

# Quality by Design: *Creating A High Performing Healthcare System*

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## Overview

- Current performance of the Canadian healthcare system pales in comparison to systems in other developed countries
- *Quality By Design* focuses on learning lessons about high performance from nominated systems
  - Some examples and highlights suggest important leverage points
- High performing systems approach redesign and improvement from a *systems* perspective
- Strategy, capability and execution are key

## Commonwealth Fund Overall Rankings Of 6 Countries For Key Indicators Of Performance

Country Rankings  
 1.00–2.66  
 2.67–4.33  
 4.34–6.00

	Australia	Canada	Germany	New Zealand	United Kingdom	United States
Overall Ranking (2007)	3.5	5	2	3.5	1	6
Quality Care	4	6	2.5	2.5	1	5
Right Care	5	6	3	4	2	1
Safe Care	4	5	1	3	2	6
Coordinated Care	3	6	4	2	1	5
Patient-Centered Care	3	6	2	1	4	5
Access	3	5	1	2	4	6
Efficiency	4	5	3	2	1	6
Equity	2	5	4	3	1	6
Healthy Lives	1	3	2	4.5	4.5	6
Health Expenditures per Capita, 2004	\$2876*	\$3165	\$3005*	\$2083	\$2546	\$6102

Ann Intern Med 2008;148:55-75

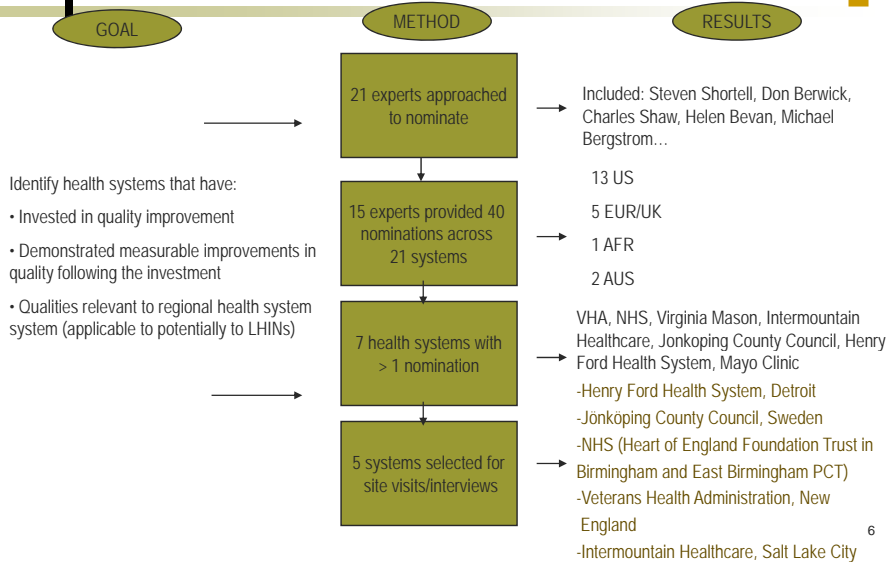
“As the architects of the UK’s National Health Service (NHS) transformation charted their course at the beginning of this century, they looked elsewhere for inspiration and cautionary tales. The worst possible outcome, they concluded would be to increase spending from 6% to 10% of GDP and end up looking like Canada. By this they meant that it would be a travesty to spend so much and achieve so little”

Stephen Lewis quoting Chris Ham, *Afterword. High Performing Health Care Systems, 2008*

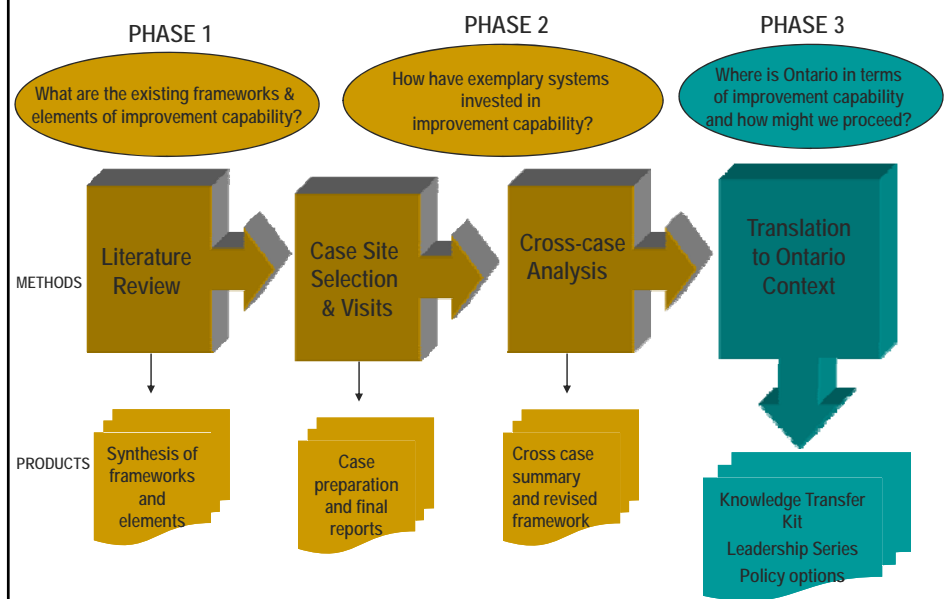
# Quality By Design Study

- Goals:
  - Understand the strategies, tools, approaches to creating and sustaining high performing healthcare organizations
  - Inform discussions and investments in a newly regionalized environment in Ontario, and (perhaps) elsewhere
  - Create pressure to seek higher performance across the system

## 5 high performing “improvement capable” healthcare systems were selected through a structured nomination process



## Quality by Design aims to define strategies & models for achieving and sustaining improvement in Ontario...



## QBD Systems Selected for Detailed Study

- 5 International systems
  - Henry Ford Health System, Detroit, MI
  - Intermountain Healthcare, Salt Lake City, UT
  - Veterans Health Administration-- VISN 1 (New England) and White River Junction VAMC Vermont, USA
  - Birmingham East and North PCT and Heart of England Foundation Trust, Birmingham, England
  - Jönköping County, Sweden
- 2 Canadian systems
  - Calgary Health Region, Alberta
  - Trillium Health Centre, Mississauga, Ontario

## [ Systems vary in several ways ]

- 3 different countries
- Range of regulation intensity
- Geography and covered populations
  - A rural county in Sweden
  - A western state in the US
  - Urban populations in large English and US cities
  - Veterans across 5 New England states

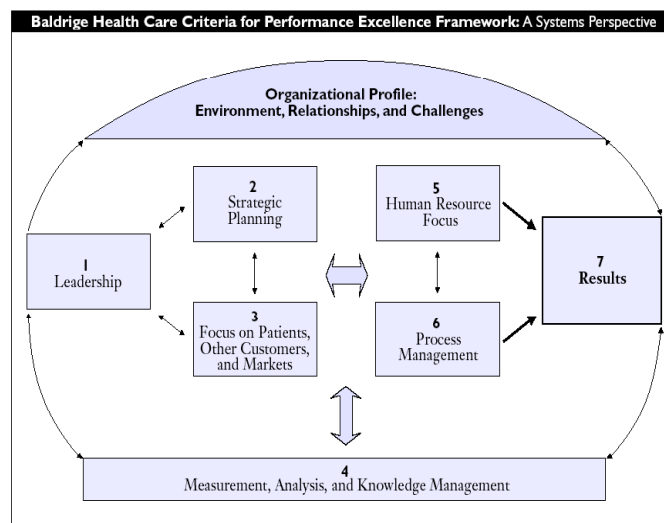
## [ The International Systems Have Faced Similar Challenges To Canadian Systems ]

- Large and diverse geographic areas (including rural areas) with several types of facilities attempting to provide integrated care
- Aging populations with complex needs
- Some centres with high levels of unmet healthcare and social needs
- Increasing rates and burden of chronic disease
- Gaps between hospital-community & primary-secondary care
- Financial and human resource issues
- Accountability and regulatory requirements

## These Key Attributes Are Common Across The Case Studies...

- Leadership
- Quality and system design as a core business strategy
- Capability for improvement
- Integration of services across levels of care, sites and disciplines
- Information technology and meaningful measurement
- Focus on patients/clients first
- Engaged physicians and staff workforce
- Strategic alignment of aims, measures and activities
- Incentives and accountability

There are ideas about **WHICH** factors are important but little specific information about **HOW** to invest in or implement these



## 5 Critical Organizational Strategies

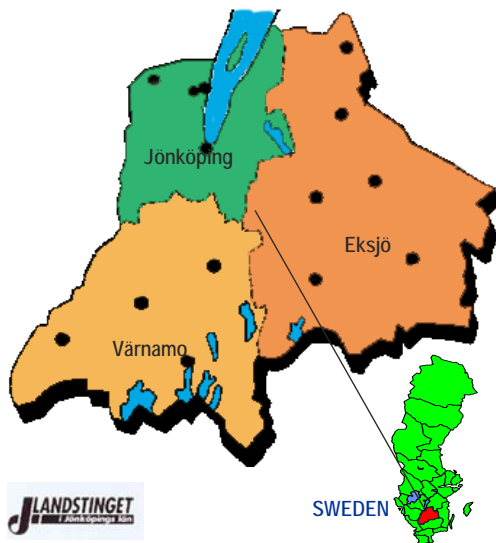
1. Quality as a Core Strategy
  - Broad definition of quality
  - Strategic focus on improving outcomes based on redesign of care processes and work roles
  - Patient as the focus of improvement
2. Development of organizational skills to support performance improvement
3. Information as a platform for guiding improvement
4. Effective learning strategies and methods to test and scale up
5. Leadership systems that use common language and embrace common goals

## Attributes and Strategies in Action

*Examples from the case studies*

# [ Quality as a Core Strategy ]

Jönköping - in a rural area of Sweden with a relatively small population - has been profiled internationally for their quality infrastructure and performance...



#### WHAT...

Regionally elected political body that funds, plans and delivers healthcare services as a dominant focus

#### WHO...

3 healthcare districts across 13 municipalities

Population of 340,000

9900 staff

3 hospitals, 34 care centres (primary care, specialized care, rehabilitation facilities, and pharmacies)

#### WHY...

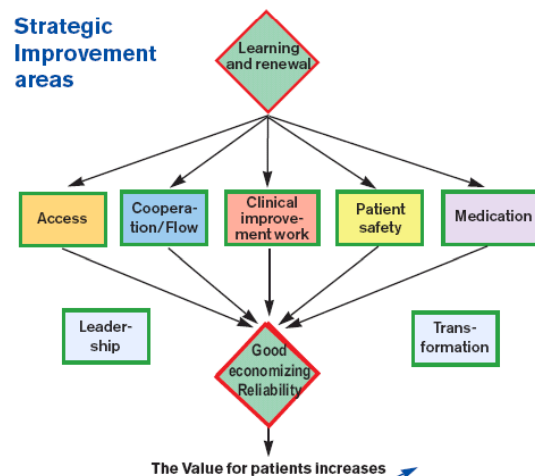
"For a good life in an attractive county"



## Quality As A Core Strategy

- In the past decade, Jönköping's senior team paired their longstanding commitment to strong financial performance with a strategic focus on quality improvement.
- Established a closer link between finance and quality, honing in on value for patients instead of just costs.
- Maintained an ongoing strategy of modest capital expenditures, removing waste and improving quality as a means of cost reduction.
- Through self-assessment using the Swedish Baldrige/QUL criteria, and an introduction to the principles of total quality management, began to use these as a framework for developing a more central and strategic focus on quality.
- The County Council estimates that its work on efficiencies has led to 80 million crowns (SEK) savings, or 2% their net costs.
- Initiatives were not yet yielding major improvements across the system. There was a need for management and front-line staff become better oriented towards process and systems thinking in their everyday work.

## Learning and Renewal Drive Improvement



## Creating the Capability to Redesign and Improve Care

- In the initial wave of County Council-wide education, senior leaders, managers and front-line teams learned that they had two jobs: *"to do what they do and to improve what they do"*.
- Qulturum "a meeting place for quality and culture" provides support for system-wide and unit-based projects to ensure ongoing learning and support to staff and leaders as they make changes to processes of care.
- Have made over 800 measurable improvements spanning all of the County Council's seven strategic aims.
- 4000 of the 9000 staff members and leaders across the system have received action-based quality improvement training at Qulturum.
- Despite the participation of physicians in education at Qulturum, Jönköping's leaders realized that they needed a parallel approach of introducing improvement to the next generation of clinicians. Jönköping initiated a partnership with a medical school and other health professions programs in Sweden.

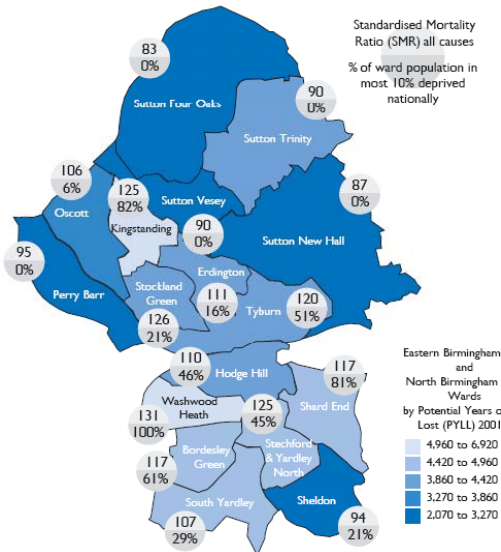


## Using Patients as the Focus for Designing Care and Engaging Staff



## Developing Organizational Capabilities to Support Improvement

### Eastern and North Birmingham Primary Care Trust



#### WHAT...

A local health care body that commissions services from hospitals, GPs, the voluntary sector and others and that provides primary care, intermediate care and community services

#### WHO...

16 wards  
Population of 437,500  
1,703 staff  
237 GPs working in 87 practices

#### WHY...

"Working in partnership to tackle inequalities and improve the health and well-being of local people"<sup>23</sup>

## Chronic disease prevention and management is a priority

- High rate of chronic disease in local communities – 27% (or ~3 in 10) people living in Birmingham have a longstanding chronic condition
- Multiple unplanned ED visits and hospital admissions for chronic disease in Birmingham
- Harvesting models and ideas from other jurisdictions to develop a strategy for managing and preventing chronic disease (or long-term conditions), and partnership with other PCTs and hospital trusts in the area, has led to:
  - 50% reduction in unplanned hospital admissions
  - 55% reduction in ED visits
  - Reduction in polypharmacy
  - Increase in patient satisfaction and compliance

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## The Partners in Health Centre



**“For many people better access means more GPs, but in many poor areas the solution is not so simple. A more flexible approach is being taken in a deprived part of the West Midlands...”**

**BBC News, January 2006**

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## Information As a Platform



### WHAT...

A not-for-profit integrated health system in Utah and southeastern Idaho – initially a gift from the Latter-Day Saints church – that provides excellent clinical care at affordable rates

### WHO...

22 hospitals, Health Insurance Plan (with 5 Provider Networks), Physician group with 2200 affiliated physicians, Community care services  
26,000 FTE employees

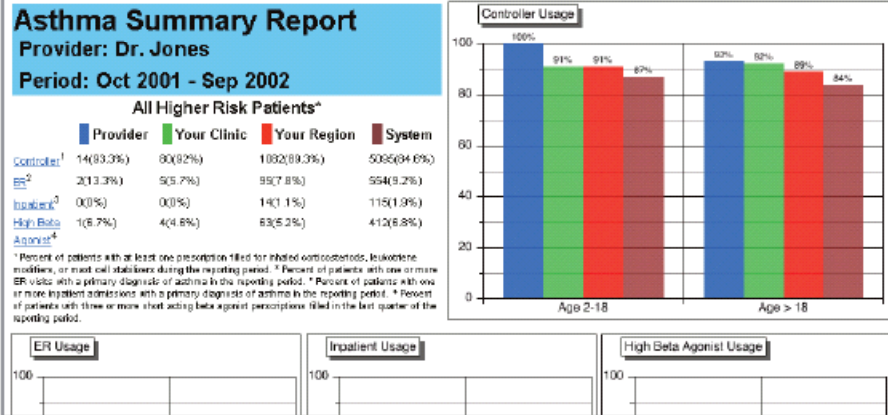
### WHY...

“To provide the best clinical practice, service experience and genuine care and concern delivered in a consistent and integrated way at the lowest appropriate cost.”

## An Integrated Clinical Information System Links Providers Into A System Of Care

- Brent James noted that “an early start created the strongest medical informatics system globally...and much of Intermountain’s success in integrating patient care is attributed to this strong clinical informatics system.”
- Their ability to build on, and link key clinical process, outcome, and finance measures enables the system to develop and track a balanced and relevant set of measures for accountability and system performance, as well as day-to-day clinical process improvement. This ensures they don’t maintain a disproportionate focus on accountability for finances and facilities management.
- When comparing the availability of data in IHC’s system in the mid 1990s to the requirements generated throughout the development of their clinical integration strategy, IHC’s information system had only 50-70% of the data needed. The clinical integration strategy was a key driver for the development of the clinical repository.

**FIGURE 1 Intermountain Health Care asthma summary report**



## Information Drives Structure, Accountability and Improvement

- Each clinical priority program became a "centre of excellence", creating an infrastructure and discipline for focused evidence-based improvement beyond projects as a system responsibility that is integrated to strategy-setting and everyday work.
- Performance reports for each centre of excellence, that are as timely as one month from patient care, and in some cases, one week, encourage a form of "*healthy competition that pushes people ahead and has been one strategic lever used to shift physicians towards acceptance of quality as a standard business process and operation.*"

Overall, there has been approximately \$100 million in savings through clinical quality improvement at IHC. Although they don't have a formal reinvestment savings plan, the savings are evident through excess system capacity and are directed towards capital investment.

## Using Information to Support Improvement



# Learning Strategies

## Henry Ford Health System



**WHAT...**  
 A not-for-profit health system in southeast Michigan initially modeled after the Mayo Clinic as a healing environment with a focus on innovation

**WHO...**  
 5 hospitals, 1 Health Insurance Plan, Physician Group (9000 physicians),  
 Community care services across continuum  
 Population of more than 1 million residents  
 13,800 FTE employees

**WHY...**  
 "To improve human life through excellence in the science and art of healthcare and healing"

HFHS



## Blues Busters at Henry Ford Health System

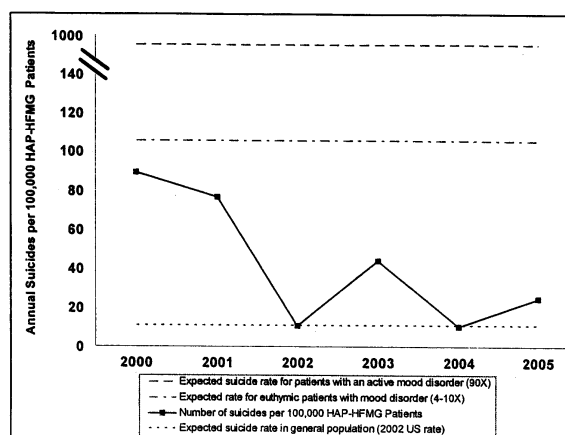
In 2000...

- The annual rate of suicide for Henry Ford Health System patients was at the lower end of the expected range for patients with mental health disorders (89 per 100,000 patients)
- Leaders at the health system's Division of Behavioural Health Sciences were still NOT satisfied and set a goal for 0 suicides
- Motivated by the ideas in the IOM Quality Chasm Report, leaders and clinicians started to work together to achieve breakthrough improvement to eliminate suicide among its patients
- Due to busy schedules were busy, clinicians and leaders started this journey by meeting together at the Chief's house on Saturday mornings and evenings...



By 2005 HFHS achieved a dramatic and sustained reduction in suicide rate at unprecedented levels... and continued to aim for 0

Figure 3. Suicides per 100,000 Patients

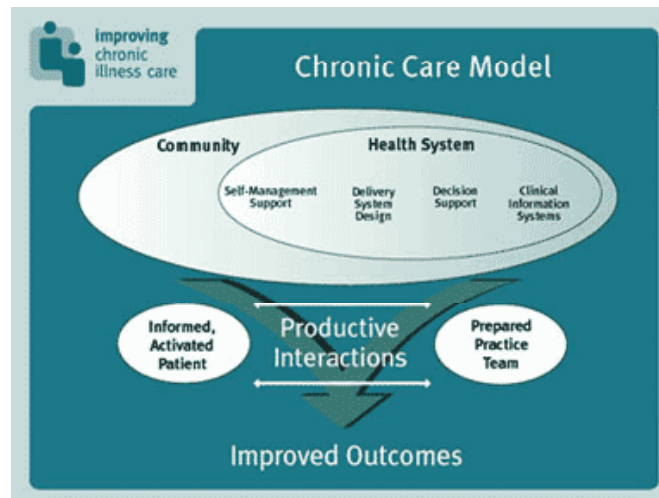


- The Joint Commission on Accreditation of Healthcare Organizations' Ernest Amory Codman Award to recognize excellence in the use of outcomes measurement to achieve improvements in the quality and safety of health care

- American Psychiatric Association's 2006 Gold Achievement Award

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## The Blues' Buster strategy incorporates the key elements of Wagner's Chronic Care Model



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## Blues' Busters leadership lessons....what really made it work

- Improving the *system* of behavioural health vs. improving care for a specific *mental disorder*
- Strive for and make peace with stretch goals (i.e. 0) but celebrate improvement
  - "If 99.9 percent accuracy is good enough, each year 12 babies in the state of Michigan will be given to the wrong parents and each day two landings at Boston's Logan airport will be unsafe." – critical to getting leaders and clinicians on board
- Think creatively about local partnerships and be strategic about getting external help
- Align high performance goals in behavioral health with accountability mechanisms and measures and strategy at a system level
- Develop an implementation team (Blues' Busters) with credible clinical leadership that drives change

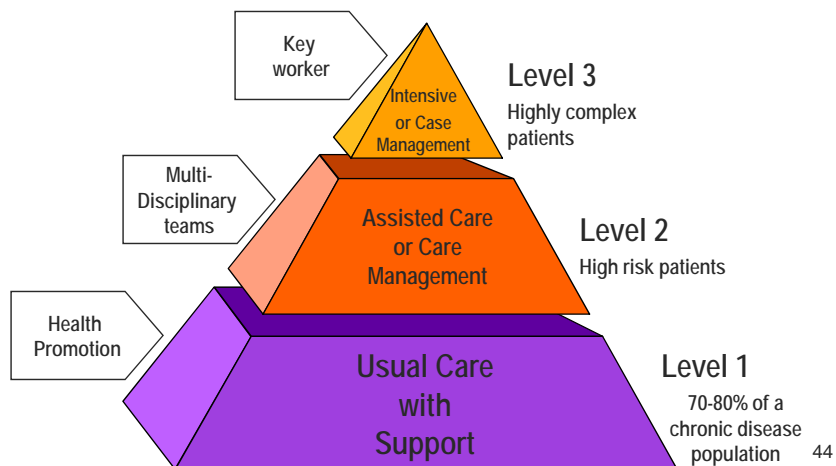
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## Birmingham: Learning From Other Systems

- Birmingham Trust was a “beacon site” for a national chronic disease prevention and management innovation
- In 2003, 6 physicians and nurses visited Kaiser Permanente
- Boards across the system agreed on a set of principles to develop and redesign care and services (“Working Together for Health”)
  - **Strong emphasis on integration**
  - **Priority given to keeping patients out of hospital**
  - **Active management of patients to prevent illness**
  - **Strong emphasis on self care and shared care**
  - **Clinical leadership**
  - **The use of information technology to underpin change management and patient care**
- A joint commitment to share control of information, financial resources, and clinical responsibility whenever and wherever it is agreed that this will improve the health and well being of its local communities

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## KP Approach to Population Management

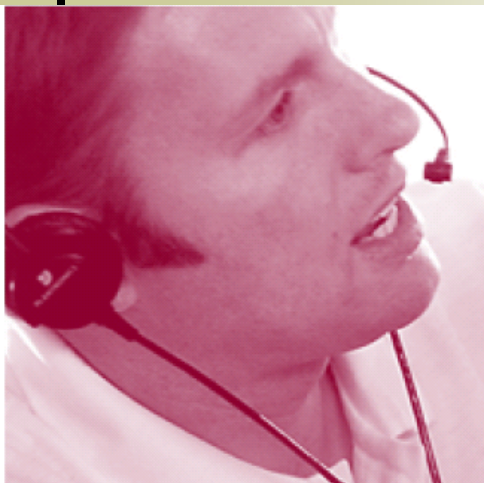


## Birmingham OwnHealth

- Partnership between healthcare providers and private industry
  - Primary Care Trusts, NHS Direct (i.e. Telehealth), UK Pfizer Health Solutions
- Use of dedicated telephone-based, self-care support to complement current care and services
  - Nurses are trained as “care managers” to help patients understand their condition, acquire self-care and prevention skills, correctly follow treatment programs and understand how to use local services
- Incorporation of local environment and needs into the design of services – service in English and Punjabi
- Disease management software
  - Decision support tool to create targeted, customized care plans
- Ongoing measurement and evaluation
  - Focus on Diabetes, Cardiovascular Disease, Congestive Heart Failure (2000 patients)
  - Measures include patient and clinician engagement and satisfaction, improved disease control, use of health services (ED visits, hospital) and costs

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## A patient story...



An Asian male aged 56 with diabetes, was enrolled in OwnHealth and discovered to have stopped his medication after watching a TV program on alternative therapies. He had stopped his medication 3 months ago and had not been back to the doctor. The Care Manager spent some time talking to him about his concerns, educating him about the prescribed medication, blood glucose and potential complications. Over 5 calls, he became motivated to return to his GP and was tested at “sky high” levels. Working with his GP, the care manager supported him to go back on and stay on his medication. The motivation to change was built on being well enough to take an upcoming trip to Bangladesh...linking medication to well-being and his personal goals made a dramatic difference to his prognosis.

OwnHealth

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## [ Leadership and Accountability ]

## [ Performance Measurement and Accountability ]



Veterans Health Administration (VISN1) continually strives to improve access, quality, patient satisfaction and wellness...



WHO...

Integrated health care system that provides comprehensive, high quality, innovative and compassionate care to all veterans it serves

WHAT...

8 medical centres, 35 community based outpatient clinics throughout 6 New England States (~ 70,000 mi<sup>2</sup>)  
 1.2 million veterans, 237,000 veterans served  
 26,000 inpatient admissions, 2.4 million outpatient visits, budget of \$1.4 billion  
 9077 FTEE, 606 physicians

WHY...

Mission: Improve health of veterans through clinical care, research and education

Performance measures influence day to day operations and decision making...

Figure 4.1-2 Communicating Performance Results

Results Classification	Measure	Organizational Unit	Communication Methods	Analytic support to decision making
Health care	Clinical outcomes	Clinical groups Service lines Quality management CPG Council	Color-coded grid Intervention specific Medical facility specific Bar graphs Intervention and medical facility specific Quadrant graphs Disease group	Relationship to targets Medical facility comparisons Best practices Current performance Improvement over time
Patient focused	SHEP results Patient issues	Quality management Patient advocate OIF/OEF coordinators	Real-time eReports Weighted and adjusted VHA reports Complaint/compliment package OIF/OEF access report	Relationship to targets Monthly trends Clinic comparisons Service comparisons
Financial and market	Staffing, cost, market share, and workload Revenue and financial index Budget allocation and variance reports	All staff Leadership	V1 website Vantage Points Decision Support System (DSS) Color-coded grid Network shared drive	Annual trends Medical facility comparisons Service line comparisons Baseline and benchmarking Relationship to targets Timeliness
Staff and work systems	Satisfaction Compensation Staffing Training Safety	All staff	ProClarity website Decision Support System Automatic Safety Incident Surveillance Tracking System	Medical facility comparisons Annual trends Frequency Severity Risk assessment
Organizational effectiveness	Clinic wait times Workload Cycle time	Systems redesign work groups Steering Committee All collaborative teams Service lines Medical facilities All staff	Color-coded grid Run control charts Clinic level Medical facility-level V1 website	Relationship to targets Monthly trends Clinic comparisons Medical facility comparisons Timeliness
Governance and social responsibility	Accreditation Compliance	All staff	Meetings V1 website	Certification Accuracy



*What will it take to create a system capable of sustained improvement in Canada?*

- High performing health systems perform well on all or virtually all critical elements of a high performing health system
- Quality improvement needs to be more than a project-based strategy-- high performing health systems link projects to core strategies and measures and build capability for improvement into the delivery system
- Measurement focuses and guides improvement efforts
- Integration across delivery elements, focusing on the patient or client drives investments and improvements
- Most of these systems have been focused on system wide strategies for a decade or longer. How long will it take to realize significant system-level results?