CANCER PEDIA

GOVERNANCE AND QUALITY

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CHAPTER

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GOVERNANCE AND MANAGEMENT

A. INTRODUCTION

Governance and management are interdependent facets of leadership. While the roles of governance and management may vary by organization, broadly speaking the "role of management is to run the enterprise and that of governance is to see that it is being run well and in the right direction." [1]

Effective governance and management are foundational to successful decision-making, communication and operations within any organization. [2] There is a strong relationship between an organization's governance performance and its delivery of safe, high-quality services. [3] In addition, better managed hospitals tend to produce better clinical outcomes, higher patient satisfaction with care and better financial performance. [4]

As complex organizations, hospitals require effective leaders at all levels. A cancer centre should consider and support both formal leadership constructs, such as defined organizational and reporting structures, and informal leadership efforts, such as the day-to-day mentorship of staff. It must also include both clinical and administrative leaders, to enable the alignment of healthcare and business goals and requirements.

This chapter describes the resources, structures, functions and behaviours required for the effective governance and management of any cancer centre, regardless of its scope and size, as well as best practices and innovative trends in leadership.

B. SCOPE

There are a number of vital functions that must be fulfilled by the leadership of a cancer centre. The specific personnel assigned to each function may vary amongst jurisdictions. Many functions transcend roles and are the responsibility of all cancer centre leaders.

Stewardship and Oversight

Stewardship and oversight are the primary functions of leadership. All leaders must ensure that resources are used optimally, while planning responsibly for the future. In any environment, stewardship and oversight are necessary to make the best use of funding, staff, infrastructure, supplies and other resources. In healthcare, stewardship is taken one step further, encompassing "the careful and responsible management of the well-being of the population." [5] It is a social contract, requiring healthcare leaders to commit to strategic, operational and policy decisions that drive efficiency in equal measure to the quality of patient care and – more broadly – the greater common good of the population.

A healthcare environment with the concept of stewardship embedded in its practices will have the information necessary to make sound decisions about how resources are used. It will also contribute locally, nationally and even globally to the improvement of cancer care.

Capital and Financial Management

Capital asset management includes capital planning exercises as well as measures that ensure the right facilities and equipment are in place to support the organization's strategic plan and the provision of high-quality services to the patient population.

Financial management includes the appropriate use of the organization's financial resources. Depending on the size of the organization, individuals with skills and training in financial management may be employed to provide accounting, budgeting and other finance-related support to the organization. In conjunction with leadership, they may develop an annual operating plan and annual budget. The World Health Organization's *District Health Facilities: Guidelines for Development & Operations* provides detailed examples of planning and financial management processes. [6]

Recruitment, Management and Mentorship

Cancer care requires intensive human resources, including a wide range of highly-skilled health professionals from various disciplines. Effective recruitment and leadership of this workforce is vital to foster the best care for patients. Managing people requires adaptable skills.

Leadership must be able to focus the workforce on the organizational vision and provide inspirational support to others. Leaders – both formal and informal – should serve as role models through ethical behaviour, the reinforcement of organizational values, and the creation of a supportive environment for innovation, communication, coaching and mentorship. [2] Senior leaders, in particular, have a profound impact on their organization's culture and can create an environment that is conducive to achieving the organizational vision by exemplifying organizational values.

Clearly articulating the organization's vision, mission and values allows staff to see meaning in their work. Furthermore, empowering staff to influence the expression of the organization's strategy within their own area of service builds engagement and supports employee retention. It is important that all staff have clarity regarding their roles and expectations. Leadership should work with each employee to set annual goals and conduct a formal annual review based on an objective system of evaluation, with informal feedback provided throughout the year. For more information, see the *Cancerpedia: Human Resources* chapter.

Quality and Performance Improvement

Quality improvement and patient safety should be a continuous focus for cancer centre leadership. The Institute of Medicine provides an excellent example of a framework for delivering high-quality patient care. [7] In order to set the foundation for high-quality care, leadership must engage patients and staff, enable quality measurement and analysis, facilitate education and create a culture where quality is the responsibility of everyone. It is important to have a process in place where near misses are identified and analyzed for learning purposes, and errors are reviewed in detail. These reviews help an organization understand the

systematic changes that are required to prevent future errors and harm from occurring. Quality should be measured and reported using key performance indicators. Many hospitals participate in accreditation, a voluntary self-assessment and external review process that determines the organization's level of performance with respect to evidence- and consensus-based standards. For more information, see the *Cancerpedia: Quality* chapter.

Information Management and Privacy

Leadership is responsible for the management of information systems, and for remaining abreast of opportunities for new system development and improved system efficiencies. This includes the management of systems that ensure patient health information is complete, accurate and easily accessible, while maintaining privacy. The management of cybersecurity protects against the loss of sensitive information and intellectual property. It also protects against financial, legal and reputational breaches. [2] For more information, see the *Cancerpedia: Equipment and Technology* and *Cancerpedia: Health Records* chapters.

Regulatory and Legal Management

Cancer centre leadership oversee regulatory and legal functions, often by engaging experts to carry out direct functions. Leadership is responsible for ensuring that the organization complies with all jurisdiction-specific regulatory requirements, which often encompass governance, conduct, infrastructure, professional competency and the protection of information, to name a few. For more information about the regulatory requirements of specific cancer centre services, see the appropriate *Cancerpedia* chapter; for example, cancer centres that provide radiation services are subject to specific regulations with respect to the handling of radioactive materials.

Organizations may have an internal legal counsel to ensure regulations are met, oversee the management of legal issues as they arise and support the management of organizational risk.

Risk and Crisis Management

Both leadership and front line staff must be invested in reducing risks to patients, as well as reputational, legal and financial risks to the organization. Proactively identifying and assessing risks can help organizations develop contingency plans and more effectively manage issues, crises, emergencies or disasters. Furthermore, effective and timely risk mitigation can assuage harm to patients and disruptions in service, as well as threats to the organization.

High-reliability organizations have cultures and processes that reduce incidents (i.e., system failures) and that allow for an effective response when problems do occur. [8] This may include the implementation of a variety of approaches and tools for risk identification and management, including:

- ***Failure mode and effects analysis***, which proactively assesses a current or potential process in terms of the steps that have the greatest likelihood of error and highest negative impact. [9, 10]

- The ***Canadian Incident Analysis Framework***, a resource for those involved in managing, analyzing or learning from patient safety incidents in any healthcare setting.[11]
- The ***Institute for Healthcare Improvement*** *Global Trigger Tool* [12], which uses known triggers or clues to identify adverse events and measure their overall level of harm in a healthcare organization.
- ***Root cause analysis***, a retroactive assessment of an event to determine what happened, why it happened and what can be done to reduce the likelihood of a recurrence. [13]

For more information about methodology for risk and incident prevention and analysis, see the *Cancerpedia: Quality* chapter.

Considerations for adopting a risk management approach include: systems for risk identification; qualitative and quantitative assessments of risk; prevention through pre-planning; risk management education; processes and procedures for timely risk mitigation; structures for risk reporting and evaluation; and the participation of diverse skill sets and professions. [6] [14] For more information about establishing a comprehensive risk management program, see the Healthcare Insurance Reciprocal of Canada's *Integrated Risk Management for Healthcare Organizations: Risk Resource Guide*. [14]

Emergency Preparedness

It is imperative that hospitals develop emergency preparedness plans along with policies and procedures for managing emergencies, which may range from outbreaks to natural disasters. Emergency preparedness planning should address all aspects of emergency response, from clinical service delivery to communication to back office functions. All staff should receive education in emergency preparedness and understand their role in responding to emergency situations. Some organizations participate in emergency simulation, in which an emergency scenario is played out by staff to assess organizational preparedness, identify areas for improvement and adjust emergency management systems. For more information on emergency preparedness measures, see the World Health Organization's *hospital emergency response checklist* [15] and other hospital emergency preparedness publications. [16]

One important aspect of hospital emergency preparedness is an emergency code system. Emergency codes notify hospital staff that there is an event requiring immediate action. Each emergency code correlates to a specific type of emergency (e.g., cardiac arrest, missing patient, fire, infrastructure loss or failure, hazardous spill or leak, disaster, etc.) and helps to relay essential information to hospital staff in a simple and timely manner. Emergency codes are generally announced over the hospital's public address system along with a specific location. All hospital personnel should have a clear understanding of emergency codes and their appropriate responses. Once a code has been managed, hospital staff should be notified that the code has been cleared.

Hospital emergency codes may be colors, numbers or words (e.g., Code Blue, Code 99 or Code Omega), and vary by jurisdiction. For an example, see the Ontario Hospital Association's emergency preparedness tools and resources and Figure 1.[17]

Figure 1: Ontario Hospital Association Emergency Codes[18]

Advocacy and Fundraising

Advocacy is a key function of leadership in all jurisdictions, as funding decisions are typically made by governmental departments that are continually lobbied by all sectors. Advocacy is not only related to funding issues, but also to awareness of population health issues and related policy. For example, many cancer centres advocate for changes in policy related to tobacco, the determinants of health linked to cancer incidence, new technologies and other issues. For more information about advocacy, see the *Cancerpedia: Cancer Control Oversight and Policy* chapter.

Organizational leaders liaise with the external environment, including funders, regulatory bodies, partners, peers, media, government and lobby groups. This liaison function is important, as every interaction presents an opportunity to represent the key values of the organization and drive the organization's agenda forward. For more information about stakeholder relations, see the *Cancerpedia: Communications* chapter.

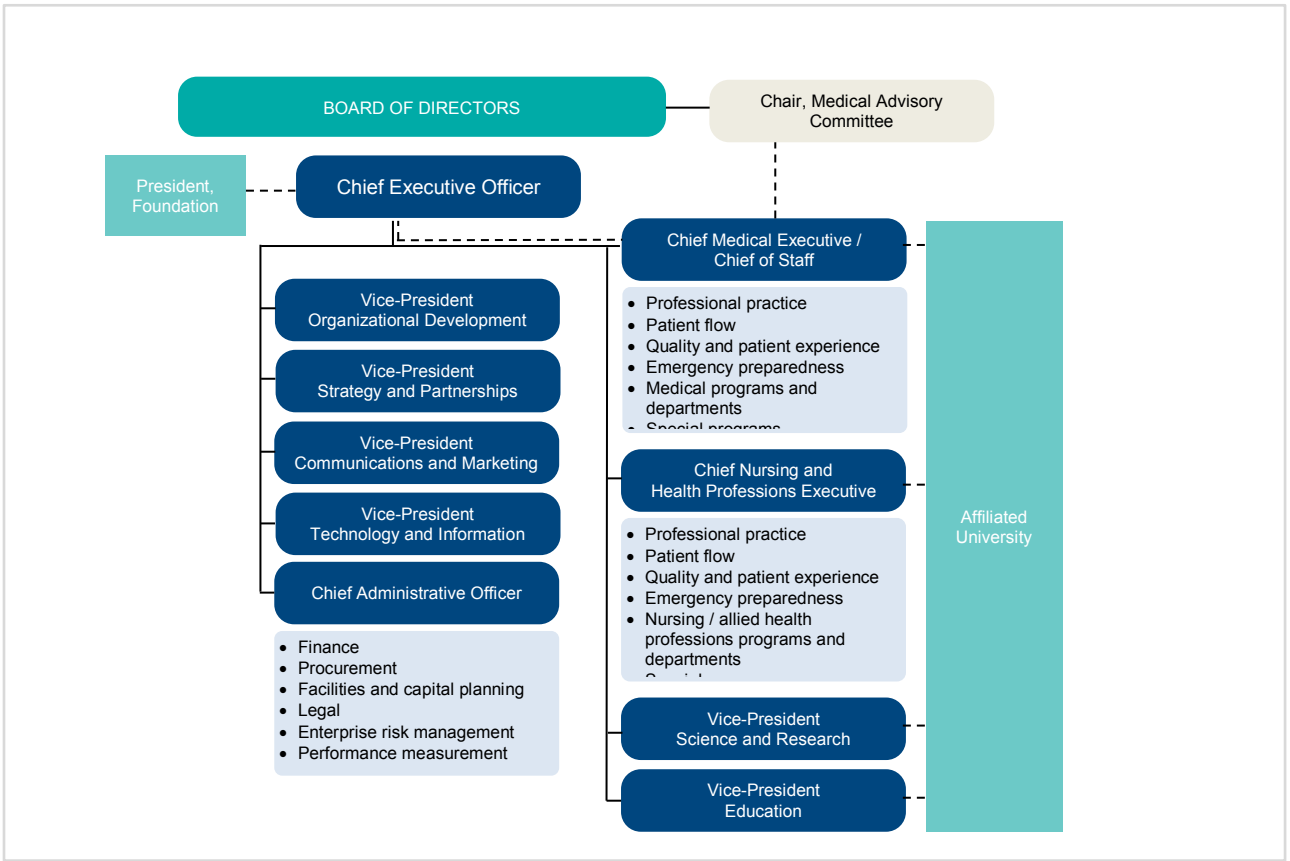
Additional resources beyond the operating budgets provided by governments are often required to develop and maintain a cancer centre. Leaders – and ideally all cancer centre staff – should be engaged in fundraising. For more information about fundraising, see the *Cancerpedia: Philanthropy* chapter.

C. ORGANIZATIONAL STRUCTURE

Organizational structure is a system used to define accountability within an organization. It identifies each organizational role, along with its responsibilities and reporting structure. It also defines how decisions are made and how information should flow between levels of leadership.

There are many types of organizational structure, ranging from centralized structures, in which the decision-making power of an organization is consolidated with senior management, to decentralized structures, in which the decision-making power of an organization is distributed amongst departments with varying degrees of independence. Hospitals typically employ a hybrid structure intended to capitalize on the expertise of a wide range of healthcare professionals and administrative staff who fulfill diverse roles, ranging from direct patient care to facilities management to fundraising. An illustrative example of a cancer centre organizational structure at the executive level is provided in Figure 2. This organizational structure may be used whether the cancer centre is free-standing or part of a larger, full-service healthcare organization. It represents just one example of the various organizational structures employed by cancer centres.

Figure 2: Example of Cancer Centre Executive Team Organizational Structure



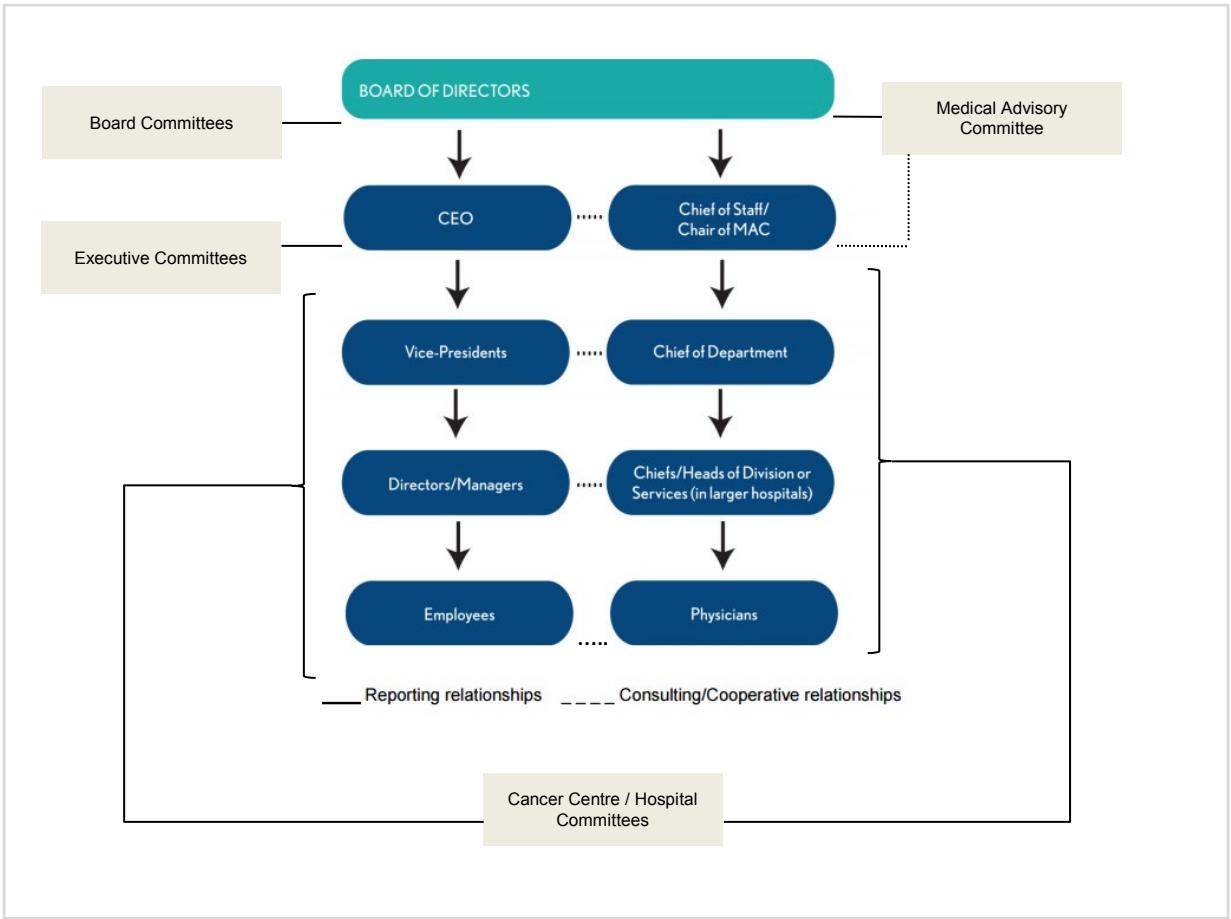
In a cancer centre, front line staff should report to the director/manager/chief/head of their service or clinical practice area. In turn, these leaders should report to the executive team of

the cancer centre or hospital. Medical staff members are represented at the executive level by a chief medical executive or chief of staff, who may also serve as the chair of the Medical Advisory Committee (MAC). The MAC is responsible for developing and managing medical staff regulations and policies. In some hospitals, nursing and allied health professions staff members are represented by a chief nursing and health professions executive. For more information about medical staff management, refer to the *Cancerpedia: Healthcare Team* chapter. All other hospital staff are ultimately accountable to the chief executive officer (CEO), sometimes also called the president or executive director.

The CEO and the chief of staff have complementary roles in running the hospital. In some hospitals, the chief of staff reports to the CEO, in other hospitals both the chief of staff and the CEO report directly to a board of directors. Where a board of directors is not present or feasible, the CEO may assume the role and responsibilities of the chair of the board, with other senior leaders or trusted advisors assuming the roles and responsibilities of other board members. [19]

Figure 3 provides an illustrative example of a cancer centre reporting structure.

Figure 3: Example of Cancer Centre Reporting Structure [20]



Information flows up and down an organizational structure. For more information, see the *Cancerpedia: Communications* chapter. Management and decision-making relating to daily

operations are typically handled at the director/manager/chief/head level, with the input of front line staff. Decision-, risk- and performance-related information is communicated to the executive, and subsequently the board of directors, if relevant. Oversight and decision-making relating to organizational strategy, reputational, legal and financial issues are typically handled by the executive team with the endorsement of the board of directors, and communicated to directors/managers/chiefs/heads and subsequently front line staff. Many decisions require the co-operation of clinical and administrative staff. Committees support the gathering of a range of expertise to focus on a specific task or issue. Hospital committees bring together department/program-level leadership and staff for issues ranging from data management to ethics to diversity, to name a few. It is typical for board members or senior leadership to sit on committees relating to governance, management of resources, finances, master planning, quality and patient safety, and human resources.

Cancer centres organize their leadership structure by service (e.g. medical imaging, laboratory medicine and pathology, surgical oncology, radiation oncology, medical oncology, pharmacy, human resources, facilities, communication, etc.) and by disease site (e.g., breast, gastrointestinal, genitourinary, etc.). Most have a matrix structure, where employees have dual reporting relationships to a functional area and a programmatic area; in these cases, effective communication and integration between areas is imperative. Regardless of the form it takes, organizational structure should always be designed to enable leadership and staff to meet the mission of the organization through day-to-day operations.

For more information about the roles, responsibilities and reporting relationships of specific professionals, see the appropriate *Cancerpedia* chapter.

D. ROLES

1. MANAGEMENT

Executive leadership is led by a CEO, president or executive director. This leader usually determines an appropriate organizational structure and is responsible for hiring senior staff, setting expectations and evaluating staff performance. It also includes a chief of staff, who is ultimately accountable for all medical appointees at the hospital.

Management is provided by senior staff. Dependent on the role, management may be responsible for the effective operations of a unit of business (e.g., an inpatient unit, a laboratory), or may oversee others who are responsible for the effective operations a program of care (e.g., surgical oncology). Managers usually have a professional education and background in medicine, nursing, or another clinical area or specialty (e.g., information management, finance, business) related to their portfolio. They have an important role in linking day-to-day operations with the overall strategy, mission and vision of the organization.

Management's major responsibilities include the following.

- Developing the organization's strategic plan in conjunction with the board of directors, and proceeding to implement this plan with board oversight.

- Managing the daily operations of the organization efficiently and effectively, including all services, programs, finances, human resources, physical facilities, etc.
- Meeting all fiduciary, regulatory and legal responsibilities.
- Establishing operating policies and procedures to manage risk, ensure quality, support privacy and confidentiality, provide a safe and healthy workplace, ensure sound financial practices, etc.
- Tracking the organization's performance and addressing issues.
- Overseeing stakeholder and public relations.

2. The Board of Directors

The board of directors is an independent body that oversees the strategy, accountability and transparency of an organization. Board members are typically appointed to bring diversity and balance to the leadership of a cancer centre. They may be influential advocates, and typically offer a wealth of knowledge and expertise through their experience and networks. Boards usually establish a small number of subcommittees that focus on particular areas of governance and make recommendations. The board of directors must also establish policies for its own effective membership, functioning and renewal. [21]

The major responsibilities of the board of directors include the following. In situations where a board of directors does not exist, executive leadership carries out these functions.

- In conjunction with management, setting a clear strategy for the organization, which includes its vision, mission, values and high-level strategic goals and directions.
- Approving key policies to guide the organization's operations (e.g., safety and quality, risk management, financial stewardship).
- Selecting, evaluating and overseeing the performance of the organization's CEO.
- Overseeing the performance of the organization in relation to achieving the strategy approved by the board.
- Ensuring the organization complies with its regulatory and legal responsibilities.
- Ensuring that risks are appropriately mitigated.

E. ENABLERS

3. Role Clarity

The delineation of roles for individuals and between clinical and administrative leaders is critical to creating accountability and proper oversight in the day-to-day operations of the cancer centre. All personnel – regardless of their working arrangement with the hospital – should be given a detailed job description that outlines clear roles, responsibilities and reporting relationships. A responsibility assignment matrix (i.e., a RACI Matrix that identifies those who are responsible, accountable, consulted and informed) can be helpful. [22] For more information about supports and best practices relating to human resources, see the *Cancerpedia: Human Resources* chapter.

4. Policies, Processes and Procedures

Policies, processes and procedures reflect different and interconnected levels of activity.

- Policies are the standards and guidelines that govern how the cancer centre operates. The cancer centre's operating policies should reflect accreditation operating standards and guidelines.
- Processes set out what the cancer centre will do to achieve its policies. Processes usually identify who is responsible for performing the process (e.g., department), and the major functions or tasks that will be performed. Processes are high-level actions that drive specific procedures.
- Procedures identify the specific steps that will be taken to perform a task, how they will be done, by whom and when.

Cancer centres must establish policies, processes and procedures and make these readily available to all staff and medical appointees, along with training, as required. Standard operating procedures (SOPs) should be regularly assessed for their ongoing relevance and effectiveness (i.e., annually, at a minimum), and updated as appropriate. Document control is critical to ensure that the most updated versions of policies, processes and procedures are being used. An electronic system is preferable as the number of SOPs increases.

A framework for operational policy can be found in *District Health Facilities: Guidelines for Development & Operations*. [6]

5. Behaviours

Leadership has no simple definition; it is multi-faceted and made up of a variety of skills and competencies. Leaders create change, make courageous decisions and transform the status quo by inspiring and motivating others to achieve goals that move an organization towards its vision for the future. [23, 24] To be a successful leader, individuals must be aware of their own strengths and weaknesses. The concept of emotional intelligence (EI) describes an ability to identify, discriminate between and use one's own and others' feelings to guide thoughts and actions. Studies show that EI is a better indicator of leadership potential than standard measurements, such as the intelligence quotient (IQ).

There are a variety of tools and resources available to better understand individual thinking styles and behaviors, and how they may influence leadership approaches, including:

- The Myers-Briggs Type Indicator® [25]
- The CliftonStrengths assessment [26]
- Insights Discovery [27]

6. Planning

The leadership team must establish a clear ***vision*** – or long-term aspiration – for the organization that focuses on patients, demonstrates organizational values and sets high expectations for the future. [2] The vision is essential, as it serves as an anchor for the organization and provides a focus for a large and disparate workforce.

A ***strategic plan*** defines the mission, values, goals and objectives of the organization. The mission refers to how the organization will achieve its desired future state and describes what the organization is attempting to accomplish. Values are the core beliefs and guiding principles of an organization. Goals are the outcomes, performance levels or desired future conditions that an organization would like to attain as part of its strategy. Finally, objectives describe the actions and timelines required to achieve goals. The elements of the strategic plan should balance the needs of all stakeholders. [2]

A robust strategic plan for a cancer centre must consider the following:

- Trends in the external environment, including political, environmental, social, technological, demographic and global factors
- The organization's strengths, weaknesses, opportunities and threats, with a particular focus on current state and capacity
- The population to be served, including current and future estimates, and its catchment area, which may vary depending on the specialized nature of cancer services; for example, a catchment area may be local for more common procedures and regional or subnational for more specialized procedures
- The centre's utilization profile or demand for service
- The role of the centre in providing services in relation to other service providers (e.g., other hospitals, community-based care providers)
- The model of care (e.g., inpatient, outpatient, collaborative partnerships, telehealth), the scope and extent of cancer services to be provided and the estimated activity for each service (i.e., projected number of patients by type of service and delivery method)
- The staff required to support the centre
- Alignment with national and subnational cancer plans and priorities for cancer services
- The resources required to achieve the goals and objectives of the plan (e.g., facilities, equipment, financial)

Alignment between strategy and operations is imperative to the delivery of high-quality services.
Organization-wide operating plans are often established on an annual basis to identify specific initiatives and budgets that support the objectives of the strategic plan. Planning is also necessary and useful at the program or department level. Program-level plans should offer a detailed and tactical view of the activities planned for a specific area or service, and should visibly indicate the alignment of these activities to the organization's overarching operating and strategic plans. This approach provides front line staff with a clear sense of how their roles and responsibilities contribute to both program-level goals and larger, organization-wide goals.

Leadership should always consider plan alignment, performance measurement data, service-level metrics, financial data and human resources when making decisions. In addition, special consideration should be given to dependencies when considering expansions or reductions in service, to ensure that appropriate supports are scaled proportionately; for example, an expansion of treatment services should take into account a need for increased imaging and/or laboratory services capacity. For more information about planning, see the *Baldrige Excellence Framework (Health Care)*. [2]

7. Continuous Improvement

Although planning is key to guiding an organization towards the achievement of its vision, it is also the role of leadership to respond to changes in the environment, mitigate risks and capitalize on opportunities. Leaders are responsible for adjusting course, when required, and must be able to leverage business intelligence to make decisions on a daily basis. In this way, strategy permeates every aspect of decision-making at the leadership level and is not accomplished only through the formal process of planning.

Building strong qualitative and quantitative metrics around the strategic plan enables effective measurement and benchmarking. Some organizations use a balanced scorecard tool to track progress and ensure the organization is succeeding against its goals. Scorecards, along with action plans, can help translate the strategy into operations and support the effective design, management and improvement of organizational services and work processes. [28]

The use of process improvement methodology is a major tactic for improving operational quality and efficiency. One common approach is lean methodology, which was pioneered by Toyota and has since been adopted by the manufacturing, service and healthcare industries. Using this approach, front line staff use a structured process to define value, map activities, and identify and remove unnecessary steps in their work. [29] A second common approach is Six Sigma, which was pioneered by Motorola and has also been adopted by other industries, including healthcare. Six Sigma uses quantified value targets and identifies and removes the cause of defects or errors to eliminate issues and minimize variability. [30] Aspects of both approaches can be used for quality improvements. [31]

An effective method for managing resources to achieve identified goals and ensure constant quality improvement is the Plan-Do-Study-Act or PDSA cycle, as illustrated in Figure 4. [32]

Figure 4: PDSA Cycle [32]

The plan step involves identifying a goal and defining its success metrics. It is followed by the do step, in which the plan is implemented. In the study step, outcomes are monitored to indicate success or failure. The act step is the final step in the cycle, and integrates the

learning generated by the entire process to adjust or change the goal or method, or even reformulate the plan. The PDSA cycle can be applied to all operational leadership functions.

For information about additional quality improvement frameworks, see the *Cancerpedia: Quality* chapter.

F. STANDARDS, GUIDELINES AND BEST PRACTICES

8. STANDARDS AND GUIDELINES

Cancer centres must meet accreditation operating standards and guidelines that have been established by their national accreditation body. [33] Many countries have health service accreditation programs, whereas others adopt or adapt the programs of other countries. Accreditation standards and guidelines for cancer centres set out operational requirements to support safe and effective services.

Accreditation agencies and organizations that focus on governance and management provide valuable information, advice and assistance to hospital leaders. For example:

- The American Hospital Association's Center for Healthcare Governance [34] is a membership-based organization that advances excellence, innovation and accountability in healthcare governance. The center has education events and an extensive resource repository.
- The Australian Institute of Company Directors is a membership-based organization that offers education events and an extensive resource centre. [35]
- The Baldrige Program [36], based in the United States, provides organizational assessment tools and criteria, and educates leaders in various sectors – including healthcare – about the practices of best-in-class organizations. The program focuses on performance excellence in leadership, strategic planning, customers, the workforce, operations, results and measurement, and analysis and knowledge management. The *Baldrige Excellence Framework (Health Care)* and its criteria are used by organizations primarily engaged in directly providing medical, surgical or other health services. [2]
- Accreditation Canada's Health and Social Service Standards [37] provide governance standards that address the board of directors' roles and responsibilities, as well as leadership standards that address leadership functions across all levels of the organization. These standards are part of Accreditation Canada's health facility accreditation process.
- The Joint Commission in the United States provides leadership accreditation standards for the governing body, the chief executive officer and other senior managers, as well as the leaders of licensed independent practitioners. [38]
- The Institute for Healthcare Improvement offers many resources and professional development opportunities to support improvements in healthcare worldwide. [39]
- The American College of Healthcare Executives is an international professional society of health executives with a mission to advance healthcare management excellence. [40] It provides access to career development, education and networking for healthcare managers and leaders.
- The Canadian College of Healthcare Leaders is an association dedicated to ensuring the health system benefits from capable, competent and effective leadership. [41]

For a list of healthcare accreditation bodies, see the International Society for Quality in Health Care. [42] For more information about healthcare accreditation bodies associated with specific cancer centre services, see the appropriate *Cancerpedia* chapter.

9. Best Practices

The effective leadership of a cancer centre is supported by a number of best practices. The best practices below assume that the organization is governed by a board of directors; however, if no board of directors exists, these best practices can apply to whomever takes on the role of governance in the cancer centre.

Key governance best practices include the following: [34, 35, 43-45]

- Establishing and understanding the roles and accountabilities of governance. This includes being clear about the difference between governance and management.
- Clarifying the roles and accountabilities of the board of directors as governors of a healthcare organization or cancer centre located within a certain jurisdiction.
- Clarifying the roles and responsibilities of subcommittees and individual directors with respect to accountability and authority, confidentiality, conflicts of interest, competencies, participation at board meetings and in board education, etc.
- Establishing policies and procedures for board functions, such as board size and composition, recruitment, attendance, performance evaluation, participation of management, orientation and development.
- Establishing board committees to support the board's functions.
- Developing processes to support the smooth functioning of the board, and to ensure it meets its accountabilities.

Key management best practices include the following:

- Developing an organizational structure and management systems that support the operations of the hospital or cancer centre, including the assignment of key leadership positions and functions (e.g., for programs, quality and safety, finance, human resources, education, research, information management, communication) and the identification of roles, responsibilities and accountabilities for each position and function.
- Selecting highly-qualified individuals for management positions, establishing expectations, and regularly evaluating, improving and rewarding performance.
- Developing and implementing annual operating plans to support the delivery of the organization's strategic goals and directions, informed by the input of internal and external stakeholders.
- Establishing operating procedures for the efficient and effective delivery of hospital activities, including the delivery of clinical services and programs and all support services, in keeping with the hospital's vision and values.
- Developing information management systems and procedures to track performance, and identifying and addressing areas for improvement.
- Establishing systems and procedures for human resource recruitment, retention, talent development, and performance evaluation and improvement.

- Establishing cultures, systems and procedures to enable patient-centred care, foster quality, manage risk, and support privacy and confidentiality.
- Developing a safe and healthy hospital environment, which includes high-quality care, a safe workplace and a positive work-life culture.
- Keeping current about the hospital's external environment and capitalizing on the opportunities it presents (e.g., government legislation and policy, health needs of the communities served, healthcare partnerships with other providers).
- Meeting all fiduciary, regulatory and legal responsibilities.
- Establishing a process for regular reporting to the board of directors.

G. THE FUTURE

Disruptive and emerging technologies are reshaping the way healthcare is delivered, and leaders must ensure that their organizations continue to look towards the future while using evolving technology to improve performance and create value. The leadership systems of the future will need to be nimble and adaptable to address the transformational changes occurring across all industries and disciplines. Examples of some trends and innovations to consider are presented below.

Teamwork and Joint Decision-Making

Teams offer the promise to improve systems through their collective intelligence. A group of professionals offers a "variety of knowledge in order to make decisions, solve problems, generate ideas, and execute tasks more effectively and efficiently than any individual working alone." [22] Increasingly, cancer centres are empowering individuals to work together across disciplines, professions and settings of care. For more information about the benefits of high-functioning teams, visit *the* *Cancerpedia: Healthcare Team* chapter.

To support teamwork, multidisciplinary/interprofessional education must be recognized, promoted and developed as part of the cancer centre's formal health professions, continuing education and professional development training. For more information, see the *Cancerpedia: Education* chapter.

A number of quality practices and tools can also help to support effective clinical management and integration through multidisciplinary/interprofessional care. For more information, see the *Cancerpedia: Clinical Management* chapter.

Meta-Leadership

A meta-leader is a leader of leaders who can mobilize people to collaborate in times of crisis, and across different organizations and sectors. Meta-leadership is a framework for strategically linking the efforts of different organizations to provide guidance, direction and momentum across organizational lines. The five dimensions of meta-leadership and more information on this leadership framework can be found through the National Preparedness Leadership Initiative. [46]

Business Intelligence

Business intelligence refers to collecting, mining and analyzing retrospective data to help guide business decisions. As healthcare organizations shift towards data-driven improvements and cost reductions, gathering business intelligence will become increasingly important to help inform strategic and operational decision-making. For more information on the use of business intelligence in healthcare, refer to *Understanding business intelligence in the context of healthcare*. [47]

Data Science

Data-driven organizations are shifting focus from traditional business intelligence to data science to make predictions about the future. While business intelligence looks back at real data from real events, data science uses predictive analytics to provide real time insights about the future. Using algorithm-driven solutions, data science can ultimately drive greater business value and enable more informed decision-making. Artificial intelligence will further accelerate the potential of this field. For a better understanding of the use of data science, refer to *How Data Science is Transforming Health Care*. [48]

Strategic Foresight

Strategic foresight is a discipline related to the study of the future. It is a planning-oriented approach that uses inputs, forecasts, possible or alternate futures, analysis and feedback to offer insights to decision-makers that help guide strategy. The Institute for Alternative Futures offers various examples of the use of strategic foresight in healthcare. [49]

The Fourth Industrial Revolution

The Fourth Industrial Revolution (4IR) is the fourth major industrial era, building on the digital revolution of the Third Industrial Revolution that started in the 1980s. 4IR will impact all disciplines, economies and industries through the fusion of the physical, digital and biological spheres. It is bringing about a complete transformation of the way we live and work, through the use of technologies like artificial intelligence, next-generation genomics, blockchain, the Internet of things (IoT), robotics, nanotechnology and 3D printing. Organizations and leaders must be prepared for the dramatic shifts that will come with this new revolution. For more information, refer to *The Fourth Industrial Revolution*. [50]

H. SUGGESTED READING

- Barnas K, Toussaint J. Beyond Heroes: A Lean Management System for Healthcare. Appleton (WI): ThedaCare Centre for Healthcare Value; 2014.
- Fried BJ, Fottler MD. Human Resources in Healthcare: Managing for Success (Third Edition). Chicago (IL): Health Administration Press; 2008.
- Horsburgh A. Dollars & $ense in Healthcare. Altona (MB): Friesens; 2014.
- Kaplan RS, Norton DP. Strategy Maps: Converting Intangible Assets into Tangible Outcomes. Boston (MA): Harvard Business Press; 2004.
- Kaplan RS, Norton DP. The Balanced Scorecard: Translating Strategy into Action. Boston (MA): Harvard Business Press; 1996.
- Sinek, S. Start With Why: How Great Leaders Inspire Everyone to Take Action. New York (NY): Penguin Group; 2009.

I. REFERENCES

1. Tricker R. Pocket director: essentials of corporate governance from A-Z. London: Economist Books; 1998.
2. 2017-18 Baldrige Excellence Framework (Health Care) Gaithersberg, MD and Boulder, CO: National Institute of Standards and Technology; [cited 2018 Feburary 21]. Available from: https://www.nist.gov/baldrige/publications/baldrige-excellence-framework/health-care.
3. Canadian Health Accreditation report: quality starts at the top –the pivotal role of the governing body. Ottawa, ON: Accreditation Canada; 2011.
4. Carter K DS, Layton D. Why hospital management matters. London: McKinsey and Company; 2011.
5. Travis P ED, Davies P, Mechbal A. Towards better stewardship: concepts and critical issues. Geneva: World Health Organization; 2002.
6. District health facilities: guidelines for development & operations. Regional Office for the Western Pacific World Health Organization; 1998.
7. Institute of Medicine. Delivering high-quality cancer care: charting a new course for a system in crisis. Levit LA, Balogh EP, Nass SJ, Ganz PA, editors. Washington, DC: The National Academies Press; 2013. 412 p.
8. Weick KE SK. Managing the unexpected: assuring high performance in an age of complexity. San Francisco: Jossey-Bass; 2001.
9. Failure mode and effects analysis (FMEA) Toronto, ON: Institute for Safe Medication Practices Canada; [cited 2018 January 5]. Available from: https://www.ismp-canada.org/fmea.htm.
10. Failure Mode and Effects Analysis (FMEA) Horsham, PA: Institute for Safe Medication Practices; 2011 [cited 2018 January 5]. Available from: http://www.ismp.org/tools/FMEA.asp
11. Canadian incident analysis framework Edmonton, AB: Canadian Patient Safety Institute; 2012 [cited 2017 April 3]. Available from: http://www.patientsafetyinstitute.ca/en/toolsResources/IncidentAnalysis/Documents/Canadian%20Incident%20Analysis%20Framework.PDF.
12. IHI global trigger tool for measuring adverse events Boston, MA: Institute for Healthcare Improvement.
13. Greenall J SJ. Medication safety alerts. Root cause analysis: learning from adverse events and near misses. Canadian Journal of Hospital Pharmacy. 2006;59(1):34-6.
14. Partnering to create the safest healthcare system: HIROC; [Available from: https://www.hiroc.com/getmedia/20b25ea7-923f-4f88-bdae-97368b812eea/HIROC-IRM-.
15. Hospital Emergency Response Checklist. World Health Organization; 2011.
16. Hospital Emergency Preparedness: World Health Organization; [Available from: http://www.euro.who.int/en/health-topics/emergencies/disaster-preparedness-and-response/publications/hospital-emergency-preparedness.
17. Tools and resources Toronto, ON: Ontario Hospital Association; [cited 2018 February 21]. Available from: https://www.oha.com/labour-relations-and-human-resources/emergency-preparedness/tools-and-resources.
18. Emergency Management Toolkit: Developing a sustainable emergency management program for hospitals. Ontario Hospital Association; 2008. Contract No.: No.327.

19. Aseweh Abor P, Abekah-Nkrumah G, Abor J. An examination of hospital governance in Ghana. Leadership in Health Services. 2008;21(1):47-60.
20. Ahlin J. Governance Structure of Hospitals. Ontario Medical Students Association.
21. M R. Nonprofit boards that work, the end of one-size-fits-all governance. 2001.
22. Understand Responsibility Assignment Matrix (RACI Matrix) Project-Management.com; [cited 2018 February 21]. Available from: https://project-management.com/understanding-responsibility-assignment-matrix-raci-matrix/
23. Osborne C. Leadership – inspiring, empowering, supporting. New York, NY: Penguin Random House; 2015.
24. Leadership behaviours that count (and can benefit all organizations) Gaithersberg, MD and Boulder, CO: National Institute of Standards and Technology; 2015 [cited 2018 February 21]. Available from: https://www.nist.gov/baldrige/leadership-behaviors-count-and-can-benefit-all-organizations.
25. My MBTI Personality Type Gainsville, FL: The Myers & Briggs Foundation; [cited 2018 April 17]. Available from: http://www.myersbriggs.org/my-mbti-personality-type/.
26. CliftonStrengths Washington, DC: Gallup; [cited 2018 February 21]. Available from: https://www.gallupstrengthscenter.com/home/en-us/strengthsfinder?utm_source=strengthsfinder&utm_campaign=coming_soon&utm_mediu m=redirect
27. Insights discovery Dundee: Insights; [cited 2018 February 21]. Available from: https://www.insights.com/products/insights-discovery/.
28. Kaplan RS ND. Using the balanced scorecard as a strategic management system. Harvard Business Review. 2007.
29. Fine B, Golden B, Hannam R, Morra D. Leading lean: a Canadian healthcare leader's guide. Healthcare Quarterly. 2009;12(3):32-41.
30. Antony J, Banuelas R. Key ingredients for the effective implementation of six sigma program. Measuring Business Excellence. 2002;6(4):20-7.
31. de Koning H, Verver JPS, van den Heuvel J, Bisgaard S, Does RJMM. Lean six sigma in healthcare. Journal For Healthcare Quality. 2006;28(2):4-11.
32. W. Edwards Deming. The New Economics for Industry, Government, Education, 3rd Edition, published by The MIT Press.Available from: https://deming.org/explore/p-d-s-a.
33. Econex. Accreditation of healthcare providers. 2010.
34. AHA Trustee Services Chicago, IL: American Hospital Association Center for Healthcare Governance; [cited 2018 February 21]. Available from: http://trustees.aha.org.
35. AICD: Australian Institute of Company Directors; [updated 2019. Available from: http://aicd.companydirectors.com.au/.
36. About Baldrige Gaithersberg, MD and Boulder, CO: National Institute of Standards and Technology; [cited 2018 April 17]. Available from: https://www.nist.gov/baldrige/how-baldrige-works/about-baldrige
37. Health and social services standards Ottawa, ON: Accreditation Canada; [cited 2018 January 5]. Available from: https://accreditation.ca/standards/.
38. Schyve P. Leadership in healthcare organizations: a guide to joint commission leadership standards. San Diego: The Governance Institute 2009.
39. Institute for Healthcare Improvement Boston, MA: Institute for Healthcare Improvement [cited 2018 April 17]. Available from: http://www.ihi.org.

40. American College of Healthcare Executives Chicago, IL: American College of Healthcare Executives; [cited 2018 April 17]. Available from: http://www.ache.org.
41. Canadian College of Healthcare Leaders Ottawa, ON: Canadian College of Healthcare Leaders [cited 2018 April 17]. Available from: http://www.cchl-ccls.ca.
42. The International Society for Quality in Health Care Dublin: The International Society for Quality in Health Care; [cited 2018 January 5]. Available from: https://isqua.org/membership/institutional-members.
43. Accreditation Canada Ottawa, ON: Accreditation Canada; [cited 2018 April 3]. Available from: https://accreditation.ca.
44. Quigley MA SG. Hospital governance and accountability in Ontario. 2004.
45. The Governance Centre of Excellence Toronto, ON: Ontario Hospital Association; 2014 [cited 2018 February 21]. Available from: https://www.thegce.ca/ABOUTUS/Pages/default.aspx.
46. National preparedness leadership initiative Boston: Harvard University; [cited 2018 February 21]. Available from: https://npli.sph.harvard.edu/meta-leadership/
47. Mettler T VV. Understanding business intelligence in the context of healthcare. Health Informatics Journal. 2009;15(3):254-64.
48. How data science is transforming health care Sebstopol, CA: O'Reilly; [cited 2018 April 17]. Available from: http://www.oreilly.com/data/free/how-data-science-is-transforming-health-care.csp.
49. Institute for Alternative Futures Alexandria, VA: Institute for Alternative Futures [cited 2018 February 21]. Available from: http://www.altfutures.org.
50. Schwab K. The fourth industrial revolution. New York, NY: Crown Business; 2016.

