Failure to properly resource
- Failure to engage physicians & broader community
- Failure to retain ‘high-level’ & Executive support
QUESTIONS