

# The Surgical Oncology Program- Cancer Care Ontario

Robin McLeod  
Surgical Lead, Quality Improvement and  
Knowledge Transfer  
Surgical Oncology Program,  
Cancer Care Ontario



# Cancer Care Ontario (CCO)

- Ontario Government Agency
- Principal advisor re: all cancer services
- Monitors/reports performance – to ensure accountability
- Supports information systems
- Organized into clinical programs (surgery, systemic therapy, radiation etc) as well as regions (14 LHINs)



# Surgical Oncology Program Goals

- Provincial system of surgical cancer care
- Patient centered, high quality, accessible, integrated, multidisciplinary care
- Regional/provincial networks of care
  - complex/uncommon procedures in regional centers
  - less complex procedures are more distributed



# Surgical Oncology Program Structure

- Provincial Head-Hartley Stern
  - Quality Improvement and Knowledge Transfer
    - includes guideline and standards development, knowledge transfer initiatives and research
    - Lead: Robin McLeod
  - Access to Care & Strategic Funding Initiatives
    - individual and hospital funding
    - Lead: Jon Irish
- Regional Surgical Oncology Leads (14)
- Communities of Practice

# How do we Improve Outcome?

- Quality Improvement Initiatives
- Ensure timely access to care



**Identify the  
Problem**

**Develop Guideline  
or Standard**

**Evaluate Results**

**Initiate Knowledge  
Transfer Strategies**

# Identify the Problem

Evaluate Results

- **Survey stakeholders**
- **Indicators**
- **Multiple Data Sources**
  - **Pathological eg: LN, margins**
  - **CIHI data**

Initiate Knowledge Transfer Strategies

Develop Guideline or Standard



# Indicator Data-using CIHI Data

- post operative mortality
- reoperative rates
- complication rates eg: anastomotic leak
- preoperative assessment (eg: biopsy, endoscopy, imaging)
- follow-up (eg: medical or radiation oncology consult)

Identify the Problem

Evaluate Results

Develop Guideline or Standard

- **Collaboration of SOP with PEBC**
- **Expert panel with wide representation**
- **Evidence and consensus based**
- **Community feedback**
- **Endorsed by CCO**

Initiate Knowledge Transfer Strategies

# Guidelines

- Advice documents for clinicians and patients
- Regarding individual clinical management decisions
- Primarily evidence based
- Represent current best practice

**CCO Program in Evidence-based Care - CPG library**  
**[www.cancercare.on.ca](http://www.cancercare.on.ca)**

- **excellent resource for cancer guidelines**
- **mainly systemic, radiation Rx**

# SOP Guidelines

- Laparoscopic Colon Surgery
- Colorectal Cancer Surgery
- Prostate Cancer Surgery
- Sentinel Lymph Node Biopsy

# SOP Standards Documents

- Provide advice regarding the requirements for the delivery of specific services by:
  - Physician
    - training, experience, organization
  - Hospital or Service
    - resources, organization, support, processes of care, volume etc

# SOP Standards Documents

- HPB Surgery
- Thoracic Surgery
- Multidisciplinary Cancer Conferences (MCC)



Identify the Problem

Develop Guideline or Standard

- Disseminate information
- Community of Practice
- Audit and feedback
- Opinion Leaders
- Educational strategies such as mentoring

Initiate Knowledge Transfer Strategies

Identify the Problem

Evaluate Results

Initiate Knowledge Transfer Strategies

- Indicators
- Publish in CSQI
- Provide feedback-provincial, LHIN, hospital

Develop Guideline or Standard



# Are we making a difference?

---

2/11/2008



cancer care  
ontario

| action cancer  
ontario

# Ontario Volume/Outcome Study of Pancreatic Ca Resection 1988-1994

Characteristics	Hospital Volumes		
	Low(<3)	Mod(3-6)	High(>6)
<b>No. of Hospitals</b>	<b>56</b>	<b>10</b>	<b>2</b>
<b>Total Cases</b>	<b>354</b>	<b>282</b>	<b>206</b>
<b>% Teaching Hosp.</b>	<b>39</b>	<b>65</b>	<b>100</b>
<b>Post-op Mortality (%)</b>	<b>14.4</b>	<b>12.8</b>	<b>3.4</b>

# What effect did the 'criteria' have? - follow up (2001)

- **92 hospitals surveyed**
- **57 (62%) hospitals responded – of those:**
  - **27% hospitals made changes to comply with recommendations**
  - **50% reported at least 1 surgeon stopped doing pancreatic surgery**

# Was there an effect on outcomes? - late follow up (2005)

## Preliminary data analysis: - Ontario

	1988-96	2000-03
<b>cases in HV hosp*</b>	<b>17.8%</b>	<b>62.3%</b>
<b>crude 30 day CFR**</b>	<b>10.2%</b>	<b>6.2%</b>

\* High Volume hospital = 10 or more cases/year

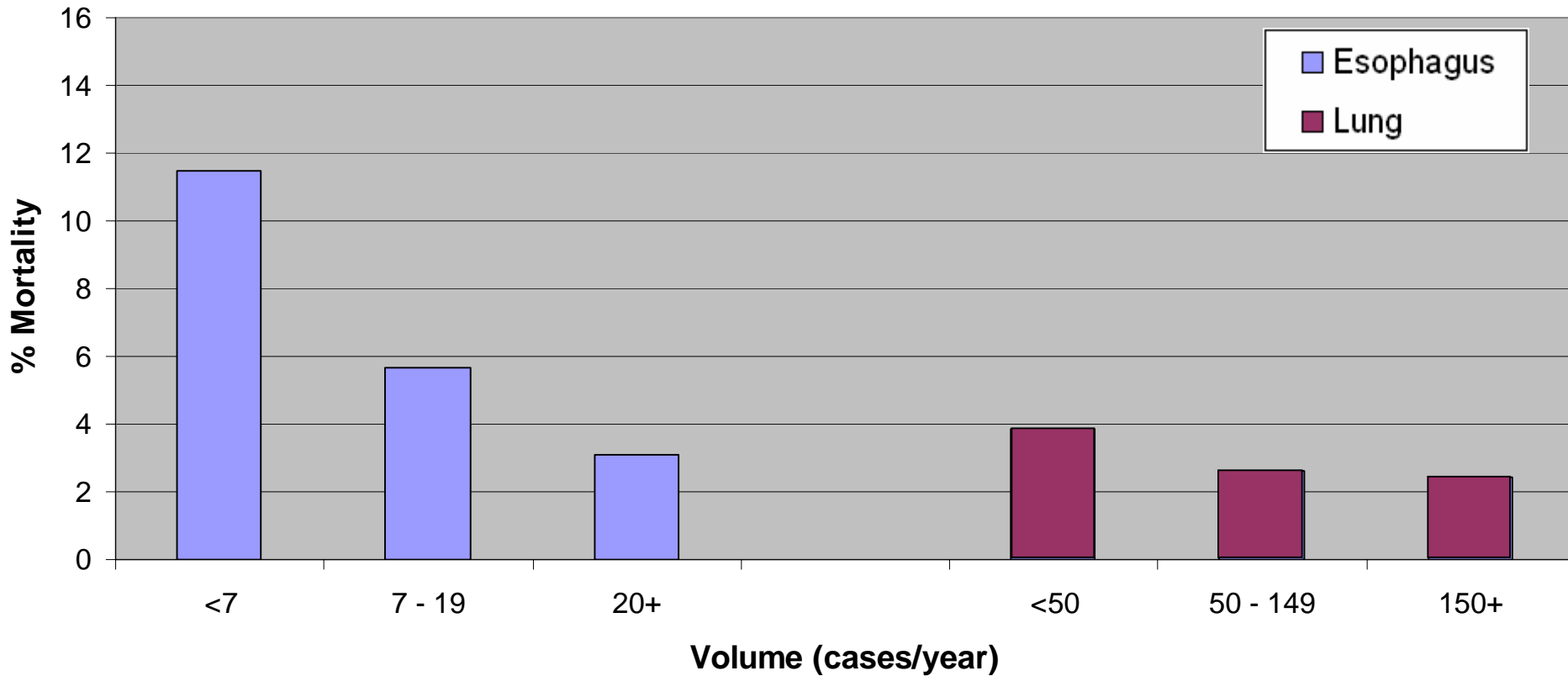
\*\* May be multiple causes for change, esp restructuring

# Improving Outcome of Esophageal and Lung Surgery

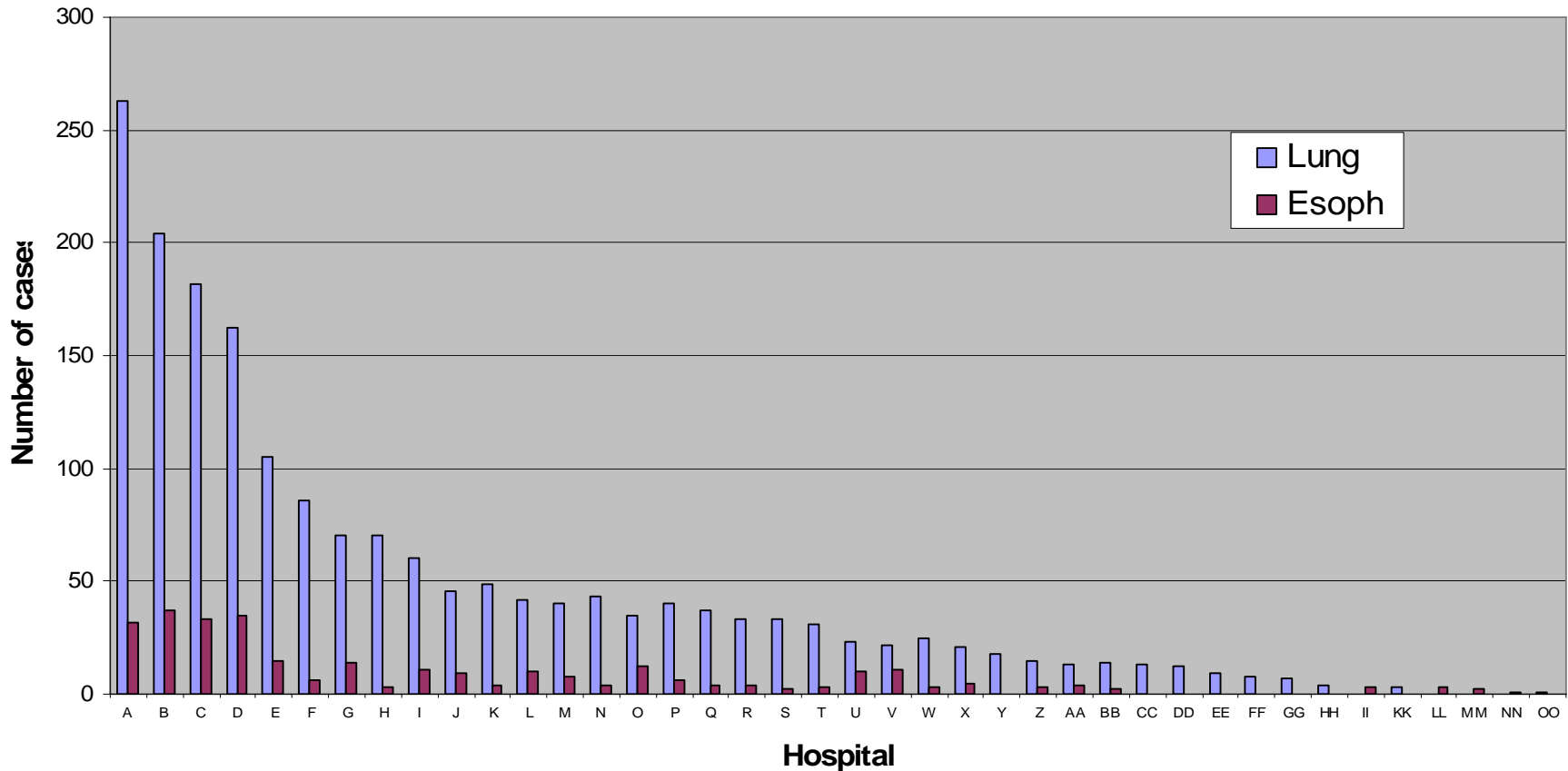
- Strong volume outcome relationship has been shown by others for pneumonectomy and esophagectomy:
  - Esophagectomy 11.9% (20.3% to 8.4%)
  - Pneumonectomy 5.4% (16.1% to 10.7%)

Birkmeyer et al, NEJM 2002

# Esophageal and Lung Resection in Ontario: Mortality Rates 2002-04

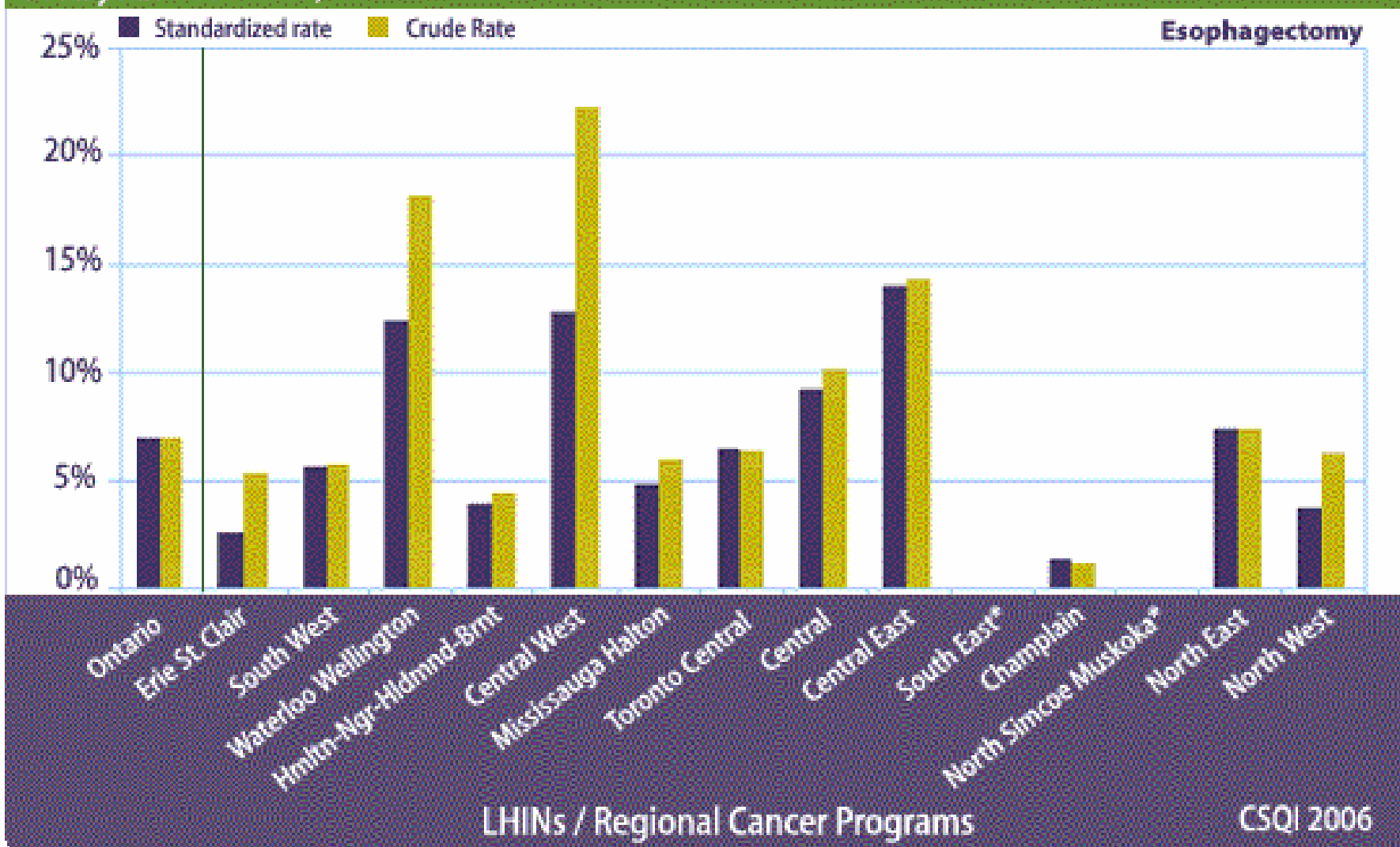


# Distribution of Thoracic Cancer Surgery Index Cases in Ontario, 2004-2005



## Deaths following cancer surgery

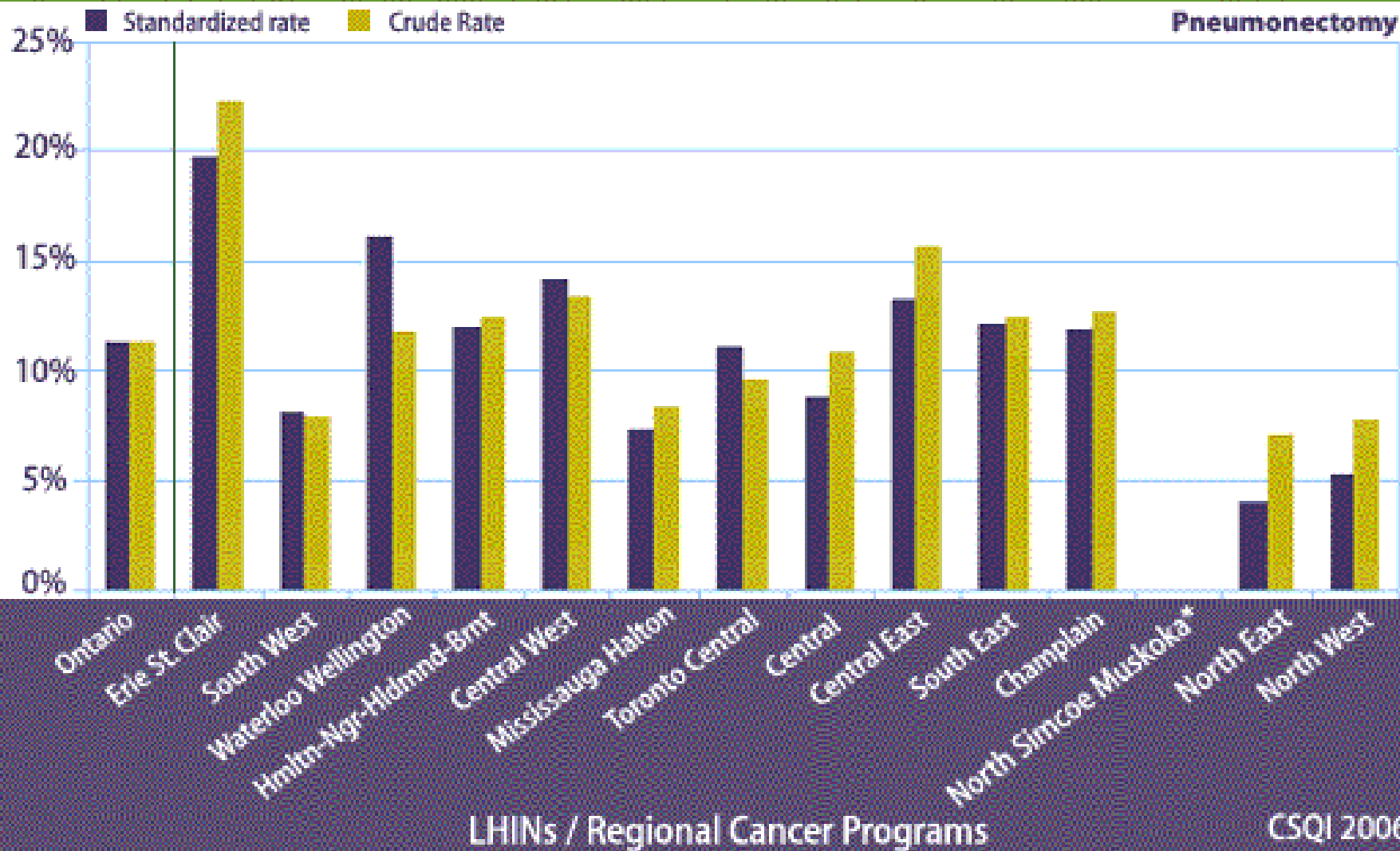
Percent of patients dying in hospital or within 30 days following **esophagectomy** (by LHIN, fiscal years 2002-2004)



Sources: Canadian Institute for Health Information Discharge Abstract Database

## Deaths following cancer surgery

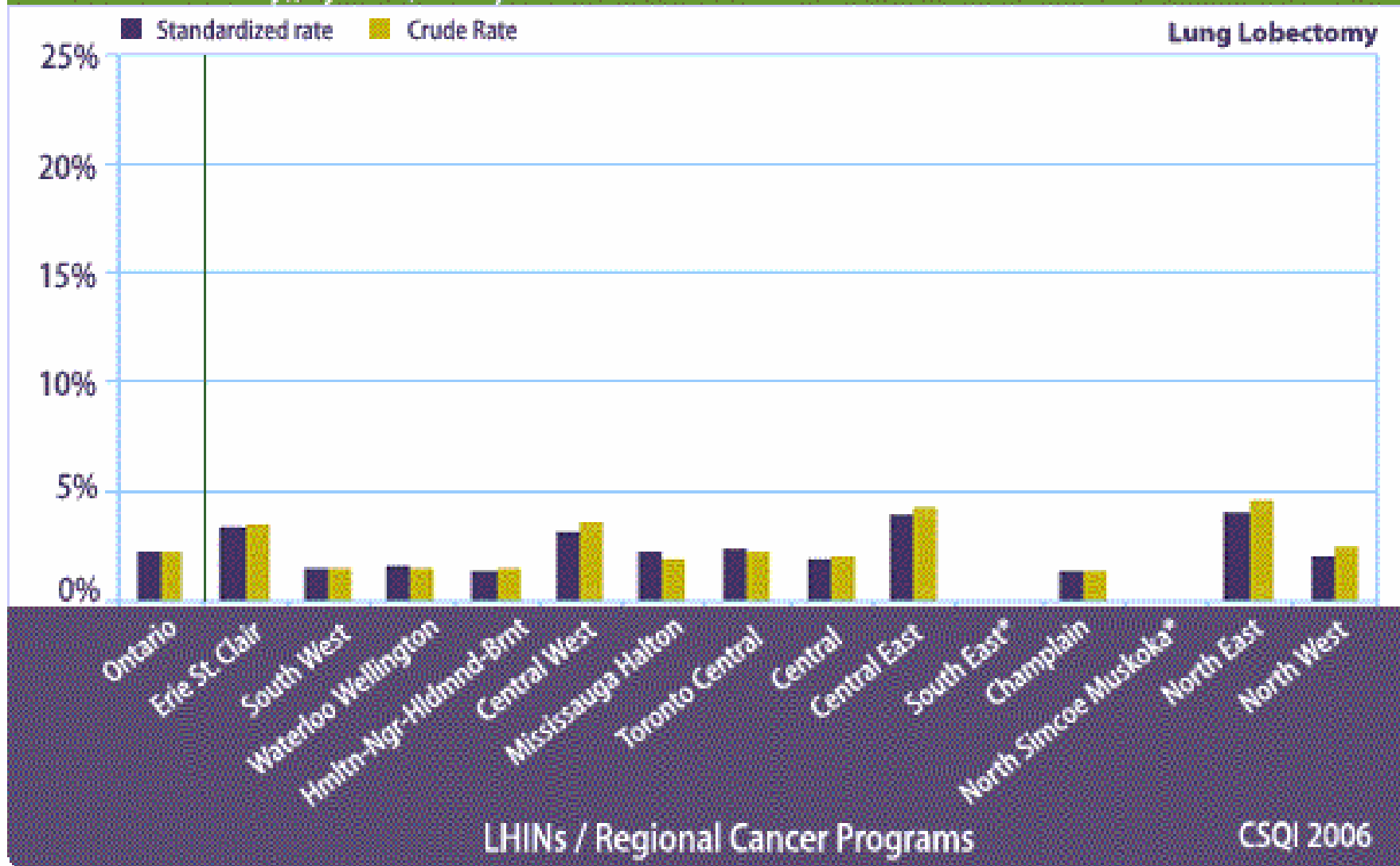
Percent of patients dying in hospital or within 30 days following pneumonectomy (by LHIN, fiscal years 2002-2004)



Sources: Canadian Institute for Health Information Discharge Abstract Database

## Deaths following cancer surgery

Percent of patients dying in hospital or within 30 days following **lung lobectomy** (partial lobectomy and total lobectomy), by LHIN, fiscal years 2002-2004



Sources: Canadian Institute for Health Information Discharge Abstract Database

# Development of a Thoracic Surgery Standards Document

- Developed by SOP and PEBC
- Expert panel with wide representation (including LHIN and hospital CEOs)
- Systematic review of the literature plus an environmental scan
- Consensus based on evidence and expert opinion
- Community feedback
- Endorsement by OATS and CCO



# Standards for Thoracic Cancer Surgery

## CCO June 2005

- **Surgeons** – full training in Thoracic Surgery
- **Hospitals** – designated program, accountability, complete range of multidisciplinary staff, support services, OR, ICU, etc
- **Volume targets**
  - Level 1 - at least 150 major lung, 20 major esophagus cases/year (3+ thoracic surgeons)
  - Level 2 – at least 50 major lung, 7 major esophagus cases/year (1+ thoracic surgeons)

# Targets

- Reduce the number of hospitals performing thoracic surgery procedures from 40 to 25 by March 2008
- Goal: 11 Level I Centers and 2 Level II Centers (Kingston and Thunder Bay)
  - based on 2004-05 volumes

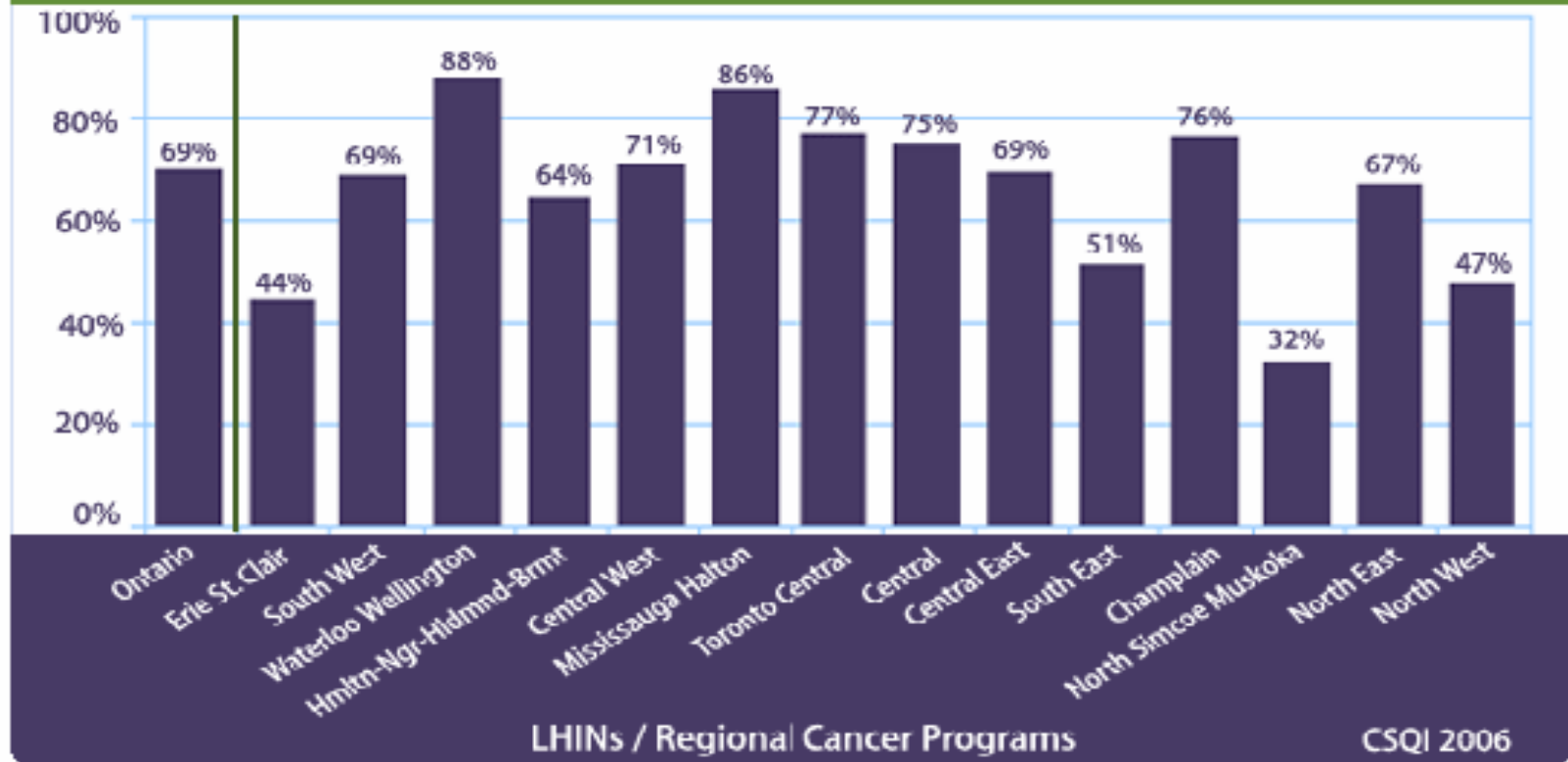


# Indicator Example-LN Retrieval in Colorectal Cancer Surgery

- Adequate number of LN required for staging
- Evidence that outcome is improved with adequate LN retrieval
- Requires good surgical technique
- Requires good pathological assessment
- Consensus that the minimum number of LN is 12
- 2003 only 27% of specimens had >12 LN (Wright et al)
- Multifaceted approach championed by Andy Smith

## Use of clinical practice guidelines - colorectal cancer surgery

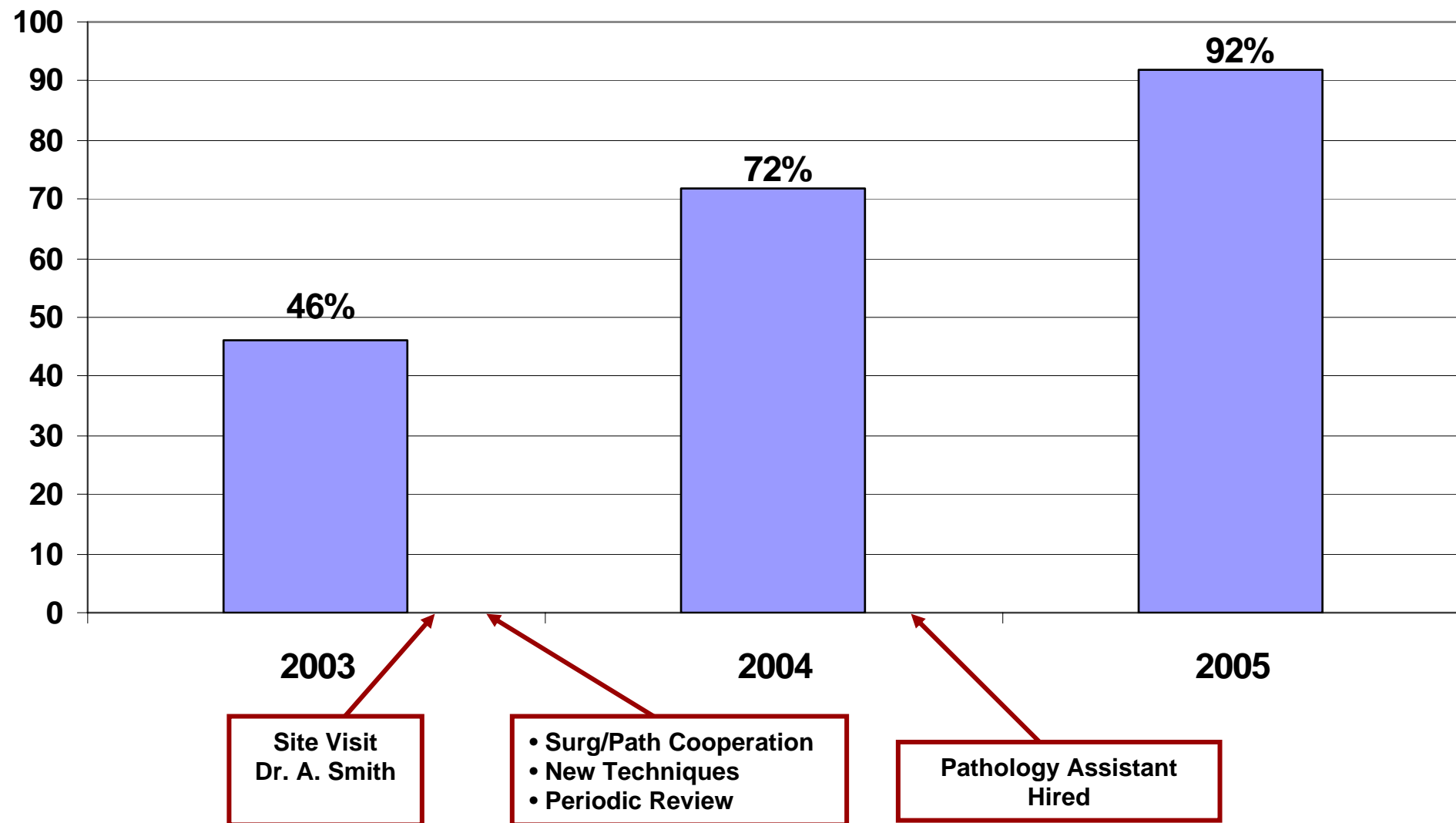
Percent of colorectal cancer resections with 12 or more lymph nodes collected and examined, April 1 to September 30, 2005



Source: Cancer Care Ontario, Pathology Information Management System (PIMS). Based on a sample of pathology reports for 1,431 colorectal cancer resections.



# Lymph Node Audit: % of Specimens with 12 or More Lymph Nodes Assessed (Grand River Hospital)



# SOP Approach to Quality Improvement

- Patients welfare is paramount
- Guidelines - support best surgical practice
- Standards - support hospital and regional processes and planning
- Data used to identify problems as well as to assess effect of quality improvement initiatives
- CCO role – information, coordination, leadership, support, incentives
- Quality improvement occurs locally

