



BC PATIENT SAFETY
& QUALITY COUNCIL

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Measuring Culture to Inform Action

A Rapid Review of the Literature

March 2021

ABOUT THE BC PATIENT SAFETY & QUALITY COUNCIL

Our work leads to better health care for British Columbians

We deliver the latest knowledge from home and abroad to champion and support high-quality care for every person in our province. This system-wide impact requires creativity and innovative thinking, which we combine with evidence-informed strategies to shift culture, improve clinical practice and accelerate our partners' improvement efforts.

We also understand that meaningful change comes from working together. We are uniquely positioned to build strong partnerships with patients, care providers, health leaders, policymakers, senior executives, academics and others. These connections enable us to nurture networks, recognize the needs of our health care system and build capacity where it is needed the most.

If you want to improve BC's health care system, visit [BCPSQC.ca](https://bcpsqc.ca) to access programs and resources that can help you start today.

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1. SUMMARY

Assessing the current state of culture in health care settings can help teams understand and improve how people work together to provide care. Many survey tools can be used to assess the current state of a team or organization's culture. In response to interest expressed by British Columbia (BC) health care system stakeholders, the BC Patient Safety & Quality Council conducted a rapid review of the literature on survey tools used to measure culture to promote quality and patient safety in health settings. The inquiry was limited to tools that are quantitative, self-report questionnaires which are readily available for use, with a focus on those identified in literature and known to be used in BC. The information presented is based on an assessment of findings at the time of publication.

For more information on the steps to take to shift culture in health care, see our [Culture Change Toolbox](#).

This rapid review provides an overview of the role of culture in health care settings, including the common limitations and best practices related to the measurement of culture. The review also highlights selected survey instruments, including a description of what is measured by each survey and their relative strengths. No one survey instrument is identified as the gold standard to measure culture in a health care setting. This literature review offers guidance and supports the use of survey tools to generate discussion, provide data for comparison and foster improvement to culture within organizations.

2. MEASURING CULTURE IN HEALTH CARE

Culture can be understood as the way a group of people work together. It is largely considered to encompass norms in the way people think (values, attitudes, perceptions and beliefs) and how they act (habits and typical behaviours). Ultimately, culture determines how an organization functions.¹ In health care, culture influences how well people work together and how they communicate with one another.

Positive shifts in workplace culture have been linked to reduced incidence of adverse events, increased patient and family satisfaction and improved system and clinical outcomes.^{2,3} These shifts have also been shown to have tangible benefits for health care professionals, teams and organizations by reducing work-related conflict and stress, decreasing staff turnover, lessening harassment and bullying as well as improving staff retention, job satisfaction and perceptions of working conditions.⁴

Examining the current state of culture enables a better understanding of organizational norms and facilitates the exploration of new ways of working together to improve quality of care. Health care organizations may be interested in measuring the culture within their teams for several reasons, including to:

- **Start conversations and build will:** Assessment raises awareness and helps make culture tangible and concrete. Evidence of local culture is a powerful driver for change.
- **Guide improvement efforts:** Measurement can inform next steps by identifying what a team is doing well, what it needs to work on and the impact that activities are having over time.
- **Enable benchmarking:** Measurement may be pursued as a means of comparison among units or professions within an organization, or against other organizations, industries or standards to help identify opportunities for improvement.
- **Fulfill regulatory requirements:** Assessments are an expectation or mandated requirement for many health service organizations.⁵

Many tools can be used to assess culture, including both quantitative and qualitative methods. Methods of assessing the current state of culture include surveys, interviews, observations and coaching. Quantitative, self-report surveys are popular because they are a relatively time – and labour-efficient way of collecting and analyzing data, and the use of these surveys have shown a positive relationship with patient outcomes.⁷ While surveys cannot provide rich insight into *why* conditions exist, they do provide a snapshot and can be used at regular intervals for comparison over time. They are more sensitive to change and easier to compare than qualitative methods, making them a practical assessment tool.¹

3. COMMON LIMITATIONS

There are common limitations around the use of quantitative, self-report surveys to assess culture in health care.⁸ This includes a lack of common language and inconsistent use of key terminology.⁹ The concept of culture is defined and measured in numerous ways in health care – many questionnaires address what they refer to as “patient safety culture” but their exact definitions and dimensions vary. The terms “safety” and “quality” are used interchangeably in some literature. However, safety, as defined by the [BCPSQC Quality Matrix](#), is one component of quality. The concepts of “climate” and “culture” are, likewise, inconsistently used though they can refer to two different concepts.¹⁰

Climate refers to staff’s perceived level of commitment to, and focus upon, quality and/or safety within a work area, whereas culture refers to the underlying beliefs, assumptions and values. It is generally accepted that the two are closely related concepts, and that climate consists of the surface level manifestations of the culture. Both have been found to influence patient outcomes and can be measured to monitor change over time.¹¹ Often, survey tools will focus on climate because it tends to be easier to assess, lends itself to quantitative measures and is more responsive to change.¹²

Culture is widely regarded as a multi-dimensional construct, though there is no formal agreement within the literature on the specific dimensions. Research has identified several components that are most commonly cited and linked to high-quality health services.^{13, 14, 15} When working towards

building a strong culture, it is important to consider all the components that make up culture as each impacts team performance and outcomes. Many surveys measure multiple components while others explicitly focus on one. The existing research does not identify any single survey instrument as a fully comprehensive assessment of culture.^{1, 7}

While validated survey instruments do exist, some general caution is recommended with the use of quantitative, self-report surveys. This is due to the tendency toward low response rates, inherent bias that exists within self-assessed response questionnaires, inconsistent and imprecise definition of key concepts as well as the highly context-specific nature of culture.¹⁶ While caution is required, the use of culture surveys for practical purposes is well supported, such as raising the profile of culture, informing quality improvement activities and comparing performance within groups over time (as response bias is likely to remain fairly consistent). Conversely, concerns have been identified regarding the use of culture surveys for accountability purposes or external comparison.¹⁷

The literature acknowledges that this is an evolving field of study that would benefit from more research and advancements in the measurement of culture. There is also limited research explicitly comparing the practicalities of using specific tools in various contexts, making it difficult to draw categorical conclusions about using one tool over another.¹⁸

4. BEST PRACTICES

From the literature, there are key best practices for administering culture surveys in health care settings. These relate to leadership, engagement, follow through and sensitivity to local context.

Ensure that leadership support is in place

- It is critical for leadership to be fully aware and in support of a measurement tool being used, as well as open to addressing the results. Visible leadership support demonstrates organizational dedication to culture among staff, helps to garner the necessary resources and overcomes the potential barriers to conducting the survey and acting upon the results. It is important to have a team with the capacity to lead the selection, distribution, collection, analysis and action-planning of the survey. This requires knowledge, experience and protected time.⁶

Engage staff

- The team responsible for administering the survey should also lead the engagement and communication of related activities among all those who may contribute to or be impacted by the activities. Assessing culture should be a participatory activity among key stakeholders, such as point-of-care staff, during both planning and implementation. This is shown to lead to higher response rates and to build interest, ownership and energy around the changes that are pursued based on the results.⁶

Follow through on the results

- It is important to visibly act on the results of the survey. Asking for input from members of a group through a culture survey without sharing the findings or intentions for subsequent action can negatively impact culture. Closing the loop with key stakeholders is critical for maintaining their confidence and involvement in the process. This can include providing a timeline for next steps and involving staff in identifying improvement actions where possible.⁶ Addressing results can be difficult, especially when there is variation in responses and/or outliers who may not be satisfied with the direction that changes take.
- Quantitative, self-report surveys alone are not sufficient to effectively work on culture. While they offer very useful flags, they do not offer clear solutions and have not been shown to fully assess the complexities of culture. Further assessment using an additional survey that is targeted to a specific domain that has been identified as an area for improvement, or pairing results with further qualitative assessment methods, may be advisable.^{4,7}

Be sensitive to the local context

- Understanding the context in which the survey is administered is paramount for selecting a tool to suit the needs of the inquiry as well as the plan for administering the tool. Culture is a highly context-specific construct; it exists at a unit level and there can be numerous sub-cultures within an organization.¹⁹ Given this, it is most useful to administer and evaluate a survey among individual units or smaller groups. Using effective data collection procedures that reflect the local environment is also important.⁷
- For example, web-based questionnaires can be easier to administer than paper-based questionnaires but they may not be practical if respondents have limited access to computers or comfort with technology. Minimizing the extra workload and making it as easy as possible for staff to respond, while ensuring anonymity in responses, is key to achieving a high response rate.⁶ A response rate must be above 60% to credibly measure culture.²⁰

There does not appear to be a quick and easy answer to the question of which specific survey instrument is best.¹ Considerations for selecting a tool may include whether there are specific components of culture that are relevant within a work context or if a particular survey which has been used over time provides well-established baseline data and comfort among the respondent group with the existing questionnaire. While timely data is helpful for comparison over time, there is not a widely accepted recommendation for the frequency of administering surveys. For detailed questionnaires, literature indicates organizations commonly repeat surveys up to every 24 months; it is recommended that surveys not be repeated within 6 or fewer months in order to provide time for changes based on the results of the previous survey to take effect.²⁰

5. SURVEY INSTRUMENTS

The validated, quantitative, self-assessment survey tools identified below largely measure climate (staff attitudes and perceptions) as an indicator for the underlying culture at play. Relative to other methods of assessing the current state of a team's culture, such as interviews or observation, they offer a practical, time-efficient and effective way to gather, analyze and report on large amounts of data across one or more participant group in a reproducible manner.^{1,7} All have benchmarking data for comparison available.

- Safety Attitudes Questionnaire
- Hospital Survey on Patient Safety Culture
- SCORE
- Canadian Patient Safety Culture Survey Tool
- Worklife Pulse Tool
- Gallup Q¹²
- Guarding Minds at Work

The *Safety Attitudes Questionnaire* (SAQ) and *Hospital Survey on Patient Safety Culture* (HSOPS) are the most commonly cited and broadly tested survey tools within the literature. Both are generalist in nature, designed to address a broad array of culture components and have been the basis for many subsequent tools.^{13, 31}

The *Canadian Patient Safety Culture Survey Tool* (Can-PSCS) is a widely used survey instrument in Canada that is recommended by the Health Standards Organization (HSO).²¹ Organizations going through accreditation in Canada are currently required to use this survey instrument.

The *Worklife Pulse Tool* (WLP) is an additional Canadian survey instrument recommended by HSO with one version for staff and another for physicians.^{22, 23} Currently, organizations going through accreditation in Canada can opt to use it or an approved substitute tool to measure work experiences.

Recently, a targeted consultation across Canada, completed by HSO and Accreditation Canada, highlighted recommendations including the development of a new survey instrument for staff which merges both the Can-PSCS and the WLP which adds mission critical topics including equity, inclusion and people-centered care. The new survey instrument will be ready for use by health care organizations undergoing accreditation in 2022. This new survey will replace both the Can-PSCS and the WLP and organizations going through accreditation in Canada will be required to use the new survey instrument.

SCORE (Safety, Communication, Operational Reliability, and Engagement) is a relatively new tool created by the developers of the SAQ that seeks to better reflect contemporary care delivery and the latest evidence in culture assessment.²⁴

The two final tools included, *Gallup Q*¹² and *Guarding Minds at Work*, are additional surveys that have been employed by health organizations in BC to measure employee engagement and psychological safety within their workplaces, respectively.²⁵

Figure 1 depicts the components of culture, as defined in the BC Patient Safety & Quality Council's Culture Change Toolbox, which are covered by each of the surveys.²⁶ The surveys go into varying degrees of depth within each of these components. A generalist tool that covers a broader range of dimensions of culture offers best value when the goal of conducting a survey is diagnostic, with the intent of identifying areas of opportunity or high risk. However, it is important to choose an instrument that measures the relevant component(s) that would be affected if the goal of conducting a survey is to evaluate the impact of an intervention or a specific aspect of culture that is of interest to the organization.^{7, 13} Alternate instruments exist, some of which are intentionally designed for narrower scopes of assessment, such as measuring how just or caring a culture is, which have not been included in this rapid review.^{1, 8}

Figure 1

Key Components of a Strong Culture

Culture Survey Tool	Key Components of a Strong Culture									
	Organizational Fairness	Leadership	Psychological Safety	Just Culture	Cultural Safety	Trust	Transparency	Teamwork & Communication	Working Conditions	Safety Climate
Safety Attitudes Questionnaire										
Hospital Survey on Patient Safety Culture										
SCORE										
Canadian Patient Safety Culture Survey Tool										
Worklife Pulse Tool										
Gallup Q ¹²										
Guarding Minds at Work										

See Appendix A for additional information on each of the seven surveys.

6. CONCLUSION

The literature does not highlight which survey instrument is best to measure culture in a health care setting. However, the literature does offer guidance and supports the use of survey tools to generate discussion, provide data for comparison and foster improvement within organizations. Based on the analysis of the reviewed tools, the SCORE tool is a valuable option for many health care settings. Although the SCORE tool has had limited use within Canada to date, it is based on well-established culture survey tools and incorporates the latest evidence on key drivers of culture.²⁷

More research and advancement in the measurement of culture is needed. There are general issues around culture surveys' sensitivity to change and their usefulness for external accountability and benchmarking. There is also limited research comparing the practicalities of using specific survey instruments in various contexts, and it is difficult to draw categorical conclusions about using one tool over another.¹ Health care organizations are actively advancing the use of survey instruments for the purposes of accreditation in Canada and internationally. A new survey tool for health

care organizations going through accreditation in Canada will be ready for use in 2022. With the widespread focus on improving culture, the body of knowledge around these activities can be expected to continue to grow.

The strength of a survey relies on how it is used. A survey can be a valuable part of the process of working on culture but is not the end in itself. Conducting a survey and not acting on the results, or being perceived as not acting on the results, can negatively impact culture more than not doing anything at all.

Given that much of the value of surveys lies in raising the profile of quality and safety and promoting conversations, it is less about the exact survey used, rather how it is implemented and how the survey responses are used to make improvements in culture. Best practice highlights the importance of engaging leadership and staff in conducting a survey, while focusing on the practical use of their results. Using additional qualitative assessment methods allows for further exploration of the opportunities that the surveys reveal, which can include interviews, focus group discussions, mapping exercises or observations

APPENDIX A

This section provides additional information on the following surveys:

- Safety Attitudes Questionnaire
- Hospital Survey on Patient Safety Culture
- SCORE
- Canadian Patient Safety Culture Survey Tool
- Worklife Pulse Tool
- Gallup Q¹²
- Guarding Minds at Work

Safety Attitudes Questionnaire

The original *Safety Attitudes Questionnaire* (SAQ) was designed in 1994 as a 60-item questionnaire to assess culture in individual units of inpatient, acute-care settings for respondents working at the point of care. It has been adapted for use in several different settings, including outpatient settings, operating rooms, intensive care units, ambulatory clinics, pharmacy, primary care and long-term care, and in many languages and countries. A revised short form of the survey was released in 2006 which contains 36 questions plus a brief section soliciting background information. It focuses on teamwork, safety climate, job satisfaction, stress recognition, perceptions of management and working conditions.²⁸

Freely available for not-for-profit use, the SAQ is one of the most widely used and rigorously evaluated tools for measuring safety culture in health care and has established direct links with patient safety outcomes.²⁹ Questions from it are used as a starting point for many other surveys. Compared to its closest counter-part, the *Agency for Healthcare Research and Quality* (AHRQ)'s *Surveys on Patient Safety Culture* (SOPS), the SAQ is shorter and may allow organizations to more efficiently trend data over time, benchmark and examine relationships with outcomes.³¹

Recently, however, concern has been raised over the construct validity of the stress recognition sub-scale.⁷ As well, components of culture that have emerged in contemporary research as critical to high-quality care since the questions were developed, such as its relationship between worker burnout and work-life balance, may not be adequately captured.⁷ The SCORE tool was developed in 2014 as an update to the SAQ to account for that gap.²⁴

Hospital Survey on Patient Safety Culture

The *Agency for Healthcare Research and Quality* (AHRQ)'s *Hospital Survey on Patient Safety Culture* (HSOPS) measures a wide range of components of culture for both clinical and non-clinical staff. The original version is a 51-item questionnaire that was released in 2004 to measure patient safety at unit and management levels, and additional versions have been developed in numerous languages and for other contexts (long term care, medical office, community pharmacy and ambulatory surgery centres). The surveys are focused on unit- and institutional-level results.^{32, 33, 34, 35} An updated version was released in 2019 as a 40-item questionnaire which includes changes to wording and response options as well as a shift towards a just culture framework.³⁶

HSOPS is the most administered tool to health care staff internationally to assess safety climate. The surveys and accompanying suite of resources are freely available for not-for-profit use; request for permission to use the surveys outside of the United States is required. Given that it is among the most widely used surveys, questions from the HSOPS are used as a starting point for many other surveys. It covers a large number of culture domains which can help organizations prioritize quality improvement activities. Concern over the tool's lack of sensitivity to detect interventions and improvement, however, has been raised in recent studies.³⁷ As well, similar to SAQ, components of culture that have emerged in contemporary research as critical to high-quality care, such as its relationship between worker burnout and work-life balance, may not be adequately captured.³⁸

SCORE

SCORE (Safety, Communication, Operational Reliability, and Engagement) was developed in 2014 as an update to the SAQ that reflects contemporary health care delivery and recent literature on the drivers of a high-quality culture. Specifically, the new tool was created to improve upon the concepts of teamwork climate, safety climate and psychological safety to help leaders create environments in which staff are comfortable finding their voice, admitting to confusion and filling gaps through continuous learning. It incorporates questions to assess performance, employee engagement and burnout from the *Job Demands-Resources Model*, burnout from the *Maslach Burnout Inventory* and work-life balance from the *College Activities and Behavior Questionnaire*.²⁴

The survey is unique in how it incorporates aspects of both safety and work-life. It yields the potential for reduced survey fatigue among staff as well as a less siloed survey approach to assessing

performance and risk. While its development is grounded on years of study and experience with the SAQ and AHRQ SOPS surveys, less research was found specific to its use as compared to its key counterparts and predecessors. The research that is available, however, is promising.³⁹ *SCORE* must be administered through the Safe and Reliable Healthcare platform as it is proprietary; various subscription models are available for a fee.

Canadian Patient Safety Culture Survey Tool

The *Canadian Patient Safety Culture Survey Tool* (Can-PSCS), formerly the *Patient Safety Culture Tool*, was originally developed by Accreditation Canada in 2002 based on the *Modified Stanford Instrument*, with the most recent revision released in 2010.⁴⁰ It is intended to measure patient safety climate across a range of health care settings in Canada through 23 questions that gauge health care professionals perceptions and opinions of patient safety, with a focus on leadership commitment and learning from errors. It has been validated and tested across broad Canadian care contexts, though the number of studies that assess its effectiveness was limited compared to SAQ and HSOPS.⁴¹

Health organizations going through accreditation in Canada are currently required to employ this survey to assess their patient safety culture. As the survey is proprietary, organizations are required to request permission to use the tool.⁴²

Worklife Pulse Tool

The *Worklife Pulse Tool* (WPL) was developed by Accreditation Canada in collaboration with the Ontario Hospital Association, with the most recent version released in 2012. It measures staff perceptions of their job, work environment and organization. These key work-life factors,

such as the degree to which a work environment is stressful or if staff feel they have enough time to do their job well, have been identified as components of a strong quality culture and contributors to patient outcomes. There are two versions of the survey: one for staff and one for physicians. The survey was designed to provide a quick, focused and high-level snapshot to compliment, not substitute, a more detailed staff survey.^{43, 44}

Currently, health organizations going through accreditation in Canada are required to use either this 30-item survey or an approved substitute to assess the quality of work life. As the survey is proprietary, organizations are required to request permission to use the tool.⁴⁵

A new survey instrument merging the Can-PSCS and the WPL will be ready for use by health care organizations undergoing accreditation in 2022. It will be an updated version which will account for gaps in areas such as equity, inclusion and people-centered care.

Gallup Q12

Gallup Q12 has been in use since 1998 across industries and sectors to measure employee engagement as a predictor of individual and organizational performance, including by BC health authorities in recent years.⁴⁶ Employee engagement has been identified among the key components of a strong quality culture and is relevant within health care settings based on its relationship with productivity, turnover, absenteeism, safety incidents and quality. The survey contains only 12 questions, which may encourage higher response rates and a reduced administrative burden.⁴⁷

The reliability, validity and practical use of the survey have been extensively studied, and linkages between survey results and outcomes have been demonstrated in research.⁴⁷ Given the survey's relatively narrow scope, it would be prudent to pair it with additional assessment tools if the goal is a comprehensive assessment of a group's culture as it relates to quality in a workplace. *Gallup Q12* questions must be used through the Gallup, Inc. platform as they are proprietary; various subscription models are available for a fee.

Guarding Minds at Work

Guarding Minds at Work focuses on psychological health and safety within the workplace. The role of employers in protecting employee mental health and promoting respect at work is identified among the key components of a strong culture and is also the subject of increasing legal requirements.⁴⁸ Through 68 questions about common work experiences, the survey measures responsibilities such as deadlines, workload, relationships and leadership, including interactions with managers, colleagues and clients.⁴⁹

The materials were developed by research-practitioners at Simon Fraser University and designed to be used by employers across Canada by incorporating research, legislation, case law and data from businesses, organized labour, public sector and not-for-profit organizations across the country. It was launched in 2009 and updated most recently in 2017.⁵⁰ The survey and complementary resources are available online to download and use at no cost. No academic articles were found on the use of *Guarding Minds at Work* within health care settings.

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info@bcpsqc.ca



@BCPSQC

604.668.8210
1.877.282.1919