



# Reporting on the Cancer System:

Lessons learned and gaps identified

Heather Bryant, MD, PhD

VP Cancer Control

Canadian Partnership Against  
Cancer

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# Overview

- System of national reporting for treatment data
- Remote populations
- Patient reported outcomes
- Facilitating forward movement

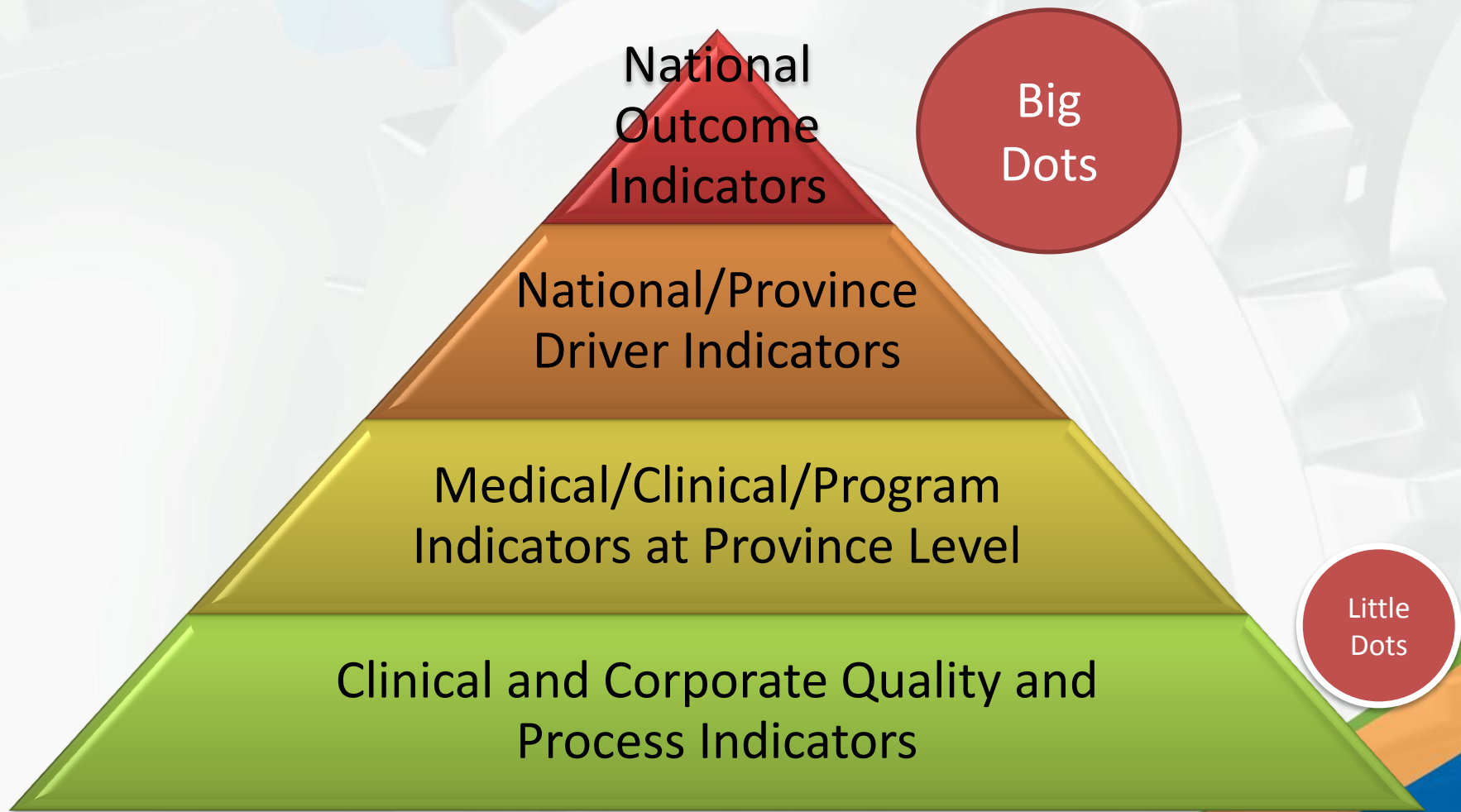
# Hospital Quality Measures Model Adapted from

Heenan et al, 2010



Heenan, M, Kahn, H & Binkley, D (2010) "From Boardroom to Bedside: How to Define and Measure Hospital Quality" *Healthcare Quarterly*, 13(1): 55-60.

# For National Cancer Control



# The system inter-relates



# What might “dot cascade” look like in national cancer control?

- Big dot
  - Reduced mortality from cervical cancer
- Driver
  - Percentage of eligible-aged women appearing for screening at appropriate interval
- Program Indicators at Province Level
  - Screening rates by age group, place of residence
- Clinical/Corporate Quality and Process Indicators
  - Number of screening invitation and reminder letters sent....

# Using Measurement to Advance Quality of Cancer Control

## Initial Steps

Assess cancer control system  
Build partnerships –  
collaborative approach

## Systematic Measurement

Gather & report data  
Identify gaps

## Evidence-based plan

Set goals for improvement  
Propose evidence-based strategies  
Take action

## Outcomes (Short-term)

Early detection  
Improved treatment  
Improved data  
Improved PT experience

## Outcomes (Long-term)

Decrease Incidence  
Decrease Morbidity  
Decrease Mortality  
Reduce disparities

# Criteria for SP treatment indicators

- Population-based (not just reflecting those referred to tertiary centers, for example)
  - This criterion made the registries a primary partner
- Feasible to collect good data from at least 3 provinces
- Experts agreed that measure was salient, high impact, amenable to intervention



# First steps

- Required team-building with webinars and country-wide workshops
- First data was “anonymized” if not previously published
- Most early data was in prevention and incidence/mortality



# A Demonstration: Development of Guideline Concordance Measures

1. Measurement Gap identified in Treatment and Care Domain (2009)



2. Country-wide consultations proposed measuring concordance with a few established treatment guidelines



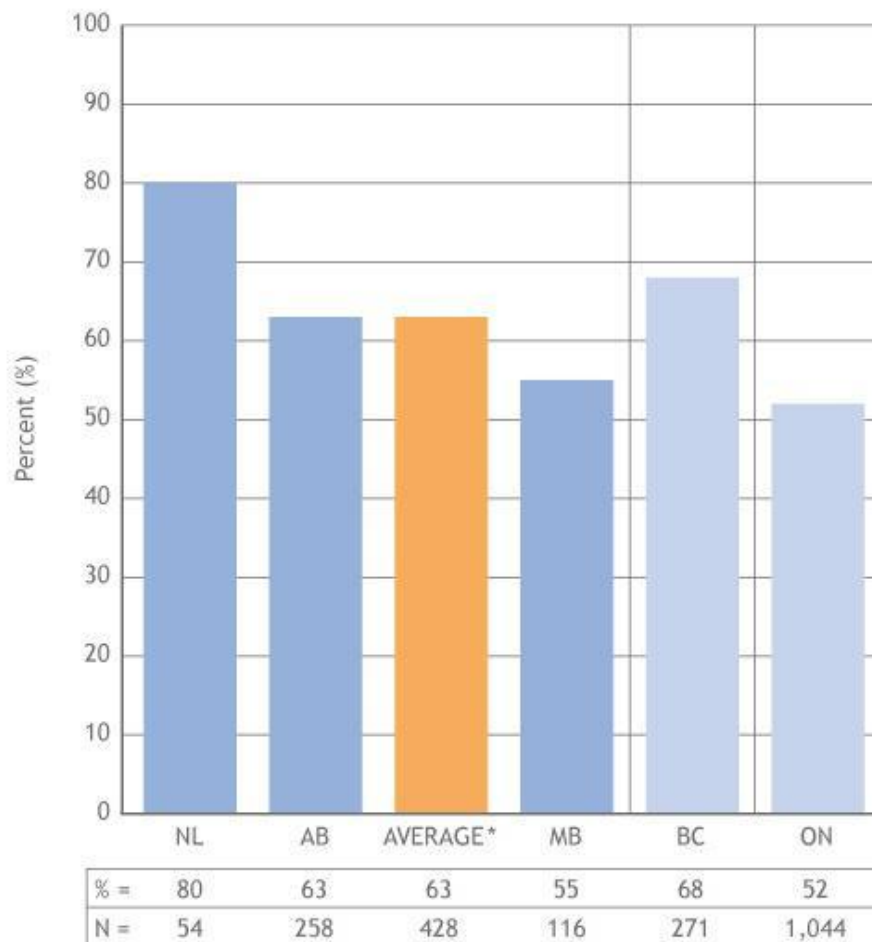
3. Data feasibility assessment followed by development of definitions and specifications for data collection



4. Guideline concordance indicators calculated, vetted through clinical and technical groups, published



## Percentage of stage III colon cancer cases receiving chemotherapy following surgical resection CHEMOTHERAPY STARTED WITHIN 120 DAYS OF SURGERY, BY PROVINCE—2007 DIAGNOSIS



ON data excluded oral chemotherapy since those data are not reliably reported to Cancer Care Ontario.

BC data included only cases referred to the cancer centres.

\* ON and BC data were not included in "Average" calculation.

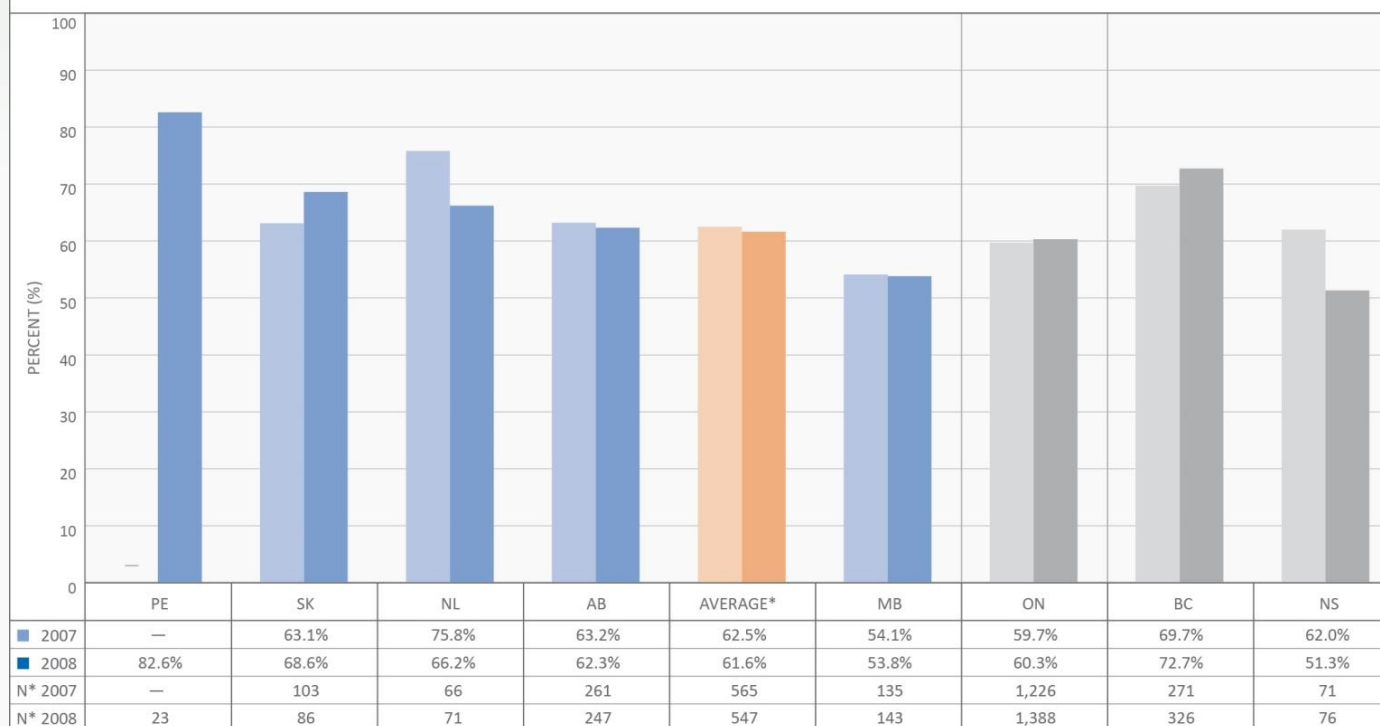
Data Source: Provincial cancer agencies

# Stage III Colon Cancer Patients Receiving Chemotherapy (proxy measure)

**FIGURE 56**

**Simplified measure: Percentage of stage III colon cancer patients receiving chemotherapy**

CHEMOTHERAPY STARTED WITHIN 1 YEAR + 120 DAYS FOLLOWING DIAGNOSIS, BY PROVINCE—PATIENTS DIAGNOSED IN 2007 AND 2008



“—” Data not available

NS data limited to residents of Cape Breton DHA and Capital Health DHA as chemotherapy treatment information is only captured when provided in the cancer centres

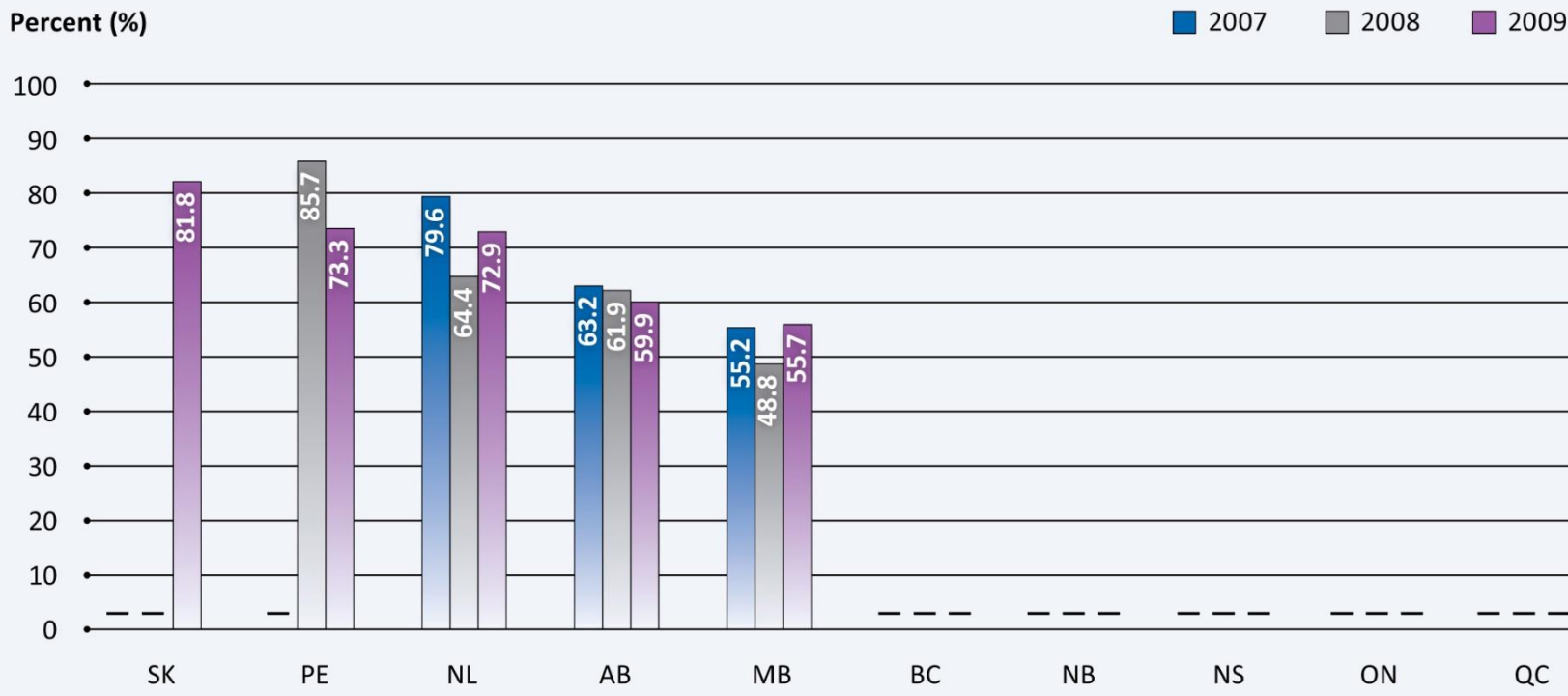
BC data include only cases referred to the cancer centres

Average\* for 2007 and 2008 includes only AB, MB, NL, SK

ON does not fully capture oral chemotherapy

Data source: Provincial cancer agencies

## Percentage of stage III colon cancer patients receiving chemotherapy following surgical resection by province, patients diagnosed 2007 to 2009



### Percentage of stage III colon cancer patients with a surgical resection, by province – patients diagnosed 2007 to 2009

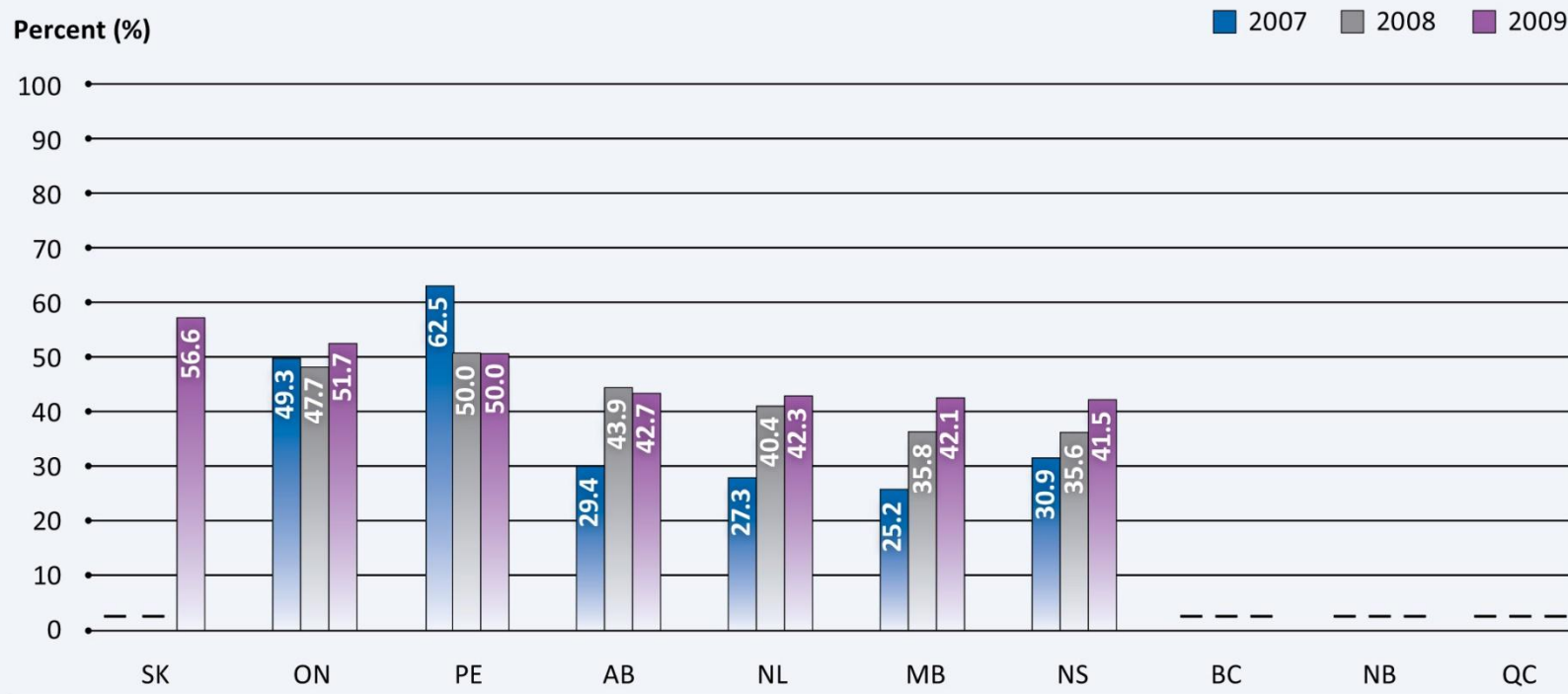
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
2007	—	—	81.8	98.9	85.9	—	—	—	—	—	—	—	—	—	—	—	—	—
2008	—	91.3	83.1	96.8	87.4	—	—	—	—	—	—	—	—	—	—	—	—	—
2009	43.1	93.8	100.0	98.6	87.1	—	—	—	—	—	—	—	—	—	—	—	—	—

“—” Data are not available for BC (2007 to 2009), NB (2007 to 2009), NS (2007 to 2009), ON (2007 to 2009), PE (2007), SK (2007 to 2008) and QC (2007 to 2009).

Includes chemotherapy started within 120 days following surgery.

Data source: Provincial cancer agencies.

## Percentage of resected stage II or III rectal cancer patients who received radiation therapy before surgery, by province – patients diagnosed 2007 to 2009



## Percentage of stage II or III rectal cancer patients who had a surgical resection, by province – patients diagnosed 2007 to 2009

2007	—	77.0	94.1	93.9	73.3	82.7	94.2	—	—	—
2008	—	70.2	90.9	92.5	74.6	78.3	89.4	—	—	—
2009	80.5	73.5	90.0	91.2	92.9	83.8	93.9	—	—	—

“—” Data are not available for BC (2007 to 2009), NB (2007 to 2009), QC (2007 to 2009), SK (2007 to 2008). Includes radiation therapy started up to 120 days prior to surgery.

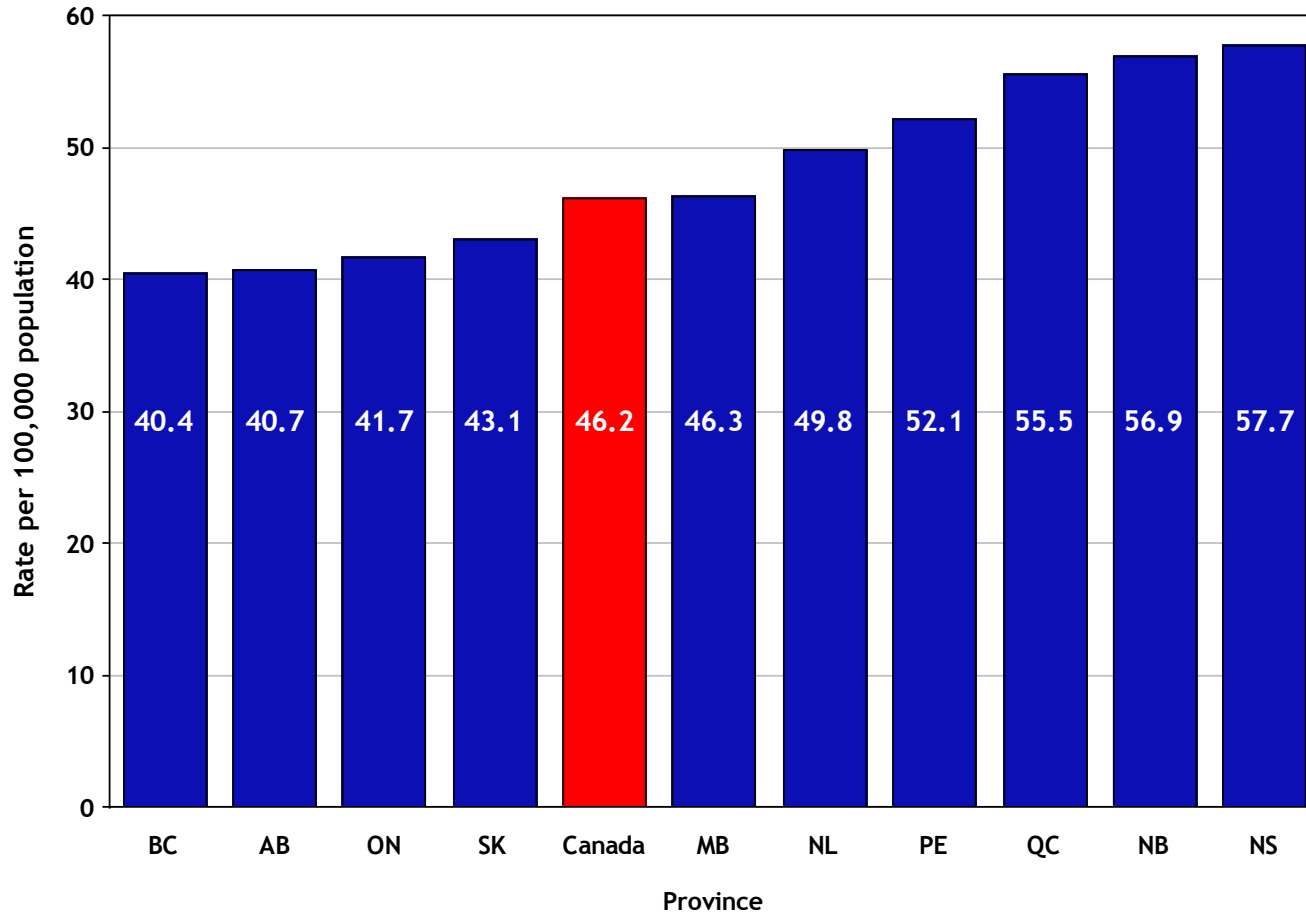
Data source: Provincial cancer agencies.

# Canada's health system...



- Unique challenges from the sparse population distribution

# ASMR - Lung Cancer by P/T, 2005





# Populations and Cancer Cases by P/T

(Estimated, 2010; Canadian Cancer Statistics, CCS)

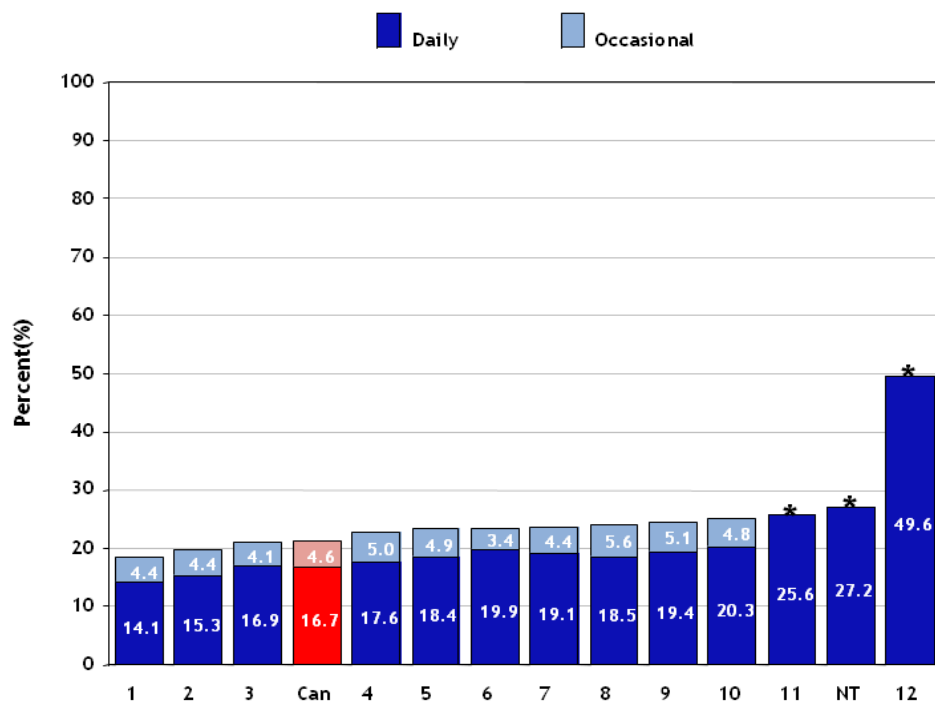
Prov/Terr	Popn (000's)	New Cases	Cases Male	Cases Female
NL	513	2700	1550	1200
PE	141	880	490	400
NS	947	6200	3400	2800
NB	756	4600	2500	2100
QC	7804	45200	22900	22300
ON	13237	65100	33300	31800
MB	1208	6200	3100	3000
SK	983	5200	2800	2400
AB	3446	15900	8400	7600
BC	4496	21600	11400	10200
YT	31	120	60	55
NT	46	140	70	65
NU	31	70	35	35

# Smoking prevalence and cessation

## By province/territory, CCHS 2008

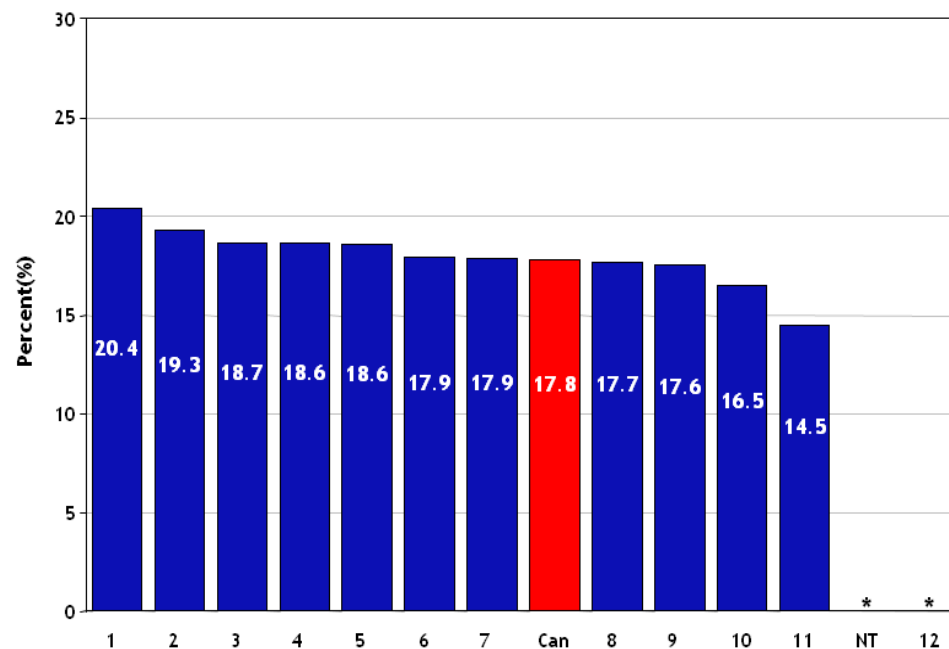
### Percentage of population aged 12+ reporting daily or occasional smoking

By province/territory – CCHS 2008



### Percentage of Smokers who have Quit Smoking in the Past 2 Years

By province/territory – CCHS 2008



Note: \* suppressed due to statistical unreliability caused by small numbers  
 Data Source Statistics Canada, Canadian Community Health Survey

## Metropolitan Influenced Zones (MIZ) in Rural and Small Town Canada, 2006 using the Statistical Area Classification



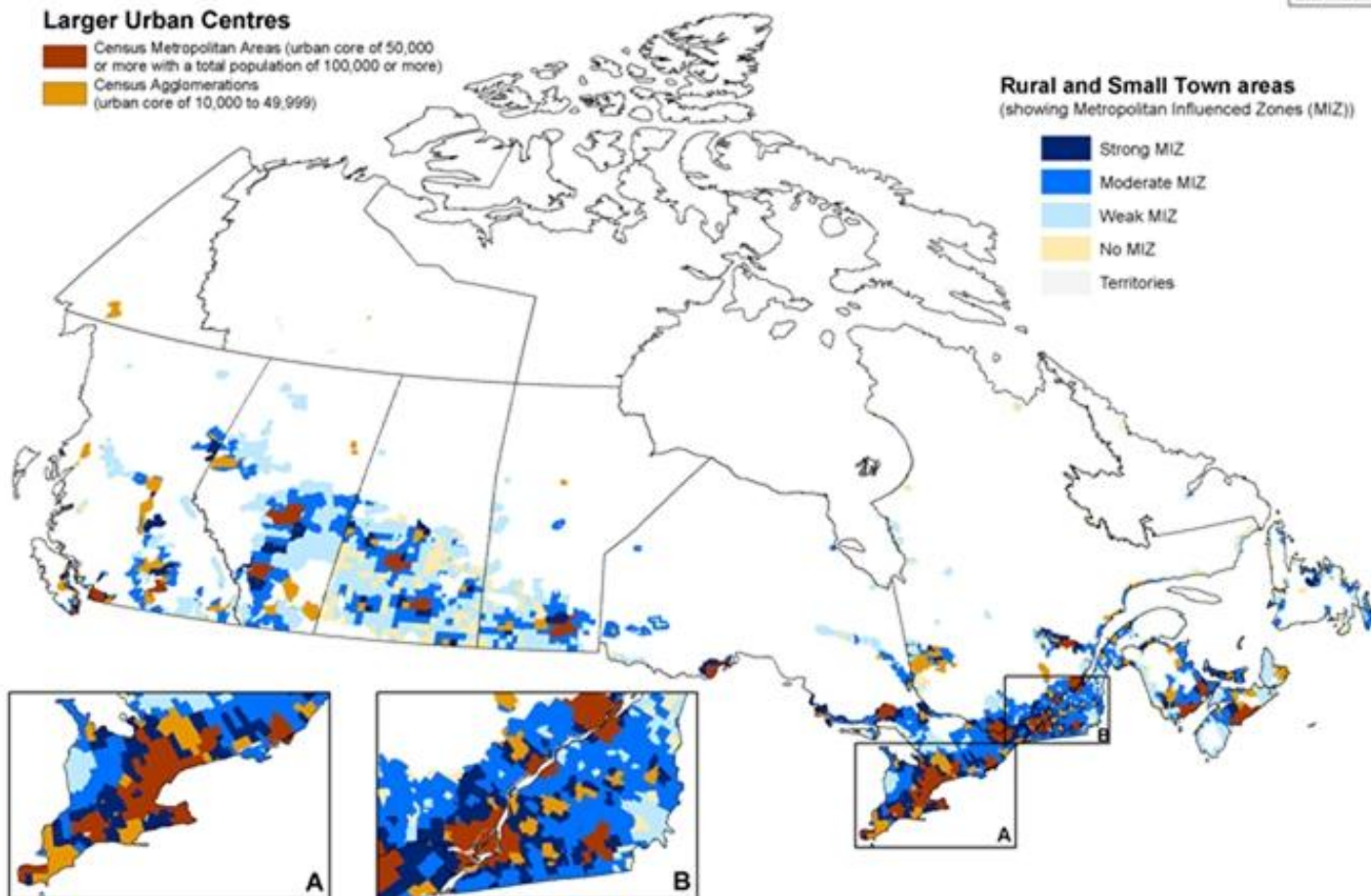
### Larger Urban Centres

- Census Metropolitan Areas (urban core of 50,000 or more with a total population of 100,000 or more)
- Census Agglomerations (urban core of 10,000 to 49,999)

### Rural and Small Town areas

(showing Metropolitan Influenced Zones (MIZ))

- Strong MIZ
- Moderate MIZ
- Weak MIZ
- No MIZ
- Territories



# So in terms of population.....

Based on the 2006 census, 81% of the Canadian population would be categorized as “Urban”, 4% as “Rural”, 7% as “Rural-Isolated” and 8% as “Rural-Very Isolated”.



# So in terms of “sample size”

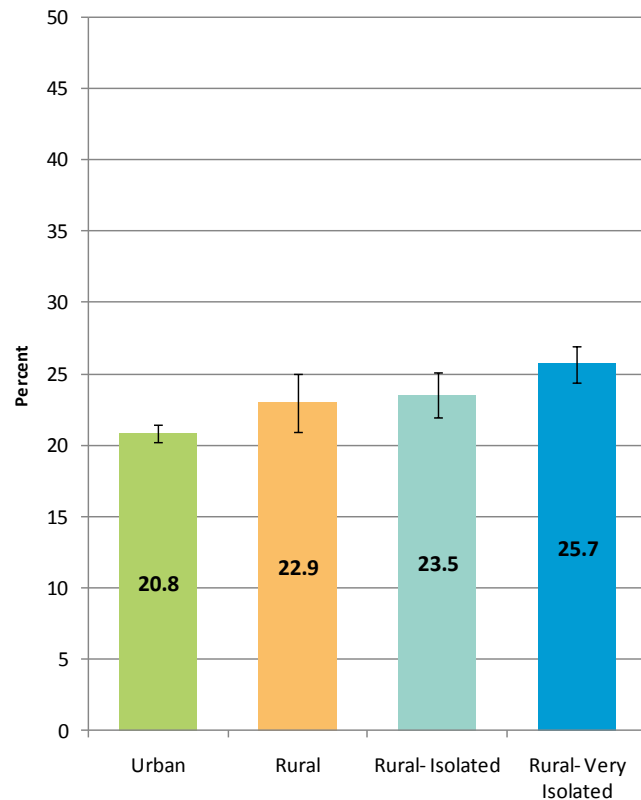
- Now can look at denominators of 2 million to 3 million people for both rural isolated and rural/very isolated, rather than population of less than 100,000 in each territory, some of which are urban dwellers



# Smoking and Smoking Cessation

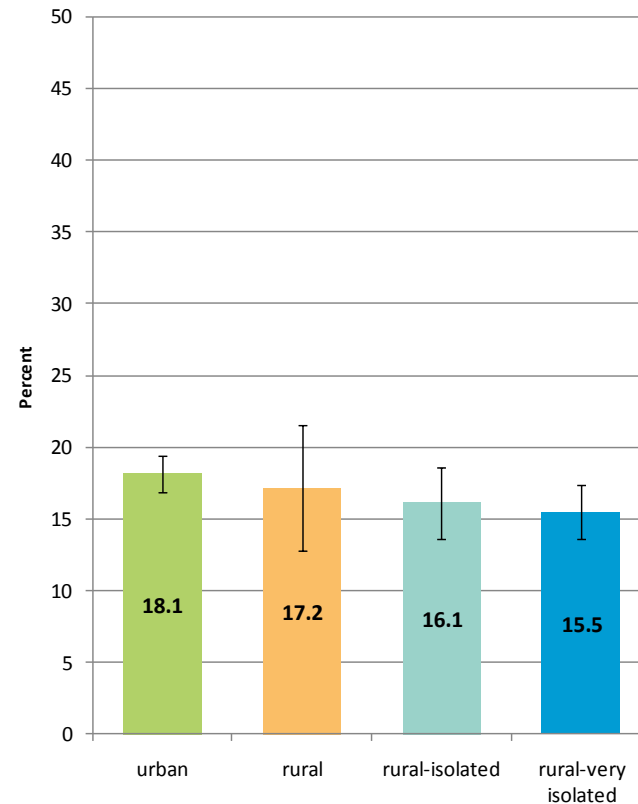
**Percentage of population (≥12) reporting daily or occasional smoking**

BY GEOGRAPHY, CANADA—CCHS 2008



**Percentage of smokers who have quite smoking in the past 2 years**

BY GEOGRAPHY, CANADA—CCHS 2008



# Patient perspective on indicators



Heal me



Don't hurt me

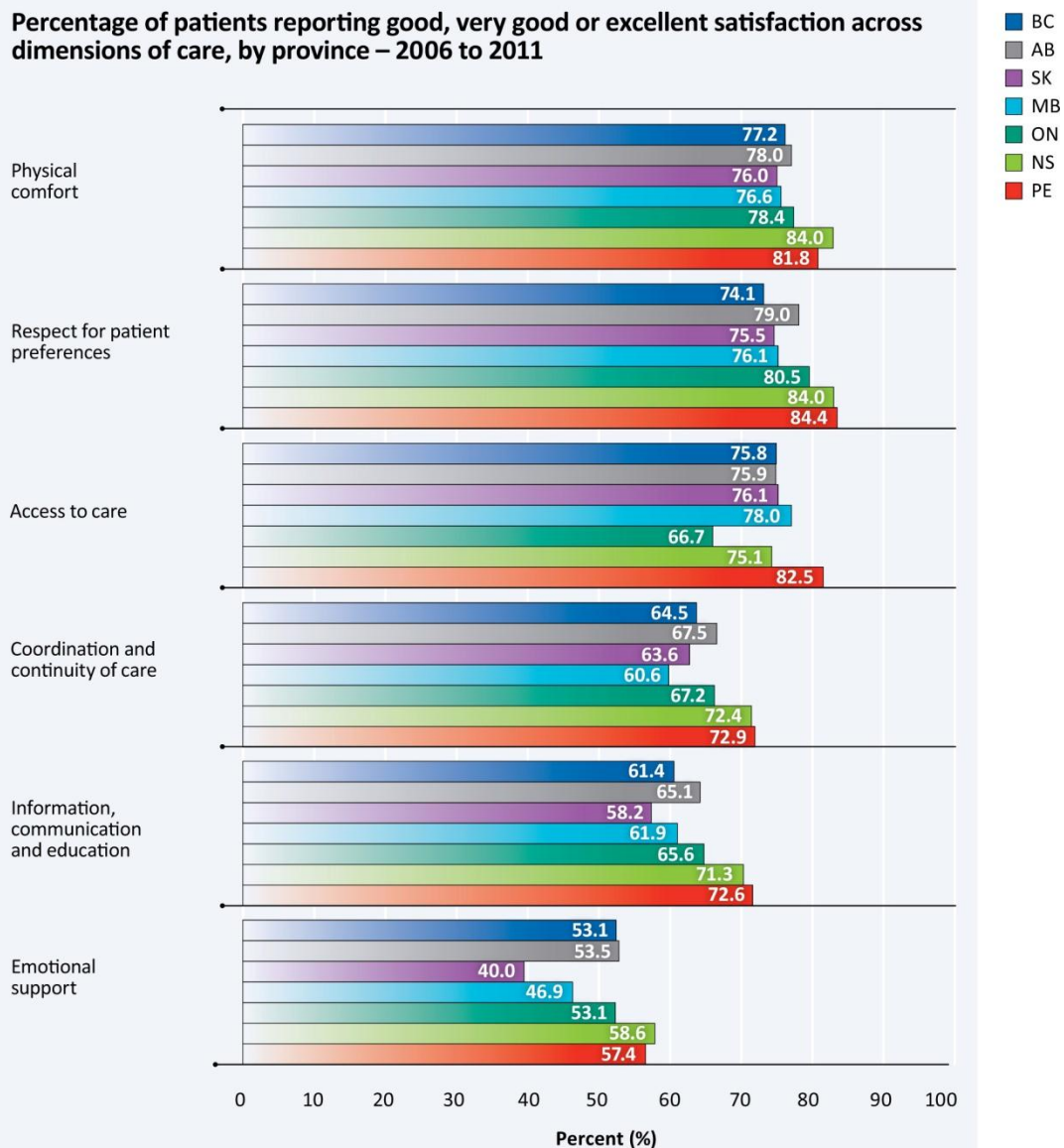


Be nice to me



Treat me quickly

## Percentage of patients reporting good, very good or excellent satisfaction across dimensions of care, by province – 2006 to 2011



Survey dates vary by province and range from 2006 to 2011.

Data source: NRC Picker Ambulatory Oncology Patient Satisfaction Survey results.

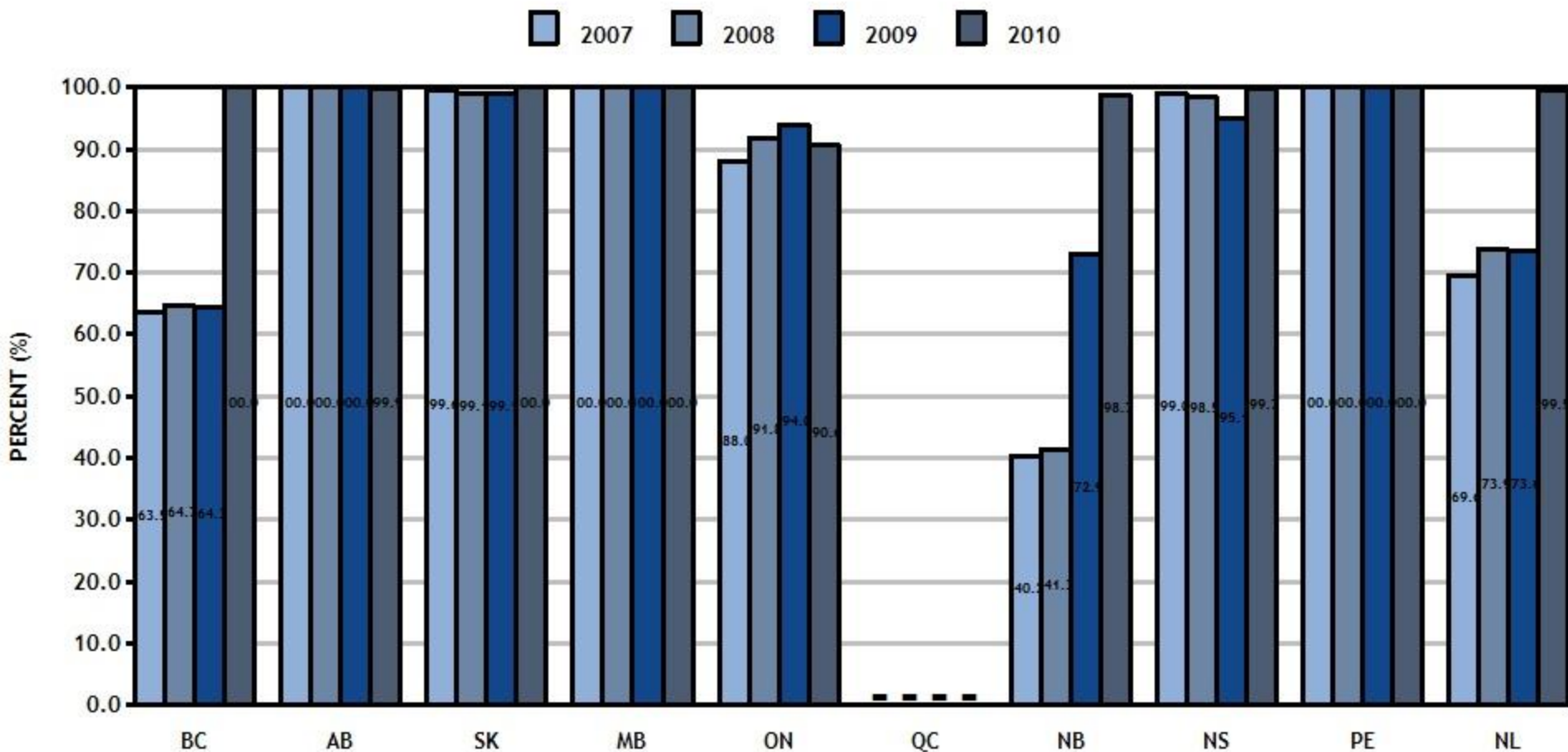
Data provided by individual provincial cancer agencies.



# What can we do nationally to facilitate future movement?

- Staging is key, and registries in Canada have participated in CSI, which has moved population-based staging forward
- Synoptic pathology reporting is now well-developed in 2 provinces – role for future roll-out – part of next 5 years of CPACC plan
- Synoptic surgery now being developed in pilot form in several provinces – further implementation part of CPACC plan

# Percentage of incident cases for which stage data is available in provincial registries - top 4 cancers\* BY PROVINCE - 2007 TO 2010 DIAGNOSIS YEARS



\* Top 4 cancers: Breast, Prostate, Colorectal, and Lung  
 "-" Data are not available for QC (2007 TO 2010)  
 Data source: Provincial cancer agencies

# What about data gaps?

Useful data



Interest in data



Investment (financial and intellectual) in data

# Thank you!

