



# Looking at the Future of Clinical Health Care Services



**Robyn Tamblyn, BScN, MSc, PhD**

**Scientific Director, CIHR Institute of Health Services and Policy Research  
Professor, Department of Medicine & Department of Epidemiology,  
Biostatistics and Occupational Health**



**CIHR IRSC**  
Canadian Institutes of Health Research  
Instituts de recherche en santé du Canada





# Overview

## ■ The Context

- Chronic disease and the aging population
- Health care spending
- Cost drivers and optimizing return on investment (ROI)

## ■ Clinical Program Redesign

- Examples of high impact redesign
- The Secret Sauce – Mobilizing key assets

## ■ Towards a Learning Health System

- Emerging models
- The Canadian approach

Healthcare Share Linkage  
Renewal Interact  
Collaborate Change  
Learn Policy  
Communicate Evidence  
Action Knowledge  
Engagement

# Population Health Challenges

**Daily Record** AND SUNDAY MAIL

HOME **NEWS** SPORT ENTERTAINMENT LIFESTYLE IN YOUR AREA

News • Scottish News • Obesity

By Dailyrecord.co.uk | 15 Aug 2013 10:27

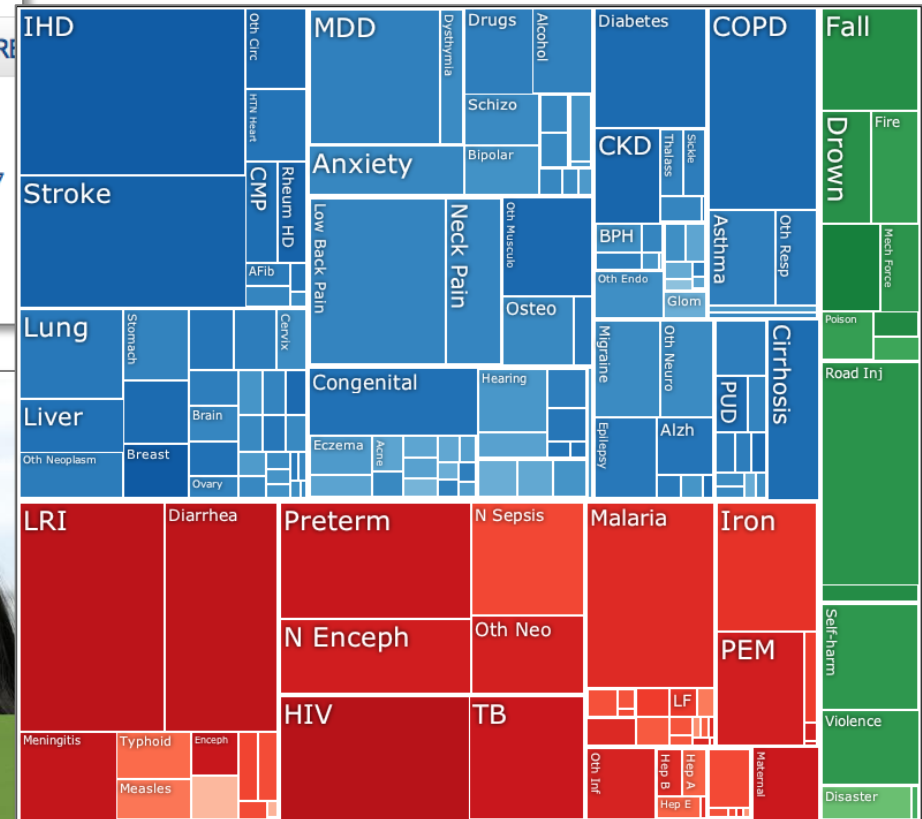
## Scotland just behind America in obesity league table, BBC reveal in shocking report



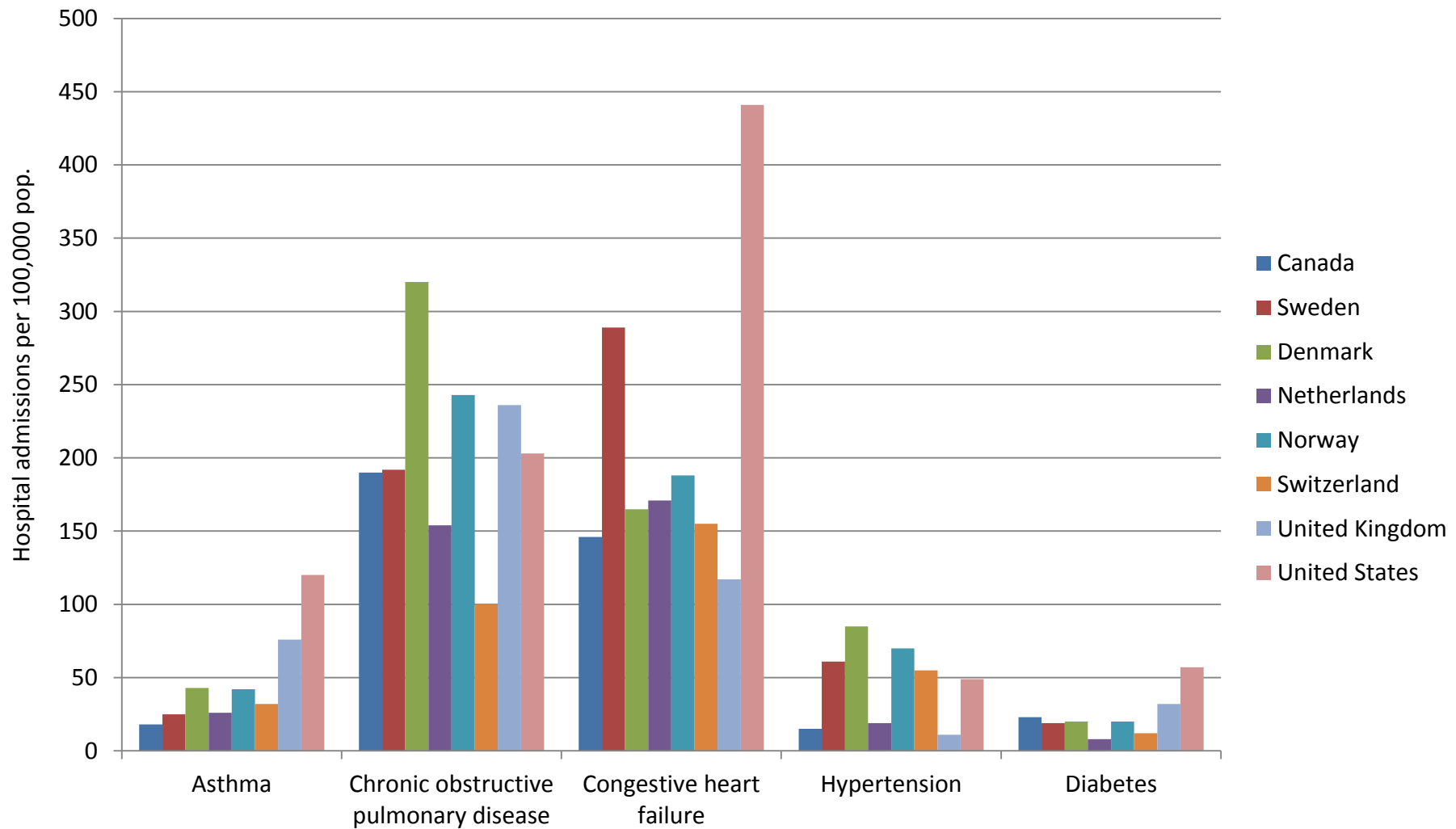
**REDUCING HEALTH INEQUALITIES:  
A CHALLENGE FOR OUR TIMES**

Public Health Agency of Canada / Agence de la santé publique du Canada

Canada



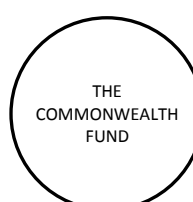
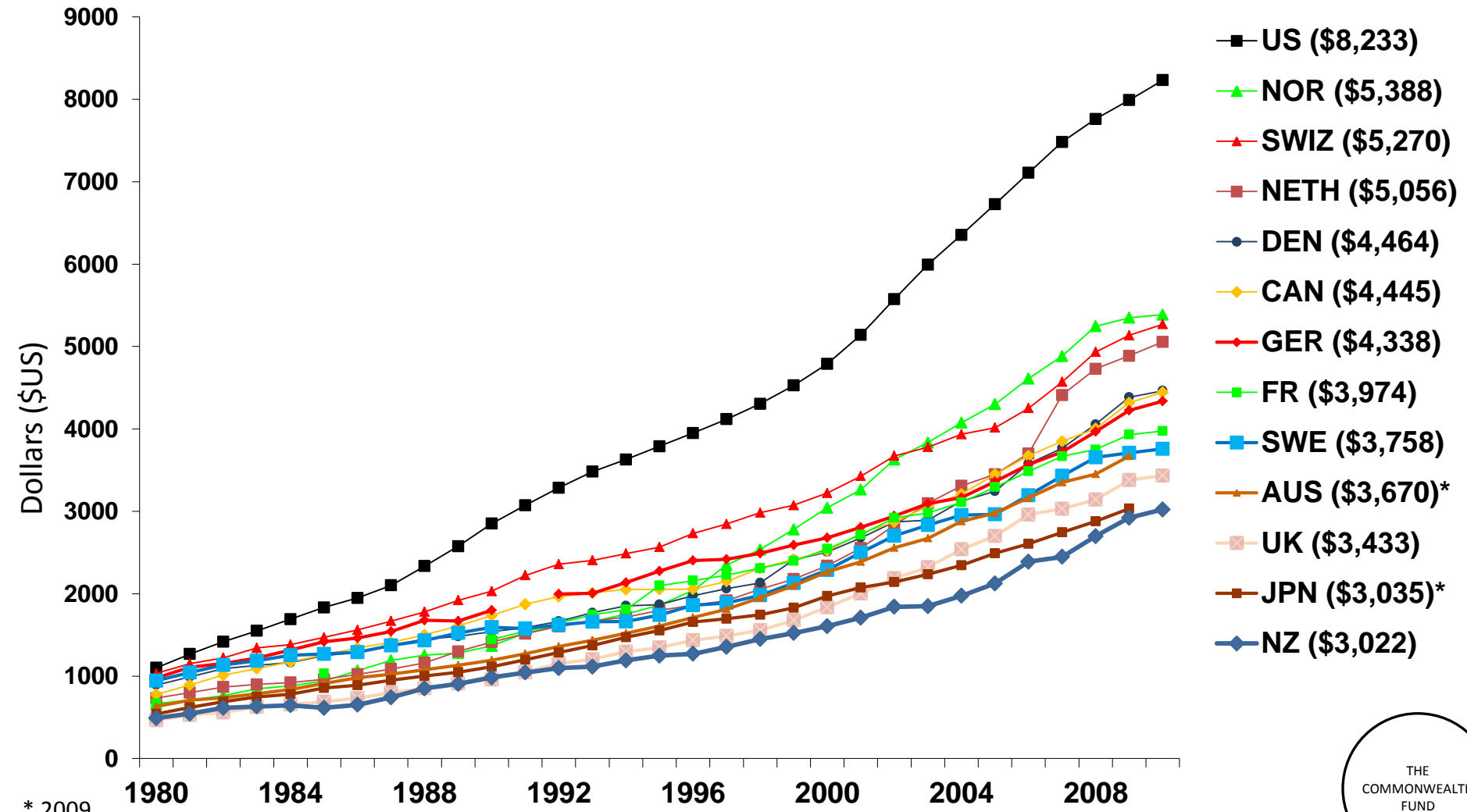
# Comparison of Hospitalization Rates for Ambulatory Sensitive Conditions, 2007



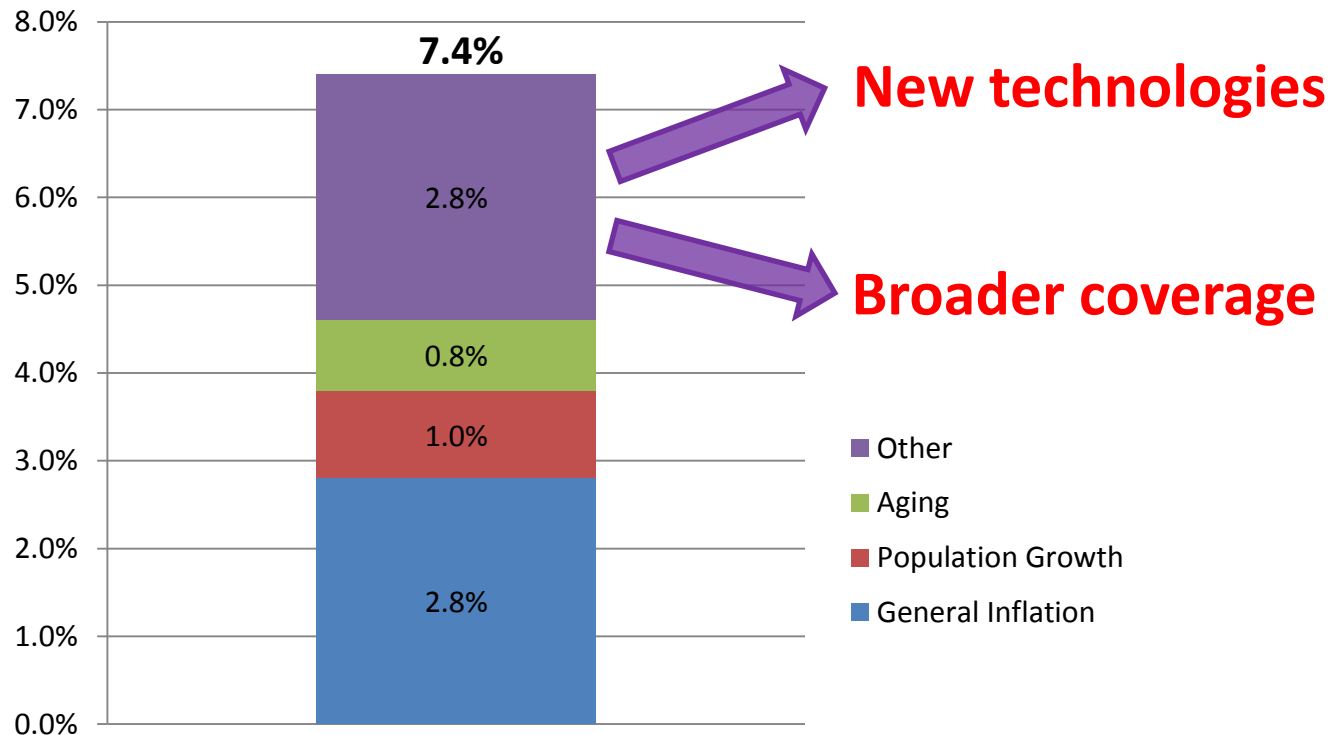
# Average Health Care Spending per Capita, 1980-2010

(Adjusted for Differences in Cost of Living)

Healthcare  
Renewal  
Interact  
Collaborate  
Learn  
Communicate  
Action  
Engagement  
Linkage  
Interact  
Healthcare  
Change  
Evidence  
Policy  
Share  
Renewal  
Share  
Learn  
Knowledge



# Average Annual Growth Rate, Public Health Care Spending, Canada, 1998-2008





# The Top Cost Drivers in Sweden

## Population Aging

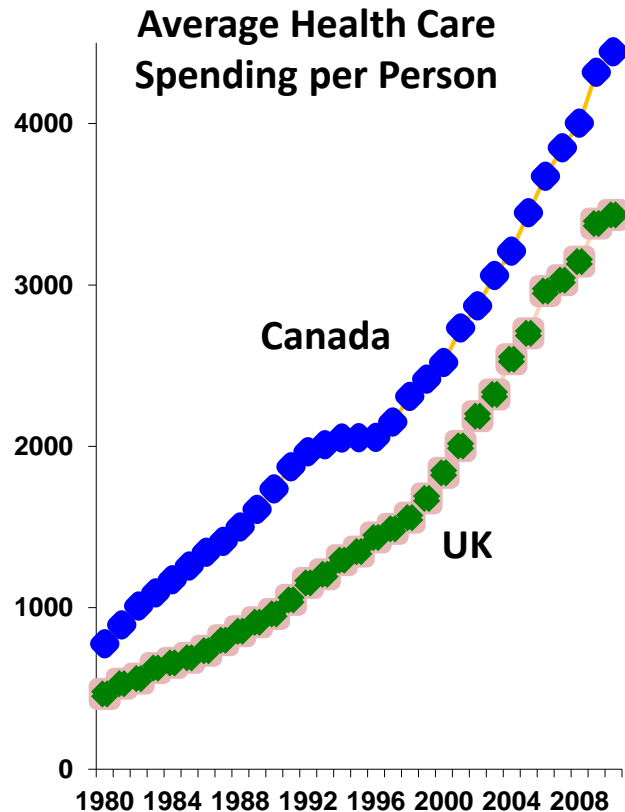
- Older people account for a large proportion of health care spending
- Level of demand for health care will come to exceed the capacity of health systems to meet it

## Innovation in Health Technology

- New innovations are costly
- New technologies, even if substituting for an older technology, are normally more expensive
- Increased use of technologies leads to higher cost
- If older people are the principal beneficiaries of these innovations, the cost problems is compounded



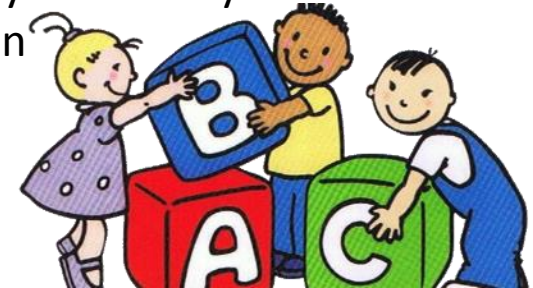
# Health Spending & Opportunity Costs



Cumulative Difference in Health Spending between Canada and the UK 1980-2010  
\$659 billion

With \$659 billion we could have:

Provided \$5/day daycare for a year for **14.6 million** children



Sent **23.5 million** students to university for 4 years



Built **9,171** Trans-Canada highways







# Innovation in the Health System

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Interventions

## Innovation in the Health System

Health  
Technology  
Assessment

# Health Policies

# Programs

## Interventions

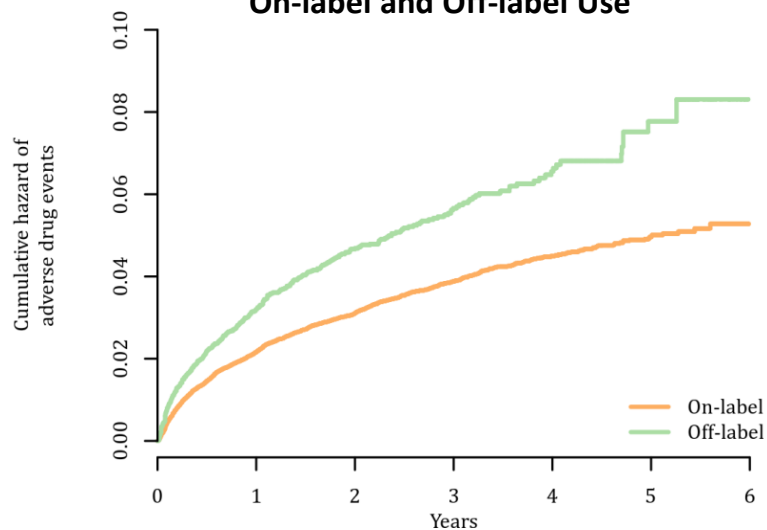
# New Technologies When Not Used as Planned

## Off-label Prescribing & Adverse Drug Events

Distribution of Off-label Use by Therapeutic Class

	No. of Prescriptions	Off-label Use, No. (%)
Central nervous system	58 914	15 491 (26.3)
Anti-infective	21 000	3599 (17.1)
Ear-nose-throat	10 622	1613 (15.2)
Gastrointestinal	14 237	1770 (12.4)
Antineoplastic	234	28 (12)

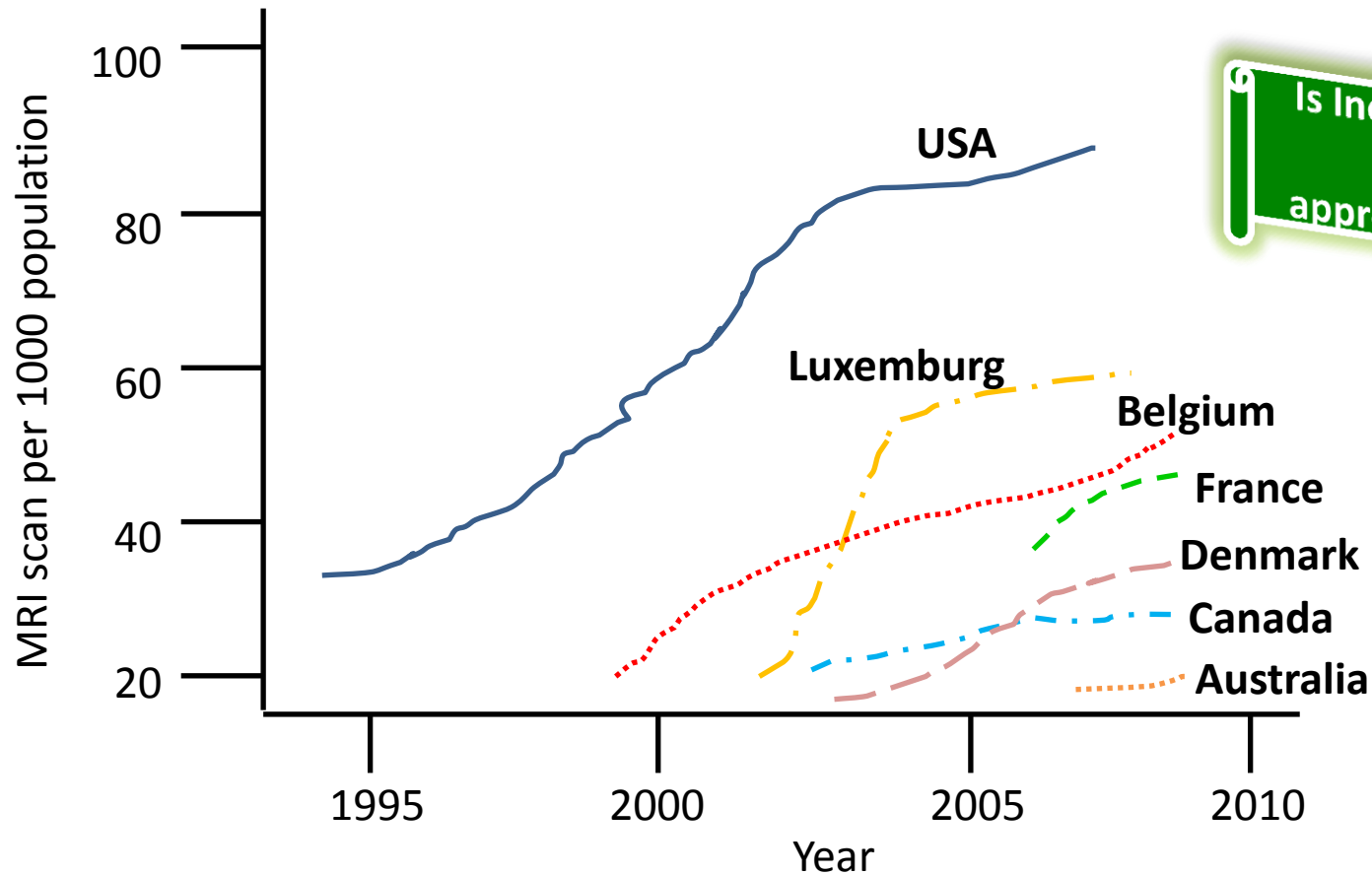
Cumulative Hazards of Adverse Drug Events According to On-label and Off-label Use



No. at risk  
On-label  
Off-label

133458	70328	40458	23213	12315	4069	0
17847	7829	4051	2414	1230	368	0

# Diagnostic Imaging Utilization: MRI





An initiative of the ABIM Foundation

Society of Nuclear Medicine and Molecular Imaging

**SNM** | SOCIETY OF  
**MI** | NUCLEAR MEDICINE  
AND MOLECULAR IMAGING

**Five Things Dr. [Name] and I**

## Five Things Physicians and Patients Should Question

**Don't use PET/CT for cancer screening in healthy individuals.**

- The likelihood of finding cancer in healthy adults is extremely low (around 1%), based on studies using PET/CT for cancer screening.
- Imaging without clear clinical indication is likely to identify harmless findings that lead to more tests and procedures.

**Don't perform routine carotid artery ultrasound or vascularization imaging in healthy individuals.**

**Don't perform routine annual stress testing at PET/CT for cancer screening in healthy individuals.**

- The likelihood of finding cancer in healthy adults is extremely low (around 1%), based on studies using PET/CT for screening.
- Imaging without clear clinical indication is likely to identify harmless findings that lead to more tests, biopsy or unnecessary surgery.

**Don't perform routine annual stress testing after coronary artery revascularization.**

- Routine annual stress testing in patients without symptoms does not usually change management.
- This practice may lead to unnecessary testing without any proven impact on patient outcomes.

**Don't use nuclear medicine thyroid scans to evaluate thyroid nodules in patients with normal thyroid gland function.**

- Nuclear medicine thyroid scanning does not conclusively determine whether thyroid nodules are benign or malignant.
- Cold nodules on thyroid scans will still require biopsy.
- Nuclear medicine thyroid scans are useful to evaluate the functional status of the thyroid gland.

• Nuclear medicine thyroid scans are useful to evaluate the functional status of thyroid nodules and to determine whether thyroid nodules are benign or malignant.

**Avoid using a computed tomography angiogram for pulmonary embolism in young women with a breast lump.**

- When the clinical question is whether a breast lump is due to the breast or to the lung, a CT scan is not the best test to use.

When the clinical question is whether or not pulmonary emboli are present, a V/Q study can provide the answer with less radiation to the breast than can CTA, even when performed with a breast shield.

**Don't use PET imaging in the evaluation of patients with dementia unless the patient has been assessed by a specialist in this field.**

- Without objective evidence of dementia, the potential benefit of PET is unlikely to justify the cost or radiation risk.
- Dementia subtypes have overlapping patterns in PET imaging. Clinical evaluation and imaging often assessed together to make a reliable diagnosis and to plan care.

For  $\beta$ -amyloid PET imaging, it is not currently known what a positive result established for an individual prediction.



# Clinical Care Redesign





# High Impact Clinical Redesign

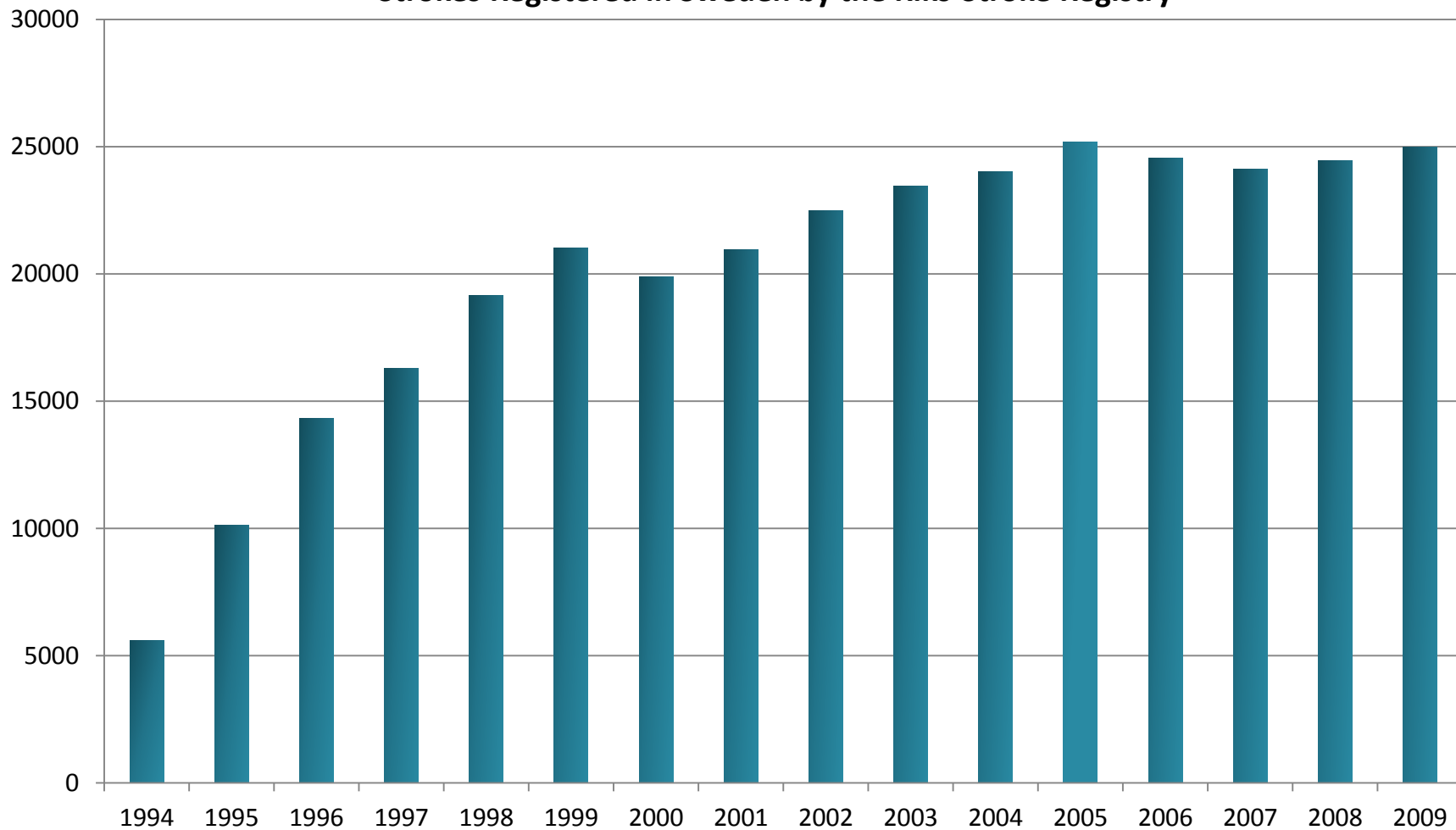
## 4 Case Studies:

- Organized stroke care
- Pre-hospital emergency care
- Pre-term birth (elective labour)
- Hip and knee surgery

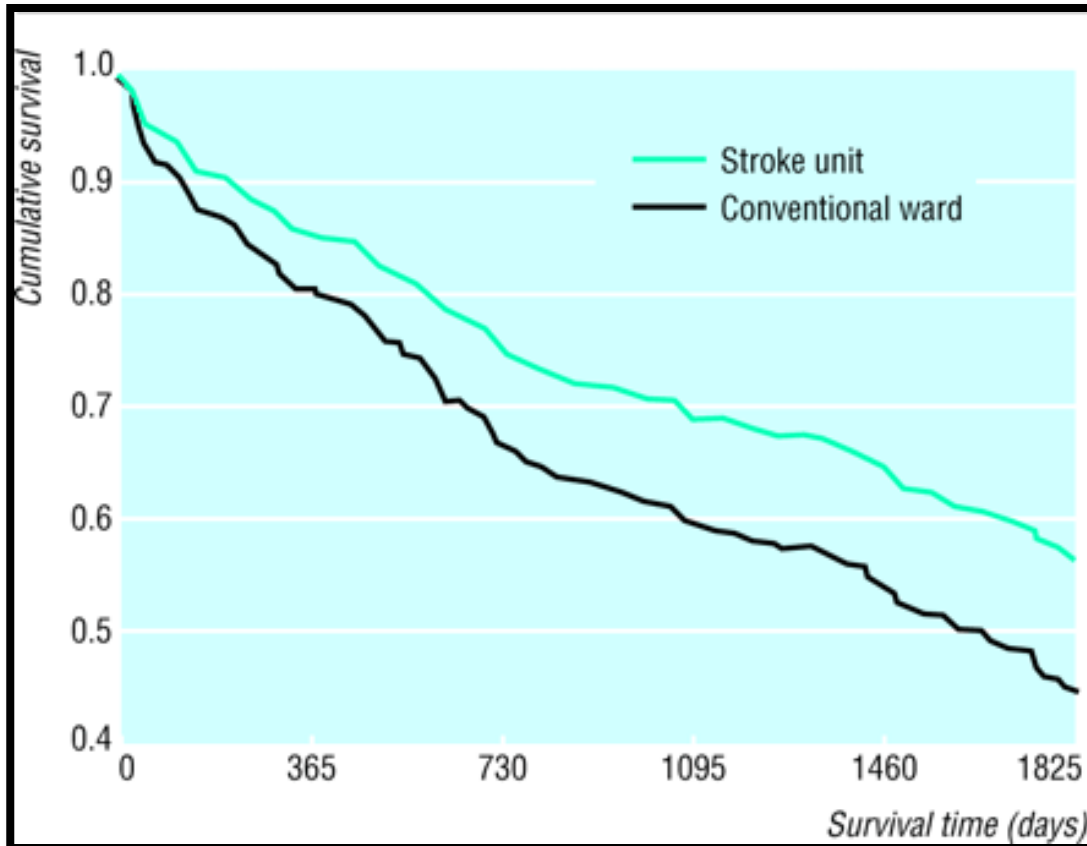


# Annual Number of Strokes, Sweden

Strokes Registered in Sweden by the Riks-Stroke Registry



# Re-organizing the Care of Acute Strikes: Stroke Units



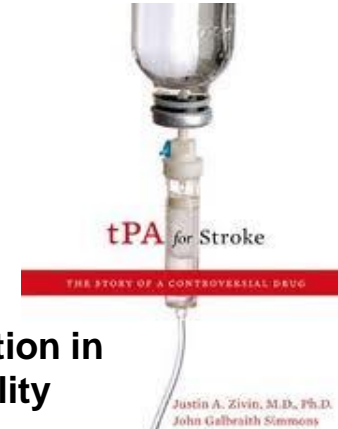
**At 5 years:**  
45% of patients on stroke unit had died compared to 55% in conventional unit

# Reduction in Mortality/Disability with Stroke Programs vs tPA



**Stroke Units vs. Usual Care**

*New Protocol for Stroke Mortality, Disability. Gandey, A. (2011). Lancet.*



**Absolute Reduction in Mortality/ Disability**



**tPA vs. Usual Care**

*Systematic Review tPA: Cochrane, 2010*

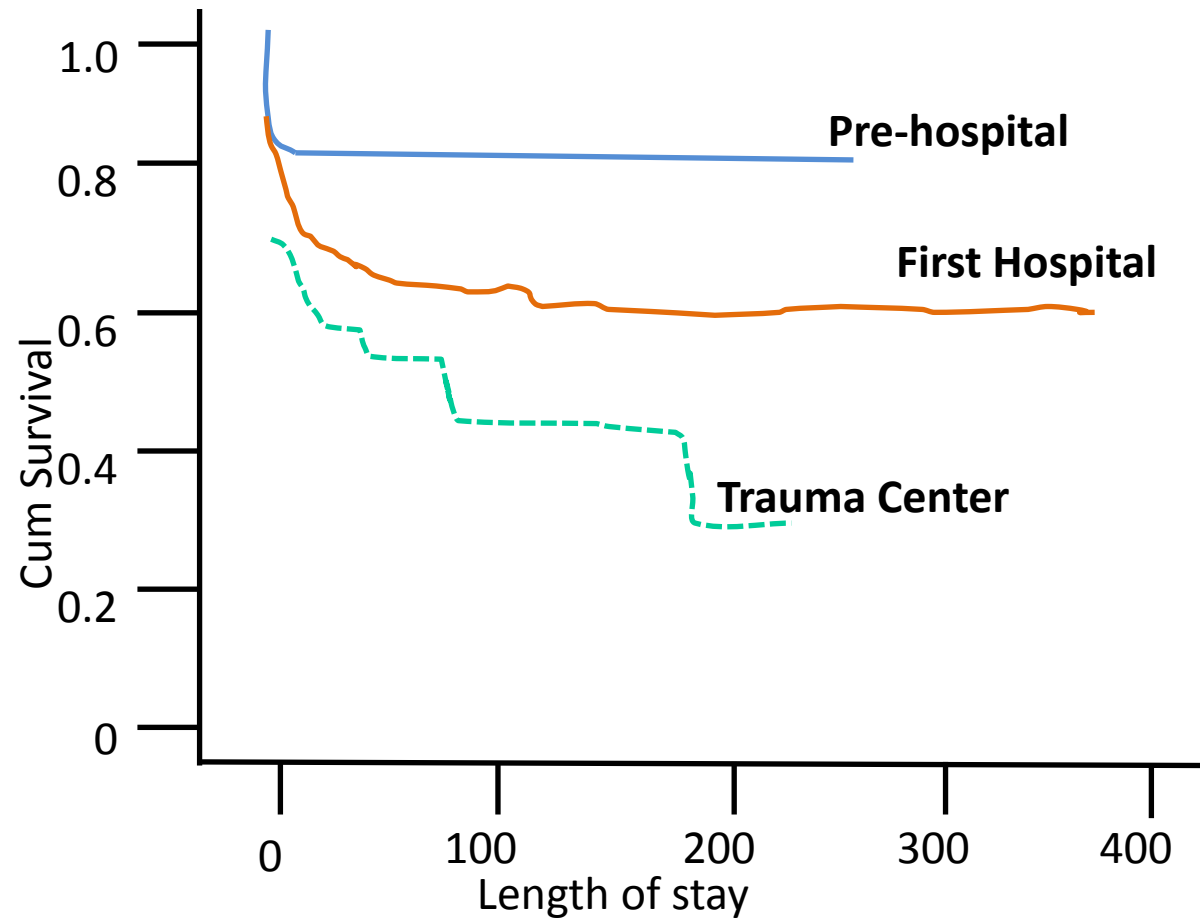
# Re-Designing Pre-Hospital Emergency Care

- “The Golden Hour”
- Improved survival in trauma cases
- Trained healthcare professionals to work specifically in emergency medical situations
  - Ex: Paramedics



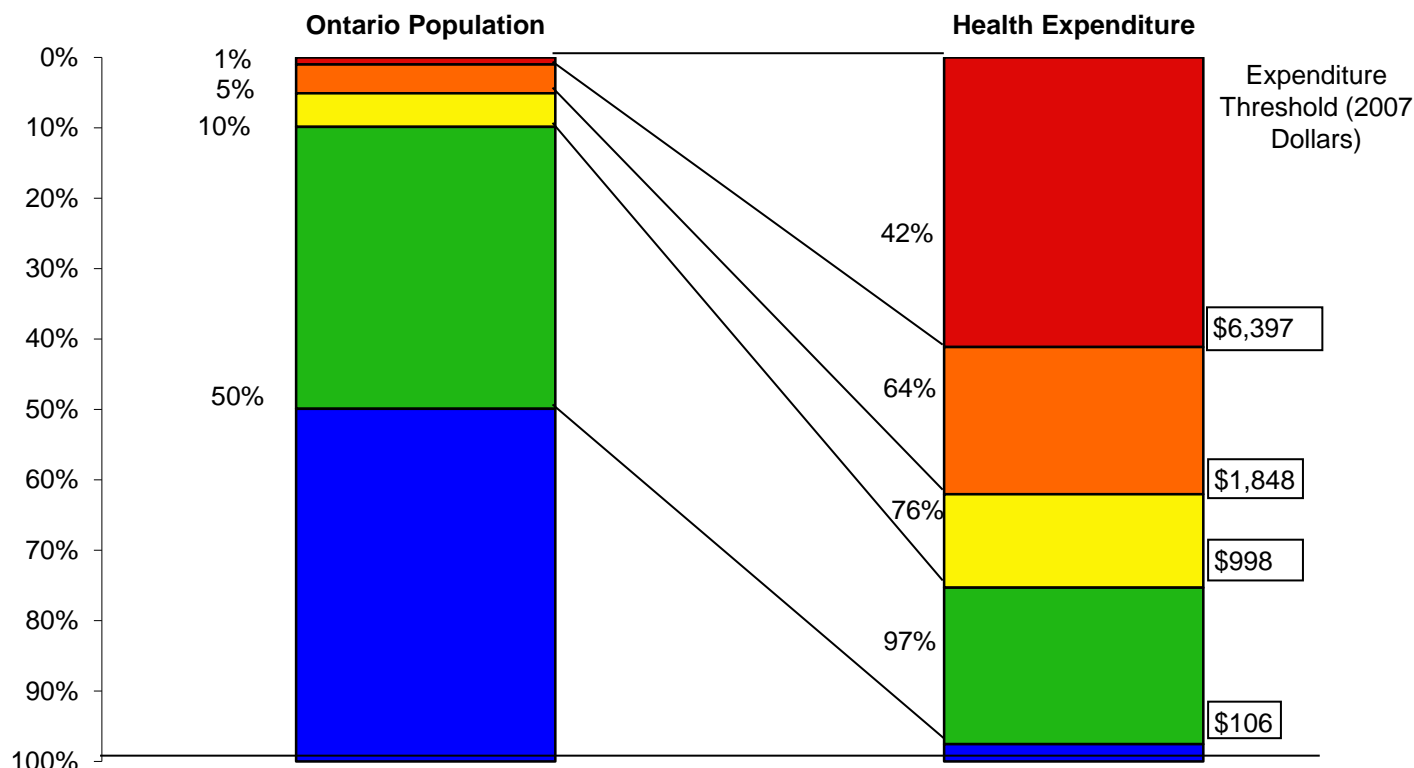
Healthcare Share Linkage Interact Renewal Healthcare Change Policy Renewal Share Learn Collaborate Policy Evidence Action Knowledge Engagement Communicate Action

# Impact of Re-Designing Pre-Hospital Care in Trauma Cases



Patients were more likely to survive when their life-threatening events were managed in the pre-hospital phase.

# Pre-Term Birth & Downstream High System Use in Children



Within different age groups, the concentration of health care costs is highest for children (aged 0-17 years), with the top 1% of the population accounting for 42% of spending in this age group.



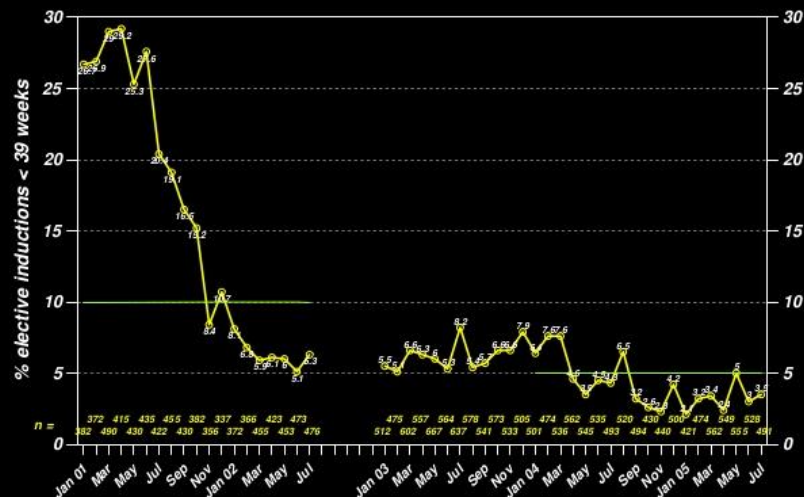
# Intermountain Healthcare: Elective Labour

## Target for improvement: induction of early labour

- 32,000 deliveries each year
- Nurse required to fill out form to determine if elective induction is appropriate
- If not, the chair of the department has to give consent



### Elective inductions < 39 weeks

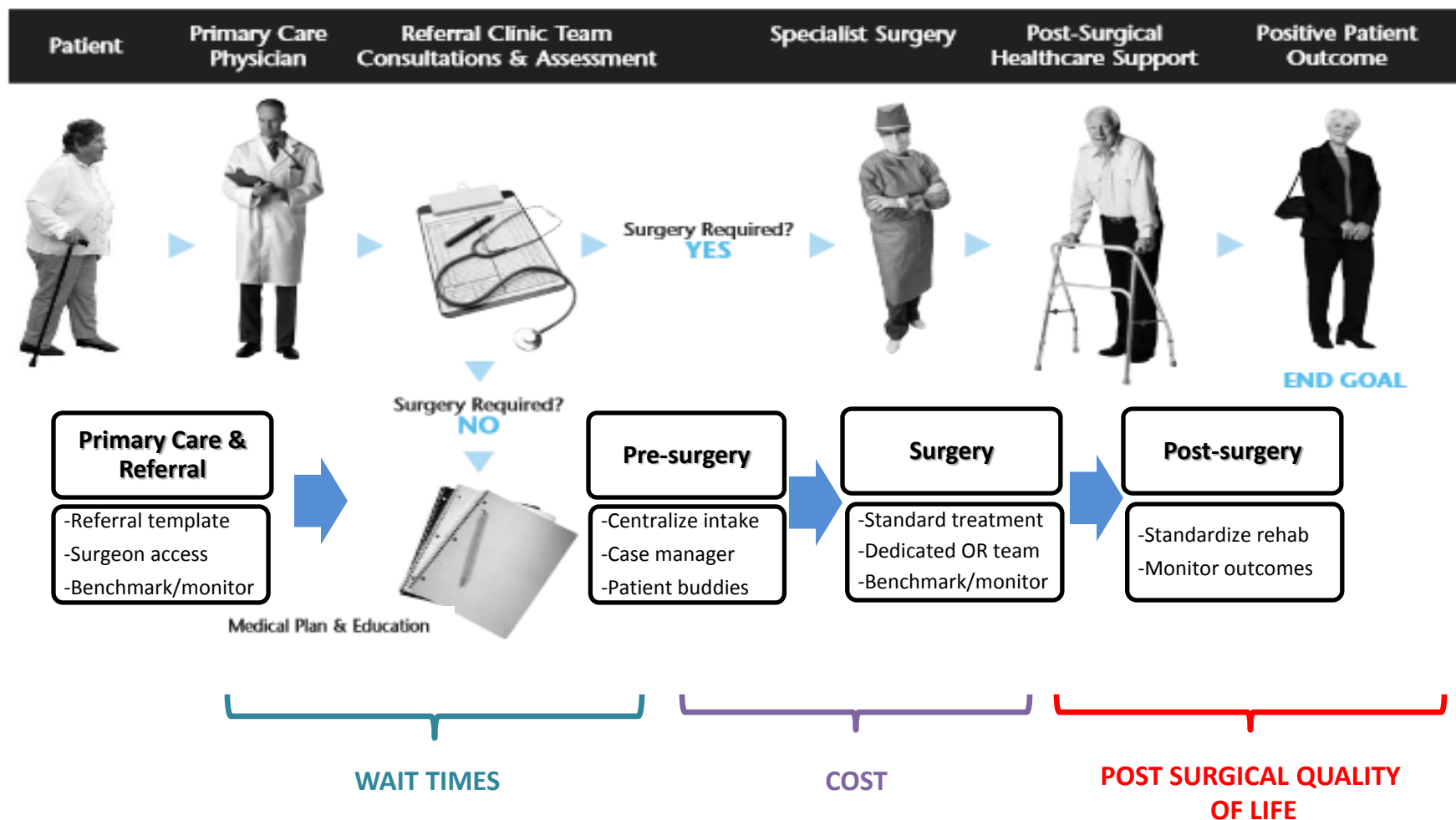


## Results:

- ✓ Elective inductions that did not meet clinical standards dropped from 28% to **2%**
- ✓ Collective length of time in labour dropped by 31 days
- ✓ **1,500** additional deliveries each year (without any additional beds or nurses)



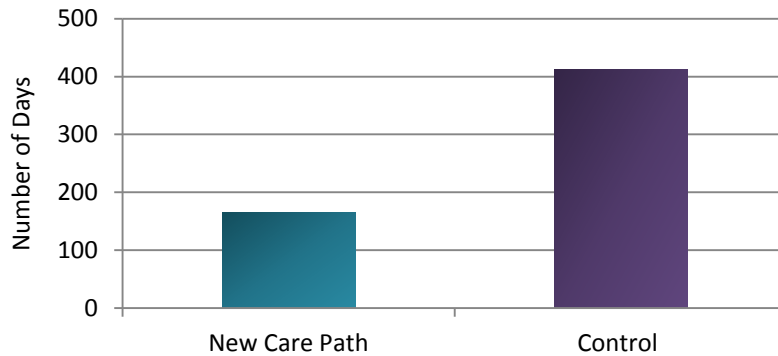
# The New Care Path for Hip and Knee Replacements



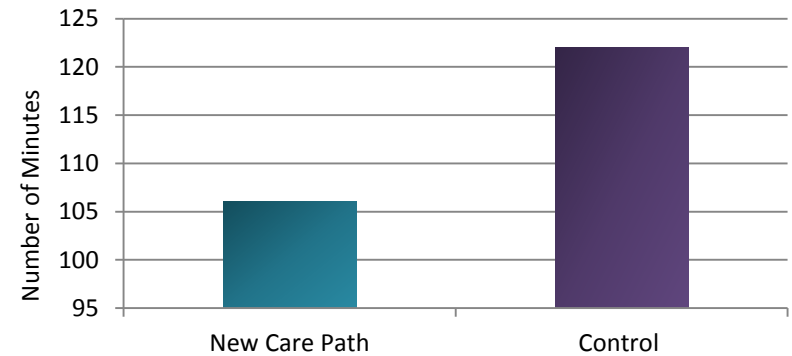


# Improved Outcomes Using the New Care Path

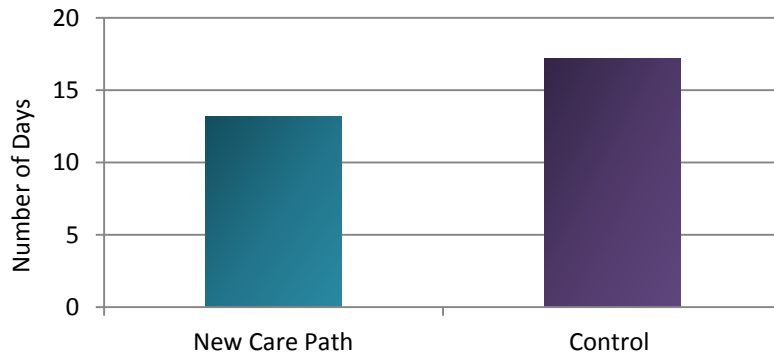
Wait Time



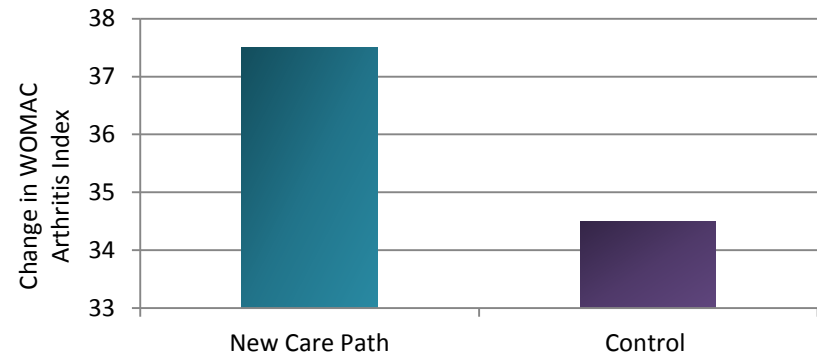
Time in the Operating Room



Institutional Stay



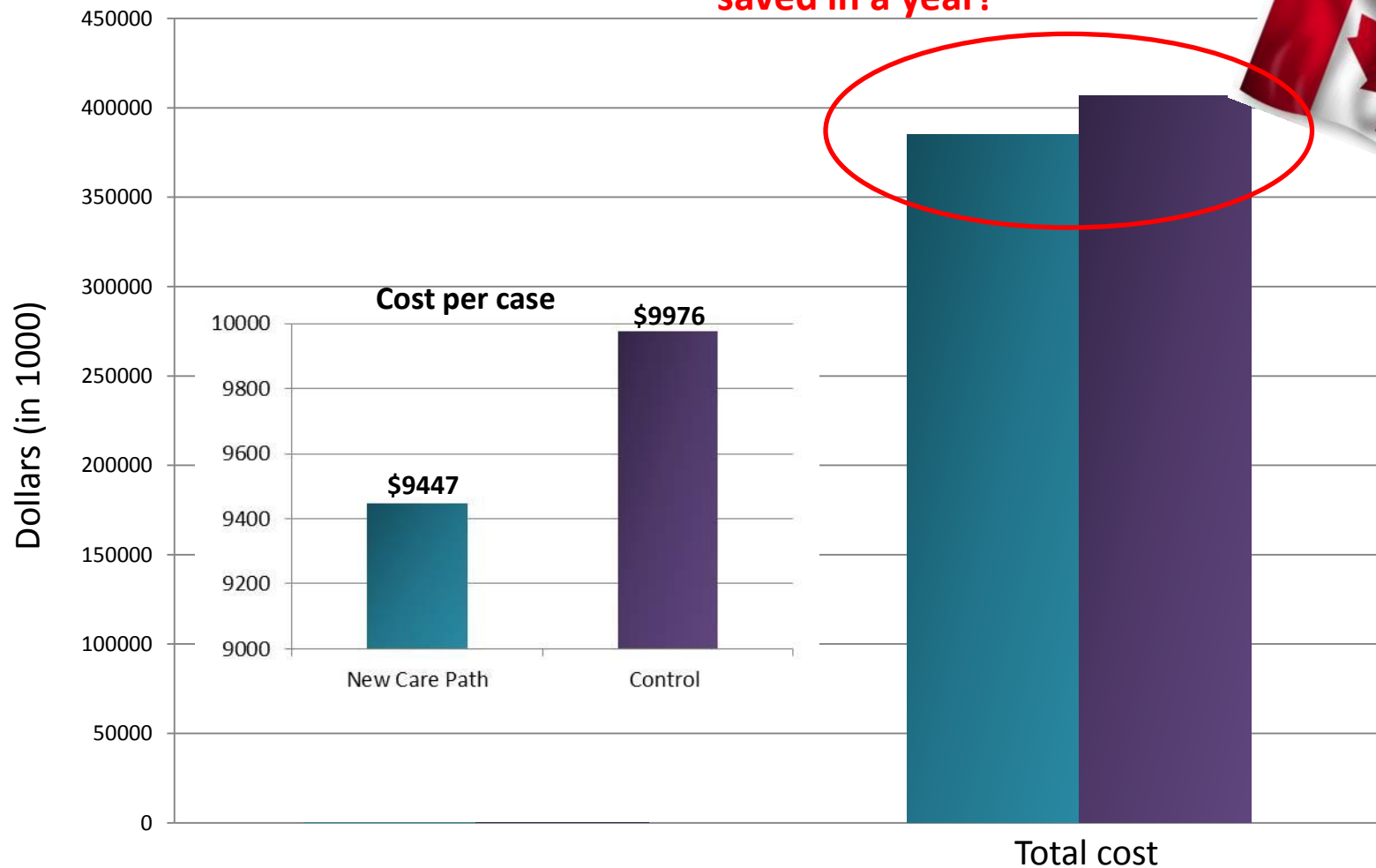
Quality of Life



Healthcare Share Linkage Interact Renewal Healthcare Change Policy Renewal Share Evidence Action Learn Communicate Action Engagement Knowledge

# Reduced Cost Using the New Care Path

Over 21 million saved in a year!



Healthcare  
Interact  
Renewal  
Collaborate  
Learn  
Communicate  
Action  
Engagement  
Linkage  
Interact  
Healthcare  
Change  
Evidence  
Policy  
Renewal  
Share  
Learn  
Knowledge  
Action  
Evidence

# Transforming Clinical Programs Capitalizing on the Assets

eHealth  
solutions

Healthcare  
professionals

The Future  
NEXT EXIT

Data

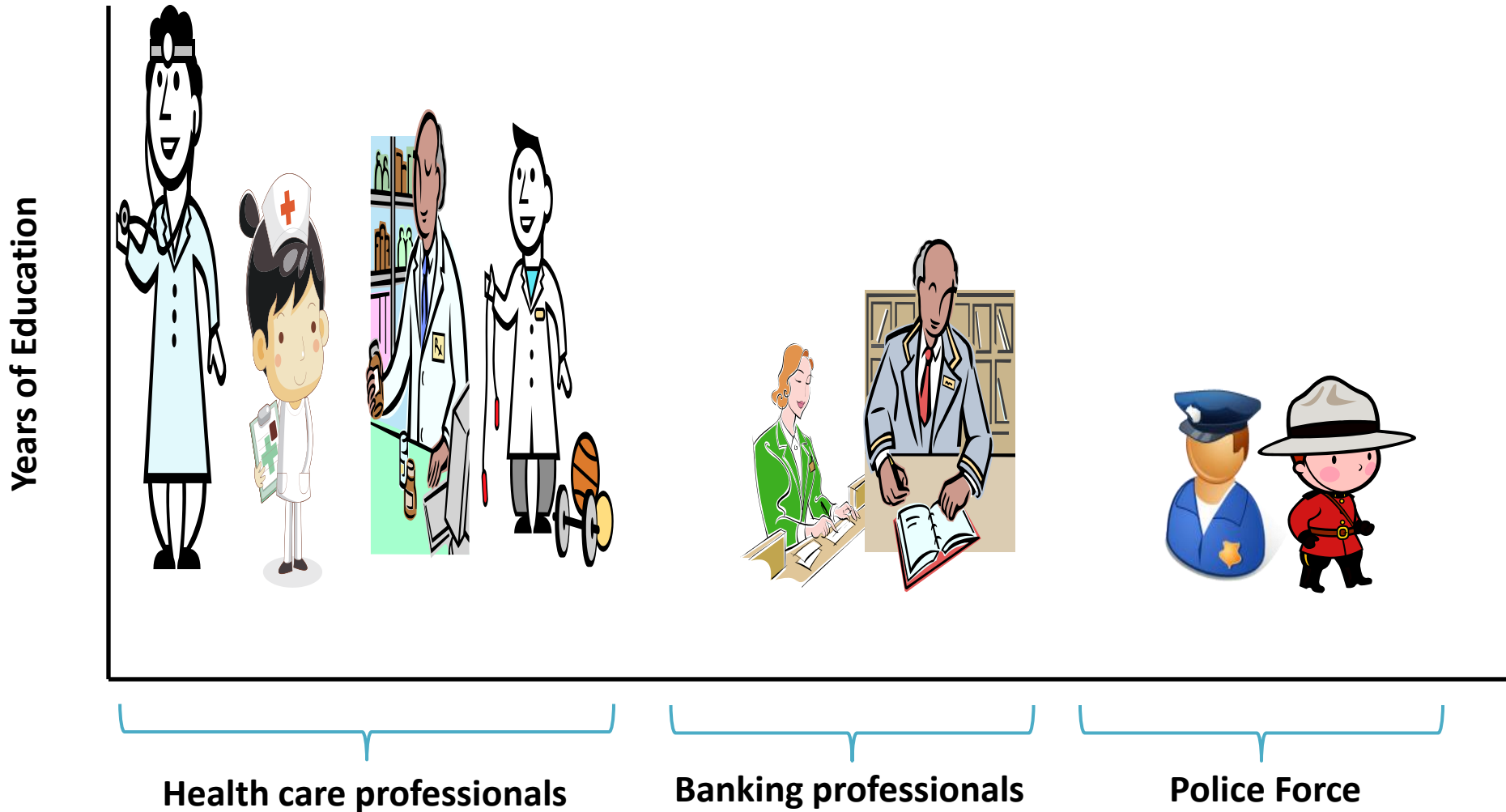
Patients

Policies  
and  
systems



Healthcare  
Interact  
Renewal  
Collaborate  
Learn  
Communicate  
Action  
Engagement  
Share  
Linkage  
Interact  
Healthcare  
Change  
Evidence  
Policy  
Action  
Knowledge  
Learn  
Engagement

# Frontline Healthcare Professionals Have the Highest Education Level



Educational attainment for workers 25 years and older by detailed occupation,  
Bureau of Labor Statistics

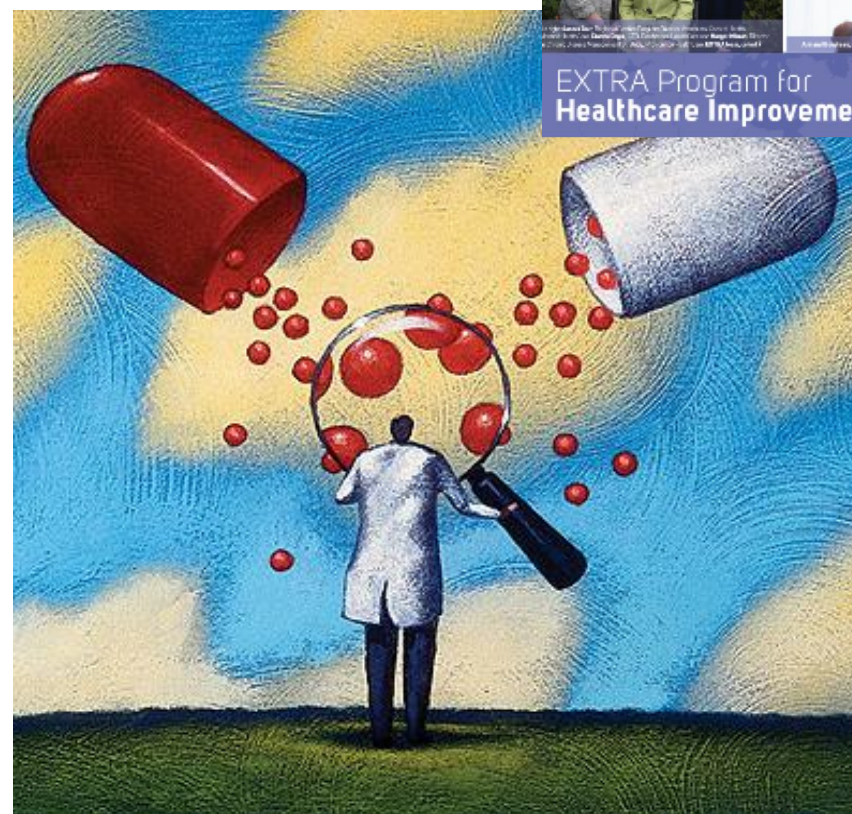


# Training Professionals for Practice-based Learning and Improvement Systems

## Core competencies of physician leaders

- Leadership
- Strategic planning
- “Systems thinking”
- Change management
- Persuasive communication
  - Including negotiation and conflict resolution
- Team building

## The EXTRA Program



Partnership: CNA-CMA-CCHL-QC Consortium

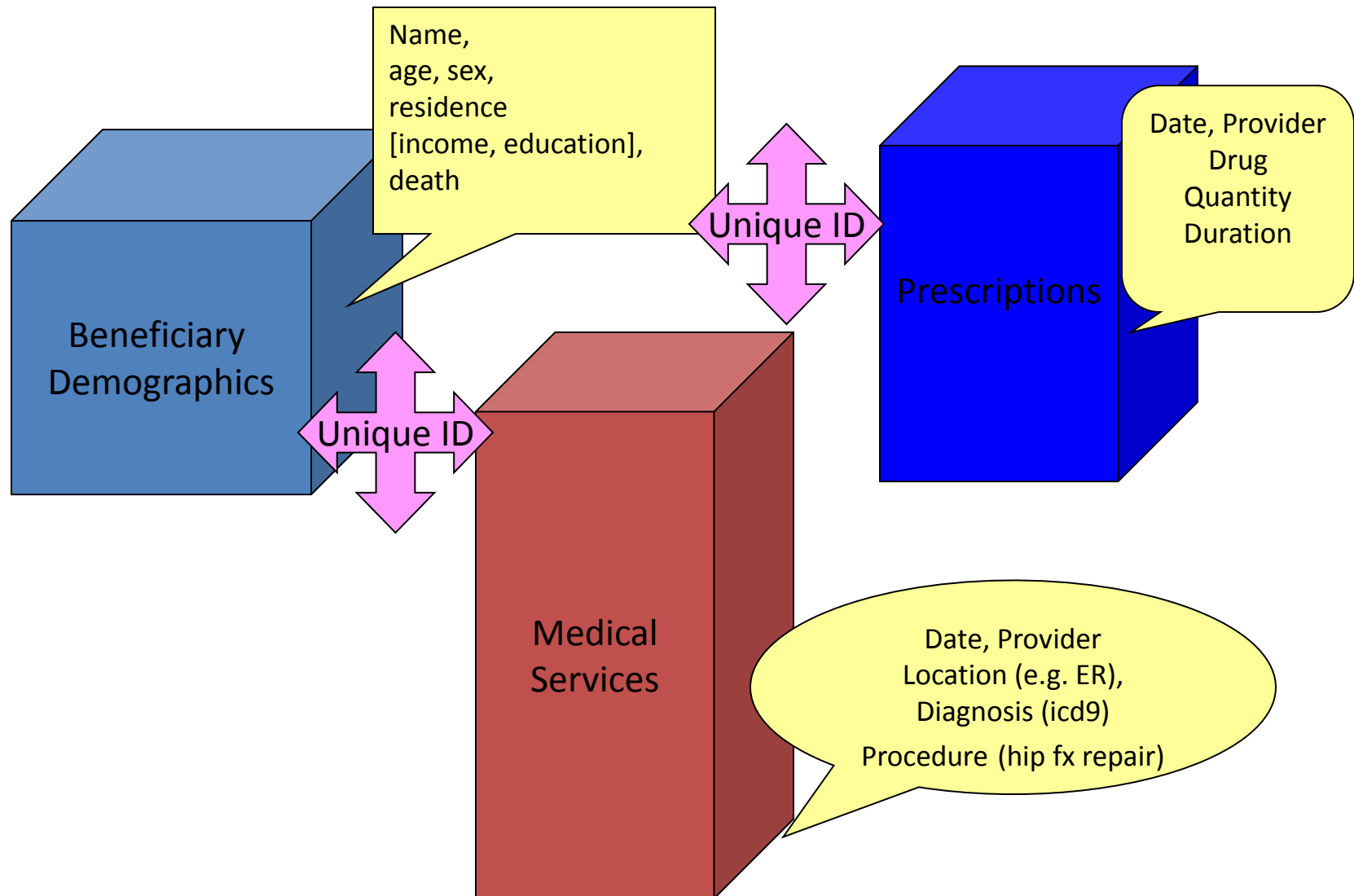
See: [www.cfhi-fcass.ca](http://www.cfhi-fcass.ca)

Denis JL et al., Physician Engagement and Leadership for Health System Improvement, CIHR webinar



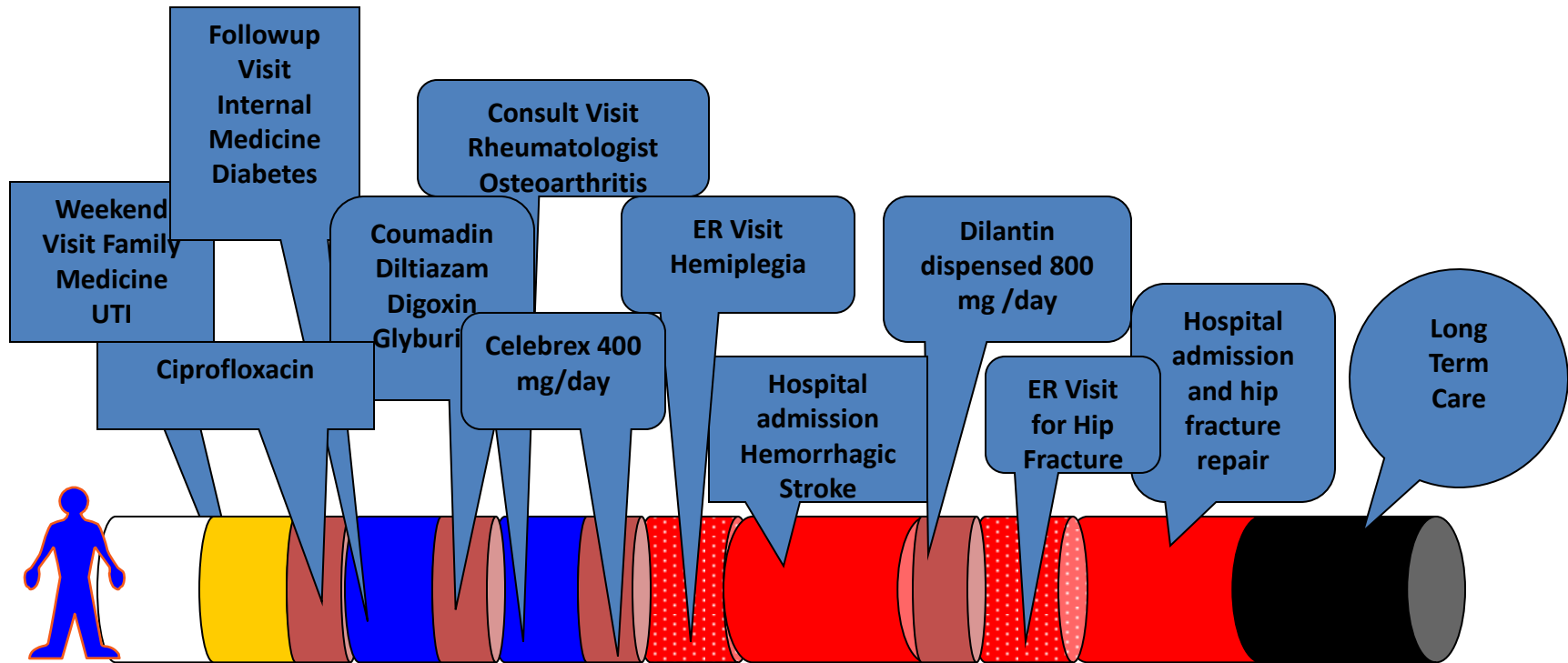


# Medical Service and Prescribing Claims Data to Monitor Care Delivery





# Creating Longitudinal Health Histories with Administrative Data

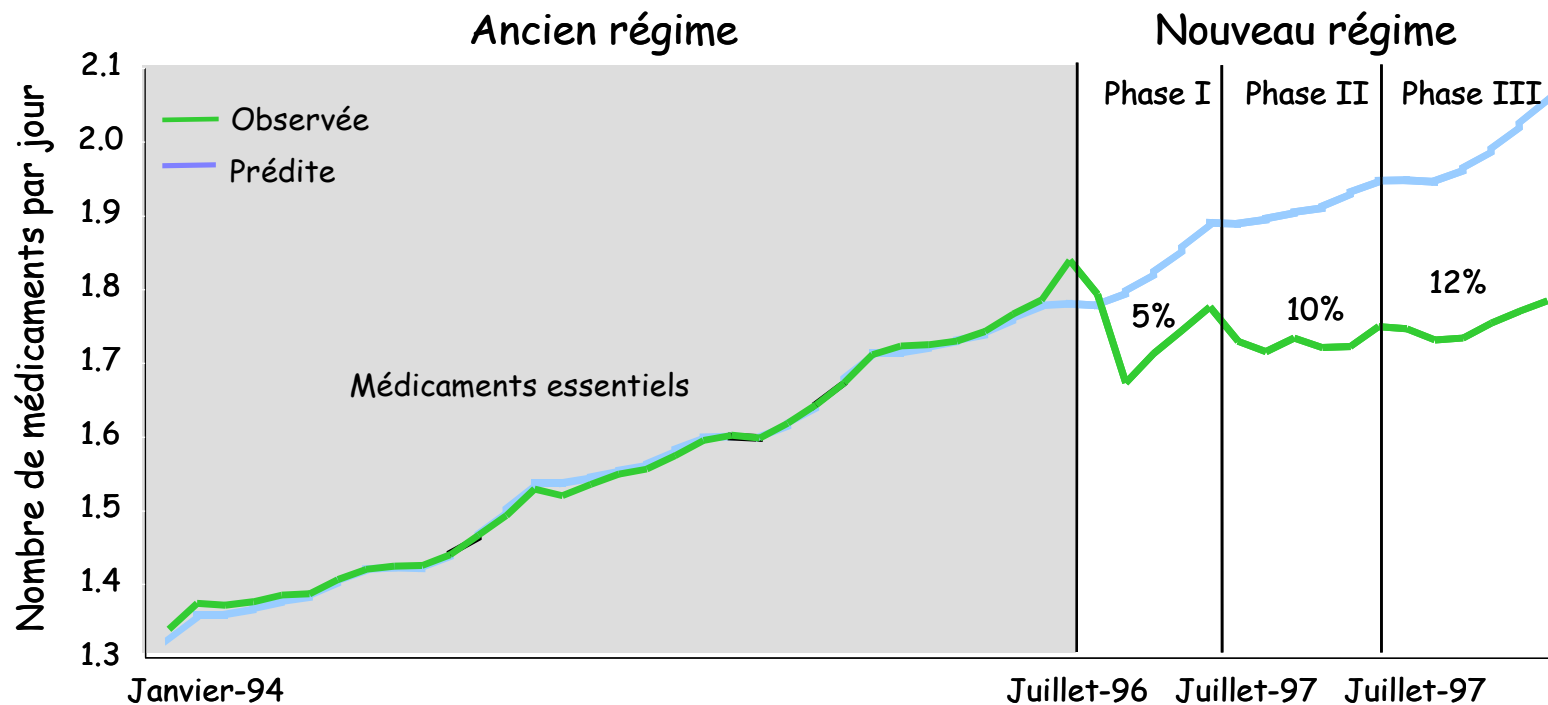


**Female**

**Age: 71 yrs.**

# Assessing Drug Policy: User Fees Reduce the Use of Essential Drugs in the Elderly

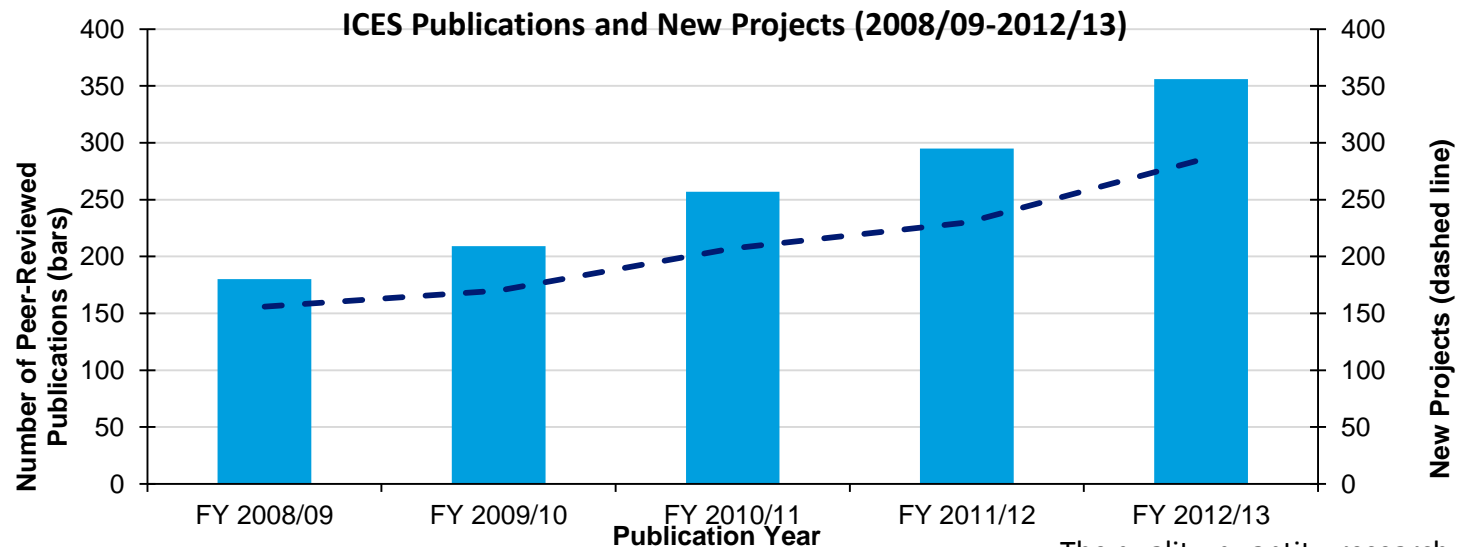
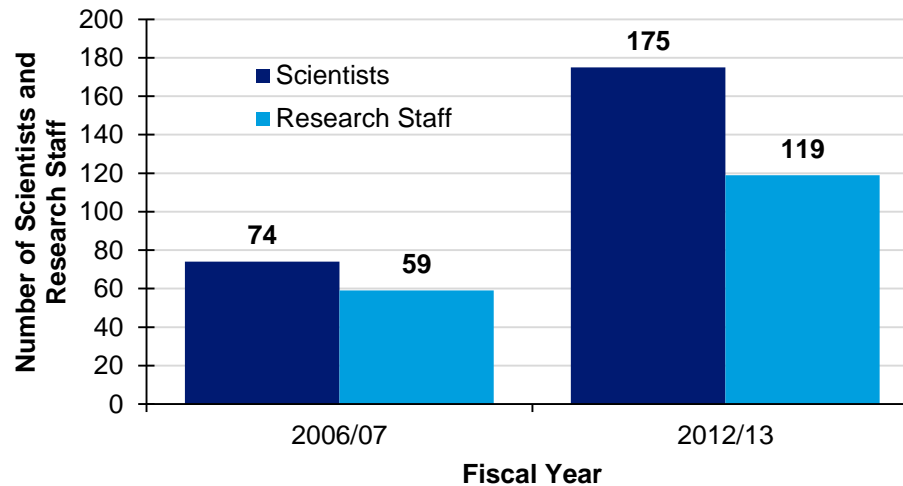
Evaluation of the Quebec income-indexed user co-insurance plan for prescription drugs in a random sample of 120,000 elderly





# Creating regional data platforms: The ICES Effect

**Research Capacity: Growth in ICES Scientists and Research Staff (2006/07-2012/13)**



The quality, quantity, research capacity building  
and impact of ICES work, 2013

Microsoft Access

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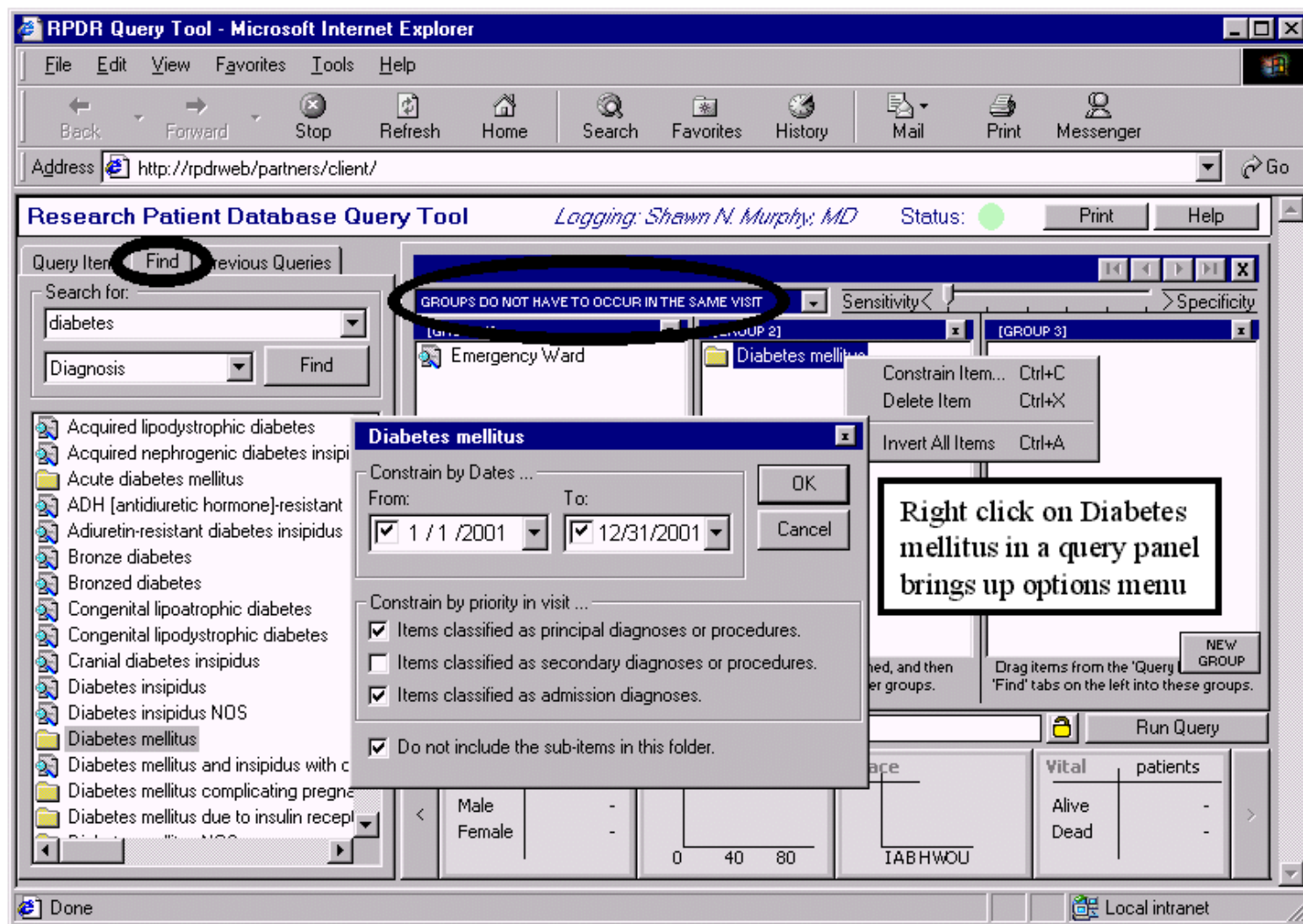
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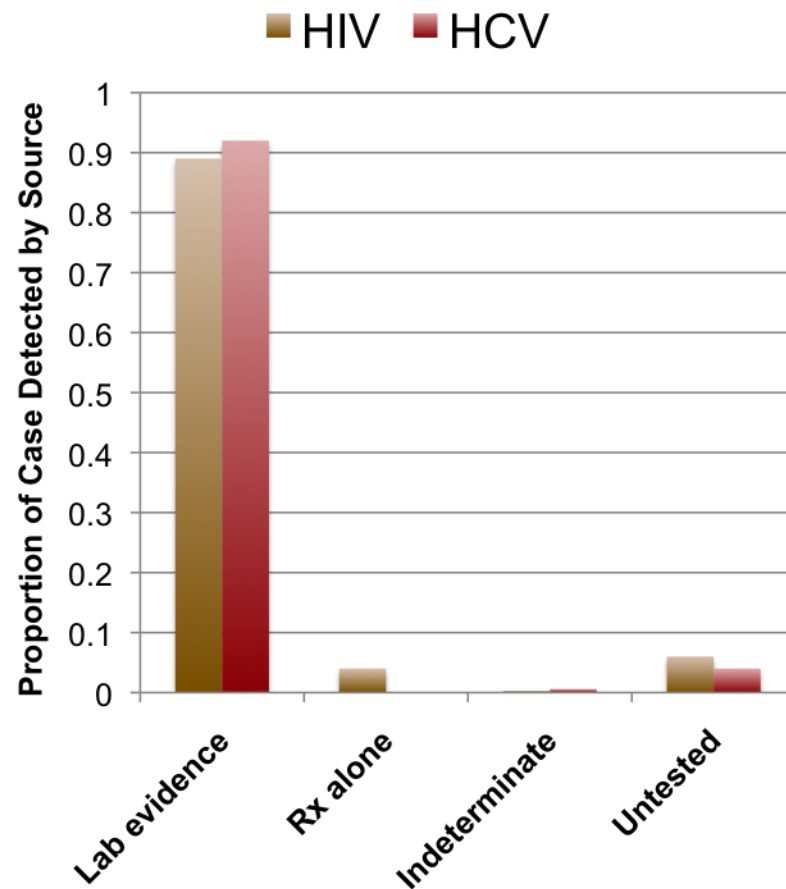
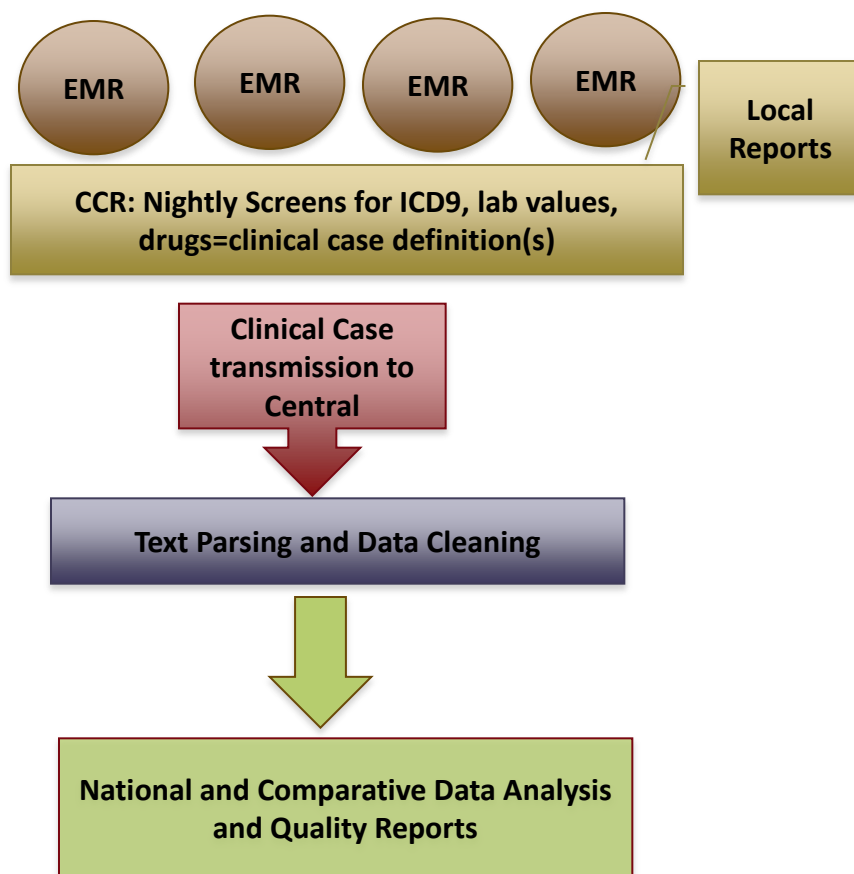
# Partners Clinical Research & Performance Monitoring Warehouse



# New Advances in using Distributed Electronic Medical Records: U.S. Veteran`s Affairs

## Example: HIV and HCV Care

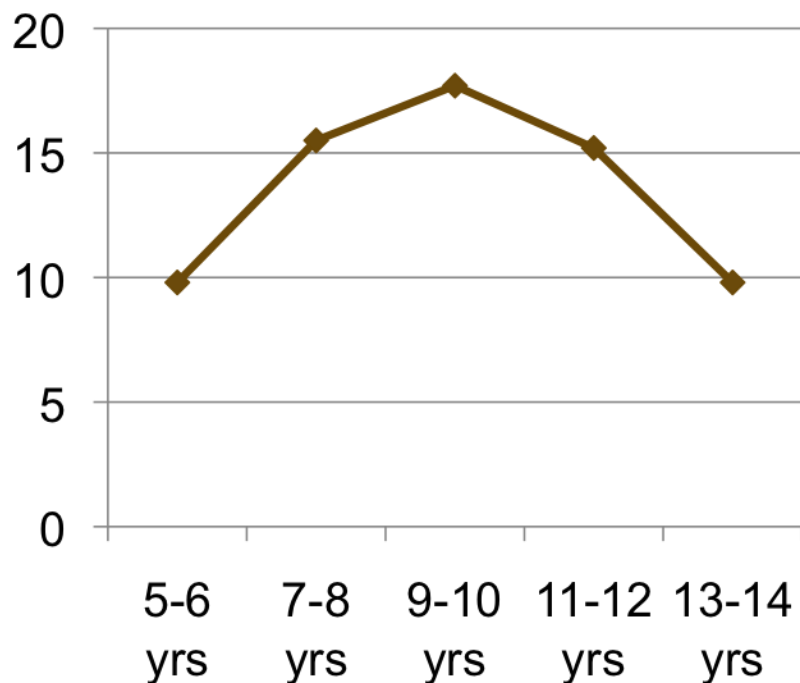
### The Clinical Case Registry Model





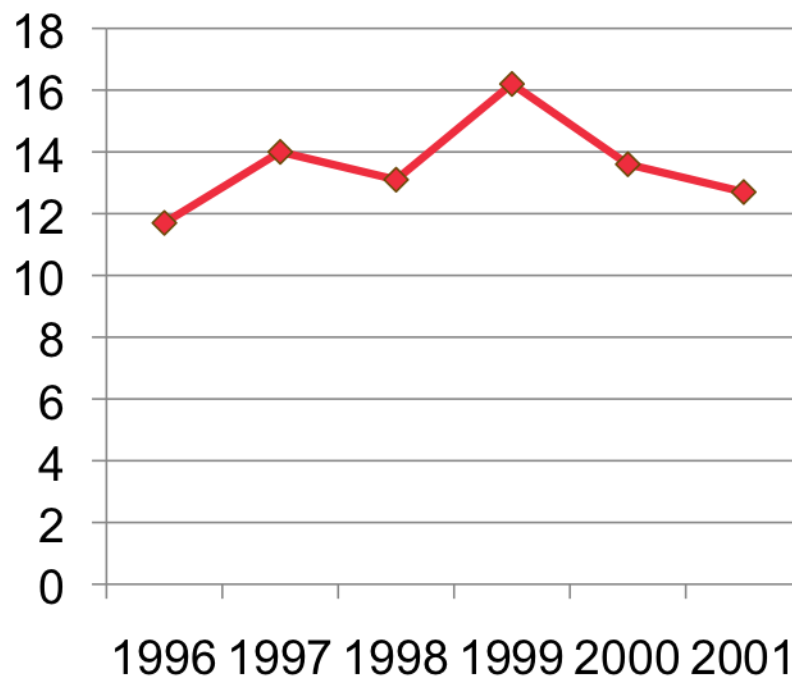
# Monitoring the Incidence and Prevalence of Attention Deficit Disorder using the GPRD EMR

**Attention Deficit Disorder Incidence by Age in Boys**



—◆— ADD Incidence per 10 000

**Attention Deficit Disorder Incidence by Year**



—◆— ADD Incidence per 10 000

# New Technologies and Predictive Models are Being Used to Detect Deterioration in Health Status

Provide **person-specific decision support** to reduce morbidity.

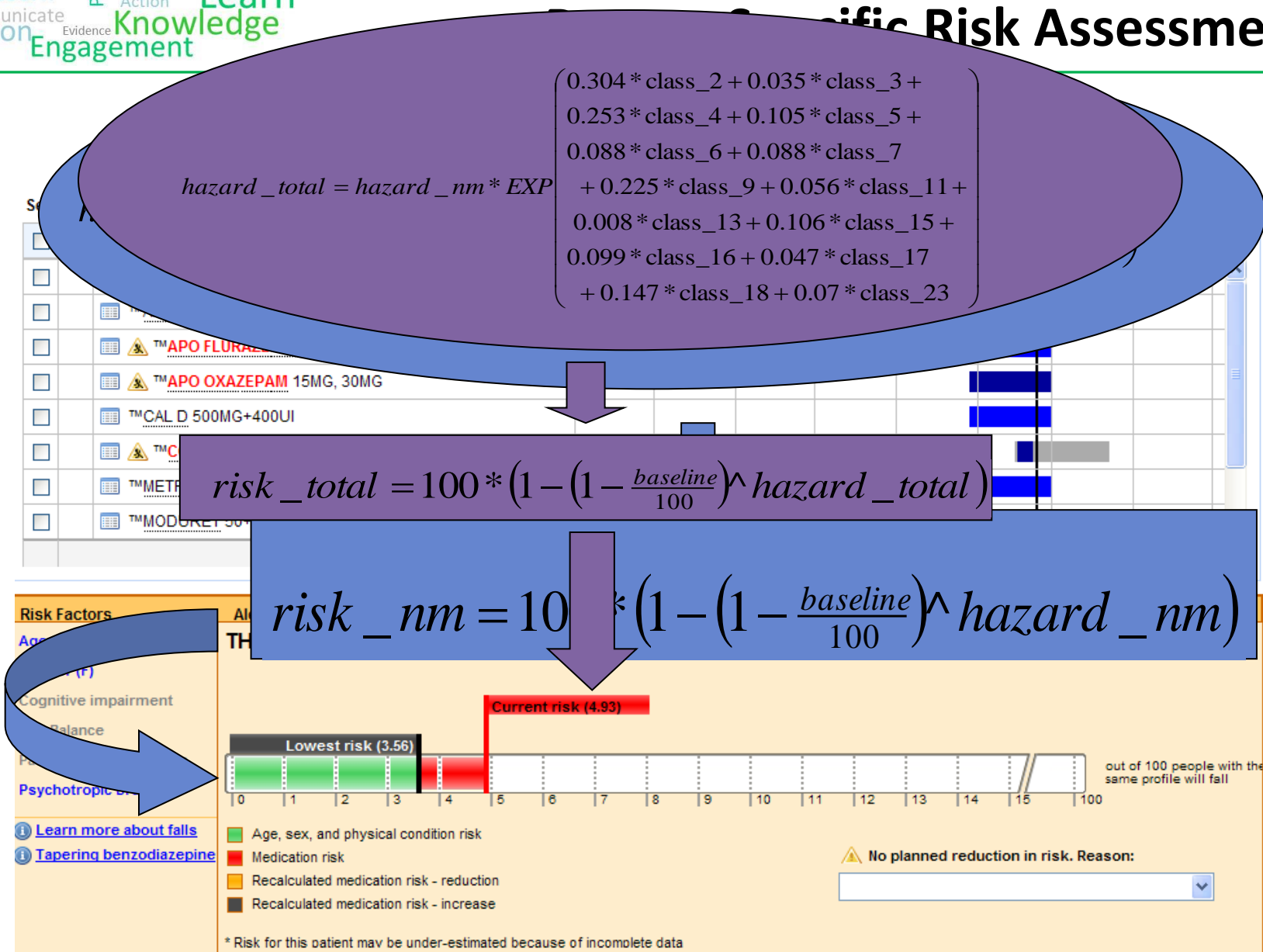
**EarlySense**  
Proactive Patient Care



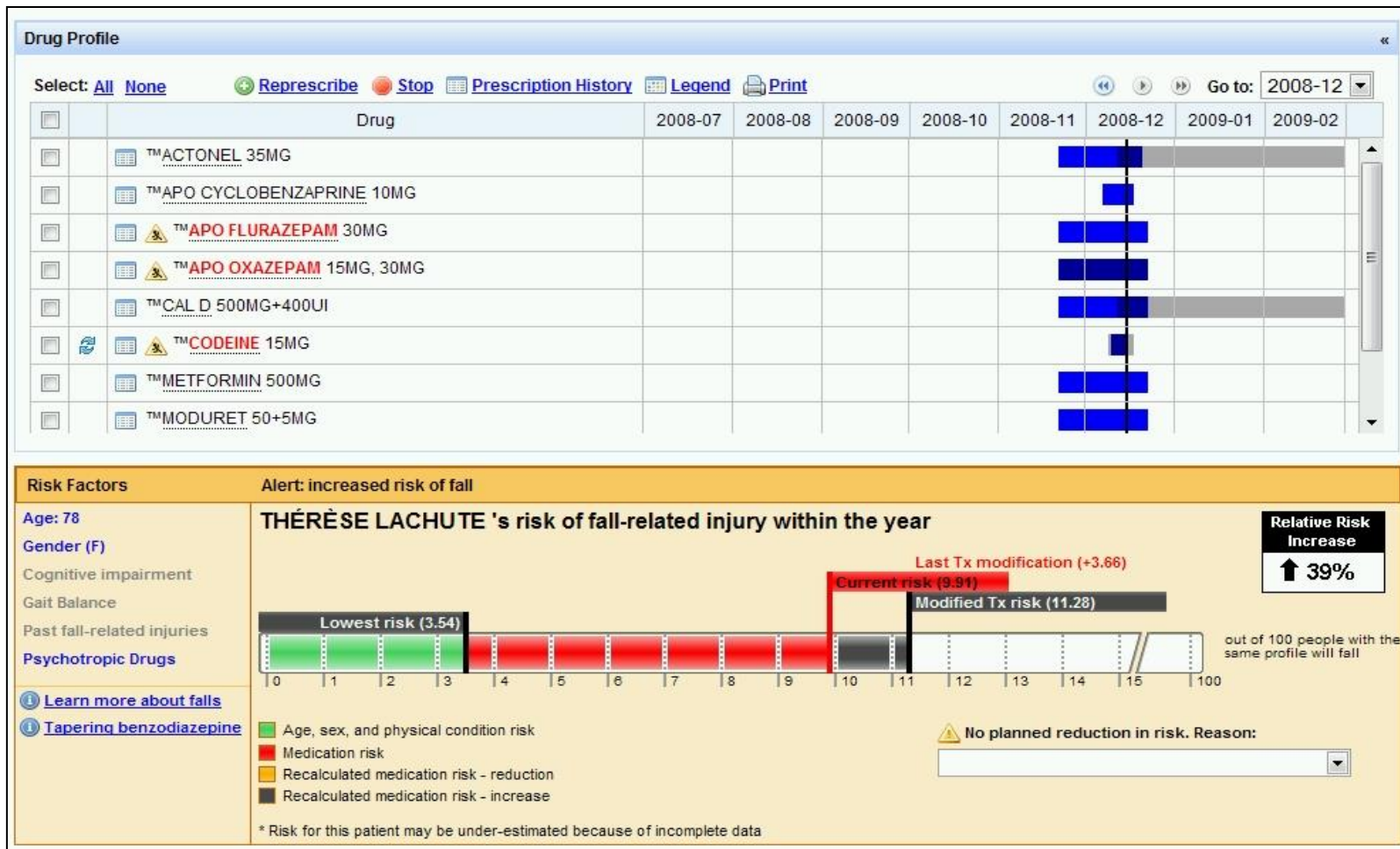
**Contact Free Continuous Patient Monitoring**

- Fully integrated patient monitoring solution
- Continuous real-time vital sign and motion information
- Timely alerts for early detection

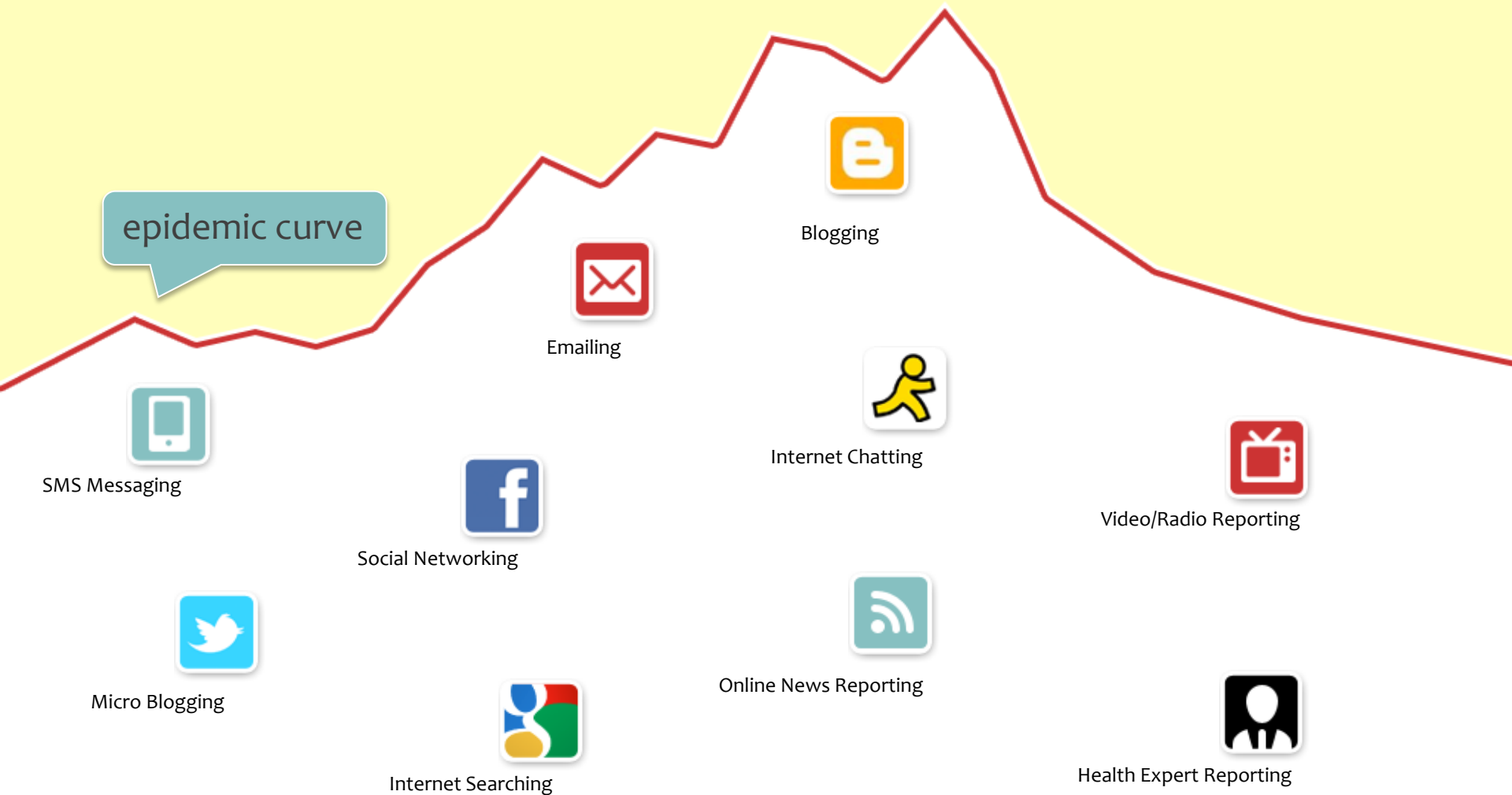
# Designing New Smart Alerts that Provide Specific Risk Assessment



# Providing Immediate Feedback on the Consequences of a Change in Medication



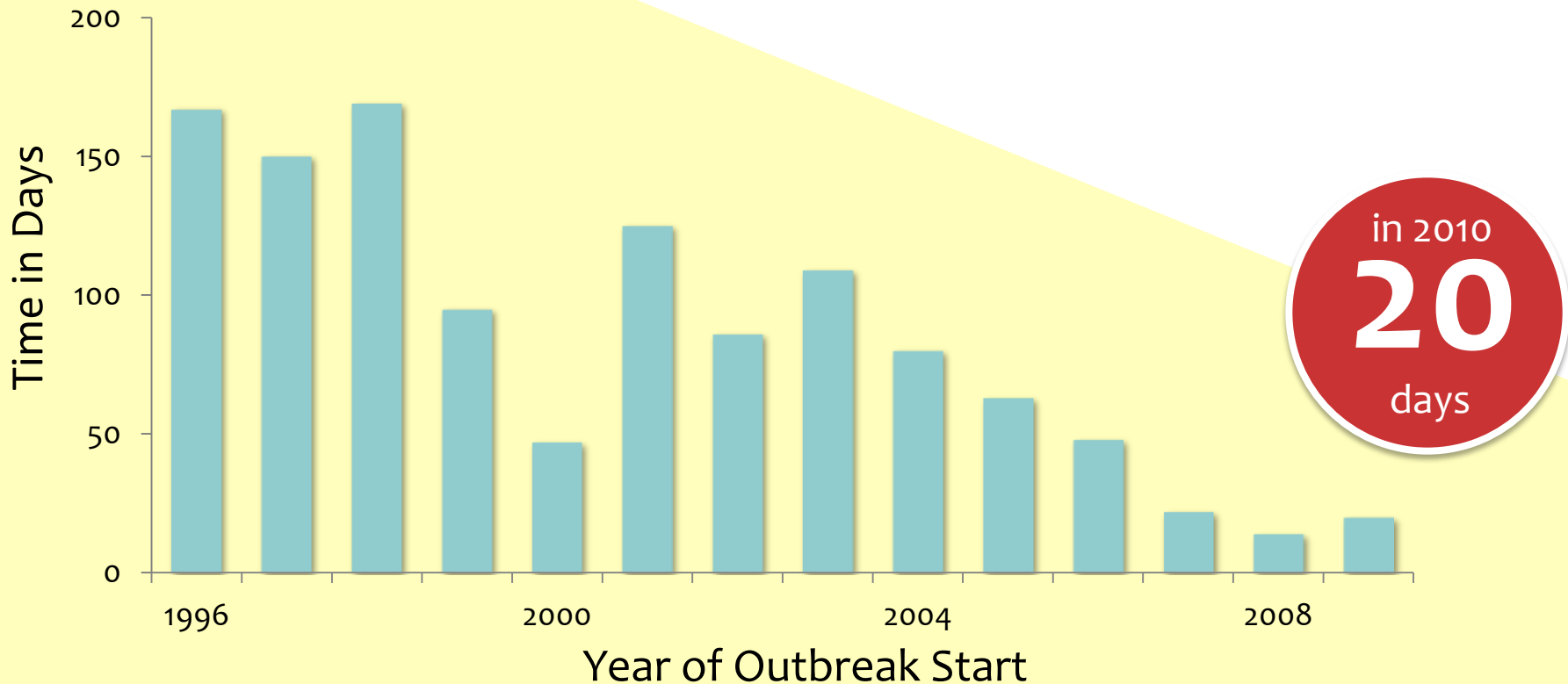
# Potential of Digital Disease Detection





# Number of days from outbreak start to outbreak discovery

in 1996  
**167**  
days



# Real-Time Population Monitoring

Healthcare Share Linkage  
Renewal Interact  
Collaborate Change  
Learn Policy  
Communicate Evidence  
Action Knowledge  
Engagement

**HealthMap** Global Health, Local Knowledge

What is HealthMap?

Global

About Projects Mobile

HOME

**The NEW ENGLAND JOURNAL of MEDICINE**

**HealthMap identified a new pattern of respiratory illness in Mexico in 2009 well before public-health officials realized a new influenza pandemic was emerging**

John S. Brownstein, Ph.D., Clark C. Freifeld, B.S., and Lawrence C. Madoff, M.D.  
N Engl J Med 2009; 360:2156 | May 21, 2009 | DOI: 10.1056/NEJMp0904012

Share: Facebook Twitter Google+ LinkedIn

Article References Citing Articles (13)

The value of Web-based information for early disease detection, public health monitoring, and risk communication has never been as evident as it is today, given the emergence of the current influenza A (H1N1) virus. Many ongoing efforts have underscored the important roles that Internet and social-media tools are playing in the detection of and response to this outbreak.

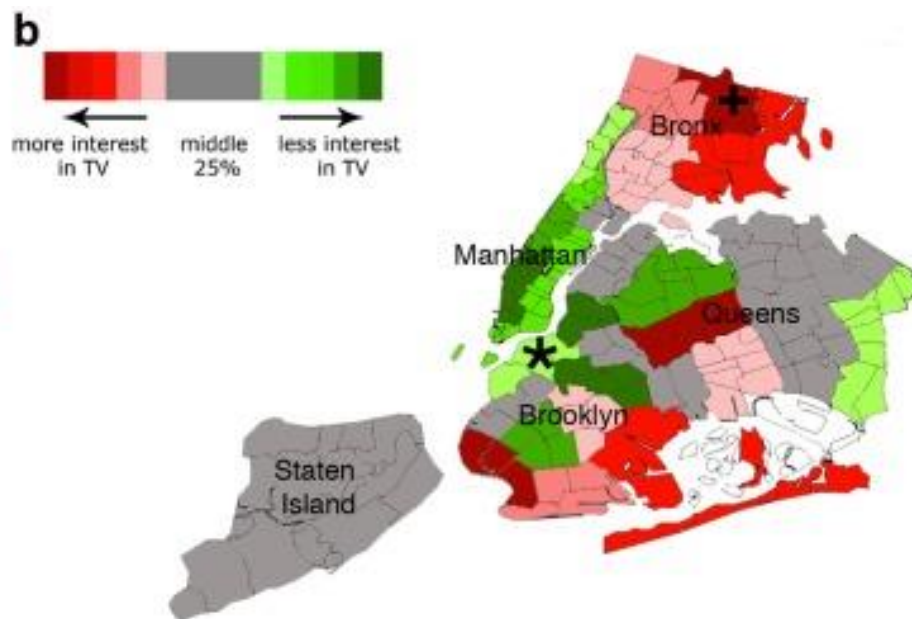
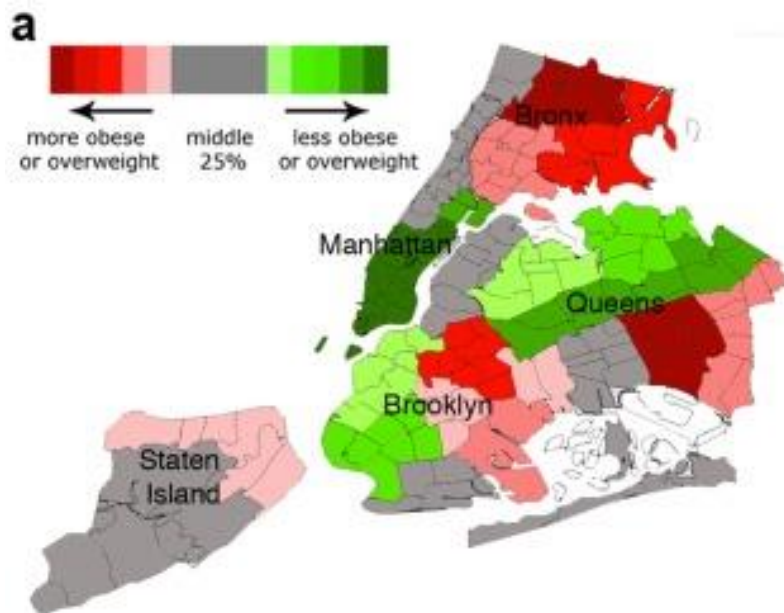
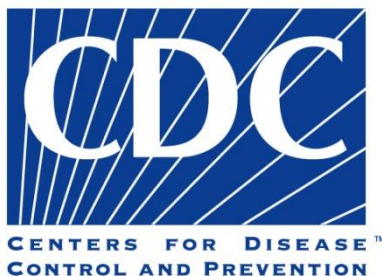
Activity Index: Low High Country level Province or local level

Alerts from past week

Avian Influenza H7N9

Coronavirus Surveillance

# Tracking Obesity with Facebook





# Patients and Families

## Experience-based co-design

It's time patients had a say



**Patients Canada**  
Make your experience count

---

### King's Fund (UK) – 2013:

#### Experience-based co-design toolkit

#### Working with patients to improve health care

This toolkit outlines a powerful and proven way of improving patients' experience of services, and helps you to understand how it can help you meet your aims. A 2013 global survey discovered that EBCD projects had either been implemented, or were being planned in more than 60 health care organisations, in countries including Australia, Canada, England, the Netherlands, New Zealand, Sweden, and the United States.

# Healthtalkonline (UK)



## Websites You Can't Live Without - [www.healthtalkonline.org](http://www.healthtalkonline.org)

31 JANUARY 2013



[www.healthtalkonline.org](http://www.healthtalkonline.org) listed in The Times 50 Top  
Websites You Can't Live Without and ranked second in their  
top 5 health websites

[www.healthtalkonline.org](http://www.healthtalkonline.org) is a wealth of highly reliable – as opposed to  
partial and anecdotal – data on personal and patient experiences collected  
and analysed using world leading qualitative research methods by the  
**Health Experience Research Group**, Department of Primary Care Health  
Sciences, University of Oxford.

### CATEGORIES

General



# Healthexperiences.ca



Caregiving module: 35-50 in-depth semi-structured interviews  
Maximum variation sample; at home or place of convenience



# Experiential evidence for system change

<http://healthexperiences.ca/en/>

Drew – on experiences with the healthcare system caring for his mother (since he was 5 yrs old).

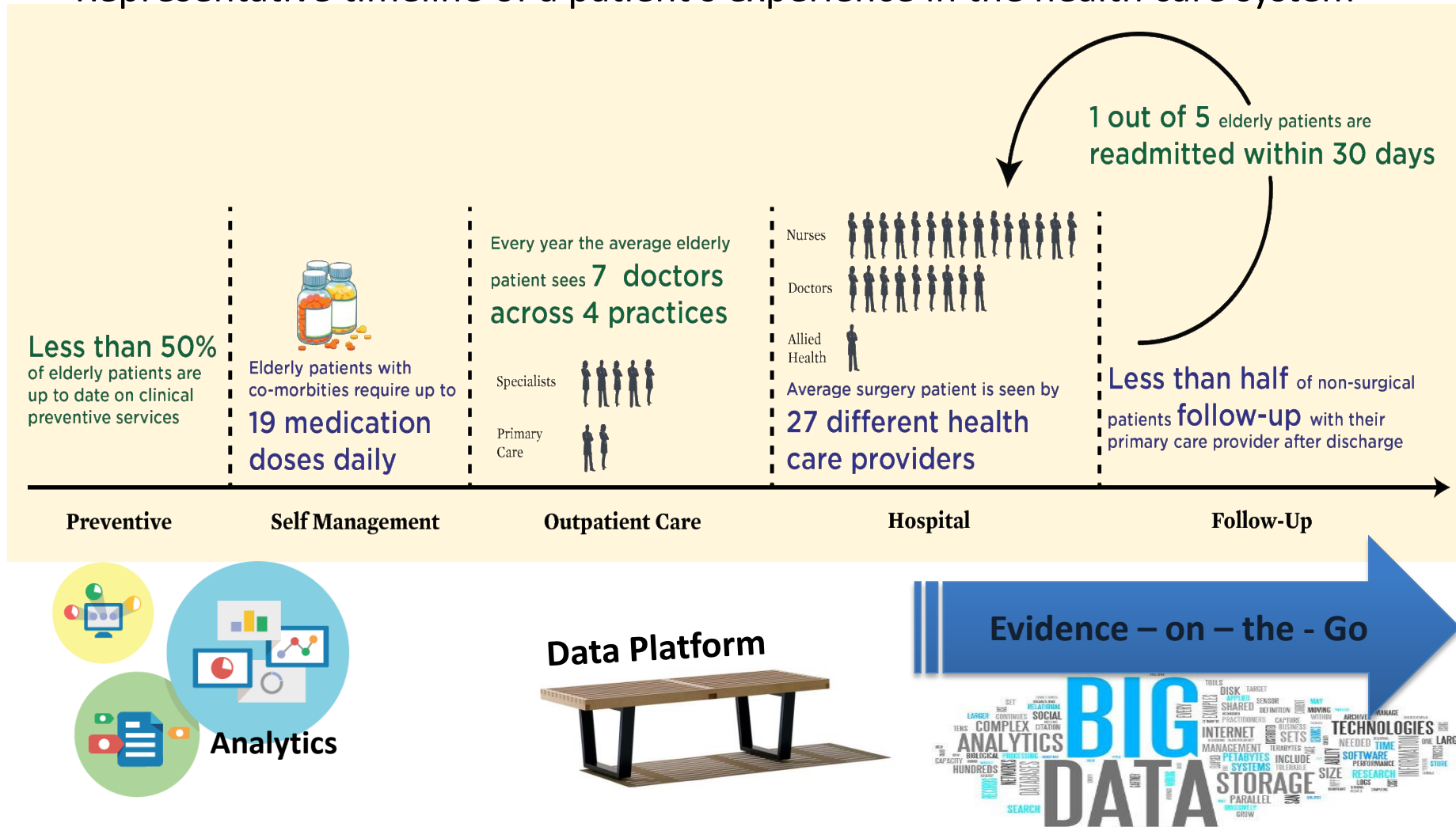


[http://www.youtube.com/watch?feature=player\\_embedded&v=RGb8AhDpb1w](http://www.youtube.com/watch?feature=player_embedded&v=RGb8AhDpb1w)

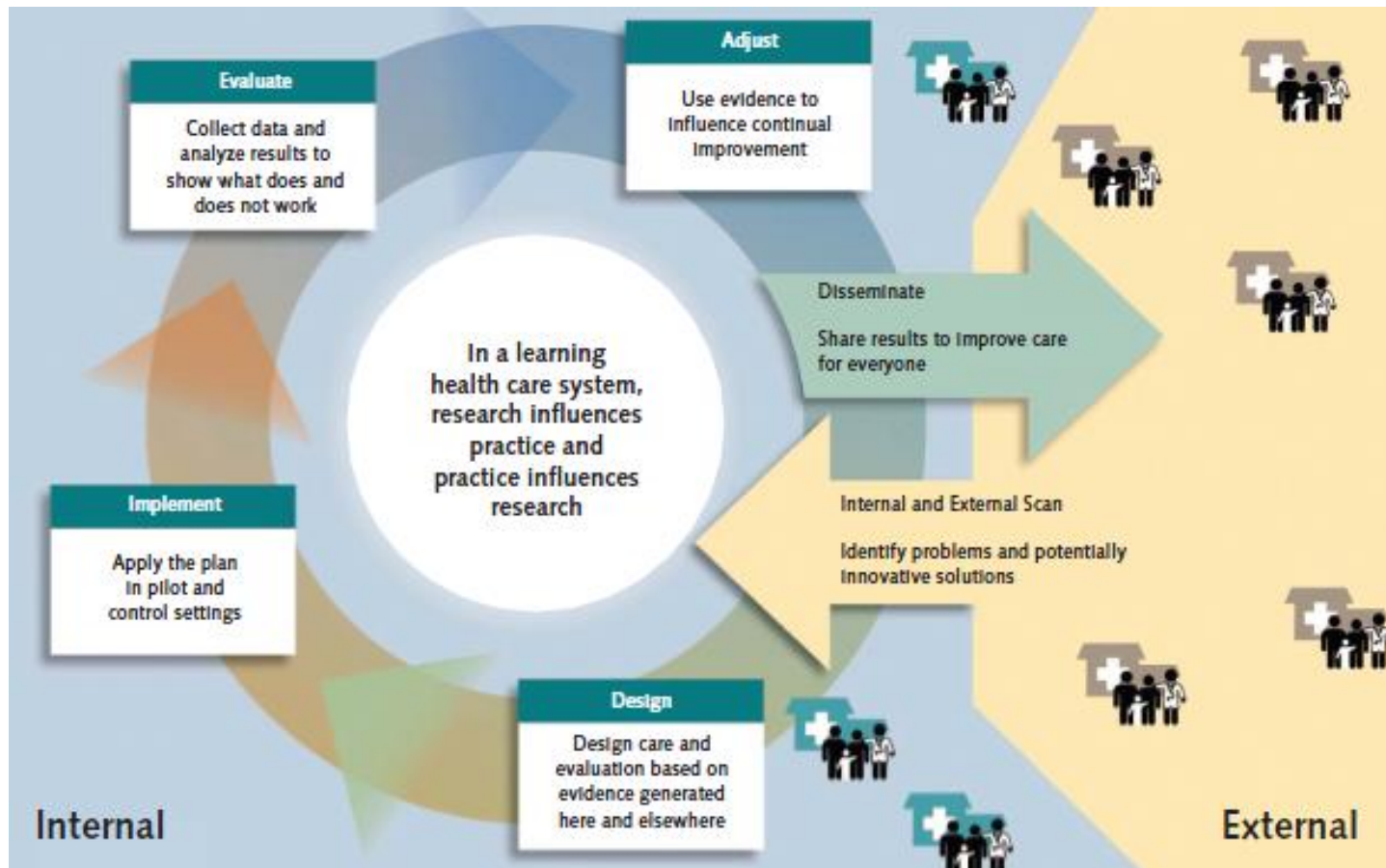


# A Continuously Learning Health Care System

Representative timeline of a patient's experience in the health care system



# Implementing the Learning Healthcare System: Group Health Cooperative

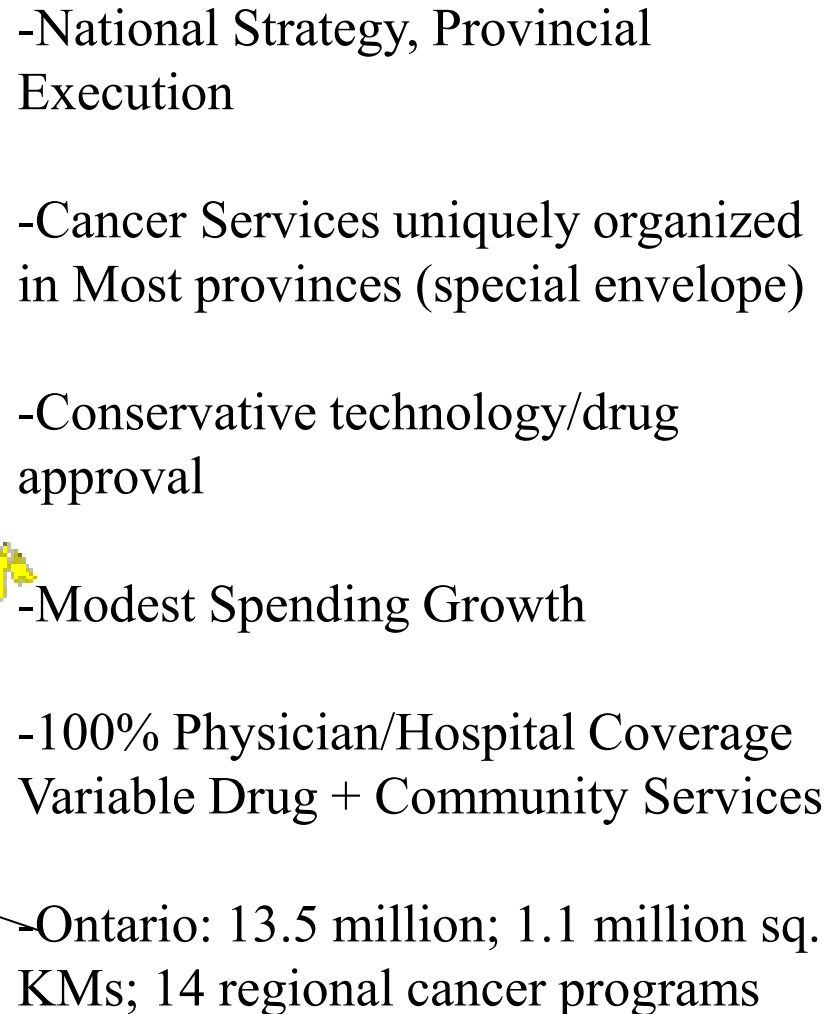


# International Learning System: Variations in NICU Outcomes

Characteristics of Birth Weight and Mortality in Participating NICU Networks

	Canadian Network	Kaiser Permanente	New England
<b>No. died/No. total</b>	418/10 819 (3.9%)	117/5 530 (2.1%)	231/3 492 (6.6%)
<b>Birth weight</b>			
<750 g	387 (3.6%)	85 (1.5%)	321 (9.2%)
750-999 g	501 (4.6%)	138 (2.5%)	372 (10.7%)
1000-1499 g	1267 (11.7%)	373 (6.7%)	898 (25.7%)
1500-2499 g	3755 (34.7%)	1712 (31%)	963 (27.6%)
≥2500 g	4909 (45.4%)	3222 (53.3%)	938 (26.9%)





## EDITO

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ESTABLISHED 1892 - JOSEPH E. ATKINSON, PUBLISHER, 1890-1948

**PRIVATE PRACTICE:** Dr. Tom McGowan, former head of radiation oncology for Cancer Care Ontario, set up a private company to run the new after-hours clinic.

## Cancer Care Ontario should be shut down

Agency couldn't figure out how to run an evening shift at its Sunnybrook centre

THOMAS WALKOM



For two weeks, Premier Mike Harris' government has been embroiled in a furor over its plans for **Cancer Care Ontario**, a crown agency that runs eight of the province's nine cancer treatment clinics.

The battle has been painted in Goliath and David terms - a monolithic, vengeful government moving to silence a feisty, independent agency devoted to serving the interest of cancer patients.

Agency board members, speaking under the cloak of anonymity, charged that Health Minister Tony Clement was trying to punish Cancer Care Ontario for publicizing the lengthy waiting

newspaper by New Democrat MPP Frances Lan-kin. It is a remarkable document.

First, the new private company is promised a so-called performance bonus. Public cancer treatment centres receive \$3,000 per patient no matter how many they treat. But if McGowan's firm treats more than 500, its subsidy will in-

## The sorry tale of Cancer Care Ontario

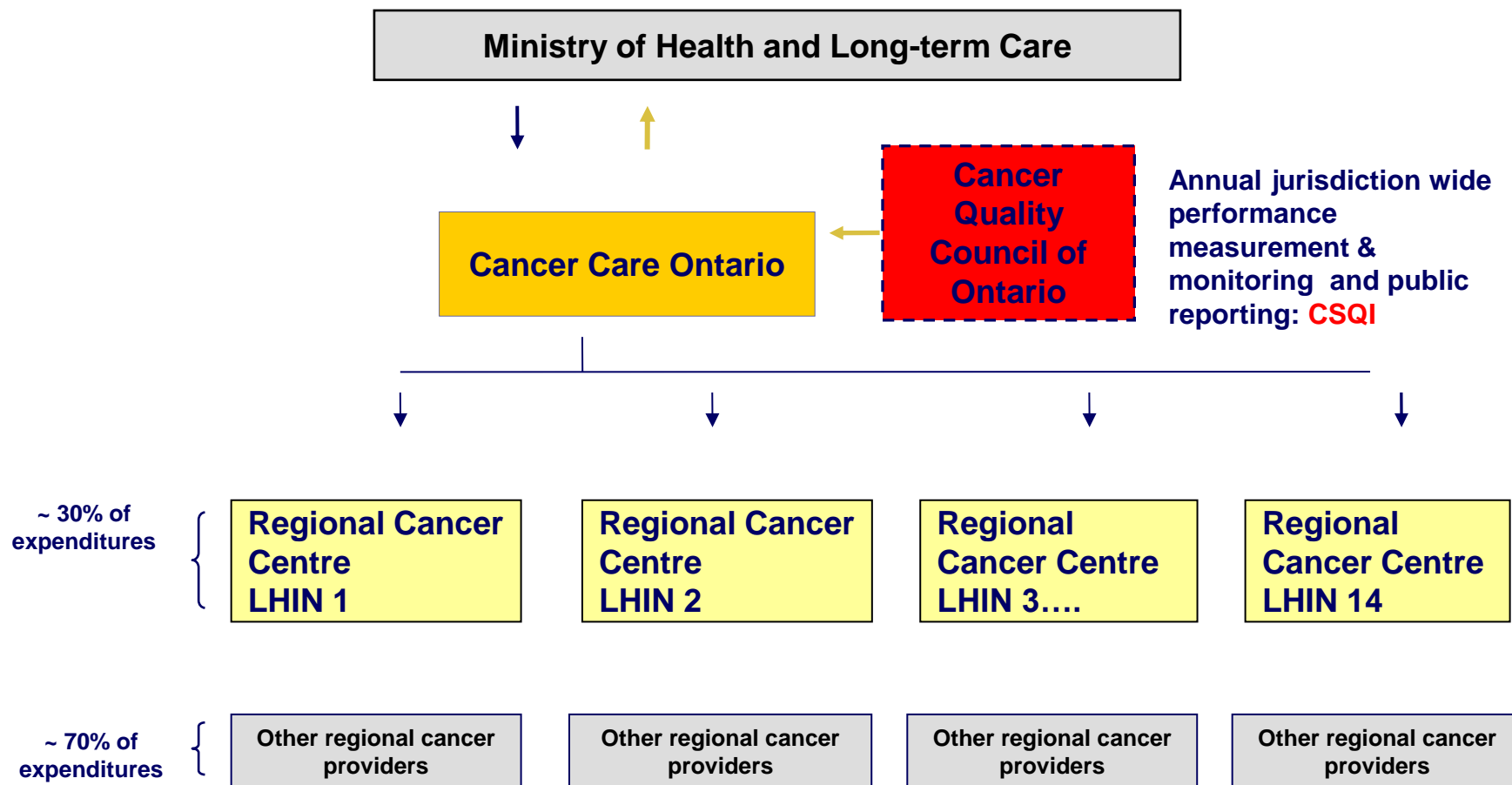
The Mike Harris government's ham-handed handling of Cancer Care Ontario has to be seen in the context of what else is happening.

Last week, Health Minister Tony Clement told the directors of Cancer

jected deficit of \$175 million and pending legislation making deficits illegal.

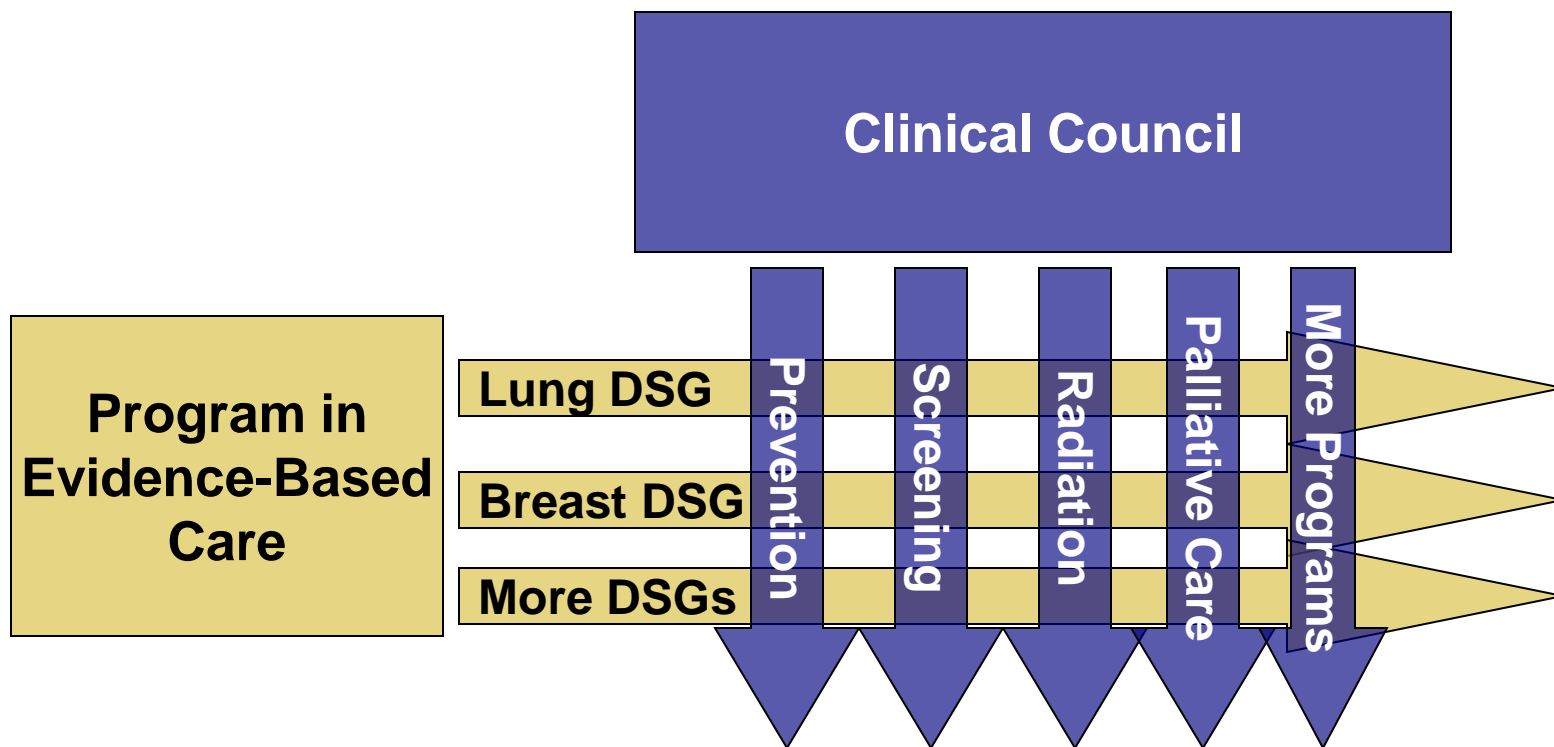
Exhibit 3: On Wednesday, a city committee will consider a report on ambulance services. It says crowding

# Cancer Care Ontario: Delivery at a Glance



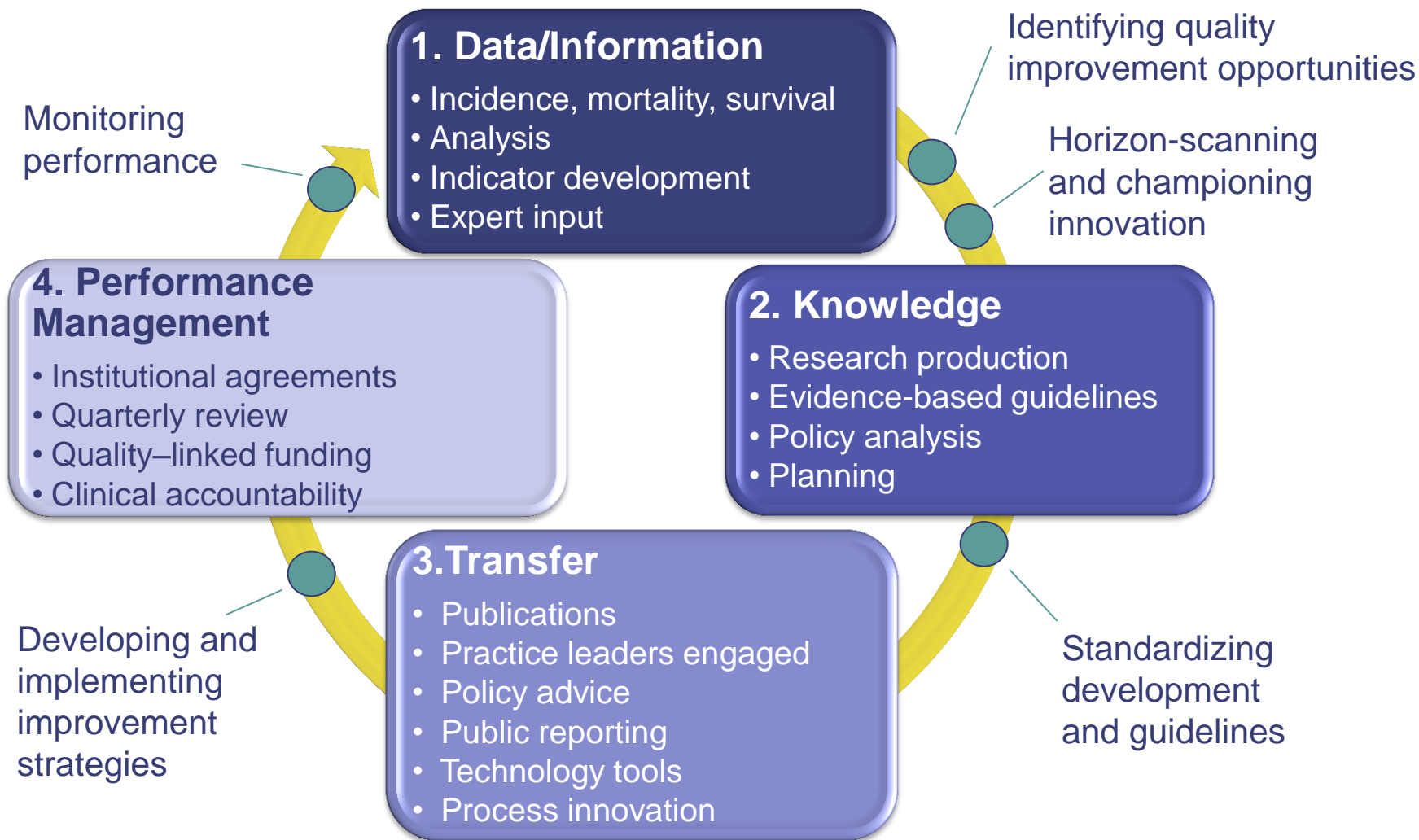
Mission: To improve the *performance* of the cancer system by driving *quality, accountability and innovation* in all cancer-related services

## Clinical Accountability Structures (cont.)



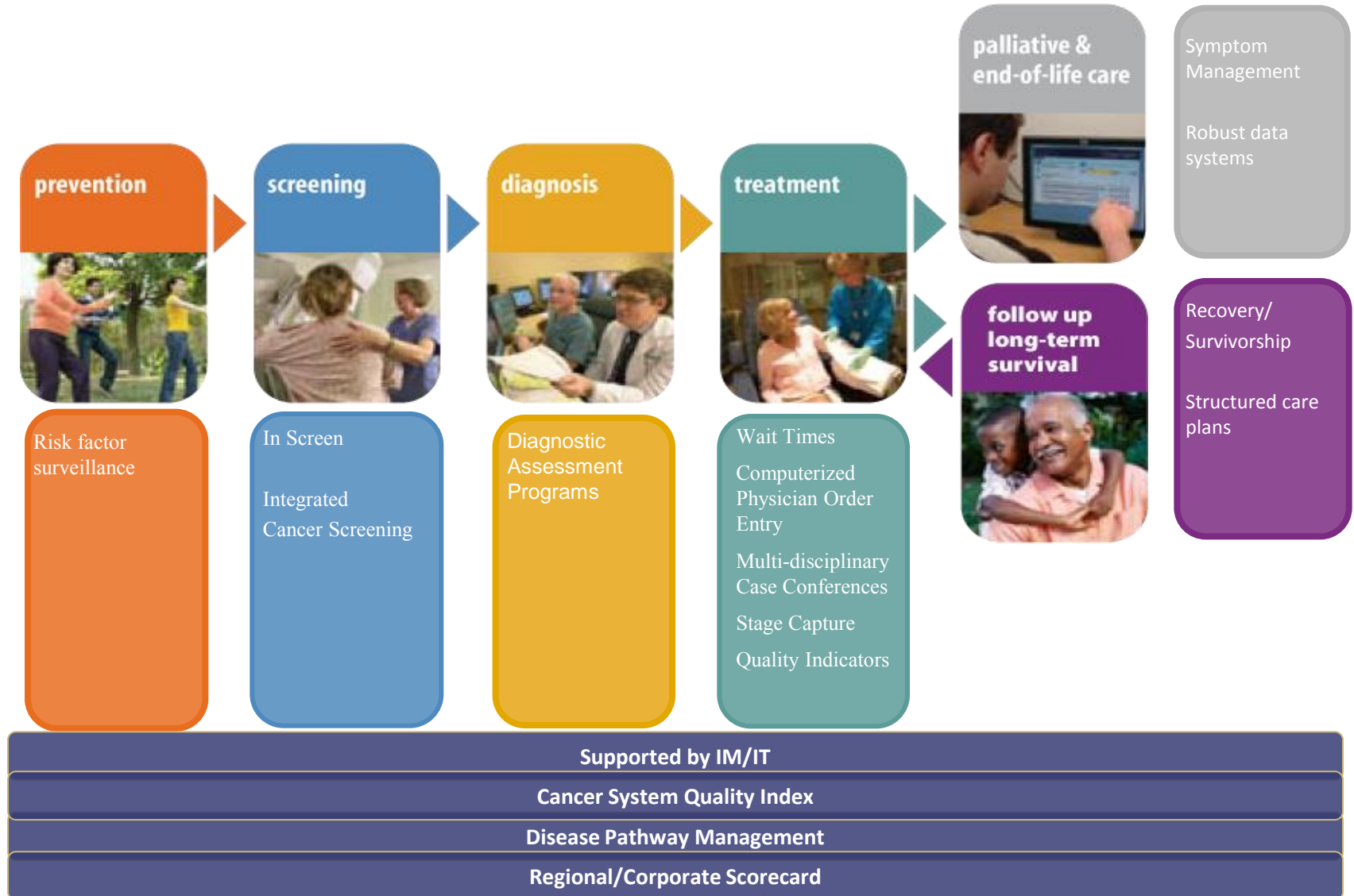


# Clinicians Engaged in All Components of Performance Improvement Cycle





# The Patient Journey IM Tools Instrument the Disease Journey





# Overall CSQI 2012 Summary

## Safe



Rating: Good. Some processes and standards for a safe cancer system are in place. However, we need better measures of safety from the patient's perspective.

## Effective



Rating: Very Good. Cancer services are generally effective and evidence-based.

## Accessible



Rating: Good. More Ontarians are accessing the services they need but efforts need to continue.

## Responsive



Rating: Fair. Ontario's cancer system needs to focus more on patients' and survivors' quality of life, both during and after active treatment.

## Equitable



Rating: Poor. Cancer burden is still higher among those with lower socio-economic status. More work needs to be done using a whole-of-society approach to ensure equity.

## Integrated



Rating: Poor. We have better data for measures that bridge across the cancer system, but more improvement is needed to ensure a seamless journey for patients and survivors.

## Efficient



Rating: Fair. We need to better measure cost efficiency and value for money, while maintaining good health outcomes for all Ontarians.

\*



Very Good



Good



Fair

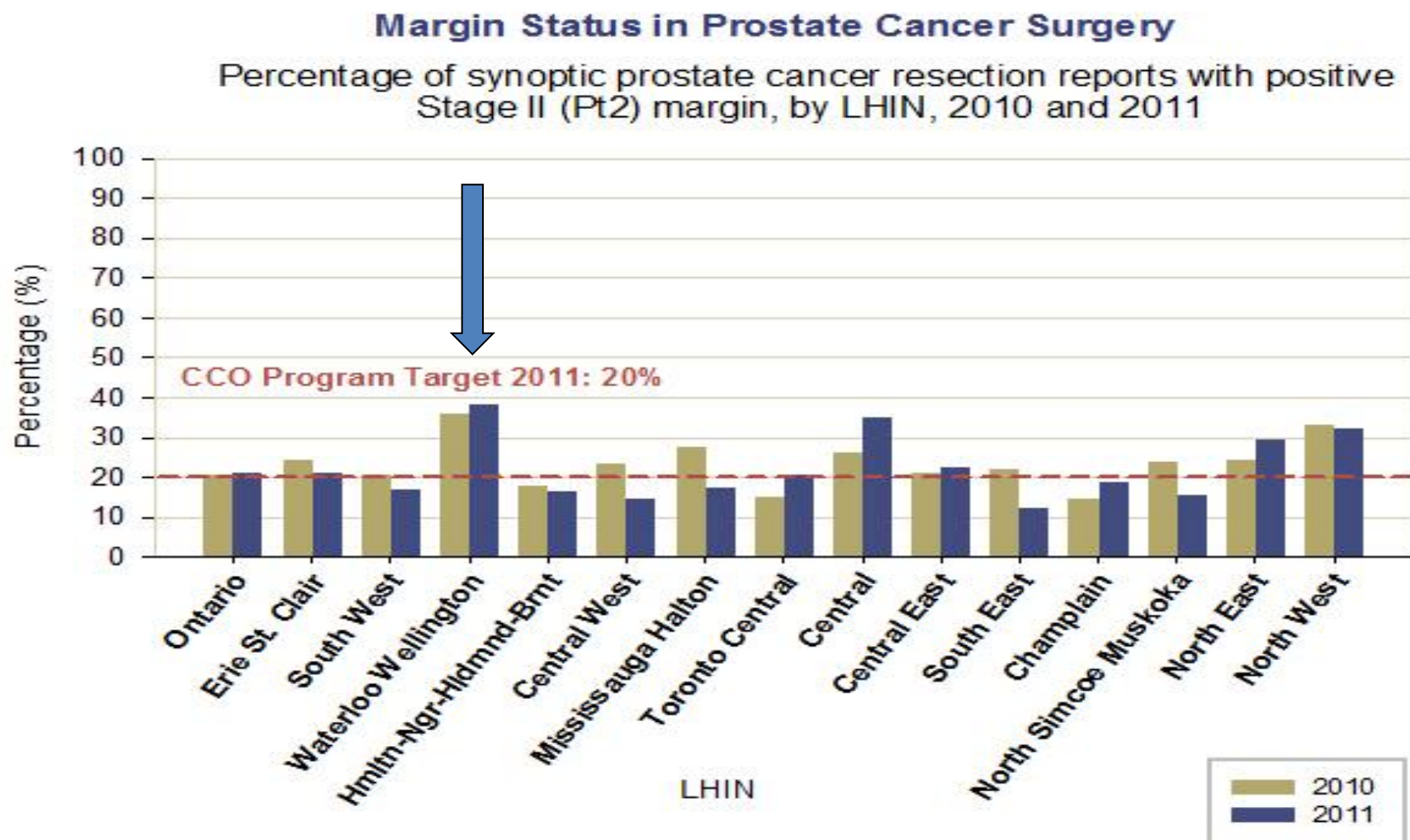


Poor



Incomplete Data

# CSQI results by quality dimension: Effective



Report Date: February, 2012

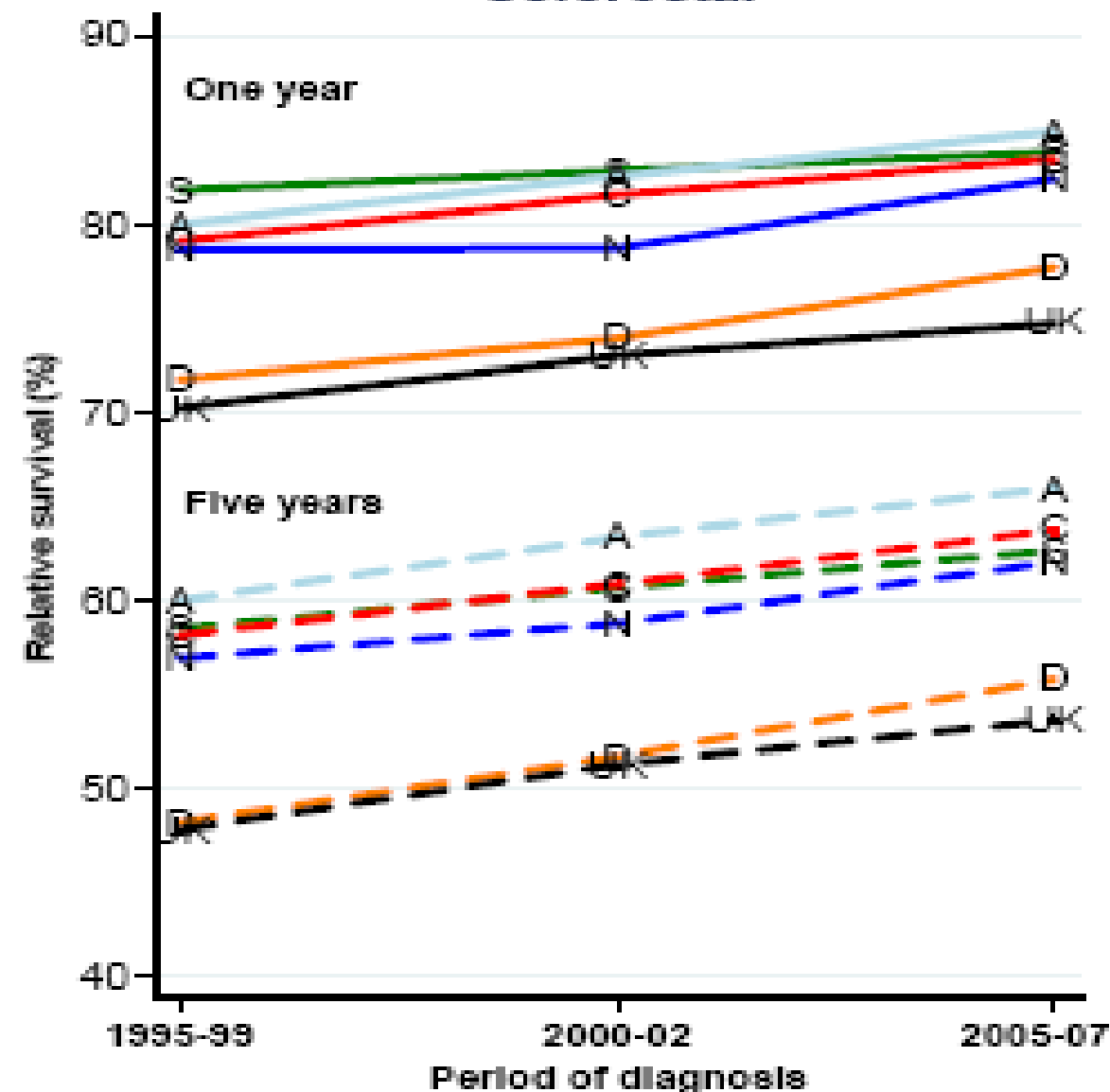
Data source: Pathology Information Management System

Prepared by: Cancer Care Ontario, Cancer Informatics

# Cancer survival in Ontario ranks among best in the world

December 21, 2010 [Megan Ogilvie](#) Toronto Star

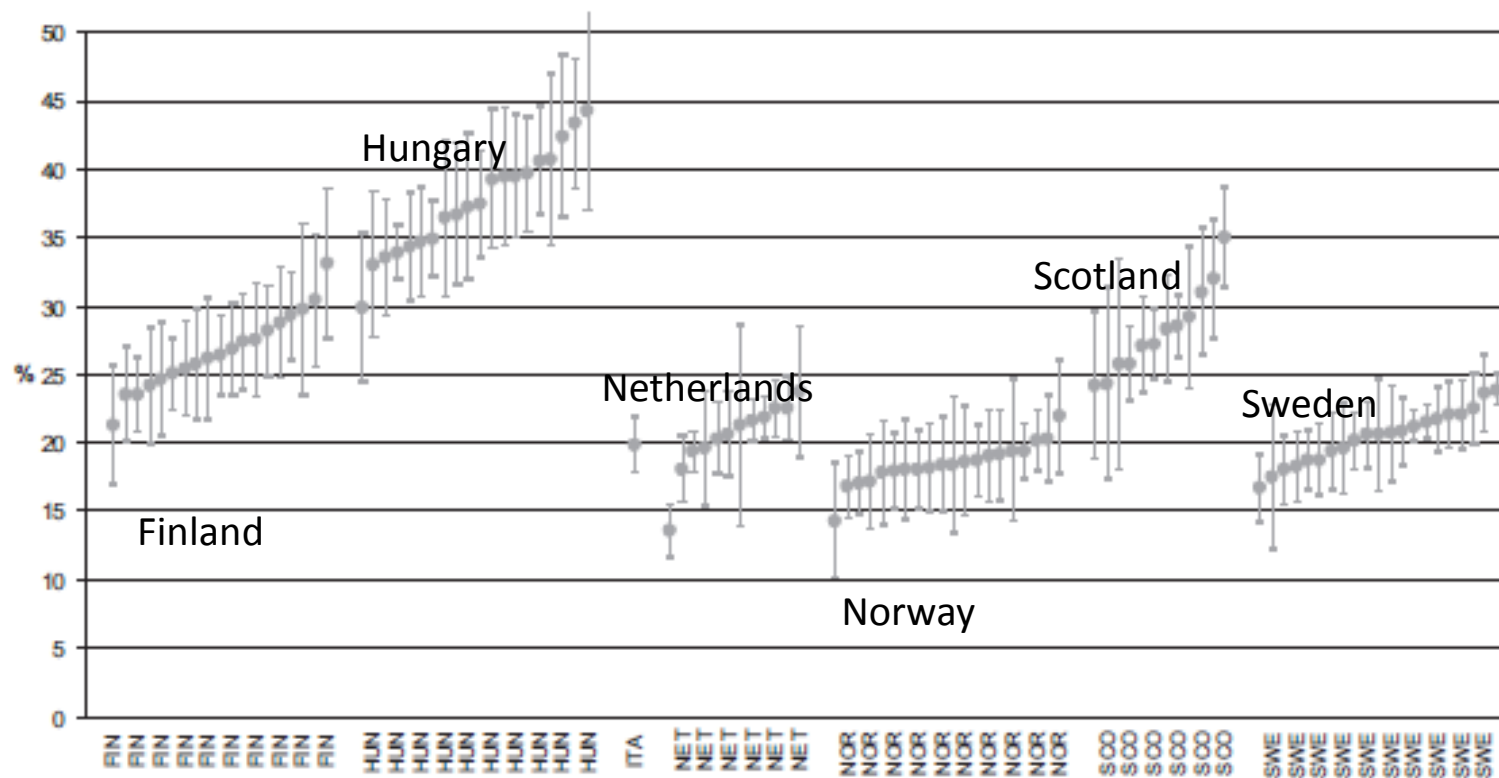
## Colorectal



Cancer survival in Australia, Canada, Denmark, Norway, Sweden, and the UK, 1995–2007 (the International Cancer Benchmarking Partnership): an analysis of population-based cancer registry data  
Coleman et al The Lancet - 8 January 2011 ( Vol. 377, Issue 9760, Pages 127-138

- S - Swedish regions
- A - Australian registries
- C - Canadian registries
- N - Norway
- D - Denmark
- UK registries

# International Learning System: Comparing Health System Performance Across Europe





Representative timeline of a patient's experience in the health care system

**Healthcare System Components:**

- Policy
- Clinical
- Scientific
- LEADERSHIP
- CITIZEN ENGAGEMENT

**Preventive:** Less than 50% of elderly patients are up to date on clinical preventive services

**Self Management:** Elderly patients with co-morbidities require up to 19 medication doses daily

**Outpatient Care:** Every year the average elderly patient sees 7 doctors across 4 practices

**Hospital:** Average surgery patient is seen by 27 different health care providers

**Follow-Up:** Less than half of non-surgical patients follow-up with their primary care provider after discharge

**Readmission:** 1 out of 5 elderly patients are readmitted within 30 days

**Less than half** of non-surgical patients **follow-up** with their primary care provider after discharge

## Evidence – on – the - Go

A word cloud titled "BIG DATA STORAGE" featuring various terms related to data management and technology. The words are arranged in a circular pattern around the central title. The words include: DISK, TARGET, SHARE, SENSORS, DEFINITION, MAY, ARCHIVE, MANAGE, TECHNOLOGIES, TIME, SOFTWARE, PERFORMANCE, SIZE, LOCUS, CAPACITY, GROW, PARALLEL, SYSTEMS, INCLUDE, TOLERABLE, SETS, TEMPERATURES, BUSINESS, MANAGEMENT, INTERNET, PETARYTES, CAPACITY, HUNDREDS, ANALYTICS, COMPLEX, TENS, LARGER, CONTAINERS, SOCIAL, CITATION, BIOLOGICAL, FINANCIAL, DATA, SEARCH.

## Data Platform

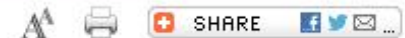
## Analytics

# Provincial Learning Networks



24/7 Health Advice  
HEALTHLink Alberta  
1-866-408-5465

- About AHS
- Find Health Care
- Health Information
- Information For
- Careers
- News & Events
- AHS In My Zone



## Strategic Clinical Networks

[Home](#) > [Information For](#) > [Health Professionals](#) > [Clinical Engagement Overview](#) >  
[Strategic Clinical Networks](#)

## Strategic Clinical Networks



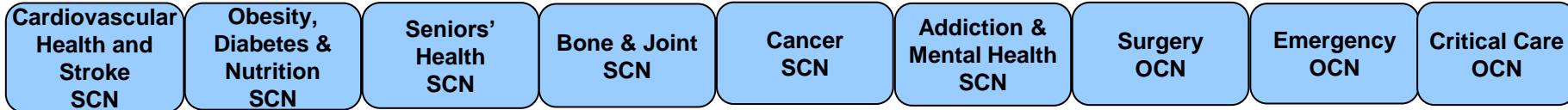
Strategic Clinical Networks (SCNs) are provincewide teams bringing together the experiences and expertise of health care professionals, researchers, government, communities and patients and their families to improve our health care system.

Each network will focus on a different area of health with the goal to:

- Improve the patient experience



# Alberta Specialty Clinic Networks



Select Priorities for Improvement



TBD

Vas  
R  
Red  
C-CH

Rural  
Pro

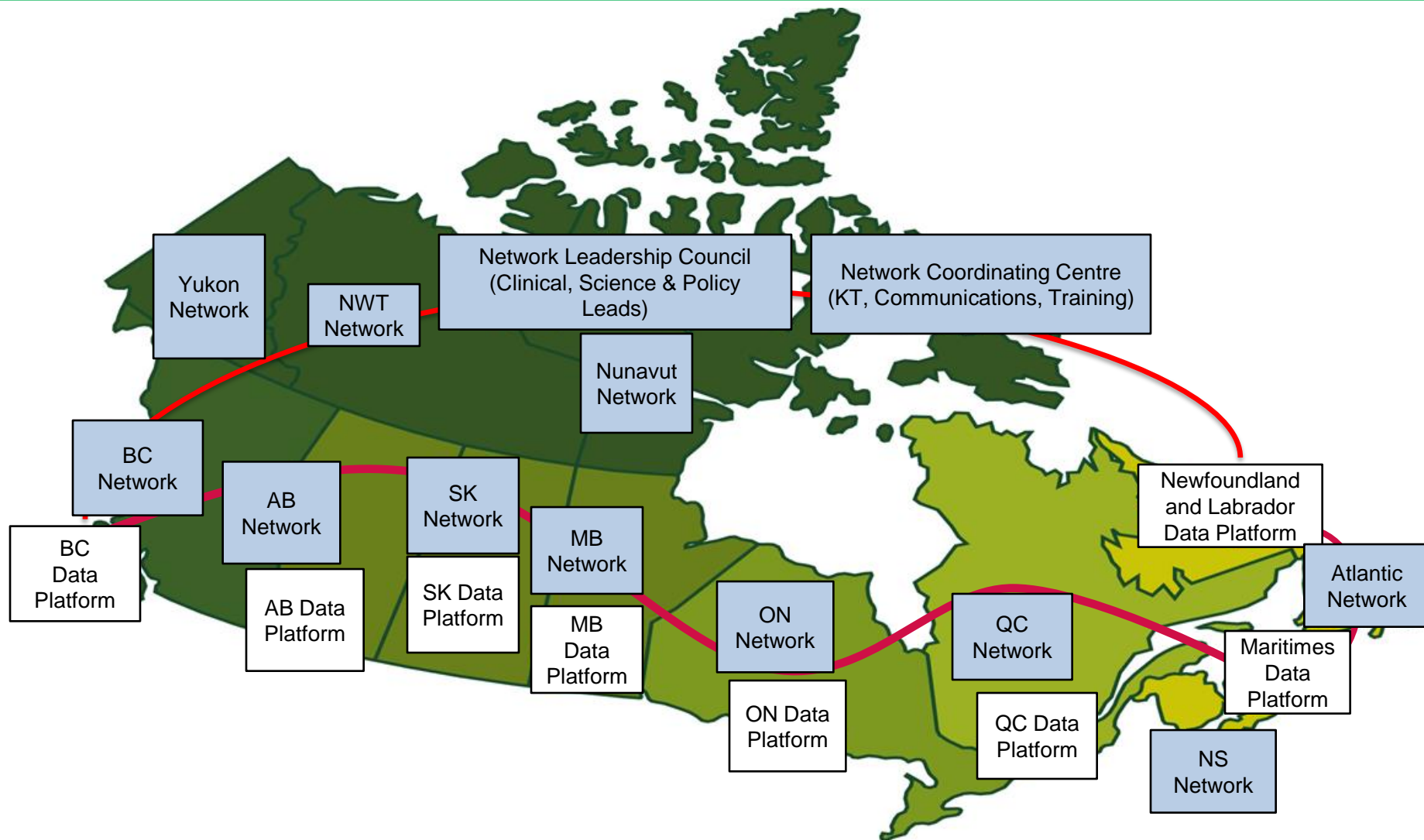
# The Launch of Canada's National Learning Networks: The Strategy for Patient-Oriented Research





Healthcare  
Interact  
Renewal  
Collaborate  
Learn  
Communicate  
Action  
Engagement  
Linkage  
Interact  
Healthcare  
Change  
Evidence  
Policy  
Renewal  
Share  
Learn  
Knowledge

# Network of Networks in Primary and Integrated Health Care Innovations

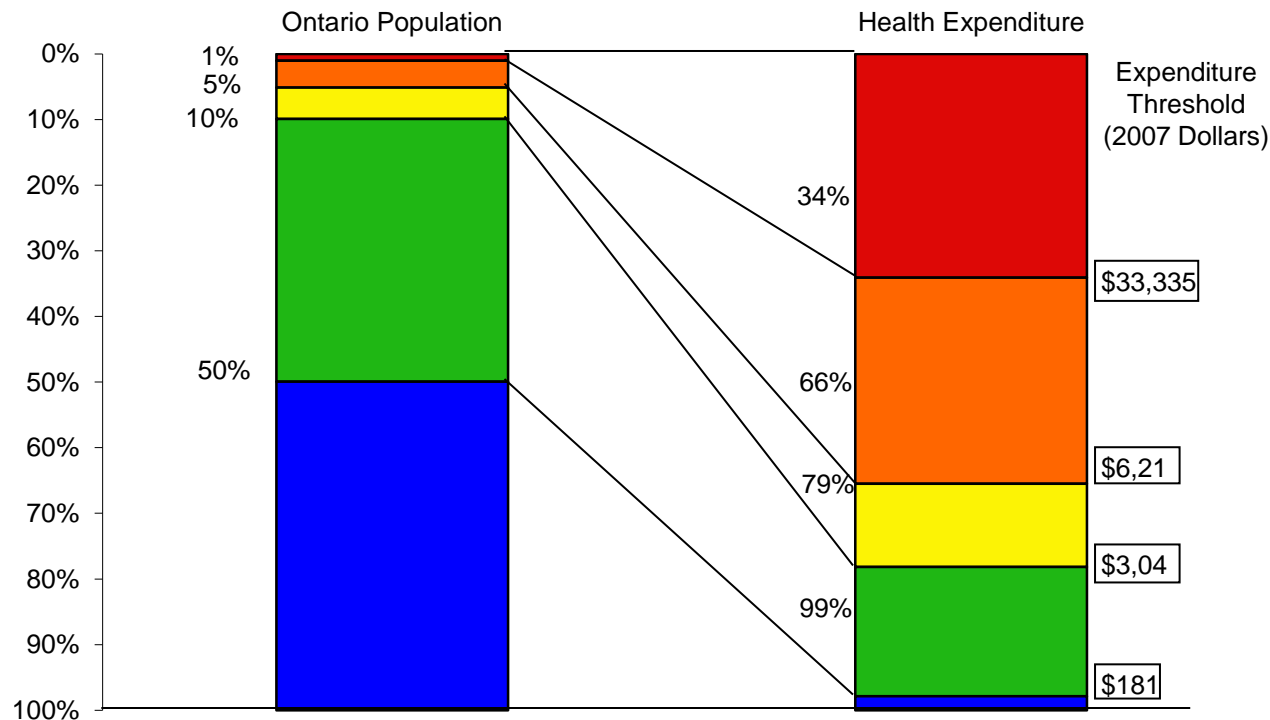


**Network of Networks in Primary and Integrated Health Care Innovations**



# High System Users

Health Care Cost Concentration:  
Distribution of Health expenditure for ON, 2007



On average, health care spending is highly concentrated, with the top 5% of the population (ranked by cost) accounting for 66% of expenditure



# Network Objectives

1

- Create cross-jurisdictional opportunities to conduct research on the comparative efficiency, cost-effectiveness and scalability of innovative and integrated models of care that build on the foundations of CBPHC and facilitate transitions into and along the care continuum.

2

- Accelerate the timely investigation of new interventions and approaches in primary and integrated care across multiple jurisdictions and sectors.

3

- Catalyze research on and scale-up of cost-effective and innovative approaches to primary and integrated health care delivery.

4

- Support capacity building among researchers, clinicians, decision-makers and citizens/patients/families for timely generation and use of primary and integrated health care knowledge.

5

- Foster the exchange of information and evidence on successful and unsuccessful interventions and innovative models of primary and integrated health care across jurisdictions to inform policy development.



# Network Membership Requirements

1

- Tri-partite leadership (science, policy, clinical)

2

- Strategic scope: (1) individuals with complex care needs across the life course, showing capacity to evolve the network's scope over time to include age groups from children to older adults; and (2) multi-sector integration of upstream prevention strategies and care delivery models

3

- Engagement of Key Stakeholders across the care continuum in primary and integrated care re-design

4

- Citizen/patient/family engagement

5

- Capacity for rapid monitoring, evaluation, feedback (linkages with SUPPORT Units)



# Network Membership Requirements

6

- University partnerships to develop primary and integrated health care research capacity

7

- Capacity to implement and evaluate e-Health solutions that could improve the cost-effectiveness of care delivery

8

- Geographic scope: Coverage of practices and patients

9

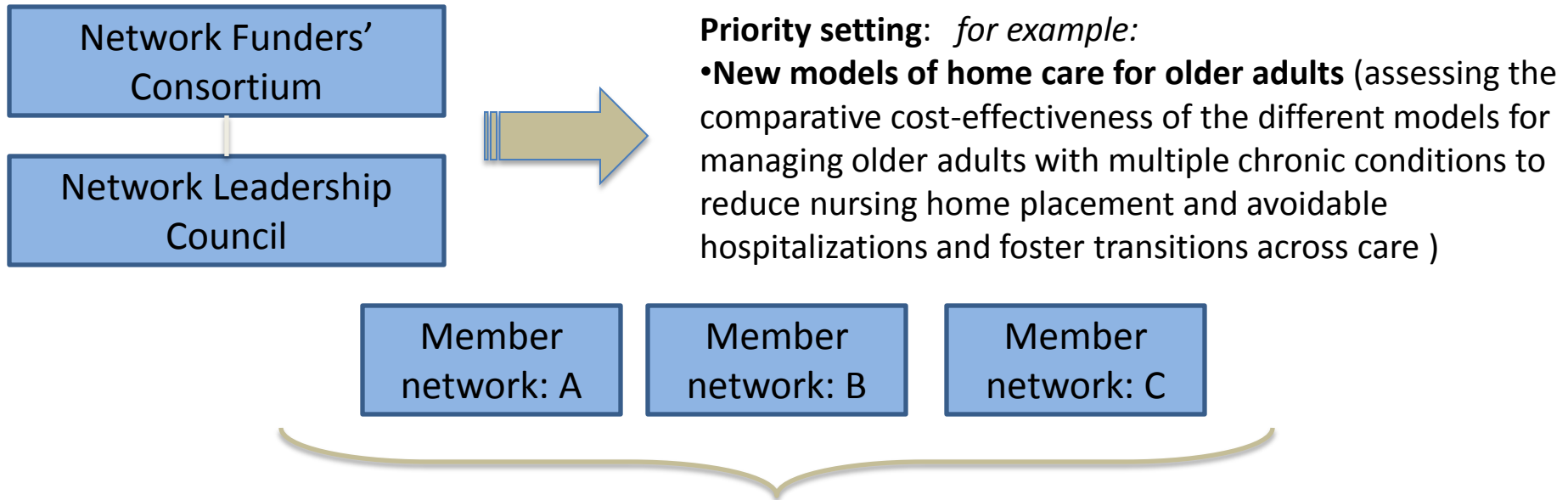
- Linkage to CBPHC Innovation Teams

10

- Partnership funding (1:1 for infrastructure award and research priorities)



# Fostering Cross-jurisdictional Priority-setting and Research



**Co-investment and cross-jurisdictional collaboration:** Member networks A, B and C collaborate. A invests \$400K to lead comparative cost-effectiveness of the different interventions; B invests \$350K to examine transitions in care and avoidable hospitalizations; C invests \$250K to examine patient experience and patient-reported outcomes.

**Peer review and funding:** Network management office coordinates assessment of research protocol. Upon approval, CIHR matches funding on 1:1 basis with member networks (\$1M) for a total overall budget of \$2M

**Network:** Entire Network (including all member networks) benefits from findings shared through Leadership Council interactions, Coordinating Centre, and annual Network forums





## In Summary...

- **The key challenges in future health systems are to:**
  - transform health care to prevent and manage chronic conditions
  - prudently incorporate and use new technologies
- **There are no magic bullets**
- **Health systems that produce meaningful improvements in costs and outcomes:**
  - Engage front line clinicians and patients in all parts of the process
  - Establish information systems that provide real-time monitoring of process and outcome targets
  - Align strategic, organizational and clinical goals for 'systems thinking'
  - Optimize enablers and tackle policy-level barriers
  - Provide comparative performance data and support learning networks for exchange
- **Canada is experimenting with research/ health system partnering programs to engage producers and users of evidence in new ways for health care transformation**