Continuing her analysis, Ashley begins to consider the organization's weaknesses. She believes the organization's main weakness is its limited experience providing care to a broad range of patients, but she knows C&A has other weaknesses as well. She and Craig need to make a decision about how to expand, but she wants to make sure they choose the most appropriate alternative for C&A.

Case Questions

1. Choose a city to be C&A's location, and complete a brief SWOT analysis (i.e., an analysis of strengths, weaknesses, opportunities, and threats) for the agency. Use the information presented in the case and any relevant outside sources.
2. Of the questions that came to mind while you were completing the SWOT analysis, which were you unable to answer based on the information presented in the case? Make a list of those questions.
3. What expansion alternative do you recommend for C&A Home Health?
4. What are the dangers associated with business size? Can a home health agency be too small or too large?

Reference

National Association for Home Care and Hospice. 2010. "Basic Statistics about Home Care." Accessed March 10. www.nahc.org/assets/1/7/10hc_stats.pdf

CASE 43

Should XYZ Healthcare Organization Make the Baldrige Journey?

John R. Griffith

Sarah Cho is an administrative fellow at XYZ—a large healthcare organization (HCO) that operates three inpatient sites and extensive outpatient, rehabilitation, and home care services—and the organization's chief operating officer (COO) has just asked her to investigate what would be involved if XYZ were to consider the "Baldrige journey." Sarah gathers whatever

information she can find on the Internet and in the literature, and she outlines the basics:

- The Baldrige program is run by a federal agency and a voluntary consortium, with programs in most states.
- Healthcare winners generally perform at top-quartile levels or better on a "balanced scorecard" of quality, patient satisfaction, worker satisfaction, and financial performance.
- Winners pursue multiple rounds of annual applications—collectively known as the "journey"—which seems to take several years. Clearly, an HCO can go part of the way and then quit, but nothing is published about anybody but winners.
- The winners' documentation is available on the program's website (at http://patapsco.nist.gov/Award_Recipients/index.cfm). The 2015 winner, Charleston Area Medical Center (CAMC), provided a clear but challenging roadmap. It is 55 pages long and hard to read.
- The Baldrige Framework provides a set of questions to prompt in-depth study of work processes. Applications must follow the Framework. The Baldrige website provides descriptive advice and encouragement.
- The Baldrige Framework specifies 11 core values and concepts (Baldrige Performance Excellence Program 2017, iii):
  - Systems perspective
  - Visionary leadership
  - Customer-focused excellence
  - Valuing people
  - Organizational learning and agility
  - Focus on success
  - Managing for innovation
  - Management by fact
  - Societal responsibility
  - Ethics and transparency
  - Delivering value and results
- These core values drive the Framework's six process categories—leadership; strategy; customers; measurement, analysis, and knowledge management; workforce; and operations—which in turn drive a results category (Baldrige Performance Excellence Program 2017, ii).
- Healthcare winners have similarities in their model for high-performance HCOs. The model has about eight components, divided between continuous improvement activities and a "servant leadership" culture. The model is not traditional, and it is not simple.

- One article (Griffith 2015) suggests that, although the model adds to some costs, it is cost effective overall and tends to pay for itself in early years. Much of the return on investment is in reduced cost of care. Individual patients are treated better, faster, and cheaper.

Reflecting on what she has learned, Sarah notes to herself that Baldrige seems like a good idea but that it involves a lot of hard work. XYZ's COO obviously thinks the idea merits further study. Sarah notes that XYZ has similarities to CAMC, the 2015 winner. She feels that if she and the rest of XYZ's team studied the model and the way CAMC implemented it, they would have enough information to decide whether to apply and whether to make the journey. Sarah begins outlining a shorter version of CAMC's Baldrige documentation to help the team better understand both the model and the journey.

Condensed Description of Charleston Area Medical Center (CAMC), Based on Their 2015 Baldrige Application Summary

This section includes excerpts from CAMC's (2015) Baldrige application summary. The application includes an organizational profile and a description of achievements and improvements across seven categories: (1) leadership; (2) strategy; (3) customers; (4) measurement, analysis, and knowledge management; (5) workforce; (6) operations; and (7) results.

Organizational Profile

CAMC is a $900-million teaching healthcare organization in West Virginia. Its 4 inpatient and 34 outpatient sites provide more than half the care in its county and a substantial fraction of all the care in the state. It employs 2,000 nurses and 5,000 other employees. It has 800 affiliated physicians, including 160 medical residents. It has not-for-profit governance with a 17-member board. It identifies West Virginia University–Charleston and several critical suppliers as key partners.

CAMC's (2015, ii) mission is "Striving to provide the best health care to every patient, every day." Its vision is to be recognized as the following:

- BEST place to receive patient-centered care
- BEST place to work
- BEST place to practice medicine
- BEST place to learn
- BEST place to refer patients

CAMC's values are quality, service with compassion, respect, integrity, stewardship, and safety, and its core competency is "Improving the health and economics of our community." CAMC (2015, i) has an explicit strategy to "Grow Our Own" professional and nonprofessional workforce.

CAMC operates in a rural, economically challenged state with a declining population, and less than half of the residents are employed. The CAMC (2015, i–ii) application states:

> [CAMC seeks] to not only deliver the BEST care to our patients but also to increase our competitive advantage as a low cost provider in the region. . . . [W]e expect to achieve an annual $10 million reduction in our costs, resulting in cost reduction of $155 million since 2002. We are also . . . using a holistic sustainability model that helps us to ensure we can deliver on our mission and create success now and in the future.

As a regional referral center, CAMC has expanded its services to West Virginia critical access hospitals, health departments, and other rural care sites, providing telemedicine, creating a Partners in Health Network, and leading a Coalition for Community Health in its home county.

In 2014, CAMC (2015, iii) changed its accrediting body to Det Norske Veritas and Germanischer Lloyd Healthcare (DNV) "because the DNV accreditation is: 1) process driven, 2) uses the ISO 9001 methodology, and 3) is better aligned with our Baldrige performance improvement journey." It also deliberately enhanced its benchmarking and best-practice intelligence. The application states (CAMC 2015, v):

> CAMC is a founding member of QUEST, a Premier and IHI [Institute for Healthcare Improvement] national hospital collaborative, comprised of a subset of 350 high performing hospitals that submit detailed comparative information. . . . QUEST provides national benchmarks based on the top decile and top quartile performance of organizations shown to outperform most U.S. hospitals.

Category 7: Results

Results are the focus of the seventh category in the Baldrige application, but for the purposes of this discussion, we will address them first. CAMC reports extensively on results, in response to the emphasis on results in the Baldrige scoring system. Within the results category, the scoring system puts 120 points on clinical outcomes and 330 points on other areas; thus, results account for a total of 450 of the system's 1,000 points. Of the other six categories, the only one weighted over 100 is Category 1, leadership, with 120.

Clinical Care

Outcomes

CAMC (2015) uses benchmarks and competitor data from several national companies. According to its application, CAMC ranks in the top decile in aggregate inpatient patient safety, complications, and mortality, and it ranks as "better than expected" on 13 relatively common inpatient diagnoses. The overall rankings are supported by details in the areas of heart failure mortality, orthopedic and neurological trauma, and obstetrics/gynecology mortality. CAMC claims to be West Virginia's leader in preventing avoidable readmissions. CAMC has reduced urinary tract infections in pediatric patients in the intensive care unit to 0 over the course of 2.5 years. It has approached 90 percent on breastfeeding in maternity care settings, substantially above local and national averages. It has reduced central line infections in trauma cases to 0 since January 2014. On the potentially avoidable admissions rate, a commercially prepared analysis, CAMC reports that it is substantially better than its competitors and national medians. CAMC's overall readmission rate is in the top quartile as reported by Premier.

Processes

CAMC (2015) is top decile in most Centers for Medicare & Medicaid Services (CMS) measures. It claims 100 percent compliance on children's asthma treatment and "outperforms local competitors" on mammogram follow-up (CAMC 2015, 35). It exceeds guidelines for stroke anticlotting response and College of Surgeons standards for trauma response. CAMC has "sustained high performance" in starting treatment for Priority 1 Trauma. It has pushed inpatient medication accuracy checking to over 98 percent, which it claims is benchmark. It has reduced blood transfusion by one third. Oxygenation of premature infants has dropped from 40 percent to 20 percent in eight years, surpassing national averages. CAMC has reduced positive tests for bacteria after cleaning to less than a third of its 2012 values, better than recommended standards. Outpatient medication records are 100 percent reconciled and 100 percent provided to patients. CAMC is top decile in meeting standards for disseminating critical lab results. It has achieved 100 percent full documentation of chemotherapy plans. The emergency department lab and X-ray reporting times exceed standards. CAMC has increased postdischarge primary care appointments to near 90 percent.

Structural Quality Measures

CAMC (2015) exceeds standards on all types of emergency drills. It surpasses network suppliers' standards on system availability and on help desk and problem resolution. Inventory turnover exceeds benchmarks; supply failures are near zero. CAMC's facilities management costs were reduced 8 percent in 2013 and 11 percent in 2014.

Patient Satisfaction

CAMC's (2015) overall inpatient satisfaction is less than top quartile, although it is better than that of the organization's competitors. (Many Baldrige winners are top decile.) CAMC identified physician and nurse attitudes as an opportunity for improvement (OFI). Some of CAMC's Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measures were near top decile. Nurse–patient communication remains less than top quartile, but the organization has reached top decile in discharge information communication.

Outpatient satisfaction is near top decile, although OFIs are reported in communication, courtesy, and physician contact time. Emergency satisfaction has risen to levels equal to those of other Baldrige recipients. Emergency "loyalty" is top decile. CAMC has a strong following on social media, and it has successfully marketed several specialty services. CAMC claims that it is the community leader in name recognition and perception of quality.

Workforce Management

CAMC (2015) has about 11 percent overall turnover and 9 percent nursing turnover per year. They are top decile in time to fill, with only 20 days for nursing vacancies. They operate substantially better than Occupational Safety and Health Administration (OSHA) standards on injuries and return to work.

CAMC (2015) maintains 100 percent continuing education compliance for both physicians and nurses. Employee survey questions on patient focus, respect for management, loyalty, and overall satisfaction show CAMC near top decile in nursing and within top decile for physicians and other workers. CAMC claims near 100 percent satisfaction with training, and internal training is effective in retaining new nursing employees. Physicians and trustees report satisfaction with leadership and governance. CAMC promoted internally for 86 percent of openings. It spent 6 percent of payroll on education.

Leadership and Governance

CAMC (2015) is a "disproportionate share hospital" with 11 percent uncompensated care. It contributes 15 percent of net revenues to community benefit, approaching twice the national average. CAMC won 87 percent of appeals on Medicare denials, substantially above average. All research review, Medicare, OSHA, and accreditation requirements are met. CAMC has won voluntary accreditation for pulmonary rehabilitation, stroke, breast, and children's care. CAMC lists eight national and two state awards for excellence. Several represent "top decile" or better achievements.

CAMC documents reduced energy consumption and contributes to smoking reduction among high school students. It documents a strong audit and compliance program.

Finance and Market

CAMC (2015) estimates its total economic impact (i.e., money spent in West Virginia) at $775 million per year, one of the largest impacts in the state. It works with the Ford Foundation to promote "wealth creation" in the region. CAMC claims "intelligent risks" in expanding community benefits, acquiring a small HCO outside of Charleston, and taking on an improvement project with a contractor.

CAMC's (2015) operating margin at least equals the teaching hospital median. Expense per adjusted discharge is near the best quartile as identified by the Council of Teaching Hospitals (COTH). The bond rating has improved to A3+ (Moody's). Medicare costs per patient are below average. Labor costs per patient day have been reduced and are best quartile. CAMC has about 200 days' cash on hand and about 40 days in receivables. It has sustained a 40 percent debt-to-equity ratio. CAMC has reduced costs every year since 2005. It raises some funds from community contributions. Net assets have increased annually since 2010.

CAMC has sustained market share in most specialties and increased share in some specialties.

Category 1: Leadership

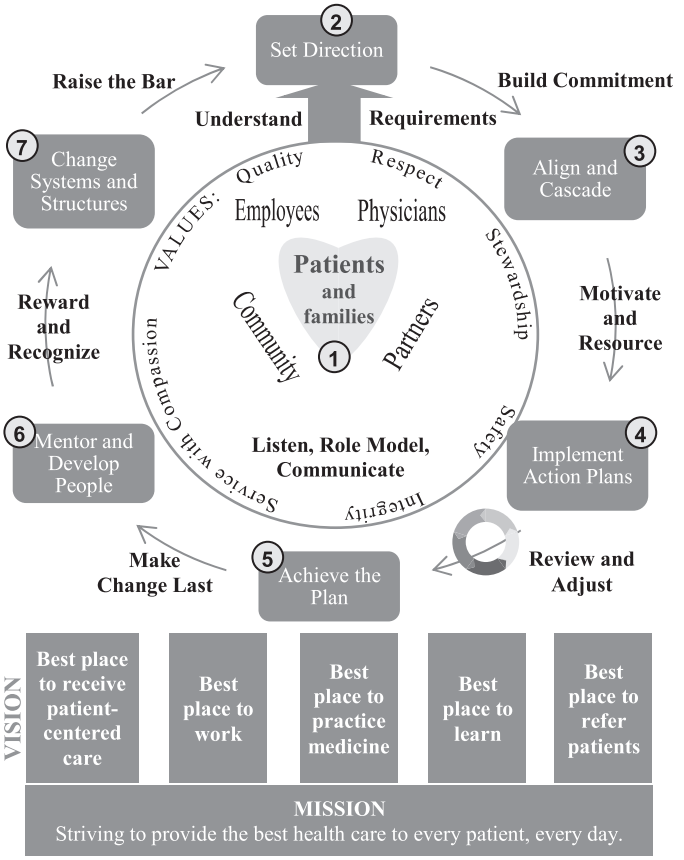
Senior leaders at CAMC (2015) guide the organization via the Leadership System (LS), shown in exhibit 43.1

CAMC (2015, 1) developed the LS six years into its journey, and its purpose is "to guide the organization and provide a systematic approach to deploy the mission, vision, values and the expectations for how we lead." The application continues:

> The foundation of the system is our mission and vision pillars. At the center are our patients and families. Every leader is expected to role model our values and demonstrate strong communication and listening skills. The numbers [in the outer circle of the diagram] represent what a leader must accomplish. Leaders must understand the key requirements of their stakeholders in order to provide the *best health care to every patient, every day* (our mission) by setting direction, aligning and cascading goals to the workforce, implementing action plans, achieving plans, mentoring and developing people, and changing systems and structures to support performance improvement (PI). This is augmented by actions every leader must role model and cannot delegate (arrows). . . . [The system] is fully deployed . . . to build leadership skills, commitment, and PI. We measure the effectiveness of the LS through the achievement of our goals and the employee engagement survey.

CAMC promotes the system extensively and repeatedly, and it expects its key partners to support the system. The application describes the evaluation of senior leaders (SL) according to the system (CAMC 2015, 1):

EXHIBIT 43.1
CAMC Leadership System

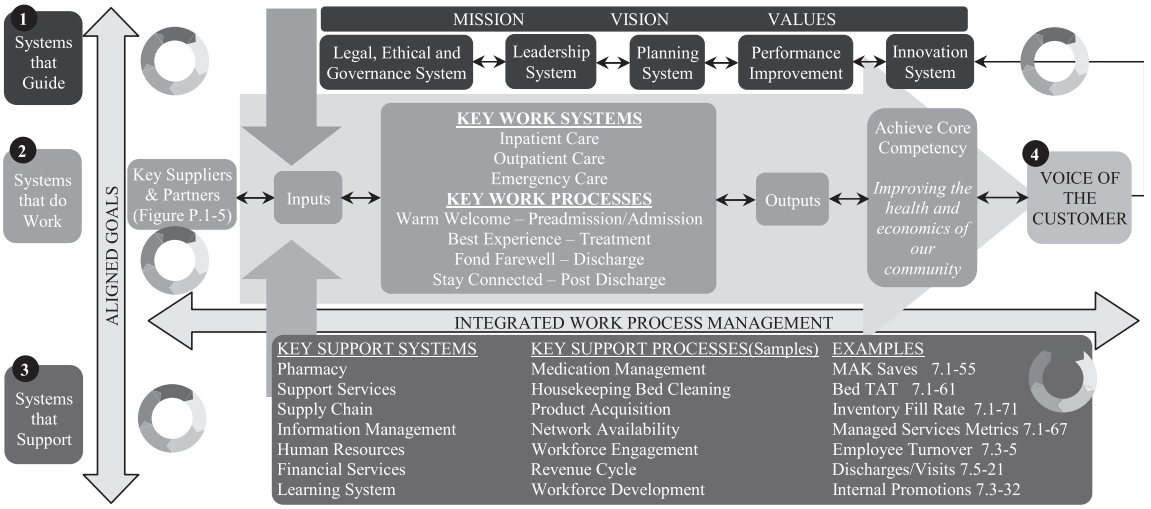


Source: Reprinted from CAMC (2015, 1).

SL are evaluated annually on their effectiveness in role modeling the values and how their actions reflect a commitment to these values. As examples, *Quality* is demonstrated by SL serving as champions for PI teams and *Stewardship* is reflected through service on community boards, volunteer activities and wise use of resources.

CAMC (2015) implements its vision using the Enterprise Systems Model shown in exhibit 43.2. The model identifies the expected contributions of all CAMC and partner activities, dividing them into three categories: those that "guide," those that "do work," and those that "support." The model diagram includes five multicolored circles that represent the Define, Measure, Analyze, Improve, and Control (DMAIC) approach to continuous improvement. These "cycles of learning," which are analogous to annual budget cycles, begin with a focus on customers' requirements and are expected of all people and processes related to patient and customer support.

EXHIBIT 43.2
Enterprise Systems Model



Source: Reprinted from CAMC (2015, 27).

The CAMC (2015, 2) states:

> Achievement of the strategic objectives and organizational agility is accomplished through SL reviews . . . , down to the performance results of every leader. . . . SL participate in succession planning and the development of organizational leaders by identifying: 1) succession planning positions; 2) who could fill each position short-term; 3) the status of each succession plan candidate; and 4) by leading, guiding and mentoring selected candidates. A culture of patient safety is created and promoted though our values, the LS, and by including safety in the *operational* sustainability factors review process.

The application explains further, describing the role of the board of trustees (BOT) in CEO performance evaluation (CAMC 2015, 4):

> The BOT Compensation Committee evaluates the performance of the CEO based on 1) achieving BOT approved annual goal and BIG DOT [strategic scorecard] targets as defined by the CEO's Individual Scorecard, and 2) role modeling the organization's values. Executive compensation is determined based on the performance evaluation of these areas and development opportunities are identified annually. . . . The CEO evaluates direct reports using the same process with recommendations reviewed and approved by the BOT Compensation Committee. . . . [A]ll SL participat[ed] in a

> multi-rater survey process aligned with our CAMC LS competencies. Each SL used the feedback to create a development plan to improve their personal effectiveness as leaders. . . . An annual Board self-assessment identifies areas for improvement and educational needs for the Board. As a cycle of learning, each committee is now evaluated and committee chairs are responsible for reviewing the results and developing an improvement plan, if needed. Individual board member competencies are evaluated annually by the BOT Nominating Committee and any individual performance improvement issues are addressed with the board member by the CEO and BOT Chair. Additionally, board members identify gaps in their personal learning and these are addressed through overall BOT, Board committee, or individual learning.

In 2015, CAMC expanded the role of the BOT Nominating Committee and made it a Governance Committee, to enhance accountability for systematic centralized review of governance processes. The CAMCC (2015, 3) organizational governance system establishes accountability for senior leaders' actions through legal and ethical requirements and audit processes. It sets annual performance goals for the CEO and approves "performance planners" for each senior leader that follow from the strategic plan. Strategic plan results are reviewed by the board's seven committees and reported quarterly at full board meetings. The board's Compensation Committee reviews the achievements of the CEO and senior leaders relative to their performance goals each year. A standardized format for senior leader scorecards links the leaders' performance and creates line-of-sight accountability.

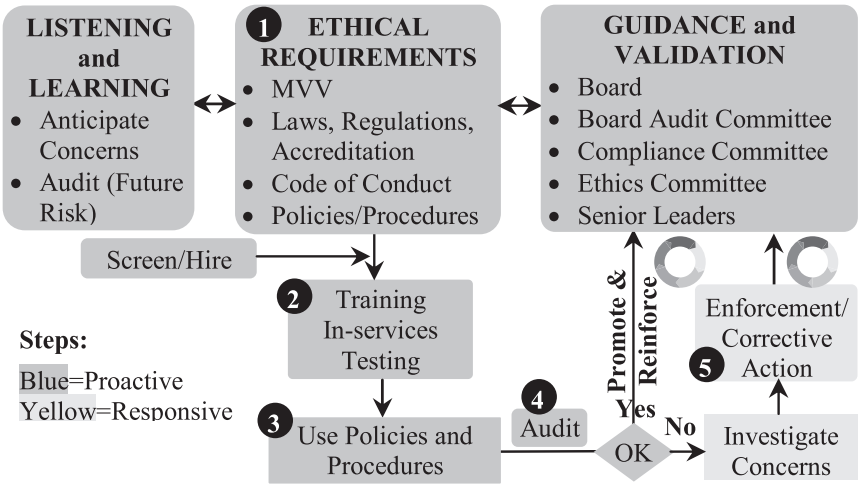
CAMC's system to promote legal and ethical behavior is illustrated in exhibit 43.3. The application further describes the organization's efforts in this area (CAMC 2015, 4–5):

> We systematically validate that we have the appropriate requirements, they are deployed through training, and use is validated through audit. Our BOT, BOT Audit Committee, Compliance Committee, Ethics Committee and SL enable and monitor ethical behavior throughout the governance structure and organization and with interactions with WF [workforce], patients, partners and others through a seven step Ethical Compliance Guidance and Validation process.

The application explains the role of the chief compliance officer (CAMC 2015, 1):

> The Chief Compliance Officer, a SL, has responsibility for oversight and reports directly to the BOT's Audit Committee on findings. Corrective action results and Compliance Hotline outcomes are used for organizational learning. Recent cycles of learning have resulted in revisions to required annual in-services for all employees and improvements to audit [procedures].

EXHIBIT 43.3
Legal and Ethical Behavior



Note: MVV = mission, vision, and values.
Source: Reprinted from CAMC (2015, 5).

CAMC also uses external audits and Safety Committee environment-of-care assessments to identify adverse risks.

CAMC leadership also focuses on the organization's societal responsibilities. The application states (CAMC 2015, 5):

> Social considerations include the Community Needs Assessment and Civic Affairs requests and contributions. . . . We also provide GME programs, a Nurse Anesthesia school, nursing and allied health education financial support, visiting residencies and student rotations. . . . Our community benefit for health professionals' education is over $40 million annually.

Category 2: Strategy

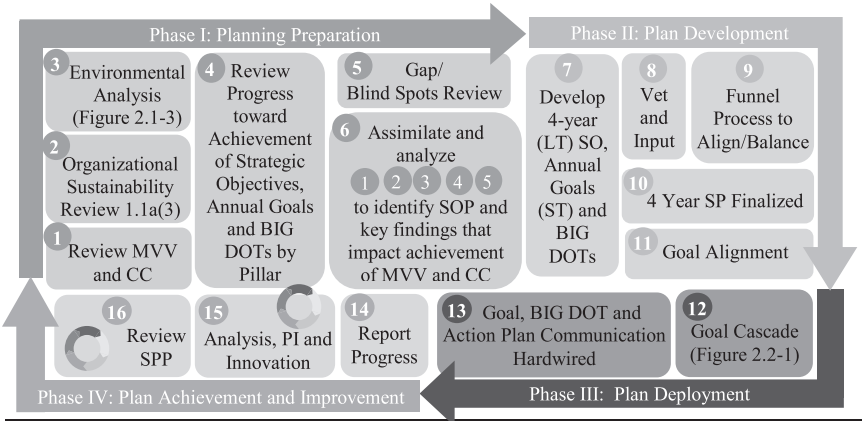
Strategy development at CAMC (2015, 6) is "a closed-loop cycle that ensures our: *strategies* are developed; *goals* and *action plans* have *performance measures* with comparisons; *goals* and *action plans* are deployed; and *performance* is analyzed, improved and innovated." It follows a four-phase, 16-step strategic planning process (SPP), shown in exhibit 43.4. The Planning Department manages the process and supplies data. As the 16 steps are executed, a specific leader monitors each of the CAMC mission and vision pillars (shown in exhibit 43.1).

CAMC begins its strategy development process by reviewing the prior year's planning activity and making improvements to the process itself. Senior leadership coordinates the cycle through a formally appointed "senior planning

team" (SPT in exhibit 43.4.), which includes all senior leaders, all clinical directors, and West Virginia University–Charleston and the information management company (key partners). Board committees, medical staff officers, the Physician Advisory Council, the CAMC physician group, nursing councils, the workforce and medical residents provide formal input to the planning.

The eight-month commitment to phases I through III is designed both to select the right goals and to gain universal understanding and support. Plan development is guided by a formal strategic analysis, shown in exhibit 43.5. The phrase "Blind Spots," which appears repeatedly in both exhibit 43.4 and exhibit 43.5, indicates a systematic double-check for errors, particularly omissions.

EXHIBIT 43.4 Strategic Planning and Deployment Process



Planning Phase	I. Planning Preparation	II. Plan Development	III. Plan Deployment	IV. Plan Achievement and Improvement
Steps	1 2 3 4 5 6	7 8 9 10 11	12 13	14 15 16
Timeframe	May – July	July – September	October – December	January Monthly/Quarterly
Key Participants	Board Planning Committee, BOT, SPT, PAC, Pillar Owners, Planning Dept., MS Officers, Dept. Managers, Workforce	SPT, Pillar Owners, Board Planning Committee, PAC, Dept. Managers, MS Officers, CAMC Physician Group, Nursing Councils, Residents	SPT, Pillar Owners Managers, Planning Department	Board Planning, BOT, SPT, Managers, Employees
Strategic Planning Elements Addressed	SA, SC, CC Innovation Opportunities Key Stakeholder Needs Blind Spots **(Figure 2.1-3 A-K)**	CC Funnel Process Blind Spots **(Figure 2.1-3 K)**	CC **(Figure 2.1-3K)**	Performance Improvement **(Figure 2.1-3 B-K)**
Outputs	MVV, SWOT Core Competency SA, SC Strategic Opportunities Blind Spots identified Pillar Owner review	4 Year Plan including 4 Year SO and Annual Goals for each Pillar Workforce Plan Blind Spots addressed Budget and Capital	Scorecards • BIG DOT • Entity • Department • Individual • Top 5 Boards	Performance Review (Figure 4.1-3) Monthly Scorecards Quarterly BIG DOTs Course Corrections Ongoing Review/Scans Formal Review of SPP

Note: BOT = board of trustees; CC = core competency; MS = medical staff; MVV = mission, vision, and values; PAC = Physician Advisory Council; SA = strategic advantage; SC = strategic challenge; SO = strategic objective; SPP = strategic planning process; SPT = senior planning team.

Source: Reprinted from CAMC (2015, 6).

EXHIBIT 43.5
Environmental Analysis Inputs into the Strategic Planning Process

		Collect	Processes to Analyze and Develop Information	Who Involved
STRATEGIC CHALLENGES, STRATEGIC ADVANTAGES, STRATEGIC OPPORTUNITIES				
A	SWOT	MVV, CC; Organizational Sustainability Review; Environmental Analysis; Ability to Execute; Gap and Blind Spot review	Steps 1-5 of the SPP, SWOT from each Department and SWOT Development Process, Identify Risks to Future Success, SC, SA, Identify Strategic Opportunities	CSO, SPT, PAC, All Depts.
RISKS TO CAMCHS FUTURE SUCCESS				
B	Technology	Technology Scans; Supplier, Partner and Workforce Input; Figure 4.2-3 *Data and Information Availability*, Safety; Competitor Technology; Disruptive Technology	Cost/Benefit Analysis; Assess technology needed to achieve SO, Annual Goals and work processes; Explore systems to allow use of Big Data for insight and action; Blind Spots	SPT, Suppliers, Partners, Vendors, PAC, MS
C	Markets	Market and Competitor Data; Figure P.2-1 *Market Share & Key Competitors*; Figure 3.1-2 *Patient/Other Customer VOC Listening and Learning Posts*	Marketplace Blind Spots; Market Share and Market Analysis Report; Mergers and Acquisitions; Scenario Planning	Planning Dept., Board Planning, SPT, PAC, Mgrs.
D	Health Care Services	National, State and Local Data; Community Needs Assessment; Figure P.1-1 *Health Care Service Offerings;* Figure 1.2-2 *Community Support*; Figure 4.1-2 *Comparative Data Selection Process;* Changes in Health Care Delivery Role of Local Businesses	Identification of Program Gaps; Comparable Organizations' Future Performance; Listening Posts, Risk Assessment; Societal Well Being; 10 year forecast for demand for inpatient and outpatient services; Blind Spots	Board Quality and Planning, Planning Dept., SPT, MS, PAC, Community
E	Patient/ Stakeholder Preferences	Satisfaction Surveys; Complaints; Figure 3.2-4 *Complaint Management Process;* Safety; Shifts in Patient Care Delivery Locations; Figure 3.1-2 *Listening Posts*; Figure 3.1-1 *Customer Communication System*	HCAHPS and Satisfaction Survey Reviews, Patient Experience Aggregated VOC Reports; A3 Problem Solving; Blind Spots	Patient Experience Council, BPTL Pillar Owner, SET, SPT
F	Competition	Market Assessment; Figure 3.1-2 *Listening Posts*; Figure 3.2-3 *Customer Relationship Model;* Competitor Strengths and Weaknesses; Non-Traditional Competitors	Trend Analysis; Future Performance; Referral Pattern Shifts; Competitive Blind Spots, Potential New Entrants into the Market Blind Spots	Planning Dept., Board Planning Committee, SPT
G	Economy	National, State and Local Issues; Business/Industry Closures; Financial Market Reviews; Unemployment	Review Trends and Industry Intelligence; Blind Spots	Board Finance Committee, SPT
H	Innovation	Innovation Inventory; Gaps Identified in Figure 2.1-5	Learnings from systems that outperform others; Figure 2.1-5 *Innovation Process;* Figure 6.1-3 *Innovation Management*	SPT
CHANGES TO THE REGULATORY ENVIRONMENT				
I	Regulatory Environment	National, State and Local Regulatory, Legal and Ethical Requirements; Legislative Briefs; Incinerator Report, Recycling, Energy Study, Safety, ISO and NIAHO	Review Survey Results; Gap Analysis; Audits; Mock Surveys; Concurrent Review; Gaps for ISO and NIAHO standards; Gaps in Key Support Processes; Blind Spots	Safety Dept., SPT, Compliance, Legal, Suppliers, Partners
ABILITY TO EXECUTE THE STRATEGIC PLAN				
J	Sustainability	1.1a(3); Organizational Sustainability Reports	Organizational Sustainability Factors Review; Blind Spots	SPT
K	Ability to Execute	Governance System; CC; BIG DOTs; Scorecards; Figure 6.1-1 *Enterprise Systems Model*; Workforce Capability and Capacity; Listening Posts; Figure 1.1-1 *Leadership System;* Figure 4.1-3 *Organizational Performance and Capabilities Review*; Organizational Sustainability Reports	Annual review of process performance for these systems and processes; CC review; Funnel Process; BIG DOT Approach and Review; Annual review of Health Care Service Work Process Requirements; Review of Support Process Performance; Review Key Support Process Performance and Gaps; Blind Spots	Executive Council, SPT, CEO, COO, CFO, CSO
BLIND SPOTS – *See the Blue Notations in the Analysis Column*				

Source: Reprinted from CAMC (2015, 7).

Exhibit 43.5 presents a rigorous environmental analysis that includes both an assessment of strengths, weaknesses, opportunities, and threats—that is, a SWOT analysis—and a systematic review of forces for change. The chart specifies multiple analyses shared across the planning team, and it indicates which groups hold responsibility over the final plan. Perhaps most importantly, the planning process concludes with "Sustainability" and "Ability to Execute" (lines J and K in the exhibit); at this part of the process, all managers understand (1) what their annual goals are, (2) how these goals contribute to CAMC's mission, (3) how they expect to achieve their goals, (4) how they and their team will be rewarded, and (4) what help to expect if a goal is in danger.

CAMC's process produces a rolling, four-year, long-range plan; a short-term annual plan; and a continuous review component that allows rapid response to unexpected changes. Any failure or difficulty in completing the plan is unexpected and thus subject to rapid response.

The CAMC goal-setting process deliberately emphasizes mission and vision, deemphasizing traditional goals focused on margin and financial performance. Note that the words *margin* and *profit* do not appear in exhibit 43.4 or exhibit 43.5. Cost reduction, however, is a recognized benefit, referenced twice in exhibit 43.5.

CAMC (2015, 10) maintains a budget planning cycle that coincides with the strategic planning process and incorporates the annual budget, capital, workforce, information system, and medical staff development plans. Thus, resources to support the various action plans are built into the budget, and long-term budget needs are incorporated into the operating and capital budget allocation processes.

Workforce plans are integrated with the budgeting process to address specific staffing and training needs. They identify changes to workforce capability and capacity.

Once a plan is adopted, progress toward goals is carefully monitored. Each department maintains a "Top 5" board that identifies its priority areas of improvement. The boards serve as a means for deploying action plans and as a working visual communication tool. The tracking of progress toward goals is further described as follows (CAMC 2015, 10):

> SL and department managers enter progress on their action plans quarterly and monthly into the on-line goal system. SL review progress monthly with their direct reports. The EC [Executive Council] and BOT conduct quarterly progress reviews towards goals and targets relative to the system BIG DOTs [strategic scorecard measures] and hospital measures. Improvement teams/innovation processes are implemented if the need for course correction is identified.

For the 2015 strategic planning process, CAMC (2015, 9) used its strategic challenges and strategic advantages to develop a list of its top 20 goals:

1. Improve processes that support our customer service vision and timeliness of responding to key customer needs.
2. Deploy standardized processes for communication with patients/families.
3. Improve use of Soarian and workflows. *NEW GOAL: Replace Siemens/Soarian with Cerner IT system.*
4. Accelerate coding and clinical documentation improvements.
5. Improve appropriate use.
6. Improve evidence-based care reliability.
7. Improve effectiveness of transitions of care to reduce readmissions.
8. Deploy TCT [Transforming Care Together] to all nursing and selected ancillary departments. Value Stream Map key processes in ED [emergency department], OR [operating room], CDL [Circulatory Dynamics Laboratory] and Ambulatory areas.
9. Improve safety systems to reduce harm.
10. Identify at least one opportunity in each department from the 2014 Employee Survey and develop an action plan for improvement.
11. Fill gaps in identified critical medical staff recruitment needs.
12. Implement a Medical Staff leadership program.
13. Define our Physician Enterprise Model.
14. Improve integration of research and academic programs and learners to Quality and Patient Safety structure, processes, QIPS [Quality Improvement and Patient Safety] and research.
15. Incorporate Individual Leadership Learning Plans in all Leadership Performance Planners (front line leaders up).
16. Grow identified service lines.
17. Achieve budgeted bottom-line.
18. Improve cost, efficiency and productivity.
19. Implement plan to improve the health of our communities.
20. Identify affiliation opportunities.

These goals all have specific benchmarks and are linked to unit goals, if applicable.

CAMC (2015, i) developed an innovative team approach to care, known as Transforming Care Together (TCT), which is "aimed at redesigning patient work processes to reduce waste, increase direct time at the patient's bedside and improve the overall quality of care." The deployment of TCT to all clinical areas has resulted in meaningful change and improved satisfaction for both patients and staff.

Category 3: Customers

CAMC (2015) has a dominant market share (about 40 percent) that has been increasing slowly. CAMC customer relations results (described in Section 7.2 of the application) are generally improving, approaching top quartile, and leading those of CAMC's competitors by small margins. The organization has segmented its markets carefully, by clinical need, care site, and communications approach. It has recognized its physicians as both workforce and referral source. It has established 15 key listening and support mechanisms, and it has identified a leader or team in control of each. CAMC integrates these efforts through a Service Excellence Team that meets monthly. The team has created five "action teams": (1) Standards, (2) Measurement, (3) Recognition, (4) Communication, and (5) Innovation. CAMC addresses identified problems through the "Top 5" boards.

CAMC's patient contact systems are summarized in exhibit 43.6. The organization has invested in extensive outreach, including telemedicine support, community education, a health improvement coalition, health fairs, and social media. To understand its markets, CAMC uses surveys (principally HCAHPS) with the assistance of a national information company that provides comparative data. It also uses complaints, worker observations, and rounding to identify patient needs. Complaint management software supports both analysis and rapid response. CAMC (2015, 11) explains:

> Our marketing team monitors and receives alerts via email and Smartphone apps when CAMC keywords are used in online venues. Compliments or complaints posted are reviewed at least hourly. When a posting requires follow-up, our marketing team responds by email or phone call.

Responses requiring multiple inputs are routed to a 24/7 on-call administrator or to the appropriate individual. Follow-up includes rounding, and patient call-backs. CAMC (2015, 12) continues:

> The effectiveness of social media campaigns is evaluated monthly. . . . Data from rounding and social media are populated in [a] dashboard and are part of the aggregated monthly VOC [Voice of the Customer] report.

CAMC uses customer data in its branding activities, targeting specific populations. It has extended its planning process to identify unmet health needs—an effort that has led to the development of a weight loss center and a program to combat child obesity. CAMC reinforces its brand through the use of social media, and it maintains an extensive website that includes clinical information for patients.

EXHIBIT 43.6 Patient and Other Customer Support

Key Communication and Support Mechanisms	Patients/ Families	Community	Physicians	Payors
Seek Information and Assistance				
Direct Contact	x	x	x	x
CAMC Website/Public Reporting Websites/ Social Media (YouTube, Twitter, Facebook)	x	x	x	x
Publications — Vital Signs, CAMC Today	x	x	x	x
Health Fairs and Community Education	x	x		
Obtain Services				
Physician Match	x	x		
Web-based Registration	x	x		
Community Liaisons	x	x	x	x
Transfer Center	x		x	
Telemedicine	x	x		
Partners in Health	x	x	x	x
VOC / Complaints				
Rounding for Outcomes	x			
Administrator On-Call	x		x	x
Letter/Fax/Email/Phone	x	x	x	x
Cipher Health/Discharge Follow-up Calls	x			

Source: Reprinted from CAMC (2015, 14).

CAMC's demand analysis and forecasting are integrated into its knowledge management (discussed further in the next section). Actual usage trends, environmental and market assessment, and input from national experts are incorporated in the strategic planning process "to determine if patient and other customer requirements are being met or exceeded and if new requirements are needed" (CAMC 2015, 13). The Voice of the Customer report and environmental assessment data help CAMC's leadership identify new markets, attract new patients/customers, and create opportunities to expand relationships with current patients/customers.

CAMC has invested in a multipart program to deploy customer-focused thinking throughout its sites. The program is supervised by the Service Excellence Team and includes the following features (CAMC 2015, 14):

- An employee handbook that defines key actions and describes their integration into annual performance reviews
- A monthly e-communication highlighting key service points
- A monthly "Service Excellence Café" featuring "fun activities that promote our standards of behavior"
- A training program for new hires that uses the AIDET (Acknowledge, Introduce, Duration, Explanation, and Thank You) model, reinforced at the work sites
- A playbook of best practices for critical customer concerns, in which a "key play" is selected quarterly and promoted systemwide with specific deliverables
- A checklist that incorporates customer expectations into key work processes, beginning with a standardized "warm welcome"

CAMC has a fully automated complaint system, with aggressive analysis and follow-up. Workers are trained in a "HEART" response—which stands for *hear* them, *empathize*, *apologize*, *resolve* promptly, and *thank* them—and authorized to do service recovery. Complaints are analyzed and summarized monthly for the departments and annually for the board. Departments are expected to review reports and initiate process corrections if needed.

Category 4: Measurement, Analysis, and Knowledge Management

Exhibit 43.7 shows that CAMC (2015) measures virtually every aspect of its operations, processing thousands of values each month, reporting dozens to every manager, and focusing on quantified improvement goals. Every CAMC measure must be valid, reliable, and collectible. It must also be related to strategic objectives, subject to operator control, and have outside comparisons or benchmarks. CAMC ranks benchmarks from nine sources, beginning with rigorously standardized national measures, but also including competitor or "recognized leader" data. The system of measures and benchmarks is reviewed and improved as part of the strategic planning process and continuous improvement programs. Progress is monitored by the assigned pillar owners.

CAMC (2015, 18) pursues performance improvement in a three-phase system.

- *Phase 1: Identification*. This phase involves identifying high-performing units and operations through performance review findings, rounding, audits, quality initiatives, and benchmarking.

EXHIBIT 43.7

Organizational Performance and Capabilities Review (Sample Only)

When	Who						Analysis To Ensure Valid Conclusions	Decisions Made
DAILY	CA	N/MS	SS	SL	P	BOT	• Variance (daily vs. budget) • Trending • Review of Quantros • Social media monitored by Marketing and issues communicated • Patient compliments and complaints • Work process in process measures • Support process requirements	• Daily operational changes • Service recovery • Safety/regulatory • Resource pool/call-offs • Physician notification • Patient flow • Performance improvement
Safety (patient/WF)	x	x	x		x			
Census/volume/staffing	x	x	x	x	x			
Admissions/referrals	x	x	x		x			
Productivity	x	x	x		x			
Social media	x	x	x	x	x			
Satisfaction/quality	x	x						
Top 5 board	x	x	x		x			
WEEKLY							• Trending/variances • Patient complaint themes reviewed • Process change • Root cause analysis	• Safety/regulatory • Staffing/recruitment • Recognition • Reinforce action plans • Service recovery • Operational changes
Rounding	x	x		x	x			
Productivity/financials	x	x	x	x	x			
Patient satisfaction	x	x	x	x	x			
PI projects (single point lessons, A3)	x	x	x	x	x			
MONTHLY							• Social media campaigns • Budget target vs. actual • Statistical comparison • Action plan evaluation • All Top 5 boards and scorecards	• Modify social media campaigns • Modify action plans for Top 5 boards • Resource allocation/New teams • Budget changes • Business development
Clinical outcomes	x	x		x				
Rounding	x	x	x	x	x			
Scorecards	x	x	x	x	x			
Financial performance	x	x	x	x	x			
TCT project status				x				

Information Flow

See exhibit 43.4.
FOCUS ON ACTION BASED ON SIZE OF VARIANCE, TREND, RISK

(continued)

EXHIBIT 43.7

Organizational Performance and Capabilities Review (Sample Only) *(continued)*

When	Who						Analysis To Ensure Valid Conclusions	Decisions Made
QUARTERLY							• Budget target vs. actual • Statistical comparison • Work/support process in-process & outcomes • Action plan evaluation • Aggregation of patient experience data • Identification of current performance gaps and gaps for projected year end performance	Address performance gaps: • Safety/regulatory • Resource allocation/changes • Operational changes • Modify action plans • Opportunities for PI/Innovation
Patient satisfaction	x	x	x	x	x	x		
BIG DOTs / goals / action plans / cascaded measures / financials	x	x	x	x	x	x		
Social media trending		x		x				
Work process	x	x	x	x	x			
ANNUAL/BIANNUAL							• Social media campaigns • Budget target vs. actual • Gaps in performance • Action plan evaluation and scorecard review • Year end results compared to annual projected performance compared to benchmarks	• Messaging approaches for social media tailored to key customer requirements • Safety/regulatory • Recognition • Action plan modification/new plans • Opportunities for PI/innovation
Workforce performance reviews	x	x	x	x	x	x		
Employee satisfaction	x	x	x	x	x	x		
Physician satisfaction	x	x		x	x	x		
Patient safety culture	x	x	x	x	x	x		
Strategic plan achievement of: • BIG DOTs • annual goals • action plans • cascaded measures	x	x	x	x	x	x	• Impact of year end results on strategic planning process accomplishment • Gap analysis: current performance versus year end actual; differences between projections of our future performance and BIG DOT performance targets	• Organizational success and success compared to competitor performance • Strategic opportunity and Innovation • Changes in structure, key work systems, key work processes, support processes • Strategic planning process and organizational review processes
CONTINUOUS							• Shifts in technology, market, services, competition, economy, regulatory environment	• Change in strategic objectives, annual goals, action plans to adapt to shifts in market conditions; shift in priority
Environmental analysis				x	x	x		

Information Flow

See exhibit 43.4. FOCUS ON ACTION BASED ON SIZE OF VARIANCE, TREND, RISK

Note: CA = clinical areas; N/MS = clinical nursing and medical staff; SS = support services; SL = senior leaders; P = partners; BOT = Board of Trustees

Source: Adapted from CAMC (2015, 18).

- *Phase 2: Spread*. The second phase promotes the spread of best practices through the use of department huddles, Six Sigma report-outs, Top 5 boards, nursing councils, PI plans, single point lessons (one-page process descriptions for teaching and reference), and standardized training.
- *Phase 3: Sustain*. The third phase uses 30 intra- and cross-functional committees to oversee operating units, and it builds on CAMC's performance improvement culture and learning environment to promote evidence-based care and thought leadership. Improvement and innovation success are recognized with Quality Awards.

As CAMC (2015, 18) gained experience and knowledge over the course of several cycles, it established a team dedicated to spreading improvements, a change acceleration model, and a prioritization matrix to integrate best practices. The Transforming Care Together approach—an "innovative management and care delivery model" to build team-based care—arose from the organizational performance and capability review process. Similarly, cycles of improvement led to the deployment of the Top 5 boards to all CAMC departments.

CAMC (2015) uses 15 projection methods to understand trends in its data. The organization's focus is on moving all BIG DOTs—that is, strategic scorecard measures—to top decile performance, if such a benchmark is available; otherwise, the focus is continuous improvement. If gaps exist, they are addressed either through continuous improvement or deliberate innovation strategies. The decision about whether to pursue innovation strategies is based on specific criteria, including whether "30 percent or greater improvement" or "a new level of performance" is required (CMAC 2015, 19).

The application explains (CMAC 2015, 19):

> We deploy PI priorities and opportunities to work groups and functional-level operations throughout the organization through the goal cascade process. . . . [P]riorities and opportunities are also deployed to our key suppliers/partners through the same cascade process to ensure organizational alignment. The BOT Quality Committee provides oversight for prioritization of PI and innovation opportunities.

Further describing its organizational learning, CMAC (2015, 20) states:

> [We] embed learning in the way our organization operates through our innovation forcing functions, culture drivers and established processes and measures at the organizational, SL, middle management, and WF levels. . . . This promotes learning as part of daily work, problem solving and best practice sharing. When a process is improved and innovated, it becomes part of our work systems and work processes which are managed through our DMAIC process.

Quantitative data must be carefully collected, protected, and monitored. CAMC (2015, 20) continues:

> At the *base level*, we utilize equipment and infrastructure systems that incorporate device-level, file-level, and database level integrity checks, as well as hardware integrity checks. At the *application program level*, we utilize database integrity checks, edits of input and interfaced data, and end-user data validation procedures. At the *application system level*, we conduct component and integrated testing, and employ acceptance criteria which must be met before systems are placed into production. We also produce "balancing reports" to allow our end-users to help detect errors in data entry or interfaces.

CAMC protects its data through routine practices ranging from Health Insurance Portability and Accountability Act (HIPAA) training to audits and specific risk assessments. The application states (CMAC 2015, 20):

> This systematic [data security] process includes: 1) investigation and remediation of any anomalies on a daily basis; 2) upgrading systems with supported versions of the operation system; 3) removing administrative privileges on common desktop accounts; and 4) hardening devices with [an] enhanced mitigation toolkit. Best practices are identified and guide selection and implementation of defense tactics such as layered security and security policy.

CAMC (2015) maintains redundant power and computing backups to ensure 99.95 percent reliability, a disaster recovery system, and explicit downtime procedures.

Category 5: Workforce

CAMC (2015, 24) deliberately and carefully fosters "an organizational culture that is characterized by open communication, high performance work and engagement through our LS." This culture permeates all aspects of CAMC's work.

As part of the annual review process, CAMC's human resource planning team reviews workforce staffing levels, capabilities, and needs to develop short- and long-term plans for each site and job category. The criterion is goal achievement rather than cost minimization—that is, it focuses on ability to improve outcomes rather than on an input standard such as hours per unit of output. In 2012, CAMC increased clinical full-time equivalents (FTEs) to meet productivity and safety targets. It developed a clinical resource float pool and temporary staff to fill resource needs. The plans support recruitment strategy and provide early warning and reassignment opportunities to potentially redundant workers.

CAMC seeks internal candidates for all positions before it recruits new workers. New workers, including physicians and volunteers, are subject to

structured interviews, evaluation, credentialing, and background checks. New hires must agree to CAMC's mission, vision, and values. Extensive training and close mentoring ensure that new workers become both capable and comfortable on the job. CAMC (2015, 22) states: "Key requirements of patients and other customers are integrated into our behavioral standard expectations and performance matrix for every employee and are embedded through orientation and training processes."

CAMC's (2015) "Grow Our Own" strategy encourages workers to expand their skills (see the examples in exhibit 43.8). The organization has developed a number of career ladders through cross-training and increasing job competencies. CAMC has 171 medical fellows, supports several other professional training programs, and holds West Virginia University–Charleston as a key partner. It systematically promotes health employment among K–12 students and provides assistance for collegiate study.

The application describes CAMC's (2015, 26) Workforce Learning and Development System (WLDS):

> We evaluate the effectiveness of our WLDS using Kirkpatrick's four levels of learning. For example, [instruction and training activities] validate specific required job competencies of a WF member. WLDS efficiency is evaluated by key factors such as cost against level of participation and effectiveness, frequency of course offerings, rapid spread of new knowledge, and convenient access.

CAMC actively participates in local and regional recruitment events and strives to recruit a diverse workforce. It provides diversity awareness training to new employees and includes patient diversity considerations in other education.

CAMC's (2015, 24) performance management system supports engagement and high performance by "evaluating, compensating, rewarding, and recognizing" the workforce. The application explains:

> WF engagement is assessed through a systematic approach that includes both formal and informal approaches. Our annual Employee Satisfaction and Engagement survey is our formal approach to obtain feedback from the WF segments. . . . We solicit additional feedback through specific surveys tailored to our nurses, physicians (employed and private) and our volunteers.

CAMC analyzes annual employee survey data for the following purposes:

- To identify the questions that have the greatest correlation to engagement
- To determine elements for different workgroups and segments
- To identify themes and trends for all segments, entities, hospitals, and departments

EXHIBIT 43.8
Examples of Education/Training Addressing Learning and Development

Educational Offerings	Learning and Development System Requirements	How Offerings Support Organizational and Personal Development — Distinctions
Clinical conferences	Core competency; focus on patients	Largest provider in the state
Service Excellence Team service plus training	Core competency; action plans; focus on patients and customers	"Service excellence" behaviors (10,257 trained to date)
Transforming Care Together	Performance improvement and innovation / action plans	More time at the bedside; workforce efficiencies
Research day	Innovation	Translating research to practice
Simulation program	Innovation; translate learning to application	State-of-the-art technology; reinforce new knowledge/skills on the job
Ethics in the Round	Ethical healthcare	Promotes values and ethical practice
Information technology (ISO 9001, ICD-10, Soarian)	Ethical business practice; focus on patients; strategic challenge	Embraces cutting-edge technology for patient care delivery
Continuing medical education	New knowledge and skill	National accreditation with commendation
Universal curriculum for residents	New knowledge and skill; focus on patients	Meets or exceeds benchmarks on Accreditation Council for Graduate Medical Education survey
CAMC University Leadership Development Program	Transfer of knowledge; workforce development; new knowledge and skill	Grow Our Own; highly qualified leaders (> 85% of leaders promoted from within); leadership capability and capacity
Nursing Leadership Development Program	Transfer of knowledge; action plans; strategic challenge; workforce development; new knowledge and skill	Grow Our Own; highly qualified nursing leaders (greater than 90 percent promoted from within)
Crucial Conversations / Team Training / Just Culture	Focus on patients; performance improvement; new knowledge and skill	Learning environment; enhancing patient safety culture; 3,007 workforce members trained
EduTrack	New knowledge and skill; focus on patients	Employee in-service/training portal; live and computer-based offerings
Medical Explorers	Strategic challenge; innovation; workforce development	20–30 high school students participate each school year; focus on future workforce
Imagine U Virtual Surgery Experience	Strategic challenge; innovation; workforce development	10,347 students from 30 high schools (2007–2014), focus on future workforce
Junior Volunteers	Strategic advantage; workforce development	50+ junior volunteers per year

Source: Adapted from CAMC (2015, 25).

The CAMC application (2015, 24) explains: "We identify departments with lower leadership scores, and pair them with managers who are most successful to assist with developing improvement plans through sharing best practices."

CAMC also measures and strives to improve workplace health, security, and accessibility. The application states (CAMC 2015, 23):

> [CAMC] provides WF training emphasizing personal security, [managing] workplace violence, crisis intervention and identification of workplace hazards. . . . Cycles of learning led to the redesign of units to increase efficiency and to decrease potential WF injuries.

Exhibit 43.9 highlights CAMCs work environment strategies related to health, security, and accessibility.

CAMC has a carefully developed compensation structure and uses a broad spectrum of rewards (see exhibit 43.10). The application states, "We conduct an annual systematic analysis of the compensation and benefit structure to determine if changes are needed to support our WF via services, benefits and policies" (CAMC 2015, 23).

EXHIBIT 43.9
Health, Security, and Accessibility Performance

	Strategies Tailored to Work Environment	Key Measure/Goal	Results
Health	• WF compliance with influenza vaccine • Pre-employment physicals • Fitness for duty testing	100% eligible WF	Figure 7.3-9
	• Transitional Return to Work program with temporary job restriction	100% of eligible WF placed	Figure 7.3-10
	• Wellness — screening, weight loss, nutrition, and fitness	Program participants	(AOS)
Safety	• Required annual safety training • Environmental rounding/Safety audits • Infection prevention procedures • Hazardous materials procedures • Ergonomic assessments • Chemical inventory process • Blood borne pathogen review	Reduction in overall accident/injury rate	Figure 7.3-11
Security	• 24-hour campus security • Associate/vendor identification badges • Escorts and car assistance • Code Gray: combative help	Reduction in personal thefts	(AOS)
Access	• Card readers for access • Security desk (ED/Mother/Baby) • 24/7 surveillance • Security rounds/Security station 24/7 ED	Number of safety incidents	(AOS)

Note: AOS = available on site. CAMC has additional assessment data not included in the application. Numbers in the far right column refer to figures from the original application, which is available at http://patapsco.nist.gov/Award_Recipients/PDF_Files/CAMC%20Health%20System%20Application%20Summary.pdf.

Source: Reprinted from CAMC (2015, 23).

EXHIBIT 43.10 Reward and Recognition Methods

Reward & Recognition	High Performance	Innovation and Intelligent Risk Taking	Patient Focused Care	Workforce	Physicians
Heart & Soul	x	x	x	x	x
Volunteer Celebration			x	x	
Thank You Notes	x	x	x	x	x
Rounding	x		x	x	x
Service Award Program & Dinner	x			x	
Service Award Recognition Boards	x			x	
Quality Awards	x	x	x	x	x
HCAHPS	x	x	x	x	x
On the Spot	x		x	x	
KEEP/ASP Program	x		x	x	x
Medical Staff Recognition Dinner			x	x	x
Nurse Excellence Award	x	x	x	x	
DAISY Award	x	x	x	x	
Medical Staff Employee Recognition	x	x	x	x	x

Source: Reprinted from CAMC (2015, 24).

The application states (CAMC 2015, 25):

> Monetary compensation and non-monetary recognition are essential to create and sustain high performance and contribute to daily engagement and strategic performance ownership. All regular status employees are eligible for an annual merit-based increase and an incentive award when annual goals and BIG DOTs are achieved. Quality performance incentives may be added at the hospital or service level to reward achieving quality or regulatory targets. Skill-based compensation plans provide incentives and rewards for individuals who attain career ladder achievement, specified certifications or other competencies in targeted professional or technical positions.

Category 6: Operations

CAMC (2015, 27) claims that its Enterprise System (shown previously in exhibit 43.2) supports a systematic process for achieving best practice:

> We begin with the MVV . . . and customer requirement inputs. Guidance is provided by legal and ethical standards and governance system, the LS [see exhibit 43.1], the SPP [see exhibit 43.4], PI System, and Innovation Systems.

The design of healthcare services and work processes at CAMC (2015) is based on patients' and other customers' key requirements. They incorporate

1. all customer requirements and existing key work processes;
2. best practices;
3. organizational knowledge, including evidence-based medicine;
4. patient and other customer value; and
5. value stream mapping or design to identify key performance indicators.

An Impact Leadership Committee monitors process design teams and supplies necessary resources.

Implementation at CAMC (2015) is also carefully managed, incorporating

1. standardization of the process;
2. deployment via policies and procedures;
3. dissemination of learning through one-page task descriptions and job instruction/training; and
4. oversight through in-process and performance measures.

The application further describes the implementation process (CAMC 2015, 27):

> Oversight for this process is the responsibility of the SL process owner who monitors key performance measures and in-process measures. . . . If there is a gap in performance, a cycle of learning using DMAIC is initiated and action plans are modified.

CAMC (2015, v) believes that "Improvement is everywhere," and the breadth and depth of the organization's improvement efforts are highlighted in exhibit 43.11. It claims over 15 years' experience with Six Sigma, with 8 full-time Six Sigma Black Belts and 92 Green Belts. It expanded the Shewhart cycle for continuous improvement—which traditionally involves cycles of Plan, Do, Check, and Act—to its DMAIC approach of Define, Measure, Analyze, Improve, and Control (see exhibit 43.12). CAMC (2015, 28) tracks "in-process

EXHIBIT 43.11 Performance Improvement Breadth and Depth

IMPROVEMENT IS EVERYWHERE
Improvement is CAMC Health System wide from the Board to every employee: • **Organizational Level:** Baldrige • **System and Process Level:** Enterprise Systems Model • **Department Level:** Improvement Projects • **Individual Level:** PI training starting at orientation
IMPROVEMENT IS SYSTEMATIC
Process Improvement uses: • **Process Improvement Methodology:** DMAIC • **Tools:** 5S, Lean, Visual Management, A3 Problem Solving, Waste Walk, Standardized Work, Root Cause Analysis, ISO 9001 and others
IMPROVEMENT IS FACT BASED
Improvement is evaluated: • **Improvement Tracking:** Top 5 Boards, Scorecards • **Performance Verification and Accountability:** Organization Performance and Capabilities Review, Performance Management System
IMPROVEMENT IS MATURE (Started in 1989)
Improvement is shared: • More than 67 Committees **Performance is integrated:** • Organizational Knowledge Management

Source: Reprinted from CAMC (2015, v).

and outcome measures for every work process and for every customer segment," and its Top 5 boards focus departments and partners on improvement priorities.

CAMC (2015, 28) analyzes patient care "at multiple touchpoints before, during, and after each visit," and it maps patient experience to (1) "understand key requirements" and (2) "enable us to explain healthcare service delivery processes and likely outcomes to set realistic patient expectations." The application further describes CAMCs efforts in "defining a *Patient Experience Pathway*" and standardizing key actions that need to at the various phases of customer interaction.

During the admission process, the patient's decision-making preferences, consent, and Advance Medical Directive forms are entered into the nursing database in the electronic record. The patient takes part in a systematic orientation process that uses both two-way communication and written information. After admission, patients' daily goals are written on the white boards in their rooms, and an Interdisciplinary Plan of Care (IPOC) process helps ensure that patient and family goals are met. Rounding helps coordinate care. Rounding and other listening post data are trended and analyzed for OFIs.

EXHIBIT 43.12 The DMAIC Process for Improvement

Define	• Determine strategic opportunity for improvement (data driven) • Identify customer requirements • Define the problem
Measure	• Develop process measures based on criteria • Collect process data • Check the data quality and identify benchmarks • Understand process behavior • Baseline process capability and potential
Analyze	• Analyze the process • Develop theories and ideas (potential root causes) • Analyze the data (trends and benchmarks) • Verify root causes and understand cause and effect
Improve	• Plan improvement strategies • Pilot strategies • Measure effectiveness • Implement improvements and re-measure as needed
Control	• Standardize new process • Sustain • Spread improvements

Note: This symbol signifies use of DMAIC process for improvement throughout this application.

Source: Reprinted from CMAC (2015, v).

Exhibits 43.13a and 43.13b show how customer requirements are factored into key work and support processes for inpatient, outpatient, and emergency department care.

CAMC's (2015, 29) sepsis procedures provide a clinical example of its Enterprise System in action. The Institute for Healthcare Improvement's QUEST collaborative had helped CAMC identify sepsis as the highest cause of preventable mortality, so it became a key goal and BIG DOT. In repeated improvement cycles, teams with physician leaders developed best practices to reduce mortality (2015):

- Preadmission efforts focused on staff training in nursing homes to promote early identification and intervention, to allow prompt treatment, and to avoid unnecessary hospitalization.
- Improvements at the admission stage included an ED nurse's protocol that identifies high-risk patients and triggers a sepsis evaluation, the sepsis treatment bundle, and notification to an intensivist physician.
- Improvements during treatment included a system that triggers an early intervention alert in response to changes in the vital signs of a hospitalized patient, as well as medication protocols that decrease ventilator and intensive care unit days.

EXHIBIT 43.13A
Key Work Processes

Key Work Processes		Key Requirements 7.1(a)	Measures 7.1b(1)	Results
Preadmission Admission	Warm Welcome	High quality, safe care Respectful attitude Knowledge and skills Timeliness/Ease through the system	IP - Uninsured Patient Conversion OP - Third Next Available Appointment ED - ED Turnaround Times by Hospital	7.1-54 7.1-52–7.1-53 7.2-19
Treatment	Best Experience	High quality, safe care Knowledge and skills Timeliness/Responsiveness Communication	IP -Medication Administration Saves OP - Documented Plan for Chemotherapy ED - ED Priority 1 Trauma	7.1-55 7.1-58 7.1-41
Discharge	Fond Farewell	High quality, safe care Communication Coordination of care Timeliness	IP - Average Length of Stay OP - Medication Reconciliation on OP Chart ED - Lab ED Turnaround Time	(AOS) 7.1-44 7.1-59
Post Discharge	Stay Connected	High quality, safe care Communication Coordination of care with next provider	IP – Primary Care Practitioner Appointments Scheduled OP - Follow-Up Mammogram after Screening Copy of Medications Provided	7.1-63 7.1-48 7.1-43

Note: AOS = available on site. CAMC has additional assessment data not included in the application. Numbers in the exhibit refer to figures and sections from the original application, which is available at http://patapsco.nist.gov/Award_Recipients/PDF_Files/CAMC%20Health%20System%20Application%20Summary.pdf.

Source: Reprinted from CAMC (2015, 28).

- Discharge improvements focused on follow-up with the patient's physician and education for the patient and family about risk factors.
- Postdischarge practices emphasized communication to increase medical staff awareness of prevention and early identification.

As a result of these work process improvements, CAMC saved 1,613 lives from 2011 to 2014. As of June 2016, the total was 1,798.

CAMC's approach to supply chain management is similarly systematic. It evaluates new supply requests in an eight-step process that includes analysis of clinically oriented value, environmental issues, source and distribution, and training materials. The application explains (CAMC 2015, 30):

> Supplier performance is measured and evaluated monthly for fill rates, invoice discrepancies, service issues and returns. Bi-annual or annual scheduled business reviews are conducted with suppliers for learning and alignment of service expectations. Key Distribution Supplier scorecards are used to provide feedback on service issues, reported product failures and business related issues.

EXHIBIT 43.13B

Key Support Systems and Processes (Partial List)

Key Support Processes	Organizational Support Requirements	Measures 7.1b(1)	Results
Work System Key Requirements are addressed by each Key Support System			
Medication Management	**Inpatient** High quality, safe care Communication/respect Responsiveness/timeliness	Missing First Dose Review MAK Saves	(AOS) 7.1-55
Housekeeping Bed Cleaning		Bed Turnaround Times	7.1-61
Product Acquisition		Inventory Fill Rates	7.1-71
Network Availability	**Outpatient** High quality, safe care Communication Timeliness	Network and Server Availability, IT Help Desk, Help Desk Customer Survey Managed Services Metrics	7.1-67
Workforce Engagement		Overall Employee/Nursing Turnover Time to Fill New Positions Employees Living the Values	7.3-5;6, 7, 29
Revenue Cycle	**ED** Timeliness High quality, safe care	Inpatient Discharges Outpatient Visits Emergency Room Visits	7.5-21, 25, 26
Workforce Development		Internal Promotions	7.3-32

Note: AOS = available on site. CAMC has additional assessment data not included in the application. Numbers in the exhibit refer to figures and sections from the original application, which is available at http://patapsco.nist.gov/Award_Recipients/PDF_Files/CAMC%20Health%20System%20Application%20Summary.pdf.

Source: Reprinted from CAMC (2015, 28).

The application describes the request for proposal (RFP) process in use at CAMC (2015, 30):

> We use an extensive RFP process with specific criteria for selecting our group purchasing organization (GPO) and other suppliers. . . . All vendors must meet CAMC's defined credentialing criteria before being granted access to the hospital or performing any sales or educational visits. We also use our GPO and other suppliers to help us achieve efficiency in supply cost management, support innovation through researching new technology and products, and provide a forum for networking to share best practices.

Examples of improved operations cited by CAMC (2015) include cycles of improvement that raised drug delivery effectiveness from 90 to 99 percent in three years and the development of a "5S" tool that all nursing units used to standardize the organization of medications, clean/dirty supplies, forms, equipment, and linen supplies.

Concerning safety, the application states (CAMC 2015, 30):

> Our safety system addresses proactive accident prevention by: 1) defining job requirements, 2) assessing the individual's ability to perform required functions, 3) defining policies and processes to safely perform tasks, 4) providing PPE [personal protective equipment], and 5) training at orientation annually/or more frequently when changes in duties occur. 6) Inspection strategies are deployed across the system through leadership rounding and safety, facility and security rounds. 7) Auditing processes are systematically used for targeted issues and include hand hygiene, semi-annual departmental inspections, and use of outside consultants.

When system failures occur, they are reviewed using the DMAIC process. Changes are deployed via single-page memos and safety alerts.

CAMC (2015) is prepared for disasters and emergencies and conducts routine training, simulations, and drills. Its systems have met two challenging tests—first in 2012, when 70 percent of West Virginia was without power, and then in 2014, when a major flood contaminated the water supply. The sites functioned under emergency conditions for several days.

Next Steps

Sarah Cho has now spent a considerable amount of time reviewing CAMC's Baldrige documentation and summarizing her findings as they might relate to XYZ. In completing her summary, Sarah decided not to draw too many comparisons between CAMC and XYZ, because other members of the team know XYZ so much better than she does. However, as she worked, she recognized that a key issue will be getting everybody to understand the differences—not just the senior team, but all managers.

When finished, Sarah is surprised to find that her "summary" is more than 8,000 words long. "Nobody will read all of this," she thinks. "Do I now have to develop a summary of the summary?"

Case Questions

1. What should Sarah include in a two-page executive summary of the summary she has created?
2. Sarah also thinks she needs an "elevator speech." It starts with something like, "XYZ is great, but we can make it greater. It's a win–win for everybody—patients, caregivers, other XYZ associates." Help her finish the speech by adding 250 words about why the Baldrige journey is a good idea for XYZ.