



Board & Executive Quality Learning Series

Quality Forum 2020



**BC PATIENT SAFETY
& QUALITY COUNCIL**
Working Together. Accelerating Improvement.

Why define quality?



BC Health Quality Matrix

Establishes a common definition and understanding of quality

Originally published in 2009

Based on well-known frameworks from Canada and around the globe

Customized by BC's health care community

Updated Matrix released in 2020

Updating the Matrix

Evolving to...

incorporate latest evidence on key drivers of quality, and

ensure our understanding of quality honours the history and teachings of Indigenous peoples in BC

Health and Wellness



Addressing people's needs
and supporting them to stay
well, build on their strengths
and thrive

Whole person

Relational nature of care

7 Dimensions of Quality



Respect

Honouring a person's choices, needs and values

This dimension upholds human dignity by minimizing power imbalances and creating space for people to demonstrate agency in their own health and wellness. Respect includes being responsive to and making decisions in partnership with a person, family, caregiver and/or community.

Safety

Avoiding harm and fostering security

This dimension involves processes and environments that ensure both actual and perceived physical, cultural and psychological safety. Safety is the extent to which services prevent or minimize harm that could unintentionally result from the delivery of care, and the extent to which they promote trust.

Accessibility

Ease with which health and wellness services are reached

Accessibility is the extent to which people can readily obtain care when and where they need it. This dimension aims to overcome physical, financial, cultural and psychological barriers to receiving information and care. It includes a welcoming entry and seamless transitions between and within services.

Appropriateness

Care that is specific to a person's or community's context

Appropriate care is informed by evidence and best practice to optimize care to achieve a specific person's health and wellness goals. It weighs the benefits and risks of interventions to prevent the overuse or underuse of treatments or services.

Effectiveness

Care that is known to achieve intended outcomes

Effective care is informed by evidence and best practice to achieve the best possible outcome for people's or populations' health and wellness. A commitment to effectiveness is demonstrated by continuously studying the results of care as well as promising new methods that may improve health and wellness for all.

Equity

Fair distribution of services & benefits according to population need.

Equity involves understanding the people being served, focusing on the social determinants of health, overcoming structural barriers and eliminating systemic oppression to address gaps in experience and outcome. Equity is demonstrated when every person has the opportunity to achieve their health and wellness goals regardless of social, economic or geographic location. Equity does not mean the exact same care for everyone because individuals have different circumstances, histories and needs.

Efficiency

Optimal and sustainable use of resources to yield maximum value

A commitment to efficiency is demonstrated by the thoughtful use of financial, environmental and human resources to deliver health and wellness services today and in the future. This includes maximizing capacity to deliver more or better services by minimizing and eliminating waste throughout health systems, such as unnecessary energy, materials and money spent.

Areas of Care



| | | DIMENSIONS OF QUALITY | | | | | | |
|---------------|--|---|--|---|---|--|---|---|
| | | RESPECT Honouring a person's choices, needs and values | SAFETY Avoiding harm and fostering security | ACCESSIBILITY Ease with which health and wellness services are reached | APPROPRIATENESS Care that is specific to a person's or community's context | EFFECTIVENESS Care that is known to achieve intended outcomes | EQUITY Fair distribution of services and benefits according to population need | EFFICIENCY Optimal and sustainable use of resources to yield maximum value |
| | | INDIVIDUAL PERSPECTIVE | | | | SYSTEM PERSPECTIVE | | |
| AREAS OF CARE | OPTIMIZING THE EARLY YEARS Advancing early development and maternal health and wellness | | | | | | | |
| | STRENGTHENING HEALTH & WELLNESS Promoting well-being and preventing injury, illness and disability | | | | | | | |
| | RETURNING TO HEALTH & WELLNESS Getting better when faced with acute illness or injury | | | | | | | |
| | LIVING WITH ILLNESS OR DISABILITY Care and support for living with chronic illness and/or disability | | | | | | | |
| | COPING WITH TRANSITION FROM LIFE Planning, care and support for life-limiting illness and bereavement | | | | | | | |

Our Vision

Better Health. Best in Health Care.

Our Purpose

To improve the health of the population and the quality of life of the people we serve.

Our Values

Respect, caring and trust characterize our relationships.

Our Commitment

- To be passionate in pursuit of quality and safe health care.
- To inspire individual and collective contribution.
- To be focused on outcomes, open to evidence, new ideas and innovation.
- To embrace new partners as team members and collaborators.
- To be accountable.



Our Vision

Excellent health and care for everyone, everywhere, every time.

Our Purpose

To provide superior health care through innovation, teaching and research and a commitment to quality and safety—creating healthier, stronger communities and a better quality of life for those we touch.



Our Values

- **COURAGE** – To do the right thing—to change, innovate and grow.
- **ASPIRE** - To the highest degree of quality and safety.
- **RESPECT** - To value each individual and bring trust to every relationship.
- **EMPATHY** - To give the kind of care we would want for our loved ones.

Our Vision

To set new standards of excellence in the delivery of health services in the Province of British Columbia.

Our Mission

Promote healthy lifestyles and provide needed health services in a timely, caring, and efficient manner, to the highest professional and quality standards



Our values

- Quality – We are committed to safety and best practice.
- Integrity – We are authentic and accountable for our actions and words.
- Respect – We are courteous, and treat each other as valued clients and colleagues.
- Trust – We are free to express our ideas.

Our goals

- Improve health and wellness
- Deliver high quality care
- Ensure sustainable health care by improving innovation, productivity, and efficiency
- Cultivate an engaged workforce and healthy workplace

Board's Role in Monitoring Performance

- Key role of the board: oversight of performance
- The quality of care delivered is a key aspect of performance
- Oversight requires regular monitoring and probing to assess the quality of services

Effective Board Oversight

- Evidence that strong board quality oversight is correlated with better care outcomes.
- Many struggle with this role, or are less comfortable

Quality Monitoring

- Typically accomplished through:
 - Board report/dashboard(s) of routine indicators
 - Deep dive into program areas/services lines – often related to priorities
 - Monitoring critical incidents in the organization

Specific Practices Vary

- Focus on exceptions vs all
- Deep dives – program areas, organization priorities, geography
- Quality committee vs committee of the whole

Quality Dashboards or Reports

Routine monitoring should include:

- Full spectrum of the services covered
- All dimensions of quality
- Timely information
- Reflect priorities of organization

But... you can't monitor everything

Tension 1: Comprehensiveness

Need to be judicious in the number of indicators monitored

Tension 2: Aggregation

- Board cannot monitor all indicators – big dots, highly aggregated
- Big dots – show overall performance, but can mask variation

Tension 3: Oversight of Performance or Processes

- Limit to the number of indicators, and level of disaggregation, that the board can monitor directly
- Supplement direct oversight with confidence in the process

Confidence in the Process

- Disaggregated indicators should be monitored by management as part of operations
- Clear accountability for performance
- Confidence that issues will be raised with the board – setting the expectation

Monitoring Performance

- The process of monitoring performance requires an appreciation of variation

Small Area Variations in Health Care Delivery

A population-based health information system can
guide planning and regulatory decision-making.

John Wennberg and Alan Gittelsohn

Science, December 14, 1973

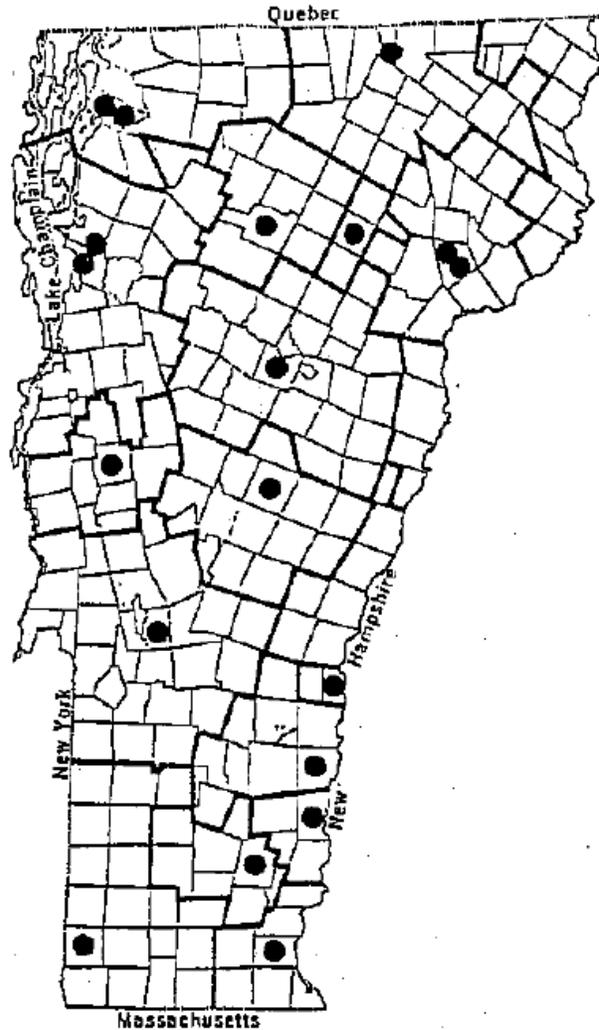
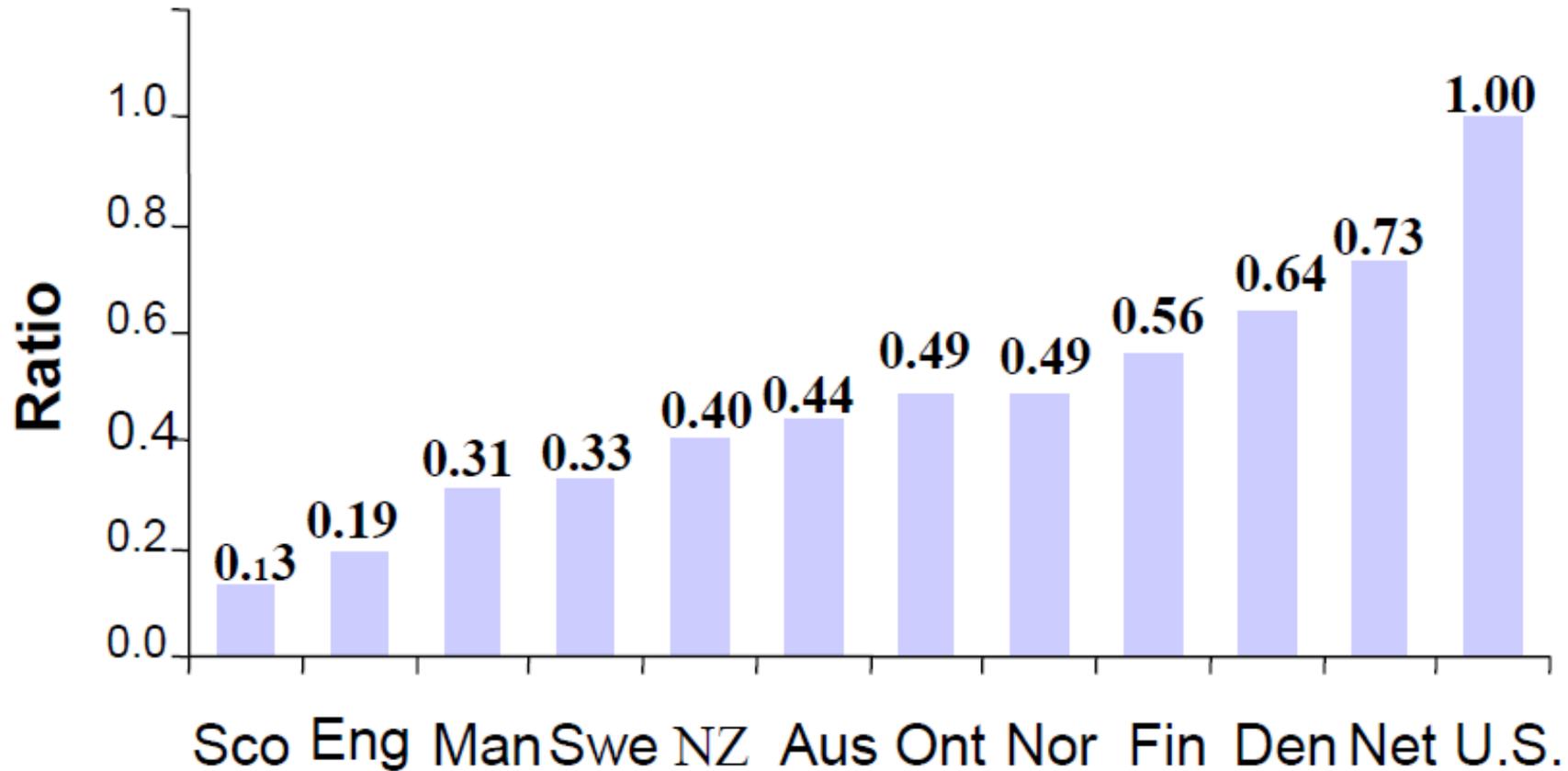


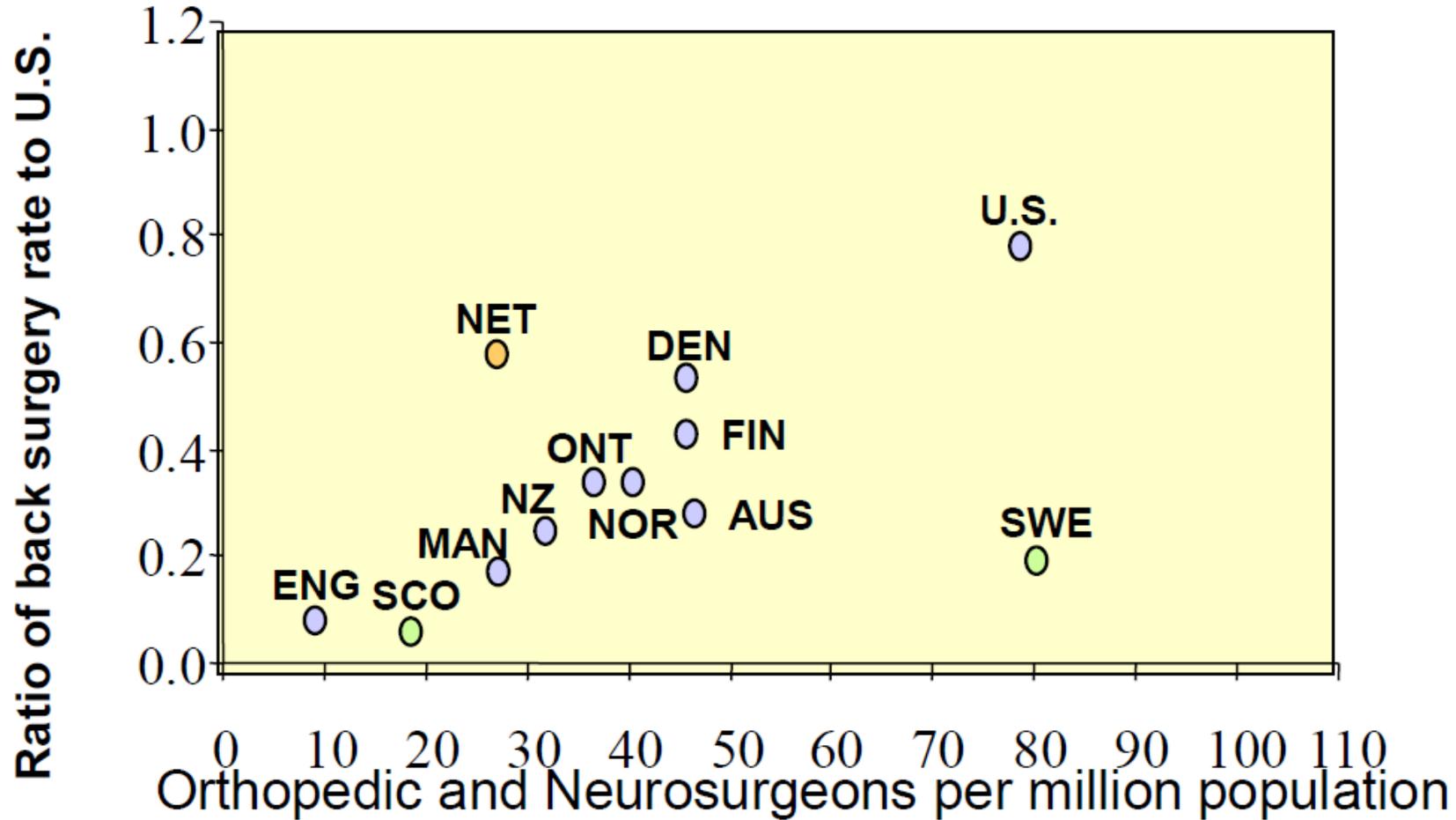
Fig. 1. Map of Vermont showing minor civil divisions, the Vermont town (lighter line). Darker line shows boundaries of hospital service areas. Circles represent hospitals. Areas without circles are served principally by hospitals in New Hampshire.



Rate of Back Surgery



Supply Sensitive Condition



Intended and Unintended Variation

- Intended variation is an important part of effective, patient-centered health care.
- Unintended variation is due to changes introduced into healthcare process that are not purposeful, planned or guided.
- Walter Shewhart focused his work on this unintended variation. He found that reducing unintended variation in a process usually resulted in improved outcomes and lower costs.

(Berwick 1991)

Health Care Data Guide, p. 107

Understanding Variation: the Good and Bad

- Unintended:
 - Poor research – Professional uncertainty
 - Poor knowledge – professional ignorance
- Intended:
 - Clinical differences among patients
 - Personal differences among patients

Unintended Variation

Most work of improvement is focused on unintended variation

If all variation was unintended, it would be easy to stop. What is difficult is reducing unintended variation while keeping intended variation

Re-discovery?



J Allison Glover, 1938

- Tonsillectomy – 10 fold variability
- Risk of death with surgical treatment – 8 fold variability

Shewhart's Theory of Variation

Common Cause: those causes inherent in the system over time, affect everyone working in the system, and affect all outcomes of the system

- Common cause of variation
- Chance cause
- Stable process
- Process in statistical control

Special Causes: those causes *not* part of the system all the time or do not affect everyone, but arise because of specific circumstances

- Special cause of variation
- Assignable cause
- Unstable process
- Process not in statistical control

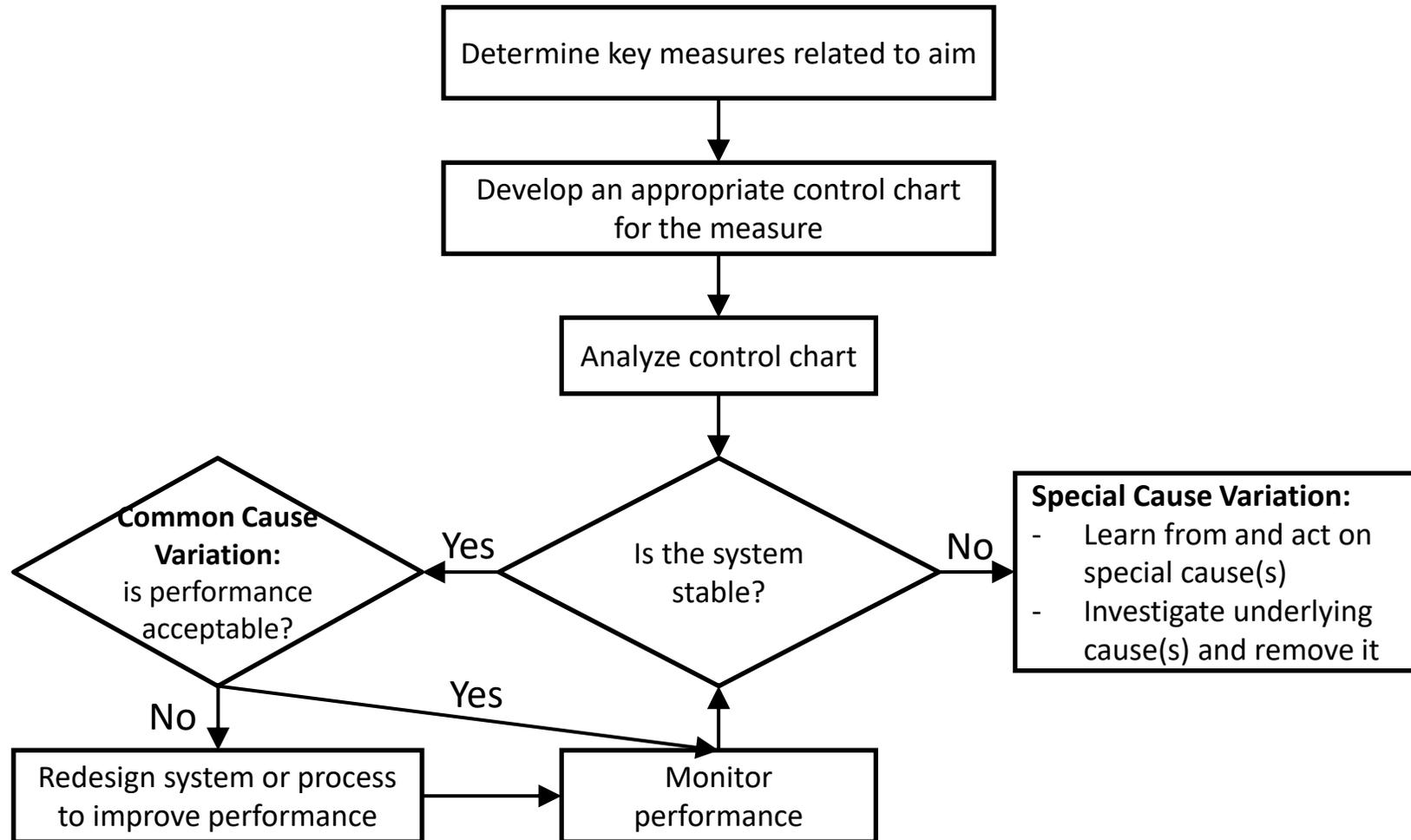
Stable Process

Implies that the variation is predictable within common bounds – only common cause variation.

Unstable Process

A process that is affected by both special cause variation and common cause variation. The variation from one time period to the next is unpredictable.

How Understanding Variation Guides Improvement Work



Adapted from: Provost, L.P. & Murray, S.K. (2011). *Health Care Data Guide*, p. 109.

Reacting to Common and Special Cause Variation

| ACTION | No Special Cause, Only Common Cause | Special Cause |
|---|--|---|
| Take action on individual points | Mistake1: costs money and time | Good approach |
| Try to change the whole system to improve it | Good approach | Mistake2: costs money and time |

Tips for Recognizing Tampering

- Be wary of organization wide changes in response to single cases
 - First step is to probe frequency of conditions
- Problems are rarely linear or have simple causes – overreliance on single solution
- Focusing on standardization without considering different contexts

What it Takes to Improve

- Will to change the current system
 - Strong positive leadership and a realistic appraisal of resources and barriers
- Ideas about changes that will improve the system
 - And a theory that links changes to outcomes
- Execution of the ideas
 - And a way to distinguish successful from unsuccessful changes

Data for Improvement, Accountability, Research

| Aspect | Improvement | Judgement or Accountability | Clinical Research |
|---|--|--|--|
| Measurement Aim | Improvement of care process, system, and outcomes | Comparison, choice, reassurance, spur for change | New knowledge |
| Methods (Test observability) | Test observable | No test, evaluate current performance | Test blinded or controlled |
| Bias | Accept consistent bias | Measure and adjust to reduce bias | Design to eliminate bias |
| Sample Size | “Just enough” data, small sequential samples | Obtain 100% of available and relevant data | “Just in case” data |
| Flexibility of hypothesis | Flexible hypothesis; changes as learning takes place | No hypothesis | Fixed hypothesis |
| Testing strategy | Sequential tests | No tests | One large test |
| Determining if a change is an improvement | Run charts or control charts (statistical process control methods) | No focus on change | Hypothesis tests (T-tests, F-tests, Chi-square), p-value |
| Confidentiality of the data | Data used only by those involved in improvement | Data available for public consumption | Research subjects’ identities protected |

Source: Solberg LI, Moser G, McDonald S. (1997) The three faces of performance measurement: Improvement, Accountability and Research. Journal of Quality Improvement, 23(3).

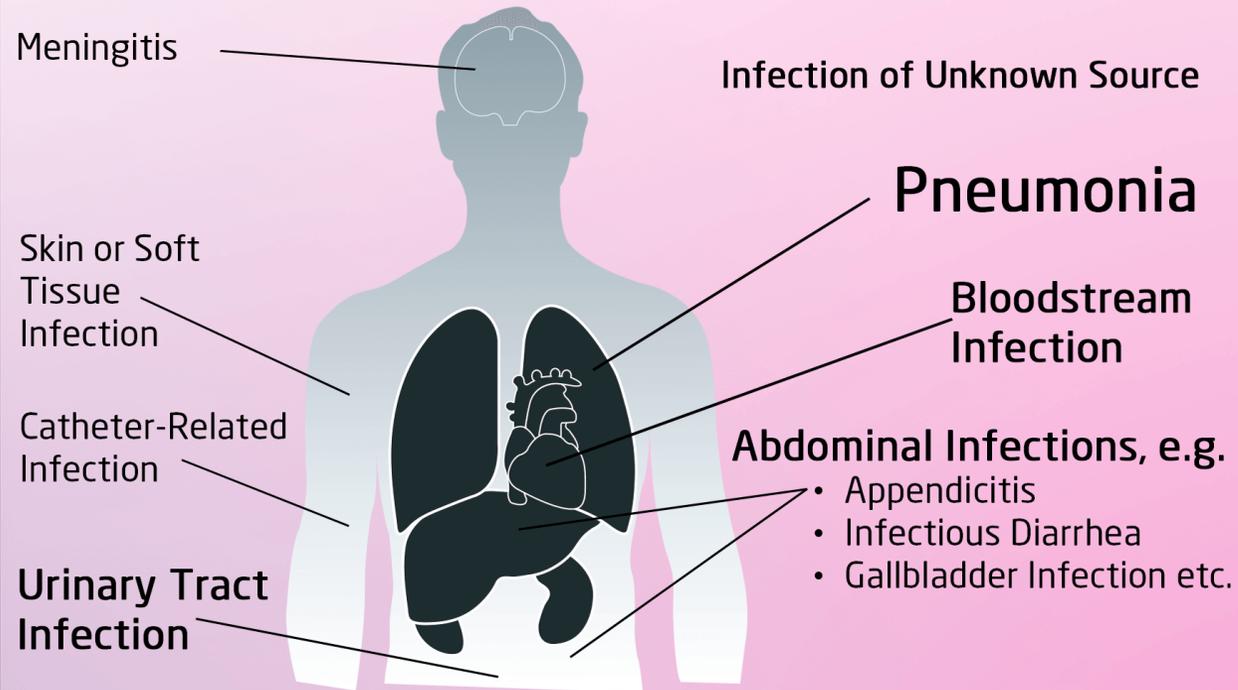
What Is Sepsis?

- Arises when the body's response to an infection injures its own tissues and organs
- Occurs when a local infection leads to general inflammation:
 - Causes shock, multiple organ failure, and death
- Commonly caused by microorganisms: bacteria, fungi, viruses, and parasites

Source: World Sepsis Day (www.worldsepsisday.org)

Sources of Sepsis

The Most Common Sources of Sepsis



Infographic 3/21

Source: World Sepsis Day (www.worldsepsisday.org)



@BCPSQC

BCPSQC.ca



In-Hospital Sepsis (per 1,000)

The risk-adjusted rate of sepsis that is identified after admission.

Description: Appropriate preventive and therapeutic measures during a hospital stay can reduce the rate of infections and/or progression of infection to sepsis. This indicator looks at the extent to which acute care hospitals are effective in preventing the development of sepsis.

Interpretation: Lower is better. It means that fewer in-hospital sepsis events occurred per 1,000 discharges.

Reference: http://indicatorlibrary.cihi.ca/pages/viewpage.action?pageId=5111838&_ga=2.237529993.808496626.1545259752-2055033370.1531510172

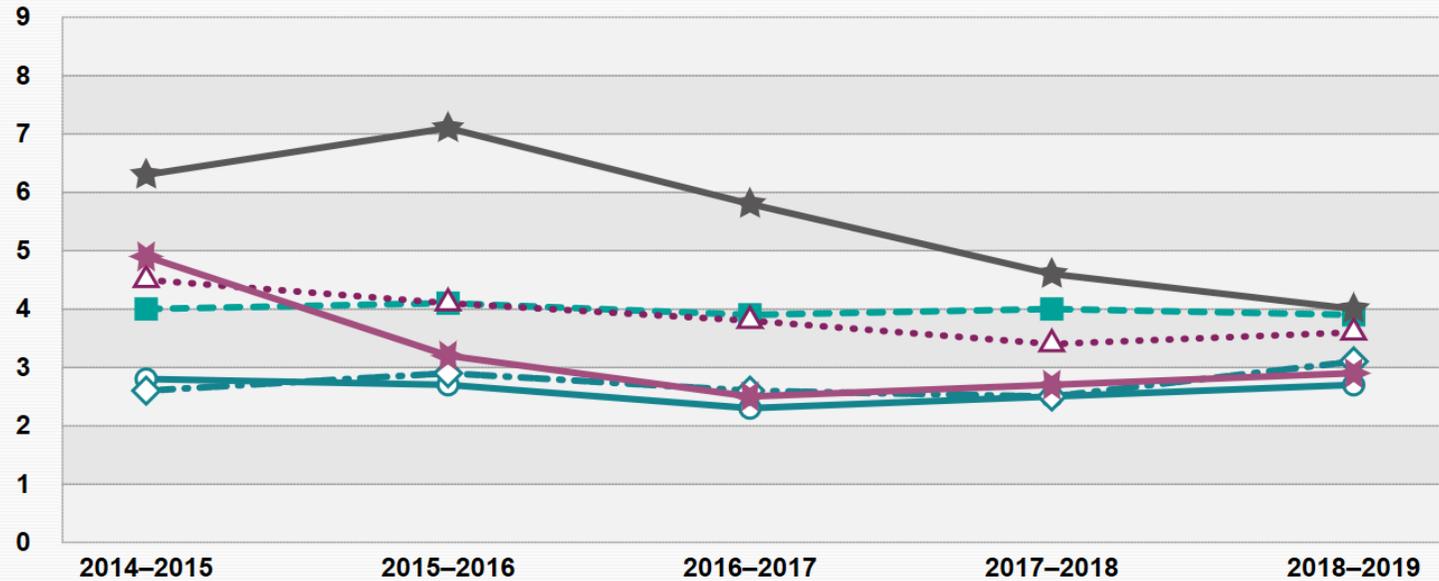
CIHI Risk-Adjusted Data: HA Aggregate

Trend Over Time: In-Hospital Sepsis (per 1,000)

ADD a province, territory, health region, long-term care organization or hospital using the search boxes below. You can also ADD a city to find results for the corresponding health region. At least 3 years of data must be available for trend results to appear on the graph.

 Methodology

.....△..... Fraser Health -◇- Interior Health -○- Island Health -★- Northern Health
-★- Vancouver Coastal Health -■- Canada

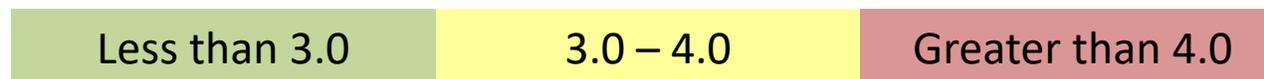


<https://yourhealthsystem.cihi.ca/>

Disaggregation by Site (2018-19)

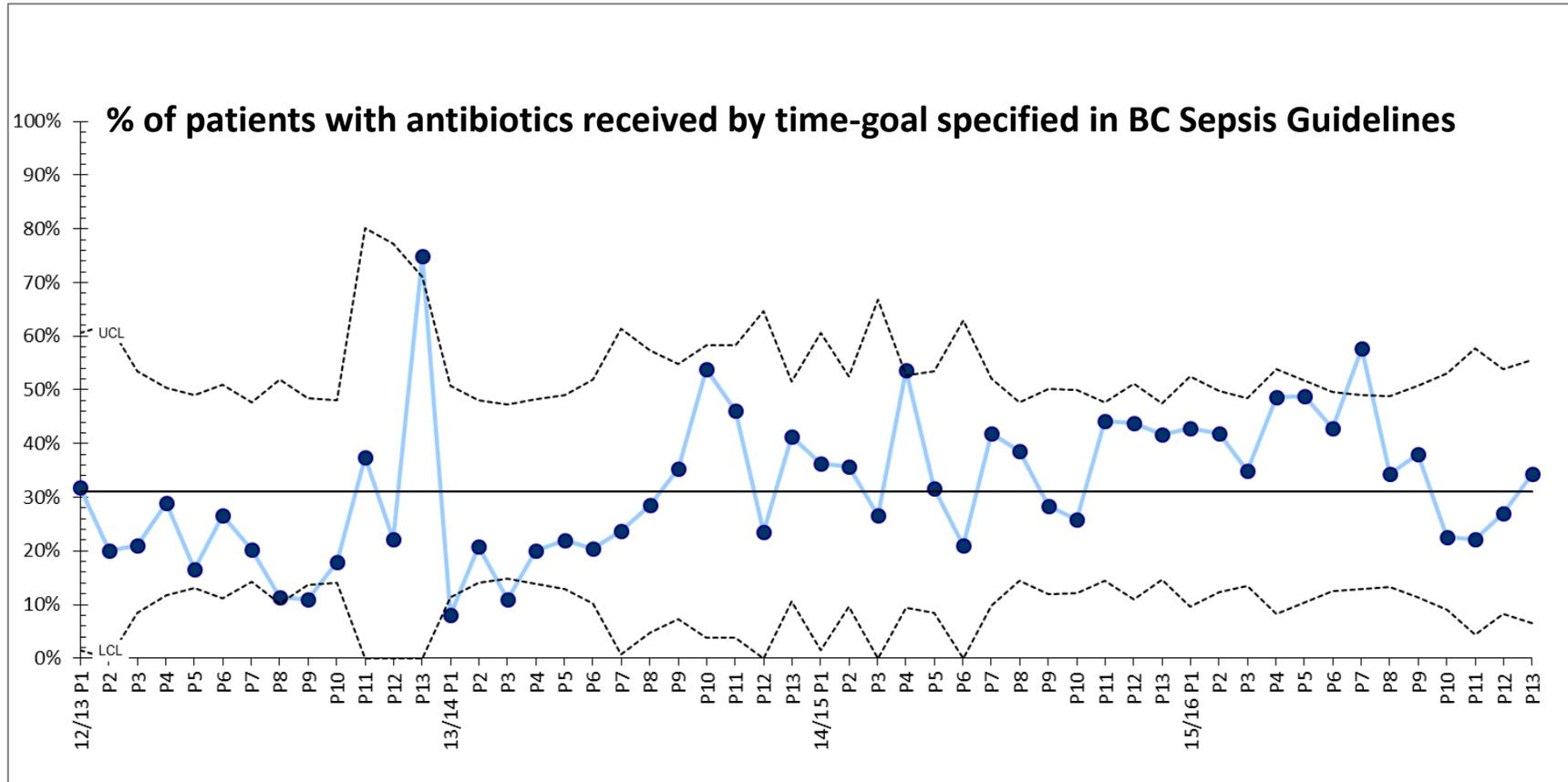
| Site | Indicator | Lower CL | Upper CL | | Site | Indicator | Lower CL | Upper CL | |
|-----------------------------------|-----------|----------|----------|--|------------------------------------|-----------|----------|----------|--|
| Canada | 3.9 | | | | Royal Inland Hospital | 5.1 | 3.8 | 6.8 | |
| British Columbia | 3.4 | 3.2 | 3.6 | | Royal Jubilee Hospital | 2.5 | 1.8 | 3.4 | |
| Burnaby Hospital | 3.9 | 2.6 | 5.5 | | St. Paul's Hospital | 3.2 | 2.4 | 4.2 | |
| Kelowna General Hospital | 3.5 | 2.7 | 4.5 | | Surrey Memorial Hospital | 5.7 | 4.7 | 6.8 | |
| Lions Gate Hospital | 4.2 | 2.9 | 6.0 | | Richmond Hospital | 2.6 | 1.5 | 4.2 | |
| Nanaimo Regional General Hospital | 2.0 | 1.2 | 3.2 | | University Hospital of Northern BC | 2.5 | 1.5 | 4.1 | |
| Penticton Regional Hospital | 2.9 | 1.6 | 4.8 | | Vancouver General Hospital | 4.8 | 4.1 | 5.5 | |
| Royal Columbian Hospital | 2.7 | 2.0 | 3.6 | | Victoria General Hospital | 4.1 | 3.0 | 5.6 | |

Legend



Sepsis Care Measures

- Percentage of Patients:
 - Septic Illness Who Received IV Antibiotics within 3 Hours of Time of Presentation
 - Blood Cultures Taken Before IV Antibiotics Were Initiated
 - Septic Illness having Appropriate Fluid Challenge for Hypotension or Lactatemia within the Appropriate Time
 - Appropriate Initial Lactate Measurement
 - Appropriate Repeat Lactate Measurement
 - Hypotension or Hypoperfusion who Received Adequate and Timely Fluid Resuscitation
 - Fluid-Resuscitated Patients with Sepsis Who Received a Timely Repeat Lactate Measurement
 - Sepsis-Related Hypotension Refractory to Fluid Resuscitation Who Received Timely Administration of Vasopressors



To Be Able to Monitor Effectively:

- Need to understand the indicator
- Need to interpret performance
- Need to ask good questions

To Be Able to Monitor Effectively:

- Need to understand the indicator
 - What it represents
 - Where it comes from
 - Why it is important
- Need to interpret performance
- Need to ask good questions

To Be Able to Monitor Effectively:

- Need to understand the indicator
- Need to interpret performance
 - Level of current performance
 - Changes over time
- Need to ask good questions

To Be Able to Monitor Effectively:

- Need to understand the indicator
- Need to interpret performance
- Need to ask good questions

Framework for Questioning

- Comparison
- Understanding Variation
- Processes for Monitoring
- When Meeting Improvement Goals
- When Missing Improvement Goals

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