



BC Patient Safety
& Quality Council



BC Health Quality Matrix

Handbook to Support the Use of the BC Health Quality Matrix



Acknowledgements

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		DIMENSIONS OF QUALITY				
		ACCEPTABILITY	APPROPRIATENESS	ACCESSIBILITY	SAFETY	EFFECTIVENESS
		Care that is respectful to patient and family needs, preferences, and values.	Care provided is evidence-based and specific to individual clinical needs.	Ease with which health services are reached.	Avoiding harm resulting from care.	Care that is known to achieve intended outcomes.
AREAS OF CARE						
STAYING HEALTHY	Preventing injuries, illness, and disabilities.					
GETTING BETTER	Care for acute illness or injury.					
LIVING WITH ILLNESS OR DISABILITY	Care and support for chronic illness and/or disability.					
COPING WITH END OF LIFE	Planning, care and support for life-limiting illness and bereavement. ¹					
		<p>EQUITY Distribution of health care and its benefits fairly according to population need.</p> <p>EFFICIENCY Optimal use of resources to yield maximum benefits and results.</p>				

The BC Health Quality Matrix was developed in collaboration with the members of the BC Health Quality Network which includes health authorities, the Ministry of Health Services, the Ministry of Healthy Living and Sport, academic institutions and provincial quality improvement groups and organizations.

¹ Descriptor reflects direction of the Ministry of Health Services and input from the Provincial End of Life Standing Committee.



Introduction

The BC Health Quality Matrix is a framework aimed at providing a common language and understanding about health care quality. While the BC Health Quality Matrix is based on well-known frameworks in Canada and the USA, it has been customized to the BC context by the BC Patient Safety & Quality Council's Health Quality Network.² The intent of the BC Health Quality Matrix is that it may be used by health care delivery organizations, leaders and practitioners for strategic planning, quality improvement program planning, measurement and evaluation at a program, facility and system-wide level.

The BC Health Quality Matrix provides a framework for the three key responsibilities of a health system: the quality of services provided as viewed by the recipient and the providing system, and the value (cost/outcome) of these services.

The BC Health Quality Matrix is comprised of Dimensions of Quality applicable to patients and clients and to populations served by programs, health authorities or the broader health system. Five Dimensions of Quality speak to the delivery of health services among four Areas of Care, and two Dimensions of Quality measure the performance of the system in which health care services are delivered.

The 'cells' within the Matrix provide a framework for health care providers and organizations to measure quality. Many factors in addition to the Dimensions of Quality enable the delivery of quality health services. Examples include committed leadership, a healthy empowered workforce, a patient safety culture, and advanced health information systems. While these are not included in the Matrix, they are foundational to quality care and patient safety in BC.

Background

The development of the BC Health Quality Matrix was initiated after consultation with representatives from BC's health care community in the fall of 2008. In a November 2008 Forum hosted by the Council, representatives of 40 health system stakeholder organizations from across the province committed to working together to establish a common language

and framework for quality. This approach had been modelled on the work of other leading quality organizations, such as the Health Quality Council of Alberta.³

In the spring of 2009, the Council established BC's Health Quality Network as a forum for bringing key stakeholders together to discuss and work on issues related to quality improvement and patient safety. As many other organizations across Canada have, the Network looked to the Alberta Quality Matrix for Health and other frameworks published in the literature for guidance in the development of a similar framework. The BC Health Quality Matrix was adopted by the Health Quality Network in June 2009.

Dimensions of Quality

The BC Health Quality Matrix assesses quality from an individual patient/client, population and system-wide perspective. The BC Health Quality Matrix asserts that quality is comprised of multiple dimensions and recognizes that there may be greater emphasis on a particular dimension of quality at any given time for unique patient/client circumstances.

Five Dimensions of Quality are focused on the patient/client experience from both an individual as well as a population perspective:

Acceptability: Care that is respectful to patient and family needs, preferences and values.

Appropriateness: Care that is provided is evidence-based and specific to individual clinical needs.

Accessibility: Ease with which health services are reached.⁴

Safety: Avoiding harm resulting from care.

Effectiveness: Care that is known to achieve intended outcomes.

Two Dimensions of Quality measure the performance of the system in which health care services are delivered:

Equity: Distribution of health care and its benefits fairly according to population need.

Efficiency: Optimal use of resources to yield maximum benefits and results.

² BC's Health Quality Network consists of the following organizations: BC Academic Health Council, BC Ambulance, BC Coroner's Office, BC Patient Safety & Learning System, BC Patient Safety & Quality Council, BC Perinatal Health Program, BC Pharmacy Directors' Group, College of Pharmacists of BC, College of Physicians and Surgeons of BC, College of Registered Nurses of BC, Deans & Directors Group, Evidence to Excellence, Fraser Health Authority, Guidelines & Protocols Advisory Committee, Health Care Leaders' Association of BC, Health Care Protection Program, Impact BC, Interior Health Authority, Mental Health & Addictions, Ministry of Health Services, Ministry of Healthy Living and Sport, Northern Health Authority, Providence Health Care, Provincial Health Services Authority, Provincial Infection Control Network, The University of British Columbia, Vancouver Coastal Health, Vancouver Island Health Authority, Western Healthcare Improvement Network.

³ The Alberta Health Quality Matrix can be found at www.hqca.ca. Saskatchewan's Measurement Framework can be found on page 9 of the in the Quality Insight report at www.hqc.sk.ca in the Measurement and Reporting on Quality section.

⁴ The OECD definition of accessibility has been adopted for the Matrix. Kelley E, Hurst, J. Health Care Quality Indicators Project Conceptual Framework Paper. OECD Health Working Papers. No. 23. Paris. Available at: www.oecd.org/dataoecd/1/36/36262363.pdf Accessed 24 May 2009.

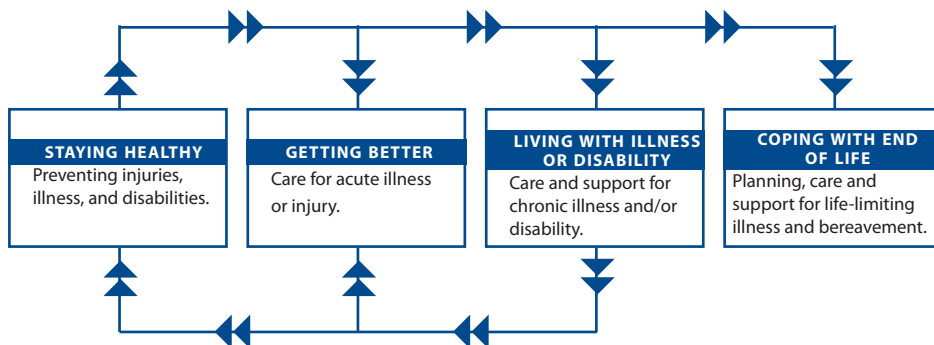
Equitable distribution of health care and the optimal use of resources are inter-related with each of the quality dimensions and are foundational. These dimensions ensure balance within the framework, underlie thinking about quality within every Dimension of Quality and Area of Care and ensure that health programs and systems are fair in providing access and services and are sustainable.

Dimensions of Quality are inextricably related. For example, unless patients/clients have timely *access* to care, the system will not be able to deliver *effective* care. Dimensions of Quality may also be mutually supporting. For example, providing post-operative care guidelines in multiple languages is an example of both *safe* and *acceptable* care. Quality is achieved when all Dimensions of Quality are satisfied across the continuum of care. For example, a health system that is safe but lacks efficiency or equity may not yield maximum benefits to BC's population.

Areas of Care

The BC Health Quality Matrix identifies four distinct but inter-connected Areas of Care. Each area represents a different experience within a person's health care journey. This journey may involve multiple transitions between Areas of Care. A person may obtain care for acute illness, and then obtain care and support to live with a chronic illness or disability. Or they may receive care for illness, recover and focus on staying healthy. The Matrix encourages organizations and health care providers to consider the health focus determined on behalf of, as well as by, individuals and groups of individuals themselves. The Matrix recognizes that for individual patients/clients, there may be chronological movement throughout the Areas of Care and individuals may enter the cycle at any stage (as is illustrated in Figure 1 below).

Figure 1: Areas of Care



Some health care providers (organizations and individuals) specialize in one Area of Care, but many provide care within a few or all of these Areas of Care. For example, BC's health authorities provide services within each of the Areas of Care through public health programs, hospitals, rehabilitation programs, long-term care facilities and palliative care programs. Using the best evidence available, BC health care providers are increasingly adopting approaches to preventing and managing illness that span multiple or all four Areas of Care. The following examples show how cancer care spans all four Areas of Care:

AREAS OF CARE	EXAMPLES
Staying Healthy	Promotion of healthy lifestyle and other activities to prevent the occurrence of cancer <i>Example:</i> Tobacco cessation program to quit smoking
Getting Better	Diagnosis and treatment of cancer <i>Example:</i> Use of pharmaceuticals and radiation to treat cancer
Living with Illness or Disability	Support to help persons with cancer feel the best they can <i>Example:</i> Support groups (i.e. survivors living with cancer)
Coping with End of Life	Planning, care and support for individuals and their families when cancer is life-limiting through to bereavement <i>Example:</i> Use of pain medication to ensure patients are as comfortable as possible during the end of their life

The Matrix encourages health care organizations and individual health care providers to think about their role within each Area of Care and inter-relationships among the health care providers in BC's health system.

How Can the Matrix be Used?

The BC Health Quality Matrix is a tool designed for every level of BC's health system, including: governance, executive/management, program delivery, clinical/front line, support services and quality improvement initiatives. The Matrix can be used by or on behalf of British Columbians at any level – an individual patient, from the population health perspective and from the system-wide perspective. The Council uses this framework in its own work for planning, assessment and evaluation.



The Matrix encourages health care providers to think about both the inter-related nature of quality dimensions and responsibilities as the area of care shifts for patients. At the same time, the Matrix recognizes that not all combinations of Dimensions of Quality and Areas of Care will be relevant to all health care organizations and individual health care providers. There is an inherent push and pull within the Matrix, calling for greater emphasis in specific 'cells' at any given time.

The Matrix also enables organizations to develop metrics that measure quality across single, multiple or even all Areas of Care. The Matrix can be used at multiple levels, from planning the distribution of health services across BC or a health authority to evaluating a specific health service.

Examples of how the Matrix can be used for planning and evaluation are detailed in the coming sections:

- Planning Healthlink's 8-1-1 Service (page 6)
- Health authority improvement planning activities (page 7)
- Evaluating the Success of BC's HPV Vaccination Program (page 7)

The adoption of the BC Health Quality Matrix by health service delivery organizations and individual health care providers will stimulate the development of health services that aim to meet all Dimensions of Quality across all Areas of Care. The Matrix provides the foundation for a common language, understanding and approach to health care quality among BC's health care organizations and individual health care providers. This common perspective can bring about increased collaboration within BC's health care community. The ultimate aim of the BC Health Quality Matrix is to promote a high quality health system that is more acceptable, appropriate, accessible, safe, effective, and equitable and efficient for all.

Aligning the Matrix within a Robust Measurement Environment

There are many organizations, both provincial and national, that have developed frameworks for measuring quality. For example, Accreditation Canada provides BC's health care organizations with an external peer review process to assess and improve the services they provide to their patients and clients. The standards within Accreditation Canada's review process (known as the Qmentum Program) are founded on eight quality dimensions.

BC's health care organizations and initiatives are diverse and they interpret health care quality in unique ways. Bringing consistency to quality measurement within BC's complex health care community requires an approach that is flexible enough to be used by all stakeholders at the program, facility and system-levels. The Matrix helps BC's health care community to come together under a common language, understanding and approach for thinking about health care quality.

While the Matrix represents a new framework for BC, it builds upon and aligns with the quality measurement frameworks of provincial and national organizations that interface with BC's health care community. Accreditation Canada's eight Quality Dimensions are reflected throughout the BC Health Quality Matrix.⁵

- Accreditation Canada and the BC Health Quality Matrix have three common quality dimensions: *Accessibility, Safety and Effectiveness*.
- Accreditation Canada's *Client-Centred* dimension is seen to be demonstrated through each of the BC Matrix's five Dimensions of Quality that consider quality as seen "through the patient's eyes".
- Accreditation Canada's *Efficiency* dimension is aligned with the Matrix's system-wide efficiency dimension.
- Accreditation Canada's *Population Focus* is represented throughout the entire Matrix, inclusive of the four Areas of Care and the Dimensions of Quality.

While Accreditation Canada's *Worklife* dimension is not within the scope of the BC Health Quality Matrix, it is recognized that wellness in the workplace is foundational to all the Dimensions of Quality.

The grid format of the BC Health Quality Matrix encourages the user to consider the five Dimensions of Quality from the patient/client perspective – the needs of those staying healthy, getting better, living with illness or disability and coping with the end of life as well as two system-wide Dimensions of Quality – equity and efficiency. It is anticipated that the Matrix may be used to facilitate the discussion of roles and responsibilities to support coordinated care. This aligns with Accreditation Canada's Continuity of Services dimension.

Because the Matrix has much in common with Accreditation Canada's Quality Dimensions, it is anticipated that organizations that use the Matrix to guide quality improvement decision-making and measure success may see the aligned benefits of evidence of the standards within Accreditation Canada's Qmentum Program.

⁵ Accreditation Canada's eight Quality Dimensions are: population focus, client-centred services, accessibility, safety, effectiveness, continuity of services, efficiency and worklife. www.accreditation.ca/en/default.aspx



Expanded Definitions of the Dimensions of Quality

Definitions for the Dimensions of Quality parallel those outlined in similar frameworks across Canada and internationally. The definition for Accessibility, for example, is adapted from the extensive work on health care quality indicators by the Organization for Economic Co-operation and Development.⁶

Acceptability:

Care that is respectful of patient and family needs, preferences and values. This dimension takes into consideration patient and family preferences, such as respecting cultural values and encouraging family involvement in decision making. Acceptability includes health care providers being empathetic to patients and families, following the wishes and expectations of patients and families and empowering them to be active in their own care.

Appropriateness:

Care provided is evidence-based and specific to individual clinical needs. This dimension reflects care that is grounded in best practices and is provided to optimize an individual's health outcome. Appropriate care weighs the benefits and risks of care – aiming to provide maximum benefit (supporting best outcomes).

Accessibility:

Ease with which health services are reached. Accessibility is the extent to which individuals can easily obtain the care when and where it is needed. Accessibility aims to ensure there are no physical, financial or psychological barriers to receiving information, care and treatment.

Safety:

Avoiding harm resulting from care. Safety is the extent to which health care services do not harm patients. Safety involves designing and implementing processes to prevent and minimize those adverse outcomes or injuries that could unintentionally result from the delivery of care.

Effectiveness:


Care that is known to achieve intended outcomes. Effectiveness is care that achieves the best possible outcomes for patients by developing and carrying out care plans that are based on clinical evidence and best practices. A commitment to effectiveness is demonstrated by continuously studying the results of care to find ways to improve care for all patients.


Equity:

Distribution of health care and its benefits fairly according to population need. Equity defines the extent to which BC's health system allocates health services fairly across the province's population. Equity does not mean the same health care for everyone because British Columbians have different needs. Equity is demonstrated when British Columbians have equal access to the health services they need, regardless of gender, ethnicity, socioeconomic status, or where they live.

Efficiency:

Optimal use of resources to yield maximum benefits and results. Efficiency is about delivering services to improve the health of more British Columbians by maximizing capacity and eliminating/avoiding waste in the health system. Health care services are considered in light of value for money or providing the maximum amount of positive impact on the health of British Columbians.

 Five Dimensions of Quality are focused on the patient/client experience from both an individual as well as a population perspective.

 Two Dimensions of Quality measure the performance of the system in which health care services are delivered.

6 Kelley E, Hurst, J. Health Care Quality Indicators Project Conceptual Framework Paper. OECD Health Working Papers. No. 23. Paris. Available at: www.oecd.org/dataoecd/1/36/36262363.pdf Accessed 24 May 2009.



Example of How the Matrix Can Be Used for Program Planning

Planning Healthlink's 8-1-1 Service

Starting in November 2008, British Columbians can simply dial 8-1-1 to get health information, medical advice and help navigating BC's health care system. The design of this service illustrates how a particular service may satisfy multiple Dimensions of Quality. For example, the 8-1-1 service demonstrates **acceptability** by planning for callers' individual needs, offering service in 130 languages, as well as a TTY option for hearing or speech impaired users.

The 8-1-1 service promotes **acceptability** on a number of levels for British Columbians focused on staying healthy and getting better. Firstly, the service is available 24/7. A trained health service representative answers 8-1-1- telephone calls, and where appropriate, calls are transferred to a registered nurse, pharmacist or dietitian for further information and advice. Many calls can be resolved through self-care or home management of symptoms. In these instances, the 8-1-1 service provides assistance and answers to questions about a variety of health topics in a setting that is more appropriate for individuals and for system **efficiency** than a walk-in clinic or an Emergency Department. Callers can access health advice from the comfort of their own homes and at times, more quickly than at a walk-in clinic or an Emergency Department. Additionally, reducing the strain on walk-in clinics and Emergency Departments will help improve the accessibility of these health services for all British Columbians.

Plans for the service have taken into account equity by looking for ways to make these services available to British Columbians in each Area of Care. For example, British Columbians with chronic conditions may struggle to connect with health services they need. The HealthLink BC is planning to pilot 8-1-1 services that support chronic disease patients, as well as homecare and palliative services, within the next two years.



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BC Health Quality Matrix

AREAS OF CARE	DIMENSIONS OF QUALITY				
	ACCEPTABILITY	APPROPRIATENESS	ACCESSIBILITY	SAFETY	EFFECTIVENESS
STAYING HEALTHY Preventing injuries, illness, and disabilities.	Care that is respectful to patient and family needs, preferences, and values.	Care provided is evidence-based and specific to individual clinical needs.	24/7 access to health information.	Avoiding harm resulting from care.	Care that is known to achieve intended outcomes.
GETTING BETTER Care for acute illness or injury.	Provides confidential health information in over 130 languages.	Health-service representatives, transfers callers to a nurse, dietitian for further information and advice.	Advises caller when and where to seek medical treatment OR tele-nurse resolves health concerns through self-care or home management of symptoms.	Pharmacist available to answer callers' medication questions.	Resolves health concerns for British Columbians.
LIVING WITH ILLNESS OR DISABILITY Care and support for chronic illness and/or disability.	Hearing or speech-impaired British Columbians can access the service from a TTY service or device by dialing 711.		Pilots of expanded services to better support chronic disease patients and homecare in the next two years.		
COPING WITH END OF LIFE Planning, care and support for life-limiting illness and bereavement.			Pilots of expanded services to better support palliative services in the next two years.		

EQUITY Distribution of health care and its benefits fairly according to population need. →
EFFICIENCY Optimal use of resources to yield maximum benefits and results. ←

The BC Health Quality Matrix was developed in collaboration with the members of the BC Health Quality Network which includes health authorities, the Ministry of Health Services, the Ministry of Healthy Living and Sport, academic institutions and provincial quality improvement groups and organizations.

Example of How the Matrix Can be Used for Health Authority Improvement Planning Activities

The BC Health Quality Matrix is intended to inform improvement planning activities at the health authority level and to guide improvement activities considering the Dimensions of Quality along the four Areas of Care. As health authorities continue to plan programs to best support changing population needs, the following provides some specific examples of how the Matrix may be used to support the strategic direction of health authority quality improvement activities. Each 'cell' of the Matrix represents a unique and distinct example. As a push/pull will always exist between Dimensions of Quality along the four Areas of Care, the two system objectives of equity and efficiency may move to the forefront to support facility and system-wide planning.

Example of How the Matrix Can be Used for Evaluation

Evaluating the Success of BC's HPV Vaccination Program

Beginning in the 2008-2009 school year, the Human Papillomavirus (HPV) vaccine was made available free to girls in BC in grades six and nine. The vaccine prevents strains of HPV responsible for 70% of all cervical cancer cases in Canada. The program was approved in BC after several studies estimated a "cost per quality life year saved" approach (which can be used to compare the costs and benefits of different types of/approaches to health care interventions).⁸

The HPV vaccine program was initiated with immunization goals and anticipated benefits. While many programs cross several Areas of Care, the focus of the HPV vaccination program is helping BC women stay healthy by preventing illness. Establishing clear goals allows health care leaders and the public to evaluate the success of a program. For example, over the longer term, the incidence of HPV-related cancers in the vaccinated population will demonstrate the effectiveness of the HPV vaccination program.



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AREAS OF CARE	DIMENSIONS OF QUALITY				
	ACCEPTABILITY	APPROPRIATENESS	ACCESSIBILITY	SAFETY	EFFECTIVENESS
STAYING HEALTHY Preventing injuries, illness, and disabilities.	Care that is respectful to patient and family needs, preferences, and values. Public consultation sought to develop screening programs in response to patient/family determined need.	Care provided is evidence-based and specific to individual clinical needs. Mammography exams offered to all women ages 40-79 and/or to those women with an elevated risk due to family history.	Ease with which health services are reached. Smoking cessation programs being offered in partnership with local schools.	Avoiding harm resulting from care. Infection control awareness campaigns (i.e. hand hygiene kiosks).	Care that is known to achieve intended outcomes. Providing an in-home tripping hazard assessment for at-risk seniors.
GETTING BETTER Care for acute illness or injury.	Emergency Department interpreters available 24/7.	Ensuring provision of appropriate antibiotic based upon type of surgery to prevent infection for every patient.	Emergency Department decongestion initiatives.	Implementation of unit/team safety huddles.	Implementing a bundle of evidence-based care to reduce in-hospital Acute Myocardial Infarction (AMI) mortality.
LIVING WITH ILLNESS OR DISABILITY Care and support for chronic illness and/or disability.	Development of a Patient Advisory Committee to ensure the patient voice is heard in the planning of care.	Inter-RAI Clinical Assessment in Residential Care and Home Health.	Diabetes clinics held at local community facilities – bringing specialists to the community.	Implementing a process to reconcile medications to ensure patients and receiving the right medications following a hospitalization.	Meal planning classes and exercise programs for cardiac patients.
COPING WITH END OF LIFE Planning, care and support for life-limiting illness and bereavement.	Family conferences to determine patient and family needs and preferred location(s) for end-of-life care.	Implementation of Provincial Pain and Symptom Management Guidelines.	Case managers are assigned to patients and their families to identify and coordinate services for the client and family, educating clients/patients, families and other service providers about available services. ⁷	Education for health care providers on advance care planning, representation agreements and advance directives to ensure compliance with individuals' legally expressed wishes to refuse or accept care.	Increased support for system-wide programs, in alignment with BC's Provincial end-of-life Strategy.

← **EQUITY** Distribution of health care and its benefits fairly according to population need. →
EFFICIENCY Optimal use of resources to yield maximum benefits and results.

The BC Health Quality Matrix was developed in collaboration with the members of the BC Health Quality Network which includes health authorities, the Ministry of Health Services, the Ministry of Healthy Living and Sport, academic institutions and provincial quality improvement groups and organizations.

7 Adapted from the Case Management Pan-Canadian Gold Standard for Palliative Home Care. Available at: www.chpc.ca/resource_doc_library/pan-cdn_gold_standards/Gold_Standards_Palliative_Home_Care.pdf. Accessed May 29, 2009

8 A Population Based HPV Immunization Program in BC: A Background Paper. Available at: www.bccancer.bc.ca/NR/rdonlyres/483D2456-286B-46DA-A12D-69C8E081CCC5/14494/HPVImmunizationReportJanuary172007.pdf. Accessed May 29, 2009



At the same time, it is important to continually monitor the safety of the vaccine. As well, the HPV vaccine program takes into account diverse family preferences and values; consent is required and parents can freely opt their daughters out of the program. Gauging public confidence in and support for the HPV vaccine program will be an important part of evaluating its acceptability.

At the time the HPV vaccine program was initiated, other vaccine programs were already in place for the sixth and ninth grades. As a result, girls in these grades could begin receiving the vaccines at minimal additional cost. An evaluation may result in further recommendations for improving the efficiency of program delivery. This would also include evaluating the value for money or the extent to which the HPV vaccination program positively impacts the health of British Columbians. The vaccination is presently recommended for women ages 9-26 (not yet approved for use in men). From a system-level perspective, an evaluation of the program would also consider not only the positive impact on females but the equity of allocating limited health resources to prevent HPV-related cancers in women.

Conclusion

It is the intention that this Handbook may be used to support the BC Health Quality Matrix as a tool designed for governance, executive/management, program delivery, clinical/front line, support services and quality improvement initiatives. The Matrix encourages health care providers to think about both the inter-related nature of the Dimensions of Quality and responsibilities as the Area of Care shifts for patients. The Matrix also enables organizations to develop metrics that measure quality across single and multiple Areas of Care. The adoption of the Matrix will help BC's health care providers and organizations work together towards a common goal of improving the quality of health care in British Columbia.

BC Patient Safety & Quality Council provides system-wide leadership that brings a provincial perspective to patient safety and quality improvement activities. Through collaborative partnerships with health authorities and other health care providers, BCPSQC is promoting and informing a provincially coordinated, patient-centred approach to patient safety and quality improvement.

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