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POUDRE VALLEY HEALTH SYSTEM

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## Glossary of Terms

**ACFM** — American College of Family Medicine

**ACHE** — American College of Healthcare Executives

**ACS** — American College of Surgeons

**ALOS** — Average length of stay — How long it takes a patient to return home or move to step-down care; the ultimate indicator of patients' improved functional status, generally indicating reduced risk to patients and efficient consumption of hospital resources.

**ANCC** — American Nurses Credentialing Center — National organization that designates top quality hospitals as “Magnet” facilities, based on a demonstrated commitment to nursing excellence and high-quality patient care.

**APIC** — Association for Professionals in Infection Control and Epidemiology

**ASHHRA** — American Society for Healthcare Human Resources Administration

**ASMBS** — American Society of Metabolic and Bariatric Surgery

**ASTD** — American Society for Training and Development

**Aspen Club** — PVHS' free, 15,000-member organization for community members age 50 and above.

**Avatar** — Patient satisfaction survey measurement tool administered by an independent third party.

**Avatar Priority Matrix** — A ranking of patient satisfaction survey items based on benchmarks, patient expectations, and relative importance to the patient, calculated using proprietary, multivariate analyses.

**BLS** — U.S. Bureau of Labor Statistics

**BOD** — Board of Directors — The ultimate policy maker and fiduciary agent; an active, deeply involved board with 11 members representing Medical Staff leadership, the Senior Management Group, and key stakeholders in the regional medical, business, service, and patient communities.

**BSC** — Balanced Score Card — A tool to display measurable outcomes and trend process improvements.

**Behavior Standards** — Guidelines related to customer care, attitude, safety, professional appearance, communication, and teamwork, established by PVHS to help the workforce live the PVHS Vision, Mission, and Values (Figure P.1-2).

**CanDo** — Coalition for Activity and Nutrition to Defeat Obesity — A collaboration of community organizations and businesses to provide a supportive culture for healthy eating and active living in order to prevent obesity and to meet worksite wellness criteria for the “Well City” designation.

**CAP** — College of American Pathologists — Laboratory accreditation program.

**CDC** — U.S. Centers for Disease Control and Prevention

**CDPHE** — Colorado Department of Public Health and Environment

**CEO** — Chief Executive Officer

**CFO** — Chief Financial Officer

**CHA** — Colorado Health and Hospital Association — Association of health systems and hospitals for research, education, and data sharing.

**CHC** — Colorado Health Care

**CINAHL** — Third party provider of clinical resource information.

**CIO** — Chief Information Officer

**CLIA** — Clinical Laboratories Improvement Act

**CME** — Continuing Medical Education — Educational activities for doctors and allied health professionals.

**CMO** — Chief Medical Officer

**CMS** — Centers for Medicare & Medicaid Services — National government agency that oversees the Medicare and Medicaid programs.

**CNO** — Chief Nursing Officer

**CPEX** — Colorado Performance Excellence — State quality organization that uses Baldrige criteria for a four-tiered system of quality awards, with Peak as the highest award level.

**CQIC** — Clinical Quality Improvement Council — The multidisciplinary committee responsible for coordination and oversight of clinical quality improvement efforts.

**CSSC** — Customer Service Steering Committee — A team with representatives from PVH and MCR inpatient, outpatient, ED, community health, marketing, volunteer services, and quality resources, with the mission of: 1) aggregating and analyzing patient/customer data; and 2) identifying, prioritizing, and deploying systemwide patient/customer improvements.

**CSU** — Colorado State University

**Cascade Learning** — A process of sharing information, so that as one person learns, he/she is responsible for sharing that learning with others, who in turn, share the learning with others, so that knowledge is cascaded throughout the organization.

**Case Mix Index** — A measure of the complexity of patients treated in a hospital. Adjustments using the case mix index make comparisons more meaningful by providing a standard method of adjusting for different patient populations.

**Clinical Education Committee** — Interdisciplinary committee charged with education and training of clinical staff. The committee serves as a resource for unit educators and staff, and is responsible for soliciting and implementing new ideas. The committee fosters staff development and implementation of practice changes founded by evidence-based practice.

**Code of Conduct** — An official policy/agreement signed by all staff, volunteers, and Board members, and acknowledged by all physicians and vendors, that outlines the organization's expectations and consequences for legal and ethical behavior.

**COMPASS Project** — A health-related data-gathering entity of health and human service agencies.

**Concierge Service** — A free service that helps patients and family members take care of life details while in the hospital.

**Customer Champions** — An adhoc committee of the Customer Service Steering Committee that assists with deploying systemwide patient/customer improvements.

**DEA** — Drug Enforcement Agency

**DOT** — U.S. Department of Transportation



**DRG** — Diagnosis Related Groups — Payment classification system used by CMS for provider payment determination, often used for comparisons of similar clinical events.

**EAP** — Employee Assistance Program — An employee counseling program.

**ED** — Emergency Department

**EEOC** — Equal Employment Opportunity Commission

**EHR** — Electronic Health Record

**ESS** — Executive Support System — The business component of Meditech that gives PVHS managers a functional view of financial performance by service line and department.

**Employee Culture Survey** — Internal employee satisfaction survey used to improve the work culture.

**Employee Ethics and Compliance Survey** — An annual PVHS survey administered by the Compliance Department.

**Employee/Volunteer Forums** — Quarterly open meetings with SMG and staff.

**Employee Suggestion Program** — Formalized process through which employees can submit suggestions for organizational improvement.

**Engagement** — A heightened positive connection that a member of the workforce feels for his or her organization and that influences him or her to exert greater discretionary effort to his or her work.

**Ethics and Compliance Hotline** — Confidential hotline available to staff, volunteers, physicians, partners, vendors, patients, and community members for reporting or questioning matters or actions of legal or ethical nature.

**Evidence-Based Medicine** — Medical decision-making based on the best available clinical research.

**FDA** — U.S. Food & Drug Administration

**FEMA** — Federal Emergency Management Agency

**FFI** — Financial Flexibility Index — A measure of financial health; a composite of seven financial ratios (Total Margin, Return on Investment, Replacement Viability, Equity Financings, Days Cash on Hand, Cash Flow to Total Debt, and Average Age of Plant) that measure an organization's ability to control funds flow. Organizations that are likely to thrive are those that can better control the relationship between source of funds and uses of funds and increase the difference between them.

**FMC** — Family Medicine Center — Outpatient primary care clinic, including care for low-income families; site for the family medicine residency program.

**FMEA** — Failure Mode Effect Analysis

**FTE** — Full-Time Equivalent — Unit of measure used by the HR Department.

**GPO** — Group Purchasing Organization

**GPS** — Global Path to Success — The PVHS leadership system for setting and deploying the Vision/Mission/Values and strategic objectives throughout the organization (Figure P.1-1).

**GetWell Network** — An in-room, interactive patient education program launched at MCR and planned for PVH, with a real-time customer satisfaction component that allows patients to: 1) obtain information about their care team; 2) access the internet and email; 3) communicate

complaints and compliments; and 4) order on-demand movies.

**GetWell Network Ambassadors** — Volunteers who visit admitted MCR patients to demonstrate navigation of the interactive GetWell network.

**Governance Institute** — An independent organization that conducts research studies, tracks healthcare industry trends, and showcases the best practices of leading healthcare boards across the country with the goal of providing the essential knowledge and solutions necessary for hospitals and health systems to achieve excellence in governance.

**Grand Rounds** — Educational opportunities for clinicians based on current issues and case studies, including specific diagnoses and lessons learned regarding identification of at-risk patients, complications, and appropriate evaluation and treatment strategies.

**HCAHPS** — Hospital Consumer Assessment of Healthcare Providers and Systems — A standardized survey instrument to support consumer choice.

**HFMA** — Healthcare Financial Management Association

**HIPAA** — Health Insurance Portability and Accountability Act

**HUCC** — Harmony Urgent Care Center

**Health District of Northern Larimer County** — Special tax district that formerly owned and operated PVH and now collaborates with PVHS through the Joint Community Health Strategic Planning Committee to improve community health.

**HealthGrades** — A leading national provider of comparative clinical results that annually reviews the publicly available MedPar data and recognizes hospitals that achieve excellent clinical outcomes.

**HealthLink** — Public-access computers placed throughout PVHS facilities so that patients, families, and community members can access health information.

**Healthy Families** — A PVHS community health program that provides health and wellness support for families.

**Healthy Kids Club** — A community outreach program sponsored by PVHS to promote health and safety in local elementary schools. Activities include: after school and summer activity programs, “Strap and Snap” bike helmet safety education, “Swim Smart” water safety instruction, Healthy Kids Run Series, support for existing exercise, health and activity programs in elementary schools and a monthly newsletter “Healthy Kids News” distributed to all elementary students.

**Hospital within a hospital** — An innovative design concept utilized at MCR that co-locates comprehensive inpatient and outpatient cardiovascular services such that one wing of the tertiary hospital functions as a standalone cardiac hospital.

**ICCU** — Intensive Cardiac Care Unit

**IHI** — Institute for Healthcare Improvement — A national campaign to make health care safer and more effective, ensuring that hospitals achieve the best possible outcomes for all patients.

**IS** — Information Systems — Department that oversees electronic technology support.

**ISS** — Injury Severity Score — An objective anatomical scoring system that assists in the triage of injured patients. A higher score indicates a more severe injury. A score above 14 indicates a critical injury.

**I/T** — Information Technology

**Ingenix** — A leading provider of comparative clinical and financial results.



**JCHSCP** — Joint Community Health Strategic Planning Committee — A regional, inter-agency collaboration to improve community healthy status by: 1) developing and implementing a community health plan; and 2) creating a central data repository.

**Joint Commission** — An organization that ensures compliance with healthcare standards through an accreditation process for Medicare/Medicaid reimbursement.

**KPI** — Key Performance Indicator — Monthly cost center report including expenses, revenue, FTE data, and monthly and year-to-date budget variances.

**Key Words at Key Times** — Guidelines for employees in interactions with patients and customers to ensure consistent and positive communication (verbal and behavioral) and to deliver the best quality care related to patient rights, comfort, concerns, confidentiality, security, and safety.

**Kirkpatrick Evaluation** — An established method for evaluating education based on the resulting behavior changes.

**Kronos** — Employee time clock.

**LEED** — Leadership in Energy and Environmental Design — A certification program through the U.S. Green Building Council that rewards points for efforts such as innovative building design; optimal energy performance; locally harvested stone, brick, and concrete; water-efficient landscaping; wetland filtration for stormwater run-off; greater than 75 percent construction waste diversion; low-emitting paint and flooring; and a smoke-free campus.

**Leadership Competencies** — Competencies that each PVHS leader needs to exhibit; used to guide leadership learning and development (Figure P.1-3).

**Leadership Dialogues** — Classes provided in the Learn and Grow series that provide group discussion on current workplace topics, such as Disciplinary Dilemmas, Employment Laws You Deal with Daily, and Coaching for Performance.

**Leadership Priorities Template** — A common checklist for use by SMG and directors during monthly one-on-one meetings to ensure leadership accountability for BSC measures, action plans, performance review completion, rounding, appreciation activities, and staff compliance requirements.

**Leadership Retreats** — Semi-annual, multiple-day, off-site meetings for in-depth discussions, strategy development and team building.

**Leadership Team** — Directors of the organization.

**Learn and Lead Program** — Leadership training on the organization's strategic objectives, with the goal of creating a learning organization and deploying the strategic plan.

**Lemay Bistro** — Coffee and sandwich shop adjacent to the surgery waiting room at PVH.

**Level IIIa Neonatal Intensive Care Unit** — A designation from the Colorado Perinatal Care Council to hospitals qualified to care for critically ill newborns and those born at 28 weeks gestation or older.

**Lifestyle Challenge** — A PVHS partnership with businesses and organizations to implement workplace wellness programs that improve healthy lifestyle factors and decrease healthcare costs.

**MAC** — Monday Afternoon Conference — A weekly presentation by regional speakers and PVHS nurses and physicians for the purpose of sharing best practices and evidence-based medicine.

**MALT** — Mandatory Annual Learning Test — Annual mandatory testing of staff and volunteer competencies in areas including safety, security, blood borne pathogens, infection control, and emergency preparedness.

**MCR** — Medical Center of the Rockies — New PVHS tertiary hospital that opened in Loveland, Colorado in February 2007.

**MEC** — Medical Executive Committee — Physician-elected group, led by the Chief of Staff and populated by the chairs of each medical department, that oversees the governance duties of the Medical Staff, oversees the physician credentialing processes, makes recommendations to the governing board(s) regarding clinical services offered by each facility, and enforces regulatory requirements pertaining to the practitioners on staff and the services offered.

**MD Consult** — Third-party provider of clinical resource information.

**MGMA** — Medical Group Management Association

**MSA** — Management Science Association — Independent national firm that conducts employee opinion surveys.

**MSEC** — Mountain States Employers Council

**MSP** — Marketing and Strategic Planning Department — The department that oversees business, marketing, outreach, and SDD.

**MSQC** — Medical Staff Quality Committee — Medical staff committee that oversees medical care and peer review processes.

**Magnet Award** — A prestigious ANCC designation that shows a hospital's commitment to nursing excellence and high-quality patient care.

**Medical Directors** — Physician partners that lead specific clinical areas.

**Medical Ethics Committee** — Committee that facilitates discussion of ethical issues through: 1) educational opportunities and programs related to the ethical dimensions of health care; 2) consultation with the administration and/or the medical staff on policies concerning clinical ethical issues; and 3) an informed and confidential forum for discussion and self education regarding the ethical dimensions of health care. Membership includes SMG representatives, community members, patient representatives, attorneys, clergy, and physicians.

**Medical Staff** — The 500+ credentialed, independently employed physicians who have practicing privileges with PVHS.

**Meditech** — PVHS' core software program that supports online clinical, administrative, and financial functions.

**MedPar** — A data bank that includes every U.S. hospital with the exception of military and Veterans Administration hospitals. Hospitals are required by law to submit complete and accurate information.

**Mental Health and Substance Abuse Partnership** — A community collaboration of public and private agencies, therapists, and physicians focused on improving access to mental health and substance abuse services by increasing the community's capacity for mental health diagnosis and prescriptions, establishing crisis assessment centers for mental health and substance abuse patients in need of emergency care, and expanding the capacity of mid-level providers for medication monitoring.

**Mentor Program** — A program that: 1) pairs new and experienced staff in similar roles or positions; or 2) pairs staff with SMG and directors to provide a resource for personal/professional growth; improve retention, professional success, and productivity; and provide an avenue for professional networking.

**MicroMedex** — Third-party provider of clinical resource information.



**Moody's** — A national financial ratings agency.

**NCCI** — National Council on Compensation — Largest provider of Workers' Compensation and employee injury data and statistics in the nation.

**NDNQI** — National Database of Nursing Quality Indicators — National database including all Magnet hospitals, as well as other hospitals interested in quality improvement or Magnet designation.

**NEC** — Necrotizing enterocolitis — A bacterial infection in the intestine, primarily affecting sick or premature newborn infants. NEC affects an estimated 2 percent of all newborns, but is more frequently seen in very low birth weight infants, affecting as many as 13.3 percent of these babies.

**NEO** — New Employee Orientation

**NHSN** — National Healthcare Safety Network — New CDC cooperative group that monitors hospital-acquired infections.

**NICU** — Neonatal intensive care unit

**NNIS** — National Nosocomial Infections Surveillance System — A CDC cooperative group that monitors hospital-acquired infections.

**NTDB** — National Trauma Data Bank — The nation's largest aggregation of trauma data for the purpose of informing the medical community, the public, and decision makers about a wide variety of issues that characterize the current state of care for injured persons. The PVHS Trauma Performance Improvement Committee uses NTDB to support a robust performance improvement program.

**OIG** — Department of Health and Human Services' Office of Inspector General

**OIG Exclusion** — An OIG ruling intended to stem fraud and protect beneficiaries of federal healthcare programs (including Medicare and Medicaid) by blocking individuals or organizations from participation in these programs for misconduct ranging from fraud convictions to patient abuse to defaulting on health education loans. No federal health care program payments may be made for any items or services furnished, directly or indirectly, by an excluded individual or entity.

**OPP** — Optional Performance Plan — A systemwide reward program based on attaining defined system goals in support of the strategic objectives.

**OR Nurse Liaison** — A nurse assigned to the surgery waiting area who stays in contact with the patient's family while the patient is in surgery. The nurse rounds continually between the operating rooms, recovery, and the waiting rooms to keep family members updated with consistent and accurate information and make sure they are available to speak directly with the surgeon after the patient is through with surgery. This program was an Avatar International Innovation Award recipient in 2007.

**OSHA** — Occupational Safety & Health Administration

**Out-migration** — Patients who live in the PVHS service area who receive inpatient care at facilities besides PVHS. PVHS can track out-migration data for patients who stay within Colorado for their care.

**PACS** — Picture Archive & Communication System — The system for electronic storage and display of radiology examinations.

**PDCA** — Plan, Do, Check, Act — The PVHS process improvement model.

- Plan – Form PDCA team to analyze data, identify root cause, research best practices, and develop improvement plan to meet customer and process requirements. Identify outcome or in-process measures for determining

whether the process is performing to goal (e.g. cycle time, patient satisfaction).

- Do – Implement improvements, possibly through a pilot.
- Check – Check results against measures of success. If results are not attained, return to Plan step.
- Act – Institutionalize change through change management process, policy/procedure revisions, and training [4.2b(2)]. Monitor performance to make sure the process is functioning to plan.

**PESEC** — Product and Equipment Standardization and Evaluation Committee

**PSA** — Primary Service Area — The geographic area, including Fort Collins, Loveland, Windsor, surrounding Larimer County, and parts of Weld County, which accounts for 75 percent of PVHS' total revenue.

**PSC** — Patient Safety Committee — A multidisciplinary group that oversees and coordinates patient safety activities.

**PTO** — Paid Time Off

**PVH** — Poudre Valley Hospital

**Patient Navigator Program** — A free program offered at PVHS to help newly diagnosed cancer patients identify, understand, and fund health care options, with the purpose of removing barriers to care and providing rapid access to quality healthcare. PVHS is the only organization in Colorado to offer personal navigators. By 2010, the goal is to have 100 percent of newly diagnosed patients in the program.

**Patient Representative** — A member of the PVHS staff who serves as liaison between patient/family members and all departments to: 1) identify and solve problems; and 2) aggregate and analyze complaints and compliments.

**Philips Medical Systems** — Global provider of diagnostic and medical imaging systems that has selected PVHS to be one of its 24 worldwide strategic partners. Through the partnership, MCR offers the first fully integrated cardiology, radiology, and imaging platform. Also, PVHS has the opportunity to pilot and guide development of new technology and, thus, ensure patients early access to new technology.

**Preceptor Program** — A program that pairs new nurses with experienced nurses, who teach, guide, instruct, and reinforce new knowledge and skills.

**Predicted** — Expected outcome, customized by organization and metric, based on a multivariable risk-adjustment model that incorporates historical data from a large number of like organizations.

**Press, Ganey** — Patient satisfaction survey measurement tool administered by an independent third party.

**Pyxis** — An automated pharmaceutical dispensing machine that gives nurses access to patient medications only after the pharmacist has reviewed physician orders and verified dosing, timing, allergies, and drug interactions.

**QIP** — Quality Indicator Project — A clinical benchmarking program with sensitive patient outcome data from more than 1,000 acute care hospitals and other healthcare facilities.

**R&R** — Reward and Recognition Program — A staff program to reward individual, team, and organizational performance through peer-to-peer coupons, R&R certificates, Employees of the Year, Grill Days, Thank You notes, and a variety of other recognitions.



**RWMC** — Regional West Medical Center — Community hospital located in Scottsbluff, Nebraska, and 12 percent owner of MCR.

**SBAR** — Situation, Background, Assessment, and Recommendation — A technique that provides a framework for communication between members of the healthcare team about a patient's condition.

**SDD** — Strategy Development and Deployment Process

**SO** — Strategic Objective (Figure P.1-1)

**SWOT** — Strengths, Weaknesses, Opportunities, Threats

**Senior Management Group** — SMG — The PVHS CEO and 10 vice presidents who oversee system planning and operations, make sure the organization meets its strategic objectives, and are accountable to the BOD for their actions and performance.

**Severity-Adjusted Risk** — A calculation used to obtain fair statistical comparisons between disparate populations or groups. Significant difference in demographic and clinical risk factors are found among patients treated in different hospitals. Risk adjustment of the data is needed to make accurate and valid comparisons of clinical outcomes at different hospitals.

**SMART Goals** — Strategic, specific, measurable, obtainable, resourced, timed goals.

**Splash of Sunshine** — A service recovery approach used to help brighten the day of a patient or guest who had or is expected to have an unpleasant experience with PVHS' services. This proactive approach is used at staff discretion and gives \$5 coupons for use in the gift shop, cafeteria, and local businesses.

**STAT** — Immediately.

**System Operations** — A multidisciplinary team at each hospital that meets for the purpose of sharing best practices and providing systemwide operational updates.

**Telehealth** — A telecommunications system that transmits real-time video, audio, and digital images to remote locations, enabling PVHS to provide physician consultations and continuing medical education at rural hospitals and medical offices throughout the region.

**Third-Party Payers** — Government agencies (e.g. Medicare, Medicaid) and for-profit companies (e.g. United Healthcare) that reimburse healthcare providers for services provided to covered patients.

**Thomas Concept** — A program that evaluates a person's strengths, tendencies, and communication style in order to understand and strengthen relationships and teams.

**Thomson** — A leading national provider of comparative clinical, financial, and market results that annually reviews publicly available MedPar data and recognizes hospitals that achieve excellent clinical outcomes.

**Thomson Healthcare Database** — National database of risk-adjusted clinical outcomes from more than 3,000 hospitals.

**Top Box** — The percentage of patients who give the highest customer satisfaction rating to any one aspect of their care (i.e. very good, very satisfied, strongly agree). Top box counts are divided by the count of all responses for the percentage result.

**Transcription** — The process of converting care providers' dictations and notes into a medical chart.

**Turnover Tips** — Weekly informational emails sent to the leadership of the organization outlining best practices for decreasing turnover.

**UMA** — United Medical Alliance — A PVHS joint venture with Northern Colorado Independent Practice Association (IPA) for the purposes of health plan administration. The goal of this hospital-physician partnership is to reduce healthcare costs for local employers by contracting directly with employers rather than requiring employers to go through a for-profit insurance company.

**VAP** — Ventilator-associated pneumonia

**VHA** — An independent hospital association that provides access to products, services, and information for the purpose of improving financial and clinical performance.

**VHAMS** — VHA Mountain States

**VIC** — Virtual Information Center — PVHS' intranet, including Manager VIC for manager support in operations; My VIC, where staff can access personal information on items such as benefits, pay stubs, time clock entries, and reminders for current and upcoming mandatory tests; and Dr. VIC for physician information.

**V/M/V** — Vision, Mission, Values (Figure P.1-1)

**V/M/V Team** — Vision/Mission/Values Team — A group of front-line employees, led by the VP of MSP, charged with providing continuous education to the staff on the Vision, Mission, and Values.

**VOC** — Voice of the Customer

**Vermont-Oxford Network** — A non-profit, voluntary collaboration of healthcare professionals dedicated to improving the quality and safety of medical care for newborn infants and their families. VON is comprised of over 700 Neonatal Intensive Care Units around the world and maintains a database including information about the care and outcomes of high-risk newborn infants. The database provides unique, reliable, and confidential data to participating units for use in quality management, process improvement, internal audit, and peer review.

**Volunteer Patient Liaisons** — Trained volunteers who make rounds at PVH and MCR and help identify and resolve patient complaints.

**Well City** — A national program of the Wellness Councils of America (WELCOA). A community-wide initiative that encourages employers to develop worksite wellness programs that meet the standards of excellence as defined by the Well Workplace Model.

**WROCIT** — World-Class Revolution of Care with Information Technology — Clinical Informatics Team.

**World-Class** — Striving for results in the 90th percentile or top 10 percent of available national comparative databases.



# Preface: Organizational Profile

## P.1 Organizational Description

Poudre Valley Health System (PVHS) is a locally owned, private, not-for-profit organization that provides care to residents of northern Colorado, Nebraska, and Wyoming. Headquartered 60 miles north of Denver in Fort Collins, Colorado (service area population 500,000), PVHS dates back to 1925, when Poudre Valley Hospital (PVH) opened its doors as a 40-bed hospital on the outskirts of Fort Collins. Recognizing that “Baldrige saves lives,” PVHS chose to use the Baldrige Criteria for Performance Excellence in 1999 and started participating in the Colorado Performance Excellence (CPEx) program in 2001. PVHS remains the sole recipient in any industry of the CPEx Peak Award, Colorado’s top Baldrige-based recognition, and has received consecutive Baldrige site visits since 2005. On this Baldrige journey, PVH has expanded and diversified into PVHS — a regional medical hub with a service area covering 50,000 square miles (roughly the size of Florida). The organization’s goal remains the same: to provide world-class health care, with a mission to remain independent while providing innovative, comprehensive care of the highest quality, always exceeding customer expectations.

### P.1a Organizational Environment

**P.1a(1)** PVHS offers a full spectrum of healthcare services, including emergency/urgent care, intensive care, medical/surgical care, maternal/child care, oncology care, and orthopedic care. PVHS’ unique focus areas include:

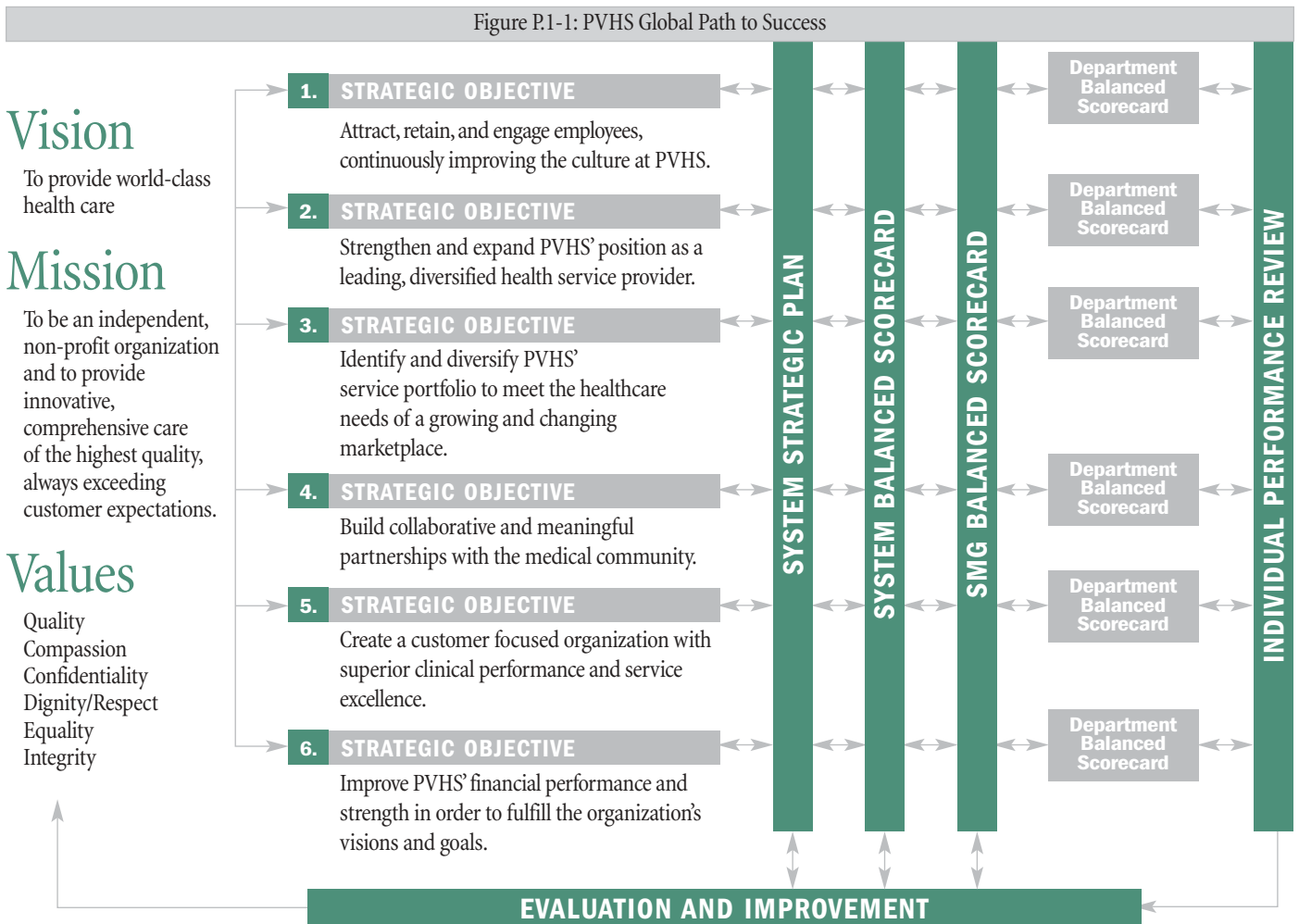
1) Colorado’s third largest cardiac center; 2) the only Level IIIa Neonatal Intensive Care Unit between Denver and Billings, Montana; 3) Level II and III trauma centers; and 4) a Bariatric Surgery Center of Excellence. PVHS also offers role model community health programs that prevent injury or illness and help the medically underserved.

The PVHS model of patient- and family-centered care drives delivery of healthcare services. The process for involving patients in their care begins with facility and service design [6.1a(2)] and continues throughout key healthcare processes (Figure 6.1-2). PVHS uses two primary care delivery mechanisms — partnerships and interdisciplinary teams.

**Partnerships.** A decade ago, in support of its mission and vision, PVHS made a commitment to provide a lifetime of care for its community. To achieve this goal while avoiding costly service duplication and ensuring optimal outcomes, PVHS strategically evaluated whether to provide a service on its own or through partnerships with other organizations [6.1a(1)]. At a time when physician-owned specialty facilities began to threaten traditional community hospitals, PVHS led the industry in physician joint ventures. With best practices learned from these early relationships, PVHS expanded its partner base beyond physicians to include entities such as home health agencies, a long-term care provider, community health organizations (1.2c) and a health plan administrator (United Medical Alliance) — a partnership that saves local employers \$5 million each year.

In an historic innovation, PVHS partnered with Regional West Medical

Figure P.1-1: PVHS Global Path to Success





Center (RWMC, Scottsbluff, Nebraska, population 15,000) in PVHS' newest hospital, Medical Center of the Rockies (MCR). Traditionally, rural hospitals such as RWMC have faced the dilemma of establishing their own specialty programs (i.e. cardiac surgery) or sending their patients elsewhere for specialty care. If they refer their patients elsewhere, they lose the income associated with that care. However, if they keep their patients at home, their small volumes do not give physicians and staff enough experience to ensure optimal clinical outcomes. Now, as part owner of MCR, RWMC is able to offer their patients world-class care and keep some of the income associated with that care.

**Interdisciplinary Teams.** From design of new facilities and services to provision of bedside care, PVHS engages teams to meet patient and other customer needs. Teams throughout the organization work together to provide the best possible care [5.1a(2)], participate in strategic planning [2.1a(1)], monitor quality indicators [6.2a(1)], and coordinate systematic improvements (6.2b).

**P1a(2)** A culture of engagement and innovation is the foundation of the PVHS strategy for providing world-class health care. Senior leaders began systematically building this culture a decade ago, by asking staff, "What makes you want to jump out of bed and come to work in the morning?" The PVHS Global Path to Success (GPS, Figure P.1-1) provides a leadership system and framework for this culture, incorporating: 1) the performance management system [5.1a(3)], which links individual goals to organizational goals through each employee's personal goal card; and 2) the Code of Conduct [1.1a(2)], Behavior Standards (Figure P.1-2), and Leadership Competencies (Figure P.1-3), which outline specific behaviors that support organizational values (Figure P.1-1), key customer requirements (Figure P.1-6), and key workforce requirements (Figure P.1-5). Members of the workforce understand and demonstrate the Vision, Mission, and Values (V/M/V) and, through their goal cards, focus on how they can help the organization provide world-class care. PVHS defines "world-class" — a term commonly used to mean "the best" — as striving for results in the 90th percentile or top 10 percent of available national comparative databases. If external comparative data are not available, PVHS uses internal, historical data to set stretch goals that will drive performance improvement and innovation.

PVHS continues to receive external verification of its progress toward its world-class vision through recognition, most recently, as: 1) the nation's No. 1 hospital for nursing care (PVH: American Nurses Association and

Figure P.1-2: PVHS Behavior Standards

CARE OF CUSTOMERS	SAFETY
We serve others with courtesy, compassion, and sensitivity.	We strive to maintain a safe, accident-free environment.
ATTITUDE	COMMUNICATION
We are all responsible for creating a positive experience in our workplace.	We talk, listen, and interact with others in a way that is consistent with our values.
PROFESSIONAL APPEARANCE	COMMITMENT TO PVHS TEAM
We represent PVHS and show respect for customers through our grooming, dress, and care of facilities.	We rely on fellow employees, and they rely on us to accomplish our mission.

Figure P.1-3: Leadership Competencies

LEADERSHIP COMPETENCIES
1. Create & manage effective teams.
2. Coach for success.
3. Maintain effective interpersonal relationships.
4. Facilitate accountability & maintain measurable outcomes.
5. Maintain positive personal behaviors.
6. Support alliances that link to Strategic Plan.
7. Promote innovation.
8. Be a steward of PVHS resources.

Figure P.1-4: Staff Profile

STAFF PROFILE	
Gender	Female: 81%, Male: 19%
Position	RN: 30.9%, Maintenance/Service: 20.3%, Licensed/Tech: 19.9%, Professional: 13.3%, Management: 7.9%, Clerical: 6.9%
Tenure (years)*	<1: 27.3%, 1<5: 30.4%, 5<10: 21.9%, 10<20: 14.2%, 20+: 6.2%
Education	Graduate school: 15.5%, College: 49.9%, Technical: 8.5%, High School: 8.5%, Other: 17.6%
Employment Status	Full time (0.8 FTE or more): 75.1%, Part time: 16.3%, Relief: 8.6%
Shift	Day: 63.7%, Evening: 14.0, Night: 15.6%, Rotating: 4.6%, Weekend: 2.1%
Ethnicity**	White: 89%, Hispanic: 8%, Other: 3%
*Reflective of new hospital	
**Reflective of the communities served by PVHS	

National Database for Nursing Quality Indicators, 2007); 2) the nation's No. 1 hospital for overall patient satisfaction (MCR: Avatar, 2007); and 3) a Thomson Top 100 Hospital for five consecutive years (PVH: one of only seven U.S. hospitals).

**P1a(3)** The PVHS workforce includes staff, credentialed providers, and volunteers.

**Staff.** Figure P.1-4 profiles the PVHS staff. There are no bargaining units.

**Credentialed Providers.** The PVH medical staff has 504 physicians; MCR has 370 physicians. Since some physicians have practicing privileges at both facilities, that means a total of 550 physicians for the two hospitals combined. PVHS has a rigorous process for credentialing all medical staff members, who are independently employed and board certified or board eligible.

**Volunteers.** Of the 773 PVHS volunteers, 80 percent are adults, 7 percent are college students, and 13 percent are teens. Volunteers vary from high school students to retired physicians.

Figure P.1-5 summarizes the key requirements and expectations of the workforce, as determined by approaches described in 5.1a(1). Job descriptions outline position-dependent health and safety requirements [5.2b(1)]. PVHS offers generous benefits [5.2b(2)].



Figure P.1-5: Key Workforce Requirements

WORKFORCE SEGMENT	REQUIREMENTS
Staff (Figures 7.4-1, 2, 3)	<ol style="list-style-type: none"> <li>1. Teamwork and cooperation</li> <li>2. Safety in innovating</li> <li>3. Listening to each other</li> <li>4. Respect and fairness</li> <li>5. Enthusiasm</li> <li>6. Feedback and accountability</li> <li>7. Resources and participation</li> </ol>
Physicians (Figure 7.4-5)	<ol style="list-style-type: none"> <li>1. Quality patient care</li> <li>2. Staff skill and attitude</li> <li>3. Responsiveness to problems or requests</li> <li>4. Support by hospital administration</li> </ol>
Volunteers (Figure 7.4-4)	<p><b>TEENS</b></p> <ol style="list-style-type: none"> <li>1. Healthcare experience</li> <li>2. Flexible scheduling</li> <li>3. Diverse task assignments</li> </ol> <p><b>ADULTS</b></p> <ol style="list-style-type: none"> <li>1. Respect</li> <li>2. Effective communication</li> <li>3. Satisfaction</li> </ol>

**P.1a(4)** PVHS has three main facilities located in the Fort Collins/Loveland area: PVH (281 licensed beds), MCR (136 licensed beds), and Harmony Campus, which includes the PVHS Corporate Offices and several PVH departments. To address space constraints at the landlocked PVH, additional PVH departments are located offsite but in close vicinity to PVH. The PVHS facilities function as a system, with a common Senior Management Group (SMG), Strategy Development and Deployment (SDD) process, and Baldrige-based performance excellence committees (P.2-3).

**P.1a(5)** Operating in the heavily regulated healthcare environment, PVHS has mechanisms in place to keep current, comply with, and often go beyond relevant laws, regulations, and standards established by key regulatory organizations. To drive performance excellence, PVHS also pursues voluntary accreditations through the American Nurses Credentialing Center (Magnet), American College of Surgeons (ACS), American Society for Metabolic and Bariatric Surgery (ASMBBS), Centers for Medicare and Medicaid Services (CMS), and the Joint Commission.

### P.1b Organizational Relationships

**P.1b(1)** The PVHS organizational structure and governance system consist of a Board of Directors (BOD), Medical Executive Committees (MECs) for PVH and MCR, Senior Management Group (SMG), and Leadership Team (1.1), which are described here and detailed in the Organizational Charts.

**BOD.** PVHS has an 11-member appointed, volunteer BOD that represents the interests of the customers and workforce. The PVHS President/CEO and a representative from the Health District of Northern Larimer County BOD serve as ex-officio members; the CMO, PVH/MCR Chiefs of Staff, and PVH/MCR Presidents/CEOs are non-voting invited guests. Because MCR has 12 percent ownership by RWMC, the law requires that MCR has its own BOD. However, to ensure effective knowledge management, the MCR BOD has the same membership as the PVHS BOD. The PVHS BOD has nine committees (see organizational charts). The PVHS President/CEO and chiefs of staff report to the BODs, which receive regular updates on departments and services from SMG. The PVHS BOD also receives regular

Figure P.1-6: Key Customers & Requirements

CUSTOMER GROUPS	REQUIREMENTS	RESULTS
<b>Patients</b> Inpatient, Outpatient, and Emergency Department	1. High-quality care	7.2-1, 2, 8
	2. Friendly staff	7.2-3, 4
	3. Prompt service	7.2-3, 4
<b>Community</b> Primary and Secondary Service Areas	1. Service availability	7.3-8, 9
	2. High-quality care	7.2-6
	3. Low cost	7.2-9

updates on the organization's joint ventures. However, PVHS has no leadership of daily operations for any of the joint ventures, except for MCR, so MCR is the only joint venture included in the scope of this application.

**MECs.** Led by the Chief of Staff at each hospital, MEC members are physicians elected by the medical staff to represent the departments of each hospital. PVH MEC has 13 members; MCR MEC has 12.

**SMG.** Led by PVHS President/CEO, SMG includes the PVH and MCR CEOs, as well as eight PVHS, PVH, and MCR vice presidents and the newly created and filled Chief Medical Officer position.

**Leadership Team.** Leadership Team includes SMG and the 54 PVHS, PVH, and MCR directors who report to them.

**P.1b(2)** For PVHS, the two key customer groups are Patients and the Community. The patient segments are Inpatient, Outpatient, and ED, and the Community segments are Primary and Secondary Service Areas, as identified through: 1) the listening and learning process [3.1a(2)]; and 2) SDD process [2.1a(1)]. Figure P.1-6 summarizes key customer requirements, as determined by approaches described in 3.1a(2). Key requirements do not vary across segments.

**P.1b(3-4)** Key types of partners, collaborators, and suppliers; the roles they play in work systems, innovation processes, and the production and delivery of healthcare services; and relationship/communication mechanisms are outlined in Figure P.2-1. This figure also describes supply chain requirements. PVHS does not rely on distributors, so none are presented here.

## P.2 Organizational Challenges

### P.2a Competitive Environment

**P.2a(1)** PVHS is the market leader in its primary market, which includes Fort Collins, Loveland, Windsor, and surrounding Larimer and Weld counties. In this primary market, which accounts for 75 percent of PVHS' revenue, PVHS is approaching a 62 percent market share — up 5 percent over the past five years, as competitor market shares have dropped (Figure 7.3-8). Demographers expect the region's population to almost double over the next two decades. To keep pace with this population growth in a way that supports the organization's vision and mission, PVHS opened its second hospital, MCR, as a joint venture with RWMC [P.1a(1)] in early 2007. MCR has attracted physicians from Greeley, Loveland, and Fort Collins and allowed new opportunities for market expansion and collaboration with a group of providers who were previously competitors.

PVHS' secondary market reaches south to the Northern Denver Metro Area, north to Central Wyoming, east across western Nebraska, and west to the Colorado/Utah border. Patients in the secondary market area travel to PVHS because they need services not available in their community, or they are familiar with PVHS' reputation for providing world-class care.

Figure P.2-1 presents information about key PVHS collaborators.

**P.2a(2)** The principal factors that determine PVHS’ success relative to competitors are the organization’s core competencies: **engaging the workforce, partnering, driving innovation, and ensuring financial stability**. Driven by the organization’s strategic challenges (Figure P.2-2), these core competencies give PVHS strategic advantages (Figure P.2-2) that enable it to achieve its strategic objectives (Figure P.1-1) and ultimately its vision of providing world-class care. **Figure 6.1-1 shows these linkages.**

**Engaging the Workforce.** Workforce satisfaction and engagement are the foundations of a successful, sustainable organization [P.1a(2), 5.0]. PVHS has been building a culture of engagement for the past decade through a systematic process of survey-driven action plans [5.1c(2)], which established and continue to refine: 1) a team culture; 2) an innovative staffing model [5.1c(2)]; 3) workforce participation in quality improvement (6.2b); and 4) an innovative performance management system [5.1a(3)].

**Partnering.** PVHS has established itself as a role model in innovative relationships that turn competitors into partners, prevent costly service duplication, and drive quality care [P.1a(1)]. These relationships help PVHS maintain its market position, free up resources for new healthcare services and community benefits (Figure 7.6-8), give PVHS early access to innovative technologies and methodologies, and allow PVHS to focus on the future by sharing risks associated with new services or markets.

**Driving Innovation.** With a pioneering spirit and systematic, team-based approach, PVHS continues to break new ground in workforce engagement [5.1a(1)], partnering [P.1a(1)], healthcare delivery [6.2a(1)], information management (4.2), and performance improvement (6.2b). PVHS successes

as an early adopter of new ideas and technologies have prompted competitors and other healthcare organizations to follow suit and, thus, have raised the level of care in Colorado and across the nation (e.g. 18th in U.S. to receive designation as a Magnet Hospital; international collaborations related to joint ventures and patient safety; one of only a few U.S. hospitals using robotic surgery in four medical specialties; one of *Hospitals & Health Networks’* 100 Most Wired Hospitals and *Information Week’s* Top 500 Innovators for the past four years).

**Ensuring Financial Stability.** Through workforce engagement, partnering, performance improvement, and innovation, PVHS continues to achieve strong financial results (7.3). Unique in the healthcare industry, these results allow the organization to focus on the future, re-invest in the health system, and give back to the community, so that PVHS can achieve its mission and ensure sustainability.

The most significant change that will affect PVHS’ competitive and collaborative situation in the months and years ahead is the recent opening of MCR. Strategic projections indicated that opening a new hospital would affect the organization’s long history of strong financial performance. However, MCR is already a national role model for innovation in partnering, technology, and facility design [5.1a(2)]. It extends PVHS’ geographic reaches to work with new community organizations and physician groups, expands the PVHS market, and keeps PVHS at the forefront of the healthcare industry. Approaches described in this application have been deployed to MCR, as appropriate.

**P.2a(3)** Key available sources of comparative and competitive data within the healthcare industry include: Thomson Healthcare Database, National Database of Nursing Quality Indicators (NDNQI), Quality Indicator Project (QIP), Colorado Health and Hospital Association (CHA), Ingenix, Avatar, VHA, Vermont-Oxford, National Trauma Data Bank (NTDB), HealthGrades, relevant Baldrige award recipients, and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). Comparative

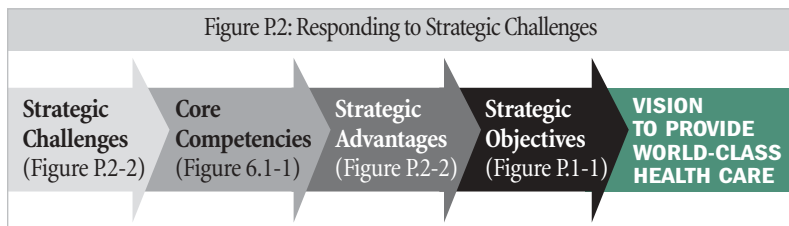


Figure P.2-1: Key Types of Partners, Suppliers, & Collaborators

	PARTNERS	SUPPLIERS	COLLABORATORS
Role in Work Systems	<ul style="list-style-type: none"> <li>Healthcare delivery</li> <li>Performance improvement</li> <li>Information management</li> </ul>	<ul style="list-style-type: none"> <li>Delivery of products or services</li> <li>Performance improvement</li> </ul>	<ul style="list-style-type: none"> <li>Design of facilities and healthcare services</li> <li>Performance improvement</li> </ul>
Role in Innovation	<ul style="list-style-type: none"> <li>Cutting-edge technology and methodologies</li> </ul>	<ul style="list-style-type: none"> <li>New products/services</li> </ul>	<ul style="list-style-type: none"> <li>Expertise</li> </ul>
Supply Chain Requirement(s)	<ul style="list-style-type: none"> <li>Patient admissions/referrals</li> <li>Accurate, timely information</li> <li>Patient satisfaction</li> <li>High-quality care</li> <li>Best practice sharing</li> </ul>	<ul style="list-style-type: none"> <li>On-time delivery</li> <li>Fair and competitive pricing</li> <li>Support and consultation</li> <li>Quality products</li> <li>Order and invoice accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Data and analysis</li> <li>Best practice sharing</li> </ul>
Relationship and Communication Mechanisms	<ul style="list-style-type: none"> <li>Representation on PVHS BOD</li> <li>PVHS representation on partner BODs</li> <li>Participation in strategic planning</li> <li>Quarterly business reviews</li> </ul>	<ul style="list-style-type: none"> <li>Contracting process</li> <li>Electronic data interchange, fax, email, phone</li> <li>Quarterly business reviews</li> <li>Participation in strategic planning</li> </ul>	<ul style="list-style-type: none"> <li>Participation in task forces</li> <li>Progress reports</li> </ul>

data from outside the healthcare industry come from sources such as American Society for Training and Development (ASTD), Moody's financial ratings, and relevant Baldrige award recipients.

The healthcare industry has a widely acknowledged lack of sharing results between institutions. Frequently, databases lag up to two years, are not severity-adjusted, and report only norms, or top 25 percent. However, PVHS recognizes the importance of comparative data in achieving performance excellence and identifies the most appropriate benchmark data for key performance measures [4.1a(2)].

### P.2b Strategic Context

Figure P.2-2 presents PVHS' key strategic advantages and challenges associated with organizational sustainability. Figures P.2, 2.1-3, and 6.1-1 present information about relationships between strategic advantages and challenges, core competencies, SOs, and the strategic plan.

### P.2c Performance Improvement System

A focus on performance excellence and organizational learning is embedded in the culture at PVHS and reinforced through systematic, SO-driven processes. The Global Path to Success (GPS) (Figure P.1-1) keeps a systemwide focus on performance improvement by: 1) communicating performance goals across the organization; and 2) linking department and individual performance goals to achievement of system goals and objectives. PVHS uses a balanced scorecard (BSC) system to monitor operations, gauge progress toward the SOs, and validate strategy [4.1a(1)].

PDCA is PVHS' formal performance improvement methodology, but individuals and departments are empowered to identify and act on improvement opportunities at the front line. Improvement opportunities escalate to system PDCA initiatives based on defined criteria and a formal scoring process (6.2b).

PVHS has seven multidisciplinary performance excellence teams focused on the Baldrige Categories to function as systemwide oversight committees (Figure P.2-3). These teams have defined roles in: 1) the annual performance excellence cycle (Figure 6.2-1); and 2) monthly monitoring of key performance measures. These teams may recommend PDCA initiatives, and the Process Improvement Team approves and oversees all system PDCA initiatives. Process Improvement staff belong to each team and coordinate improvement efforts between the teams, as well as quarterly learning opportunities for all team members.

Figure P.2-2: PVHS Strategic Advantages & Challenges

STRATEGIC ADVANTAGES (SA)	
1.	Low workforce vacancy and turnover (SO 1)
2.	Strong patient referral base (SO 2,3,4)
3.	Minimal duplication of core healthcare services (SO 4,6)
4.	Innovative technology, programs, and methodologies (SO 2,3,4,5)
5.	Focus on the future (SO 1-6)
6.	Community health involvement (SO 2,4,5)
7.	High-quality, low-cost care (SO 5,6)
8.	Performance excellence (SO 1-6)
STRATEGIC CHALLENGES (SC)	
1.	Overcoming labor shortages in critical-to-recruit positions (SO 1,3)
2.	Managing resources in response to population growth and changes in government reimbursement (SO 1,3,6)
3.	Maintaining and expanding market share (SO 2)
4.	Maintaining and expanding partnerships (SO 4)
5.	Maintaining world-class clinical outcomes (SO 5)

Figure P.2-3: Performance Excellence Teams

TEAM	FUNCTION
<b>MB1:</b> Leadership Committee	Provide feedback to SMG on V/M/V deployment, communication processes, governance, legal/ethical environment, and community support
<b>MB2:</b> Strategy Team	Deploy strategic plan
<b>MB3:</b> Customer Service Steering Committee (3.1a)	Provide leadership and oversight of service excellence initiatives
<b>MB4:</b> Knowledge Management Team [4.1a(1)]	Develop processes for selecting, gathering, analyzing, managing, and improving data, information, and knowledge, including definition, analysis, and review of cascading BSC measures
<b>MB5:</b> Workforce Focus Team	Evaluate and improve workforce processes that impact turnover, vacancy, culture, and safety
<b>MB6:</b> Process Improvement Team (6.1, 6.2b)	Approve and oversee system PDCA teams; identify, evaluate, and monitor key processes
<b>MB7:</b> Key Measures Team	Coordinate review of key measures

# 1. Leadership

## 1.1 Senior Leadership

### 1.1a Vision & Values

**1.1a(1)** The annual process for setting and deploying the V/M/V begins with the SMG-led Strategy Development and Deployment process [SDD, 2.1a(1)]. Each spring, the Board and SMG members hold a retreat for the purpose of reviewing and modifying (as appropriate) the V/M/V. The process balances the needs of the organization's stakeholders through inputs [2.1a(1)] gathered under the direction of SMG. SMG and MEC provide direct input to the Board and have a voice in final decisions through Board representation by the Chiefs of Staff and CEOs.

The PVHS Global Path to Success (GPS, Figure P.1-1) provides a leadership system to deploy the V/M/V to all leaders, the workforce, suppliers, partners, and customers. Driven by the V/M/V, the Board and SMG annually evaluate the strategic objectives (SOs) and establish the strategic plan [2.1a(2)]. Based on the strategic plan, SMG determines measures for the system balanced scorecard [BSC, 4.1a(1)], which cascade to SMG and department BSCs and ultimately individual performance goals and personal goal cards [5.1a(3)]. Figure 1.1-1 highlights these and other mechanisms used to deploy the V/M/V. To demonstrate their personal commitment to the organization's values and provide further support for these formal deployment tools, senior leaders also model the values in daily interactions with the workforce, partners, suppliers, customers, and collaborators [1.1a(2,3)] through simple actions such as publicly praising staff members when introducing them to a group (dignity/respect) or self-

reporting audit findings (integrity). Annually, the staff V/M/V Team, led by the Vice President of Marketing and Strategic Planning (VP MSP), evaluates V/M/V deployment and implements an improvement plan.

**1.1a(2)** Senior leaders personally promote an environment that fosters, requires, and results in legal and ethical behavior through: 1) the Code of Conduct; 2) Leadership Competencies (Figure P.1-3); 3) open lines of communication for asking questions and reporting concerns; and 4) personal role modeling. First and foremost, senior leaders sign, support, model, and enforce the Code of Conduct — an official policy outlining the organization's expectations for ethical behavior, resources to help individuals achieve these expectations, and consequences for those who do not [1.2b(2)].

Senior leaders further promote organizational compliance by establishing a just culture—supported by an official policy—that focuses on prevention and process improvement rather than personal blame. In addition to numerous formal communication mechanisms (Figure 1.1-2) and an open-door policy [1.1b(1)], which encourage frank two-way communication with all of the organization's stakeholders, they establish and support mechanisms whereby any stakeholder can pass a question or concern to the Compliance Department, either directly, through a manager, or through the Ethics and Compliance Hotline [1.2b(2)].

Senior leaders also have established a systematic process for preventing and addressing medical ethics concerns that arise at any point in the organization. Any workforce member, partner, supplier, patient, or community member can bring a concern to SMG [1.1b(1)] or any other member of the workforce, who reports the concern to the Medical Ethics Coordinator. The Ethics Coordinator then convenes all involved parties with the Medical Ethics Committee, which was established by SMG and has membership including SMG, community, patient representatives, attorneys, clergy, and physicians. The committee takes appropriate action to reach resolution and, if appropriate, deploys lessons learned throughout the organization to improve processes and prevent future problems. SMG also participates in the Corporate Compliance and Diversity committees, which establish, evaluate, and improve nondiscriminatory employee and patient treatment policies.

Though senior leaders believe ethical behavior is more than simply complying with the letter of the law, SMG ensures that staff members stay up to date on relevant laws and regulations. Presentations by senior leaders and appropriate experts at New Employee Orientation [NEO, 5.1b(1)], employee/volunteer forums, leadership development programs [5.1b(2)], Leadership meetings, and System Operations meetings provide an important basis for ethical and legal decision-making throughout the organization. To ensure prompt investigation and appropriate action if ethical concerns arise, SMG created a position for an in-house attorney and recently added a second attorney to keep pace with health system growth and regulatory requirements [1.2b(2)].

Key questions in the Management Science Association (MSA) and Employee Culture surveys [5.1c(1)] — such as, “It's OK to report errors or mistakes in my department” [7.6a(2)] — help senior leaders monitor the organizational environment and take appropriate actions to maintain a just-cause workplace. Audits of annual staff and volunteer performance reviews [5.1b(1)], which ask if individuals “do the right thing because it's the right thing to do,” may also prompt SMG action. Individual breaches of ethical or legal behavior result in swift but fair disciplinary action (Figure 7.6-5).

Figure 1.1-1: Deploying V/M/V

	Staff	Volunteers	Physicians	Partners	Suppliers	Collaborators	Patients/Community
Job/Service Description	•	•					
New Employee Orientation	•						
Volunteer Orientation		•					
Code of Conduct [1.1a(2)]	•	•	•		•		
SMG-led V/M/V Team	•	•	•				•
V/M/V Card for Identification Badge	•	•					
Personal Goal Card [5.1a(3)]	•	•					
Screen Saver	•	•	•		•		•
Meeting Agenda Template	•		•	•	•		
Balanced Scorecard	•						
Performance Review	•	•	•				
Behavior Standards (Figure P.1-2, 5.1)	•	•					
Leadership Competencies (Figure P.1-3, 5.1)	•						
Reward & Recognition	•	•	•				
Employee/Volunteer Forums	•	•					
Medical Staff Meetings			•				
Formal Contract				•	•		
Business Review				•	•		
Facility Postings	•	•	•	•	•	•	•
Brochures	•	•	•	•	•	•	•
Web Site	•	•	•	•	•	•	•

**1.1a(3)** To create a sustainable organization, senior leaders build on PVHS core competencies [P.2a(2)] to establish strategic advantages and address strategic challenges (Figure P.2-2). They also create an environment that fosters:

**Performance Improvement.** Senior leaders put a heavy emphasis on performance improvement through: 1) the GPS model (Figure P.1-1), including the Strategy Development and Deployment process [SDD, 2.1a(1)] and the Balanced Scorecard [BSC, 4.1a(1)]; 2) the Plan-Do-Check-Act model (PDCA, 6.2b); and 3) the performance excellence cycle (6.2b).

**Accomplishing Mission and SOs.** Senior leaders align and engage the organization to accomplish the mission and SOs through: 1) the GPS model, including SDD [2.1a(1)] and BSC [4.1a(1)]; and 2) the performance-management system, including personal goal cards [5.1a(3)].

**Innovation and Performance Leadership.** By setting world-class performance goals [P.1a(2)] and engaging stakeholders in achieving those goals (5.1a), SMG creates an environment for innovation and role model performance leadership. With the organization's visionary leadership, PVHS leads the region, and in some cases the industry, in breakthrough innovations such as new medical technologies (e.g. robotic-assisted surgery) and creative business solutions [e.g. RWMC and UMA, P.1a(1)].

**Agility.** SMG uses SDD [2.1a(1)] and BSC [4.1a(1)] to continuously collect internal and external data relevant to current and future strategies. The Board and SMG collaboratively decide whether the organization needs to alter its path in response to environmental changes, in which case, SMG deploys the changes to the rest of the organization [1.1b(1)]. Senior leaders have established built-in rapid response mechanisms, such as contingency funds, to enable agility and maintain a competitive advantage. For instance, when physicians came to senior leaders outside the budget cycle and made a case for purchasing a robotic-assisted surgery system, PVHS used the contingency fund for the purchase, rather than waiting for SDD, to ensure that PVHS was the first in the region to acquire the new technology. SMG annually evaluates the contingency fund to ensure that it provides sufficient resources for agility.

**Learning.** Since workforce learning is key to PVHS' sustainability and agility, senior leaders have established an HR process (Figure 5.1-2) that: 1) evaluates education and training needs in the areas of clinical knowledge, technology, regulations, and staff development [5.1b(1)]; and 2) develops appropriate learning opportunities (Figure 5.1-3).

Recognizing the need for networking and benchmarking outside the organization, senior leaders work with learning organizations to gain new knowledge for PVHS and share PVHS knowledge with others. SMG are active leaders, participants, and presenters in regional and national healthcare organizations, such as Magnet, American College of Healthcare Executives (ACHE), VHA, and AHA. For example, in 2008, the PVHS CEO has presented at numerous locations around the country on topics including Board ethics, workforce engagement, and healthcare leadership, and he is coordinating a patient safety initiative between U.S., Israeli, and Palestinian hospitals. This year, the PVH CNO has presented nationally on patient satisfaction and nursing quality; the CIO has presented on information technology; and the CFO was one of 15 U.S. healthcare executives selected to visit China and train organizations there on hospital financing. Additionally, PVHS spends more than \$500,000 yearly so staff can attend conferences and other off-site learning opportunities (Figure 7.4-8).

The PVHS GPS model (Figure P.1-1) keeps a systemwide focus on organizational learning by visually reminding staff that evaluation and improvement are critical to achieving the PVHS vision. Senior leaders direct and actively participate in ongoing evaluation and improvement (P.2c) and the systematic process for sharing these learnings across the organization [(4.2b(2))].

**Leadership Development.** Senior leaders personally participate in succession planning and development of future organizational leaders in a variety of ways. In addition to the formal succession planning process [5.1b(4)], senior leaders rotate interim leadership coverage among the organization's directors, support formal mentor and healthcare executive residency programs, serve as leadership coaches, and participate in each Thomas Concept training session [5.1b(2)]. Also, senior leaders launched and serve as instructors for a role model Learn and Lead Program [5.1b(2)] that promotes knowledge sharing among leaders across the organization.

**1.1a(4)** Senior leaders create and promote a culture of patient safety through: 1) Business Decision Support Process [6.1a(2)]; 2) design of new facilities [6.1a(2)]; 3) the BSC process [4.1a(1)]; 4) interdisciplinary teams focused on patient safety; and 5) workforce engagement [5.1a(1)]:

1. Senior leaders established a formal Business Decision Support Process for determining healthcare services [6.1a(2)]. The process requires the initiator of a new service to consider patient safety issues. It also requires SMG approval.
2. Senior leaders choose caregivers to participate in facility design and work layout to ensure that patient safety remains a central focus. For instance, in the intensive care units at MCR, nurses located workstations so that they would have a direct view of patients at all times, and MCR patient bathrooms have oxygen hook-ups so patients don't get light-headed and fall.
3. Through the SMG-led BSC process [4.1a(1)], key patient safety measures appear on the system BSC and cascade to appropriate SMG and department BSCs. Measures not performing to standards prompt an action plan [4.1b(1)].
4. SMG establishes and actively participates in interdisciplinary teams with patient safety responsibilities. For example, the Patient Safety Committee proactively evaluates support and clinical department operations, and the Clinical Quality Improvement Council (CQIC) monitors clinical outcomes.
5. Senior leaders foster a just culture that empowers individual staff members, volunteers, and physicians to identify, address, and bring forward patient safety concerns. Reporting of near misses is expected and routine, and senior leaders specifically solicit safety concerns during rounding. To encourage individual action, senior leaders monitor and, if appropriate, respond to results of the MSA survey [5.1c(1)], which specifically asks whether staff members "can talk to management about patient safety concerns" [7.6a(2)].

### 1.1b Communication & Organizational Performance

**1.1b(1)** Senior leaders devote significant time and resources to communicating with and engaging the workforce [P.2a(2)]. Staff engagement and frank, two-way communication between senior leaders and staff begins on an employee's first day on the job, when the PVHS CEO addresses attendees in NEO: "It is my job to make this the best place you have ever worked. If I'm not doing my job, tell me." To support this invitation, the CEO and other senior leaders have an open-door policy, encourage email, and provide their home phone numbers. In addition to



formal communication mechanisms (Figure 1.1-2), senior leaders engage the workforce through informal settings, such as focus luncheons, leadership rounding, and system or department celebrations and social events.

Senior leaders use several approaches for communicating key decisions:

1. If the decision relates to the strategic direction of the organization in the context of the annual strategic planning and resource allocation process, senior leaders use a systematic deployment process for communicating strategies and goals and aligning the organization [2.1a(1), Figure 1.1-2].
2. Employee/volunteer forums and Learn and Lead Programs [5.1b(2)] offer additional venues for communicating key decisions related to organizational performance, strategic direction, and workforce issues. Senior leaders often follow up with a systemwide email and an announcement on the PVHS intranet (VIC). Semi-annual Medical Staff Meetings offer a similar mechanism for communicating with physicians.
3. If a decision is time-sensitive, senior leaders may send an urgent systemwide email, post an announcement on VIC, and call a special forum. SMG may also convene a special Leadership Team meeting to inform directors, so that directors can inform their staff members.

Senior leaders established and maintain a culture of celebration to reinforce high performance, customer focus, and achievement of organizational goals. In addition to active participation in the formal performance-management system [5.1a(3)], which rewards individuals and the organization for high organizational performance, senior leaders also host and participate in numerous reward and recognition opportunities:

1. To celebrate department, facility, or organizational accomplishments, senior leaders host special events and personally serve cake or ice cream.
2. To recognize high-performing individuals, senior leaders host an annual Employees of the Year dinner and a Service Awards celebration. They also write personal thank you notes and publicly share patient letters of commendation.
3. To show general workforce appreciation, senior leaders round weekly and on holidays and support celebrations, such as Grill Days, holiday events/gifts, summer picnic, PVHS nights at Colorado State University athletic events, and Hospital Week, with free meals, Hospital Bucks, and activities such as the annual medical terminology Spelling Bee, PVHS night at the drive-in movie theater, and Colorado Rockies baseball game.

Special volunteer reward and recognitions include Spotlight Volunteers and an annual Volunteer Recognition Luncheon. Legal criteria limit individual physician recognition, so physicians receive frequent thank you notes and group recognitions such as special meals, public recognitions, and invitations to PVHS activities.

Senior leaders monitor and respond to results of workforce surveys [5.1c(1), Figures 7.4-1,2], which specifically ask questions such as whether individuals have opportunities to participate in organizational or departmental decisions and whether senior leaders act on input from the workforce.

**1.1b(2)** To create a focus on action to accomplish the organization's objectives, improve performance, and attain its vision, senior leaders use: 1) the GPS model (Figure P.1-1), including SDD [2.1a(1)], BSC [4.1a(1)],

and performance-management system [5.1a(3)]; 2) the Plan-Do-Check-Act model (PDCA, 6.2b); and 3) the performance excellence cycle (6.2b).

Through these processes, senior leaders align the organization with the V/M/V and SOs, allocate resources to projects that are critical to achieving the SOs, and reward staff for achieving SOs. Key organizational performance measures appear on the BSC [4.1a(1)], which senior leaders review monthly to monitor operations, gauge progress toward the SOs, and validate strategy. Senior leaders oversee and monitor action plans for system BSC metrics that fall below standard, as described in the BSC Policy [4.1a(1)]. Senior leaders use SDD, PDCA, and the performance excellence cycle to create value and balance the interests of patients, other customers, and other stakeholders. The result is continual performance improvement toward the organization's vision of being a world-class healthcare provider.

## 1.2 Governance & Social Responsibilities

### 1.2a Organizational Governance

**1.2a(1)** PVHS achieves key aspects of its governance system as follows:

- The BOD holds SMG accountable for its actions through the BSC and other monthly, quarterly, and annual reports regarding quality, safety, patient grievances, human resources, and a wide variety of clinical and business indicators. The Board annually reviews the PVHS CEO's performance, and review of other SMG members occurs as described in 1.2a(2). Additionally, the organization holds SMG, Leadership Team, and the rest of PVHS management accountable through: 1) yearly performance reviews [5.1a(3)], which include an assessment of how well individual leaders have upheld the Leadership Competencies (Figure P.1-3); and 2) MSA and employee culture survey results [5.1c(1)], with specific feedback from a leader's direct reports. Managers work with their director to set improvement goals and develop action plans. Consistent low performance may result in disciplinary action.
- PVHS ensures fiscal accountability through annual external audits and the independent Board Audit Committee, which is chaired by a non-Board member and meets annually with an external auditor, in the absence of SMG.
- To ensure transparency of operations and prevent unethical governance activities, Board members sign the organization's Code of Conduct and a Conflict of Interest statement; they receive annual compliance training; they received Sarbanes-Oxley training on how to structurally prevent unethical business practices; and they convene an independent, external Board Audit Committee, which annually scrutinizes the organization for evidence of misconduct.
- Auditing and monitoring is a continual process for PVHS (Figures 7.4-15, 7.5-9-11, 7.6-2). Individual departments perform routine monitoring, and the organization engages external experts to perform independent audits. On average, the Compliance Department performs five internal monitoring audits throughout the organization each month, based on high-risk areas identified by the organization and the federal government. Also, regulatory agencies perform scheduled and unscheduled reviews.
- The BOD make-up [P.1b(1)] and Step 2 of SDD [2.1a(1)] ensure protection of stakeholder interests.

Senior leaders annually review the governance system relative to each of the above aspects and make appropriate improvements as described in 1.2a(2).

**1.2a(2)** PVHS has processes in place to evaluate and improve the effectiveness of its leadership, both as individuals and as a system:



Figure 1.1-2: Examples of Formal SMG Communication Mechanisms

METHOD	* /+	PARTICIPANTS	PURPOSE
Board of Directors (BOD) Retreats (Semi-annually)	* /+	BOD (representing patients, community, physicians, staff, partners, and collaborators), SMG, Physicians, Partners	<ul style="list-style-type: none"> <li>Review V/M/V</li> <li>Set strategic direction</li> </ul>
Leadership Retreats (Semi-annually)	* /+	SMG, Directors	<ul style="list-style-type: none"> <li>Deploy strategic plan and Leadership Competencies</li> <li>Develop operational tactics</li> </ul>
Learn & Lead Programs [5.1b(2)] (Semi-annually)	*	SMG, Directors, Managers	<ul style="list-style-type: none"> <li>Deploy V/M/V, strategic plan, and Behavior Standard</li> </ul>
Performance Excellence Teams (Figure P.2-3) (Monthly)	* /+	SMG, Directors, Managers, Physicians	<ul style="list-style-type: none"> <li>Review Baldrige/CPEX self-assessment and feedback reports</li> <li>Develop and monitor action plans for organizational improvement</li> </ul>
Employee/Volunteer Forums (Quarterly)	*	SMG, Staff, Volunteers	<ul style="list-style-type: none"> <li>Deploy V/M/V, strategic plan, and Behavior Standards</li> <li>Two-way communication with staff</li> </ul>
New Employee Orientation (NEO) (Bi-weekly)	*	HR, SMG, All New Employees	<ul style="list-style-type: none"> <li>Deploy V/M/V and strategic plan</li> <li>Two-way communication with staff</li> </ul>
PVH/MCR System Operations (Monthly)		SMG, Directors, Managers	<ul style="list-style-type: none"> <li>Communicate policy updates</li> <li>Share best practices</li> </ul>
V/M/V Team (Monthly)	*	SMG, Staff	<ul style="list-style-type: none"> <li>Deploy V/M/V</li> </ul>
Employee Culture Survey (Semi-annually)	* /+	Staff	<ul style="list-style-type: none"> <li>Monitor staff satisfaction and engagement</li> </ul>
Volunteer Satisfaction Survey (Annually)	* /+	Volunteers	<ul style="list-style-type: none"> <li>Monitor volunteer satisfaction and engagement</li> </ul>
Women & Family Steering Committee (Quarterly)	+	SMG, Directors, Physicians, Staff	<ul style="list-style-type: none"> <li>Deploy strategic plan</li> <li>Two-way communication with physicians and staff</li> </ul>
Provider Informatics Team (Monthly)	+	SMG, Directors, Physicians	<ul style="list-style-type: none"> <li>Deploy strategic plan</li> <li>Two-way communication with physicians</li> </ul>
PVH/MCR Medical Staff Meetings (Semi-annually)	+	SMG, Physicians	<ul style="list-style-type: none"> <li>Deploy V/M/V and strategic plan</li> <li>Two-way communication with physicians</li> </ul>
Joint Venture Board of Director Meetings (Monthly)	+	SMG, Partners	<ul style="list-style-type: none"> <li>Deploy V/M/V and strategic plan</li> <li>Monitor partner performance</li> <li>Two-way communication with partners</li> </ul>
Key Vendor Review Meetings (Ongoing)	+	SMG, Directors, Suppliers	<ul style="list-style-type: none"> <li>Deploy V/M/V and strategic plan</li> <li>Monitor supplier performance</li> <li>Two-way communication with suppliers</li> </ul>

\* Systemwide; + Input to SDD [2.1a(1)]

**SMG.** The BOD annually reviews the PVHS CEO's performance, and the appropriate PVHS, PVH, or MCR CEO reviews the performance of individual SMG members as follows:

1. During a monthly one-on-one meeting, the CEO reviews the SMG member's BSC. Negative BSC trends trigger analysis, drill down, and if warranted, action to ensure improvement [4.1b(1)]. Following the Leadership Priorities template — a learning that standardizes routine SMG/director meetings — the discussion also includes accountability for performance review completion, action plans, staff rounding, appreciation activities [(1.1b(1))], and staff compliance requirements.
2. Mid-year, the CEO reviews the SMG member's yearly goals.
3. Annually, the CEO completes the SMG member's PVHS performance review.

Based on these reviews, individual SMG members set goals for personal leadership development, such as finishing a doctoral degree, becoming an

ACHE fellow, improving communication skills, or doing more staff rounding. Additionally, the Leadership Team completes an annual Leadership survey on overall SMG effectiveness. Based on survey results, the Leadership Team recommends which improvement opportunities SMG should address, and SMG develops an action plan. For 2007, this action plan focused on facilitating communication and learning between PVH and MCR. Leadership Team members also evaluate their President and/or VP as part of that SMG member's individual yearly performance review. Additionally, senior leaders receive informal input through many communication methods noted in 1.1b(1).

**BOD.** Board members have formal job descriptions and a defined skill matrix with regular performance review through: 1) an annual self-assessment of the overall BOD with the independent Governance Institute (Figure 7.6-7); 2) feedback from the CEO and SMG; 3) individual Board member review after first term of service; and 4) concerns about fellow Board members brought to the Board Executive Committee. Based on





information gained from all of these sources, the Board identifies and prioritizes areas for leadership improvement and develops an action plan, including annual Board education with 100 percent attendance.

**Leadership System.** Senior leaders use internal and external feedback to evaluate and improve the leadership system:

1. The BOD annually uses feedback from SMG, the Governance Institute, Board Audit Committee, and other external experts to identify and prioritize improvement opportunities and develop and implement action plans. In 2005, the Board evaluated the Governance Institute relative to similar organizations and confirmed that the Governance Institute, indeed, provides the most effective model for PVHS.
2. Led by the PVHS CEO, SMG annually evaluates the leadership system, prioritizes improvement needs, and develops and implements action plans based on the Baldrige criteria and annual Baldrige and CPEX feedback reports.
3. SMG uses the Employee Culture and MSA surveys [5.1c(1)] to further evaluate the leadership system and gauge progress on leadership system improvements. With each survey, SMG takes one of the lowest-scoring dimensions and initiates an action plan.

Senior leaders allocate resources needed to achieve these action plans during SDD [2.1a(1)] and evaluate action plan effectiveness based on the following year's feedback.

### 1.2b Legal & Ethical Behavior

**1.2b(1)** With a strong sense of social responsibility, PVHS devotes significant resources to minimizing adverse impacts of its healthcare services and operations. During SDD [2.1a(1)], senior leaders identify these potential impacts and develop action plans to address them (Figure 1.2-1).

PVHS also has mechanisms in place to anticipate and respond to public concerns with current and future services and operations:

1. PVHS works closely with public health agencies, emergency responders, and other community-focused organizations and proactively initiates public dialogues through numerous Listening and Learning methods (Figure 3.1-1).
2. During the Business Decision Support Process [6.1a(2)], the multidisciplinary design completes evidence-based research, identifies other organizations that already provide the service, and contacts them for best practice sharing. Through these discussions, the design team identifies possible public concerns and develops a plan for addressing these concerns.
3. Prior to an equipment or technology purchase, the Materials Management Department screens vendors against the Office of Inspector General's noncompliance list. The Biomed Department and/or Facilities Services test equipment/technology upon arrival. Individual departments do additional department-specific testing and perform ongoing quality control checks.
4. The PVHS Legal and Compliance departments monitor actual and anticipated changes in laws and

regulations, evaluate how these changes will impact PVHS operations, and proactively implement appropriate policies and processes.

Design of Medical Center of the Rockies (MCR) demonstrates these processes in action (Figure 1.2-2).

PVHS is committed to meeting and striving to surpass all regulatory, legal, and accreditation requirements at their highest level. The organization is also committed to addressing risks associated with healthcare services. Figure 1.2-3 highlights processes, measures, and goals that support this commitment. PVHS' continuous monitoring and auditing process provides further support [1.2a(1)].

**1.2b(2)** PVHS is dedicated to promoting and ensuring ethical behavior in all its interactions through: 1) the Code of Conduct; 2) a process for proactively addressing regulatory and legal requirements; and 3) mechanisms for asking questions and reporting concerns.

As described in 1.1a(2), the Code of Conduct is at the core of PVHS efforts to promote and ensure ethical behavior throughout the organization. The BOD and staff sign the Code of Conduct, and staff must annually pass a test that measures compliance knowledge (Figure 7.5-5). Volunteers sign the Code of Conduct and receive compliance training during their initial orientation. New physicians sign a consent to abide by the Medical Staff Bylaws, which include strict ethical guidelines outlined in the Code of Conduct, and recommit to these guidelines upon reappointment. Suppliers sign an acknowledgment of the Code of Conduct, and partners sign a contract requiring them to abide by high ethical standards and maintain a compliance plan, which is audited by PVHS counsel.

The Corporate Compliance Program supports a formal process for proactively addressing regulatory and legal requirements [1.1a(2)]. The Compliance Officer continually updates the organization's compliance training based on changes in regulations, expectations, standards, and trends reported in compliance publications. In-house counsel monitors contract adherence, provides legal advice, maintains a database for current contracts, and keeps the organization current on healthcare rules and regulations through mechanisms such as regular reports to the Board Compliance Committee and presentations to various workforce groups. For instance, in response to an increase in the number of inquiries about federal patient privacy regulations, the attorneys and other Compliance staff members gave a series of workforce presentations, with mandatory attendance by every staff member. PVHS has numerous checks and balances to enable ethical behavior in the governance system [1.2a(1)].

To further promote and ensure ethical behavior, PVHS has open lines of communication [1.1a(2)] and a systematic process enabling all

Figure 1.2-1: Examples of Minimizing Adverse Impacts from Healthcare Services/Operations

POTENTIAL IMPACT	PVHS RESPONSE
High Costs	PVHS maintains its position as a low-cost provider in the region (Figure 7.2-9).
Healthcare Access	PVHS works to ensure service access, regardless of a patient's finances, location, or cultural considerations [3.2a(2)].
Patient Safety	Key patient safety measures appear on the system and department BSCs so that leaders and staff can easily monitor these measures and take prompt corrective action if needed (7.1).
Disaster Preparedness	PVHS leads and participates in regional task forces focused on community education, preparation, and response to disasters, such as pandemics, natural disasters, and biological/chemical warfare [1.1a(3), 6.1c].



stakeholders to ask questions and report concerns related to ethical issues, either directly, through a manager, or through the Ethics and Compliance Hotline, which is an anonymous, third-party reporting mechanism. To ensure visibility with all stakeholders, the hotline phone number is posted publicly throughout PVHS facilities and published in the PVHS directory, on the intranet, and on the Web. Additionally, patients have access to the Patient Representative, who logs concerns, directs them to appropriate individuals for follow-up, and tracks them to ensure timely resolution [3.2a(3)]. For physician-related incidents, occurrence reports go to the Medical Staff Office [3.2a(3)], and Medical Staff Services complies with legal and regulatory agencies.

PVHS monitors and responds to trends and activities related to the organization's ethical and legal environment (Figure 7.6-2). Organizational indicators of ethical behavior include: 1) Ethics and Compliance Hotline calls; 2) reported compliance issues and trends; 3) annual employee ethics/compliance survey (Figure 7.6-3); 4) MSA and Employee Culture surveys [5.1c(1)]; and 5) exit interviews [5.1c(1)]. Individual breaches in ethical behavior result in progressive discipline or termination, as appropriate (Figure 7.6-6).

### 1.2c Support of Key Communities & Community Health

For more than 80 years, PVHS has worked closely with its key communities to identify and address specific health needs. PVHS defines its key communities based on its primary and secondary service areas. Historically, Fort Collins represented the primary service area, so much of PVHS' community involvement is centered there. However, as PVHS' geographic reaches have expanded, so have its community health services.

In the primary service area, including Fort Collins and Loveland, PVHS is an active member of the role model Joint Community Health Strategic Planning Committee (JCHSPC), a regional, interagency collaboration to improve community health by: 1) developing a community health plan; and 2) creating a central data repository. JCHSPC uses a systematic process to determine community health needs:

- 1. Compile and analyze data.** JCHSPC members meet quarterly to analyze data and allocate resources. Data come from a variety of external and internal sources, including:
  - Colorado Health and Hospital Association (CHA), which provides DRG information and market share data;
  - Health District of Northern Larimer County, which conducts a community health assessment every three years;
  - COMPASS Project, which collects data on health and human services;
  - PVHS Community Health Survey [3.2b(1)];
  - VHA Superior Performance Initiative, which gathers, compares, and publishes data from 26 Mountain States hospitals.
- 2. Identify and prioritize needs.** Based on data described in Step 1, the JCHSPC works with an epidemiologist to identify needs, determine the relative health burden of each need, and evaluate how successful interventions have been in other communities. The group then prioritizes response efforts relative to available resources.
- 3. Determine response.** JCHSPC matches programs/initiatives with the most appropriate response organization(s), based on alignment with each organization's SOs. The PVHS Community Health Director works through PVHS SDD [2.1a(1)] to secure resources needed for programs or initiatives assigned to PVHS.

**4. Evaluate and improve.** Data analysis is ongoing so that community health leaders can gauge the effectiveness of response efforts and make adjustments or shift resources as appropriate. The committee also evaluates the process for determining community health involvement/support and adjusts the process as appropriate.

Figure 1.2-4 presents a sampling of ongoing community health initiatives and programs focused on the primary service area.

In the largely rural secondary service area, PVHS identifies and prioritizes community

needs through SDD [2.1a(1)] based on market share data and information gathered during regular visits to these communities by physicians, the Director of Outreach, and members of SMG. PVHS involvement in the secondary service area focuses on improving healthcare access in these rural communities through activities such as specialty clinics, low-cost medical equipment, hospital management services, a Family Medicine Residency Program that places physicians in medically underserved areas, and telehealth, which enables remote specialty consultations and continuing medical education for rural healthcare providers.

In addition, PVHS provides extensive unreimbursed care [3.2a(2)], and senior leaders and staff are personally committed to improving key communities and building community health through leadership and membership positions in numerous service and professional

Figure 1.2-2: Examples of Anticipating and Responding to Public Concerns at MCR

CONCERN	PVHS RESPONSE
Environmental Impacts	MCR is on track to become one of the first hospitals to earn the U.S. Green Building Council's highest level of LEED™ certification [Leadership in Energy and Environmental Design, 7.6a(5)].
Safety	PVHS commissioned air traffic studies to document that MCR poses no safety risks relative to the nearby regional airport. With the studies, PVHS also evaluated noise levels and found no significant problems for patients or workforce.
Emergency Vehicle Access	Since vehicle access to MCR is possible only through "roundabout" traffic calming structures, the MCR design team invited Loveland officials to ride along in an ambulance and experience the city's standard roundabouts first-hand. As a result, the city adjusted the design of roundabouts critical to MCR access.

Figure 1.2-3: Addressing Compliance and Risk Management Requirements

REQUIREMENTS	PROCESSES	INDICATORS	GOALS
Regulatory	Licensure	Licensure	100%
Legal	Contract adherence	Contract review	100%
Accreditation	Accreditation	Joint Commission, ACS, CMS, ASMBS, Magnet	100%
Risk Management	Patient safety	National patient safety goals	Fig. 7.1-12
		Critical medication errors	Fig. 7.1-11
		Consequential falls	Fig. 7.1-17, 18
		VAP rate	Fig. 7.1-10

organizations. Together, SMG members belong to and/or lead 70 local, regional, and national Boards, Societies, and Foundations.

Figure 1.2-4: Examples of Community Health Initiatives/Programs

CLINICAL FOCUS AREA	INITIATIVES / PROGRAMS
<b>Healthcare Access</b> Basic and preventive care	Family Medicine Center, Family Medicine Residency Program, Mental Health and Substance Abuse Partnership, Community Case Management Program, Patient Navigator Program, Chronic Disease Management Program
<b>Cardiac</b> Prevention and screening for heart disease	Lifestyle Challenge, CanDo Coalition, Healthy Kids Club, HeartAware
<b>Neonatology</b> Prevention of low birth weight	Poudre Valley Prenatal, Substance Abuse and Pregnancy Task Force
<b>Trauma</b> Injury Prevention	Aspen Club Fall Prevention Program, Safe Kids Coalition of Larimer County, Teen Motor Vehicle Safety Coalition, Emergency medical coverage for all athletic events in Fort Collins and Loveland public schools and at Colorado State University

## 2. Strategic Planning

### 2.1 Strategy Development

#### 2.1a Strategy Development Process

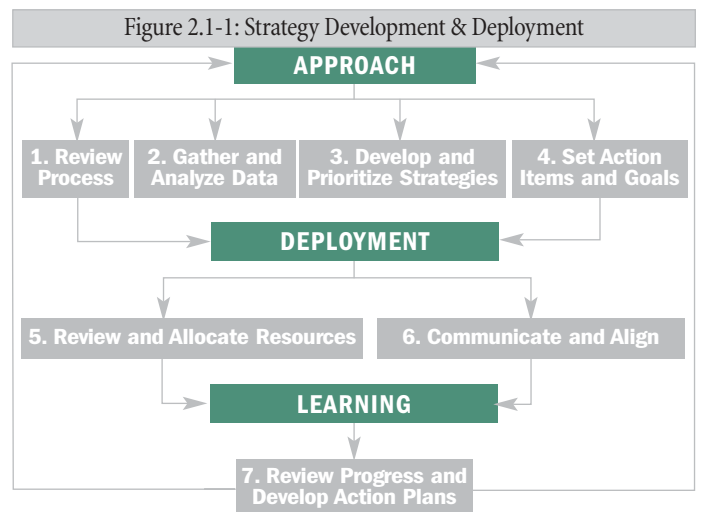
**2.1a(1)** The PVHS strategy development and deployment process (SDD) is a continuous seven-step cycle (Figure 2.1-1) that ensures active involvement of all stakeholders. Key players in the SDD process are the BOD, SMG, and Leadership Team, which collectively gather extensive data from staff, physicians, volunteers, patients, the community, partners, collaborators, and suppliers (Figure 2.1-2). The goal of SDD is to provide a process where fact-based SO selection drives a strategic plan, and then systemwide deployment optimizes resources to operationalize the plan. With that goal in mind, PVHS has a five-year, longer-range strategic plan that supports a 10-15 year strategy. PVHS' short-term plan covers a one-year timeframe, with built-in agility to rapidly respond to opportunistic projects or sudden threats that come up within the one-year planning horizon. The BOD and SMG set one-year and five-year planning horizons to balance the organization's needs to both focus on the future and remain agile in the changing healthcare environment. Monitoring plan progress and making just-in-time, results-based adjustments give PVHS a distinct competitive advantage within its expanding northern Colorado marketplace.

#### Step One: Review Process

The SDD process begins at the annual winter SMG retreat, when SMG assesses progress on the previous year's strategic plan and evaluates the SDD process. Each year, SMG identifies improvement opportunities in the SDD process and makes appropriate adjustments to the process. Improvements implemented in recent years include more systematic information gathering from physicians, more extensive staff participation in both planning and deployment, and better integration of the planning and deployment timelines.

#### Step Two: Gather and Analyze Data

Quarterly, the Marketing and Strategic Planning Department (MSP) gathers and analyzes zip code- and procedure-based market-share, financial, and demographic data to identify trends for out- and in-migration, population growth, physician admissions, and utilization. Examples of analyses include: 1) correlations between market share and out-migration data; 2) trends for volume and market share by product line and service area; 3)



physician admission trends; and 4) service line and market forecasts. The CFO and MSP VP are the owners of this organizational knowledge, with data from numerous sources including: 1) key stakeholder interviews (partners, physicians, volunteers, Board Chair); 2) SWOT analyses and environmental assessments [2.1a(2)]; 3) technology analysis; and other sources highlighted in Figure 2.1-2. SMG uses these data for information: 1) quarterly to monitor progress toward SOs, detect shifts in technology or markets, and identify potential blind spots; and 2) annually to support SDD.

The CFO and VP of MSP prioritize the results of their data analysis and present them at the annual winter SMG retreat—attended by Medical Staff leaders—to provide data for SWOT analysis. Through the SWOT analysis, SMG identifies strategic advantages and challenges (Figure P.2-2) and reviews proposals for new services [6.1a(1)], evaluating them based on whether or not they: 1) support achievement of the V/M/V and SOs; 2) meet key customer requirements; 3) enhance strategic advantages or address strategic challenges; and/or 4) meet community needs. SMG also identifies: 1) opportunities for innovation, such as lab automation and the planned cancer center; and 2) strategies, such as MCR's hospital within a hospital, that would be best deployed in partnership with another organization. At the conclusion of the SMG retreat, SMG agrees on strategy recommendations to present to the BOD and proposals that warrant further

Figure 2.1-2: Examples of Organizational Knowledge that Supports SDD\*

STAKEHOLDER	INPUT
Staff	MSA survey [5.1c(1)], HR market analysis of compensation/benefits [5.2b(2)], performance review audits [5.1b(1)], HR plan, Leadership rounding, proposals for new healthcare services [6.1a(2)], BSC action/improvement plans [4.1a(1)], system/department improvement plans (6.2b), facility design teams
Volunteers	V/M/V Team [1.1a(1)], Strategy Team (P.2-3)
Physicians	Annual physician survey, MEC, physician educational needs assessment, Board representation, physician participation in Board and SMG retreats, facility design teams, Cancer Center Steering Committee, regular one-on-one meetings between SMG and physicians, physician interviews by MSP VP, Joint Conference Committee, Medical Directors
Patients/ Community Partners	Aggregated data from Customer Service Steering Committee [3.1a(2)], demographic information, consumer awareness survey, facility design teams, community health survey, JCHSPC (1.2c) Joint venture business reviews
Suppliers	VHA purchasing consortium
Collaborators	Collaborator progress reports, JCHSPC (1.2c)
Other	Contribution margin by service line, total margin, days cash on hand, days in accounts receivable, payer mix analysis/reimbursement trends, comparative/competitive analysis, market share trends by zip codes/product lines, comparative/competitive analysis, 5-year capital plan, I/T plan, conferences, literature reviews, CORE measures, National Patient Safety Goals, Thomson Healthcare Database, Leapfrog, HealthGrades, QIP, Vermont-Oxford, recent Baldrige award recipients, CQIC dashboards, regulatory and accrediting agencies

\*Also see Figure 1.1-2

analysis, including financial and other risk assessment, by the Decision Support Department.

In parallel and in support of the strategy recommendations, the CIO prepares a five-year information technology (I/T) plan [4.2a(4)], SMG members update facility masterplans, and the CFO finalizes the five-year financial and capital plans derived from: 1) historical costs; 2) expected volumes; 3) expected third-party payer reimbursement; 4) physician expectations; 5) capital needs; 6) staffing needs [2.2a(5), 5.2a(1)]; and 7) net income and cash flow needs. The capital plan includes facility additions/upgrades and projections for the organization's I/T needs based on analysis of: 1) state of technology assessment; 2) product life-cycle analysis and; 3) evaluation of technology performance.

**Step Three: Develop and Prioritize Strategies**

At the Board retreat in April, the CFO and MSP VP present the results of their extensive data aggregation and analysis activities (Step 2), and the BOD and SMG engage in a rigorous discussion about the future of the organization, including a SWOT analysis. The BOD and SMG then evaluate and approve: 1) major new directions in the strategic plan; and 2) yearly goals for each SO. If necessary, they adjust the V/M/V and SOs. Every three years, to ensure early detection of major shifts in technology, markets, customer preferences, and competitive and regulatory environments, SMG and the BOD hire an external consultant to conduct a 10-15 year strategy analysis. SMG and the BOD assess the impact industry and environmental factors may have on the future of the organization and reconcile the various SWOTs performed during SDD. Based on this information, the VP of MSP prepares the Strategic Plan, including SO-specific goals (Figure 2.1-3), for review by the Board Strategic Planning Committee and final approval by the BOD in late September. SMG communicates major changes in the strategic plan to the Leadership Team and works with individual Leadership Team members to address/resource significant department-specific changes.

**Step Four: Set Action Items and Goals**

Based on the Strategic Plan, SMG uses a systematic process [4.1a(1)] to determine measures for the system Balanced Scorecard (BSC) — the key mechanism for measuring and tracking organizational performance

relative to the SOs. From the system BSC, individual SMG members create the aligned SMG BSCs and set appropriate goals and benchmarks [4.1a(2)]. SMG then presents these BSCs to the Leadership Team, which works with SMG to coordinate goals between facilities and set goals for individual departments. Department goal-setting occurs through several mechanisms: 1) For measures, such as voluntary staff turnover, the department BSC reflects the goal of the respective facility (PVHS, MCR, or PVH); 2) For some financial metrics, such as percent variance from budget, PVHS, MCR, and PVH share the same goal; and 3) For specific department measures that are of particular interest to SMG, the Director works individually with the appropriate SMG member.

**Step Five: Review and Allocate Resources**

Based on the financial plan and in support of the strategic plan, the CFO — with input and approval from SMG — determines budget parameters for capital, revenue, expenses, and FTEs. The CFO communicates these parameters to SMG, with historical data from the past two years and forecasted expenditures for the remaining current year. Budget parameters may vary between departments, depending on expected volumes, the introduction of new services, or a department's role in achieving the SOs. Using these parameters, SMG and directors work with staff and physicians to develop budgets and staffing plans [2.2a(5)] for the coming year. At this time, the CIO queries managers for their projected resource needs and balances those needs with the I/T plan. The Board Finance Committee completes the budget in November. In support of organizational agility, SMG establishes a contingency fund for smaller urgent/emergent capital projects that fall outside the regular budget process. SMG annually evaluates the amount allocated for the fund to determine whether adjustments are necessary. SMG and the Leadership Team make current-year adjustments as needed to avoid blind spots in resource allocation.

**Step Six: Communicate and Align**

In December, the Board reviews and approves the proposed budget, strategic goals, and system BSC, matching the resources required to carry out the SOs with available resources and adjusting strategic goals to accommodate action items that are not funded. Once the budget is final, directors make appropriate department adjustments to account for items that did not receive budget support.

### Step Seven: Learning

SMG and directors review system and department BSCs monthly relative to goals specific for each SO [4.1b(1)]. If a system BSC result falls short of the goal, the point person for that metric develops an action plan, which is approved and monitored by SMG [1.1b(2)]. For example, the result for timely completion of yearly reviews was not meeting goal. The HR VP developed and implemented an action plan that included accountability for tardy reviews, and the result returned to goal. SMG and Leadership Team members review the other BSCs monthly at routine one-on-one meetings and document results that require action on the Leadership Priorities form for that specific SMG or Leadership Team member. The CEOs and CFO meet monthly to ensure systemwide deployment [4.1b(1)].

**2.1a(2)** PVHS senior leaders rely on the systematic, fact-based SDD process to facilitate rigorous and timely discussions about the future of the organization.

In preparation for the Winter SMG retreat, MSP and the Resource Utilization Specialists perform a SWOT analysis, and at the retreat, SMG and physician leaders complete their own SWOT analysis. SMG completes a third SWOT with the BOD at the April BOD, aggregates and correlates the results of the three SWOT analyses, and reviews the 10-15 year strategy analysis (SDD Step 3). This exhaustive environmental assessment — in conjunction with the five-year I/T, financial, and capital plans — provides early indications of major shifts in technology, markets, the competitive-collaborative environment, and regulatory requirements and can be used in assessing the strategic plan. The consumer awareness survey (Figure 7.2-6), patient focus groups, and multiple listening and learning methods (Figure 3.1-1) indicate patient and customer preference shifts.

With the visionary leadership of SMG and the BOD, PVHS has a unique ability to drive changes in healthcare industry structures and ensure long-term sustainability [1.1a(3)]:

1. To protect the organization's interests in the short term, senior leaders use the BSC and internal and external scans (SDD Step 2) to detect immediate threats or challenges and prompt swift corrective actions.
2. For a decade, PVHS partnerships have attracted national and international attention as innovative, role-model business solutions [P.1a(1), P.2a(1)]. SDD Step 2 incorporates interviews and data from current partners and identifies new partnering opportunities.
3. PVHS consistently achieves superior financial results (7.3), which allow the organization to invest in workforce engagement (Category 5), partners, facilities, and technology, and prepares the organization for emergencies. The five-year financial plan, updated annually through SDD, ensures that the organization can sustain these results.
4. The organization maintains and tests detailed plans to protect stakeholder interests, overall and in an emergency [6.1c]. SDD identifies and resources needs related to these plans.

Successful execution of the strategic plan requires adequate resources and organizational alignment around the SOs. The budgeting process ensures sufficient dollars, staffing, and I/T capabilities; careful deployment to the workforce [4.1b(2)] ensures organizational alignment, implementation, and sustained gains.

### 2.1b Strategic Objectives

**2.1b(1)** PVHS' SOs are listed in Figure P.1-1. Key goals for each SO are listed in Figure 2.1-3.

**2.1b(2)** The Board adjusts the SOs in direct response to the organization's strategic challenges and advantages (Figure P.2-2, Figure 6.1-1). The SOs address opportunities for innovation by identifying six critical areas for success: workforce, partnering, market expansion, service diversification, quality, and finance. For each SO, the organization sets goals that drive innovation [4.1a(2)]. For instance, for almost a decade, PVHS has continued to set stretch goals for voluntary staff turnover so that now the organization is a national role model (Figure 7.4-11). Achievement of the SOs — as measured by the PVHS BSC — strengthens the organization and creates a foundation for long-term sustainability. To balance short- and longer-term challenges and opportunities, SDD [2.1a(1)] identifies SO-based action items and goals for one- and five-year planning horizons and allocates resources for both, based on extensive organizational knowledge (Figure 2.1-2). By collecting and analyzing data from all stakeholders [2.1a(1)], SDD is able to balance stakeholder needs.

## 2.2 Strategy Deployment

### 2.2a Action Plan Development & Deployment

**2.2a(1)** Development and deployment of the strategic plan occur through Step 3 of SDD [2.1a(1)], the GPS model (Figure P.1-1), and the monthly BSC review process, which focuses the organization and identifies results that don't meet goal [4.1b(1)]. If necessary, the point person for a measure not performing to goal develops an action/improvement plan, which is approved, resourced (Step 5, SDD), and monitored by SMG [1.1b(2)]. These action plans are hyperlinked to the electronic BSC [4.1a(1)] for access by SMG and the Leadership Team.

PVHS relies on the GPS model and the performance-management system to sustain strategic plan outcomes by continually aligning individual and organizational goals. Through the annual performance review process, staff members set individual goals to support achievement of the organization's SOs. Throughout the year, they carry these goals on special cards attached to their identification badge [5.1a(3)]. Both the Reward and Recognition (R&R) program and Optional Performance Plan reward staff when the organization achieves its goals [5.1a(3)].

PVHS' innovative Learn and Lead Program [5.1b(2)] further supports strategic plan deployment and sustainability by gathering 350 leaders from across the organization for SO-focused learning.

**2.2a(2)** SDD Steps 2 and 3 [2.1a(1)], along with daily management of cash flow and investments [7.3a(1)], ensure that adequate financial resources are available to support accomplishment of the strategic plan. In SDD Step 5, SMG works closely with the Leadership Team to allocate resources to support accomplishment of the strategic plan. SO alignment is essential for budget approval of any item. Contingency funds and SMG-approved, departmental budget variances ensure that accomplishment of critical new plans is not restricted by lack of budgeted financial resources. Step 2 of the SDD process [2.1a(1)] and the Business Decision Support process [6.1a(2)] assess the financial and other risks associated with proposed projects. Steps 2 and 5 of the SDD process balance resources to ensure cash flow to meet current obligations.

**2.2a(3)** Monthly system BSC review provides the framework for organizational performance review [4.1b(1)] and alerts senior leaders to the need for action/improvement plans, which are developed as described in 4.1a(1). Rapid deployment and execution of key decisions or new plans occurs as described in 2.2a(1) and 1.1b(1).



Figure 2.1-3: Key Goals, Plans, Indicators, & Projections

SO Figure P1-1	KEY GOALS 2.1b(1)	KEY SHORT-TERM PLANS 2.2a(4)	KEY LONGER-TERM PLANS 2.2a(4)	KEY PERFORMANCE INDICATORS 2.2a(6)	PERFORMANCE PROJECTIONS 2008/2012	
					PVHS	COMPETITOR
1	Reduce voluntary turnover	Implement retention and exit interviews	Achieve region's lowest rates and U.S. top 10%	Voluntary turnover	6.7-10% / 5%	14% / 10% 8%*
	Maintain strength in employee satisfaction	Develop action plans for lowest dimension of culture survey	Raise lowest dimension	Lowest dimension score on culture survey	4.5 / >4.5	n/a
	Achieve vacancy rate in U.S. top 10%	Implement recruitment plans	Achieve rates that are lowest in region and within national top 10%	Vacancy rate	2.3% / <2.3%	1.7%*
2	Strengthen overall service area market share	Establish marketing strategies specific to service area/product line needs	Align marketing strategies with strategic plan	Primary service area market share	61% / 65%	7% / 5%
				Total service area market share	29.1% / 31.8%	21.7% / 19.7%
3	Support facility development	Develop Cancer Center	Open Cancer Center	Cancer Center fundraising	\$7.5M / \$30M	n/a
				Oncology market share	27.5% / 31%	n/a
4	Enhance physician relations	Initiate physician engagement survey tool	Achieve top box physician engagement goals	Physician engagement survey	80% / >80%	80%*
5	Establish PVHS as leader in patient safety, patient satisfaction, quality improvement, and outcomes	Implement Thomson database/software	Achieve top 10% for all service lines	CMS core measures	Top 10% for PVHS/for service lines	See Figures 7.5-9-11*
		Continue to hardwire "We're Here for You"	Become national benchmark for top box (patient satisfaction)	Overall top box	80% / >80%	n/a
				HCAHPS referral	80% / >80%	80%*
				HCAHPS loyalty	80% / >80%	75%*
Achieve Joint Commission national patient safety goals	Initiate and deploy PDCA teams for goals below 90% compliance	Achieve 100% compliance	National patient safety goals compliance	90% / 100%	90% / 100%	
6	Monitor, compare, and strengthen PVHS financial position	Compute and trend financial flexibility components quarterly	Achieve financial flexibility index of 11	Financial flexibility index	8.5 / 11	7.6 / 7.6 11*
		Achieve budget	Achieve 5-year financial plan	Net income actual to budget	±2.5% / ±2.5%	n/a
				Operating cost per unit of service (percent variance)		
Operating revenue per unit of service (percent variance)						

Legend: National Comparison (\*)

**2.2a(4)** Figure 2.1-3 presents key short- and longer-term action plans that support each SO and address the organization's most significant change — the opening of MCR, which affects healthcare services, programs, customers, markets, and operations [P.2a(2)].

**2.2a(5)** SDD assesses workforce needs for accomplishing the organization's short- and longer-term SOs and action items. The strategic plan outlines key HR plans for accomplishing SO1. The budgeting process addresses specific staffing and training needs to support the remaining action plans, considering potential workforce impacts and potential changes to workforce

capability and capacity needs as described in 5.2a(1). With the opening of MCR, a detailed HR plan identified capacity and capability needs and outlined specific recruitment goals for: 1) filling new positions at MCR; and 2) replacing PVH staff who moved to MCR. To identify MCR's physician capacity and capability needs, MCR leaders relied on the Outreach Director's annual physician practice analysis [5.2a(1)], as well as discussions with key hospital-based groups, such as emergency physicians, hospitalists, intensivists, radiologists, and anesthesiologists, who needed to recruit additional physicians to support the new hospital.

**2.2a(6)** Key performance measures for tracking achievement of SOs populate the system BSC [4.1a(1), Figure 2.1-3]. Senior leaders select these measures through SDD [2.1a(1)] and a systematic process described in 4.1a(1). Reviews by Leadership Team and SMG throughout the process ensure that targets are set to achieve or surpass performance projections and realistically address strategic challenges. The GPS model (Figure P.1-1), incorporating the BSC process, ensures systematic deployment of the SOs, guides appropriate goal-setting, and ensures that the measurement system covers key deployment areas and stakeholders.

### 2.2b Performance Projections

Figure 2.1-3 lists PVHS performance projections relative to national

comparisons and its main competitor, with additional relevant information, including comparisons to benchmarks and past performance, presented in Category 7. PVHS uses traditional trending analysis based on historical data and internal and external assessments to determine projections. The organization expects its projected performance to compare favorably with goals, competitors, and benchmarks. Monitoring the strategic plan and the BSCs ensures progress toward organizational goals. SDD [2.1a(1)] addresses current and projected performance gaps relative to competitors or comparable organizations by modifying action plans [2.2a(3)], initiating appropriate improvement teams (6.2b), and allocating necessary resources [2.2a(2)].

## 3. Focus on Patients, Other Customers, & Markets

### 3.1 Patient, Other Customer, & Healthcare Market Knowledge

#### 3.1a Patient, Other Customer, & Healthcare Market Knowledge

**3.1a(1)** PVHS identifies and determines which customers and market segments to pursue for current and future healthcare services through Steps 2 and 3 of SDD [2.1a(1)], which include analysis of healthcare service utilization, market share, and out-migration data, as well as PVHS and competitor volume projections. PVHS has identified its two key customers as Patients and the Community, and PVHS has segmented Patients into inpatient, outpatient, and Emergency Department (ED), based on the location of their care, and the Community into Primary and Secondary Service Areas, based on geography and service utilization. PVHS defines its market areas by geography [P.2a(1)], based on a detailed analysis of zip code-based service utilization data that incorporates customers of competitors and other potential customers.

**3.1a(2)** PVHS uses an integrated listening and learning process to hear the Voice of the Customer (VOC). VOC information continuously comes to PVHS through: 1) patient satisfaction process [3.2b(1)]; 2) relationship building process [3.2a(1)]; 3) comment management process [3.2a(3)]; 4) community needs assessments [1.2c]; 5) access mechanisms (Figure 3.2-1); and 6) SDD [2.1a(1)]. PVHS customizes listening methods for different customer groups as indicated in Figure 3.1-1, with further customization as appropriate. For instance, PVHS hosts separate focus groups for different customer groups and adjusts questions for each audience. Members of an inpatient focus group may talk about their PVH experience with nurse responsiveness, room cleanliness, and meal delivery, while a community focus group tested furniture during construction of MCR. The Customer Service Steering Committee (CSSC) — with representatives from PVH and MCR inpatient, outpatient, ED, community health, marketing, volunteer services, and quality resources — is responsible for aggregating and analyzing VOC information (Figure 3.1-2).

To determine key customer requirements for patients and community (Figure P.1-6), CSSC relies on the Avatar patient satisfaction survey and community health survey [3.2b(1)] with verification from other VOC information. Monthly, CSSC reviews VOC information such as: 1) Avatar

Figure 3.1-1: Voice of the Customer

LISTENING METHOD	CUSTOMER GROUP*	FREQUENCY
<b>PVHS-Initiated</b>		
Avatar Patient Satisfaction Survey	IP, OP, ED, C	Weekly
Discharge Phone Calls	IP, OP, ED	Daily
Focus Groups	IP, OP, ED, C	Ongoing
Volunteer Patient Liaisons	IP	Daily
Community Health Survey	C	Every 3 years
Consumer Awareness Survey	C	Every 2 years
Community Health Program Evaluations	C	Per Event
Board of Directors Representation	C	Monthly
<b>Customer-Initiated</b>		
Patient Representatives	IP, OP, ED, C	Daily
Ethics/Compliance Hotline	IP, OP, ED, C	Daily
Letters/Phone Calls/Emails	IP, OP, ED, C	Daily
Support Groups	IP, OP, ED, C	Ongoing
GetWell Network [3.2a(1)]	IP	Ongoing
Community Health Education/Services	C	Ongoing
Community Involvement by SMG/Workforce	C	Ongoing
PVHS Foundation Development Councils	C	Ongoing

\*Inpatient (IP), Outpatient (OP), Community (C), Emergency Department (ED)

patient satisfaction, dissatisfaction, loyalty, and retention data from former patients (7.2); 2) Avatar priority matrix, which ranks patient survey items by their relative importance to customers' healthcare purchasing or relationship decisions [3.2b(1)]; 3) complaints and compliments from current and former patients [3.2a(3)]; and 4) market data related to healthcare service utilization, consumer preferences/loyalty, and community health needs. This review enables the organization to identify changing expectations.

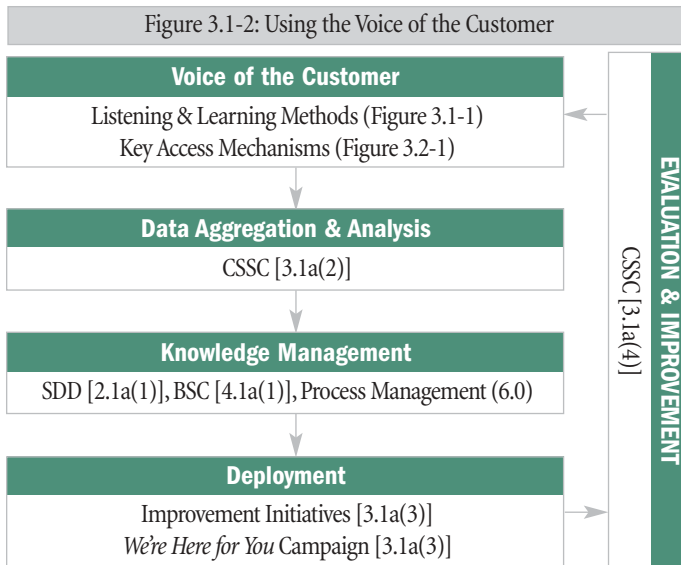
PVHS uses VOC data in: 1) healthcare service design [6.1a(2)] 2) Business Decision Support Process [6.1a(2)]; 3) SDD [2.1a(1)]; 4) evaluation and improvement of key access mechanisms [3.2a(4)]; and 5) evaluation and improvement of work systems and processes (6.2b).

**3.1a(3)** PVHS uses VOC information and feedback to become more patient- and customer-focused, satisfy patient/customer needs and desires, and identify opportunities for innovation [Figure 3.1-2, 3.2a(1)].

1. Through SDD [2.1a(1)] and the BSC process [4.1a(1)], PVHS uses VOC information to set world-class customer service goals (Figure 2.1-3) that drive innovation and monitor progress toward those goals. System BSC measures not performing to goal prompt action plans [4.1a(1)].



Figure 3.1-2: Using the Voice of the Customer



To support systemwide goals, CSSC team members meet with directors in patient care units/departments and use the Avatar priority matrix [3.2b(1)] to identify improvement opportunities, set goals for department BSCs, and write unit improvement initiatives. For transparency, system, facility and unit patient satisfaction results are posted monthly on the intranet. Units use these data to gauge progress toward their improvement goals and make adjustments.

- Annually, CSSC establishes and deploys systemwide, customer service-focused improvement initiatives in support of the SOs, with resource allocation through SDD [2.1a(1)]. CSSC also monitors action plan progress for customer service-focused improvement initiatives. For 2008, the major customer service improvement initiative focuses on re-engaging staff in the “We’re Here for You” campaign and achieving top box patient satisfaction scores of 80 percent (Figures 7.2-1, 2).

**3.1a(4)** PVHS continually strives to keep its listening and learning methods current with healthcare service needs and directions. CSSC annually evaluates the organization’s listening and learning methods [3.2a(4)] relative to best practices, Avatar feedback, new technology, environmental changes, and new healthcare service offerings. The committee identifies, prioritizes, and implements improvement opportunities. The GetWell Network [3.2a(1)], launched at MCR, demonstrates the use of technological advances to create a new listening and learning method. Also, as needed, patient contact areas review and update Avatar questions. For instance, after PVH launched the operating room’s nurse liaison program, the Avatar survey began asking patients whether the nurse liaison provided timely information. The design team for PVHS’ community health survey also updates questions and is exploring options for an online survey. Additionally, PVHS has increased the frequency of its consumer awareness survey, and since MCR added a new key community for PVHS (1.2c), the organization has expanded its community listening and learning methods to Loveland and the surrounding area [3.2a(1)].

## 3.2 Patient & Other Customer Relationships & Satisfaction

### 3.2a Patient & Other Customer Relationship Building

**3.2a(1)** For PVHS, building relationships with patients and other customers begins long before they come to the organization seeking services and continues throughout their care and after their discharge.

**Acquiring Patients/Customers.** Relationship building efforts aimed at

acquiring patients and other customers initiate through the Marketing, Outreach/Business Development, and Community Health departments in support of the strategic plan. These departments identify key target audiences in the primary and secondary service areas and develop relationship building initiatives, which may include:

- Establishing partnerships [P.1a(1)]
- Providing community health services, such as the free, 24-hour Poudre Valley Nurse Line and Nurse-Is-In program [7.6a(5)]
- Offering specialty clinics and other clinical and administrative services in rural areas [3.2a(4)]
- Providing community health education and continuing medical education
- Creating community health organizations, such as the Healthy Kids Club or Aspen Club (Figure 7.2-11)
- Participating in community organizations, such as the Mental Health and Substance Abuse Partnership [4.1b(2), Figure 1.2-4]

Three years prior to the scheduled opening of MCR, PVHS began relationship building with potential customers in the Loveland area. The MCR President conducted town hall meetings, and a permanent gazebo at the construction site allowed the community to watch project progress and gain information about PVHS. PVHS regularly hired the Loveland Optimist Club to grill lunch for construction crews and continues to provide free emergency medical coverage for athletic events in Loveland schools. Hospital officials also established a Physician Advisory Committee and multiple community advisory groups. The organization’s role model relationship with RWMC [P.2a(1)] provides a strong foundation for relationship building in western Nebraska.

**Securing Future Interactions.** Once customers enter PVHS, the organizational vision guides the workforce to offer services in a manner that exceeds customer expectations, secures future interactions, builds loyalty, and gains positive referrals. Fewer than 2 percent of hospitals are able to achieve and maintain improvement in customer satisfaction for three consecutive years, according to Press, Ganey Associates. Yet, PVHS has sustained continued improvement since 2001, earning Avatar’s Overall Best Performer Award, Five Star National Award, Most Improved Inpatient and Outpatient Scores at the National Level, and numerous Innovation Awards, including four for 2007. Innovative, systemwide service excellence initiatives that support the organization’s continuing success in this area include:

- Staff use Key Words at Key Times to enhance customer interactions [3.2a(2)].
- Volunteer Patient Liaisons make rounds monitoring current patient satisfaction, logging complaints/comments, and forwarding them for follow up [3.2a(3)].
- Guest Services helps family members find affordable accommodations at local hotels or one of the PVHS-owned hospitality houses (Pitkin Houses).
- The Concierge Service meets individual patient and family needs prior to and during hospitalization.
- GetWell Network — an in-room, interactive patient education program launched at MCR and planned for PVH — offers a real-time customer satisfaction component that allows patients to: 1) obtain information about their care team; 2) access the internet and email; 3) communicate complaints and compliments; and 4) order on-demand movies.
- OR RN liaisons update family members on patient status, with continual updates from an electronic status board (2006 Avatar Innovation Award



winner).

- PVH operates the Lemay Bistro adjacent to surgery waiting rooms so family members can get convenient refreshments (2006 Avatar Innovation Award winner), and, based on community focus group input, the MCR ED offers vending machines with hearty, healthy snacks for late-night visitors.
- PVHS was an early adopter of patient room service.
- MCR patient rooms are private and equipped with sleeper sofas and windows that open to let in fresh air. PVH has only three remaining semi-private rooms. MCR also offers showers, changing rooms, full kitchens, and healing gardens for family use.
- Caregivers wear color-coded identifiers on their name badges because patients and families wanted to quickly identify nurses, physicians, and other caregivers at a glance (2007 Avatar Innovation Award winner). MCR departments wear color-coded scrubs.
- PVH and MCR have implemented bedside registration and checkout. Patients go straight to their room rather than having to stop in Admitting and fill out paperwork, and the final bill is delivered to the patient room the morning of discharge to avoid delays as the patient is leaving.
- PVHS patients receive follow-up phone calls from a nurse after certain outpatient procedures or discharge from the hospital [3.2b(2)]. Many units also send personal thank-you notes.

**3.2a(2)** PVHS has established multiple access mechanisms enabling customers to seek information, obtain services, and share complaints and compliments (Figure 3.2-1).

**Seeking Information.** PVHS provides extensive information to patients and the community related to healthcare services, disease management, and health and wellness (Figure 3.2-1).

**Obtaining Services.** As summarized in Figure 3.2-1 and 7.6a(5), PVHS ensures service access, regardless of a customer’s finances, location, or cultural considerations:

- PVHS continues to establish new facilities in the Fort Collins/Loveland area to offer patients convenient locations for obtaining services. Harmony Urgent Care Center — the only urgent care center in Fort Collins that accepts patients regardless of insurance coverage — also offers extended and weekend hours.
- PVHS works to improve access in rural areas as described in 1.2c.
- PVHS provides medical interpreter services for non-English speaking patients and for the hearing- or speech-impaired. PVHS employs four Spanish interpreters, with 31 certified staff interpreters and an extensive network of contracted interpreters.

**Sharing Complaints and Compliments.** Reaching beyond traditional complaint management, PVHS has established a comment management system for gathering and trending complaints and compliments. This formal comment management system is described in 3.2a(3), with key mechanisms for receiving complaints and compliments highlighted in Figure 3.2-1.

**Key Contact Requirements.** The Workforce Focus Team [5.1a(1)] established, deployed, and annually evaluates the Behavior Standards (Figure P.1-2), which outline the organization’s key customer contact requirements for all access mechanisms. During development of the

Figure 3.2-1: Key Access Mechanisms

SEEKING INFORMATION	OBTAINING SERVICES	MAKING COMPLAINTS
<ul style="list-style-type: none"> <li>• Workforce (in person; by phone, letter, or email; community presentations)</li> <li>• Newsletters, brochures, ads, press releases</li> <li>• Web site, HealthLink</li> <li>• Medical library</li> <li>• Public-reporting web sites</li> <li>• GetWell Network [3.2a(1)]</li> <li>• OR Nurse Liaison Program [3.2a(1)]</li> <li>• Patient education materials</li> <li>• Discharge phone calls</li> <li>• Ethics/Compliance Hotline</li> </ul>	<ul style="list-style-type: none"> <li>• Providers</li> <li>• Emergency responders</li> <li>• Payers</li> <li>• Indigent care</li> <li>• Rural outreach programs</li> <li>• Medical translators</li> <li>• Concierge</li> <li>• Community health classes/services</li> <li>• Human Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Workforce (in person or by phone, letter, or email)</li> <li>• Patient Representative</li> <li>• Volunteer Patient Liaison</li> <li>• GetWell Network [3.2a(1)]</li> <li>• Discharge phone calls</li> <li>• Avatar survey</li> </ul>

Behavior Standards, this team looked at best practices from Baldrige recipients, and then reviewed patient feedback for guidance on how to operationalize PVHS values and the key customer requirements into specific staff behaviors. The systematic deployment strategy includes:

- Formal training for all managers and supervisors through the Learn and Lead Program [5.1b(2)], with tool kits to facilitate staff meeting discussions
- An acknowledgement to abide by the Behavior Standards signed by all job applicants and members of the workforce
- Adherence check at annual staff performance review [5.1a(3)]
- Linkage of R&R program to Behavior Standards [5.1a(3)]
- SMG presentations at NEO and employee/volunteer forums
- Visual displays throughout health system facilities, including computer screen savers
- “How We’re Making PVHS World Class” information, distributed and posted throughout the health system
- Re-engagement of staff through “We’re Here for You” campaign [3.1a(3)]

To re-enforce the Behavior Standards, CSSC also established and deployed Key Words at Key Times, which outlines specific customer contact requirements related to customer access (e.g. answering the phone and welcoming customers to facilities). CSSC determined Key Words at Key Times through its extensive data aggregation and analysis activities [3.1a(2)].

**3.2a(3)** PVHS has a comment management system that collects, tracks, aggregates, and trends complaints to ensure prompt, effective resolution and a better understanding of what drives customer satisfaction and dissatisfaction. As a cycle of improvement, PVHS also collects, aggregates, and trends compliments.

Comments may enter the system through any of the key access methods (Figure 3.2-1). To minimize customer dissatisfaction and secure future interactions and referrals, PVHS trains and empowers front-line staff members and Volunteer Patient Liaisons [3.2a(1)] to: 1) proactively address concerns before they become complaints; and 2) resolve complaints immediately before they escalate (Figure 7.2-5). Staff and Volunteer Patient Liaisons use: 1) a service recovery process (Figure 3.2-2), which is taught through the Learn & Grow series [5.1b(1)] and distributed throughout the health system in the “How We’re Making PVHS World Class” information sheet; and 2) the Splash of Sunshine program. Splash of Sunshine authorizes staff members to offer a voucher to patients or family members for food or gifts to help ease concerns. A Patient Representative tracks and trends

voucher distribution to look for improvement opportunities and to better understand dissatisfiers.

If staff members or volunteers cannot resolve an issue on their own, they contact their supervisor and/or director. Complaints received through physicians go directly to the appropriate director. The director promptly assists in resolving the complaint.

If resolution is not possible at the director level or if the director ascertains that the complaint puts the organization at risk, the director contacts a Patient Representative, who works with the director to resolve the

Figure 3.2-2: Service Recovery

<b>C</b>	Clarify the customer's concerns and expectations.
<b>A</b>	Apologize and acknowledge the problem.
<b>R</b>	Resolve the problem.
<b>E</b>	Explain how the problem will be fixed.

complaint. If the Patient Representative cannot resolve a patient complaint, the patient/customer lodging the complaint can enter a formal grievance process, involving the CEO of PVH, MCR, or PVHS. The CEO has seven days to respond and attempt to resolve the complaint. The Patient Representatives trend, track, and review grievances quarterly with their respective CNOs. Quarterly reports on potential and formal grievances go to the BOD so the BOD is aware of resolutions and risks and can offer guidance.

The Patient Representative also gets involved with complaints involving physicians. If the patient does not demand anonymity with the physician, the Patient Representative immediately speaks with the physician to resolve the complaint. If the patient wishes to remain anonymous with the physician, the Patient Representative does what is possible to resolve the complaint without involving the physician. The Patient Representative tracks complaints and compliments by physician, and when a physician is up for re-appointment, the Patient Representative sends a report to the Medical Department Chairperson. Additionally, if the complaint is related to quality of care, the Patient Representative forwards it for physician peer review.

Patient Representatives maintain a central database for logging comments and following complaint status. Comments received by the Patient Representatives, Volunteer Patient Liaisons, directors, physicians, GetWell Network, and discharge phone calls enter the database.

The Patient Representatives trend comments by department/unit and by comment category to identify departments that receive consistent compliments and report them to CSSC. CSSC highlights role model practices for distribution to the Leadership Team and Customer Champions — a multidisciplinary team that assists CSSC in deploying patient/customer process improvements. CSSC correlates recurring complaints with department-specific Avatar customer satisfaction results and the priority matrix, and deploys improvement initiatives.

**3.2a(4)** PVHS evaluates approaches to building relationships and providing customer access in order to remain current with healthcare service needs and directions:

- At an annual planning retreat, the VP of MSP and the Marketing Department evaluate the format and content of key customer communication tools, such as the public web site and community

newsletters, and make adjustments and/or develop plans for new tools. For example, in preparation for the opening of MCR, the department made significant changes to web site content to provide information for current and future MCR patients and for potential members of the MCR workforce. Also, the department increased the frequency of the consumer awareness survey from once every three years to once every year because the results proved so valuable in SDD steps 2 and 3 [2.1a(1)].

- During SDD Step 2, the VP of MSP works with the Director of Business Development and Outreach to identify rural areas in need of healthcare services so that the organization can provide support through physician recruitment, telehealth, specialty clinics, or hospital management services [2.1a(2)].
- Community Health evaluates and improves class content and delivery with each class/program evaluation and evaluates and improves the overall class and program offerings with the community health survey performed every three years. For instance, when the survey indicated a growing interest in complementary medicine, the department developed numerous new classes on that topic. The department also added the Healthy Families program to compliment Healthy Kids Club and Aspen Club (for seniors).
- Community Health participates in a systematic, intra-agency evaluation of community needs related to healthcare access (1.2c).
- PVHS keeps listening methods current as described in 3.1a(4).

### 3.2b Patient & Other Customer Satisfaction Determination

**3.2b(1)** PVHS uses multiple approaches to capture customer satisfaction and dissatisfaction (Figure 3.1-1).

**Patient.** The most comprehensive, systematic, and global tools for capturing patient information are the Avatar patient satisfaction surveys. Avatar randomly selects patients, personalizes the surveys, customizes them for each patient group, and mails them following discharge or service delivery. Questions collect information regarding the full cycle of patient interaction, from admission to discharge. Avatar surveys monthly and continues to send each month's survey for six weeks past the end of the month until achieving a statistically significant response.

Avatar segments patient satisfaction and expectation scores by overall, inpatient, outpatient, and ED, and then by unit/department to ensure that the survey captures actionable information closest to the patient. The Avatar priority matrix uses proprietary, multivariate analyses to rank survey items for each unit/department based on benchmarks, patient expectations, and relative importance to the patient. Annually, CSSC team members meet with individual directors and use the priority matrix to identify improvement opportunities, set goals, and write unit improvement initiatives [3.1a(3)]. Directors track progress toward these goals through department BSCs, with unit initiatives posted on the intranet. Through the intranet, staff members have online access to the data, which are updated monthly, and CSSC reviews results monthly [3.1a(3)].

**Community.** PVHS assesses satisfaction and dissatisfaction of community customer groups through: 1) a community health survey, which goes out every three years to former and potential patients, as well as customers of competitors, in and around PVHS' key communities; 2) questions on the Avatar patient satisfaction survey that parallel the community health survey and monitor VOC between community health surveys; 3) evaluations following PVHS programs and events; 4) a bi-annual consumer awareness survey (Figure 7.2-6), which monitors community perceptions of PVHS and competitors; and 5) numerous informal listening and learning



methods (Figure 3.1-1).

As described in 3.1a(2), CSSC aggregates and analyzes the results of these and other listening methods (Figure 3.1-1), including complaints, to identify and prioritize systemwide improvement needs and develop initiatives [3.1a(2)]. The Leadership Team monitors progress relative to goals monthly through the BSC and weekly through Avatar updates.

**3.2b(2)** PVHS follows up with patients and other customers on the quality of healthcare services to receive prompt and actionable feedback through mechanisms including:

**Volunteer Patient Liaisons.** As described in 3.2a(1) and 3.2a(3), specially trained Volunteer Patient Liaisons pro-actively visit patients during their hospital stay to identify patient concerns for immediate follow-up. Patient comments go into the central Patient Representative database [3.2a(3)].

**GetWell Network.** Upon admission to MCR, trained volunteer GetWell Network Ambassadors show patients and family members how to use the interactive, electronic system [3.2a(1)], which offers MCR patients a real-time mechanism to electronically submit concerns during their hospital visit. If a patient who submits a concern asks to speak to a hospital representative, GetWell Network pages the charge nurse, who immediately tries to resolve the concern and, if necessary, elevates it to the appropriate Director and Patient Representative. All concerns are logged for tracking and trending and correlated with other VOC data.

**Discharge Phone Calls.** Based on national best practices, PVHS implemented a discharge phone call program in response to requests from patients, staff, physicians, and family members. Nurses from a patient's treatment unit call inpatients and procedure-based outpatients within 48 hours of discharge to answer follow-up care questions and ask for improvement suggestions. ED patients who leave without seeing a physician receive a phone call within 24 hours. Nurses work with staff interpreters when calling Spanish-speaking patients. If possible, the nurse immediately resolves concerns voiced during the discharge phone calls and documents them in the patient's electronic health record. The Patient Representative receives immediate notification to prompt further action if needed. The Patient Representative logs concerns in the comment management database for purposes of trend tracking, process improvement, and resolution [3.2a(3)].

**Avatar Survey.** Avatar patient satisfaction surveys [3.2b(1)] include a

comment section where respondents can provide open-ended feedback and request a follow-up call from a PVHS representative. A patient's unit follows up promptly on the request.

**3.2b(3)** To maintain a strategic advantage and ensure world-class health care, PVHS monitors customer satisfaction relative to competitors, other organizations offering similar healthcare services, and healthcare industry benchmarks. The Avatar survey [3.2b(1)] measures satisfaction relative to actual service expectations and to other healthcare organizations in Avatar's national database. PVHS also relies on comparative data from Baldrige award recipients, and participates in the VHA Superior Performance Improvement Initiative — a collaboration between 36 participating hospitals that have standardized a series of Avatar and Press, Ganey patient satisfaction survey questions. For the first time, CMS' new Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is providing a nationally standardized survey instrument (Figure 7.2-8).

Additional information on local competitors is collected through a variety of mechanisms, including the annual consumer awareness survey; local media; competitor web sites, advertisements, and press releases; and visits to competitor facilities by staff and the CEO.

PVHS uses comparative satisfaction data for setting world-class goals during SDD [2.1a(1)], BSC development [4.1a(1)], and improvement initiatives (6.2b).

**3.2b(4)** To keep its approaches for determining customer satisfaction current with healthcare service needs and directions, PVHS annually and as needed evaluates and improves its approaches as described in 3.1a(4) and 3.2a(4). A significant improvement occurred when PVHS converted to the Avatar satisfaction-survey system, which increased statistical reliability and frequency of satisfaction determination (weekly updates). At the same time, PVHS began surveying patients from all care areas. CSSC continues to identify new data needs and requests Avatar adjustments, including customized reports and new questions, or new information gathering tools. For example, CSSC is currently working with Avatar on a database component to pull patient satisfaction data related to specific physicians.

PVHS stays up to date on the latest available information gathering tools through participation in conferences and trainings. The GetWell Network [3.2a(1), 3.2b(2)] represents the organization's newest tool in this area.

## 4. Measurement, Analysis, & Knowledge Management

### 4.1 Measurement, Analysis, & Improvement of Organizational Performance

#### 4.1a Performance Measurement

**4.1a(1)** Through the Balanced Scorecard (BSC), PVHS has established a process for selecting, collecting, aligning, and integrating data to track organizational performance, including progress relative to the strategic plan. As described in the organization's formal BSC Policy, the annual process begins with SDD [2.1(a)1], when SMG identifies: 1) strategic goals and plans in support of each SO; and 2) key performance measures indicating progress toward the strategic plan. These key performance measures, including short- and longer-term financial measures (Figure 2.1-

3), populate the system BSC (Figure 7.6-1).

Next, BSC measures go to the multidisciplinary Knowledge Management Team (Figure P.2-3), where each measure is assigned to a point person with relevant expertise for standards review (Figure 4.1-1). Each point person sets performance goals and ranges (Figure 4.1-2) to drive innovation and performance improvement, based on comparative data for the top 10 percent of U.S. organizations or an internal stretch goal determined by trending historical data. SMG gives final BSC approval, and the system BSC is created in PVHS' innovative electronic BSC system.

From the system BSC, individual SMG members create BSCs with division-specific measures and goals that support the system BSC. Directors then create department BSCs with service area-specific measures and goals that support the division and system BSCs (Figure P.1-1). Each month, managers of data related to HR, patient satisfaction, financials, market



Figure 4.1-1: BSC Standards Review

1. What is the purpose of the measure?
2. Why was the measure chosen?
3. How was the measure chosen?
4. How should the measure be defined?
5. How often should this item be measured?
6. What is the format of the measure?
7. What are acceptable and unacceptable values for this measure?
8. Are the definition and range acceptable for all levels of the organization?
9. What sources were consulted for possible industry benchmarks?
10. Is there an industry benchmark?
11. Are there a data source and benchmark for this measure?
12. If a benchmark is not appropriate, why not?
13. Are there other factors to consider?

Figure 4.1-2: BSC Performance Goals & Ranges

<b>BLUE</b>	The best practice or world-class [P.1a(2)] stretch goal
<b>GREEN</b>	An indicator of acceptable performance
<b>YELLOW</b>	An indicator that performance is in transition and warrants monitoring
<b>RED</b>	An indicator that performance falls outside the acceptable range and warrants immediate action

share, and key clinical process/outcome measures globally populate the electronic BSCs. SMG and directors populate additional key measures on their respective BSCs.

At a glance, system BSC users can gauge organizational progress relative to the strategic plan. If key performance measures are blue or green, PVHS is on track to accomplish the corresponding strategic plan items; if key performance measures are yellow or red, the organization is not on track to accomplish these items. On the system BSC, if a measure is red for one month or yellow for three months, the point person for that measure determines why the measure is not on track and develops a BSC improvement/action plan, which is approved and monitored by the appropriate SMG member and hyperlinked to the electronic BSC. The result is continual performance improvement and progress toward the organization's strategic plan.

In addition to using the BSC to track organizational performance and drive innovation and performance improvement, PVHS also analyzes data for information to make fact-based decisions at both strategic and operational levels (Figure 4.1-3). One critical tool across the organization is the monthly Key Performance Indicator (KPI) reports that go to each Director. These cost center reports let Directors monitor departmental revenue and expenses and perform drill down analysis. The KPI reports roll up from department to division to facility to system. The resulting system Monthly Financial Results report goes to all Directors, SMG, and the BOD.

**4.1a(2)** PVHS uses comparative data to set goals that drive innovation and performance improvement at both strategic and operational levels. For instance, year after year, PVHS has set increasingly aggressive goals for patient satisfaction scores and systematically implemented initiatives to achieve them [3.1a(3)]. Though PVHS narrowly missed its 2007 stretch goal, its initial HCAHPS results (Figure 7.2-8) are better than the U.S. top 10 percent. To select and ensure the effective use of comparative data, the organization requires identification of comparative data through formal, systemwide processes, including: 1) SDD [2.1a(1)]; 2) BSC [4.1a(1)]; 3) the

Figure 4.1-3: Examples of Fact-Based Decision Making

DATA	HOW USED
SMG & BOD Evaluations	1.2a(2)
SDD Data (Figure 2.1-2)	2.1a(1)
Voice of the Customer	3.1a(2), 3.2b(1)
BSC	4.1b(1)
Workforce Satisfaction Surveys	5.1c(2)
Work Process Measures (Figure 6.1-2)	6.2a(1)

feasibility analysis step of the Business Decision Support Process [6.1a(2)]; 4) the process for monitoring, evaluating, and improving the organization's key processes [6.2a(1)]; and 5) PDCA improvement model (6.2b).

With all applications of comparative data, the organization asks the following questions:

- What comparative data are available: 1) external and world-class [P.1a(2)]; 2) external but not world-class; 3) internal; or 4) none?
- Are the data truly comparative?
- Do the data drive performance improvement and stimulate innovation?

P.2a(3) describes PVHS' key sources of comparative and competitive data. If external comparative data are not available, PVHS uses internal, historical data to perform trend analyses and set stretch goals that will drive performance improvement and innovation.

**4.1a(3)** To keep the performance measurement system current with healthcare service needs and directions, SMG and the Knowledge Management Team evaluate the system through the annual Baldrige self-assessment and feedback process. Specifically, the organization considers: 1) the process for developing and monitoring the BSC; 2) the process for developing and monitoring BSC improvement/action plans; and 3) the selection and use of comparative data. This annual learning process prompted creation of a formal BSC Policy, a strategic decision to use national comparative databases rather than comparative results from individual high-performing organizations, and implementation of an electronic BSC [4.1a(1)].

The most recent Baldrige-based cycle of improvement to PVHS' performance measurement system is implementation of the Thomson Healthcare database for benchmarking of risk-adjusted clinical outcomes against more than 3,000 U.S. hospitals. This nine-month project will produce the first results in June 2008.

To ensure that the performance measurement system is sensitive to rapid or unexpected organizational or external changes, the BSC Policy allows SMG to add or remove BSC measures and adjust BSC goals outside the annual SDD process.

#### 4.1b Performance Analysis, Review, & Improvement

**4.1b(1)** The BSC (Figure 7.6-1) provides the framework for organizational performance review. SMG and directors review system BSC metrics monthly, with quarterly review by the Board. Since the BSC directly links performance measures to achievement of the strategic plan, results that are red or yellow (Figure 4.1-2) alert SMG when: 1) the strategic plan is not being achieved; and 2) rapid or unexpected organizational or external changes are occurring. To support these reviews, assess organizational success, and ensure valid conclusions, SMG examines trends and correlations in BSC measures relative to health industry, benchmark, and competitive data, projections, and goals. For instance, when gastric bypass

volumes moved into the red, analysis of utilization and out-migration data showed that PVHS was losing patients to a competitor that offered an alternative Lap-Band® procedure for morbidly obese patients. This trend and subsequent analysis prompted PVHS to consider and eventually add the procedure. Thus, by monitoring progress relative to the strategic plan, SMG is able to prioritize and manage resources across the organization [Figure 4.1-3, 2.2a(2)]. Similar reviews and adjustments happen at all levels of the organization (i.e. at the department level, based on the department BSC).

**4.1b(2)** Performance review findings help the organization prioritize opportunities and resources for improvement and innovation through: 1) the SDD process [2.1a(1)], which sets goals and action plans for achieving the SOs and identifies opportunities for innovation; and 2) the BSC review process [4.1b(1)], which directs improvement/action plan development aimed at getting low-performing areas back on track. For instance, at PVH, increasing ED wait times and decreasing ED patient satisfaction prompted PVHS to drill down into ED performance measures and determine that mental health and substance abuse patients were significantly impacting ED processes. In a community collaboration recognized nationally, PVHS worked with the inter-agency Mental Health and Substance Abuse Partnership to establish an ED crisis assessment center to centralize and streamline treatment for these patients. MCR also implemented the successful program.

To deploy priorities and opportunities to all appropriate areas, PVHS relies on the GPS model (Figure P.1-1), which incorporates system and department BSCs [4.1a(1)], as well as individual performance reviews [5.1a(3)], to align the organization and guide decision making in support of common goals. When appropriate, PVHS deploys these priorities and opportunities outside the organization through communication mechanisms described in Figure P.2-1.

**4.1b(3)** Organizational performance reviews drive systematic evaluation and improvement of key processes by SMG, steering committees, and directors throughout PVHS. Measures not performing to goal can prompt corrective actions such as: 1) initiation of a system PDCA team (6.2b); 2) development and implementation of new/updated policies and procedures; 3) workforce training/re-training [5.1b(1)]; 4) process re-design [6.1b(3)]; and 5) resource allocation through SDD [2.1a(2)].

## 4.2 Management of Information, Information Technology, & Knowledge

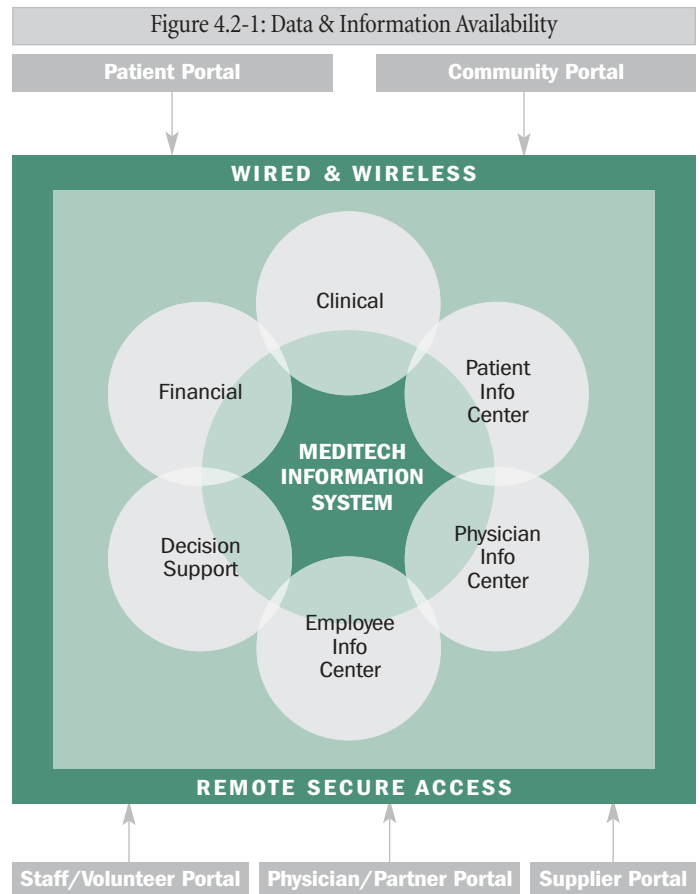
### 4.2a Management of Information Resources

PVHS has received national recognition for its innovative use of information technology to improve patient care and safety (*Hospitals & Health Networks*, Top 100 Most Wired Hospitals and Health Systems, 2004, 2005, 2006, 2007), its efforts to provide physicians electronic access to patient records from their offices or homes (*Hospitals & Health Networks*, 25 Most Wireless Hospitals and Health Systems, 2004, 2005, 2007), and its use of information technology in business practices (*Top 500 Information Technology Innovators*, *Information Week*, 2004, 2005, 2006, 2007).

**4.2a(1)** PVHS' ability to meet and exceed the expectations of quality care, prompt service, and friendly staff is dependent upon the timely availability of information for the workforce, suppliers, partners, collaborators, patients, and the community. To optimize the flow of accurate, real-time information, PVHS has established a secure, user-friendly network (Figure 4.2-1) that is appropriately accessible to all stakeholders, regardless of geography or time

of day. In this network, the Meditech Information System acts as the central repository, with associated content-specific functions such as:

- **Clinical Information.** Electronic health records, Picture Archive and Communication System (PACS), lab results, poison control, MicroMedex, Pyxis (automated pharmaceutical dispensing machine), Thomson Healthcare database.
- **Physician Information Center (Provider LINK).** Clinical information (see above); subscription-based online resources, such as MD Consult, CINAHL, and online medical journals.
- **Decision Support.** KPI reports; electronic data interchanges (automatic supply tracking, ordering, and billing with nearly 100 percent of PVHS vendors); Information Center (service utilization, patient demographics, market trends).
- **Financial Information.** Patient billing, payroll, accounts receivable, revenue cycle management
- **Employee Information Center.** Patient census (by unit or outpatient department); Bed Management (number of patients by unit/facility and admission/discharge projections); Kronos (timeclock); Manager VIC (staff due for mandatory annual learning test, TB, and performance reviews); My VIC (due dates for mandatory annual learning test, TB, performance reviews, time clock entries, pay stub, and benefits); BSC/quality data; patient satisfaction data; medical cybrary; policies/procedures; forms; calendars; job postings; directories.
- **Patient Information Center.** GetWell Network, educational materials, gift shop, Babies! photo gallery, and health resources, such as a diabetes management tool and a database for identifying potential drug interactions.



More than 3,000 networked computers throughout PVHS facilities provide role-specific information access for authorized users, and secure portals give these users electronic access from outside the organization:

- **Physician/Partner Portal.** The 3M Care Innovation clinical data repository system enables more than 99 percent of area physician offices — as well as appropriate partners — to retrieve patient information on a timely basis via off-site computers. With this system, authorized providers may access real-time patient information, such as lab results or radiology reports, from their office or home through the secure PVHS web access site.
- **Staff Portal.** With web access, authorized staff members can remotely access e-mail, shared drives, VIC (intranet), and Kronos (employee time clock).
- **Patient Portal.** The PVHS web site provides information about the organization and its services, as well as patient education information and general health resources.
- **Community Portal.** The PVHS web site provides information about the organization and its services, as well as patient education information and general health resources. HealthLink provides dedicated public-access computers and printers throughout PVHS to help community members access health information.
- **Supplier Portal.** Vendor-specific electronic data interchanges provide automatic supply tracking, ordering, and billing with nearly 100 percent of PVHS vendors.

Besides the electronic network and the extensive availability of software programs, e-mail is used constantly throughout the system for internal and external communication, and the system and departments communicate internally (with members of the workforce) and externally (with partners, collaborators, suppliers, patients, and the community) through newsletters, reports, bulletin boards, posters, mailings, media, and approaches described in 1.1b(1), Figure 1.1-2, and Figure 3.2-1.

**4.2a(2)** The Information Services (IS) Department maintains hardware and software reliability through several mechanisms. IS replaces hardware through a life-cycle planning process and monitors the system's superior reliability [7.5a(2)] for reporting on the BSC. IS also establishes checks and balances to maintain software reliability. For instance, IS provides a separate software system for testing and documenting system functionality results without affecting production environments. PVHS has implemented a tracking and monitoring system, Task Plus, to ensure testing and documentation of all software enhancements. Staff members have real-time access to a 24/7 IS information center for troubleshooting.

PVHS uses several mechanisms to maintain information security:

1. Computer system access requires two-level password authentication.
2. Hardware and software tools such as firewalls, encryption of wireless transmissions, and intrusion detection systems facilitate overall computer system security.
3. The workforce receives training on password confidentiality and other information security issues, such as accessing information only on a need-to-know basis, logging out of a computer before leaving it unattended, and being aware of who may be able to look over a computer user's shoulder and see information displayed on the screen.
4. IS grants access to certain software modules and screens on a job-specific basis, supported through formal HIPAA policies, and computer screens time out when left unattended.
5. Locked access and an extensive security monitoring system secure

paper-based records, and confidential shredding is provided at locked collection points.

6. IS removes access codes for terminated staff members on the last day of employment.
7. IS, Corporate Compliance, and Medical Records perform routine audits of all key user groups, including: 1) an exhaustive bi-annual audit by an independent company; 2) random managed audits throughout the organization; and 3) instant specific auditing triggered by an incident or concern.

PVHS uses numerous mechanisms for ensuring that hardware and software are user-friendly. IS includes members of the workforce in system selection processes, pilot projects, system updates, and training sessions. Members of the workforce also supply input for the development of knowledge management systems. For example, the Clinical Informatics Team (WROCIT), a committee of 70 staff members representing all PVHS departments, designed the electronic health record (EHR), and front-line staff tested the menu and query-based screens for ease of use. Additionally, IS and work-area staff members budget to jointly attend user conferences where best practice and knowledge transfers take place. In response to workforce requests for the fastest and simplest security system allowed by PVHS, Joint Commission, and HIPAA, IS is currently piloting a single sign-on technology consistent with the PVHS commitment to investing in technologies that boost productivity and improve patient care.

**4.2a(3)** Contingency planning ensures continued availability of data and information during an emergency. Mirrored data and stand-by servers are available to ensure redundancy, to support business continuity for disaster recovery, and to provide ongoing availability of systems during system upgrades. In addition, IS backs up data on a scheduled basis, using a grandfather process to ensure a further level of data redundancy, and then stores back-up files off site in a secure location. Contingency policies, which are tested during disaster drills (6.1c), also outline how to transition to a "paper system."

**4.2a(4)** To keep data and information availability mechanisms current with healthcare service needs and directions, PVHS' five-year financial and information technology (I/T) plans drive an annual evaluation of technology [2.1a(2)]. At the Board's April retreat, the CIO facilitates a review and prioritization of potential I/T strategies that align with SOs. In fall and late winter, the IS Steering Committee, with representatives from the workforce and BOD, meets to review I/T plan progress and check alignment with strategic action items. WROCIT, the Business Informatics Team, and the Provider Informatics Team identify and manage operational needs, working together by functional areas to prioritize capital resources and ensure all stakeholders are represented in identifying tactical projects (Figure 2.1-2). Each tactical initiative identifies plan interdependencies, capital outlays for initial purchases, recurring maintenance costs, and staffing requirements for implementation and ongoing support. The committees report to the IS Steering Committee, and the Provider Informatics Team reports monthly to MEC, SMG and the BOD ultimately make decisions regarding resource prioritization in support of the strategic plan.

## 4.2b Data, Information, & Knowledge Management

**4.2b(1)** To facilitate integrity, reliability, timeliness, accuracy, security, and confidentiality of information and organizational knowledge, PVHS relies on industry standards for hardware, software, interfaces, and network protocols, with additional support including:



- **Accuracy.** PVHS relies on automation and audits to ensure accuracy of data and information. The Meditech-based network [4.2a(1)] links clinical data from disparate applications and locations via a uniform patient identifier that assists clinicians in selecting the correct patient and supports the organization's patient safety initiative. Systems also have data input control mechanisms. For instance, when entering patient information into an electronic health record, care providers choose from pull-down lists, rather than manually entering data, and Pyxis [4.2a(1)] issues alerts if discrepancies occur. To verify information accuracy, automated electronic processes and discharge chart audits provide daily validity checks. Other mechanisms are described in 6.2a(3).
- **Integrity & Reliability.** The process for maintaining information integrity and reliability begins with data entry. System controls allow only authorized, trained individuals to input data, and systems have built-in data input control features, as well as extensive security measures [4.2a(2)]. To ensure data and information availability, IS maintains hardware and software reliability [4.2a(2)] and detailed contingency plans [4.2a(3)]. With regard to the integrity of BSC measures, all key performance measures undergo standards review with centralized, automated data entry as described in 4.1a(1).
- **Timeliness.** PVHS has devoted significant resources to developing an innovative electronic information system that ensures authorized users secure, user-friendly access to clinical and financial information, decision support, and the physician, employee, and patient information centers, regardless of geography or time of day [4.2a(1)]. The organization also has partnered with providers to establish remote electronic connectivity [4.2a(1)] and continues to achieve best-practice turnaround times for medical transcription.
- **Security and Confidentiality.** In addition to the measures described in 4.2a(2), PVHS established confidentiality as one of the organization's values, so the Behavior Standards (Figure P.1-2) and Code of Conduct [1.1a(2)] emphasize confidentiality for all stakeholders. The workforce receives annual training on this topic (Figure 7.6-2).

**4.2b(2)** PVHS manages organizational knowledge to ensure knowledge transfer to and from its key stakeholders:

- **Workforce.** Members of the workforce are key sources of clinical, operational, and organizational knowledge. Collection and transfer of clinical knowledge happens largely through the Meditech-based network [4.2a(1)], which allows authorized caregivers to enter and access real-time clinical information remotely or from any computer in the PVHS system. Nursing supervisors also get daily written and verbal reports, and caregivers provide real-time written and verbal reports when transferring patients between departments and shifts. Staff who attend outside conferences share their learning at the department level. To drive knowledge management across facilities, PVHS intentionally created a common SMG [P.1b(1)] and system-level departments, such as HR, IS, and Purchasing, that oversee strategy and operations for the entire system. Learn and Lead programs [5.1b(2)] and System Operations meetings facilitate cascade learning throughout the organization. The PVHS culture — including routine use of VIC, shared drives, and interdisciplinary teams — encourages information sharing at all levels of the organization. Physicians routinely participate in collaborative knowledge transfers, such as the weekly Tuesday Afternoon Conference (TAC), which is broadcast to rural hospitals through the PVHS telehealth program. Appropriate oversight committees, including the performance excellence teams (Figure P.2-3), systematically review key learnings to

identify best practices and deploy them across the organization.

- **Patients.** In addition to listening and learning methods detailed in Figure 3.1-1, PVHS begins collecting information from patients prior to or immediately upon arrival. This information — including personal information, medical history, and care preferences [6.2a(2)] — goes into an electronic medical record that is available to authorized caregivers throughout the system. Caregivers update this record throughout the patient's stay/visit and give patients regular verbal reports on their condition, procedures, and progress. The primary tools PVHS uses to gather information from the community are described in 1.2c and 3.1a(1). Results are available to staff, physicians, and other local healthcare organizations for use in evaluating existing services and designing new ones. PVHS transfers knowledge back to patients and the community through access mechanisms listed in Figure 3.2-1.
- **Suppliers.** PVHS' electronic data interchange facilitates rapid information exchange with suppliers [4.2a(1)]. PVHS also gathers information through VHA, PVHS-hosted vendor fairs, and vendor seminars on new products, technologies, and services. PVHS transfers knowledge back to suppliers through RFPs, survey responses, regular utilization/quality reports, and participation on vendor boards and advisory committees.
- **Partners & Collaborators.** Key mechanisms for transferring information to and from partners are through: 1) joint venture business reviews; and 2) SMG representation on JV boards. Partners who are involved in direct patient care can also access clinical information through a secure electronic portal [4.2a(1)]. Knowledge management with collaborators is described in 1.2c.

PVHS has a systematic process for identifying and deploying best practices across the organization:

- **Initiation.** Best practices may be identified by: 1) SMG or a Director; 2) PDCA teams; or 3) oversight committees such as performance excellence teams (Figure P.2-3). The BSC [4.1a(1)] is intentionally designed to highlight departments where internal best practices are occurring. Additional internal best practice identification comes through Learn and Lead programs [5.1b(2)], Systems Operations meetings, and the annual Quality Festival. PVHS also devotes significant resources to identifying external best practices inside and outside the healthcare industry. PVHS leaders and staff attend national conferences and build relationships with world-class organizations [P.1a(2)]. A medical library containing more than 3,000 textbooks and 200 journal titles; special collections covering ethics, leadership development, quality improvement, and diversity awareness; and satellite broadcasts from CDC, VHA, and others provides additional sources for external knowledge. A medical cybrary page in VIC provides easy access to subscription-based online resources, such as MD Consult, CINAHL, MicroMedex, and online medical journals.
- **Policy.** For implementation of the best practice, the initiator prepares a draft policy or policy revision, seeks approval from the appropriate oversight committee, and presents it to the systemwide, multidisciplinary Policy Committee. The Policy Committee chairperson presents all new and revised policies at the Systems Operations meetings, and all new and revised policies are posted on VIC and emailed to department point persons. If monitoring of relevant results (e.g. audits, outcomes) indicates implementation gaps, the process owner takes appropriate action.
- **Education.** The initiator of a best practice is charged with developing an implementation plan, including identification of education and training needs. Depending on the best practice, the initiator communicates these



needs to the Clinical Education Committee, HR, or Product and Equipment Standardization and Evaluation Committee (PESEC), which coordinate the system's education and training programs [5.2a(1)].

- **Monitoring.** The appropriate oversight committee monitors implementation of best practices through mechanisms, including: 1) audits; and 2) Level III and IV Kirkpatrick evaluation [5.1b(3)].

PVHS representatives also learn and shape best practices across the healthcare industry through organizations such as Magnet, VHA, ACFM, and IHI.

## 5. Workforce Focus

### 5.1 Workforce Engagement

#### 5.1a Workforce Enrichment

**5.1a(1)** PVHS has been systematically building a culture of workforce satisfaction and engagement for the past decade (Figure 7.4-11).

In 1997, based on a best practice from a Baldrige recipient, PVHS surveyed employees as customers and asked: 1) What makes you want to jump out of bed and come to work? and 2) How do we build a culture that supports that? In 1999, to further understand drivers of staff satisfaction and engagement, PVHS collaborated with the Industrial and Organizational Psychology Department at Colorado State University (CSU) to survey and interview staff from all disciplines and shifts and identify key staff requirements (Figure P.1-5). These requirements — or culture dimensions — are universal to all staff segments and remain the framework for the semi-annual Employee Culture Survey, which drives improvement efforts in the organization, based on segmentation as described in 5.1c(1). The Workforce Focus Team (Figure P.2-3) — a multidisciplinary staff team including representatives from HR, education, employee health/safety, and clinical/nonclinical areas — collaborates with CSU in evaluating and improving the survey tool.

In 2003, PVHS initiated an annual physician survey to assist in determining key factors that affect physician satisfaction and engagement (Figure P.1-5). Volunteer Services also performs an annual volunteer survey (Figure P.1-5).

**5.1a(2)** PVHS fosters an organizational culture conducive to high performance and a motivated workforce to accomplish the following:

**Cooperation, Communication, & Skill Sharing.** In addition to communication mechanisms described in 1.1b(1), PVHS ensures cooperation, effective communication, and skill sharing within and across healthcare professions, work units, and locations:

1. Interdisciplinary, SO-driven teams are at the core of PVHS work management and organization. From development of new services to provision of bedside care, PVHS engages teams to meet patient needs. Team members throughout the organization — including representation from staff, physicians, and volunteers — work together to provide the best possible care, participate in strategy development, monitor quality indicators, and coordinate improvement efforts. A team purpose form guides new teams in identifying appropriate membership, with the goal of promoting cooperation and the core competency, innovation, across disciplines, departments, and locations. Specifically, patient-care teams enable agility and improve clinical outcomes by increasing opportunities for communication and responsiveness. For instance, a trauma resuscitation team including

PVHS assembles and transfers organizational knowledge for use in SDD as described in 2.1a(1). For instance, before deciding to build MCR, data analysis indicated significant population growth to the south at the same time landlocked PVH would reach capacity. Further analysis of zip-code based utilization data showed that two-thirds of current cardiac patients and more than half of trauma patients traveled from outside the Fort Collins area. Thus, SMG and the BOD made the strategic decision to: 1) build a new hospital; 2) locate it south of Fort Collins at a regionally accessible hub in a community that did not have advanced cardiac or trauma programs; and 3) focus its cardiac and trauma programs there.

- physicians, nurses, respiratory therapists, radiology technologists, and social workers is on call 24/7 to respond to traumas, and an interdisciplinary care team led by a trauma surgeon makes daily rounds on trauma patients. These teams demonstrate “the best collaboration of nurses and doctors, relative to any trauma program in the U.S.,” according to a recent survey team with the American College of Surgeons.
2. PVHS uses SBAR methodology to ensure consistent and effective communication between nurses and physicians. Implemented as a process improvement, the IHI best practice provides a checklist of information nurses should gather before paging a physician.
3. The Learn and Lead Program [5.1b(2)] brings together managers from all PVHS departments for offsite trainings and holds attendees accountable for cascading learning to their staffs.
4. The Reward and Recognition (R&R) program [5.1a(3)] rewards staff who cooperate across department lines.
5. Formal education and training programs foster or require skill sharing within and across disciplines, departments, and locations. For instance, MCR leaders and the majority of MCR staff began their jobs at PVH, working alongside their PVH counterparts.
6. To ensure the flow of accurate, real-time information, PVHS has established a secure, user-friendly electronic network [4.2a(1)] and processes for transferring non-electronic information and knowledge [4.2b(2)].

**Manager Communication.** Since an employee's relationship with his/her immediate supervisor is critical to retention, PVHS has mechanisms in place to ensure effective information flow and two-way communication with supervisors and managers:

1. Cascade learning through regularly scheduled team or individual meetings
2. Open-door policy and robust email system
3. Leadership rounding
4. Leadership development programs [5.1b(2)]
5. Annual performance reviews [5.1a(3)]
6. Employee culture surveys, which engage staff in developing and implementing action plans for improvement
7. Increase in number of supervisors

Members of the workforce also have regular formal and informal opportunities for two-way communication with SMG [1.1b(1), Figure 1.1-2].

**Goal Setting, Empowerment, & Initiative.** Annually, through the performance review process [5.1a(3)], staff members set individual goals in support of the SOs and outline resources they will need to accomplish those goals. Each medical department's quality committee sets goals for tracking through the system quality dashboard. Leaders empower and challenge





members of the workforce to: 1) identify opportunities for improvement (6.2b); 2) resolve customer complaints [3.2a(3)]; and 3) participate in interdisciplinary teams focused on performance improvement, facility/service design, quality, patient safety, clinical education, and numerous other aspects of daily operations and process management. The organization celebrates initiative through reward and recognition of individuals and teams [5.1a(3)]; supports professional and personal development (5.1b); and regularly promotes from within [5.1b(4)].

**Innovation.** PVHS fosters innovation in the work environment:

1. Through the BSC process [4.1a(1)] and performance management system [5.1a(3)], PVHS sets and deploys goals to drive innovation throughout the organization.
2. Step 2 of SDD [2.1a(1)] includes extensive information gathering so that the organization stays current on work environment innovations internal and external to the healthcare industry.
3. PVHS engages staff, physicians, and volunteers in workplace design of remodels, additions, and new facilities, so that work layout and location support innovative and patient-focused processes. With MCR, staff and physicians joined the design team in site visits to innovative facilities across the country and then tested mock patient rooms, an elevator, a trauma resuscitation suite, and an operating room, all built out of Styrofoam and cardboard in a local warehouse. As a result, MCR now incorporates innovations such as: 1) the Disney design concept that separates public spaces from patient flow pathways to ensure patient privacy and optimize workforce productivity; 2) streamlined pathways for trauma patients to maximize critical patient-care minutes and allow the entire trauma team to stay with the patient at all times; 3) intensive care beds with power, data ports, and medical gases coming from free-standing columns rather than mounted headwalls to facilitate 360-degree access to the patient by the care team; and 4) surgical imaging technology available at only 14 other hospitals in the country.
4. As part of the Business Decision Support Process [6.1a(2)] and performance improvement system (P.2c, 6.2b), interdisciplinary teams research internal and external best practices to drive innovation. For instance, PVHS was the first hospital or health system in Colorado to improve productivity and patient safety with complete lab automation, and PVHS' in-house counsel adapted the Purchasing Department's RFP process for legal applications and continues to save the organization over \$500,000 a year in insurance premiums.
5. The annual Quality Festival, which invites members of the workforce to highlight quality improvement projects, promotes and rewards sharing and implementation of innovations across the organization.
6. The semi-annual Employee Culture Survey helps leaders and staff monitor how conducive the work environment is to innovation (Figure 7.4-1).

**Diversity.** PVHS benefits from the diverse ideas, cultures, and thinking of

the workforce:

1. Committees and teams are carefully populated to consider: 1) appropriate work shifts, departments, and facilities; 2) blend of positions, backgrounds, generations, and PVHS tenure; 3) balance of leadership strengths as identified by the Thomas Concept program; 4) rotation of membership and leadership to introduce new ideas.
2. The Policy Committee establishes, evaluates, and improves nondiscriminatory and inclusive workforce and patient treatment policies.
3. PVHS employs four Spanish interpreters, with 31 certified staff interpreters and an extensive network of contracted interpreters.

Figure 5.1-1: Rewards & Recognitions

REWARDS & RECOGNITIONS	STAFF	PHYSICIANS	VOLUNTEERS	GIVEN BY	FREQUENCY
Hospital Week & Nurses Week Celebrations	•	•	•	SMG	Yearly
Summer Picnic & Holiday Parties/Gifts	•	•	•	SMG	Yearly
Founders Day	•	•	•	SMG	Yearly
Employees of the Year	•			Workforce	Yearly
Volunteer Week Celebration			•	Management	Yearly
Physician Thank You Dinner		•		SMG	Yearly
Spotlight Volunteers & Traveling Thank You Cart			•	Directors	Ongoing
Special Meals in Physician Lounge		•		Management	Ongoing
Service Awards	•		•	Management	Ongoing
Theme Days	•	•	•	SMG	Ongoing
Birthday Certificates	•		•	Management	Ongoing
Peer-to-Peer Coupons	•	•	•	Workforce	Ongoing
R&R Certificates (\$5-\$500)	•			Workforce	Ongoing
Thank You Notes	•	•	•	All	Ongoing
Retail & Entertainment Discounts	•	•	•	All	Ongoing

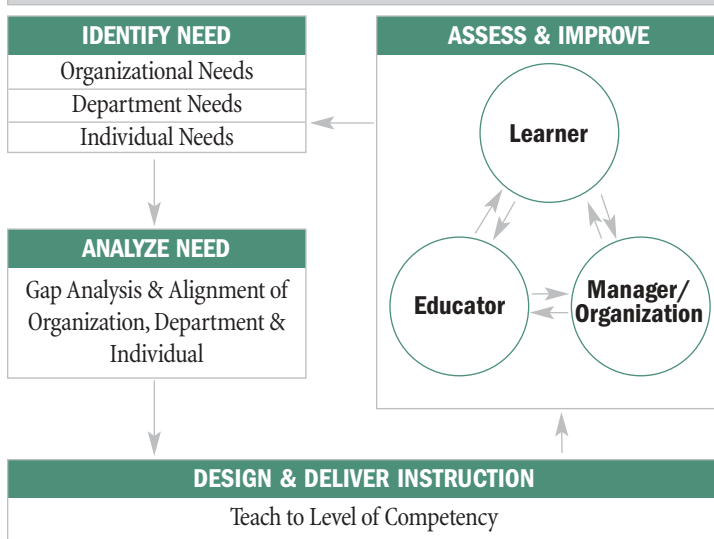
**5.1a(3)** Key aspects of the PVHS performance management system support high-performance work and workforce engagement:

**Performance Review**

- All staff members undergo an annual performance review using an innovative review instrument. Managers and peers evaluate a staff member based on the Behavior Standards (Figure P.1-2), values (Figure P.1-1), and key customer (Figure P.1-6) and staff requirements (Figure P.1-5). Staff members set individual goals to align their work with the PVHS strategic plan, drive high performance, and engage them in the organization's success. The staff member and manager review the staff member's job description and identify education/training needs. HR coordinates evaluation and improvement of the performance review process to more fully engage the workforce and support high performance. Based on benchmarking with Magnet hospitals and Baldrige recipients, as well as input from managers, staff, and the V/M/V Team, the Workforce Focus Team reorganized the performance review instrument to specifically address the V/M/V, Behavior Standards, and key customer and staff requirements (see above). The most recent cycle of improvement involved the creation of personal goal cards, which employees now complete during their performance review and attach to their identification badge. New employees receive pre-printed goal cards during orientation to remind them that their goals during the first year



Figure 5.1-2: Workforce Development System



are to live the Behavior Standards and learn to excel at their job. The Learn & Lead Program trained managers on performance review process and instrument changes.

- Physicians are recertified every 23 months [5.1b(1)].
- Volunteers are evaluated annually with competency testing for the volunteers who perform infant hearing screens. Volunteers also carry personal goal cards.

**Optional Performance Plan (OPP).** The OPP is an incentive program designed to engage staff and reinforce innovation, high performance, and patient/customer focus linked to achievement of organizational goals. Payout is based on: 1) attaining a net gain on the budget; 2) achieving 75 percent participation in the Employee Culture Survey; and 3) attaining established patient satisfaction goals. All staff members share equally in the OPP, with individual payout amounts determined by number of hours worked, not organizational rank. SMG annually evaluates and adjusts OPP to drive continuing performance improvement.

#### Rewards and Recognitions

- **Reward & Recognition (R&R) Program.** Managers may request an R&R Certificate for staff who demonstrate: 1) high performance, innovation, and patient/customer focus toward achievement of the SOs; or 2) Behavior Standards and values. The certificates are redeemable for \$10 to \$500 at a diverse list of area businesses that support the PVHS Foundation. Peer-to-peer coupons, redeemable for \$3, allow staff, volunteers, and physicians to reward each other for actions supporting Behavior Standards and values.
- **Employees of the Year.** Members of the workforce nominate staff for consistently supporting SOs and V/M/V.
- PVHS uses numerous other informal and individualized rewards (Figure 5.1-1). However, federal law limits rewards hospitals can give independent physicians. Thus, PVHS cannot extend many of its reward programs to physicians.

Compensation includes an hourly rate plus benefits [5.2b(2)] worth an additional 27 percent of salary. HR adjusts salaries annually based on market analysis. Managers may also make individual equity adjustments. Evening or night workers receive generous shift differentials, and staff who are called in to work with less than 24 hours notice receive short-notice pay. To retain and engage the workforce, PVHS offers referral bonuses for

individuals who recruit critical-to-recruit employees, as well as benefits based on length of service: increasing vested interest in matched retirement investments and increasing paid-time-off (PTO) hours and health benefits.

#### 5.1b Workforce & Leader Development

**5.1b(1)** The PVHS Workforce Development System (Figure 5.1-2) balances organizational, department, and individual needs to support and engage the workforce in achieving the V/M/V. Identification of learning and development needs is annual and ongoing, driven by processes and factors such as 1) SDD [2.1a(2)], regulatory requirements, retention data [5.1c(1)], and VOC [3.1a(1)] for the organization; 2) new policies and evidence-based practices for departments; and 3) performance reviews [5.1a(3)] for individuals. After systematic needs analysis and prioritization, a workforce development team designs and delivers appropriate instruction. Educators partner with learners and managers to assess instruction effectiveness (e.g. Kirkpatrick analysis) and drive improvements in instruction, learning/development opportunities, and the Workforce Development System itself.

#### Learning Needs & Desires

- Managers identify initial learning and development needs through the job description and a checklist for New Employee Orientation (NEO). Volunteer position descriptions also outline competency requirements for volunteer orientation. During annual performance review, staff members and their manager review the education tracking sheet for the previous year and identify education needs for the coming year. Volunteers discuss their education needs and desires with the Volunteer Directors. Yearly, HR identifies and prioritizes training needs based on extensive data gathering and analysis activities (Figure 5.1-2). HR then responds to these needs through the coming year's Learn and Grow series, which balances organizational and individual needs and is available to the entire workforce. To assess physician education needs, Medical Staff Services performs an annual Medical Staff Needs Assessment, and Medical Staff Services collects informal data through interviews, networking, and committee participation. The CME Committee uses this information to develop offerings that target physician needs and interests.
- Supporting organizational agility, PVHS responds to unexpected, just-in-time training needs. HR, Employee Health Services, Environmental Health and Safety, Risk Management, or any director may bring forward a need for immediate education as part of: 1) a root-cause analysis associated with an event, such as a needle stick, sexual harassment report, or serious patient complaint; or 2) an emerging health need, such as a sudden influx of patients with rattlesnake bites.

**Licensure & Recertification Requirements.** In addition to the job description and NEO checklist described above, patient care units have a designated clinical educator charged with coordinating unit-based education and staying current on that unit's licensure and recertification requirements. Clinical educators and staff development coordinators from the Clinical Education Department populate the Clinical Education Committee, which identifies and coordinates systemwide needs. PVHS requires current licensure for continued employment or practicing privileges. The annual performance review process [5.1a(3)] and biannual recertification monitor licensure status for staff and physicians, respectively. PVHS does not attempt to meet all the continuing medical education (CME) needs for physicians, but the recertification process reviews activities such as types of procedures, disciplinary/behavioral

issues, and medical record completion to identify education needs.

**Core Competencies, Strategic Challenges, & Action Plans.** Education and training are essential to maintaining and strengthening core competencies [6.1a(1), Figure 5.1-3], addressing strategic challenges (Figures P.2, 5.1-3), and achieving the strategic plan [2.2a(5)].

Figure 5.1-3: Examples of Using Education to Strengthen Core Competencies & Address Strategic Challenges (SC)

CORE COMPETENCY OR STRATEGIC CHALLENGE	EDUCATION/TRAINING PROGRAM
Engaging the Workforce	Communication Series, Meeting Management, Injury Prevention
Partnering/SC4: Partnerships	Learn & Lead (Figure 5.1-4)
Driving Innovation	PDCA Training, Thomas Concept, Coaching for Performance
Ensuring Financial Stability	Leadership Dialogue: Workers' Compensation
SC1: Labor Shortages	New Graduate Nurses Class, Diversity
SC2: Population Growth/ Reimbursement Changes	Technology Training, Understanding Change & Transition
SC3: Market Share	Service Recovery, Telehealth: TAC and Grand Rounds
SC5: Clinical Outcomes	Clinical Competencies, Advanced Certification

**Performance Improvement, Technological Change, & Innovation**

1. To deploy performance improvement methodology, leaders receive training on the PDCA process, which identifies education necessary to implement and maintain performance improvements.
2. PVHS financially supports staff members to be active CPEX and Baldrige examiners with the goal of: 1) understanding performance improvement; and 2) identifying external best practices to drive innovation at PVHS. PVHS currently has three Baldrige examiners and seven CPEX examiners on staff. The quarterly performance excellence meetings provide education on the Baldrige framework (P.2c).
3. PVHS has become the national benchmark for deploying Thomas Concept. More than half the organization has received training through this program, which helps PVHS build balanced, diverse teams that foster new ideas and, thus, drive innovation.
4. The process used by the multidisciplinary Product and Equipment Standardization and Evaluation Committee (PESEC) identifies training needs related to new technology.
5. PVHS sends members of the workforce to seminars, conferences, and classes on numerous topics, including performance improvement methodologies and new technology. A primary goal with external educational opportunities is bringing back best practices to drive innovation in the organization.

**Breadth of Development Opportunities.** In addition to traditional classroom settings, classes may be offered on-line, by video conference, or through self-learning packets. The Mentor Program matches staff members with a willing mentor, and coaching occurs both within the organization and through contracted consultants. PVHS coordinates conferences and semi-annual Grand Rounds for physicians and other providers, and physicians may request one-on-one proctoring to learn new procedures/technology, such as robotic-assisted surgery. Telehealth transmits on-site classes to other facilities and rural sites. The PVHS team

culture supports daily opportunities for informal training. PVHS offers tuition reimbursement and collaborates with area colleges on accelerated programs for nursing, radiology, and other healthcare professions.

**Knowledge Transfer.** A comprehensive system of policies, procedures, and protocols documents the organization's knowledge base so critical information does not reside solely with one person. Also, department cross-training transfers knowledge using tools such as job rotation, secondary job codes, and interim job coverage. The goal with any employee departure is to hire a replacement to overlap with the departing individual. For instance, with almost 300 employees transferring from PVH to MCR when the new hospital opened, detailed staffing plans focused on backfilling vacated PVH positions in time for knowledge transfer to occur. Committees and teams use similar approaches to facilitate knowledge transfer associated with departing team members.

**Knowledge Reinforcement.** Reinforcement of new knowledge and skills occurs through mechanisms including: 1) NEO training checklists of critical skills and follow-up skill tests; 2) Preceptor Program, which pairs new nurses with seasoned staff; 3) Level 3 Kirkpatrick analysis [5.1b(3)] with re-training if needed; and 4) recertification for licensed staff. In planning for MCR, HR researched pitfalls of newly opened hospitals and extended the hiring timeline to allow key new staff to work side-by-side with current staff at PVH. This successfully reinforced knowledge and job skills and oriented new hires to the PVHS culture. Volunteers also have service descriptions that include competencies required for their assignment, and they have signed competency sheets. Following orientation, volunteers shadow experienced volunteers.

**5.1b(2)** HR plans and coordinates learning and development opportunities for leaders.

**Personal Leadership Attributes.** The PVHS Leadership Competencies (Figure P.1-3) drive learning and development opportunities related to personal leadership attributes:

1. The Learn and Grow series offers classes on team building, listening, coaching for performance, disciplinary dilemmas, confidentiality, service recovery, and numerous other topics that directly support leaders in living the Leadership Competencies.
2. Regular leadership development opportunities — including monthly Leadership meetings and semi-annual retreats — focus on helping leaders understand and live the Leadership Competencies.
3. Building Blocks of Leadership — the newest improvement cycle — is an intensive, cohort-based program with a standardized curriculum based on the Leadership Competencies.

For physicians in new leadership roles, an orientation manual augments training provided by Medical Staff Services and the three medical staff officers at each hospital. MEC members receive training based on a nationally recognized methodology for medical staff governance, and medical staff officers attend annual training conferences. MEC members also attend a four-day training related to medical staff governance, which includes topics such as disciplining and leading committees. For the Medical Staff Quality Committee, new members receive training from the Quality Resources departments and conferences on physician peer review.

**Organizational Knowledge.** Development of organizational knowledge begins with SDD [2.1a(1), 2.2a(5)], when SMG and HR identify and prioritize organizational knowledge needed to achieve the strategic plan. Also, the PDCA process (6.2b), process design [6.1b(3)], and the Business

Decision Support Process [6.1a(2)] require teams to identify best practices and, thus, may prompt development of new organizational knowledge [4.2b(2)]. Leaders may obtain this knowledge through conferences, site visits, literature reviews, interviews with high-performing organizations, and participation in national organizations.

**Ethics.** The Compliance Department oversees training on ethical healthcare and business practices, guided by: 1) new or changing compliance requirements; 2) analysis of data from the Ethics and Compliance Hotline and disciplinary actions; and 3) just-in-time needs. For instance, when disciplinary actions related to confidentiality increased, the Compliance Department initiated mandatory training, and new regulations related to individual physician gifts prompted training on what constitutes a gift and a process for tracking gifts. In addition to the mandatory annual testing required of all staff [1.2b(2)], leaders have numerous other educational opportunities. The Compliance Officer presents frequently at monthly Leadership Team meetings and at NEO and management orientations, and HR offers Leadership Dialogues — group discussions with HR facilitators to discuss current workplace issues and challenges, such as sexual harassment and discrimination, leave of absences, employment laws, and disciplinary dilemmas.

Physician and their office staffs receive compliance training from PVHS' staff as requested or if laws change. The BOD's Corporate Compliance Committee, chaired by a former District Attorney, recommends and arranges appropriate BOD training, such as Sarbanes-Oxley.

**Core Competencies, Strategic Challenges, & Action Plans.** In addition to classes and programs highlighted in 5.1b(1) and Figure 5.1-3, PVHS offers additional leadership development opportunities related to core competencies, strategic challenges, and action plans:

1. Management orientation provides training on SDD [2.1a(1)], BSCs [4.1a(1)], and the organization's performance improvement system (P.2c, 6.2b).
2. With each agenda focused on a different SO, the Learn and Lead Program helps PVHS achieve its strategic plan and provides specific learning opportunities to help leaders maintain and strengthen the organization's core competencies (Figure 5.1-4). The innovative program dates back to 2003, when leaders adapted a model from Baldrige award recipients Baptist and SSM. Since then, PVHS has hosted offsite programs for directors, managers, and supervisors, with attendance now at 350.
3. SMG trains directors on the strategic plan [2.1a(1), Step 5] through the semiannual Leadership Retreats, which are purposely scheduled after the BOD and SMG retreats to facilitate deployment.
4. Monthly Leadership Team meetings provide education on the organization's finances, BSC, and Leadership Competencies.

**Performance Improvement & Innovation.** A focus on performance excellence and organizational learning is embedded in the culture at PVHS and reinforced through the leadership development system. Since the GPS model keeps a systemwide focus on performance improvement (Figure P.1-1, P.2c), management orientation teaches all new leaders about GPS, BSC cascading measures [4.1a(1)], and the primary PVHS improvement tools — PDCA (6.2b) and the Baldrige framework (P.2c) — which drive innovation. Leaders actively participate in one or more of the performance excellence

teams, and the organization financially supports leaders who want to pursue training as a CPEX or Baldrige examiner. The BOD also receives training on the Baldrige criteria.

**Breadth of Development Opportunities.** The breadth of opportunities that support workforce learning and development [5.1b(1)] are also available to leaders, in addition to interactive forums such as Learn and Lead and Leadership Team meetings and retreats. Both staff and leaders also have opportunities to attend external conferences, seminars, and classes.

Figure 5.1-4: Strengthening Core Competencies through Learn & Lead

ENGAGING THE WORKFORCE	PARTNERING	DRIVING INNOVATION	ENSURING FINANCIAL STABILITY
<ul style="list-style-type: none"> <li>• Caring for Ourselves and Our Customers</li> <li>• Enjoying and Improving Where You Work</li> </ul>	<ul style="list-style-type: none"> <li>• Back to the Future</li> <li>• A System's Perspective</li> </ul>	<ul style="list-style-type: none"> <li>• Achieving Service Excellence</li> <li>• The Culture of Change</li> <li>• Service Excellence</li> </ul>	<ul style="list-style-type: none"> <li>• Going for the Gold</li> <li>• The Balancing Act</li> <li>• Financial Rewards of Quality</li> </ul>

**5.1b(3)** PVHS evaluates the effectiveness of workforce and leader development and learning systems:

1. On a per-course basis, instructors work to improve their curriculum and presentation style, based on formal participant evaluations and scored tests. The organization uses the Kirkpatrick method of assessing training, which includes: 1) evaluation the day of training (Level I); 2) post-testing/demonstration (Level II); 3) assessing behavioral changes (Level III); and 4) impact on key measures (Level IV).
2. The semi-annual Employee Culture Survey asks staff members if their training needs are being met [Figure 7.4-1] and prompts adjustments, if indicated by survey results.
3. HR annually evaluates the organization's educational needs and adjusts course offerings as necessary (Figure 5.1-2).

**5.1b(4)** Staff career progression begins with goal setting at performance review, when managers and employees may discuss and plan for growth opportunities within PVHS. Support processes to accomplish employee goals include scholarships/tuition reimbursement, mentoring, coaching, shadowing, conference attendance, and interdepartmental secondary job codes that allow staff to train and gain experience in other positions. PVHS regularly promotes from within (seven of 12 SMG members, 30 of the 54 directors, and an equally impressive rate for managers and supervisors). PVHS also supports volunteers who want to move into staff positions.

Since 2003, SMG has had succession criteria and a plan for critical positions including senior leaders and critical-to-recruit positions. Directors rotate VP coverage during absences to gain experience at the SMG level. The formal succession process for Medical Staff leaders occurs through intentional grooming on selected Medical Staff committees.

### 5.1c Assessment of Workforce Engagement

**5.1c(1)** PVHS assesses workforce engagement through numerous formal and informal methods (Figure 5.1-5). Formally, the MSA and semi-annual Employee Culture surveys (Figure 7.4-1-3) are the primary methods PVHS uses to assess staff engagement and satisfaction. The Employee Culture Survey focuses on the key staff requirements (Figure P.1-5), intentionally segmenting results by department to emphasize teamwork at the front line. Every three years and more frequently as needed, the in-depth Management Science Association (MSA) survey validates the Employee Culture Survey



and addresses additional topics, such as leadership, compensation, benefits, and environmental factors. MSA segments the results by department, age, shift, tenure, and position, and compares them against a national database of other healthcare organizations. To accommodate the organization's diverse work shifts and communication styles, staff can complete the confidential surveys online or in paper form, with assistance available to all staff. Survey participation is directly linked to OPP [5.1a(3)]. As described in 5.1a(1), members of the Workforce Focus Team annually evaluate the surveys relative to content, frequency, access mechanisms, and hurdles to participation.

PVHS has separate annual satisfaction surveys for volunteers and physicians. The organization had no physician survey in 2007, while it evaluated and selected a new tool to measure physician engagement.

In addition to surveys, PVHS also uses other indicators to assess and improve workforce engagement. For instance, PVHS works with an external organization to administer exit interviews, and as a recent cycle of improvement, added stay interviews as well. For other indicators of engagement and satisfaction, PVHS monitors voluntary employee turnover on all BSCs and employee safety on the PVH and MCR BSCs. Through the BSC system, these measures prompt corrective action if they fall below defined levels [4.1a(1)].

**5.1c(2)** PVHS has systematically built a culture of workforce satisfaction and engagement to support performance excellence in key healthcare and business results [5.1a(1), Figure 7.4-11]. Annually, based on Employee Culture Survey results, SMG identifies opportunities for improvement, prioritizes them, chooses one for action plan development, and monitors progress through a measure on the system BSC. Individual departments also engage staff to develop an action plan that addresses department-specific survey results.

The organization uses other indicators of workforce satisfaction and engagement (Figures 1.1-2, 5.1-5) to validate survey results, monitor action plans, and prompt additional, just-in-time adjustments.

Figure 5.1-5: Assessing Workforce Satisfaction & Engagement

WORKFORCE GROUP	METHOD	SEGMENTATION
Staff	Employee Culture Survey, MSA survey, Magnet designation, leadership rounding, voluntary turnover, stay/exit interviews, safety indicators	Demographics, job family, tenure, position, shift, department
Physicians	Physician survey, size of Medical Staff, leadership rounding	Demographics, tenure, specialty
Volunteers	Volunteer survey, leadership rounding	Adult, student, teen

PVHS' strategic decision to adopt a balanced staffing model demonstrates this process in action. At a time when strategic challenges related to labor shortages and reimbursement cuts loomed large, PVHS identified staffing practices as a top dissatisfier. To address both workforce and financial issues, PVHS adopted and continues to use a balanced staffing model. Across the industry, hospitals typically staff for average patient volumes; then, if patient volumes increase, hospitals call in extra staff, and if patient volumes are low, they send staff home. For employees, that means unpredictable upstaffing and involuntary days off; for hospitals, that can mean costly external agency use; and for patients, that can mean fluctuating nurse-to-patient ratios and care by temporary, agency nurses, which can both negatively impact clinical outcomes, according to the National Database of Nursing Quality Indicators

(NDNQI). However, with PVHS' innovative staffing model, planners use monthly Pareto chart analysis of historical data to determine staffing levels that are appropriate for patient populations cared for on each unit more than 80% of the time. As a result, PVH's nursing levels per patient day — an indicator the American Nurses Association uses rather than nurse-to-patient ratio — ranks second in the nation (Figures 7.5-3, 4), as does nursing satisfaction. Plus, PVHS has eliminated use of external agency nurses and saves millions of dollars by preventing employee turnover.

## 5.2 Workforce Environment

### 5.2a Workforce Capability & Capacity

**5.2a(1)** PVHS assesses workforce capability and capacity needs through SDD [2.1a(1), 2.2a(5)] in support of the strategic plan.

**Staff.** In SDD Step 5, based on the five-year financial plan (SDD Step 2) and in support of the strategic plan, the CFO determines budget parameters and communicates them to the SMG. Individual SMG members and their directors review department-specific parameters and set staffing plans relative to: 1) industry standards and best practices (e.g. Magnet nursing ratios, balanced staffing model [5.1c(2)]); 2) plans for new healthcare services, as approved through the Business Decision Support Process, which specifically addresses staffing requirements [6.1a(2)]; 3) changes in technology, regulations, or environmental factors; and 4) knowledge of their service area and customer needs/demands. PVHS assesses capability needs as described in 5.1b(1-2).

**Physicians.** The Director of Outreach annually analyzes data for physician practices in PVHS' primary and secondary markets relative to factors such as population growth, healthcare utilization, physician admissions, and physician age to determine if the area needs additional physician capacity or capability. PVHS addresses these needs by: 1) working to recruit a physician with the appropriate capability, either independently or in collaboration with established physician practices; or 2) building relationships with existing physicians to change referral patterns.

**Volunteers.** Volunteer Services Directors track volunteer hours and trend historical data to project future capacity needs. Volunteer service descriptions, which outline required capabilities, help the directors identify needed volunteer skill sets. The MCR Volunteer Services Director determined recruitment needs based on the number of departments and beds at MCR, relative to historical PVH data.

**5.2a(2) Recruiting, Hiring, & Placing.** Traditional recruiting approaches include the PVHS web site, advertising, career fairs, and professional conferences.

Innovative approaches are far more extensive and include:

- Ongoing collaborations with local colleges to: 1) establish accelerated programs for nursing, radiology, and other professions; and 2) provide tuition assistance in exchange for employment commitments.
- Referral Bonus Program: Staff members receive a cash bonus or paid time off (PTO) for referring new hires in critical-to-recruit positions.
- Shadow Program and Medical Careers Class: Community members, such as students and professionals interested in a career change, have an opportunity to experience the medical profession first hand.

Hiring follows a standardized process that is a collaboration between the hiring manager and HR. A real-time staffing plan tracks the hiring status of positions across the health system and drives a monthly recruitment report



to directors. The process to place new staff appropriately begins during pre-hire interviews and continues during and after orientation. To address capability and safety, job descriptions specify competency, education, and physical requirements. After placement, communication [5.1a(2)] and orientation [5.1b(1)] ensure new job assignments meet individual and PVHS needs.

Volunteer Services Directors recruit volunteers through volunteer referrals, advertisements, and the web site and place them by matching PVHS needs with volunteer interests. PVH currently has a waiting list for teen volunteers.

**Retaining.** A full-time retention specialist focuses on identifying and enhancing the aspects of PVHS that are key to staff retention, based on information from the MSA and Employee Culture surveys, staff focus groups, exit and stay interviews, and industry research. In addition to cultural elements described throughout Category 5, specific retention initiatives include:

- Staff who remain in night/evening shifts for critical-to-recruit positions receive a retention bonus.
- Since an employee's relationship with his/her immediate supervisor is critical to retention, PVHS offers leadership development opportunities, a regular "Turnover Tips" e-mail to supervisors, and HR Dialogue Sessions where managers can have open discussions about how to handle difficult situations.

**Ensuring Diversity.** PVHS ensures that the workforce represents the diverse ideas, cultures, and thinking of the hiring community through: 1) an Affirmative Action Plan that establishes strategies for incorporating diversity into recruiting practices; and 2) support mechanisms to retain staff from diverse backgrounds after hire. These mechanisms include training interpreters, single parent/family support (alternative child care for sick children, convenient discounted daycare, flex hours, and a range of shifts), variable PTO for religious holidays of the individual staff member's choosing, evening/weekend shifts and tuition reimbursement for students, and training on generational differences. PVHS has had no EEOC violations, as determined through annual adherence reviews.

**5.2a(3)** PVHS engages the workforce through the organization's open, team-based culture [5.1a(2)] to create an environment fostering cooperation, initiative, empowerment, and the core competency innovation. Key components of the PVHS work system address:

**Core Competencies.** PVHS organizes and manages the workforce to capitalize on the organization's core competencies [P.2a(2)]:

- With an **engaged workforce**, PVHS is able to provide excellent customer service and quality care.
- PVHS relies on strategic **partnerships** to avoid duplication of services and gain early access to innovative technologies, programs, and methodologies.
- PVHS uses its numerous mechanisms to drive **innovation** [5.1a(2)] related to workforce engagement, healthcare delivery, information management, and performance improvement.
- With consistently **strong financial results**, the organization is able to reinvest in the workforce through innovative staffing models [5.1c(2)], a robust performance-management system [5.1a(3)], workforce learning and development system (5.1b), and state-of-the-art technology and facilities.

**Customer Focus.** Patient and customer needs are the driving force behind PVHS services, and senior leaders empower the workforce to think of

themselves as care providers, regardless of how much direct patient contact individuals have. The GPS (Figure P.1-1) and OPP [5.1a(3)] focus staff members on accomplishing the organization's patient satisfaction goals, and unit initiatives [3.2b(1)] further engage staff in continuously improving patient satisfaction. Additionally, staff and volunteers receive training on the Behavior Standards [Figure P.1-2, 3.2a(2)], which operationalize PVHS values and key customer requirements into specific behaviors.

**Performance Excellence.** The BSC process [4.1a(1)], performance improvement system (P.2c), and performance-management system [5.1a(3)] engage the workforce in achieving performance excellence. PVHS' learning and development system (5.1b) further supports performance excellence through classes on performance improvement tools and opportunities to identify internal and external best practices. PVHS also has a systematic process in place for sharing and implementing best practices across the organization [4.2b(2)].

**Strategic Challenges & Action Plans.** Through the GPS model (Figure P.1-1), the BSC process [4.1a(1)] and performance-management system [5.1a(3)] align the organization toward accomplishing the strategic plan. SDD [2.1a(1), 2.2a(5)] makes sure the organization has the resources needed to accomplish the plan.

**Agility.** PVHS designs agility into work systems and processes [6.1b(3)] and annually evaluates and improves work systems and processes to accommodate changing healthcare service and business needs (6.2b). PVHS annually assesses and addresses workforce capability and capacity needs [5.2a(1-2)] and prepares the workforce for changing capability and capacity needs as described in 5.2a(4).

**5.2a(4)** The most significant change affecting PVHS' capacity and capability needs is the recent opening of MCR. PVHS prepared the workforce through: 1) communication; 2) a flexible staffing model; and 3) support systems.

**Communication.** Prior to posting non-director positions for MCR, SMG and HR developed a plan for keeping staff informed about upcoming changes. Initially, employees received a letter explaining MCR staffing plans, including timelines, needed expertise, and opportunities for advancement. Monthly, SMG held forums to answer questions and deploy additional staffing information, including plans for PVH positions vacated by staff moving to MCR, and worked with Marketing to create an MCR section on the home page of the intranet. SMG also presented updates at volunteer forums and medical staff meetings, worked with the MCR Physician Advisory Group and Medical Staff Services to plan physician communications, and sent personal letters to all members of the PVH medical staff with information about the MCR credentialing process. The Learn & Grow series offered a class on change and transition (Figure 5.1-3).

**Flexible Staffing.** To ensure sufficient staff capacity and capability without risking future staff reductions, MCR departments used a flexible staffing model. With plans to hire additional staff as patient volumes increased and stabilized, directors initially hired to the minimum FTE forecast (e.g. a 0.8 FTE rather than a 1.0 FTE). This approach allowed the hospital to temporarily upstaff as needed without hiring additional staff. Also, MCR clinical leaders identified and trained on a universal skill set that would allow care providers to move between units. MCR staff meet twice daily to determine reassignment needs for the next 12 hours.

**Support Systems.** Staff had an opportunity to apply for MCR positions before HR posted them externally, and the PVH Medical Staff elected



physician leaders for MCR. The organization guaranteed jobs for staff required to transfer to MCR. Internal human resource consultants (HRC) offered career counseling.

With careful planning and resource management, PVHS has never had an across-the-board workforce reduction. With specific department restructuring that may result in staff reduction, PVHS has a systematic process that establishes elimination priority based on employment status, job performance, and seniority. Staff receives at least 30 days notice, and HRCs provide assistance with other PVHS opportunities, resume development, interviewing techniques, and career counseling. The organization provides training for transfer to a new position and makes every effort to offer comparable positions. Staff members who take a pay cut do not start the reduction for three months. Up to 24 weeks of severance pay is also an option, based on length of service. The organization also may provide out-placement/re-employment services and treats staff who reapply to PVHS within one year as internal candidates. If rehired, they reacquire their seniority.

### 5.2b Workforce Climate

**5.2b(1)** PVHS ensures and improves workplace health, safety, and security through programs described in Figure 5.2-1, with mandatory annual staff testing (Figure 7.5-5) to demonstrate knowledge of safety, security, emergency preparedness, infection control, and quality improvement. Each program considers the specific needs of workforce groups in different work environments through workforce participation in oversight committees and improvement efforts and through defined job categories that outline specific hazards and mandate appropriate capabilities and training. The Safety Management Program performs area-specific risk assessments, provides area-specific safety training, and ensures compliance with relevant OSHA, Joint Commission, CDPHE, EPA, and DOT standards. The organization monitors key health, safety, and security performance measures through BSCs and implements corrective action if indicated [4.1a(1)]. Performance measures and goals may vary between workforce groups, depending on work environment and task. The appropriate oversight committees (e.g. Environmental Safety Committee) annually evaluate and improve these programs based on Baldrige/CPEX feedback and data gathered, aggregated, and analyzed throughout the year. These data include key performance measures, audit findings, workforce survey results, regulatory updates, and changes in technology or healthcare

services. Emergent events or environmental changes may prompt immediate corrective or preventive action [5.1b(1)].

**5.2b(2)** PVHS supports the workforce as follows:

**Benefits and Services.** The PVHS staff benefits program is extensive and supportive of individuals from diverse backgrounds and needs, including a variety of competitive and flexible health, dental, and vision plans, as well as a flexible PTO program, optional child care and medical spending accounts, employee assistance program (EAP), alternative child care for sick children, discounted daycare near major PVHS facilities, and a staff emergency assistance fund that offers grants and loans to individuals facing a personal life crisis. To support health and wellness, PVHS offers on-site gyms, health and fitness classes, Lifestyle Challenge (Figure 7.6-11), which promotes healthy weight and physical activity, and Live Well, which offers workforce health fairs and low-cost screenings.

Under federal law, healthcare organizations cannot provide direct benefits to independent physicians. However, PVHS offers numerous services for physicians who are based locally or who refer patients from remote locations. These services include: 1) a secure, electronic physician portal [4.2a(1)]; 2) one of the nation's first hospitalist programs, as well as hospital-based physician specialty coverage; 3) full wireless and VoIP capabilities; 4) full-service Medical Staff Offices, physician lounges, and sleep rooms; 5) continuing education in more than 40 specialties, both on-site and via telehealth; 8) assistance with coding and preauthorization; and 9) low-cost I/T support for their offices and homes.

In addition to other benefits described in 5.1a(3), volunteers receive cafeteria and gift shop discounts.

**Policies.** PVHS has a comprehensive system of formal policies developed with workforce input and posted on the intranet. The policies: 1) protect the workforce; 2) highlight resources available to the workforce; 3) clearly define roles and expectations for members of the workforce; and 4) play a critical role in organizational knowledge management [4.2b(2)].

HR, Medical Staff Services, and Volunteer Services annually evaluate and improve policies, services, and benefits based on workforce survey results, workforce focus groups, Baldrige/CPEX feedback, exit interviews, retention and safety data, and informal workforce input gathered throughout the year.

Figure 5.2-1: Workplace Health, Safety, & Security

PROGRAM	DESCRIPTION	MEASURES
Employee Health Services	This program provides a resource for staff on work-related health issues. New staff and volunteers are screened for and provided current vaccinations. Annually, free flu vaccines are offered to all staff, volunteers, and physicians.	Mandatory annual learning test (Figure 7.5-5)
Environmental Health & Safety	This program promotes environmental compliance/responsibility, occupational health, emergency preparedness, and overall safety.	Safety audits (Figure 7.4-15)
Occupational Health Services	To increase staff productivity and reduce cost of work-related injuries, this program: 1) tests employees to make sure they can safely fulfill physical job requirements; 2) trains staff to identify risk factors, avoid injuries, and prevent minor injuries from becoming major; 3) participates in design of remodels and new facilities.	Worker's Compensation claims (Figure 7.4-15)
Infection Control	An Exposure Control Plan identifies jobs with risk of exposure to communicable diseases and develops control precautions and procedures.	Influenza vaccination (Figure 7.5-10)
Security	Security patrols PVHS properties and offers a safe-walk program. Certain departments and non-public exterior doors require individual codes. Parking lots, entrances, and ED have video surveillance. Parking lots have emergency call stations.	Safety audits (Figure 7.4-15)



# 6. Process Management

## 6.1 Work Systems Design

### 6.1a Core Competencies

**6.1a(1)** SMG and BOD first identified PVHS core competencies at a retreat a decade ago as part of a strategy for providing a lifetime of care [P.1a(1)]. The organization has continued to strengthen these core competencies and verifies them through a systematic process involving senior leaders and interdisciplinary teams. Most recently, in 2007, the performance excellence teams (Figure P.2-3) identified unique PVHS strengths and performed an affinity sort that verified the core competencies. SMG independently performed the same process for further verification. Driven by the organization's strategic challenges (Figure P.2-2), these core competencies give PVHS strategic advantages (Figure P.2-2) that enable it to achieve its strategic plan (Figure 2.1-3) and ultimately its mission and vision (Figure P.1-1). Figure 6.1-1 shows these linkages.

**6.1a(2)** PVHS designs and innovates its work systems to achieve its world-class vision and meet its key customer requirements (Figure P.1-6) through SDD [2.1a(1)]. Based on extensive data aggregation and analysis (SDD, Steps Two & Three), SMG evaluates organizational capabilities relative to customer needs and considers the organization's two healthcare delivery mechanisms — partnerships (external) and interdisciplinary teams (internal).

To engage the workforce and drive innovation in internal work systems, PVHS has established a formal design and innovation process — the Business Decision Support Process, adapted from the Health Care Advisory Board, an organization that researches and reports best practices to senior leaders at more than 2,000 U.S. health systems.

- 1. Identification of Opportunities.** Ideas for new or expanded healthcare services may originate from: 1) SDD [2.1a(1)]; 2) proposals from staff, patients, community members, physicians, and other stakeholders; or 3) an urgent/emergent situation.

- 2. Preliminary Proposal.** The project champion works with the Business Decision Support Director to draft a proposal, including: 1) a definition of the new and/or expanded service; 2) resource requirements (time, capital, staff); 3) outlook (financial, SO support, competitor offerings); and 4) feasibility analysis (yes/no worksheet for determining obstacles to HR, financials, facility, legal/regulatory, and technology). Proposals go to the project champion's SMG representative for initial approval based on whether or not it is critical to: 1) achieving SOs; 2) meeting key customer requirements; 3) enhancing strategic advantages or addressing competitive challenges; and/or 4) meeting community needs.
- 3. Business Planning.** If given initial approval, the project champion works with Decision Support and Planning to complete: 1) volume forecasting; 2) feasibility analysis; and 3) financial forecasting, with performance targets for service.
- 4. Final Approval.** The expanded proposal returns to SMG for a go/no go decision, with funding through SDD [2.1a(1)] or the contingency fund [2.1a(1), Step 5].
- 5. Implementation and Review.** The new or expanded service is implemented, and Decision Support and Planning reviews it quarterly relative to business plan forecasts. The project champion manages and improves new processes as described in 6.2.

If the organization decides to capitalize on its partnering core competency [P.2a(2), Figure 6.1-1] and pursue an external work system partnership [2.1a(1), Step 2], SMG identifies and researches other organizations that provide particular healthcare services or own innovative technologies and methodologies. A potential partnership goes through the Business Decision Support Process. If indications are positive, SMG recommends it to the BOD and incorporates it into the strategic plan.

SMG annually evaluates work systems through SDD.

### 6.1b Work Process Design

**6.1b(1)** Figure 6.1-2 presents PVHS' key work processes, which build on the

Figure 6.1-1: Core Competencies, Competitive Environment, & Strategic Context

STRATEGIC CHALLENGES (Figure P.2-2)	CORE COMPETENCIES [P.2a(2)]	STRATEGIC ADVANTAGES (Figure P.2-2)	STRATEGIC OBJECTIVES (Figure P.1-1)	RESULTS (7.0)
<ul style="list-style-type: none"> <li>Labor shortages</li> <li>Growth/reimbursement</li> <li>Clinical outcomes</li> </ul>	Engaging the Workforce	<ul style="list-style-type: none"> <li>Low turnover/vacancy</li> <li>Strong referral base</li> <li>High-quality, low-cost care</li> </ul>	1, 5, 6	<ul style="list-style-type: none"> <li>Turnover (7.4-11,12)</li> <li>Vacancy (7.4-13)</li> <li>National certifications (7.4-14)</li> <li>Workforce satisfaction (7.4-1-6)</li> </ul>
<ul style="list-style-type: none"> <li>Labor shortages</li> <li>Growth/reimbursement</li> <li>Market share</li> <li>Partnerships</li> <li>Clinical outcomes</li> </ul>	Partnering	<ul style="list-style-type: none"> <li>Strong referral base</li> <li>No service duplication</li> <li>Innovation</li> <li>High-quality, low-cost care</li> </ul>	2, 4, 5	<ul style="list-style-type: none"> <li>Joint venture equity earnings (7.5-1)</li> <li>Clinical outcomes (7.1)</li> <li>Community (7.6)</li> </ul>
<ul style="list-style-type: none"> <li>Labor shortages</li> <li>Growth/reimbursement</li> <li>Market share</li> <li>Partnerships</li> <li>Clinical outcomes</li> </ul>	Driving Innovation	<ul style="list-style-type: none"> <li>Low turnover/vacancy</li> <li>Innovation</li> <li>High-quality, low-cost care</li> <li>Performance excellence</li> </ul>	1-6	<ul style="list-style-type: none"> <li>Medical staff size (7.4-6)</li> <li>Market share (7.3-8, 9)</li> <li>Turnover (7.4-11)</li> <li>Performance excellence (7.5)</li> </ul>
<ul style="list-style-type: none"> <li>Growth/reimbursement</li> <li>Market share</li> <li>Partnerships</li> </ul>	Ensuring Financial Stability	<ul style="list-style-type: none"> <li>Innovation</li> <li>Focus on future</li> <li>Community benefits</li> </ul>	1, 3, 6	<ul style="list-style-type: none"> <li>Profit per discharge (7.3-1)</li> <li>Financial flexibility (7.3-2)</li> <li>Community benefits (7.6-8)</li> </ul>





organization's core competencies (Figure 6.1-1). Healthcare processes provide value to the customer through direct patient or community services; support processes enable the healthcare processes to operate effectively and efficiently. Together, they ensure organizational success and sustainability, enabling the organization to: 1) achieve SOs; 2) meet key customer requirements; and 3) address competitive advantages and challenges.

**6.1b(2)** PVHS determines key work process requirements (Figure 6.1-2) based on extensive Voice of the Customer data. Input from patients and the community is described in 3.1a(2) and Figure 3.1-1. For support processes, VOC information comes from workforce, supplier, and partner surveys, interviews, and/or focus groups, as well as appropriate stakeholder representation on process design teams. Based on customer requirements, design teams identify in-process and outcome indicators and goals to ensure that the process is performing to target.

**6.1b(3)** PVHS has a systematic process for designing and innovating key work processes:

1. An oversight committee or director identifies a need for process design and forms a multidisciplinary design team representing stakeholders, such as the workforce, suppliers, and partners.
2. The design team determines process requirements, such as efficiency and effectiveness measures and the need for agility, as described in 6.1b(2).
3. The design team identifies internal and external best practices and opportunities for innovation, including new technology, through organizational knowledge, literature reviews, site visits, and/or experts.
4. The team maps the process.
5. If possible, the team performs a pilot to make sure that the process meets requirements.
6. If the process does not perform to goal, the team revises the process.

As highlighted in 6.2a(1), MCR provides a unique glimpse of process design and implementation in action.

Figure 6.1-2: Key Work Processes

PROCESS	KEY REQUIREMENTS (Related Core Competencies)	KEY PERFORMANCE MEASURES (*In Process) (Figures in 7.0)
<b>HEALTHCARE PROCESSES</b>		
Enter patient into the health system	Provide timely access to the appropriate service with complete information (Engagement, Partnering)	*Ambulance response time (7.5-6) *Length of time to see an ED physician (7.5-7) *Wait times at HUCC & FMC (7.5-8)
Clinically assess patient and develop plan of care	Appropriately identify the problems of the patient and develop a plan of care (Engagement, Partnering, Innovation, Financial Stability)	Process Measures: AMI, Pneumonia, CHF (7.5-9-11) *Radiology image rejection rates (7.5-12)
Care for and treat patient	Provide timely and safe care according to the plan of care (Engagement, Partnering, Innovation, Financial Stability)	Process Measures: AMI, Pneumonia, CHF (7.5-9-11) Compliance with Patient Safety Goals (7.1-12) *OR turnaround times and on-time case starts (7.5-13) Patient falls (7.1-16-18) Complication rates (7.1-4, 5) Critical medication errors (7.1-11)
Discharge patient	Transition patient from current level of care when established criteria are met (Engagement, Partnering)	Average length of stay (7.1-15) Case management readmission rates (7.6-9) Process Measures: AMI, Pneumonia, CHF (7.5-9-11)
Improve health in the community	Identify and prioritize community health needs and develop and deploy appropriate initiatives (Engagement, Innovation, Financial Stability)	Healthy Kids Club membership (7.6 text) Aspen Club membership and service utilization (7.2-11, 7.6-12) Lifestyle Challenge (7.6-11) Patient Navigator Program (7.6-10)
<b>SUPPORT PROCESSES</b>		
Financial Management	Effectively manage cash flow (Engagement, Partnering)	*Days in accounts receivable (7.3-4) *Days cash on hand (7.3-6) *Cash collections to target (7.3-7)
Information Management	Gather and deploy accurate, timely information (Engagement, Partnering, Innovation, Financial Stability)	Abandoned call rate (7.5-15) VIC utilization (7.5-14) *Meditech uptime [7.5a(2) text]
Supply Chain Management	Provide high-quality, low-cost supplies and services in a timely, accurate manner (Engagement, Partnering, Innovation)	*Turnaround time for STAT room cleanings (7.5-16) Cycle Service Level (7.5-18) Cost savings on biomed preventative maintenance (7.5-17)
HR Management	Recruit, hire, and retain qualified individuals that meet the organization's needs (Engagement, Partnering, Innovation, Financial Stability)	*Vacancy rates (7.4-13) *Background screen completion rates (7.6-4) *NEO completion rate [7.6a(2) text] Workplace health, safety, and security (7.4-15) RN hours per patient day (7.5-3, 4)



## 6.1c Emergency Readiness

PVHS has processes in place to ensure work system and workplace preparedness for disasters and emergencies.

### Prevention.

1. The Environmental Health and Safety Program (Figure 5.2-1) reduces or eliminates recognized hazards and establishes an incident reporting/investigating mechanism.
2. The Infection Control Program (Figure 5.2-1) identifies jobs with risk of exposure to communicable diseases and develops control precautions and procedures, including a system for infection surveillance and reporting.
3. PVHS leads or participates in communitywide task forces, such as the Pandemic Flu Task Force, which develop emergency preparedness and disaster plans. The plans not only focus on disaster management, but also outline mechanisms for educating community members about their role in preventing disasters.
4. PVHS prepares a five-year, long-range financial plan that includes cash flow, capital, and financial projections to ensure that adequate financial resources are available to support operations during disasters.

**Management.** PVHS' Emergency Preparedness Policy and Disaster Management Plan ensure continuation of critical medical services during crisis events, such as mass casualty incidents, internal system failures, or communitywide disasters. In addition to back-up systems, such as emergency generators, the program includes: 1) department-specific procedures that guide workforce responses; 2) detailed internal operating procedures that describe coordination of specific departmental resources; and 3) an incident command system to ensure overall coordination of internal and external resources.

Staff receive training in emergency response and incident command, demonstrate annual competency, and participate in exercises to test program effectiveness. After drills or actual events, the Environmental Health and Safety Officer and now the new System Emergency Preparedness Coordinator debrief with the Environmental Safety and Emergency Preparedness committees, adjust plans and policies, and develop appropriate training strategies.

**Continuity of Operations.** PVHS has financial and operational plans to ensure continuity of operations in the event of an emergency. PVHS develops, tests, reviews, and annually updates disaster and contingency plans. Each department has an emergency plan and scope of service, which defines the minimum required staffing levels and gives detailed parameters for increasing and decreasing staffing levels. Key vendors track high-use items and have emergency plans for supplying them. Contingency plans ensure continued availability of data [4.2a(3)] and outline how to transition to a "paper system."

**Evacuation.** PVHS' Emergency Preparedness Policy and Disaster Management Plan define when and how PVHS facilities should be evacuated, where patients should be taken, and where the workforce should set up a temporary hospital. Staff receive training on evacuation plans. Departments post evacuation maps and have a red Safety/Disaster notebook that contains detailed evacuation maps.

**Recovery.** To ensure organizational sustainability through and following a disaster and to fund repairs or reconstruction that might be necessary, PVHS maintains Business Interruption Insurance, a line of credit with local banks, and a conservative approach for number of days cash-on-hand. The

organization is also eligible for FEMA grants.

## 6.2 Work Process Management & Improvement

### 6.2a Work Process Management

**6.2a(1)** PVHS has a systematic process for implementing work processes to ensure they meet design requirements. Upon design completion [6.1b(3)]:

1. The design team mocks up or pilots the process, invites users to test it, and makes appropriate modifications.
2. The design team rolls out the process and standardizes it across the organization, as appropriate. Standardization occurs through: 1) development and deployment of new policies or procedures; and 2) staff training or re-training.
3. The design team and relevant departments monitor and adjust the process to make sure it is meeting design requirements — including patient safety and regulatory, accreditation, and payer requirements — as indicated by key performance measures identified during process design (Figure 6.1-2). PDCA (6.2b) provides a tool for process improvement.

MCR provides a unique glimpse of process design and implementation in action. The MCR Steering Committee — led by the MCR President and guided by organizational learning from throughout PVHS and partner RWMC — identified key processes that needed to be in place when MCR opened and assigned each process to a design team [6.1b(3), Step 1]. To determine process requirements (Step 2), the teams looked at PVH's VOC data and convened focus groups to reach new communities that would be served by MCR. Based on these requirements, the teams visited world-class organizations around the country, mapped service delivery processes, and piloted them (Steps 3-5). For instance, teams worked with suppliers to build and test mock-ups of key spaces planned for the facility [5.1a(2), Innovation]; one team invited city transportation officials to be "patients" in the back of ambulances and tested proposed street and driveway design; and the teams worked with partners and suppliers to hold a series of "Day in the Life" events where community members posed as "patients" and "family members" in numerous possible scenarios. The teams revised facility or process design based on these pilots (Step 6), documented processes in policies and procedures, and trained the workforce. These "Day in the Life" events earned MCR an Innovation Award (Avatar, 2008).

To ensure that processes are meeting key requirements in day-to-day operations, PVHS designs processes to incorporate automation, error-proofing, and alert systems, and monitors in-process measures as early indicators of potential problems [6.2a(3)]. The organization also monitors monthly, quarterly, and yearly audits through oversight committees (e.g. CQIC). If a process is not meeting established requirements, the PDCA process (6.2b) may be initiated.

To reduce variability and response time, PVHS uses unit-specific collaborative-practice guidelines and protocols. Physicians team with Nursing, Pharmacy, and other departments to write the guidelines, which are reviewed annually and tracked by the Pharmacy and Therapeutics Committee. On a daily and shift-by-shift basis, caregivers make and document corrections if the patient is not responding as expected. Quality Resources performs real-time audits to ensure that guidelines are followed.

Processes incorporate patient feedback and in-process measures, such as those gathered hourly by caregivers or throughout the day as physicians make rounds. These measures are particularly important in the timely control and improvement of healthcare processes, as they allow care



providers to make immediate adjustments to patient care plans. In-process measures are also critical for timely responses by the environmental health and safety team.

Suppliers assist in managing work processes by training on new equipment, advising on design and remodel, ensuring product availability and effectiveness, and participating in process improvements (Figure P.2-1). Major suppliers meet regularly with appropriate directors to assess service standards and product availability. Also, SMG and directors serve on supplier advisory boards and provide direct input into decisions that will impact design and delivery of future products and services.

The role of partners in managing work processes varies with the nature of the partnership (Figure P.2-1) but may include: 1) participation in process implementation; 2) collection and monitoring of key process performance measures; 3) identification of opportunities for process improvement; and 4) participation in improvement initiatives, including sharing of best practices.

Collaborators may identify opportunities for process improvement and participate in improvement initiatives.

**6.2a(2)** With a mission of providing high-quality care that exceeds patient expectations, admitting caregivers query patients on their: 1) preferred learning methods; 2) expected visitors; 3) financial concerns; 4) housing/transportation needs; 5) psychological/cultural issues; 6) functionality; 7) pharmaceutical needs; 8) nutritional issues; 9) advance directives; and 10) pain control goals. Caregivers then incorporate these preferences into an individualized, documented care plan (Figure 6.1-2) that guides care delivery throughout the patient’s stay with PVHS.

To encourage patient involvement and set realistic expectations, procedures begin with an explanation by caregivers of available options and probable outcomes. For consistency and currency of information, English and Spanish patient education materials are available to caregivers through a centralized, electronic database. Discharge planning determines the patient’s needs and matches those to the patient’s desire to transition to the next level of care.

**6.2a(3)** PVHS minimizes overall costs associated with inspections, tests, and process or performance audits by: 1) incorporating automation and error proofing into process and service design; and 2) identifying in-process measures that give early indications of potential problems.

Part of the design process includes investigating whether automated alert systems or other error-proofing tools are available to ensure vigilant monitoring. PVHS has invested significantly in automated alert systems that minimize constant checking and re-checking of vital systems. For example, computerized monitoring systems — such as lab delta checks, drug-interaction notifications on medication orders, flow meter alarms on patient IVs, and temperature monitoring of medication, lab, and blood bank refrigerators — save caregiver time that can be better spent on direct patient care needs. Support processes have similar mechanisms: Computerized systems alert staff to supply outdates and FDA recall; Charge Master Committee assists revenue-generating departments in routine audits of billing procedures that assure appropriate and timely charges; Claim Scrubber and Grouper software functions ensure that reimbursement is complete and that data has no conflicts; required fields in the admissions process collect billing information and reduce insurance claim rejections; and compliance software performs a medical-necessity check. Other mechanisms are described in 4.2b(1).

## 6.2b Work Process Improvement

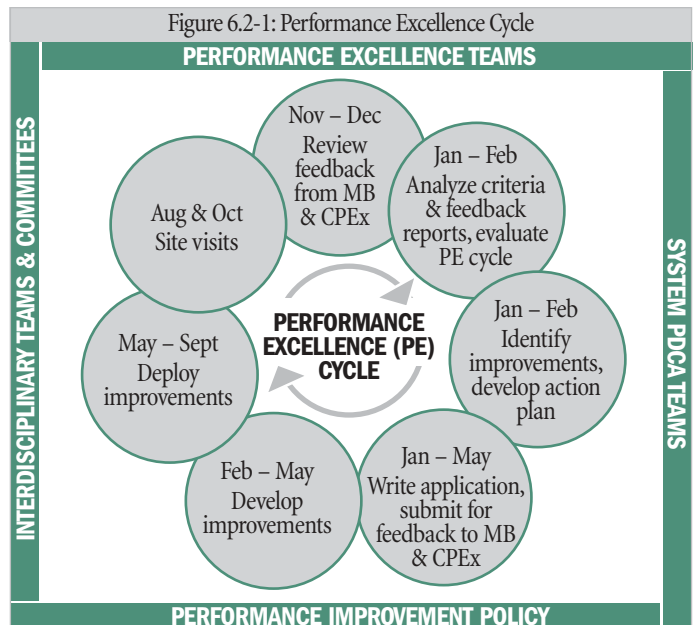
A focus on performance excellence and organizational learning is embedded in the culture of PVHS, with formal and informal approaches driving continual work process improvement. Process improvement begins at the front line with staff who are empowered to identify improvement opportunities for simple problem solving by unit or department teams.

Complex, costly, or far-reaching improvement opportunities identified by staff or through the PVHS performance measurement system [4.1b(3)] escalate to system PDCA initiatives based on defined criteria and a formal scoring process. Tools for determining when a formal PDCA initiative is appropriate are available on the intranet. The Process Improvement Team (PIT) approves and monitors system PDCA initiatives to ensure strategic alignment and resource optimization:

- 1) The PDCA initiator completes a Team Purpose Form that quantifies the improvement need, defines the scope of the proposed PDCA initiative, recommends team membership, and establishes measures of success;
- 2) The initiator presents the Team Purpose Form to PIT;
- 3) PIT evaluates the proposed PDCA initiative using a formal scoring tool based on implications for patient safety, regulatory compliance, the strategic plan, and other defined factors;
- 4) Approved teams receive a trained facilitator, post summary information on the intranet, and report quarterly progress to PIT.

PIT annually evaluates the organization’s PDCA system and recently, as part of the performance excellence cycle (Figure 6.2-1), completed a PDCA on PDCA, which improved PDCA deployment, standardization, and knowledge management.

PIT is one of seven multidisciplinary performance excellence teams, which also play a key role in PVHS’ performance improvement system. These teams, organized around the Baldrige Categories, function as systemwide oversight committees (Figure P.2-3) with defined roles in: 1) the annual performance excellence cycle (Figure 6.2-1); and 2) monthly monitoring of key performance measures. Process Improvement staff belong to each team and coordinate improvement efforts between the teams, as well as quarterly learning opportunities for all team members.



# 7. Results

With the vision of providing world-class healthcare [P.1a(2)], PVHS strives to identify comparative data in the national 90th percentile or top 10 percent for key performance measures. However, with some measures presented here, world-class benchmarks are not available, so PVHS uses comparative data representing the national norm or top 25 percent.

Also, with regard to comparisons for some key clinical measures, PVHS has historically used HealthGrades data, which lag two years and represent only a portion of the total patient population (MedPar). As a Baldrige-driven cycle of improvement, PVHS has been working over the past nine months to implement the Thomson Healthcare Database, which allows timely comparison of severity- or risk-adjusted clinical outcomes for all patient populations with the national top 10 percent. Except for test data from PVH for Q2 2007, only preliminary Thomson data offering comparison to the national norm (Figures 7.1-3,5,14) were available at the time this application was submitted. However, comparative data representing the national top 10 percent will be available for use by PVHS staff and physicians in the coming weeks and for review by examiners upon site visit. With full implementation of the Thomson database, PVHS will

simultaneously monitor both HealthGrades and Thomson comparisons for a transition period to continue historical HealthGrades trending and establish a Thomson baseline.

Most results presented here include historic data for PVH/PVHS but only 2007 data for MCR, which opened in February 2007.

## 7.1 Healthcare Outcomes

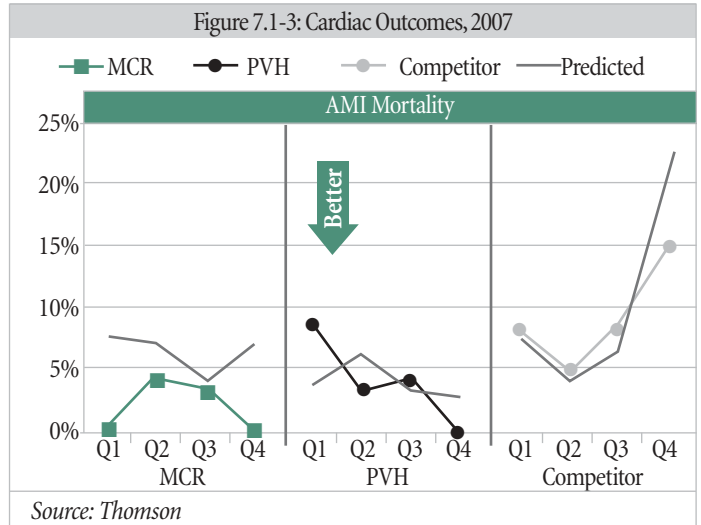
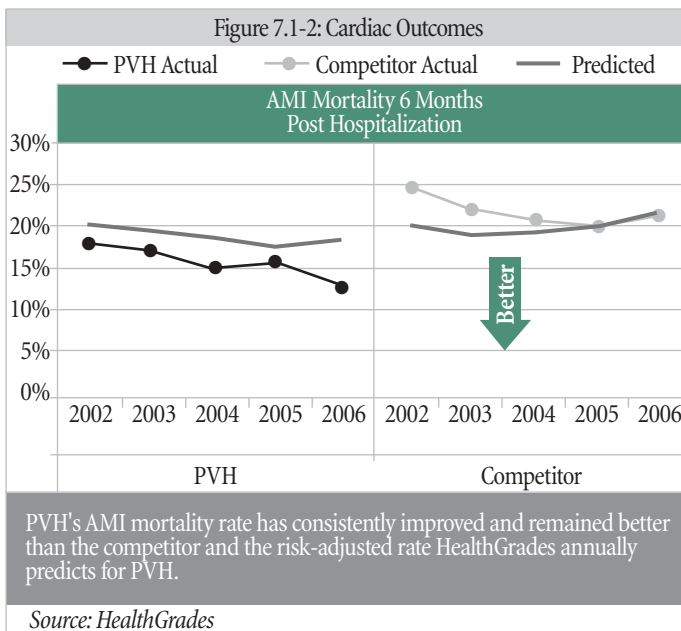
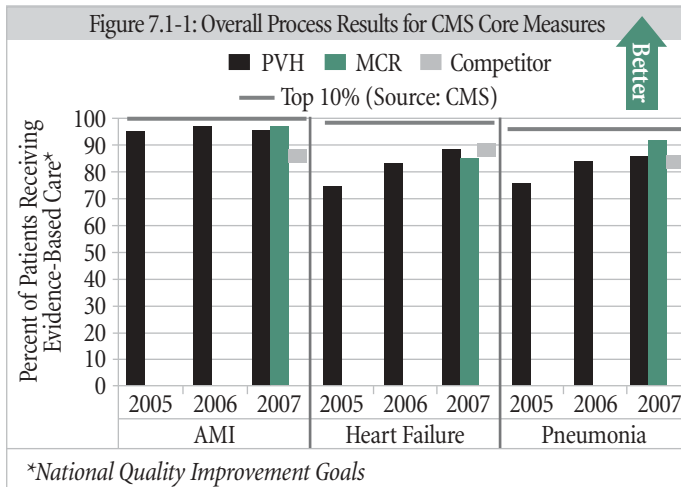
### 7.1a Healthcare Results

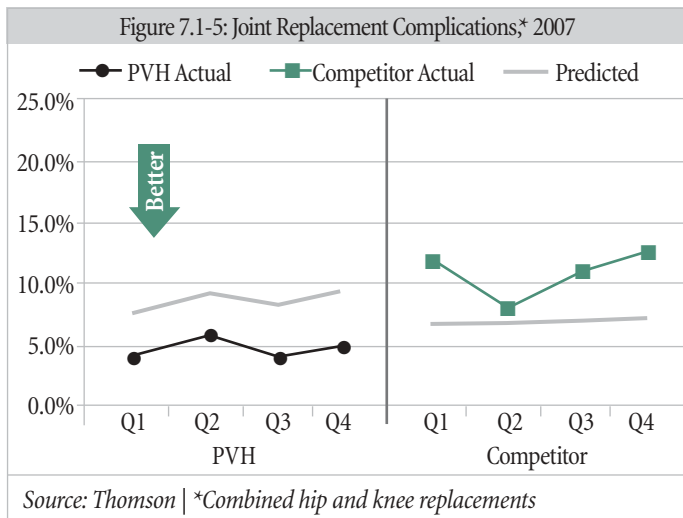
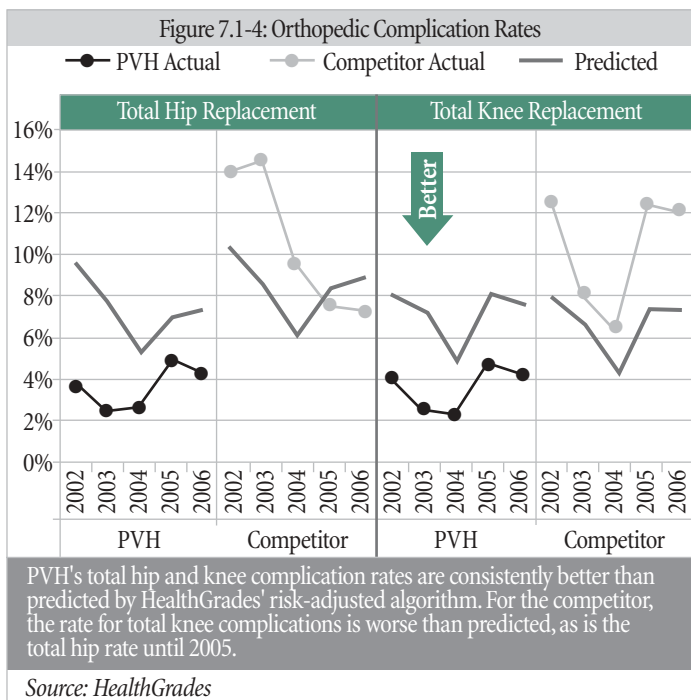
To meet key customer requirements, address strategic challenges, and achieve the SOs, mission, and vision, PVHS monitors key measures for its unique clinical focus areas [P.1a(1)] and overall quality and safety.

To support transparency, PVHS reports a composite index of the National Quality Improvement Goals for acute myocardial infarction (AMI, heart attack), heart failure, and pneumonia (Figure 7.1-1). Each composite index represents a set of evidence-based diagnostic, treatment, and discharge processes (Figures 7.5-9-11) that ensure optimal patient outcomes. For AMI, PVHS has had sustained strong performance that is better than its main competitor and approaching the national top 10 percent. PVHS has seen three years of continued improvement for patients with heart failure and pneumonia.

**Cardiac.** PVHS cardiac care demonstrates the core competencies of partnering and innovation in action through a physician joint venture and MCR's hospital within a hospital. In addition to cardiac process measures reported in Figures 7.1-1 and 7.5-9, 11, PVH has historically focused on mortality rates for six months after hospitalization as the best indicator of cardiac outcomes and a reflection of outpatient services provided following discharge. PVH's mortality rate for AMI patients has consistently improved and remained better than the competitor (Figure 7.1-2). Also, PVH continues to outperform the risk-adjusted rate HealthGrades annually predicts for PVH. Thomson database – PVHS' newest source for comparative data – does not collect post-hospitalization mortality rates, so PVHS will shift its focus to inpatient mortality rates. For 2007, MCR – home to PVHS' new state-of-the-art cardiovascular facilities – outperformed the competitor and Thomson's predicted rate (Figure 7.1-3), while PVH saw a strong improving trend.

**Orthopedics.** Orthopedics is a center of excellence for PVH, which has demonstrated sustained, better-than-expected performance for two high-volume orthopedic procedures (Figure 7.1-4). PVH's complication rates for





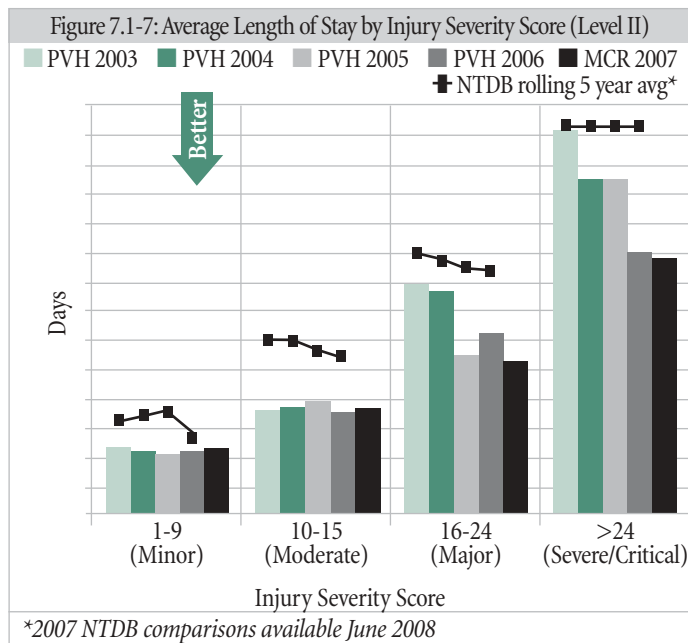
total hip and total knee replacement are consistently less than half: 1) the complication rate of its major competitor; and 2) the complication rate predicted for PVH by HealthGrades, based on risk-adjusted MedPar data (Figure 7.1-4). PVH's excellent performance continues in 2007, according to preliminary Thomson data (Figure 7.1-5). The PVH combined complication rate for total hip and total knee replacement continues to be well below the predicted rate and the competitor's rate, which is consistently above predicted. PVH achieves these excellent outcomes using standardized order sets developed by physicians, physician office staff, and hospital staff from every discipline that touches orthopedic patients. These order sets direct care from the patient's initial physician office visit to his/her discharge from the hospital. The Robert Wood Johnson Foundation recently selected PVH's orthopedics program as one of 50 in the nation to participate in the evidence-based Transforming Care at the Bedside Dissemination Project. *U.S. News & World Report* named PVH one of America's Top 50 Hospitals for Orthopedics for three consecutive years.

**NICU.** PVHS wanted to keep premature and critically ill infants close to their families rather than sending them to Denver for specialized care, so

**Figure 7.1-6: PVH NICU Outcomes**

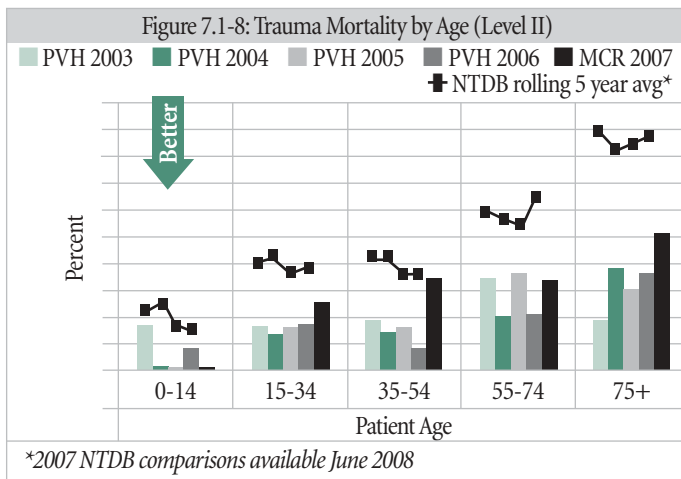
	2004	2005	2006	2007	2004-2006* Top 25th Percentile	2004-2006 Mean
Pneumothorax	0.03	0.03	0.04	0.05	0.03	0.05
NEC	0.01	0.01	0.01	0.01	0.01	0.02
Mortality	0.01	0.02	0.01	0.01	0.02	0.05
Nosocomial Infection	0.01	0.01	0.01	0.01	0.02	0.05
ALOS (days)	8.9	11.3	14.6	12.3	14.2	22.7

\*2007 comparison not available until September 2008



PVH established a Level IIIa neonatal intensive care unit (NICU). In an innovative partnership with a Denver competitor, three neonatologist physicians on staff at the Denver hospital relocated to Fort Collins and joined the PVH medical staff, with back-up from numerous pediatric specialists in Denver. The neonatologists and other highly trained staff guided renovation of the PVH nursery, incorporating a patient/family-centered design and the latest medical technology. They also established care guidelines to improve and standardize care. To compare survival outcomes of high-risk infants, PVH began participating in the Vermont Oxford Network in 2004. PVH became the only NICU in Colorado to participate in an expanded database that recorded 56,264 infants and benchmarked outcomes with 93 international centers. According to the best available data, PVH compares favorably to the top 25th percentile for most major outcomes (Figure 7.1-6). Though the pneumothorax rate remains significantly better than the rate predicted for PVH by Vermont Oxford, incidence of the respiratory infection has increased. This increase — at least partially due to the fact that PVH has continued to receive sicker babies since its IIIa NICU designation — is the focus of a 2008 improvement initiative.

**Trauma.** PVH has operated a nationally verified Level II trauma center since 1997. With the opening of MCR, PVHS transferred the Level II status to the new hospital and redesignated PVH as a Level III trauma center. Historically, PVH has segmented trauma patients by age, injury type, and injury severity to better understand process and prevention needs. With defined triage



**Figure 7.1-9: PVH Bariatric Results**

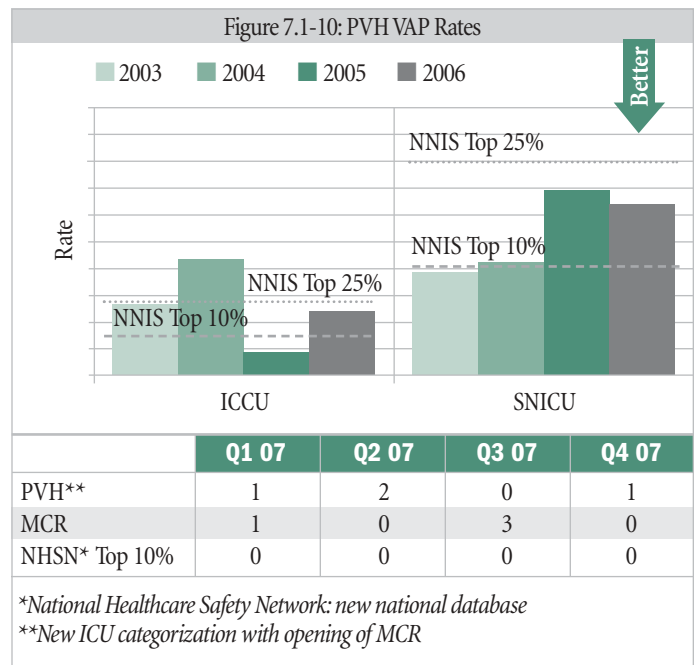
	2003	2004	2005	2006	2007
DVT/Pulmonary Embolus within 30 days of the Primary Operation	1.1%	0.4%	0.0%	0.0%	0.19%
ASMBS 0.4%*					
Mortality Rate within 30 days of the Primary Operation	0.75%	0.44%	0.79%	0.0%	0.0%
ASMBS 0.4% (1.5% for super-morbidly obese)					

\*American Society of Metabolic and Bariatric Surgery

criteria based on American College of Surgeon guidelines, an established trauma nurse case management program, and daily multidisciplinary rounds, the PVHS ALOS for each Injury Severity Score (ISS) grouping is lower than the National Trauma Databank (NTDB) and continuing to improve (Figure 7.1-7). As expected, trauma mortality rates increased in 2007 when MCR opened and began drawing higher-acuity patients, but the rates remain lower than NTDB (Figure 7.1-8). To support PVHS' nonprofit mission, the comprehensive trauma program includes a focus on community injury prevention. Based on data segmented by age and cause of injury, PVHS established and leads: 1) a community fall prevention program for seniors; 2) a community coalition focused on teen motor vehicle safety; and 3) Safe Kids Coalition of Larimer County, which focuses on car seat and helmet safety for children (7.6).

**Bariatric Surgery.** Bariatric surgery, which includes gastric bypass and Lap-Band® procedures, is designed to help morbidly obese patients lose weight and reduce co-morbidities, such as diabetes and heart disease. PVH was the first hospital in the region to offer these procedures, and hospitals from Denver and across the region routinely send their super-morbidly obese, high risk patients to PVH. PVH's incidence of major complications and mortality within 30 days of surgery has improved to levels below the ASMBS rate of 0.4 percent (Figure 7.1-9), while PVH has continued to see an increasing number of super-morbidly obese patients. Nationally, super-morbidly obese patients have a mortality rate of 1.5 percent — almost four times the overall ASMBS rate. They made up 40 percent of PVH's bariatric surgery patients in 2007, up from 8 percent in 2005.

**General Patient Care & Safety.** For the past four years, HealthGrades has recognized PVH as a Distinguished Hospital for Patient Safety based on publicly available data for key patient safety indicators identified by the Agency for Healthcare Research and Quality. Each year, fewer than 5 percent of U.S. hospitals earned this recognition. In 2008, PVH was the only hospital



**Figure 7.1-11: Critical Medication Errors**

	2003	2004	2005	2006	PVH 2007	MCR 2007
Errors per 100 Doses	0.0002	0.0002	0.0001	0.0001	0.0002	0.0003

in Colorado and the surrounding states of Wyoming, Utah, and New Mexico, with only one hospital in Nebraska.

Ventilator-associated pneumonia (VAP) — a hospital-acquired infection that can be fatal for critical care patients — is a universal patient safety indicator and a focus for the Institute for Healthcare Improvement (IHI). Though PVH has generally maintained rates that are better than the best-performing 25 percent of U.S. hospitals, VAP rates are an improvement opportunity PVH is actively addressing. In addition to previous improvement efforts that standardized protocols and established PVH as an early adopter of an intensivist physician program, PVH now considers each VAP a sentinel event and responds accordingly with a root-cause analysis, appropriate corrective and preventive actions, and a report to the Board Quality Committee. PVH is also piloting participation in the VHA collaborative, Transforming ICU. MCR does detailed review of VAP cases and is monitoring the effectiveness of PVH's approach.

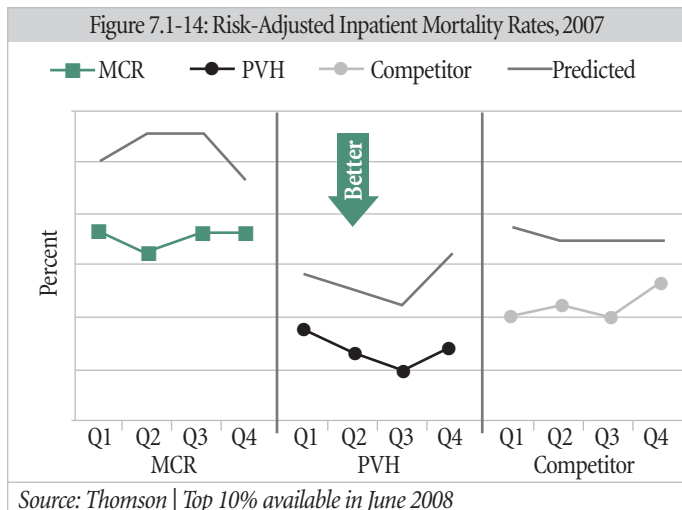
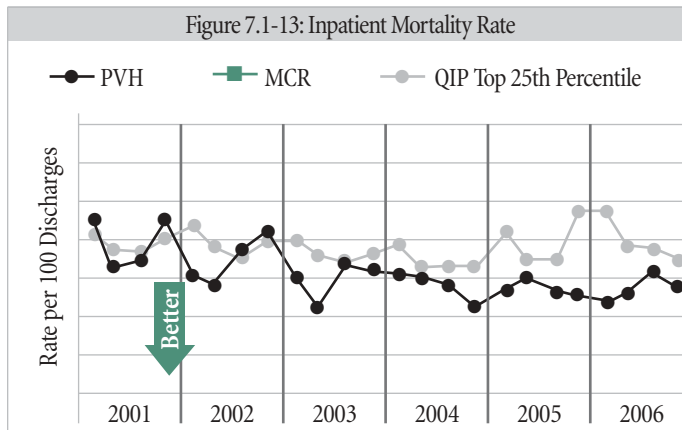
Critical medication errors (Figure 7.1-11) — defined by PVHS as an error that results in death, use of emergency drugs, increased LOS greater than 24 hours, or transfer to a higher-acuity nursing unit — are another key indicator of patient safety. All critical medication errors trigger FMEA and root-cause analyses with improvement plans. The healthcare industry has no comparative data for critical medication errors, and benchmarking for this measure “perpetuates the myth that (organizations) can gauge the quality and safety of the medication use process simply by comparing error rates,” according to the Institute for Safe Medication Practices. PVHS has set the high goal of having no critical medication errors and tracks this monthly on the system, facility, and department BSCs. In 2006, PVHS introduced barcoding technology for bedside medication verification to alert caregivers to mismatches and track near-misses for process improvement. PVHS has achieved continuing improvement relative to all

Joint Commission National Patient Safety Goals, including examples presented here (Figure 7.1-12).

Inpatient mortality (Figures 7.1-13,14) is a universally accepted indicator of hospital quality. Historically, PVHS has used unadjusted QIP data to monitor overall mortality relative to more than 1,000 hospitals with varying patient acuities. PVH sustained improving performance better than the top 25th percentile. Both PVH and MCR had a better-than-predicted mortality

Figure 7.1-12: National Patient Safety Goals

Goal	Hospital	2005	2006	2007	Joint Commission
Use of two identifiers	PVH	98.1%	99.4%	99.9%	100%
	MCR	n/a	n/a	99.5%	
Compliance with CDC hand washing guidelines	PVH	97.2%	98.9%	99.7%	100%
	MCR	n/a	n/a	99.5%	
List of patient meds communicated to next provider/level of care	PVH	91.8%	92.7%	96.5%	100%
	MCR	n/a	n/a	90.4%	
Education to patient on how to report safety concerns (new measure for 2007)	PVH	n/a	n/a	97.7%	100%
	MCR	n/a	n/a	100%	



rate in 2007, according to preliminary PVHS data from Thomson Healthcare. As expected, MCR mortality is higher than the rate for PVH or the competitor. As the closest Level II trauma center to a vast rural and rugged Rocky Mountain region, MCR receives a large number of critically injured patients relative to the size of its total patient population, and that impacts its mortality rate. Comparison to the top 10 percent of comparable hospitals for both MCR and PVH will be available on site.

For severity-adjusted average length of stay (ALOS) — another indicator of overall quality of care — PVH has sustained strong performance better than its main competitor and the U.S. top 10 percent (Figure 7.1-15). No 2007 comparative data were available at the time of publication, but PVH's ALOS decreased from 2006 to 2007, and MCR's ALOS was below the 2006 ALOS for the competitor and top 10 percent.

**Nursing Care.** Patient falls are a universal indicator of patient safety so PVHS monitors the number of consequential falls on the system BSC, and each nursing unit monitors fall rates for comparison to the NDNQI database (Figure 7.1-16). Despite an overall decrease in falls from 2006 to 2007, PVH Critical Care saw an increase with the change in patient acuity that accompanied the opening of MCR. PVH rapidly responded by instituting regular rounds to check for bed alarms and other fall precautions.

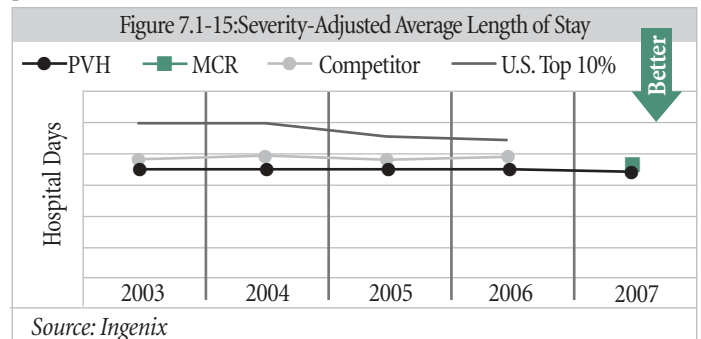
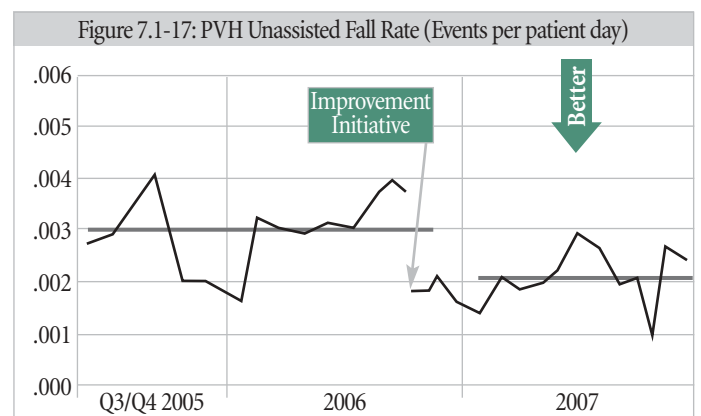
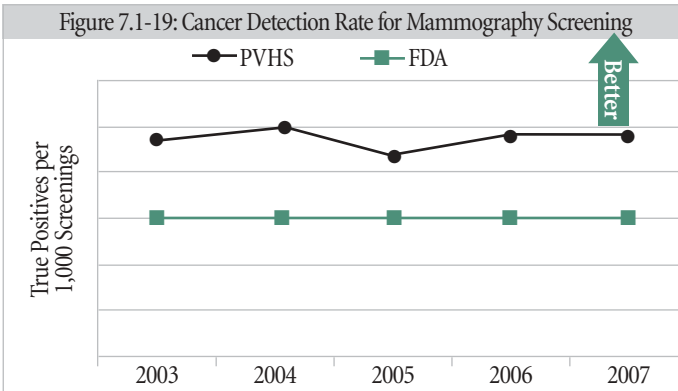
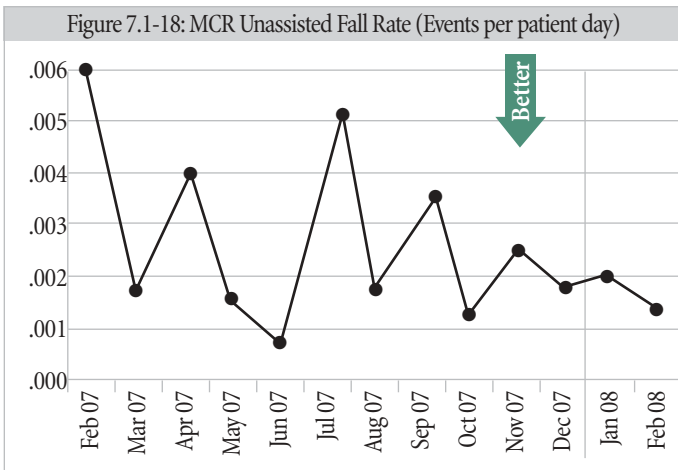


Figure 7.1-16: Falls per 1,000 Patient Days

	2005	2006	2007	NDNQI MEAN 2007	NDNQI BEST 25% 2007
PVH Critical Care	0.23	0.39	1.46	1.48	0.00
PVH Medical	3.96	3.45	2.21	4.22	2.65
PVH Surgical	2.64	3.14	2.07	3.07	1.59
MCR Critical Care	n/a	n/a	0.67	1.92	0.00
MCR Med-Surg	n/a	n/a	3.08	3.96	2.26





Overall fall rates include both assisted and unassisted falls. Assisted falls occur when a caregiver helps a patient to the floor before a more serious fall occurs. PVHS segments out unassisted falls (Figures 7.1-17, 18), which are more likely to result in serious injury and, thus, are a more meaningful patient safety indicator. No comparative data exists for unassisted falls, so PVHS is working with Magnet to establish a national benchmark.

Concurrent audit results and root-cause analysis linked 95 percent of PVH falls to toileting. To improve these results, PVH developed new toileting procedures, re-trained staff, and set automatic reminders in the electronic health record, requiring staff to verify completion of precautionary interventions for patients identified as high risk for falls.

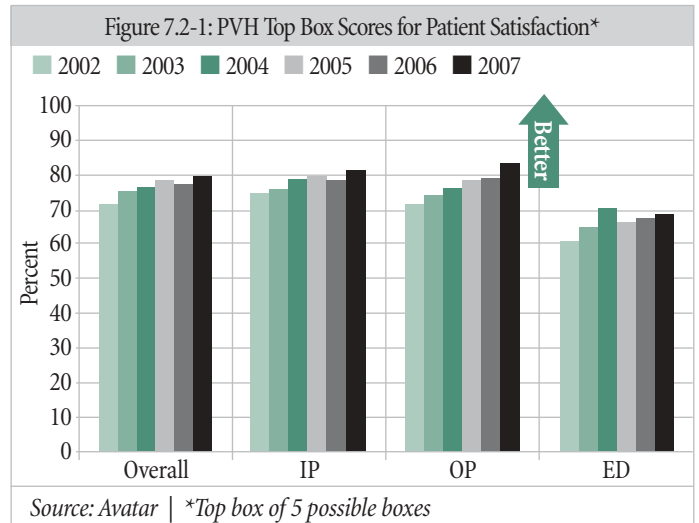
To ensure that the outpatient customer segment is receiving world-class care, PVHS monitors a variety of clinical outcome measures. For example, the Breast Diagnostic Center monitors its cancer detection rate for screening mammography (Figure 7.1-19) as an indicator that diagnosis is occurring in the earliest, most treatable stage of disease. The best available comparison is the FDA recommendation that screening mammography programs detect at least 3 true positives per 1,000 screenings. PVHS is consistently well above this recommendation.

Other outpatient outcome measures are available on site. Cardiac, trauma, and pneumonia results presented here in 7.1 include ED patients, who frequently arrive with one of these diagnoses. Results for community services are presented in 7.6.

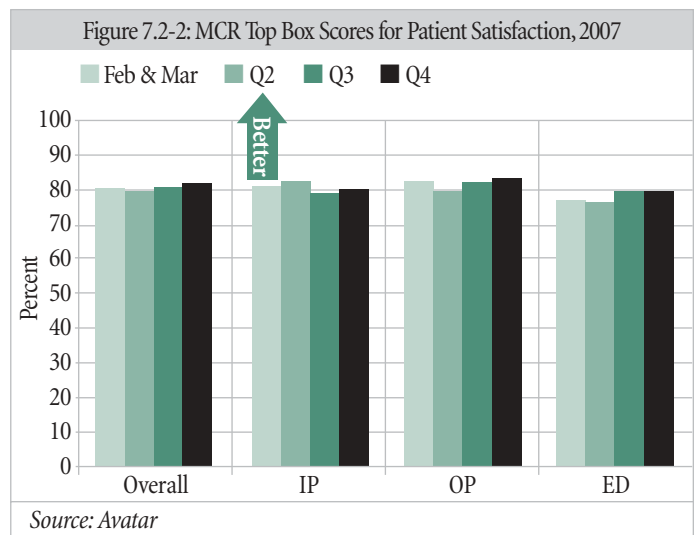
## 7.2 Patient- & Other Customer-Focused Outcomes

### 7.2a Patient- & Other Customer-Focused Results

7.2a(1) In support of its vision to provide world-class health care, PVHS



Source: Avatar | \*Top box of 5 possible boxes



Source: Avatar

chose to join Baldrige recipients and monitor top box — a rigorous measure of customer retention and loyalty that allows comparison across industries, surveys, and databases. Top box is the percentage of patients who give the highest customer satisfaction rating to a given aspect of their care. PVHS consistently achieves superior top box results for patient satisfaction, as measured by the Avatar Patient Satisfaction Survey [3.2b(1)]. The numbers continue to improve (Figure 7.2-1, 2) with the organization's robust and innovative service excellence program [3.1a(3)].

PVHS monitors top box as the percentage of survey respondents who select the top response (strongly agree) out of five possible responses. The organization's top box scores in both inpatient and outpatient areas are approaching 80 percent. For comparison, one Baldrige Award recipient achieved 67 percent top box results for overall patient satisfaction, and another recipient achieved 52 percent. Two other recipients track top box for segmented results, not for overall. Their highest top box scores were 78 percent and 82 percent, respectively. **Further PVHS segmentation by patient group, care unit, and facility are available on site.**

Like its overall patient satisfaction—an indicator of the key customer requirement, Quality Care—PVHS continues to improve its top box results for the key customer requirements of Friendly Staff and Prompt Service (Figure 7.2-3, 4).



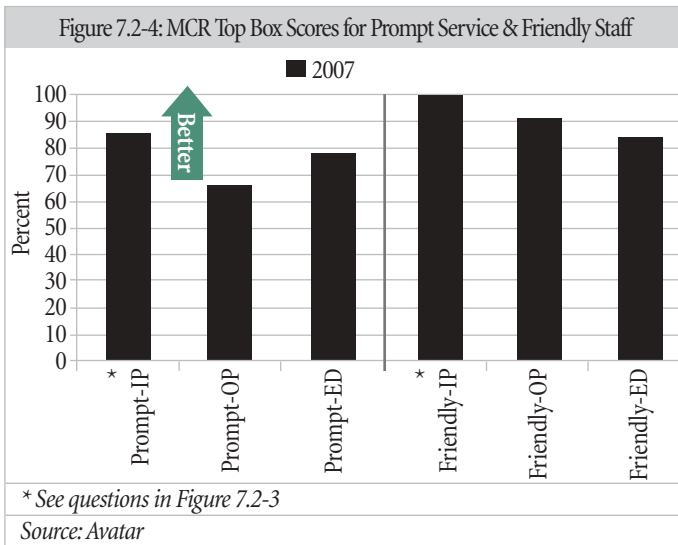
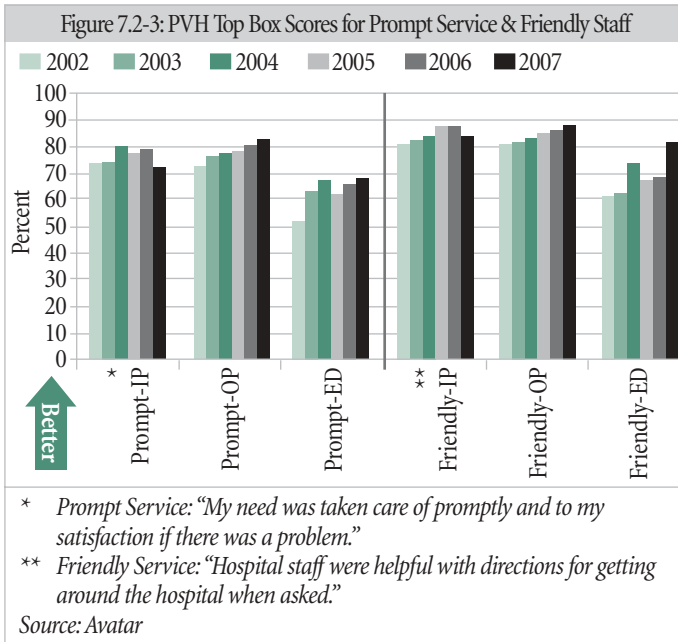
To minimize patient dissatisfaction, secure future interactions, gain critical VOC information [3.2a(3)], and maintain regulatory compliance, PVHS analyzes and responds to concerns and grievances. The consistently low number of PVHS state-reported grievances (Figure 7.2-5) is an indicator of the organization's ability to proactively resolve customer concerns.

PVHS assesses community satisfaction through a hospital preference survey. On behalf of PVHS, the independent Sigma Group conducts a phone survey of 1,000 respondents living in northeast Colorado, southeast Wyoming, and western Nebraska. Respondents named PVHS facilities as their hospitals of choice three times more often than their second choice (Figure 7.2-6). Also, PVHS received the National Research Council's

Consumer Choice Award in 2004, 2005, 2006, and 2007, placing it in the top 3.5 percent of the nation's hospitals.

To ensure that PVHS meets the community's key customer requirements of service availability and low cost (Figure P.1-6), the organization monitors charges and market share relative to other regional hospitals (Figures 7.2-9,10; Figures 7.3-8,9).

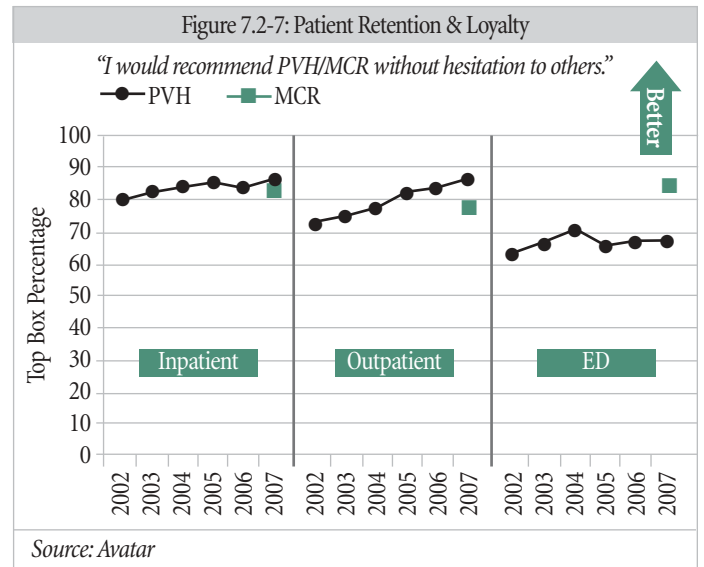
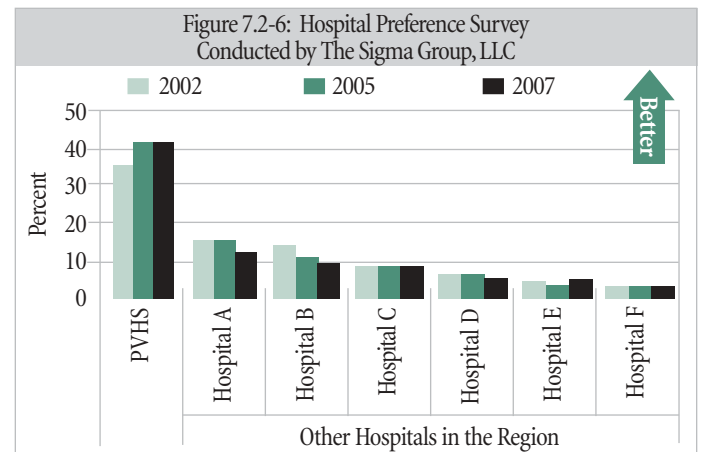
**7.2a(2)** PVHS monitors patient retention and loyalty (Figure 7.2-7) as an indicator of whether or not PVHS is securing future customer interactions. By retaining customers and gaining positive referrals, PVHS can maintain and strengthen market share, support financial stability, and ultimately, achieve its mission of remaining an independent, not-for-profit organization. PVHS' segmented top box scores for inpatient, outpatient, and ED satisfaction all exceed the level considered "top performer" by Gallup. The first publicly reported data from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) verifies that PVHS' performance in this area is indeed world-class (Figure 7.2-8). HCAHPS is CMS' new nationally standardized patient satisfaction instrument. On the two HCAHPS loyalty questions, PVH out-performed its competitor, two recent Baldrige award recipients, and the national top 10 percent of reporting hospitals. MCR did not have a full year's data to be included in the initial voluntary report.

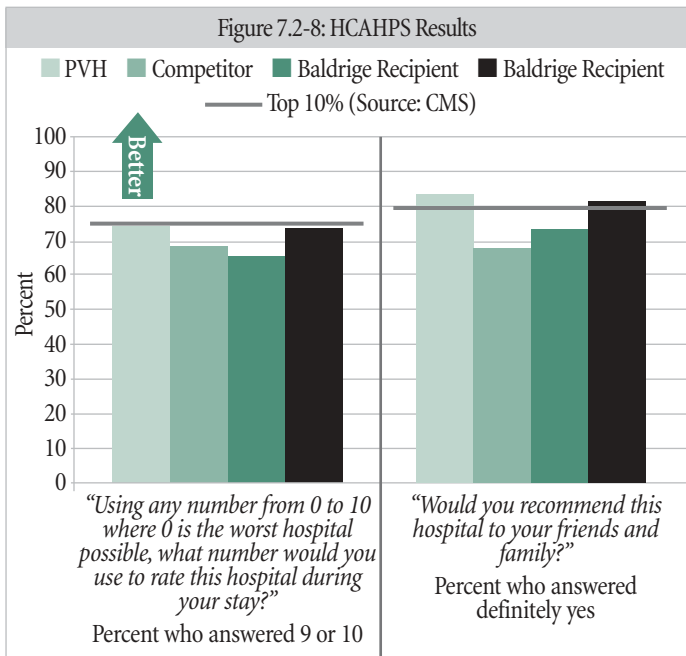


**Figure 7.2-5: State Reported Grievances**

	2005	2006	2007
PVH	1	2	0
MCR	n/a	n/a	0
Competitor	2	3	0

Source: CDPHE





PVHS consistently offers the best healthcare value in the region by providing excellent clinical outcomes (7.1) and patient satisfaction [7.2a(1)] at a low cost (Figure 7.2-9)—one of the community's key customer requirements (Figure P.1-6). Since 2001, PVHS charges have been consistently lower than competitors, as indicated by CHA data for key admission diagnoses (Figure 7.2-10).

The Aspen Club, which recently celebrated its 15,000th member (Figure 7.2-11), is one of the mechanisms PVHS uses to build customer relationships. The free membership program offers services, such as Medicare counseling, reduced-cost blood tests, flu shots, and bone density screenings (Figure 7.6-12), as well as health and wellness classes and social activities for community members ages 50 and above. PVHS also offers a membership program for youth, called Healthy Kids Club [7.6a(5)].

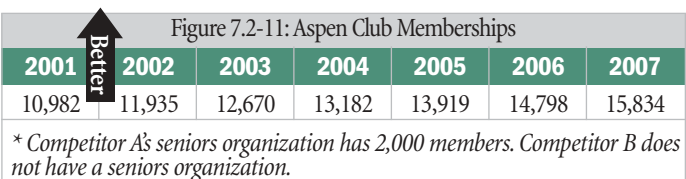
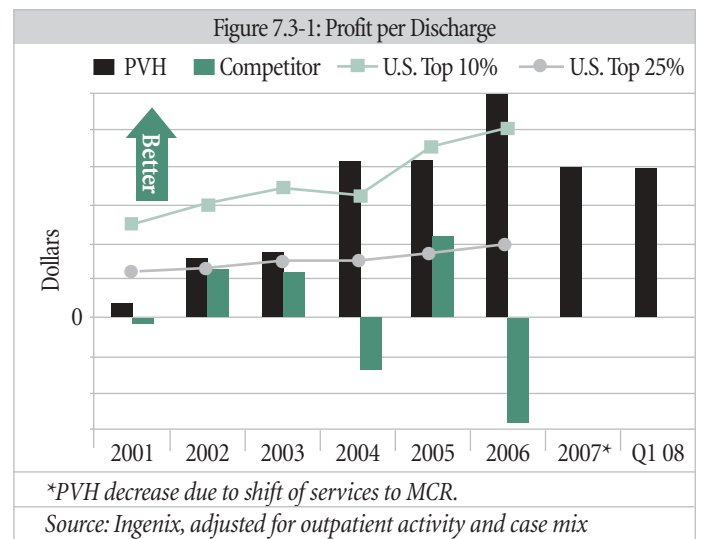
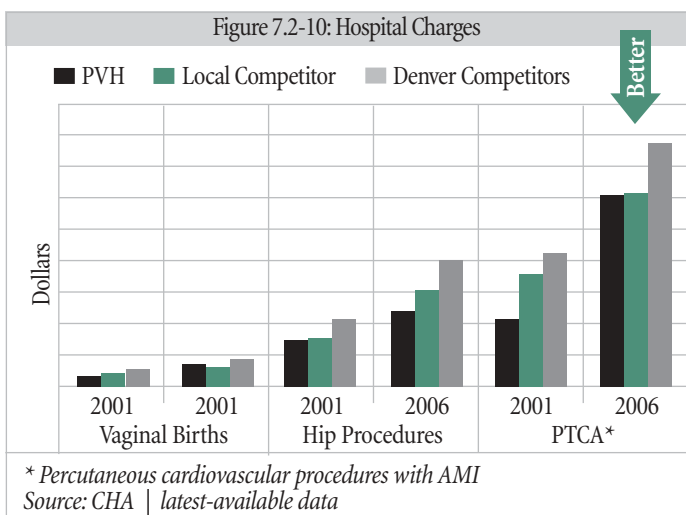
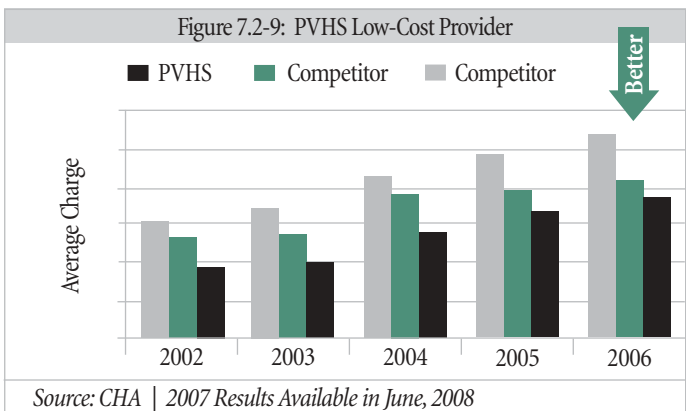
PVHS also builds relationships through its Poudre Valley Nurse Line and Nurse-Is-In programs [7.6a(5)].

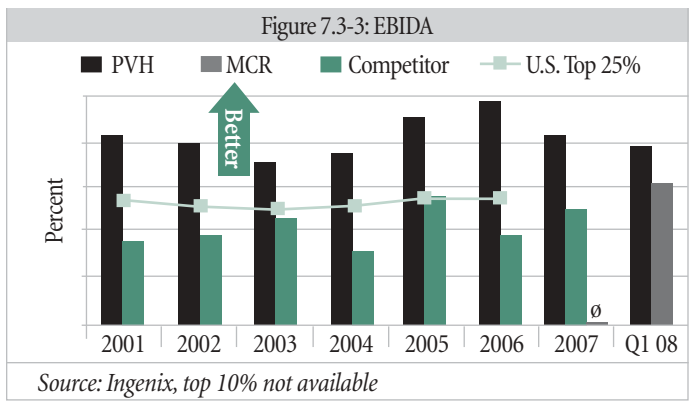
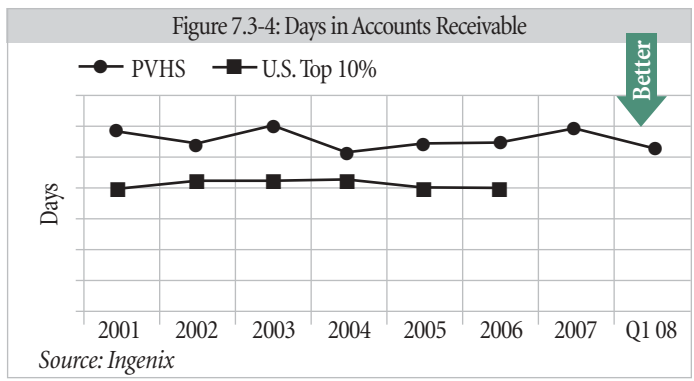
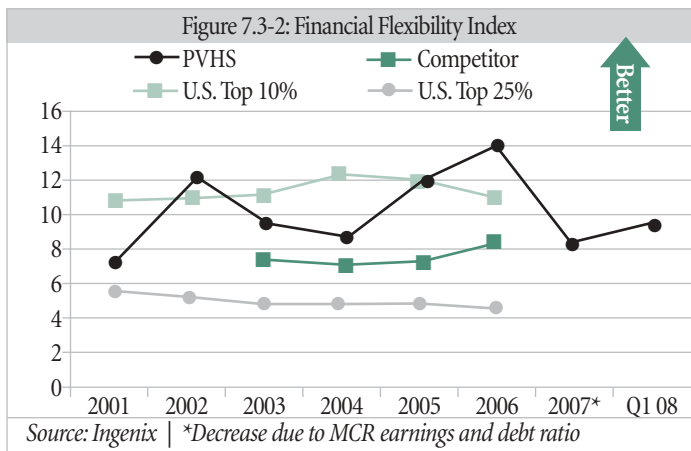
### 7.3 Financial & Market Outcomes

#### 7.3a Financial & Market Results

**7.3a(1)** Building on the core competency of financial stability, PVHS has achieved strong performance and sustained improvement for its key short-term and long-term financial measures. In fact, Baldrige examiners awarded Item 7.3 a score of 90-100 percent following 2006 and 2007 site visits. With the opening of MCR, some of the financial results took an unavoidable but expected and planned for dip in 2007. At the same time, however, PVHS saw an expected increase in market share (Figure 7.3-8,9) indicating that — as planned — PVHS is on track to increase patient volumes and profitability, and Q1 2008 data for numerous key financial measures confirm that. Already, Moody's Investors' Service has upgraded PVHS' credit rating twice since MCR opened, which is phenomenal for a new facility.

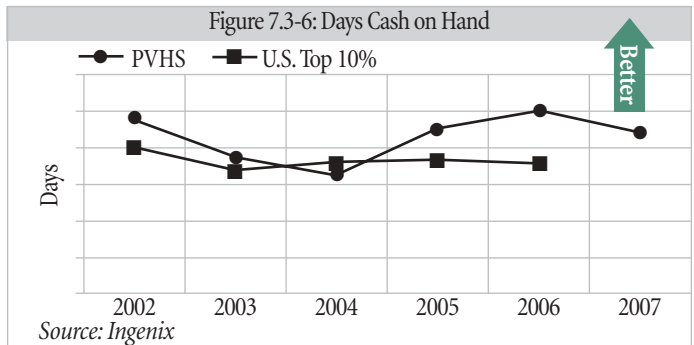
Profit per discharge (Figure 7.3-1) and Financial Flexibility Index (FFI, Figure 7.3-2) help PVHS monitor sustainability, which is critical to achieving its mission of remaining an independent, not-for-profit organization. With PVHS' commitment to being a low-cost provider, the organization monitors profit per discharge (adjusted for outpatient activity and case mix) to ensure sufficient investments for the future. Despite the





**Figure 7.3-5: Net Earnings (actual to budgeted)**

	2001	2002	2003	2004	2005	2006	2007	Q1 08
PVH	+	+	+	+	-	+	+	+
MCR	n/a	n/a	n/a	n/a	n/a	n/a	-	+



strategic challenge of declining reimbursement, PVH dramatically increased its profit per discharge to surpass the U.S. top 10 percent. In 2007 and 2008, as the competitor continued to struggle with volatile financial results, PVH shifted services and patients to MCR and still reported profits per discharge above the U.S. top 25 percent and again approaching the U.S. top 10 percent. As expected for a new hospital, MCR's 2007 profit per discharge was well below PVH's historical performance, but PVHS prepared for this by increasing PVH profit per discharge in the years leading up to the opening of MCR. MCR already reported an impressive increase in profit per discharge in the first quarter of 2008.

FFI (Figure 7.3-2) — one of the most balanced measures of financial health — is a composite of seven financial ratios that measure an organization's ability to control funds flow. PVHS has historically achieved an FFI above the U.S. top 10 percent. PVHS FFI took an expected dip in 2007 as the organization opened a new hospital, but even with the impact of MCR, PVHS was well above the U.S. top 25 percent. For the first quarter of 2008, PVHS is very close to the top 10 percent again, though the organization expects another slight decline in 2008 due to planned strategic purchases.

Earnings before interest, depreciation, and amortization (EBIDA), days in accounts receivable, and net earnings relative to budget demonstrate sound governance and fiscal management. PVH has sustained EBIDA (Figure 7.3-3) substantially above the U.S. top 25 percent. A slight 2003 decline was primarily the result of lower interest rates and planned real estate investments for MCR, and the 2007 decline was due to the opening of MCR. Even with the opening of MCR, PVH EBIDA remains above the U.S. top 25 percent, and in first quarter of 2008, MCR has already surpassed the benchmark as well.

PVHS also continues to outperform other Colorado healthcare organizations relative to accounts receivable (Figure 7.3-4) — an achievement that minimizes the organization's short-term financing requirements and increases cash on hand. PVHS significantly reduced its days in accounts receivable between 2000 and 2002, then saw a slight increase as new regulations and Medicare software slowed reimbursement payments. After 2003, PVHS regained and maintained its low rate by streamlining billing processes. The Claim Scrubber software [6.2a(3)] also improves accuracy, which decreases claim resubmittals.

To help staff monitor the financial component of OPP [5.1a(3)] and performance relative to expectations, PVHS reports net earnings relative to budget (Figure 7.3-5). Numbers dropped slightly in 2005, when: 1) projected volumes did not meet forecast; and 2) the organization made a strategic decision to focus on the future by hiring critical-to-recruit staff in preparation for the opening of MCR.

Days cash on hand (Figure 7.3-6) provides a measure of liquidity and indicates the number of days PVHS could meet its average cash payments without collecting any revenue. According to Moody's, healthcare organizations in solid financial position should have 90 to 100 days cash on hand. Ingenix comparative data place PVHS above the U.S. top 10 percent. Due to PVHS' strong position, during 2003 and 2004, the organization chose to: 1) purchase land and fund initial MCR construction; and 2) pay down long-term debt. While this strategy resulted in a temporary cash decline, the organization maintained days cash on hand near the U.S. top 10 percent. Results for this measure declined again in 2007, not because cash reserves declined, but because daily expenses increased with the opening of MCR. However, PVHS prepared for these increased expenses by increasing days

cash on hand in 2005 and 2006. To ensure that PVHS can meet cash flow projections, the CFO establishes an internal, operational daily cash flow threshold (Figure 7.3-7). Patient Financial Services implements in-process corrective action plans when the threshold is not met.

**7.3a(2)** PVHS continues to improve its position as market leader in its primary service area (Figure 7.3-8) and, with the opening of MCR, has increased market share in its total service area (Figure 7.3-9). Competitor market share continues to decline.

**Figure 7.3-7: PVHS Daily Cash Collections to Target**

	Q1/06	Q2/06	Q3/06	Q4/06	Q1/07	Q2/07	Q3/07	Q4/07
Amount Collected	105%	97%	102%	105%	100%	99%	108%	107%
Goal	≥95%							

**Figure 7.3-8: Market Share, PVHS Primary Service Area**

	2001	2002	2003	2004	2005	2006	Q3/07*
PVHS	57.0%	56.0%	58.3%	58.6%	59.3%	59.7%	61.5%
Competitor	8.2%	8.7%	8.3%	8.4%	7.9%	7.6%	7%
Competitor	24.9%	24.9%	23.1%	22.1%	21.5%	20.4%	20.4%
Competitor	9.9%	10.4%	10.3%	10.9%	11.3%	12.2%	11%

\*Latest Available Data | Source: CHA

**Figure 7.3-9: Market Share, PVHS Total Service Area**

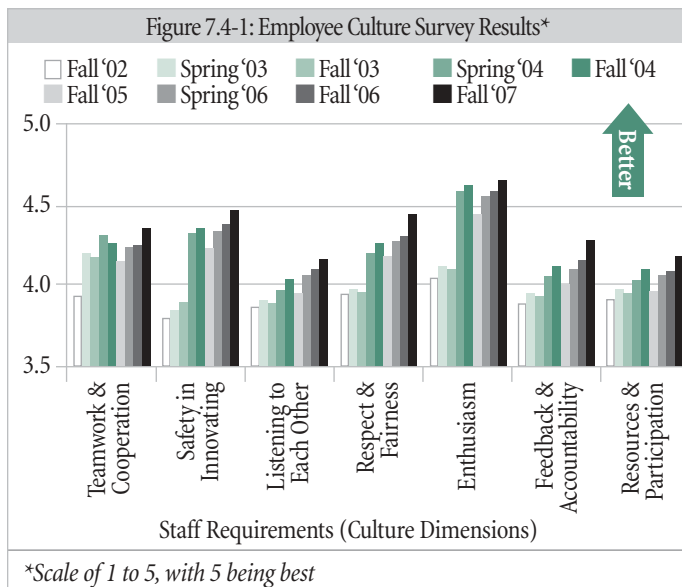
	2003	2004	2005	2006	Q3/07*
PVHS	25.5%	25.6%	25.8%	26.0%	27.8%
Competitor	23.5%	23.6%	23.8%	23.5%	22.7%
Competitor	9.1%	8.5%	8.4%	8.0%	8.4%

\*Latest Available Data | Source: CHA

**Figure 7.3-10: Outpatient Equivalent Days**

	2002	2003	2004	2005	2006	2007
PVH	38,760	39,190	40,278	41,038	43,667	45,595
MCR	n/a	n/a	n/a	n/a	n/a	4,023
Competitor	32,215	33,421	35,317	35,645	39,015	43,061

Source: CHA

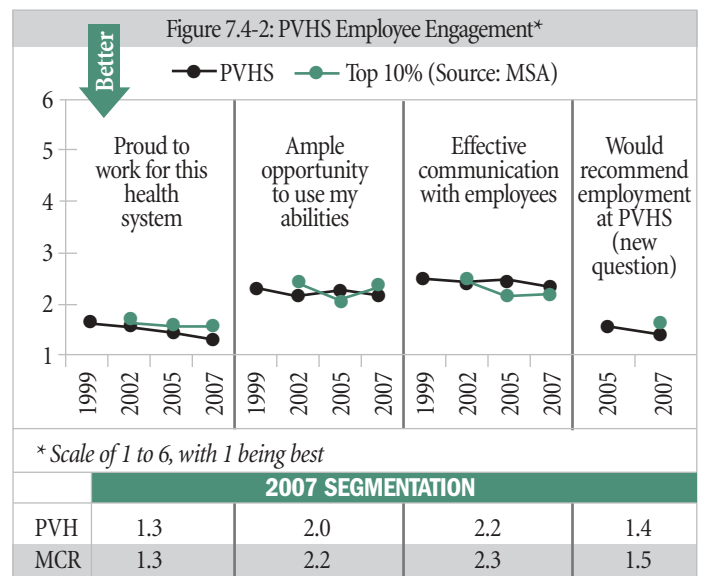


Traditional market share data are not available for outpatient procedures, so to ensure that PVHS is maintaining and increasing its outpatient business, the organization monitors outpatient equivalent days (Figure 7.3-10). PVHS outpatient equivalent days — a standard industry calculation for comparing outpatient volumes across facilities — remain above PVHS' main competitor and continue to increase.

## 7.4 Workforce-Focused Outcomes

### 7.4a Workforce Results

**7.4a(1)** Since workforce engagement — a PVHS core competency — is critical to accomplishing the strategic plan, PVHS closely monitors key performance measures in this area. For staff, results of the semi-annual Employee Culture Survey (Figure 7.4-1) have improved significantly since initiation in 2002, and results of the MSA Employee Survey meet or exceed the national top 10 or 20 percent in 14 of the 16 categories (Figure 7.4-3). Historically, PVHS has administered the MSA survey every three years to



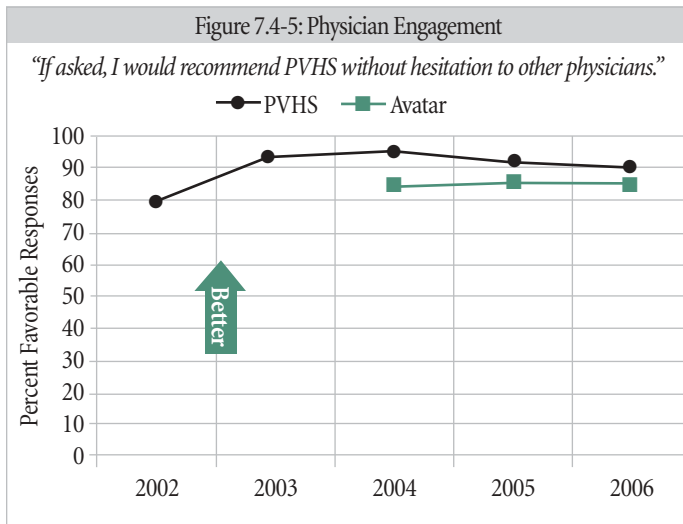
**Figure 7.4-3: PVHS Employee Satisfaction**

ATTITUDE AREAS OF MSA SURVEY	U.S. TOP 10%	U.S. TOP 20%	ABOVE NATIONAL NORM
Job Satisfaction	•	•	•
Senior Management Group	•	•	•
Department Director	•	•	•
Immediate Supervision			•
Communications	•	•	•
Human Resources		•	•
Pay	•	•	•
Benefits	•	•	•
Job Security	•	•	•
Development		•	•
Physical Work Environment	•	•	•
Teamwork		•	•
Work Demands	•	•	•
Resource Utilization			•
Participation	•	•	•
Performance Management	•	•	•

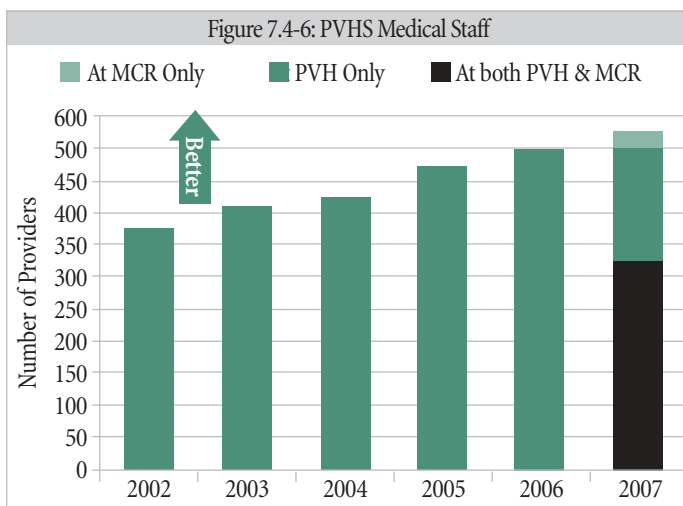
Source: MSA

**Figure 7.4-4: Volunteer Satisfaction Results**

	2003	2004	2005	2006	2007
PVH	93%	96%	95%	96%	98%
MCR	n/a	n/a	n/a	n/a	100%

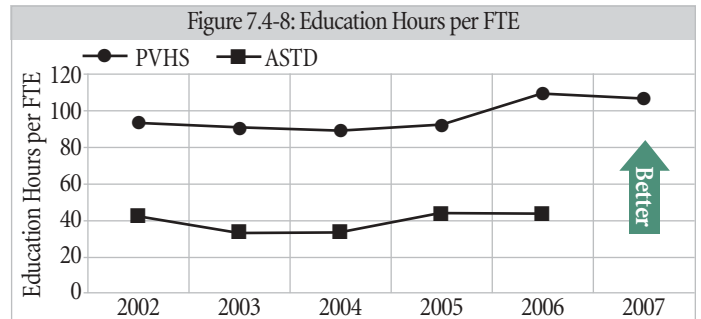
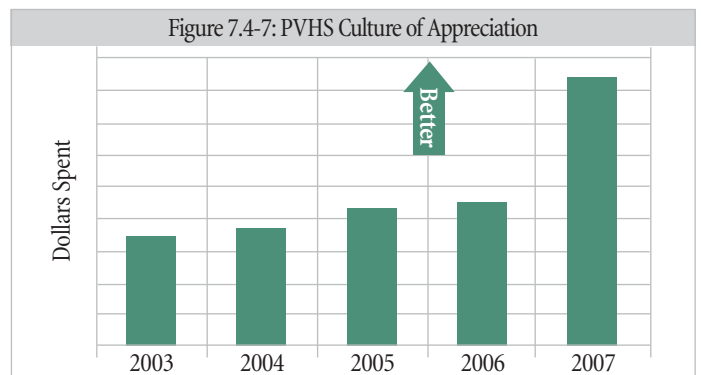


Source: Avatar Physician Satisfaction Survey (latest available data)



benchmark results and verify the Employee Culture Survey. However, in 2007, PVHS administered the survey after only two years to make sure the organization was sustaining its culture in the midst of all the changes associated with opening MCR. The 2007 results — which earned PVHS recognition as an MSA benchmark organization — demonstrated that PVHS had achieved its SO1 strategic goals. To maintain these superior results, PVHS continues to focus on key survey items that correlate to employee engagement (Figure 7.4-2). **Complete survey results segmented by gender, age, department, job family, shift, ethnicity, length of service, and more are available but not presented here due to space limitations.**

Volunteer satisfaction remains high, according to results of the annual volunteer satisfaction survey (Figure 7.4-4), with confirmation through informal satisfaction assessment methods such as leadership rounding, volunteer forums, and volunteer interviews. Looking to the future when retiring Baby Boomers will become the largest volunteer population,



**Figure 7.4-9: Results of Learn & Lead Training**

	2004	2005	2006	2007
	94%	82%	92%	95%

*"I have changed practices in my department as a result of the training."*

**Figure 7.4-10: Completion Rate for Performance Reviews**

	2003	2004	2005	2006	2007
PVHS	49%	83%	90%	94%	96%
PVH					96%
MCR					95%
Joint Commission	95%	95%	95%	95%	95%

Volunteer Services is focusing even more heavily on measuring and improving satisfaction and engagement to meet the increased demands of this age group for meaningful volunteer opportunities.

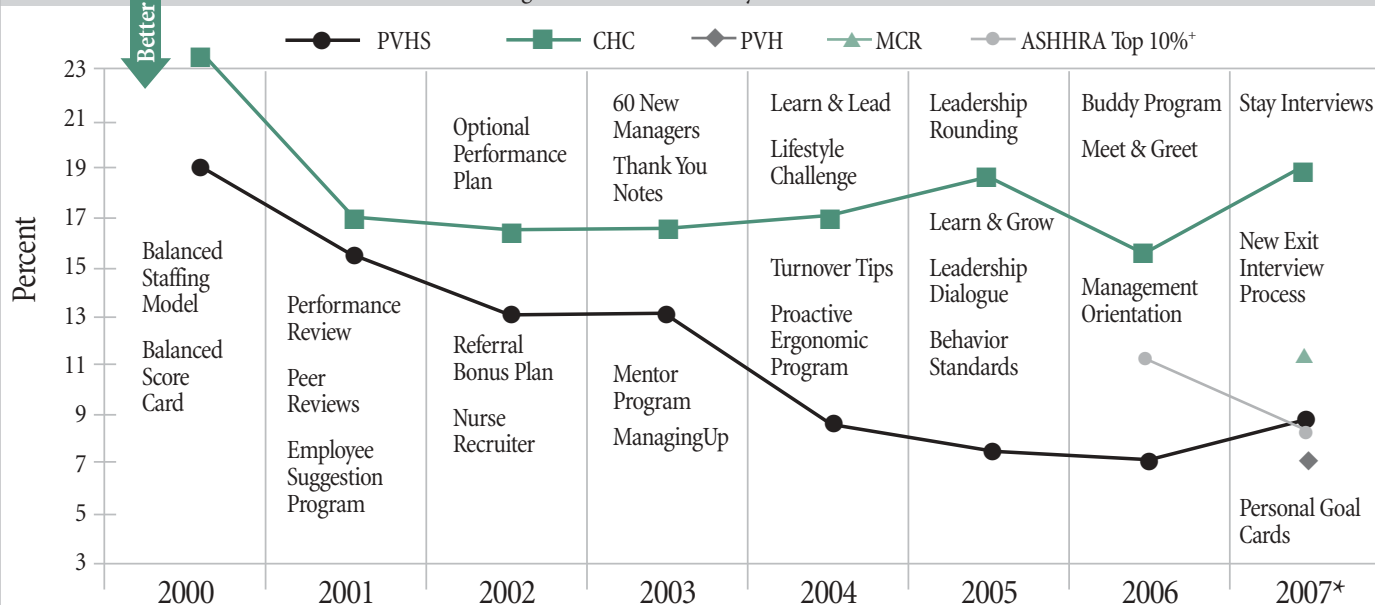
PVHS physician engagement (Figure 7.4-5) is consistently higher than the national Avatar database. Also, the number of providers with medical privileges within PVHS (Figure 7.4-6) continues to increase as more providers from outside the Fort Collins area seek privileges at PVH and/or MCR.

PVHS continues to invest significant resources in two-way communication with physicians (Figure 1.1-2) and in services to support physicians [5.2b(2)]. The organization also engages physicians in SDD [2.1a(1)], facility and service design [5.1a(2), 6.1a(2)], and performance improvement (6.2b).

PVHS invests significantly to engage the workforce in a culture of appreciation [Figure 7.4-7, 1.1b(1), 5.1a(3)]. Specifically, budgets for Reward and Recognition and special events continue to increase.

To further engage staff, PVHS continues to increase its investment in staff development (Figure 7.4-8) by offering and supporting extensive personal and organizational learning opportunities (5.1b).

Figure 7.4-11: Staff Voluntary Turnover Rate



\*Increased turnover expected due to opening of MCR. Other new Colorado hospitals reported first-year turnover rates approaching 50%.  
 †American Society for Healthcare Human Resources Administration

Figure 7.4-12: Nurse Turnover Rate

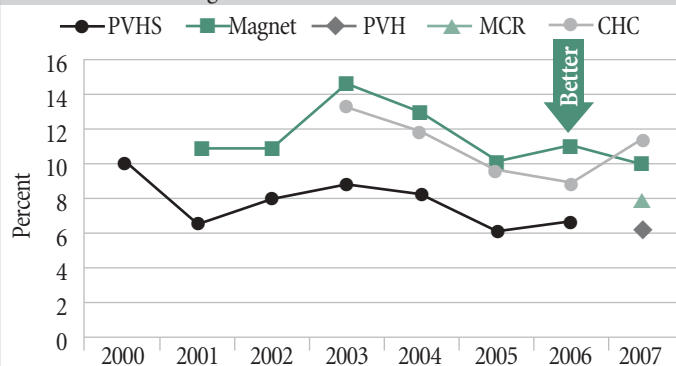


Figure 7.4-15: Workplace Health, Safety & Security

		2003	2004	2005	2006	2007	Regulatory Requirement
Regulatory Training: New Employees	PVH	100%	100%	100%	100%	100%	100%
	MCR	n/a	n/a	n/a	n/a	100%	
Environmental Safety Tours	PVH	100%	118%	111%	116%	104%	100%
	MCR	n/a	n/a	n/a	n/a	100%	
Life Safety, Code Drills	PVH	100%	100%	100%	100%	100%	100%
	MCR	n/a	n/a	n/a	n/a	100%	

Figure 7.4-13: Vacancy Rates

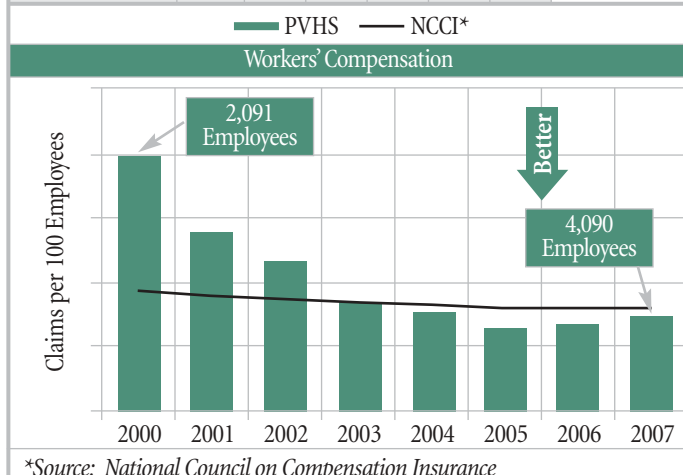
	2002	2003	2004	2005	2006	2007**	Q1/08
All Staff*			2.5%	2.0%	2.39%	3.93%	2.00%
Top 10%+			n/a	n/a	3.5%	1.7%	n/a
PVH RN	4%	1.7%	3.3%	2.3%	2.68%	4.22%	1.09%
MCR RN	n/a	n/a	n/a	n/a	n/a	5.87%	1.86%
Magnet RN	11%	3.47%	6.87%	4.30%	3.9%	4.3%	n/a
Top 10%+ RN	n/a	n/a	n/a	n/a	3.2%	2.3%	n/a

\*Not tracked prior to 2004 | \*\*Posted > 900 positions in 2007  
 \*Source: ASHHRA

Figure 7.4-14: National Certifications for Direct Care Givers

	2005	2006	2007
PVH	23.95%	26.4%	24.2%
MCR	n/a	n/a	22.0%
NDNQI	n/a	n/a	23.0%

PVHS uses Kirkpatrick evaluation [5.1b(3)] to gauge effectiveness of training programs, such as the Learn and Lead Program [5.1b(2), Figure 7.4-9]. When Learn and Lead results decreased, the Learn and Lead Team sought and implemented participant feedback on how to make the training more



effective, and results returned to the 90+ percent range.

To support a culture of accountability and the value, Respect, PVHS added timeliness of performance reviews (Figure 7.4-10) to the 2006 system BSC and set the goal at 100 percent. PVHS continues to make significant improvements in this area and exceeds the Joint Commission requirement.

7.4a(2) Since workforce capacity and capability are critical to achieving the

strategic plan, PVHS monitors voluntary staff turnover and vacancy as key indicators. As PVHS has worked to systematically build a culture of workforce satisfaction and engagement [5.1a(1)], the overall voluntary staff turnover rate (Figure 7.4-11) has decreased significantly to a rate that is better than the rate reported by Colorado Health Care (CHC), which includes competitors in the region. The rate for nurses (Figure 7.4-12), which PVHS has designated as critical-to-recruit positions, has decreased more than 40 percent over the last five years and is better than rates reported by Magnet hospitals, which represent the top 2 percent in the nation. MCR's low turnover rates are especially significant: Other hospitals surveyed by PVHS prior to the opening of MCR reported first-year turnover rates approaching 50 percent.

Vacancy rate (open positions/total number of staff, Figure 7.4-13) is an indicator of whether HR is meeting the needs of the organization. Except for 2007, when PVHS posted more than 900 job openings, the PVHS vacancy rate for nursing is lower than Magnet, and the overall staff vacancy rate is lower than the rate reported by the American Society for Healthcare Human Resources Administration. The number of providers on the medical staff continues to increase (Figure 7.4-6), and PVH has a waiting list for teen volunteers.

PVHS has a highly skilled workforce. Nurses, for instance, have more

national certifications than their peers at other Magnet hospitals (Figure 7.4-14). Higher skill levels correlate with improved patient outcomes, according to Magnet.

**7.4a(3)** PVHS takes an innovative and integrated approach to workplace health, safety, and security (Figure 5.2-1), as indicated by the organization's dedication to new employee training, environmental safety tours, and life safety and code drills (Figure 7.4-15). As a result, the Workers' Compensation claim rate is consistently below the industry, and since 2000, PVHS has reduced its Workers' Compensation claim rate by more than 70 percent while almost doubling the number of employees. These results positively impact the organization's ability to achieve SOs 1 and 6.

PVHS employees are very satisfied with their benefits. In fact, PVHS' satisfaction scores in this area make PVHS an MSA national benchmark (Figure 7.4-3). Employees also score PVHS very high relative to benefits in the Employee Culture Survey and stay and exit interviews, verifying PVHS' consistently world-class MSA results.

### 7.5 Process Effectiveness Outcomes

PVHS' innovative, team-based performance excellence cycle (Figure 6.2-1) drives improvement of organizational effectiveness. During the annual cycle, the performance excellence teams (Figure P.2-3) evaluate the organization relative to the Baldrige criteria and implement aggressive

Figure 7.5: PVHS Performance Excellence Journey

							Employee/ Volunteer Forums
							Personal Goal Cards
						Leadership Priorities Template	Strategic Planning Timeline
						Global Path to Success & Personal Goals	Increased Physician Participation in SDD
						BSC Action Plan Process	We're Here for You
					Definition of World-Class	Strategic Planning Timeline	GetWell Network
				Leadership Rounding	Customer Service Must- Haves	Customer Service Steering Committee	Private Rooms
				Learn & Lead	Splash of Sunshine	Top Box	Electronic BSC
		Optional Performance Plan		Key Words at Key Times	Concierge Service	Lemay Bistro	Thomson Healthcare Database
		Patient Focus Groups	60 New Managers	IS Steering Committee Structure	Provider Identification	OR RN Liaison	Volunteer Performance Review
1st Baldrige Feedback Report	Performance Review	Volunteer Patient Liaisons	Thank You Notes	Proactive Ergonomics	Electronic Health Record	Definition of System BSC Measures	Stay Interviews
Balanced Scorecard	Peer Evaluations	Customer Champions	Discharge Phone Calls	Performance Excellence Team Coordination	Behavior Standards	Management Orientation	New Exit Interview Process
Balanced Staffing Model	Employee Suggestion Program	Referral Bonus Program	Walk Don't Point VIC (Intranet)	CPEX Peak Award	Learn & Grow	New PDCA Process	Peer Recognition for Volunteers & Physician
Value Model	PDCA	PDCA Training	Physician Connectivity Mentor Program		Training on Process Improvement	Business Decision Support Process	PDCA Facilitation
<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>



Figure 7.5-1: Equity Earnings from Joint Ventures

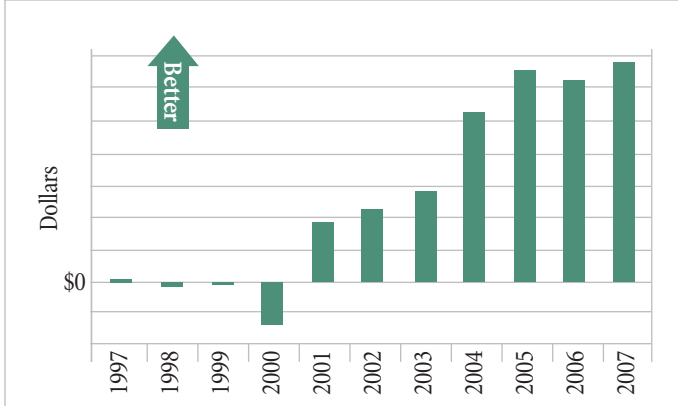


Figure 7.5-4: MCR RN Hours per Patient Day

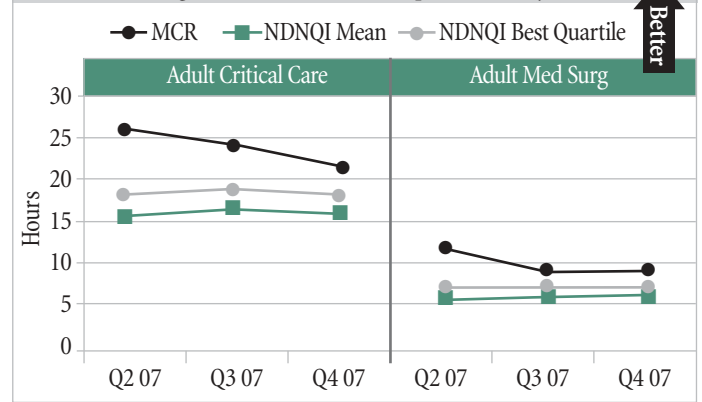
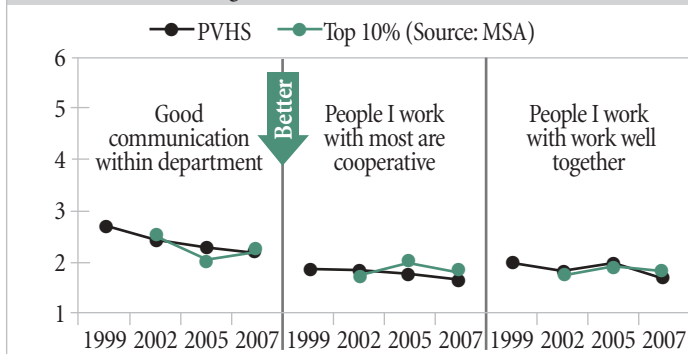


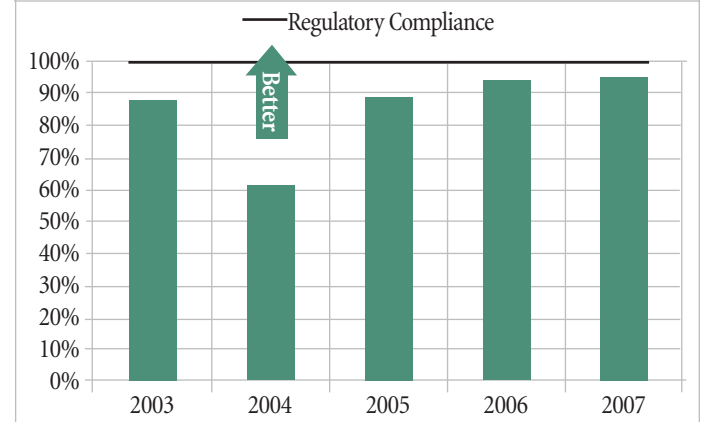
Figure 7.5-2: PVHS Teamwork\*



\* Scale of 1 to 6, with 1 being best

2007 SEGMENTATION			
PVH	2.3	1.8	1.8
MCR	2.2	1.8	1.7

Figure 7.5-5: PVHS Mandatory Annual Learning Test Compliance



teams and the core competency, partnering. Equity earnings from joint ventures (Figure 7.5-1) — an indicator of partnership performance — saw a small decline in 2006 when PVHS made a strategic decision to sell some of its interests, but overall, have increased more than three-fold since 2001. MSA survey results (Figure 7.5-2) continue to indicate that PVHS is maintaining a culture that fosters and supports teamwork.

Staffing is another key component in PVHS' ability to ensure effective work system operations. As a result of PVHS' innovative balanced staffing model [5.1c(2)] and low nurse turnover rate (Figure 7.4-12), PVHS consistently and significantly outperforms Magnet hospitals with regard to nursing hours per patient day (Figure 7.5-3, 4). This staffing measure indicates how many hours of RN attention each patient receives. For instance, 24 nursing hours per patient day indicates that each patient has a dedicated RN around the clock, in addition to assistance from nursing aids. Evidence suggests that high nursing hours improve clinical outcomes, and in fact, the American Nurses Association and NDNQI recently named PVH the nation's No. 1 hospital for nursing care.

To ensure disaster and emergency preparedness, PVHS staff complete training on life safety, emergency response procedures, evacuation, and infection control and demonstrate annual competency (Figure 7.5-5). PVHS monitors days cash on hand (Figure 7.3-6) to ensure that the organization can meet its average cash payments if it were not able to collect revenues.

7.5a(2) Levels and trends of key measures and indicators of operational performance of key work processes are presented here and throughout Category 7, as referenced in Figure 6.1-2.

action plans. Guided by Baldrige and CPEX feedback, this systematic approach continues to move PVHS closer to achieving its world-class vision (Figure 7.5).

### 7.5a Process Effectiveness Results

7.5a(1) To ensure work system effectiveness, PVHS monitors key measures for its two primary care delivery mechanisms [P.1a(1)]: interdisciplinary



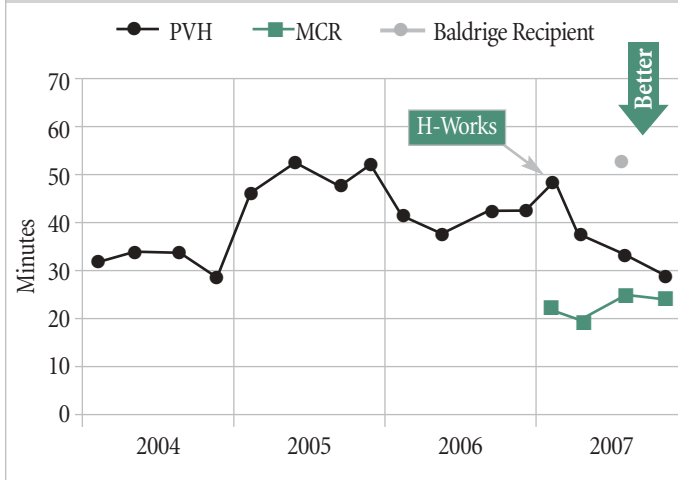
Figure 7.5-6: Ambulance Urban Response Time

	2001	2002	2003	2004	2005	2006	2007
Average Response Time in Minutes	6.5	6.4	6.1	6	5.6	5.6	5.7
Industry Standard	8.59						

Source: Journal of Emergency Medical Services, 2005

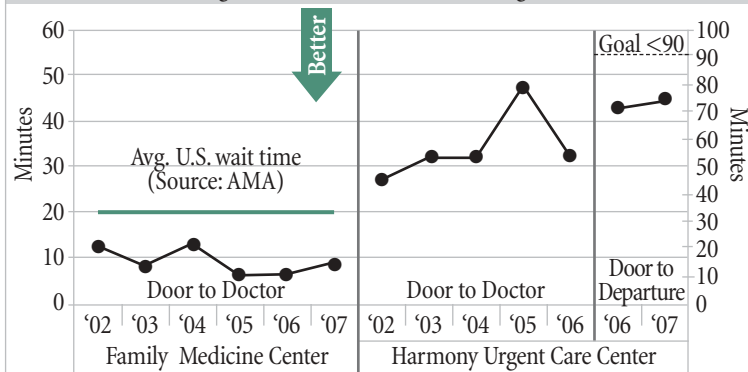
**Entry into Health System.** To make sure PVHS is providing timely access to care (key process requirement, Figure 6.1-2), the organization monitors response times to emergency ambulance calls. Response times continue to compare favorably to the industry average, though the PVHS response area is double the size of the typical urban response area (Figure 7.5-6). At PVH, increasing patient acuity has impacted the length of time a patient has to wait to see an ED physician (Figure 7.5-7), but PVH responded to this trend in early 2007 by bringing in national experts, The Advisory Board's H-Works, to assess patient flow and guide improvements. Wait times have improved since launch of beside registration and the triage short form, and ED renovations are underway.

Figure 7.5-7: Length of Time to See an ED Physician (in minutes)



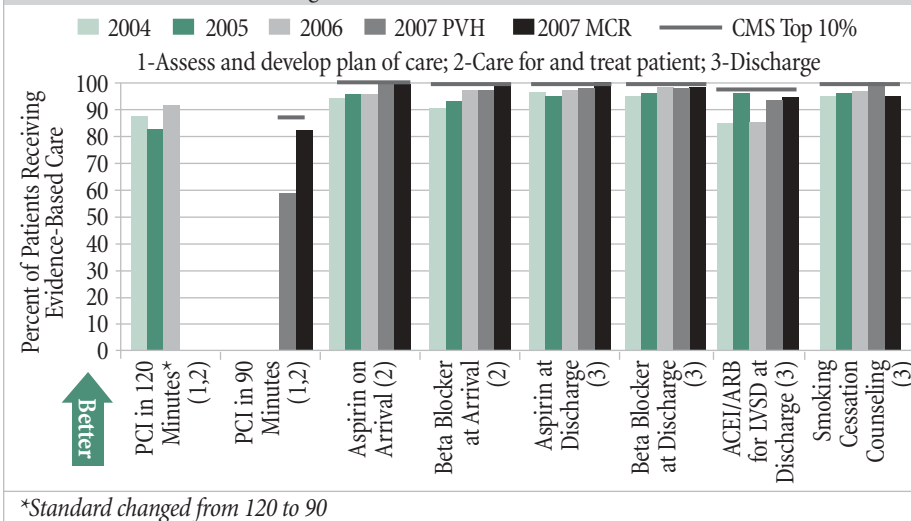
PVHS also monitors wait times to see a caregiver at Family Medicine Center (FMC) and Harmony Urgent Care Center (HUCC) (Figure 7.5-8). With an innovative scheduling process, FMC currently reports seven minutes, compared to the national comparison of 20. HUCC's goal is to see patients within one hour, despite increasing patient volumes (21 percent growth from 2006 to 2007 alone). Wait times increased in 2005 but remained within the 60-minute goal and improved after HUCC adjusted patient flow. In 2006, HUCC changed its key measures and began monitoring door-to-door time to ensure that patients were admitted and discharged within 90 minutes.

Figure 7.5-8: Wait Time to See a Caregiver



**Clinical Assessment.** To appropriately identify patient problems (key process requirement, Figure 6.1-2), PVHS monitors use of evidence-based assessment methods, including CMS process measures. Left ventricular function assessment for congestive heart failure patients (Figure 7.5-11) and oxygenation assessment, blood culture before antibiotic, and most appropriate antibiotic for pneumonia patients (Figure 7.5-10) have improved to at or near the CMS top 10 percent, and a PDCA team is working to improve PCI in 90 minutes for AMI patients (Figure 7.5-9). PVHS also monitors efficiency measures, such as radiology image-rejection rate (Figure 7.5-12). Impacting productivity and quality of care, this rate continues to decrease, due largely to the Picture Archive and Communication System (PACS), which enables electronic storage and display of radiology examinations. PVHS consistently outperforms the Joint Commission comparison in this area.

Figure 7.5-9: Process Measures for AMI



**Patient Care.** To ensure that patients receive timely and safe care according to their care plan (key process requirement, Figure 6.1-2), PVHS monitors the Joint Commission Patient Safety Goals (Figure 7.1-12). PVHS also monitors use of evidence-based care protocols, including CMS process measures. Aspirin and beta blocker at arrival of AMI patients (Figure 7.5-9) have improved to the CMS top 10 percent. For pneumonia patients (Figure 7.5-10), pneumococcal and influenza vaccine, as well as antibiotic in four hours, are below the CMS top 10 percent, but PVHS has action plans in place to improve these results.

As an example of an efficiency measure, PVHS attains impressive OR turnaround times through team coordination — modeled after a pit-crew

design — and monitors OR on-time starts as a process measure of timely care and effective resource utilization (Figures 7.5-13).

**Discharge.** PVHS also relies on CMS process measures to ensure appropriate patient discharge. For AMI (Figure 7.5-9), PVHS use of evidence-based discharge protocols for aspirin, ACEI/ARB, and smoking cessation counseling have improved to the CMS top 10 percent. For pneumonia (Figure 7.5-10) and congestive heart failure (Figure 7.5-11), PVHS is working to improve use of smoking cessation counseling, discharge instructions, and ACEI/ARB. The organization monitors its average length of stay (Figures 7.1-15) and readmission rates for the Community Nurse Case Manager program (Figure 7.6-9).

**Community Health.** Community health initiatives are described in 1.2c, with results presented in 7.2 and 7.6.

**Financial Management.** PVHS closely monitors key process measures for financial management, including days in accounts receivable, days cash on hand, and daily cash collections to target (Figures 7.3-4, 6, 7).

**Information Management.** To ensure timely information access, IS monitors the Meditech uptime, which has been greater than 99.9 percent for the last five years. With the move toward electronic health records (EHR), computer availability is critical to efficient and effective patient care. Staff and volunteers are increasingly using VIC to access daily information and organizational knowledge, with hits increasing four fold from 2003 to 2007 (Figure 7.5-14). Staff who need immediate computer assistance can call the IS Help Desk, which is available 24 hours a day, seven days a week. IS also has a key role in achieving SOs 4 and 5 by continuing to increase the number of physician offices and homes linked electronically to PVHS. As of year end 2007, 99 percent of medical staff offices were connected to PVHS systems. This

connectivity — which continues to earn accolades as a national role model (4.2a) — provides immediate access to patient information, which is critical for physician efficiency, loyalty, and satisfaction, as well as quality care and prompt service.

IS also effectively maintains critical telecommunication operations, including a call center with an abandoned call rate well below the industry (Figure 7.5-15).

**Supply Chain Management.** In the healthcare industry, the timely availability of clean patient rooms directly impacts patient wait times and overall patient satisfaction and, thus, is a critical component of supply chain management. The lack of a successful bed management process can force hospitals to temporarily close their doors to new admissions and divert patients to nearby hospitals,

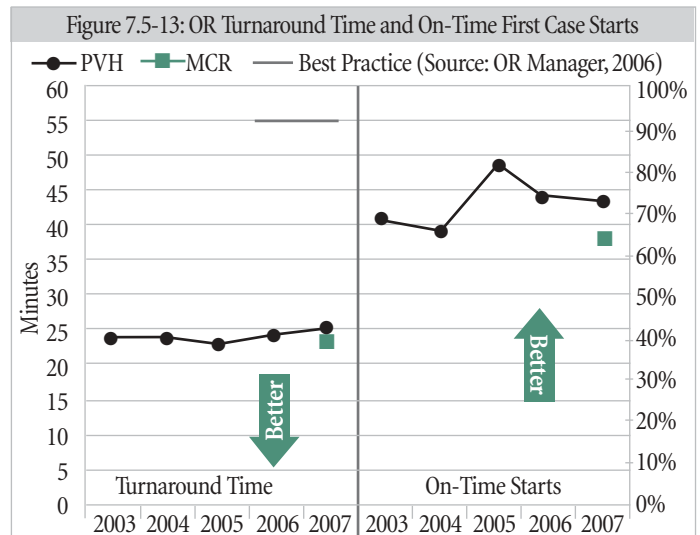
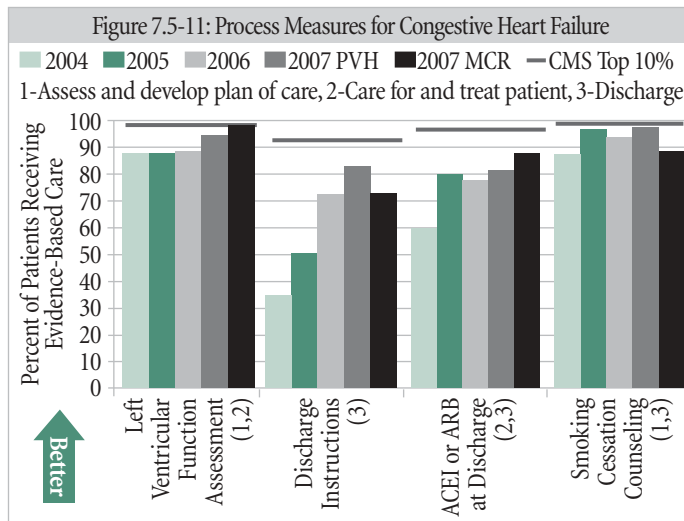
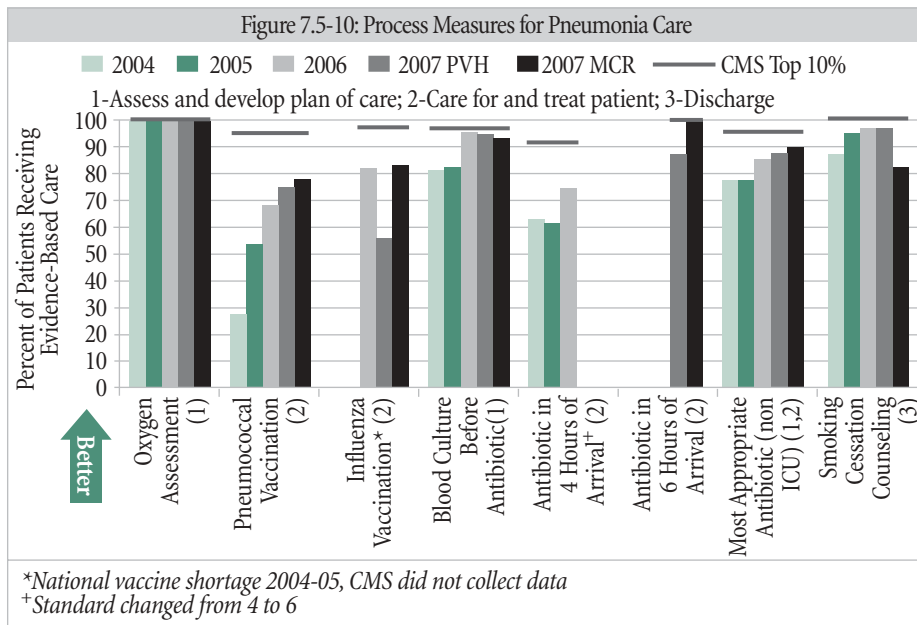


Figure 7.5-12: PVH Radiology Image Rejection Rates

Year	2003	2004	2005	2006	2007	JC
Rejection Rates	4.48%	4.26%	4.58%	2.89%	2.9%	5%

MCR 2007 = 2.9%

Figure 7.5-14: VIC Use

Year	2003	2004	2005	2006	2007
Number of Hits to VIC	849,739	1,442,334	1,858,278	2,585,914	3,754,865

with obvious negative financial and business implications. However, through focused performance improvement efforts, the PVH interdisciplinary Bed

Management Team implemented a successful process to ensure timely bed availability, such that PVH has not had to divert patients for more than four years. Housekeeping is consistently successful in cleaning urgently needed (STAT) rooms without sacrificing patient satisfaction (Figure 7.5-16). The bed management system is also in use at MCR.

To ensure fiscal responsibility and safe, predictable operation of biomedical equipment, PVHS appropriately matches internal and external technical talent with department and equipment needs to effectively and efficiently manage service strategies. This approach results in significant cost savings each year (Figure 7.5-17).

To ensure timely availability of supplies critical to patient care, Materials Management works to re-stock supplies on nursing units before units stock out of these supplies. The support department achieves its cycle service level goal 99 percent of the time (Figure 7.5-18).

**HR Management.** To ensure that PVHS is able to strengthen its core competency of workforce engagement and address its strategic challenge of overcoming labor shortages in critical-to-recruit positions, the organization monitors HR measures presented in 7.4.

## 7.6 Leadership Outcomes

### 7.6a Leadership & Social Responsibility Results

**7.6a(1)** The key indicator of progress toward PVHS' strategic plan is the system BSC [4.1a(1)]. Since the BSC is too lengthy to include in its entirety, Figure 7.6-1 lists the 2007 system BSC measures in support of each SO, with results presented throughout Category 7.

If every measure on the system BSC is green or blue, PVHS has accomplished its short-term plans and is on track to accomplish its long-term plans. Measures that appear red on the system BSC indicate that the

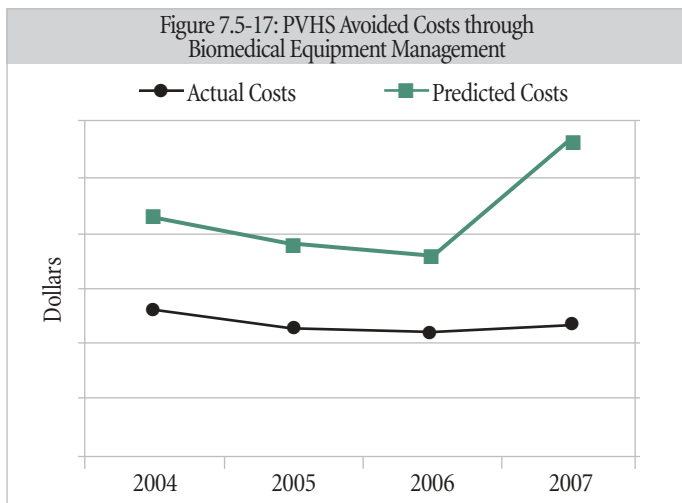
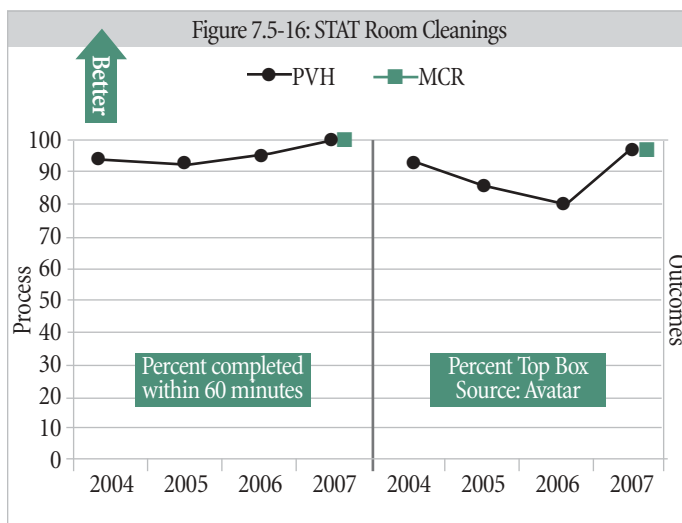
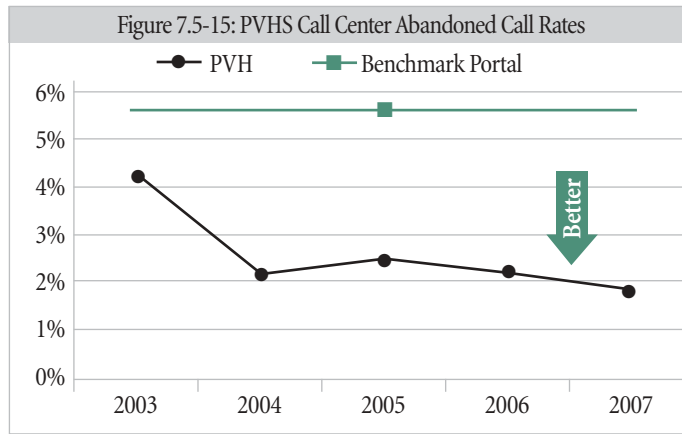


Figure 7.5-18: Department Cycle Service Level

	2003	2004	2005	2006	2007
PVH	99.1%	99.0%	99.1%	98.9%	99.1%
MCR	n/a	n/a	n/a	n/a	99.3%
Benchmark	n/a	n/a	n/a	n/a	99.8%

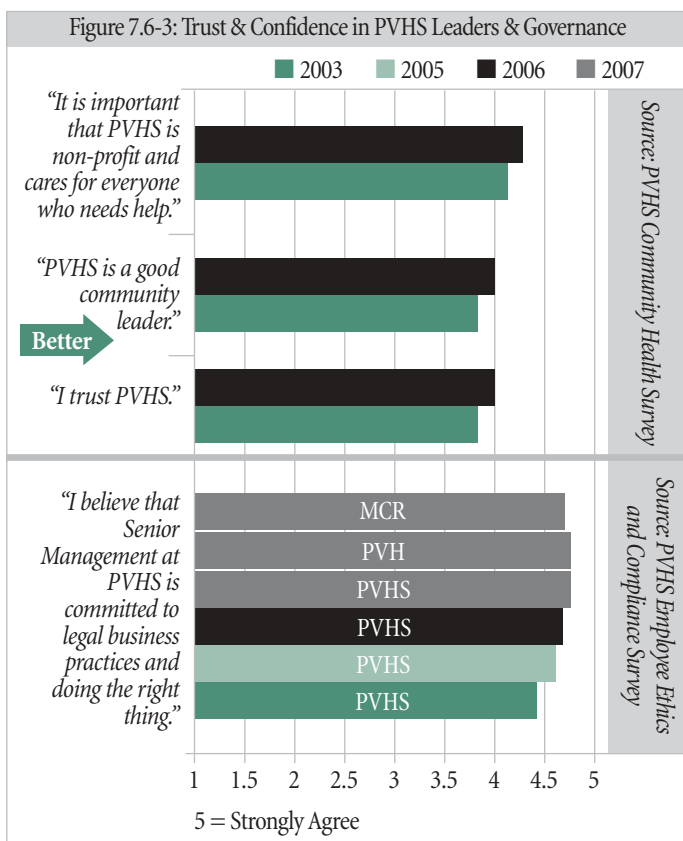
Figure 7.6-1: System BSC Measures

Strategic Objective #1	Results	2007
Voluntary Staff Turnover Rate	Figure 7.4-11	Green
Vacancy Rate	Figure 7.4-13	Blue
Employee Culture Survey	Figure 7.4-1	Green
Completion Rate for Performance Reviews	Figure 7.4-10	Green
<b>Strategic Objective #2</b>		
Primary Service Area Market Share	Figure 7.3-8	Green
Outpatient Equivalent Days	Figure 7.3-11	Blue
<b>Strategic Objective #3</b>		
EHR Outcomes	7.5 (text)	Green
<b>Strategic Objective #4</b>		
Physician Connectivity	7.5 (text)	Green
Equity Earnings from Joint Ventures	Figure 7.5-1	Blue
<b>Strategic Objective #5</b>		
Patient Satisfaction	Figure 7.2-1	Yellow
National Patient Safety Goals	Figure 7.1-12	Green
Critical Medication Errors	Figure 7.1-11	Red
Inpatient Falls	Figure 7.1-17	Red
VAP Rates	Figure 7.1-10	Green
CMS Core Measures	Figure 7.1-1	Yellow
<b>Strategic Objective #6</b>		
Net Income: Actual to Budget	Figure 7.3-5	Blue
Financial Flexibility Index	Figure 7.3-2	Blue
<b>Blue</b> – World Class / Stretch Goal	<b>Yellow</b> – Needs Monitoring	
<b>Green</b> – Acceptable	<b>Red</b> – Needs Immediate Attention	

Figure 7.6-2: Compliance & Legal Measures

Measure	Goal	2003	2004	2005	2006	2007
% of staff who sign the Code of Conduct	100%	100%	100%	100%	100%	100%
% staff who receive compliance training	100%	100%	100%	100%	100%	100%
Licensures and accreditations	Meet or exceed targets	100%	100%	100%	100%	100%
Physician contract review	100%	100%	100%	100%	100%	100%
Sanctions/adverse actions against PVHS for HIPAA violations	0	0	0	0	0	0
Response time to compliance concerns*	Within 72 hrs.	n/a	n/a	n/a	100%	100%

\*New measure in 2006



organization is not meeting goals. During SDD [2.1a(2)], senior leaders evaluate and adjust outstanding plans from the previous year, relative to the strategic plan. For instance, based on the 2005 BSC, the VP of MSP adjusted marketing plans for key service areas, and SMG established the Cancer Center Steering Committee to begin development of a cancer center.

**7.6a(2)** PVHS continues to live its values and demonstrate social responsibility, as indicated by key metrics related to ethical behavior (Figure 7.6-2). Community trust in PVHS remains high, as does employee trust in senior leaders (Figure 7.6-3). To ensure a just-cause workplace, the organization also monitors whether managers are living the values. In response to the Employee Culture Survey question, “It is okay to report errors or mistakes in my department,” staff responses are positive and

Figure 7.6-4: Drug, Criminal, Education, & OIG Screens

2002	2003	2004	2005	2006	2007
100%	100%	100%	100%	100%	100%

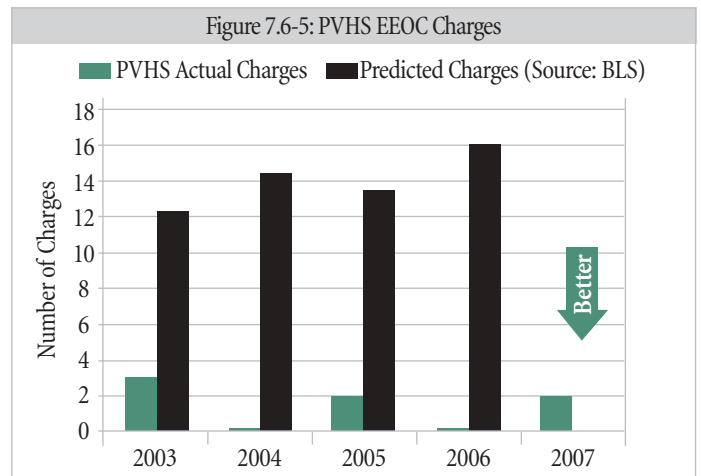


Figure 7.6-6: Disciplinary Action for Patient Privacy Violations

	2003*	2004	2005**	2006	2007
Disciplinary Actions	0	2	7	7	13
Number of Staff	2,502	2,802	2,802	3,109	4,090

\* HIPAA law passed  
\*\* New PVHS Policy: Staff receive Final Warning or Termination for HIPAA violations

improving: On a scale of 1 to 5 with 5 being best, this question scored 4.36, 4.45, 4.49, and 4.53 for the last four surveys (listed chronologically, earliest to most recent). Also, on the last MSA survey, the first-time, PVHS-customized question, “I can talk to management about patient safety concerns,” scored 1.8 on a scale of 1 to 6 with 1 being best. Additionally, third-party administered exit interviews ask departing employees, “Were you ever asked to do anything that you believe was illegal or unethical at PVHS?” HR takes appropriate action to follow up on positive responses.

To further support the value, Integrity, PVHS screens 100 percent of all potential hires for drug usage, criminal record, highest educational level, and OIG exclusion (Figure 7.6-4), and 100 percent of new staff members and volunteers complete orientation, which includes training on the Code of Conduct [1.1a(2)]. Supporting the Equality value, PVHS EEOC charges remain well below the rate predicted for organizations of like size, despite significant staff growth in recent years (Figure 7.6-5). PVHS addresses breaches in ethical behavior with progressive disciplinary actions. To support the value, Confidentiality, PVHS continues to strengthen its policy governing patient privacy violations (Figure 7.6-6).

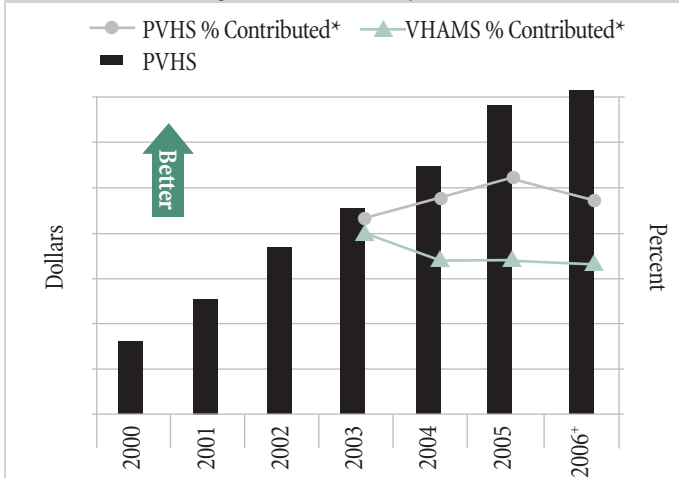
**7.6a(3)** Building on the core competency of financial stability (Figure 6.1-1) to overcome strategic challenges (Figure P.2-2), PVHS continues to demonstrate fiscal accountability. Staying on budget for large capital projects helps build stakeholder trust and demonstrates Integrity and fiscal responsibility. MCR, the biggest capital project for PVHS, opened on time and on budget. Profit per discharge (Figure 7.3-1), FFI (Figure 7.3-2), and

Figure 7.6-7: Financial Oversight by PVHS Board of Directors (Board members choosing top 2 of 5 responses)

	2002	2003	2004	2005	2006	2007
PVHS	100%	98%	100%	91%	96%	100%
National	n/a	n/a	n/a	84%	82%	82%

Source: Board Self-Assessment, The Governance Institute; top box comparison not available

Figure 7.6-8: Community Benefits



\*Community benefit as % of net patient revenue  
 \*2007 data available in June 2008

Figure 7.6-9: Community Case Management

		2003	2004	2005	2006	2007
Decrease in Visits*	Inpatient	50%	69%	62%	37.5%	43.6%
	ED	47%	53%	45%	61.5%	55.0%
Cost Savings	Inpatient	\$185,584	\$600,132	\$831,366	\$859,287	\$883,005
	ED	\$17,521	\$10,240	\$25,383	\$13,145	\$23,388

\*The patient had X% fewer visits in the 6 months following case management compared to the 6 months prior to case management.

equity earnings from joint ventures (Figure 7.5-1) also indicate financial responsibility.

PVHS contracts an annual audit of its financial performance by an independent audit firm. Throughout its history, PVHS has received clean, nonqualified audit opinions. Major areas of audit emphasis are: 1) accounts receivable, revenue, and allowances for uncollectible, contractual adjustments; 2) managed care capitation contracts and related liabilities; 3) joint ventures; 4) capital expenditures; 5) debt covenant compliance; and 6) review of internal controls. The auditors have had no disagreements with management. Also, in the rigorous, annual BOD self-assessment with the independent Governance Institute, 100 percent of PVHS BOD members respond with the top two of five possible boxes when asked about the BOD's role in financial oversight (Figure 7.6-7).

**7.6a(4)** PVHS has consistently achieved full Joint Commission accreditation — most recently in 2007 — and is in full compliance with all regulations and laws. The laboratory department earned Accredited with Distinction from the College of American Pathologists, receiving a two-year accreditation — the maximum period allowable under CLIA 88

regulations. In 2000 and again in 2004, PVH received designation as a Magnet Hospital by the American Nurses Credentialing Center. Currently, only about 110 of the nation's 6,000 hospitals are Magnet Hospitals, which puts PVH in the top 2 percent for its commitment to an area that is critically important to patient care. MCR is preparing for designation as well. PVH was the region's first trauma program to earn Level II designation from ACS and CDPHE; MCR now holds Level II designation from both agencies. The NICU holds Level IIIa designation from the Colorado Perinatal Care Council — a designation meaning PVH can care for some of the most critically ill infants. PVHS has had no critical OSHA or EPA fines.

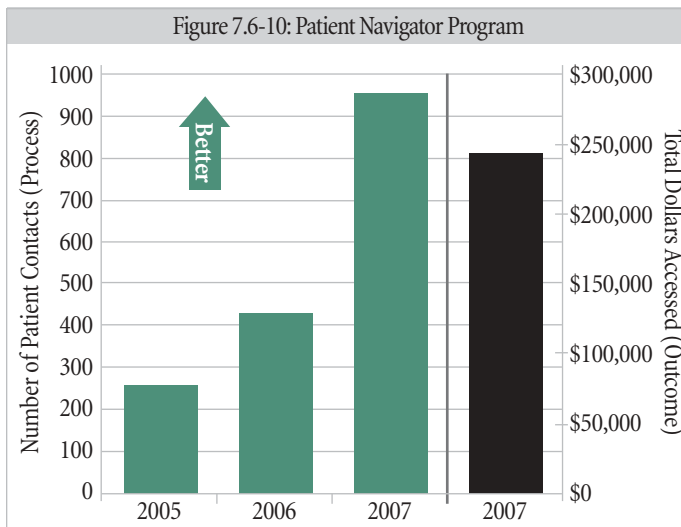
**7.6a(5)** With strong community roots and a non-profit mission, PVHS is committed to being a model organizational citizen in support of its key communities. Community benefits have increased more than 400 percent since 1999, placing PVHS in the top 5 percent of VHA Mountain States (VHAMS) member hospitals.

In 2006 (latest available data), PVHS absorbed \$62 million in unreimbursed care for patients enrolled in government-assistance programs and provided \$1.9 million in charity care. PVHS also offers a free Community Case Management program, which pairs advance practice nurses and social workers with high-risk, chronically ill patients. Prior to the program, these patients came to the ED for their care and often required lengthy hospitalizations. This utilization pattern negatively impacted their quality of life and meant significant costs for PVHS and government-assistance programs. The PVHS program has dramatically reduced ED utilization and inpatient admissions for these patients and resulted in significant cost savings (Figure 7.6-9).

To accomplish the PVHS mission and build relationships with referring providers and future patients, PVHS' two trauma centers (7.1) remain committed not only to treating injuries, but also to preventing them. Since the leading cause of trauma among PVHS patients is falls in individuals age 55 and above, PVHS launched a community fall prevention program. In 2007, the free program educated physicians and reached more than 4,000 seniors with educational materials,

a fall-risk assessment clinic, strength/balance exercise programs, vision and hearing screenings, medication reviews, or a home safety checklist/assessment. To address the growing number of injuries in teens and young adults, PVHS has formed a coalition of youth and youth-serving agencies to focus on motor vehicle safety — the leading cause of injury in this age group. Also, since more than one-third of the children treated through PVHS' trauma program are injured in motor vehicle or bicycle accidents, the Safe Kids Coalition — an interagency program coordinated by PVHS — provided education, car seat/bicycle helmet safety checks, or free/reduced-cost car seats and bicycle helmets for nearly 4,000 area children and their families in 2007.

To further support the mission and address a specific goal in the strategic plan (Figure 2.1-3), PVHS offers the Patient Navigator program. The purpose of this one-of-a-kind program is to remove barriers and improve healthcare access for newly diagnosed cancer patients, who typically face overwhelming care options and financial burdens. Utilization has increased dramatically since program launch in 2004, and



in 2007, navigators procured almost \$250,000 in patient financial aid through national and local grants (Figure 7.6-10).

To improve the health of staff and community members, PVHS initiated an effort among area employers to obtain Well City designation for Fort Collins from the Wellness Councils of America. To support this initiative, PVHS offers employers the Lifestyle Challenge — a program PVHS developed and piloted with PVHS employees in 2004. The innovative program, named VHA's Best Community Health Program, uses a team approach to help employees lose weight (Figure 7.6-11) and increase exercise. This innovative approach builds on the core competencies of partnering and engaging staff to improve employee health and support financial stability. Employees who increase their activity minutes to 150 or more a week each save their employer \$1,645 a year in decreased healthcare utilization and work-related injuries, as well as increased productivity, according to the National Center for Policy Analysis. PVHS has also rolled the program out to area employers, who have since implemented it at other facilities around the country.

PVHS also serves the community and builds relationships through the Aspen Club, which offers services such as Medicare counseling, reduced-cost blood tests, flu shots, and bone density screenings (Figure 7.6-12), for community members ages 50 and above.

The Aspen Club continues to grow (Figure 7.2-11), as does the Healthy Kids Club. The Healthy Kids Club offers after-school fitness programs in six Fort Collins and Loveland schools and monthly kindergarten lessons in 11 schools. In 2007, 950 youth participated in the Healthy Kids Run Series, and 8,700 students from 48 schools joined the Schools on the Move Challenge. The program continues to receive inquiries from organizations that would like to implement Healthy Kids Club across the country.

Another PVHS program that benefits the community and builds customer relationships [3.2a(1)] is Poudre Valley Nurse Line (Figure 7.6-13). Community members can call this around-the-clock service and speak to a nurse at Mayo Clinic for free, and PVHS pays the bill, which totaled more than \$500,000 in 2007. In more than half the phone consultations, the nurse recommended either a lower or higher level of care than the caller had intended to seek. By identifying the most appropriate level of care, the program strengthens the PVHS core competency of financial stability.

**Figure 7.6-11: Lifestyle Challenge**

		% with BMI > 25	
		at Baseline	at Completion
PVHS	2004	68%	65%
	2005	64%	63%
	2006	62%	60%
	2007	60%	51%
Employer 1	2007	71%	64%
Employer 2	2007	85%	55%

**Figure 7.6-12: Examples of Aspen Club Services**

	2002	2003	2004	2005	2006	2007
Blood Tests	2,177	2,718	3,124	3,027	3,462	4,169
Flu Shots	1,270	1,134	780 <sup>1</sup>	1,247	2,044	1,242 <sup>2</sup>
Bone Density Screening	416	1,607	1,135	1,502	1,185	1,360
Medicare Counseling	395	391	601	3,952 <sup>3</sup>	2,019	1,792

<sup>1</sup> National vaccine shortage. <sup>2</sup> Vaccine offered at more community clinics. <sup>3</sup> Introduction of Medicare Part D; PVHS responded to VOC with increased services.

\* Competitor does not have a seniors organization

**Figure 7.6-13: Poudre Valley Nurse Line**

	2006	2007
Call Volume	6,036	8,949
Community Benefit	\$374,232	\$554,838
% of calls that resulted in more appropriate resource utilization	58.7%	60.7%

Source: Mayo Clinic Health Solutions

**Figure 7.6-14: Recycling Results**

	2003	2004	2005	2006	2007 PVH	2007 MCR
Total Tons	55	159	197	286	291	89
# of Trees Saved	936	2,705	3,350	4,857	4,994	1,509
Pounds of Air Pollution Avoided	3,302	9,547	11,823	17,144	17,450	5,326
Landfill Tons Avoided	182	525	650	943	960	293

Source: Waste Not Recycling

PVHS also offers the Nurse-Is-In program, which provides free drop-in nurse consultations in Fort Collins, Loveland, and Windsor. After a 2005 pilot, the program served 1,456 people in 2006 and 2007.

Responding to the VOC in PVHS' key community of Loveland (Figure 1.2-2), MCR is on track to become one of the nation's first hospitals to receive gold LEED (Leadership in Energy and Environmental Design) certification through the U.S. Green Building Council (USGBC). The 2006 international USGBC conference featured MCR, which recycled 79 percent of its construction waste and implemented numerous innovative "green" concepts. Additionally, PVH has held the Energy Star award from the EPA since 2003 and is a Silver Partner in the City of Fort Collins Climate Wise Program; recycling efforts at PVH continue to increase (Figure 7.6-14). To recycle equipment and supplies no longer suitable for use by PVHS, the organization donates them to Project Cure to help hospitals and clinics in developing countries, with contributions valued at almost \$1 million over the past five years.