MISSOURI QUALITY AWARD

SSM HEALTH · CARE℠

Information Center

2005 Missouri Quality Award Application Summary

CATEGORY 1 – LEADERSHIP

1.1 Senior Leadership

SSM Health Care's (SSMHC) (System) Board of Directors sets the organization's Vision Statement and affirms the mission and core values based on input from employees throughout the System. SSMHC's mission statement was developed based on input received from over 3,000 employees, including representation from SSM Information Center (SSMIC). SSMIC and its leadership, as a member of the System, adopt this vision, mission and core values as its own.

These values are deployed throughout the System, and are reinforced by annual visits by the System President and CEO. SSMIC's senior leaders are responsible for deployment of the values at SSMIC. Senior leaders provide two-way communication of organizational values to all employees through a variety of methods, including town hall meetings, SSMIC's intranet, the IC Employee Council (ICEC), required training programs, e-mail, leadership planning sessions with directors, manager meetings, and open dialog. In doing so, they emphasize the need for employees to create value for customers and stakeholders, balancing conflicting customer requirements.

Annual educational sessions are conducted at each SSMHC entity to ensure deployment of the mission and core values statement to all employees. A common tool kit, called a "meeting in a box," was developed to assist facilitators in delivering a consistent message across the entire system. The tool kit includes such items as videos and brochures, and is used throughout SSMHC. Five characteristics of exceptional health care have been identified, and in 2005 special emphasis was focused on customer satisfaction and patient centric care. Several system-wide activities are underway to assure that the vision of the organization is achieved, such as "Achieving Exceptional Patient Care" (AEPC) and "Achieving Exceptional Safety" (AES), and SSMIC senior leadership participates on these committees.

SSMIC is a mission-and-values-driven organization. Executive leadership is responsible for ensuring that SSMHC's mission and values are communicated and deployed. As part of this deployment SSMIC (in accordance with SSMHC policy) has established a mission awareness team (MAT), made up of employees to emphasize the mission and values internally and demonstrates them to the communities we serve. In addition to executive sponsorship, senior leaders actively support the activities of the MAT, and maintain a presence at all MAT events.

SSMIC's senior leadership deploys organizational values and performance expectations, as well as short-term and long-term directions, to all employees through an organization wide program called "The Passport," which evolved from SSMIC's internally developed Strategic Connection process. Each SSMIC employee and department develops individual goals that are strategically linked to the goals and initiatives of SSMIC and SSMHC. Each employee, with their manager, develops a passport that displays each initiative and the link to higher-level goals is displayed. The same process is then completed by each employee at the individual level. In addition to the individual, departmental and IC goals, each passport contains the SSMHC mission statement, SSMHC values, and the five characteristics of exceptional health care. This process clearly links the individual employee's job with the mission of the organization. The employee development process is integrated with the Passport process and places further emphasis on the importance of these goals and their linkage to the mission of SSMHC. Quality Principles and the mission and values are posted in conference rooms throughout SSMIC.

A weekly e-mail newsletter called SSM Link is distributed to the SSMHC executive leadership group. This newsletter contains information of interest to the organizations executive leaders, including industry trends; best practices, learning opportunities, and market news. This communication tool was specifically designed for this audience. In addition to industry news, it also ensures that these leaders are receiving regular updates on news and information specific to SSMHC's values, performance expectations, and short-term and long-term strategic directions. At SSMIC, senior leaders send this information on to all managers. SSM Link and Network, a bi-monthly system-wide newsletter, is also available on the intranet site.

Senior Leadership is expected to reflect the mission, vision, and values of the organization in their personal actions. In addition to meeting the established requirements as outlined in the SSMHC Executive Leadership Handbook, senior leaders actively promote the activities of the MAT, the Employee Council, the Corporate Responsibility Program, and the system-wide quality improvement teams and initiatives. Embedded in the job description of each senior leader are expectations that they impart the philosophy, values, mission, and vision of SSM Health Care. They are also expected to facilitate the integration of values in CQI activities; understand, embrace and practice the principles of CQI; understand and exemplify the philosophy and values of the Franciscan Sisters of Mary and SSMHC; They must also personally demonstrate examples of living the principles of continuous quality improvement whereby decision making is driven by data, and customer-supplier relationships are facilitated both within and outside the System.

The Code of Ethics is sent to key vendors and all consultants or contractors who have staff working for SSMIC. As part of the vendor negotiation process vendors also are sent the Standard of Ethical Conduct so they know what is expected of them in their dealings with SSMIC.

SSMIC has set a goal of 100% compliance with all rules and regulations, as well as strict compliance with ethical business practices. Annual training relating to ethical behavior and compliance is mandatory for all employees, and all employees are educated on-line on the Corporate Responsibility

Program (CRP), which provides a process to report possible unethical business practices anonymously.

Policies and procedures are in place and have been communicated to all employees that deal with vendors detailing acceptable behavior and conduct when interacting with vendors or partners. These policies cover such areas as what gifts are acceptable and solicitation of donations. All employees with the authority to initiate transactions or influence purchasing decisions sign a conflict-of-interest form annually disclosing any potential conflicts.

SSMIC senior leadership ensures sustainable operations through a planning process, that establishes a clear vision and an alignment of people, processes, and resources towards achieving the goals of the organization. Senior leaders cultivate relationships with employees and customers. High levels of satisfaction must be achieved for the organization to grow and prosper. Applications and services must constantly be improved to meet the changing needs of our health care provider customers, and therefore senior leaders provide an environment of partnership with vendors to assure that we have the information on the newest advances in the IT field and provide employees with the opportunity to acquire and share knowledge on new applications and technologies.

SSMIC has embraced the CQI principles and processes, which are strongly promoted by SSMHC executive leadership and indoctrinated throughout the System. One of the basic tenants of CQI is that quality is achieved through people and can only be recognized if the people are empowered to implement improvements. Employee and customer satisfaction issues are discussed at Administrative Council (AC) and manager meetings and used to identify areas of concern and potential improvement. As these are identified, action plans to facilitate the improvement or address the concern are identified. Depending on the issue, these action plans may be as simple as a communication back to a customer or may be more involved, initiating a project or the formation of CQI teams.

Project managers have the responsibility to manage projects to project plans. This often requires coordination of resources from multiple areas, and SSMIC Professional Project Management (PPM) processes are designed to support the project manager throughout the project as well as provide a reporting mechanism, the ability to adjust to changing customer needs, and a means for issue escalation.

The culture promoted by SSMIC leadership is one of innovation, and programs are in place to solicit ideas for improvement from all employees. Examples include HR Solutions, the Employee Council and leadership's open door/easy access practice. The organization is able to act with agility because its leadership cultivates a culture of empowerment and local autonomy; invests in technology to provide timely information; and operates under a governance structure that fosters decision-making at the level of greatest impact. SSMHC also uses several mechanisms that offer a way to address change rapidly.

SSMIC executive leaders emphasize learning and innovation as key factors in delivering quality services to our customers as well as significantly improving employee satisfaction. The education model described in category 5 provides the tools needed to assure that the educational needs of the organization are met. All employees are required to attend CQI training, and managers are required to also attend CQI Leadership training. Along with establishing business goals, the employee development process also requires the setting of measurable personal development goals. Attendance of seminars and continuing education is strongly supported, as is membership in professional organizations. In addition to participation in multiple professional organizations, SSMIC participates in application specific user groups such as Insight of McKesson, our primary clinical system vendor and America's SAP User Group (ASUG), a user group for our enterprise resource planning application. Brown Bag Lunch-and-Learn sessions provide employees with an opportunity to learn about topics of interest, such as HIPAA and MQA, and an opportunity for those attending conferences and seminars to share what they learned with others throughout the organization. Participation in the SSMHC Malcolm Baldrige National Quality Award process and the SSMIC Missouri Quality Award process are important sources of organizational learning. The applications as well as feedback received through these processes are posted on the intranet and all employees have access and are encouraged to review these materials. SSMHC hosts "Showcase for Sharing," a best practices sharing conference with participation of all entities to foster learning across the System.

Staff learning and innovation is also encouraged by access to the System's intranet and Internet; Web links to sources of clinical information (e.g. Micromedex, MD Consult and PubMed); posting of monthly functional improvements on the electronic bulletin board (Lotus Notes); improvement project storybooks posted on the internal e-mail system and intranet; Network employee newsletter; system-wide meetings of functional areas; SSMHC-sponsored electronic and traditional educational programs; tuition reimbursement/educational assistance; and conference reimbursement.

Annually SSMIC conducts a daylong education session regarding advances in information technology and its impact on SSMHC. Members from around the System as well as SSMIC employees are invited to attend this session. Vendors and other industry experts address the audience regarding advances in technology, growth in industry segments, and expectations for the future regarding IT advances and adoption by the health care community. In 2005, due to the importance of the Project Beacon, this session was expanded to three days and was focused on evaluating the product offerings of the top three EHR vendors.

In addition to providing staff with the opportunity to grow through education and reimbursement programs, SSMHC fills positions with internal candidates whenever possible.

This provides employees with advancement opportunities and maintains the critical knowledge acquired by these employees as they are promoted to higher positions within the organization.

In addition to encouraging career growth and development, SSMHC also recognizes the importance of ensuring that employees remain well informed. Senior leaders use a variety of forums to effectively communicate with employees. These include quarterly town hall meetings, departmental meetings, e-mail, SSMIC's intranet, open door practices, Showcase for Sharing and the annual education day. There are several mechanisms in place to assure that communication flows both ways. In addition to the above where encouragement of open dialogue and the creation of an environment where employees can openly discuss issues with supervisors and senior leadership are promoted, the Employee Council was formed to provide employees an additional means to provide feedback to senior leadership on issues affecting them. Results from the employee satisfaction survey process are also used to clarify employee concerns and identify action plans. Teams may be formed to address issues identified through these processes and have employee representation to assure that the employee concerns are heard when solutions are developed.

In order to empower and motivate employees throughout the organization, all members of SSMIC management have taken leadership training to make them more effective leaders. AC members become more effective leaders through the leadership training as well and also benefit from coaching sessions with Collarelli and Meyers, a career development professional services organization. Employees all receive CQI training. Employees are encouraged to provide input into implementation of process improvements, and number of improvements implemented is a common goal that can be found on many of the employee passports. Senior leadership supports and promotes employee recognition programs, and employees that have contributed to teams or performed above and beyond what is expected may be recognized at town hall meetings. Positive feedback from customers regarding the performance of an employee is recognized, and the STAR program was initiated to provide employees with the opportunity to recognize fellow employees whose efforts have been particularly helpful or appreciated.

The organization's short-term and long-term strategic directions are set through the Strategic, Financial, and Human Resource Planning Process (SFHRPP). As part of this process, SSMHC's Innsbrook Group Planning Session establishes the strategic direction of SSMHC. This provides direction for SSMIC's strategic plan, which is formulated by its Administrative Council under the guidance of the System Information Management Council (IMC) which is supported by the Clinical Transformation (CTESC) and Administrative Information Systems (AISESC) Executive Steering Committees. These multidisciplinary subcommittees include members of SSM System Management, nursing and physician representation, and representation from each network in the System, as well as SSMIC. These subcommittees recommend strategies to the IMC, which then defines and determines SSMHC's IS strategies. These strategies are incorporated into SSMIC's strategic plan and long-term direction. This plan will encompass action plans, including measurements of success, designed to deliver value to our customers and advance the goals of the organization. A well-defined project management process and a 90-day plan tool are used to ensure an effective implementation of the action plans and provide a reporting mechanism regarding progress.

The diverse representation of the CTESC and AISESC and the variety of listening posts detailed in categories 2 and 3 ensures that the needs of all customers are considered. Preparation of the plan includes consideration of human resource issues and employee and community needs. Customer, employee and community needs, financial impact to the System and utilization of limited resources are all weighed against each other, resulting in a balanced plan that provides maximum benefit to the organization for the costs expended.

The Performance Indicator Report (PIR) is utilized to review performance and action plans implemented to adjust when performance is not meeting expectations. Performance is reported back to the IMC, which also may request specific actions if determined appropriate. 90-day plans and the project management reporting process provide linkage back to the strategic plan and provide focus on actions to achieve the objectives of the organization.

1.2 Governance and Social Responsibility

The SSMIC governance structure is designed to assure that the System's resources are utilized in the most effective manner, allowing the System to achieve its mission. The president of SSMIC reports to the COO/Executive Vice President of SSMHC. Measures of success are established for SSMIC, and these are reviewed with the COO, and progress on achieving these measures is reviewed by the IMC, which serves as SSMIC's governance board and to whom SSMIC is accountable. Variances and action plans are reviewed at designated Administrative Council (AC) meetings by the president and vice presidents of SSMIC. Bi-weekly project management status reports are posted on the SSMIC intranet page, and updates on project issues and progress can be viewed by all SSMHC stakeholders. Internal audit reports are signed off on by SSMIC senior leadership and reviewed by System Management.

The operating and capital budget of SSMIC is approved annually by the IMC, and projects requiring capital exceeding $500,000 are reviewed and approved through the Capital Allocation Process. Monthly reporting of variances is performed both internally by IC managers, and also reported externally to System Finance, where action plans are required to correct any negative variance greater than 5%. Financial results are reviewed by the AC, and managers have a goal of achieving operating results within a range of 0% positive 3% of planned controllable expense. As a not-for-profit organization, SSMHC is not required to comply

with Sarbanes-Oxley but has chosen to adopt the compliance requirements. Spending on capital projects and results of the project versus projections are reported to System Finance via the intranet. Accounting functions are handled independently, and separation of duties assures that no one with the authority to approve payment to vendors processes the payments.

SSMIC uses the Catholic Healthcare Audit Network (CHAN) for internal audit functions, and KPMG provides independent external audits for the System, including SSMIC. KPMG is not engaged for consulting assignments.

SSMHC senior leaders review the results from the PIR, HR Solutions employee satisfaction process, customer satisfaction surveys, and Baldrige and state quality award feedback to improve their effectiveness and the effectiveness of management throughout the organization. In addition to the periodic surveys, satisfaction ratings and comments are gathered and reviewed from multiple events, such as the town hall meetings. The review of key indicators tells them whether executive leaders are meeting the SFHRPP. The employee and physician survey results indicate satisfaction and dissatisfaction within the workplace and whether an environment of empowerment, innovation, and learning is being promoted at the various System entity sites. The feedback provides a comprehensive evaluation of the effectiveness of the entire leadership system. When dissatisfaction is detected, executive leaders address it quickly through a plan-do-study-act (PDSA) cycle. Data and information gathered from these various sources are correlated and integrated for inclusion in the SFHRPP cycle.

The president of SSMIC has an annual review meeting with the Executive Vice President/COO of SSMHC to assess performance. Feedback gathered through the Leadership Development Process and the 360-degree evaluation is discussed. In addition to this annual meeting, monthly meetings are held to discuss progress towards achieving the objectives of the organization. This same process is followed by the members of the Administrative Council, who meet with the president for their reviews. Administrative Council members also receive feedback from their direct reports through responses to the employee satisfaction survey and periodic meetings.

The system-wide Leadership Development Process is a key approach to improving leadership and management effectiveness.

SSMIC, as a member of SSM Health Care, addresses societal requirements expressed in regulations, laws, and accreditation through several mechanisms. These include participation in the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) assessment, of which use and security of information systems provided by SSMIC plays a critical role; a voluntary system-wide Corporate Responsibility Process (CRP) which has been fully deployed at SSMIC; Health Insurance Portability and Accountability Act (HIPAA) project, of which confidentiality of patient health information is a key ingredient; and extreme diligence in maintaining software compliance. Key measures in this area are 100% compliance with dates as required by HIPAA, 100% compliance with software licensing system-wide as determined by annual software audits, and voluntary compliance with Sarbanes-Oxley requirements.

SSMHC's and SSMIC's executive leaders stay abreast of public concerns by reading professional reports, journals, and national studies and through informal public contacts at the national, regional, and local level. Participation on the boards of multiple organizations also provides valuable insight into trends and events affecting health care and IT.

SSMHC proactively addresses public concerns through the use of teams and clinical collaboratives. For example, SSMHC appointed a HIPAA Project Team to address compliance with the security and privacy rules under the Health Insurance Portability and Accountability Act. SSMHC has policy guidelines regarding patient privacy rights in accordance with the federal legislation. Six sub-teams were formed: privacy, technical security, physical security, administrative security, EDI/national identifiers, and education/training. The HIPAA Project Team conducted a gap analysis at each entity; developed a HIPAA toolkit for education; and developed standardized system-wide policies and procedures; redesigned a compliant technical information infrastructure; and provides security and privacy education and training.

New technologies that allow the implementation of an Electronic Health Record will change the way healthcare is delivered by providing information at point-of-care, dramatically reducing medical error and increasing patient safety. The CTESC is in place to assure an effective implementation and provide a structured process for prioritization of these systems.

SSMIC's applications are designed to promote the patient-centric culture of SSMHC. While most of our applications are used by hospital personnel, these applications directly impact the quality of care delivered to patients and their families. The listening posts described in the planning process identify concerns regarding these applications and their use. Participation on several previously mentioned system-wide quality committees, such as the AEPC and AES, also provide insight to senior management as to ways that SSMIC applications and services can impact patient care and improve the health of our communities.

In 1998, SSMHC implemented a voluntary system-wide organizational ethics effort called the Corporate Responsibility Process (CRP), designed by a CQI team to address societal requirements associated with regulatory, legal, and ethical compliance in providing health care services. Key practices include a confidential free Helpline for reporting concerns or issues; thorough training for all employees and key vendors; education to proactively ensure ethical behavior; formal reporting mechanisms to ensure ethical policies are strictly adhered to; swift process for dealing with violations;

and internal audit functions. A corporate responsibility contact person has been named at each entity. The CRP aligns with the elements of the national Office of Inspector General's (OIG) model compliance plan, but goes beyond compliance with the model plan to ensure that SSMHC values are reflected in all work processes. Employees are asked to raise questions about any part of their job they believe is not in line with SSMHC's mission and values as well as policies or CRP guidelines. All reported issues are investigated and appropriate action taken in a timely manner. KPMG, which conducted a system-wide audit in 2000, identified SSMHC's CRP as a best practice nationwide. This program has been fully integrated at SSMIC and has undergone multiple improvement cycles.

Ethical practices are also ensured through an ethics section in the orientation of new employees; System policies such as the Code of Ethical Behavior, conflict-of-interest, Corporate Responsibility, Equal Employment Opportunity/Affirmative Action, Confidentiality of Information, Sexual and Other Harassment, and Staff Rights to Refuse to Participate in Aspects of Patient Care; CRP confidential Helpline; and employee grievance process, which allows for reporting of unethical behaviors. Ethical practices are reinforced through education required for all employees on CRP and other ethical issues and the development process, which requires all employees with influence over purchasing decisions to review and sign the Conflict-of-Interest Questionnaire each year. In addition to the above practices, departing employees are provided an opportunity during exit interviews to comment on or identify any questionable conduct or ethical breaches, and to date no issues have surfaced.

In addition, SSMHC's contract review process ensures ethical, legal, and regulatory practices are adhered to in stakeholder transactions and interactions. Ninety percent of all the System's contracts are reviewed by the manager of contract review, and SSMIC contract review is conducted under this policy.

Consistent with SSMHC's vision, mission and values, and culture, improving the health of the community is one of SSMHC's areas of ongoing emphasis. Each SSMHC entity is required to actively engage in one or more community projects and incorporate healthy community initiatives into its strategic plan. In response to Baldrige feedback in 2000, SSMHC is emphasizing measurement of Healthy Communities projects. A progress report on all projects and their results is reviewed annually by the Board of Directors. Use of a system-wide tracking system called Community Benefit Inventory for Social Accountability (CBISA), a software application that allows SSM to record, track and report on community benefits provided to the communities we serve, provides the ability to measure our efforts against our Mission Statement, support our tax-exempt status, and provide the communities we serve with an extensive description of our ministry.

SSMIC employees participate in numerous activities to improve the health of its community. The primary activity that SSMIC has established and is reporting on as part of the measures in the SFHRPP is the healthy community project of IS education provided to a segment of the population that would otherwise have limited access to the opportunity to become computer literate. SSMIC has partnered with Mathews-Dickey Boys' and Girls' club to deliver 12 sessions per year on different aspects of use of a computer. This activity was chosen after review of several alternatives based on the IC areas of expertise and ability to impact positive effect on the community. SSMIC also sponsors several annual activities designed to benefit our communities. Community workdays have been conducted in each of the last six years. These days are set aside for SSMIC employees to work with selected charities, performing maintenance and improvement activities, such as painting and cleanup at homes in the local community. Active campaigns are in place for the American Heart Association, with the IC providing teams of walkers to the annual fund raising event, and the United Way. A contribution program for employees to donate money to support SSM hospitals and programs has also been established. Blood drives are conducted and promoted by leadership.

CATEGORY 2 – STRATEGIC PLANNING

2.1 Strategic Planning

2.1a(1,2) SSMIC's Strategic, Financial and Human Resource Planning Process (SFHRPP) combines direction setting, strategy development, human resource and financial planning. The plan is developed for a three-year period (long-term horizon), with increments of one-year segments (short-term horizon), shorter-term projects, and action plans identified to achieve the goals. The three-year horizon was determined to be the time required to achieve major objectives. Due to the rapidly changing environment in health care and IT, the one-year segments (and 90-day-plans) are required to provide agility. The SFHRPP integrates Quality Principles and stresses planning as a way of learning more about customers and responding to their needs and expectations. The SFHRPP ensures that SSMIC sets strategic goals clearly oriented toward helping SSM entities demonstrate performance improvement. Project 2014 established a 10-year plan that will be used to assure that projects and initiatives approved in the shorter planning periods and limited resources are allocated to activities that are consistent with achieving the long-term vision of the organization. This process identified performance levels necessary to sustain the organization and achieve the desired growth. Performance is closely monitored against this plan and actions put in place as appropriate to drive performance to levels required to achieve the goals of the organization.

SSMHC's defined characteristics of exceptional health care provide the foundation upon which SSMIC's plan is built. System strategic initiatives are based on the vision and mission statements to provide the framework for the SFHRPP. The SFHRPP links the System's focus on patients, other customers and markets (Category 3), information and analysis (Category 4), staff focus (Category 5), and process man-

agement (Category 6). The SFHRPP begins when a vision of the future, called the Vision Statement, is reviewed each year by SSMHC's Board of Directors. The Vision Statement and Mission Statement guide the Innsbrook Group, which consists of System, network and entity senior leaders, when it annually assesses key challenges and sets the system-wide strategic initiatives.

The System Information Management Council (IMC), in conjunction with the Clinical Transformation (CTESC – for clinical IS needs) and Administrative Information Systems (AISESC – for all other needs) Executive Steering Teams, and the SSMIC Administrative Council (AC), reviews the system-wide strategic initiatives and determines key IS strategies to assist SSMHC entities with the implementation of these strategies. The System initiatives determine what is important to achieve SSMHC's mission, and the current trends in health care and information technology are analyzed to determine opportunities to help achieve these initiatives. SSM entity and network plans are reviewed for areas that may be benefited by IS. Functional Quality Teams (FQT - user group teams) also provide input regarding enhancements that may be beneficial to their individual application. IS strategies are developed based upon these factors. The direction provided by these IS strategies are then used to formulate the Information Center's strategic plan. The strategic plan sets measurable, three-year strategic goals and objectives that are necessary to achieve the desired future. The goals may cover any area but must include goals impacting customer and employee satisfaction, clinical outcomes, and financial performance. This process ensures that all stakeholder groups have the opportunity to provide input into the IT planning process, eliminating blind spots and missed opportunities to increase customer satisfaction and productivity.

Once goals have been developed, strategies, including projects and action plans to move these goals to fruition, are investigated. The strategies incorporate identified champions, completion dates, expected results, financial projections, human resource needs, capital requirements and intermediate objectives for measuring progress. Teams may be formed to address specific strategies and needs, such as the Nursing Informatics Committee, the Medical Informatics Committee, and the Web IMC to provide comprehensive representation of customers, management, IT technical staff, and the user community. These teams review recommendations from the groups they are formed to represent and investigate solutions and opportunities for improvements. Other opportunities are identified by the FQTs, which represent users for a specific application area, such as laboratory, pharmacy, or patient records, which are then investigated and analyzed by the product specialists at the Information Center. Regional and entity IMC's input is also incorporated into the process. Other strategically important requirements in such areas as IT infrastructure and network capabilities are researched by the SSMIC staff.

In order to accomplish the implementation of as many of these new projects as possible, support of existing applications and services are evaluated and areas where resources can be reallocated to support new applications and services identified. Over the last five years SSMIC has been able to reduce the budget required to support the existing application portfolio, freeing up additional resources that can be dedicated to the implementation of strategically important projects.

The impact of each of these strategies is summarized and incorporated into a list of potential projects. The strategic purpose of each is identified and linked back to the AISESC or CTESC goal it supports. Presentations regarding the benefits and costs of each strategy are presented to the AISESC or CTESC by a representative of the team proposing the project. The presentation will include:

- the strategic purpose of the project, what goals it relates to, and how the project achieves its purpose
- impact on SSMIC customers both at the System level and among the user base
- added functionality provided to user
- cost of services provided to customers
- use of System and hospital resources to implement
- technological impact, if appropriate
- regulatory or ethical implications, and community impact, if applicable

The AISESC or CTESC reviews each presentation and assesses the benefits and ability of each project to deliver progress towards achieving the previously determined goals and objectives. Approved projects are then recommended to the System IMC where the resource consumption of each project and impact on fees to the hospitals are weighed against benefits delivered. The projects are then balanced and prioritized to deliver the most impact in advancing the stated goals. The outcome of this process determines which projects will be included in the short-term business plan for SSMIC.

The new initiatives are consolidated with the strategies that allow SSMIC to maintain and optimize the existing portfolio of services offered to SSM hospitals to provide the basis of the Strategic, Financial, and Human Resource Plan. The planning process utilizes a standard plan format across the System. Through planning sessions, the SSMIC Administrative Council and Directors develop the strategic plan. One of the early steps of this process is the determination of the Strengths, Weaknesses, Opportunities, and Threats (SWOT) of the organization. The SWOT analysis is developed through a review of inputs from multiple sources, including customer and employee feedback and industry data. Based on this analysis, a strategic overview is developed for the next planning cycle, including an assessment of the current situation and how that situation can be improved. Also included is what changes are expected in the upcoming years, including new technologies and applications. The next section of the plan details specific goals of the entity to achieve the previously developed System goals. Every goal must have established measurements to determine success, and each goal is linked to the System goal it supports to assure

strategic alignment. Special emphasis is placed on Human Resource issues in a section for Human Resources.

To provide integration of SSMIC strategies to the SSM facilities, SSMIC conducts an Annual Education Day for System, network, entity, and physician executives as well as other key partners to discuss information system and data management needs for SSMHC in the coming year. In 2005, due to the importance and impact of Project Beacon, this session was dedicated to evaluation of Electronic Health Record applications and the functionality provided by the top three vendors as determined through the vendor selection process, as well as to gain educational insight into the technologies that are available to assist in the delivery of patient care. As part of the System Planning Process, SSMIC prepares assumptions and guidelines regarding IT initiatives that are sent to all SSM entities. This document gives specific information regarding SSMIC action plans and the impact and planning requirements at each facility and network.

One of the projects approved through the SFHRPP was the Data Protection project. This project recognizes the need for data protection across the spectrum of disaster planning and provides SSMIC the ability to continue to provide services to our customers in the event of any emergency.

The final phase of the planning process is presentation of the plan to System Management, after which it is consolidated into the System Strategic and Financial Plan and presented to the board of directors for approval. Consistent throughout the planning process is the incorporation of the use of CQI methodology. Seven CQI basic tools, which are used in planning throughout the organization, including evaluating options in setting the strategic initiatives, are taught in SSMHC's CQI 301 Team Leader Training course. This course is attended by all supervisors and managers. Many SSMIC staff is also encouraged to participate in the CQI 401 class, Facilitator Training.

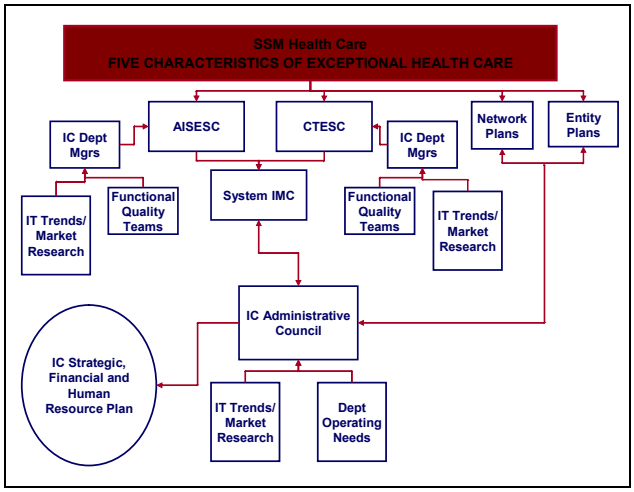


Figure 2.1-1 Information Sources Strategic Plan

The multiple information sources feeding the formation of SSMIC plan and the flow of this information is displayed in Figure 2.1-1.

Achieving the five characteristics of exceptional health care are the key initiatives of SSMHC and were developed at the System level to set the context for the 2005-2007 plan. These are exceptional clinical outcomes, exceptional patient satisfaction, exceptional employee satisfaction, exceptional physician satisfaction, and exceptional financial performance. All goals, projects, and action plans are linked to one of these initiatives or directly to the Mission Statement. As part of the SFHRPP, the Information Center develops specific goals and action plans relating to each of these areas.

The IMC planning process described in 2.1a is used to assure that strategic objectives are balanced to meet the short- and longer-term needs of the organization and all key stakeholders, as well as to address the challenges facing the organization.

2.1 Strategy Deployment

Action plans are developed in response to the IMC initiatives. Current state, including base technologies, is reviewed to determine where enhancements and improvements can be made to have the greatest impact on achieving the stated goals. Once areas of potential impact are identified, process changes and new technologies are investigated to determine the most effective method of achieving these improvements in a cost effective manner. Key criteria used in making this determination include cost and availability of resources, impact on staff and customer satisfaction, risk, including vendor reliability and developmental stage of technology (bleeding edge versus established systems), linkage to and ability to deliver progress toward meeting strategic initiatives, and amount of time required to implement and recognize benefits. A standard form is used to determine the resources, both human and otherwise, required for the plan to assure that all appropriate areas are considered. This process determines the resources to be allocated towards the plan if approved. Results of these investigations generate a list of potential projects and action plans that are to be considered for inclusion in the SFHR Plan. Action plans that have been determined to deliver desired results towards achieving goals that can be achieved through changes in process or with minimal costs are incorporated into the SSMIC base plan. Action plans and projects that have higher levels of costs are prioritized using an internal rating method that compares costs and benefits of each project. These action plans are then presented to the AISESC or CTESC, where the strategic benefits of each project are weighed against project costs, both financial and other. Projects and action plans which are determined to best meet the needs of the organization are then included in the plan, subject to adjustments that may be required to align SSMIC resource requirements with System resource availability as outlined above. These are balanced against the resource needs required to sustain existing operations, which are determined by the departmental planning process.

If a project is included in the plan, measurements for success are identified, a time line for deployment is developed, and a

champion named to oversee progress in deployment. Project plans, including coordination of resources, are developed in accordance with SSMIC's Professional Project Management (PPM) methodology, and the project is then reported on and tracked through PPM. Current status of all projects is available on the intranet. This includes major milestones of each project.

To keep attention focused on the goals and objectives, and to manage short-term action plans in order to achieve the overall objectives of the organization, each quarter employees involved in SSMIC projects, in conjunction with their supervisor, develop a 90-day plan that details what they will accomplish in the coming quarter. Each item on the plan is associated with the goal it links to. Measurements of success, the business value of the action item and the resource impact are identified. These plans are then forwarded onto the Project Management administrator, who accumulates them into a single database. At the end of each quarter, the previous 90-day plan is reviewed and reported on to the appropriate Vice President. Employees whose responsibilities focus primarily on daily operations and issue resolution, such as the Client Response Center and Computer Operation, are generally not expected to complete 90-day plans.

For major projects, there are semi-annual reports after projects "go-live" that compare recognized benefits from the project to those projected at the outset of the project. In addition to providing insight into projection methods that allow for improved projections on future projects, this process also provides a mechanism to assure that positive results can be sustained, and action plans developed, if performance does not continue to generate expected improvements.

Action plans are developed to meet each specific goal identified in the planning process, and milestones are identified for each action plan. These action or project plans often have to be modified to accommodate changes in customer requirements resource availability, and escalation in priority, etc. The PPM program includes a mechanism for changes in project plans due to scope change, customer resource change, etc. This process is utilized to assure that all stakeholders are apprised of the change. The modified plans are then deployed using the same processes that exist for other action or project plans.

Recognizing the importance of effectively allocating human resources to best advance each project and priority, HR planning is fully integrated into the System's and SSMIC's SFHRPP as a result of process improvements in 2000. Entity and network human resource and nurse executives provide data for the planning process as part of the Environmental and Market Assessment and Internal Assessment and actively participate in strategic planning sessions. HR needs and its financial impact are tied to each project during the SFHRPP to ensure adequate budget is correlated with strategy.

The need for Leadership Development courses was identified through the SWOT analysis, and is a key action item for 2005. Project Management and Staffing requirements are reviewed, and determination as to what is best to handled by contract personnel (shorter-term) or internal staff is evaluated, and action plans surrounding these are incorporated into the project plans.

Key performance measures are established for each goal that will be used in determining success in attaining the goal. These measurements are validated in a variety of manners, but primarily through input received from stakeholders, who are represented on the AISESC and CTESC and participate in the review of the goals and action plan development, including measures of success. They are also reviewed by System Planning and Finance, and are therefore aligned with the System goals and objectives. Inclusion in the consolidated System plan provides access to all other members of SSM, our customers. In order to communicate the System consolidated plan to all levels of the organization, a variety of communication vehicles are used, including memos, newsletters, department meeting agenda items, and presentations. Copies of the strategic plan are provided to boards, physician leaders, and managers.

Physicians have representation in the development of the IC plan through the Medical Informatics Committee and an extensive amount of physician consulting provided by representatives of the physician community. This same type of representation is provided by nurses through the Nursing Informatics Committee, which was formed to address issues raised by the nursing community. Entity and Regional IMC's input is reviewed to assure that all needs are considered. In addition to the measurements established through the strategic planning process, operation key indicators are established, tracked and results reported. These are communicated and relevance established through the service letter process, which is sent annually to each customer and establishes the parameters and responsibilities of each party. Key indicator results are communicated quarterly to each SSM customer.

SSMIC uses its Passport process to deploy strategic initiatives and action plan goals to all employees and to align network, entity, department and individual plans with overall organizational strategy. See the description of the Passport in Category 1. The Passport links the employee's work to the department's goals and to the goals of the department, entity, network, and System.

SSMIC's key measures and indicators are based upon industry practices and measures. The organization tracks IT spending as well as spending trends against what is common in both the health care and the general IT areas. The primary factor used in this determination is percent of budget dedicated to IT. While this measurement varies greatly from organization to organization, SSMIC is consistently in the lower quadrant of spending. The migration to an Electronic Health Record will lead to increases in these percentages over the next 6-8 years, a trend that will also be experienced by many in the health care industry.

Customer satisfaction is measured by an internally developed survey that has been statistically verified to be accurate, and the trend of increases in customer satisfaction that have been experienced over the past several years is expected to continue during both the short- and long-term plan periods. Because the survey is internally developed, comparisons to other organizations is difficult, but the use of an external firm to perform a benchmark on SSMIC satisfaction levels was conducted in the past and ranked SSMIC results as among the leaders in the industry, and SSMIC results have shown marked improvements from the satisfaction levels at the time of the study.

As part of the planning process, costs are also compared to historical levels. While IC costs, both operating expense and capital, have shown a steady increase (as is consistent with most IT organizations), SSMIC has been able to demonstrate that costs devoted to the maintenance and delivery of the existing systems steadily declines with no negative impact on satisfaction. The increases are attributable to increases in the services and technologies offered to our customers. SSMIC will continue its efforts to make additional resources available for new application, and this trend is expected to continue throughout the plan years, although at reduced rates than those recognized in the past.

Continued improvements in the project management processes will lead to better management of projects, and the goal of 100% of major projects delivered on time will be maintained.

CATEGORY 3 - CUSTOMER AND MARKET FOCUS

3.1 Customer and Market Knowledge

SSM Information Center, a technology provider, is a service-oriented entity using enabling technology to meet the strategic needs of SSMHC.

The key customers for SSM Information Center (SSMIC) are the physicians, clinicians, leadership, and staff employed by the acute and ambulatory care facilities and other entities that are members of SSMHC. Also included in the customer base are patients and affiliated providers that receive management and IT services from SSMHC.

SSMIC employs many methods of listening and learning to determine our customer requirements. Most of these surface several times in this application, as their importance in providing direction and in determining SSMIC initiatives cannot be overstated. These sources of information are incorporated into the SFHRPP. These sources also play an integral part in the IS Planning and Management process, displayed in Figure 3.1-1 below. The key customers are involved in the timeline, resource requirement determination, and project planning as a part of tactical or operational teams. Key sources of information regarding customer requirements are the Clinical Transformation Executive Steering Committee (CTESC), the Administrative Information Systems Executive Steering Committee (AISESC), and the System Information Management Council (IMC), which includes representation from across the System. These groups determine which customer needs have the highest priority and weigh the costs of solutions versus benefits derived. In addition to these Executive Committees, each region and entity also has an IMC to address its information management needs. This organizational structure ensures that individual entity needs are being met as well as the commonly shared needs of the whole System. While we have a captive customer base, cost effectiveness of SSMIC is a critical factor and is constantly under review. SSMIC must be able to demonstrate to the IMC that it is a cost effective provider of quality IT services. Comparisons of cost of utilizing in-house resources is compared to use of outside service IS are considered when making decisions impacting our customers.

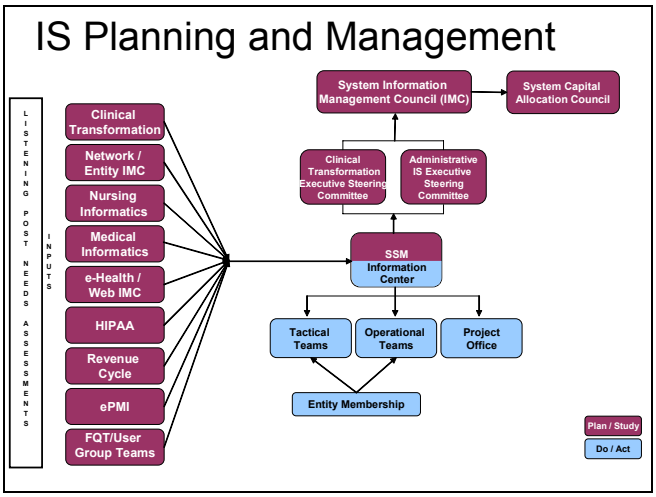


Figure 3.1-1 – IS Planning and Management

The CTESC is charged with setting strategic goals for clinical information systems that will ultimately become the Electronic Health Record (EHR). The CTESC will follow the established SFHRPP process of reviewing and recommending clinical projects based upon input from the various listening posts. The AISESC follows the same process in reviewing and recommending non-clinical projects (financial, HR/Payroll) infrastructure and data protection projects.

Teams, comprised from SSM Health Care entities and departments, are formed to represent segments of our customer base to determine requirements and propose solutions for groups with specialized needs. Examples of these groups are the Medical and Nursing Informatics Committees, Revenue Cycle Team and the Web IMC. Hospital and network plans are reviewed and summer site visits are conducted as part of the planning process to identify areas that may benefit from or impact IT. Functional Quality Teams (FQTs) provide application line representation, assuring that the varying needs of each user group are incorporated into the planning process. These teams provide detailed input into the entire process, including determination of the need for new applications, developing scoring criteria and implementation strategy. These teams, facilitated by SSMIC, provide hospital personnel input into process improvements regard-

ing their application line, such as pharmacy, laboratory and patient accounting.

SSMIC senior management has responsibility for providing a communication link between the IC and each entity's or IDN's Administrative Council and Information Management Council. This provides a forum to share, listen, and discuss technologies that best support the strategic development of the entity or region.

SSM Health Care of Oklahoma, SSM Health Care – St. Louis, SSM Health Care of Wisconsin and the remaining Multi-State facilities, each have a Regional IS Director who has responsibility over Information System Managers (ISMs) within the respective regions. SSMIC senior management provides direction, coaching and mentoring to the Regional IS Directors. The Regional IS Directors work directly with their respective entity ISMs to communicate the strategy and direction of SSMIC and SSMHC. A critical element of the ISMs role is to act as a conduit for communication between SSMIC and their entity. In addition to the daily interaction between IC management and the ISMs, semi-annual meetings are conducted with all SSMHC ISMs. These meetings improve communication and provide an educational forum that facilitates the sharing of knowledge, discusses enabling technologies, and reviews products and services available to the entities.

The SFHRPP has built in improvement cycles, and the structure that provides comprehensive representation on the AIS-ESC and CTESC ensures that feedback is provided regarding changing customer needs. Prior to 2004, one body, the System IMC, represented the needs of both clinical and administrative applications. The improvement cycle process and identified changes in customer needs led to the separation of these two functions.

3.2 Customer Satisfaction and Relationships

The Customer Relationship Management (CRM) process starts with the gathering of customer requirements as described in category 2 and in item 3.1 above. Measures are established and goals set regarding customer satisfaction through these processes. The customer input and measures are then incorporated into the CRM program, which is the process used to ensure that customer expectations are exceeded.

Key Components of Customer Relationship Management

- Service Level Agreements
- Customer Satisfaction Surveys
- Functional Quality Teams
- Complaint Management Process and Escalation Management
- Operational Performance Reporting
- On-site Information System Management

Figure 3.2-1 – Key Components of CRM

The IS customer support structure for SSMHC is made up of both the Client Response Center (CRC), which is the centralized help desk for SSM Health Care and the entity IS department help desks. Both the entity IS departments and the CRC provide support during normal business hours and 24 hour on-call support for critical and high issues. The hospitals each have an on-site IS department that acts as front line support for desktops, peripherals, standardized applications, and entity specific applications. If they cannot complete an issue they refer it to the CRC for resolution. The CRC continues the resolution process and may escalate issues to the appropriate resource. The CRC provides support for all SSMHC standard products and services as well as front line support for the smaller entities that do not have an on-site IS department.

The CRC and the IS departments share a centralized call tracking system (Remedy), which allows for smooth transition and documentation of issues from one physical location to another. When a help desk call is received it is recorded into the tracking system allowing monitoring of the issue through resolution. The in-process indicator for the SSMIC departments is to monitor the call tracking system daily and monthly to address aging of tickets or issues. A monthly procedure is also performed to ensure that Remedy tickets in an escalated aging cycle (30 days, 60 days, 90 days and above) are aggressively being addressed. (See Figure 3.2-2).

Tracking also allows SSMIC to generate reports identifying areas where product or service enhancements are needed. In addition to support, access to a "Solutions Database" is provided for customers via the CRC's intranet page.

In order to monitor the relationships between the entities and SSMIC, periodic (quarterly) customer satisfaction and event driven surveys are conducted. Survey participants can provide feedback on items that need improvement in addition to quantitative scores. Information that is garnered through these surveys provide input into action plans to correct problems, and also impacts the formation of the strategic plan regarding major areas of improvement or opportunities to replicate strengths.

SSMIC has established Service Response Levels (SRLs). These levels are a measurement of how quickly an issue in a respective category will be resolved. The goals of these measurements are outlined in figure 3.2-3, and the definitions of the SRLs are displayed in figure 3.2-4.

The SRLs are communicated to the customer via SSMIC's management site and the CRC's intranet page and brochures. Performance against these goals is reported quarterly through the Key Performance Measurements (KPM) included in the Service Letter Agreements (SLAs), which are discussed further in 3.2a(4). The communication regarding Service Response Levels also includes education regarding how customers can escalate an issue and/ or lodge a complaint. Department goals are established and monitored as well, and are communicated monthly through Performance Indicator Reports, known as the PIRs.

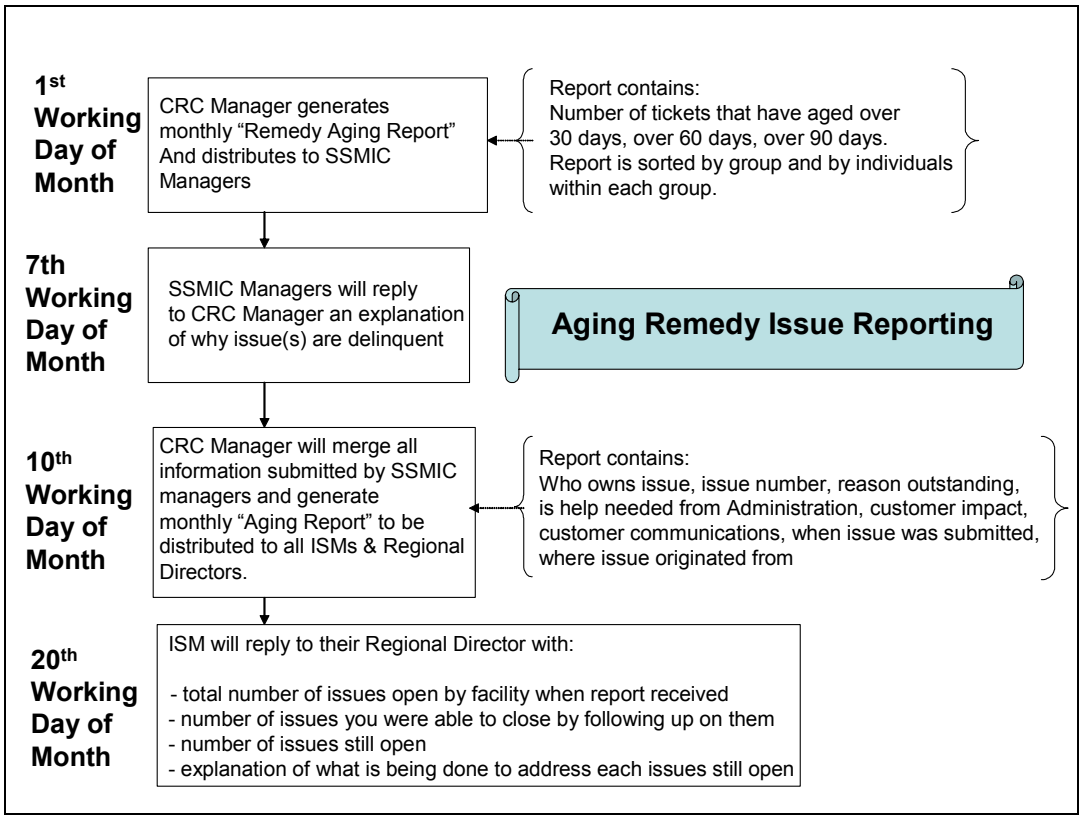


Figure 3.2-2 – Aging Remedy Issue Reporting

Severity Level	Initial Response	Resolution Goal Applications/Network	Expected Resolution % Met
Critical	1 Hour	0-24 Hours/0-4 Hours	95%
High	1 Hour	0-48 Hours/0-10 Hours	95%
Medium	1 Business Day	Within 5 Business Days	95%
Standard	2 Business Days	Within 15 Business Days	95%

Figure 3.2-3 - Committed Response Times

Critical - Issues for which no work around exists that adversely affect the delivery of patient care or cause a financial impact on the hospital.
High - Not affecting delivery of patient care or causing a financial liability, but causing user hardship or operational difficulties.
Medium - Issues that do not require an immediate response or for which a work around exists.
Standard - Issues that are not a problem with an existing system but rather a question or request for new hardware, software, etc.

Figure 3.2-4 Issue Level Definitions

SSMIC has a publicized complaint tracking system available to our customers. Customers have the ability to submit a complaint through the entity IS departments or through the CRC, where the complaint is then entered into a tracking system. In this enhanced complaint management tracking system, complaints are assigned an owner and tracked until closure in one central repository. Upon acceptance, electronic notification of closure is given to personnel who are the originators of the complaint and personnel who enter complaints into the system. Since the Complaint Management System utilizes a segregated portion of the "Remedy" database to store information, and "Remedy" has the capability to capture and manipulate the data stored, ad hoc and canned report formats developed in the "Remedy Tracking System" are available to the Complaint Management System.

The Root Cause Team is a resource for identifying additional opportunities for training, customer awareness, review of implementations and/or upgrades that may have impacted the customer's current work methods. Additional reporting metrics to track opportunities are used during the Root Cause Analysis team meeting. This includes identification of most frequent callers, by application and sub-application. This

allows the team to identify those customers who might need some additional attention, either through training or IC focus.

Four components frame how SSMIC establishes and continues the relationship with its customers. Those four components are the annual Service Letter Agreement (SLA), the Client Response Center Satisfaction Program (central), Entity Customer Response Cards (local), and the SSMIC proactive periodic customer satisfaction survey.

In building a relationship with its customers, SSMIC develops annual SLAs with all entities that receive applications and associated services from SSMIC. The customers are invited to provide suggestions to the SLA process. SSMIC listens to the suggestions to improve the SLA from the ISMs, the CFOs and the COOs of each entity or Network. Applications and services that will be provided to each entity through the period of the calendar year and the costs associated with these services are outlined in the Service Level Agreement. The SLA is a working document and is reviewed annually. Input from the Regional IS directors, the entity ISMs and SSMIC managers is incorporated into the SLA to improve the effectiveness of the document. The approach is diagrammed in Figure 3.2-5.

One of the key components of the SLA is the reporting on the KPMs by SSMIC. These measurements are associated with goals that are used to determine how SSMIC is performing relative to its responsibilities described in the document. The Key Performance Measurements results are reported on a quarterly basis to the ISMs, the CFOs and the COOs of the respective entities or IDNs. The Service Letter Agreement also outlines the responsibilities of the customer (the entities that receive applications and services). This process removes ambiguity as to what the customer can expect to receive in the form of services from SSMIC as well as what is expected from them in order to ensure that these services are delivered in an effective manner. The SLA also contains the escalation procedure for unresolved issues and details the steps the customer takes to resolve complaints.

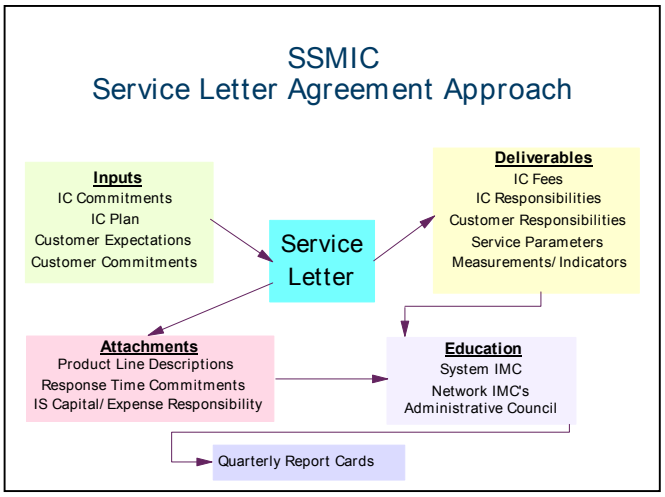


Figure 3.2-5 – Service Letter Agreement process

SSMIC, under the direction provided by SSMHC, has made a major commitment to continuous quality improvement (CQI) in both business and technology processes. In the continued effort to improve on the effectiveness of the SLAs, the document was submitted to META Group for review and comment. After review, META Group rated the SSM SLA in the "upper quartile" of all the SLAs they review as a normal part of their service. In addition, the Support Center Practices (SCP) certification reviews identified the SLA as a best practice.

Customer satisfaction for the CRC is measured through a central event driven survey process. For two days each week, every seventh CRC call that is closed generates a survey to the customer. The survey is sent via e-mail with an intranet link to go to for survey completion. The survey uses a Likert scale of 1 to 4 with 4 being the highest. The survey also allows for comments and suggestions as part of the CRM process. (See Figure 7.2-4)

To provide a peer comparison, the CRC completes a certification process, biennially, with SCP. SCP certification establishes a service quality benchmark for IT support centers/ help desks. To receive certification, centers must complete an evaluation covering 11 key areas and must be audited through a site visit. Other SCP certified centers include Microsoft, Nokia, Compaq, Xerox, Lucent Technologies, and Lockheed Martin.

SSMIC Client Response Center has achieved certification in its last four application cycles, including 2004, and is the only not-for-profit and the only health care IS organization to receive this certification. SCP has identified several of the CRC's processes as best in class, including the use of SLAs and the Departmental Level Training Programs. The report from the recertification process has provided several recommended opportunities for improvement which were implemented with positive results.

To address customer satisfaction from an entity level, the IS departments solicit feedback from their customers through a local event driven survey. Both the central and local event driven surveys utilize the same set of questions. The process allows the customer to provide feedback to the local entity's Information Systems department on IS related tasks affecting personal computers and/or entity staff customer requests and requirements. To remain consistent, this survey also utilizes a Likert scale of 1 to 4 with 4 being the best.

For overall customer satisfaction, SSMIC has developed and utilized the Customer Satisfaction Employee Awareness Model for over five years. This model (shown in Figure 3.2-6) encompasses education and training, evaluation of customer service provided by SSMIC, provides feedback and communication to SSMIC customers and is integrated into employee performance reviews.

Incorporated into this model is the evaluation of the customer service provided to SSMHC entities. One of the best measures of customer service is the survey tool. As previously

discussed, the central and local event driven surveys are part of the overall Customer Satisfaction Model. SSMIC also conducts a proactive periodic relationship survey to address a broader picture of customer service performance.

The survey is conducted through e-mail and requires only 5 minutes to complete. Participants are invited to score each of five questions, based upon a Likert scale of 1 to 4, with 4 being the best. The opportunity for comments is provided for each question to clarify their quantitative response, if desired. These comments provide actionable feedback that is used to drive improvement. Every negative comment is assigned an owner who is required to develop an action plan to address the comment. IC directors review comments and action plans. Comments that do not appear to be isolated incidents are evaluated and opportunities for improvement identified. Keys to success of the survey are guaranteed confidentiality and continuous communication and feedback to the participants.

Based upon MQA feedback in 2004, SSMIC developed a consolidated customer satisfaction score. This provides a more objective view of overall satisfaction and allows further benchmarking to other organizations.

Quantitative results are collected in a database so that results can be customized by entity, region or other desired requirements. The participants receive the quantitative results of the survey, in addition to a response to their issues or concerns raised in the comment section.

Comments from the central and local event driven surveys and the SSMIC proactive periodic customer satisfaction survey are disseminated to the appropriate managers and SSMIC senior management so that follow-up can be provided to the customer and action plans developed regarding their comments. This is an important part of the process to ensure that all customer issues are resolved and addressed appropriately.

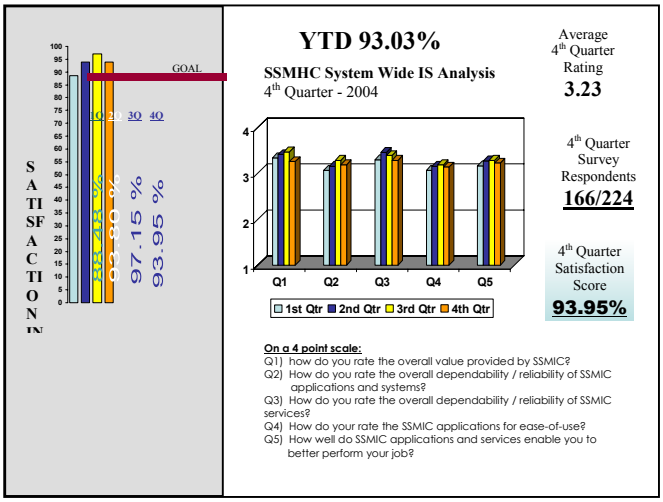


Figure 3.2-7 – Sample Scorecard for SSMIC Customer Satisfaction Survey

The constituency of participants for the proactive periodic survey arises from personnel from the entities that have SSMIC contact. This is established through the assistance of entity Administration and the entity ISMs. Participants are refreshed on an annual basis with revisions conducted throughout the survey period, based upon participant requests and feedback.

Through these components SSMIC can better understand the needs of the customers and assist the health care providers at the SSMHC entities to provide the best possible health care to their customers through information management, technology and services. At the same time, these components also provide customers input into the development of the strategic plan regarding services and applications offered, and feedback towards success in meeting the agreed upon stated objectives. (see Figure 3.1-1)

Reports on progress towards achieving SLA metrics are also issued to customers in the form of KPMs. A sample of the existing report is displayed in Figure 3.2-8.

The customer satisfaction data collection tools are reviewed annually and revised as appropriate. These tools have also been evaluated for effectiveness by external parties. The participants in the study are refreshed on an annual basis to assure that diverse opinions are being addressed. The SFHRPP and the SLA processes allow customer feedback into the planning and measurement systems, and goals that relate to customer satisfaction are reviewed annually as part of the planning process. Representatives in the field provide another form of feedback regarding customer needs, and provide information regarding the validity of the customer feedback mechanisms.

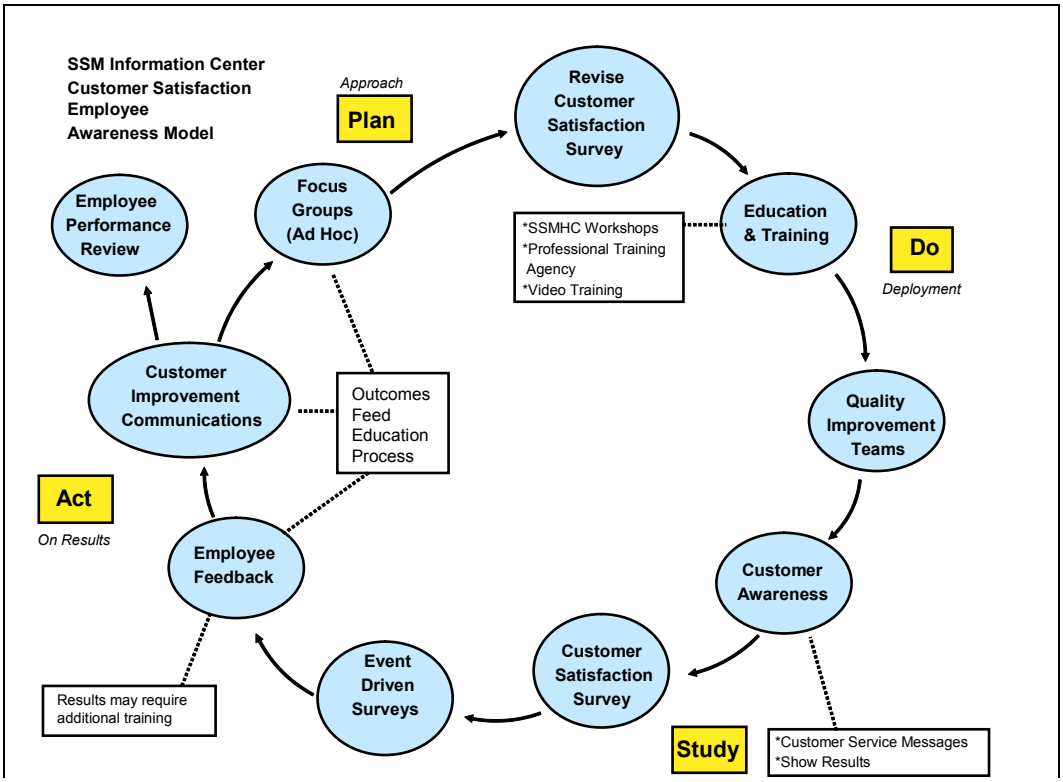
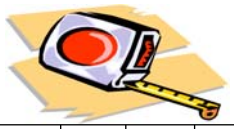


Figure 3.2-8 – Sample Report Card on SLA

2004 Service Letter Agreement Report

Key Performance Measurements (KPM's)



INFORMATION MANAGEMENT

Application Product Support

KEY MEASURES	1Q	2Q	3Q	4Q	GOAL
# of outstanding issues remaining on a new application before transition to CRC for support.	1	4	2	1	<5
Increase percentage of overall use of Electronic Data Interchange (EDI) technology to transfer data relating to payor transactions. . Eligibility / Claims	5% 4%	23% 10%	26% 4%	4% 2%	1% increase> Baseline
A minimum of one new advanced level Decision Support class is made available to the user community per quarter.	N/A	2	2	1	≥ 1 Class per Qtr
≥ 80% Score on Proficiency Tests conducted.	89%	100%	100%	100%	≥ 80%
Level of user satisfaction with Functional Utilization Assessment based upon evaluations	100%	100%	100%	100%	95%
One Functional Utilization Assessment performed for each core application, at all entities, every two years.	6.25%	25.3%	46.9%	87.4%	100%
Implement a minimum of two patient safety initiatives in Clinical Applications	3	3	2	2	≥ 2
Annual attendance at Network Group conference for each product area.	N/A	100%	100%	100%	100%

INFORMATION TECHNOLOGY

Computer Operations Services

KEY MEASURES	1Q	2Q	3Q	4Q	GOAL
Scheduled Batch Processing Completed on Time.	99.79%	99.83%	99.82%	99.06%	99.95%
Scheduled Backups Completed on Time	99.18%	99.21%	99.41%	99.73%	99.25%
Successful daily transfer of SSMIC Electronic Claims to payors.	99.26%	99.55%	99.61%	99.57%	99.5%
Regional Site Visits	2	2	0	1	5

CATEGORY 4—Measurement, Analysis, and Knowledge Management

4.1 Measurement, Analysis, and Review of Organizational Performance

Each year SSMIC confirms and updates key processes in conjunction with reviews of customer feedback and development of Service Level Agreements (SLAs). These reviews result in updates to and/or confirmation of key processes. At that time measures relative to monitoring the process and measuring results are also reviewed or developed. This process assures that monitoring methods and measures are aligned with value creation and support processes. A key step in the SFHRPP, as described in category 2, is the development of specific measures to determine success in achieving the short- and longer-term strategies of the organization. The planning process incorporates customer, employee, and stakeholder feedback to ensure all needs are considered. In similar fashion, as annual goals for passports are developed at all levels within the organization, outcome and in-process measures are also developed. Annual training is provided regarding the development of goals and measures, and all measures are reviewed by the manager and the IC director responsible for planning and quality for appropriateness. This ensures that measures selected are aligned with the SFHRPP. The source of the selected data and information is also determined as the measure is developed or reviewed. Collection of the data and information is automated wherever possible, and Figure 4.1-1 provides key examples of data collection and analysis tools. Finally, integration of the data and information is the result of completing the process review as identified in Category 6. This process review insures that all value added and support processes are identified and appropriate data and information will be available to monitor progress and measure results. As part of the process review SSMIC identifies key processes and the corresponding key measures which are detailed in Figure 6.1. In addition, key SLA and PIR measures are detailed in Figure 4.1-2.

Each of the information elements undergoes an annual review that focuses on appropriate use during the process review and SFHRPP discussed above. Annual goals for the organization as well as divisions and departments within the organization have a corresponding PIR developed. All PIRs are updated and reviewed by the appropriate staff; AC reviews the organization's PIR, directors review the divisional PIRs and managers review the departmental PIRs. Organizational level goals that vary more than five percent (5%) require that an action plan be developed. The action plan identifies the performance issue and the steps to be taken to bring performance levels up to the desired level. Process measures and results are used by divisions, departments and/or teams to identify performance issues. As an example, help desk open call aging reports provided to entity IS Managers monthly help identify potential system and customer issues. Directors and managers along with the appropriate work groups identify causes of the performance issues and develop action plans to bring performance back to expected levels.

Innovation occurs through root cause analysis, CQI process redesign, and/or external comparisons. A root-cause team made up of cross-functional membership identifies common causes for recurring or like problems. As the underlying root causes are identified and addressed, significant improvements and innovation occur. The CQI process design and redesign models provide a methodology that enhances the opportunity to develop innovative changes through focusing on techniques such as brainstorming and benchmarking. Finally, external comparisons are sought when applicable to identify areas of opportunity that may not be readily apparent when monitoring processes and reviewing results.

As process measures and results are reviewed and/or revised annually, as noted above, a search for appropriate comparative data is conducted. Both internal and external comparisons are considered. SSMIC uses various external sources when considering appropriate comparative data. Published industry standards and vendor recommendations are used in monitoring hardware performance to insure performance meets industry expected levels. Certification programs provide best practices in areas such as Help Desk performance and Project Management performance that are used to compare to current practices. Vendor recognition programs and the feedback SSMIC receives from those award applications provide comparisons to best practices. The state quality award application process as well as the annual customer feedback and development of SLAs are used to identify opportunities to benchmark key process measures, and efforts are made to identify potential benchmark sources. Comparative data are used to compare processes and outcomes with external organizations. Examples of areas where these data are currently being used include employee survey results, a healthcare CIO forum, and a university-sponsored technology forum. Many of the measures utilized by SSMIC are not tracked by others in the industry. SSMIC's president and CIO has initiated a process within the Catholic Healthcare Association CIO group to provide comparative data on key measures regarding IT customer satisfaction. Many of these organizations do not track items such as customer satisfaction with IT services, and the proposal is currently under consideration.

SSMIC keeps its measures current and aligned with business needs through an annual review of the measurements developed. This process is integrated with the SFHRPP. As part of the strategic plan, measures are established that are used to determine progress in achieving the strategic goals of the organization. During this process SSMIC goals and measures are aligned to the Systems' five characteristics of exceptional health care, ensuring that SSMIC's plan supports the initiatives of the entire organization.

SLAs are developed annually, providing customers with details relative to expected levels of service their business requires as well as what their responsibilities are to assure that these levels of service can be met. Every year these measures are reviewed during the SLA preparation process. Measures that are no longer appropriate are reviewed and replaced by more relevant measures.

Planning Area	DO or OP*	Method of Collection and Analysis	PIR
Operations & System Management	DO	Automated Tools (ITO, HP Openview)	
	DO	Metrics by server	
	Both	Root cause analysis	
Human Resources	OP	Employee opinion surveys	√
	DO	Employee development process	
	OP	Market and experiential analyses	
	OP	IC Employee Council	
	OP	Quality award feedback	
Customer Relationship Management	DO	Customer surveys	√
	OP	SLA feedback	
	OP	Quality award feedback	
	Both	Remedy issue tracking	
	Both	Root cause analysis	
	DO	Client feedback survey	
	OP	Project debriefings	
	OP	Quality award feedback	
Application Effectiveness	Both	Automated education monitoring	√
	OP	Customer surveys	
	DO	Data audits	
	Both	Functional utilization assessments	
	Both	Root cause analysis	
	OP	Quality award feedback	
Financial Performance	Both	SAP budget variance reports	√
Mission and Values	OP	MBE spending from SAP	√
	OP	Education session feedback	
	OP	Minority staff from HR	
	OP	Compliance audits	
Supplier/ Partner	DO	Price comparisons	
	Both	FQT feedback	
	OP	Vendor selection process • RFIs and RFPs • Technical Assessments • Decision Matrices • Scorecards	

*DO = Daily Operations / OP = Organizational Performance
√= Indicators appear on the organization and/or department PIR

Figure 4.1-1: Information Gathering and Analysis Tools

In-process measures are used to identify and rapidly adjust to changes in customer needs. This provides SSMIC the ability to proactively address problems before the impact is noticed by the customer and the potential negative impact is realized in the lagging indicator. Continuous monitoring of system status is an example of an in-process measure that allows server/storage administration staff to respond to needs before a problem is encountered.

SSMIC uses the PIR as the basis for its organizational performance reviews. These reviews focus on clinical outcomes, customer/physician/employee satisfaction, and financial performance by analyzing measurements/indicators such as project status, SLA compliance results, quarterly and event-driven customer satisfaction results, periodic employee survey satisfaction results, and utilization statistics. Key collection and analysis tools are depicted in Figure 4.1-1.

Clinical Outcome and Physician/Patient Satisfaction indicators are derived from SSMIC's commitment to implement a system-wide Electronic Health Record (EHR) while enhancing and supporting existing applications (Figure 4.1-2). Since SSMIC is not directly involved in clinical practice or patient care, the focus for the reviews of these indicators is project status, SLA metrics, and application utilization statistics and satisfaction with particular emphasis on physician/clinician applications. Market salary and compensation analyses and the employee satisfaction survey are a few of the many HR inputs that are provided to senior management enabling them to make decisions positively impacting employee issues. Other reviews include the FUA process which analyzes the effective use of a specific application within a hospital entity. This review provides information regarding the elements of an application which are useful to an entity, evaluates how the entity is leveraging these elements, and explores the potential of unused elements. If an FQT determines that the level of value of a current application has dropped below acceptable levels, vendor analyses will be performed to support the decision regarding application enhancement or replacement, which will be addressed through the SFHRPP.

Information technology is constantly being reviewed and new, more cost effective or higher functionality solutions investigated. Analysis of in-process systems performance data allow management to rapidly review and make informed decisions regarding applications and infrastructure needing upgrades or replacements.

Because the PIR is a central tool used by SSMIC for performance reviews, monthly PIR variances are discussed between manager, director, and vice president to ensure that coordinated corrective action plans are implemented. Since these action plans are linked to the PIR indicators which are, in turn, linked to departmental and organizational goals, the action plans define the priorities which drive continuous improvement and innovation.

For example, password change problems with our single sign-on application led to the formation of a team which systematically assessed the issues and developed action plans to address them. Not only were efficiencies achieved by taking several support applications and combining them into one application, but the end-users (primarily physicians) were presented with a password change screen which is easier to understand and use; this is evidenced by the drop in user-related errors. In another example, network and server availability problems created by worm viruses spurred the rollout of the high integrity desktop model which assures a managed, standard, and secured desktop throughout SSMHC. Security patches which prevent worm virus attacks are now deployed in hours instead of days with the added bonus of improved network and system availability.

PIR Areas	Key Performance Measures
Exceptional Patient Satisfaction	• Projects on time and on budget • SLA metrics achieved
Exceptional Employee Satisfaction	• 2005 Initiative HR Solutions score • Increase number of minority managers and professionals
Exceptional Physician Satisfaction	• Projects on time and on budget • Projects compliant with standards • SLA metrics achieved • Connected physicians • Additional physicians trained • Additional clinicians trained
Exceptional Customer Satisfaction	• IC customer satisfaction score • SLA metrics achieved
Exceptional Clinical Outcomes	• Projects on time and on budget • SLA metrics achieved • Connected Physicians • Additional physicians/clinicians trained
Exceptional Financial Performance	• Effectively manage IC Fees • Billable expense variance • Projects on time and on budget • SLA metrics achieved • Improve utilization of IS capabilities that enable entities • Upgrade IT infrastructure to provide optimal system performance
Mission-related Goals	• Expenditure to minority businesses • 10% of discretionary spending to MBEs • Healthy Community—offer computer education • Implement systems to facilitate organizational knowledge and best practices

Figure 4.1-2 PIR Key Measures

4.2 Information and Knowledge Management

A number of listening posts and tools are used to understand the data and information needs of SSMHC's employees, suppliers, physician/clinician partners, and other customers. These are displayed in Figure 3.1-1 and discussed in Category 3.

The SSMIC SFHRP ensures that all staff, suppliers/partners, and customers have the data and information that they need to make decisions and perform at the highest level of excellence. The information management planning process follows an eight-step model. These steps are displayed in Figure 4.2-1.

There is a focus on standardizing information systems to ensure that standard data and information will be available for reporting at a regional and System level. SSMIC works collaboratively with key functional areas (e.g., Corporate Finance) to ensure systems meet common data definitions.

Standard information systems are deployed throughout the System by SSMIC. Non-standard systems are implemented at the entity or regional level. SSMHC purchases its business applications from industry-leading software vendors. Vendor selection is facilitated by SSMIC with the assistance of Functional Quality Teams. Comparative vendor application, pricing, and financial information from MD Buyline, KLAS, and Gartner is used to negotiate cost effective contracts. SSMIC uses a formal project management process for implementing information systems. A PMI-certified professional (PMP) coordinates the program. This process monitors not only the initial deployment of the application, but the implementation of subsequent releases and upgrades. SSMIC has also implemented a sophisticated technical infrastructure that allows employees, patients, suppliers and physician partners to access data and information locally or remotely. For example, over 70 Virtual Private Networks (VPNs) have been established which provide direct links to specific SSMIC servers for vendor maintenance and support.

Interactive access to data is provided through Web portals, SSM Physician Connectivity applications, internally developed Lotus applications, links to numerous intranet Web sites as well as the Internet, e-mail, and other application-specific software. SSMHC's Web-based Physician Portal, which provides access to clinical patient resulting/reporting, medical information and journals, e-mail, etc., was utilized by 3,328 physicians in the first quarter of 2005. Information is also distributed through newsletters, e-mail, entity IMCs, entity ISMs and regional directors, and the many application-focused FQTs.

Step	Action
1	SSMHC develops System Strategic Financial, and Human Resource Plan (SFHRP) and system-wide initiatives. All aspects of the SSMIC planning process flow from and are driven by this step.
2	IMC, through CTESC and AISESC, develops System IS strategies, priorities, and initiatives.
3	Development of SSMIC SFHR Plan.
4	IMC, through the CTESC and AISESC, review/recommend the SSMIC SFHR Plan.
5	SSMIC further refines the SFHP.
6	Corporate Office reviews the associated capital project proposal request(s).
7	SSMHC Capital Allocation Council reviews the capital project proposal.
8	SSMHC System Management and Operations Committee review the SSMIC SFHR Plan and approve or reject it.

Figure 4.2-1 – SSMIC Eight-step Information Management Planning Process

Internal communication to employees is performed through a variety of mechanisms. Quarterly town hall meetings provide a forum for SSMIC management to present information to

employees and answer questions and address concerns they may have. Departmental, functional, and project meetings provide information regarding area specific issues. E-mail and newsletters are utilized to keep employees up-to-date on activities, and SSMIC's intranet page contains a host of information valuable to employees, including a calendar of events, HR information, updates on projects, presentations, etc. Brown Bag Lunch-and-Learns provide employees opportunities to access information from other segments of the organization.

SSMIC has a technology management function that monitors its information systems to ensure high availability and reliable access to data and information. This is accomplished through the Operations Center with the use of system performance monitoring tools such as Spectrum and ITO. File servers are monitored for disk and CPU utilization as well as availability. This data is used for forecasting and planning server upgrades and to monitor data availability. Additionally, network performance is monitored to ensure efficient access to application systems. As appropriate, SSMIC has implemented redundancy for business critical systems and within its network infrastructure to provide for high availability.

SSMIC has deployed uninterrupted power supply (UPS) systems and is protected by its own power generator to ensure the availability and reliability of IT systems. Wherever possible, hardware systems are designed with built-in component redundancy. SSMIC security policies outline the procedures, responsibilities of IS staff, and standards for safeguarding the hardware, software, and usage of the Internet. Anti-virus software has been deployed to desktops and servers and intrusion detection/prevention software is implemented, providing additional security for the hardware and software infrastructure. Standardized, high integrity desktop management tools allow for timely delivery of software (including security patches) to servers and client personal computers alike. A Patch Management Team is in place to oversee the process of identifying, evaluating, prioritizing and deploying security patches in a timely manner. The HIPAA security team coordinates efforts to ensure regulatory compliance, resulting in improved information security. SSMIC also formally tests software application enhancements prior to implementing them into a production environment to make certain they are reliable and user friendly.

Functional Quality Teams meet at regular intervals to review and prioritize desired functionality and enhancements to systems. Design teams are assigned this task during the process of system development or vendor selection. This process of input from customers utilizing applications in daily operations assures that systems are more fully optimized and user friendly.

A Data Protection Team was created in 2004 to develop a comprehensive approach to the protection of information systems and data, particularly in an emergency. Part of this team's responsibility is the development of a phased information systems disaster recovery plan. A key aspect of this plan is to implement appropriate recovery solutions for business critical functions based on a Business Impact Analysis (BIA), which was completed in early 2005. The BIA has allowed the team, in concert with customers and stakeholders, to determine the recovery priority as well as the maximum tolerable downtime and data loss for each application.

Two alternate data centers are in place to provide data replication and high-availability failover for many of these applications. Redundant high-speed circuits connect the two data centers to support synchronous data replication, where necessary. As part of this effort, the Tape Storage Management backup system is being moved to one of the alternate data centers. High-speed links between all data centers provide for network redundancy and efficient data backup and restoration.

The BIA prioritized applications into four tiers based on customer/stakeholder recovery requirements as follows:

- Tier-1: 0-4 Hour Recovery
- Tier-2: 4-24 Hour Recovery
- Tier-3: 24-72 Hour Recovery
- Tier-4: 72 Hours to 7 Day Recovery

Tier-1 and Tier-2 infrastructure and application systems utilize the alternate data center, while the majority of Tier-3 and Tier-4 systems involve a commercial alternate data center.

The Team has employed multiple strategies for data protection and recovery: 1) creating alternate data centers to provide high availability where appropriate, 2) contracting with commercial recovery vendors to provide hot-site equipment locations, 3) moving the enterprise tape backup system to an alternate data center, 4) providing an alternate termination point for WAN and Internet circuits, 5) providing a redundant enterprise storage system for data mirroring of business critical systems where feasible, 6) implementing load balancing/distance clustering technologies for systems and applications where possible, 7) splitting the organizations file servers currently centralized at SSMIC into two physical locations where appropriate, and 8) providing off-site workspace for support staff to utilize in the event of an extended outage.

SSMIC keeps its data and information systems current with health care service needs and directions in part by linking IS/IT with the health care business processes and through the research done as part of information management planning process outlined in Figure 4.2-1 and discussed in Category 3. IS/IT is integrated with health care business planning through the AISESC, CTESC, System IMC, the SSMIC-sponsored Education Day, system-wide Medical and Nursing Informatics Committees, and FQTs. Their role is focused on maximizing the value of each specific application and providing a forum for sharing best practices across SSMHC.

The Catholic Healthcare Audit Network's (CHAN) services are utilized to review our processes. CHAN's experience with other hospital systems provides a source of best practice information. SSMIC also contracts with and participates in

external industry research and educational groups, including Gartner Inc., Washington University's CAIT program, HIMSS/CHIME, INSIGHT (participation by individual membership), and a local forum of IT business professionals focused on best practice sharing in order to keep current with health care service needs and directions.

The development of ideas, business cases, proposals and deployment of applications is done in concert with Functional Quality Teams and other listening posts, utilizing processes such as the SFHRPP, as well as the IC Recommendation and Vendor Selection Processes. The collection, identification and information transfer of relevant knowledge regarding best practices amongst Functional Quality Team members supports and facilitates implementation of best practices when processes change. Additionally, every completed project goes through a project debriefing process from which lessons learned can be gleaned. Lessons learned are shared during these debriefings in the spirit of Plan, Do, Study, Act. Staff members who attend external seminars also enable the transfer of information from those seminars during department, management and other ad hoc meetings including Brown Bag Lunch & Learns. Finally, a formal orientation program also introduces new staff to processes and procedures they will need to succeed.

The sharing of best practices and transfer of relevant knowledge is also promoted on the SSMHC Corporate intranet. These best practices serve as case studies and testimonials for team work. Contact information is also shared in order to facilitate the transfer of information.

The SSMIC, recognizing that data and information security and confidentiality is paramount in the HIPAA environment, has established a department for Compliance Administration and Security, which is responsible for ensuring appropriate authorized access to its computer systems. A formal Computer Authorization process for granting access to systems and a process requiring passwords to be changed on a regular basis have been implemented. An automated Computer Authorization workflow process has been deployed to reduce the time required to complete a request for computer access. Processes were implemented to disable computer access for terminated employees, and to disable computer access for user accounts that have had no activity in 90 days.

The HIPAA security team, with representation from each SSMHC entity, helps ensure that the confidentiality of electronic patient records is in compliance with federal standards. An organizational structure was established to address HIPAA that includes teams at the enterprise and entity levels to ensure coordination of activities and the distribution of project information. HIPAA security, privacy, and transaction assessments were performed, GAP analyses and recommendations were developed, and remediation action plans were distributed to all SSMHC entities. The Compliance Administration and Security department manages the entity HIPAA security work plans to ensure compliance.

A Change Management CQI Team is designed a process, based on industry best practices, to document and approve changes to all components of SSMHC's production information technology infrastructure. This greatly reduces the possibility of unauthorized modifications to information or infrastructure, improving the integrity and reliability of systems.

The accuracy of data, information and knowledge is addressed in several ways. SSMIC 's Clinical Applications department works with entity customers to complete Functional Utilization Assessments (FUA) which helps insure conformance with the best practice model defined for each applications Business Practice Model (BPM). Some entities have formed a Revenue Integrity Team as a further measure for ensuring the reliability and accuracy of the information. For electronic business partners, such as payers, SSMIC has established checks and balances in the control process to validate the timely receipt and integrity of submissions for payroll direct deposit and electronic claims submissions. SSMIC uses the Catholic Healthcare Audit Network (CHAN) to perform audits of information systems and processes for integrity, reliability, accuracy, timeliness, security, and confidentiality.

Policies are also in place to protect SSMHC data, information and knowledge from outside intrusion. These policies and procedures govern the use of firewalls, intrusion detection/prevention systems, patch management processes, incident response procedures, and assure that anti-virus protection is installed on all servers and workstations. In addition, a high-integrity desktop model is being implemented on all workstations across the organization to help protect the integrity and reliability of information assets. A Homeland Security Action Plan, discussed in Category 5, was implemented to increase security and safeguard assets in the event of terrorist threats.

CATEGORY 5 – HUMAN RESOURCES FOCUS

5.1 Work Systems

Human Resources (HR) development and management is guided by the Quality Principle, "Quality is achieved through people." SSM Health Care (SSMHC) identified four system-wide strategic goals in the human resources area: Competitive Compensation, Balance in Work/Life, Learning Opportunities, and Effective Leadership. These goals are the same for SSMIC and support the SSMIC strategic plan.

SSMIC organizes its work, jobs, and skills according to functional responsibility, usually by departments and often by teams. Employees are managed through performance review and coaching. Work processes are designed and improved by teams that use the CQI model. Team leaders, facilitators, and members are selected to serve on CQI teams based on their skills and interest.

Employees throughout SSMIC use CQI to design, manage, and improve their work processes in support of SSMIC's strategic plan. At SSMIC, managers are empowered to develop strategies for improved utilization of staff and resources through the use of teams. Participation on teams and the focus on SSMHC's Quality Principles – in particular "all work is part of a process" and "decision making by facts" – provide agility by freeing individual employees to exercise greater initiative and to assume more self-directed responsibility in their work units, departments, and entities of SSMHC. CQI establishes a common language and common set of tools empowering employees to work together within SSMIC and the various entities throughout SSMHC. Teams share information, lessons learned, and methodologies.

The need for new or improved work design and job functions is identified from various "listening posts," including contractual agreements, changes in technology or health sciences, job function integration, community needs, changes in the SSMHC market served, analysis of health care industry trends, competitor activities, and input from employees.

SSMIC has several programs and work systems to accommodate the rich diversity of SSMIC's employee base thus accommodating different ideas, cultures, and thinking. The use of teams is a key tool that is used to draw on the diverse ideas, culture, and thinking of SSMIC Employees. CQI is an integral part of the SSM culture, and use of teams is a key ingredient of CQI. The basics of CQI, via team member training, are offered to all employees. All managers are strongly encouraged to take team leader training. These teams and the use of CQI tools enable employees to provide valuable input into all aspects of SSMIC operations, providing diverse points of view and incorporating multiple sources of experience into the decision making process.

SSMIC commissioned a CQI team, in response to feedback received from various listening posts, to revisit the dress code policy. The team recommended, and the Administrative Council approved, a relaxation of the policy to fit the current employee base. Another team was formed to address Work-Life balance. IT employees are accustomed to working various hours outside of the normal business day. SSMIC has a flexible work schedule where employees can adjust their schedules depending on their lifestyle and the operational needs of SSMIC. Employees enjoy a relaxed atmosphere, where morale-building activities are routinely held.

SSMIC uses various forms of communication to ensure knowledge transfer within SSMIC and to the end-users at the entities. Communication channels include department, manager, director, network group, functional quality team, intranet, town hall meetings, IMC, administrative council meetings, formal training classes, email, Brown Bag Lunch-and-Learns, and CQI teams.

Aside from meetings, a variety of reports, presentations, newsletters, the SSMIC Event Calendar and the intranet help to further support employee communications. For system wide communication, SSMIC participates in Showcase for Sharing which allows the sharing of information to all SSMHC entities. Information sharing facilitates the implementation of SSMIC programs, most notably "The Passport."

SSMIC's Professional Project Management program provides a mechanism for sharing information regarding project activities that require the use of SSMIC human and capital resources. Semi-annual managers' meetings provide a means for communication, both director-to-managers and manager-to-manager. These meetings ensure that departments are updated on activities that are taking place throughout the organization that may impact them. The SFHRPP incorporates communication mechanisms that allow managers from one area to receive information regarding other area plans so they will be informed regarding planned activity that may require their resources. 90-day plans are posted on a common drive to provide access to all areas of SSMIC.

As a result of the Work-Life Balance CQI team, SSMIC implemented Brown Bag Lunch-and-Learn sessions. The sessions are educational opportunities for information sharing across work units, jobs, and locations. These sessions are held monthly and are available via Web conference.

One of the seven management practices considered essential for success within SSMIC's leadership system is "developing people." This practice is defined as facilitating the development of others; having high expectations of individual skills and abilities; investing in employee development; and valuing and modeling lifelong learning.

The Employee Development Process is integrated with the Passport and deploys strategic initiatives and action plan goals to all employees and aligns network, entity, department, and individual plans with overall organizational strategy. These goals must be measurable and specific. Additionally, coaching is built into the process at all levels of the organization.

In keeping with its mission and values and the human resources strategic goal of Competitive Compensation, SSMIC human resources develops compensation policies to be fair and equitable for all employees. Annual market surveys are conducted and pay ranges adjusted as necessary to ensure competitive compensation for all jobs. The compensation system is reviewed annually.

Employee recognition programs include the S.T.A.R. Program which is designed to allow employees to recognize other employees that provide **S**uperior **T**eamwork that **A**chieves **R**esults; the Spotlight Program provides managers, directors, and vice-presidents a simple, paper-free mechanism for recognizing employees for performance excellence in customer service, quality, or initiative, and rewarding them with retail gift certificates.

At the annual employee award and holiday celebration, employees are recognized for years of service in five-year increments with a gift of their choosing.

SSMIC has two teams whose purpose is to provide functions that improve morale and keep the mission of the organization alive. These teams are the Information Center Employee Council (ICEC) and the Mission Awareness Team (MAT). Throughout the year these teams hold events to support their purpose. The employee satisfaction survey and the individual event surveys indicate that employees appreciate and enjoy these events.

SSMIC is a highly technical organization with clearly defined skills and characteristics needed to perform the various jobs. Through the SFHRPP, the CTESC and AISESC recommend the strategic objectives for SSMIC. Once these objectives are determined, SSMIC identifies applications, software, and skills needed to implement and manage these applications. In order to fulfill skill needs, SSMIC deploys two processes: (1) current SSMIC employees via the training plan or employee development plan, and (2) recruiting externally for individuals with the required skills. The internal skills development process is most successful in that it provides SSMIC employees with career growth and development. SSMIC has a well-established requisition process to support the hiring of employees, whether internal or external. All potential staff is expected to exhibit characteristics that reflect SSMHC's values. The skills required for particular positions are determined during job design and recruitment processes. Positions are defined in job descriptions developed by managers in collaboration with department members and key customers.

In keeping with the commitment to ensure a diverse workforce at all levels, SSMIC follows the System protocol for search firms. There are several initiatives under way to bridge diversity gaps in the employee population such as: (1) IN-ROADS program, (2) Diversity Forum, (3) Sharing Conference, (4) Diversity video and brochure for recruitment, (5) St. Louis Internship Program, and (6) Diversity Mentoring Program/Diversity Development Association (DDA).

The DDA has been established to further develop diverse talents for upward mobility, succession planning, and team representation; bring together diverse employees and informally serve as mentors and role models for other employees with specific emphasis on diverse employees; and serve on committees and/or teams and be assigned to system-wide projects.

The promotion and celebration of diversity within SSMIC is one of several key organizational commitments. SSMIC managers are educated regarding the value diversity brings to the workplace, and human resources policies promote an atmosphere where diversity can flourish. SSMHC developed an Office of Corporate Vice President System Diversity to support diversity initiatives. The SSM Diversity Forum, composed of persons of color, different ethnicity, or with disabilities holding professional and management positions, seeks to address challenges faced by its members; explore common workplace experiences; serve as mentors; enhance leadership skills of its members; and promote the strength of differences and fully integrate the talents of all people.

The requisition process begins with a detailed request for a particular position and the required skill sets to be qualified for the position. The position is then posted initially on an internal Website to give internal candidates the opportunity to apply for the position. It is then posted externally on SSMHC's Web site. The next step is recruiting and hiring. SSMIC Human Resources collaborates with the respective departmental managers and participates in the recruiting and hiring process. To establish a diverse pool of highly skilled applicants, SSMIC Human Resources applies several recruiting methods, including advertising in many different publications, job fairs, and search firms. SSMIC also recruits electronically, both on its external Web site and on all SSMHC intranet pages. An online application and a transfer request are available from these sites.

The SSMIC Equal Employment Opportunity Policy requires managers to base employment decisions on the principles of equal employment opportunity and affirmative action to ensure that all employees – regardless of race, color, religion, sex, or national origin – are introduced into the work force and encouraged to seek promotion. This includes individuals with disabilities and veterans.

The Diversity Scorecard is a Web-based tool that integrates various metrics from other SSMHC data sources into a single collection point to provide a comprehensive assessment of our strategic diversity goals. With these key diversity metrics, SSMIC can track progress, identify which areas are lagging behind expectations, and make changes where needed to meet and exceed our goals.

All employees at SSMIC receive career development in the form of coaching from their managers, on the job training, external training, and professional development courses. The annual review and employee development process includes education and personal development goals.

Ninety-one percent of the management staff at SSMIC were promoted internally, which provides them with first hand knowledge of the work processes they manage and better equips them to lead and assist their employees. Forty-six percent of all open positions in 2004 were filled internally. The Caliper Profile, taken by all SSMIC managers, is used to assess characteristics of managers. The profile helps managers identify characteristics that are strengths and areas that need improvement.

5.2 Employee Learning and Motivation

Ensuring that employees have the skills necessary to perform in the rapidly changing environment of health care IS and to meet SSMIC's and SSMHC Human Resources' strategic initiatives is fundamental to the success of the organization. To determine these needs and the means to address them, SSMIC examines the skills and knowledge required to enhance their development. Each position in SSMIC has a job description that, in addition to describing job responsibilities, delineates the skills, knowledge and experience required. Each employee has the opportunity to review the job description for

his or her current position as well as for any other position of interest. Based on these descriptions, staff training needs are discussed and determined as part of the annual performance review process – which is called the Employee Development Process. In 2003, SSMHC Corporate Office sponsored a CQI team to link SSMHC's mission and strategic long and short-term goals of the organization to personal and professional goals of each employee in the Employee Development Process. These needs and subsequent action plans for tracking needs are established for both current position requirements and career growth. These training and development needs are also reviewed during the twice-yearly reviews held with each employee. Training needs may also be identified during the review process associated with the 90-day plans. Training programs are identified which would enhance current SSMIC performance: e.g., CRP training, application software training and network training. By increasing the skill level of employees and ensuring a highly qualified staff, participation in these programs helps reduce costs.

To meet specific development needs, employees are encouraged to attend classes offered by the SSM St. Louis Organizational Development program, Washington University's Center for Applied Information Technology (CAIT) program, and local universities and colleges. Employees have equal opportunity to enhance their skills and advance to higher-level positions. Positions within SSMIC are structured in a way to allow for upward mobility into promotion with different functional areas, lateral movement, promotions within the same functional area and promotion into management. There are multiple possible career paths. Examples include, PC/LAN Analyst promoted to Senior PC/LAN Analyst, and then promoted to Information System Manager (ISM).

On an annual basis, aligned with SSMIC and human resources strategic initiatives and in response to regulatory requirements, training requirements for all SSMIC employees are identified. Examples of these types of training programs include customer service, HIPAA, CRP, safety, diversity and leadership training. This assures that training addresses the key requirements of the organization. It also allows the flexibility to adjust the training plan as key requirements change. A well-structured employee orientation program provides training on all key elements determined to be of importance in fulfilling the job requirements and promoting the culture and values of SSMHC. This orientation includes standard aspects to ensure that all SSMHC and SSMIC needs are addressed and also departmental specific segments.

As a part of the Employee Development Process, managers meet semi-annually with employees to discuss training and development needs. This clarifies expectations and aligns educational efforts with work requirements and organizational goals. There is required training, recommended training and general training for personal growth.

Knowledge assets associated with organizational learning, e.g. internal and external seminars, classes, and presentations, are stored on the SSMHC intranet and common network drives. These assets are systematically shared with other employees, often through Web-based presentations using Web-conferencing.

Training and education are delivered to SSMIC employees in a variety of ways. Internal education is provided to increase the effective use of SSMIC supported applications. Seminars conducted by external organizations are utilized extensively to provide knowledge in areas not directly accessible through the SSMIC internal training sessions. Continuing education is encouraged and promoted as a means of attaining further expertise. Additionally, skills acquired through these vehicles are leveraged via the previously mentioned skills sharing channels.

Training requirements are entered in employee "My Learning Plans" in the Learning Management System (LMS). The LMS tracks the status of all education, both internal and external. Delivery methods include live, self-study, virtual and online learning. Feedback and options on methods of delivery of education and training are discussed with employees as part of the Employee Development Process.

Non-required training is self-directed and on-going to prepare employees for success with new and ever-changing knowledge requirements and challenges. Brown Bag Lunch-and-Learns are used to share knowledge about current topics of interest across the organization. SSMIC encourages and reinforces the value and importance of learning by allowing time for employees to get the training they need, paying for classes taken outside of the organization and taking time to mentor employees as they try new skills.

The Remedy application serves as a warehouse for organizational knowledge. Employees are required to enter a detailed account of the specific steps followed to resolve an issue. This knowledge can then be recalled by other employees as needed, even after their departure or retirement.

Managers collaborate with departing or retiring employees to systematically create transition plans. These plans identify how key skills will be replaced and how tasks in progress will be successfully completed. When possible, cross-training of employees is utilized to ensure that required knowledge to perform job responsibilities is retained within SSMIC.

Internal class evaluations include satisfaction surveys and competency tests. Based on feedback from satisfaction surveys, several actions may occur including course redesign, new course offering and/or new or revised presentation vehicles. For example, Microsoft classes were expanded from 22 to 38 as employees asked for short/specific topics such as "Pivot Tables." External classes are evaluated by the employee and results are entered into the LMS.

Training results are tracked against various criteria which include 1) reduction of help desk calls, 2) increase in system up time, 3) increase in quality, 4) decreased costs, and 5) increased productivity. Upgrade training is an example of how training results can decrease costs. A vendor quoted $150,000 to upgrade fifteen Pathways Contract Management

(PCON) servers. In the past, vendor resources were used for all upgrades. However, our database administrator will be trained by vendor support and will subsequently upgrade 13 of the 15 servers independently. The overall cost of the upgrade will be reduced to $20,000, a savings of $130,000.

SSMIC employee composition consists of highly technical and skilled employees. Within the SSMIC culture, employees are believed to have an intrinsic desire to perform well in their work. The employee focus group reveals that "work itself" is a motivating factor to SSMIC employees. SSMIC is the primary entity determining new and advanced information technology to be used system wide. Employees are provided an opportunity to explore, examine, and implement innovative applications. The use of cutting edge technology motivates employees and keeps their creative abilities flowing.

Additional approaches to motivate SSMIC employees and to enhance the work environment include retreats (one day outing to reflect on mission and to reenergize or a work day in the community). Dedication to the mission of the organization is itself a motivating factor for many SSMIC employees. Programs such as the Passport further that commitment by emphasizing the employee's role in achieving the mission.

5.3 Employee Well-Being and Satisfaction

The HR strategic goal, Balance in Work Life, is tied to SSMIC's values of Compassion, Respect, Excellence, Stewardship, and Community. This goal is accomplished by creating a safe and healthful work environment, promoting wellness, providing employee support services, determining and improving employee satisfaction, and evaluating programs on an ongoing basis to identify opportunities for improvement in this area. Issues are identified through a number of outlets: new hire 30-day satisfaction survey, department orientation, employee satisfaction survey, ICEC, or direct communication.

Based on input from the Information Center Employee Council (ICEC), Senior Leadership chartered the Workspace Process Improvement Team. This team was asked to review and study employee workspaces toward the possibility of improving employee satisfaction, reducing the cost/potential cost of workers' compensation claims, and creating a safer and more effective work environment. The team was challenged to measure its success via an anticipated increase in employee satisfaction scores and a decrease in the number of workers' compensation claims. As a result of the team's work, live and online ergonomics training was provided.

Senior leadership also chartered the Work Life Balance CQI team. This team was asked to research and recommend alternatives for work life balance options. The team networked and researched organizations designated as "Best Places to Work" to identify options to replicate at SSMIC. The options recommended included flexible work schedules, commuting programs, Brown Bag Lunch-and-Learns, and dependent caregiver assistance.

To provide a secure environment for SSMIC employees, visitors and property, employees and visitors are required to wear identification badges. Each badge allows access to specific areas of the 7980 Clayton building based on the individual's "need to know."

SSM Health Care, including the SSM Information Center, became tobacco-free on November 18, 2004. This means that tobacco use is prohibited in and on any property owned or leased by SSMHC. The initiative has a direct connection to SSMHC's mission. SSMIC formed a team comprised of smokers and non-smokers to champion this initiative at the 7980 Clayton location. The team provided communication, conducted tobacco cessation classes for employees, and coordinated activities to take place on the tobacco-free compliance date.

Employee well-being is also addressed through funding towards health club memberships, one-time purchases of exercise equipment, and the Employee Assistance Program.

Work environment is incorporated into the employee satisfaction surveys, and responses to these surveys are a primarily tool in providing measurable feedback and addressing employee concerns.

To increase the security for the SSMIC staff and visitors and safeguard SSMIC assets in the event the United States government deems it necessary due to terrorist threats, the Homeland Security Action Plan was developed in October 2003. This process identifies the specific steps to be taken, and the parties accountable for those steps, in the event the Attorney General of the United States raises the security level for the nation, or a specific geographic area or industrial sector affecting SSMIC or one of its customers. The Security Emergency Response Team (SERT) measures its success by noting the completion of the steps identified in the action plan.

There are also a number of additional mechanisms in place that are used to determine key factors effecting employee well-being, satisfaction, and motivation. These mechanisms include surveys in which the questions are interrelated. The employee satisfaction survey, administered through HR Solutions, Inc., identifies 18 dimensions for which satisfaction is measured. The 30-day satisfaction survey is conducted with new hires. If any question on the survey is rated as unsatisfactory, the employee is contacted by Human Resources. An exit interview survey is conducted with voluntary terminations. This survey is intended to identify areas within SSMIC where improvements are needed. Exit interview data is consolidated and shared with senior leaders to implement corrective measures as needed. Another mechanism for determining key factors is the ICEC. The ICEC provides open communication between employees and management. The ICEC is made up of 10 staff members from a variety of functional areas and chaired by the president of SSMIC.

In addition, employees are encouraged to maintain open dialogue with their manager regarding issues that may be caus-

ing dissatisfaction. Managers follow an escalation process to address these issues.

Feedback from the primary employee satisfaction measurement tool, the HR Solutions survey, is broken down by the area the employees work in, allowing for segmentation of data by manager, director and vice president. Confidentiality requires that distribution of this information be limited to departments of sufficient size so that individual respondents cannot be identified.

Services and benefits offered to SSMIC employees are designed to support employee needs by providing them with flexibility to tailor the package to meet their own needs. Employees select benefits that most closely meet their individual and family needs. This selection is made annually. In addition to the ability to choose between different benefit options, the culture existing at SSMIC allows for flexibility in work schedules if functions performed by the position so allows. The employee Paid Time Off (PTO) policy is also designed to allow for maximum flexibility regarding time off. SSMIC provides an Employee Assistance Program (EAP) at no cost to the employee. This confidential program provides counseling for employees and their dependents.

SSMIC employee benefits are tailored to represent the diverse needs of the work force. Many benefits are offered to employees of any status; while other benefits are available only to employees in part or full time statuses.

In addition to benefits previous described, benefits offered include:

- Medical insurance
- Prescription coverage
- Dental insurance
- Life insurance
- Accidental Death and Dismemberment insurance
- Long term disability insurance
- Health and Dependent Care Flexible Spending accounts
- Vision insurance
- Tax-deferred annuity with matching contribution
- Defined benefit pension plan
- Extended medical time off
- Legal holidays (6)
- Tuition reimbursement
- Adoption reimbursement
- Supplemental life insurance
- Wellness reimbursement
- Dependent life insurance
- Legally Domiciled Adult medical insurance
- Long term care program
- Direct deposit
- 457(f) non-qualified deferred compensation

Employee well-being is formally assessed through the employee satisfaction survey. The survey is administered approximately every 18 months. Every employee has an opportunity to participate in the survey process. These results provide SSMIC the ability to stratify feedback by operational function, manager, job category, race, age, gender, and length of service. Based on these results, action plans are created at the entity, operational, and department level. Another formal measure of employee wellness is the 30-day satisfaction interviews with all new hires. This survey is intended to measure a new employee's level of satisfaction in the first 30 days of employment.

An informal measure of employee wellness is the ICEC. Employees provide input to the ICEC either through one-on-one communication or through SSMIC's intranet. Input is reviewed by the Council, which may recommend and assist in the prioritization of the projects for study. The projects may include issues that positively improve work life balance, health and safety, work environment, and activities to improve morale, communications, and employee satisfaction. Recommendations are then made to the Administrative Council, which reviews and makes a final determination. SSMIC is an employer of choice for IT employees, as evidenced by the substantially lower-than-IT-industry turnover rate and the time to fill positions. The average time to fill positions in the IT industry is ten weeks, while SSMIC time to fill is seven weeks. The SSMIC turnover rate for 2004 was 6.9% where the industry average is 14.9%, according to the U.S. Department of Labor.

SSMIC's Human Resources recruitment and retention plan and the successful partnership with the operational managers were major contributors to SSMIC being an employer of choice for IT workers.

Other measures such as employee retention rates, grievances and work related injuries support the employee satisfaction survey results. Combined, these measures affirm SSMIC as an employer of choice in the IT community.

As with any organization, all aspects of SSMIC operations are impacted by the satisfaction, motivation, skill level and well-being of its workforce. The assessment of these factors is integrated into the SFHRPP and is a priority of SSMIC senior leadership. Measures and action plans are established and incorporated into these key processes.

CATEGORY 6 – PROCESS MANAGEMENT

6.1 Value Creation Processes

SSMIC determines the applications and services to be offered to customers based upon information obtained from a variety of listening posts through the SFHRPP. Once these applications and services have been determined, processes that will allow the delivery of these services at the lowest cost while meeting customer expectations are identified. Inputs into the identification process include industry standards and best practices; user group needs identification, CQI teams, vendor application delivery processes, and available technology. Process improvement cycles lead to modifications and development of new processes over the life of an application or service. Key value creation processes are identified in Figure

6.1-1, including an abbreviated description of the value generated by these processes.

6.1a(2,3) Once the need for a new service or an opportunity for process improvement in an existing service is identified, teams are formed to investigate the best processes for delivery of these services. Current state analyses are performed, and industry standards, vendor expertise, other external expertise, user community input and IC staff knowledge are leveraged to determine the key requirements of these processes. The IS Planning and Management Process displayed in Figure 3.1-1 assures that all key stakeholders have input not only into the choosing of the new technology, but also into the determination of the processes and the key requirements. The CQI methodology is used in the development of processes for new services as well as for improvement of existing processes. Implementation of new services and improvements of existing processes are managed through the Professional Project Management Program. Organizational knowledge is shared via formal training and at higher levels at department meetings, town hall meetings, Brown Bag Lunch-and-Learns, newsletters, and Showcase for Sharing. Technology Assessment is used as a mechanism to quickly evaluate new technology solutions providing the agility needed in today's environment. Key requirements of value creation processes are displayed in Figure 6.1-1.

6.1a(4,5) Key performance measures are developed for key processes and reported through a variety of mechanisms. Feedback from customers is reviewed to assure that their needs are being met, and performance is measured and compared to industry standards to assure that performance is optimized. In-process measures are utilized to monitor daily (or other short-cycle) performance, as these metrics can provide a proactive approach to addressing potential service issues to avoid any negative impact to the customer. These measures and approaches vary by application, and an abbreviated description by key process can be found in Figure 6.1-1.

6.1a(6) Multiple tools are utilized to improve the value creation processes. The CQI process provides the basis for implementation of the improvements, which may be identified through a variety of sources. Customer feedback is a key source used to identify potential improvement. In addition to the customer survey tools described in category 3, Functional Quality Teams (FQT) are formed for key applications and services, providing each user group with direct input into the planning process, identifying potential process improvements and assuring that delivery of services remains current with changing customer needs and advances in technology. Other input includes internal audits, feedback received through the MQA process, membership in industry groups and professional organizations, and use of education and learning to stay abreast of the latest advances that may be used to improve existing processes. Improvements are shared throughout the organization, utilizing PPM, Showcase for Sharing, sharing of seminar learning (i.e., Brown Bag Lunch-and-Learns), town hall meetings, manager and departmental meetings, and newsletters.

6.2 Support Processes

6.2a(1) Key support processes, which are displayed in Figure 6.2-1, are determined primarily by business need. These are processes that meet a basic requirement of conducting operations, providing support to the value creation processes and day-to-day general business practices.

6.2a(2,3) Key requirements of support processes are determined in the same manner as value creation processes, but the sources of input tend to be more internal than those of the processes described in item 6.1. Since a key component of most support processes is that they be conducted in the most cost efficient manner, many of the administrative functions for SSMIC are provided by SSMHC corporate staff. These staff members are guided by the same CQI principles as SSMIC, and SSMIC participates as members on their process improvement teams and provides feedback through surveys regarding the effectiveness of the services received, with organizational learning occurring utilizing department meetings, town hall meetings, Brown Bag Lunch-and-Learns, newsletters, and Show Case for Sharing. Key requirements are displayed in Figure 6.2-1.

6.2a(4,5) As with value creation processes, key measures are developed for support processes. The use of in-process measures, monitoring of daily performance, proactive addressing of issues, built in improvement cycles and sharing of knowledge are also incorporated. The responses in 6.1a(4-6) are applicable to 6.2a(4-6). The one area of difference is that the reporting and action plan development is typically less external than those of the value creation process as customers generally are interested in measures having a direct impact on delivery of service.

6.2a(6) The same CQI tools that are used for value creation processes are also in place for support processes. Standardization of processes is a key to consistency, and the tools in place assure that standard processes are in place when feasible. Feedback into the processes is provided by a variety of tools. Participation on Process Improvement Teams and survey responses provide SSMIC the ability to assure that the services provided by SSMHC Corporate staff are effective in meeting the changing business needs of the organization. Improvement cycles and communication mechanisms are built into all key processes, with organizational learning occurring utilizing department meetings, town hall meetings, Brown Bag Lunch-and-Learns, newsletters, and Show Case for Sharing.

6.2b(1) SSMIC's Strategic, Financial and Human Resource Planning Process (SFHRPP) combines direction setting, strategy development, human resource and financial planning. The net result of this process is a three year capital and operational plan that ensures the organization is funded to meet its operational needs (financial obligations), as well as to accomplish major projects (major new business investments). Due to a rapidly changing environment, the plans are reviewed annually and modified based on current and forecasted internal and external forces. Detailed plans are devel-

oped and executed in one-year increments to assist the organization in meeting financial goals and objectives, (inclusive of its financial obligations). The expectations of these plans are managed via the monthly budget variance process. Proposed major projects resulting from the SFHRPP must include total cost of ownership (TOC) and/or return on investment (ROI) components to enable the organization to assess benefits against risks to better assure strategic business and financial objectives will be met. A standard model is used for project evaluation, and this model includes fluctuating required return based upon risk factors that exist in the project. For major projects that include a significant dependency on a vendor and/or the incorporation of a new technology, this risk assessment process will also take into account vendor reliability, financial stability and potential for takeover or buyout, and the developmental stage of any new technology(s) being considered. To better assure strategic initiatives are met for the long-term, a ten-year planning cycle was introduced in 2003 with the 2014 Project. Upon completing this initiative SSMHC established a 10-year plan that will be used to ensure projects and initiatives approved as part of the SFHRPP are funded to enable the organization to meet its long-term strategic goals and objectives.

Once the operational plans have been developed, SSMIC operations are funded through a combination of fees to SSMHC facilities and fund balance transfers (funds transferred from the entities to cover SSMIC capital and debt service needs). Operating expenses are billed back to the entities through IC fees. Through these processes SSMIC is assured of adequate resources to fund its operations.

SSMIC views continuity of operations in the event of an emergency from two perspectives. First, through risk mitigation using proactive processes geared toward avoiding such emergent situations, and second with reactive processes geared to take quick and decisive action to minimize both downtime and data loss if an event does occur. Downtime threats can come from multiple sources in today's world, from human error, or acts of God, to hackers and attackers (criminals), malicious code, and even terrorism. To avoid many of the more malicious threats SSMIC has established strong security policies and procedures coupled with processes that include proactive system monitoring, the implementation of anti-virus tools and processes, security patch management tools and processes managed by SSMIC's Patch Management Team, and a Homeland Security process, including a team that is activated based on alert (and/or event) criteria at the entity, regional or national level. IT monitoring tools along with key performance measures (KPMs) are utilized to measure the success of these key processes. If an event does occur resulting in unscheduled downtime, SSMIC immediately engages the appropriate on-call and management teams to resolve the issue quickly, ensure downtime procedures are invoked at the appropriate time within affected business units, and to guarantee communication with the customer and SSMIC leadership occurs following the organizations' downtime communication process. SSMIC carries risk insurance against major events. In the event that a disaster is declared, SSMIC leadership and all appropriate teams are immediately notified (Homeland Security in the event of an outside attack on the network or SSMIC 's Data Protection Team in the event that communication to the organization's primary data center or entity data center is lost). SSMIC's Data Protection Team utilizes a process to prioritize applications based on their criticality to the organization's customer and core business. During a disaster, systems deemed mission critical will be brought back on-line as quickly as possible (based on system priority), at either SSMIC 's alternate data center where redundant systems are available for the most critical systems, or, at a hot site location contracted through a third party disaster recovery service provider. For all outages (not just disasters), a post incident analysis is performed resulting in an incident report. Each incident report must identify steps (actions) that will be taken to avoid similar events in the future. Accountability and dates are assigned to each action with the reports shared at all levels within the organization.

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System Maintenance & Upgrades -*Software Upgrades* -*Application Patch Deployment* -*Programming Services* -*Testing / QA* -*Server / Storage Admin* -*Systems Performance Management* -*Capacity planning* -*Interface Support*	**6.1.a (1)**	**6.1.a(2)**	**6.1.a(3)**
	Add Value: - Increased System Availability - Improved System Capacity Planning - Reduction in Application Software Errors - Centralized vendor contacts for maintenance & repairs, and, contract negotiation & renewal - Reduced cost of third party hardware, software and support - Best-process design and replication	Key Requirements: - Timely - Error free - Efficient - Meet or exceed industry standards Stakeholder input incorporated - FQTs - Project Request Process - Supplier User Groups - Customer Surveys - Vendor communications	Designed to meet requirements: - FQT/Product Specialist input - PSO Reviews processes/requirements - Security/Patch management team - Automated tools to track patch deployment - Defined Help Desk Process Technology reviewed at PSO level Implementation to meet requirements: - PSO - Plan/Do/Study/Act
	6.1a(4)	**6.1a(5)**	**6.1a(6)**
	Key Performance Measures: - Server uptime - Network availability - Storage capacity - Software errors - Hardware Maintenance Savings	Minimize costs/rework: - Testing prior to install - Retrofits for SSMIC customized code	Process improvement identified: - Post project team/customer review - PPM post project review - CQI - Root cause analysis - Help desk tickets
Training/Education -*Assessment* -*External Training* -*Internal Training* -*Train the Trainer* -*Documentation* -*Evaluation*	**6.1.a (1)**	**6.1.a(2)**	**6.1.a(3)**
	Add Value: - Achieve skill level for optimal use of applications - Increase employee satisfaction - Increase efficiency - Meet/exceed regulatory requirements - Reduced costs	Key Requirements: - Number of training sessions - Effective staff development - Achieve Train-the-trainer level service - Meets or exceeds industry standards Stakeholder input incorporated - FQTs - Customer Surveys - Vendor communications	Designed to meet requirements: - Delivery methods - Number of sessions Review of New Vendor Technology Implementation to meet requirements: - PSO - Plan/Do/Study/Act
	6.1a(4)	**6.1a(5)**	**6.1a(6)**
	Key Performance Measures: - Customer Training Satisfaction Score - Training effectiveness - Number of IC employees completing CRP training Cost savings to organization	Minimize costs/rework: - Customized training to SSM needs - Eliminate courses that are not effective	Process improvement identified: - On-line CRC FAQ - FQTs - CQI - Root Cause Analysis - Help desk tickets

Computer Operations -*EDI Processing* -*Information Backup and Recovery* -*Batch Job Processing* -*Report Printing and Distribution* -*Tape Management* -*Data Archiving* -*Generator/UPS testing* -*Proactive System Monitoring*	**6.1.a (1)**	**6.1.a(2)**	**6.1.a(3)**
	Add Value: - Ensure integrity, timeliness, reliability, security, accuracy and confidentiality of data on systems utilized by customers - Allow seamless delivery of service to customer, issues addressed before customer impact - Provide infrastructure to run applications - Electronic transfer of bills to reduce accounts receivables.	Key Requirements: - Timely - Error free - Secure - Efficient - Regulatory compliance Stakeholder input incorporated - AIS and CT (SFHRPP) - FQTs - Customer surveys - Vendor communications	Designed to meet requirements: - CQI Design Model - Automated - Technology Acquisition Process Implementation to meet requirements: - PSO - Thresholds established - Plan/Do/Study/Act
	6.1a(4)	**6.1a(5)**	**6.1a(6)**
	Key Performance Measures: - Backups completed on time - Batch processing completed on time - System availability - Percent (and total dollars) of Claims submitted on time - Gross Days in A/R	Minimize costs/rework: - Automated system monitoring tools - Service level monitoring	Process improvement identified: - Root Cause Analysis - CQI - CHAN audits - JCAHO - CAP
New Product Development -*Programming Services* - *Interface Development* -*Testing Q/A* -*Application Installation* -*Application Design*	**6.1.a (1)**	**6.1.a(2)**	**6.1.a(3)**
	Add Value: - Reduce cost - Reduce time to delivery - Increase compliance - Increase functionality - Increase flexibility - Leverage vendor relationships - Provide standardization	Key Requirements: - Timely - Meet identified strategic or operating need Stakeholder input incorporated - FQTs - Project request process - SFHRPP - Customer surveys - Vendor communications	Designed to meet requirements: - PSO/PPM process Technology reviewed at PSO level Implementation to meet requirements: - PSO - Plan/Do/Study/Act
	6.1a(4)	**6.1a(5)**	**6.1a(6)**
	Key Performance Measures: - On-time, on-budget - KPM set by individual project in PPM	Minimize costs/rework: - Testing prior to install - Project work plans - CQI	Process improvement identified: - Root Cause - FQTs - Post project team/customer review - PPM post project review - CQI

Consulting Services -*Infrastructure Design* -*Functional Utilization Assessment (FUA)* -*Process Redesign* -*New Process Design* -*Telecommunication Services Consulting* -*Best Practice Replication* -*Technology Assessment* -*Contract Negotiation*	**6.1.a (1)**	**6.1.a(2)**	**6.1.a(3)**
	Add Value: - Reduce cost of purchased IT applications and services - Increase customer satisfaction - Provide comparative data - Technology Assessments prior to IT acquisition - Contract Negotiation for IT acquisitions - Identify OFIs and implement best practices - Provide opportunity for education	Key Requirements: - Identify OFIs and best practices - Effectively implement action plans - Effective communications - Consistent with CQI model - Measurable Stakeholder input incorporated - Cross-functional and CQI Teams - FQTs - Customer surveys	Designed to meet requirements: - CQI team designed template - CQI process redesign model - Technology Review of New Vendor Technology Implementation to meet requirements: - PSO - Standardized RFI - Plan/Do/Study/Act
	6.1a(4)	**6.1a(5)**	**6.1a(6)**
	Key Performance Measures: - 90 Day and PSO milestones - Cost savings - FUA Customer Satisfaction - Number of Technology Assessments	Minimize costs/rework: - Rapid Cycle CQI - Issue and prework performed - Technology (Assessment) Review and Response	Process improvement identified: - Root Cause - FQT Sharing Process - PPM post project review - CQI

Figure 6.1-1 – Value Creation Processes

Quality Improvement -*CQI* -*MQA/MBNQA* -*Root Cause Analysis* -*PI Data Base*	**6.2.a (1)**	**6.2.a(2)**	**6.2.a(3)**
	Add Value: - Create replicable processes - Implement best practice - Increase operating efficiencies - Eliminate repeating issues - Increase customer satisfaction - Lower costs	Key Requirements: - Replicable - Fully deployed - Provide actionable feedback - Timely/Accurate Stakeholder input incorporated - CQI teams - Automated tools - SFHRPP - Customer survey tools	Designed to meet requirements: - CQI process improvement teams - Baldrige Criteria as business model - CQI tools Technology reviewed, implemented in accordance with Technology Acquisition Process (category 2) Implementation to meet requirements: - CQI - Plan/Do/Study/Act
	6.2a(4)	**6.2a(5)**	**6.2a(6)**
	Key Performance Measures: - Improvements implemented - MQA feedback items addressed - Root causes identified and addressed - Customer satisfaction	Minimize costs/rework: - Standardization - CQI	Process improvement identified: - Root Cause - CQI teams - MQA application process - SFHRPP
Social/Regulatory -*HIPAA Compliance* -*CRP* -*POE* -*Community Service* -*License Compliance*	**6.2.a (1)**	**6.2.a(2)**	**6.2.a(3)**
	Add Value: - Reduce exposure - Cost avoidance (no fines) - Promote desired culture - Increase billing efficiency - Multiple Community Service activities - Increase patient privacy	Key Requirements: - Timely - Preserve confidentiality - Accountability - Improve community (specified by program) Stakeholder input incorporated - Key Communities - Government Regulation - SFHRPP	Designed to meet requirements: - Confidentiality maintained through reporting structure - Programs identified positive community impact Implementation to meet requirements: - CQI - Plan/Do/Study/Act

	6.2a(4)	**6.2a(5)**	**6.2b(6)**
	Key Performance Measures: - Compliance with HIPAA/other regulations - Software license compliance - Healthy Communities sessions - Claims submitted same day, zero duplications - Community Benefit for Social Accountability (CBISA)	Minimize costs/rework: - Standardization - CQI	Process improvement identified: - Mission Awareness Team - SFHRPP - CQI
Project Management -*Project Reporting and Control* -*PSO Planning* -*Change Management*	**6.2.a (1)**	**6.2.a(2)**	**6.2.a(3)**
	Add Value: - Reduce errors - Timely implementations - Increase communications - Cost savings - Optimize use of resources - Promote desired culture	Key Requirements: - Timely - Measurable - Accountability - Effective communication Stakeholder input incorporated - Project request and implementation process	Designed to meet requirements: - Standardized structure - Industry Standards - Based on CQI Implementation to meet requirements: - CQI - Plan/Do/Study/Act
	6.2a(4)	**6.2a(5)**	**6.2a(6)**
	Key Performance Measures: - Projects on Time - Projects on Budget - Project compliance with standards - OPM-3 Best Practices implemented	Minimize costs/rework: - Standardization - CQI	Process improvement identified: - PSO Planning Committee - 90 Day Plans - SFHRPP - CQI
Security -*Auditing* -*Patch Management* -*Homeland Security* -*Anti-virus Protection* -*Policies and Procedures* -*End User Administration* -*Data Protection* -*HIPAA Compliance*	**6.2.a (1)**	**6.2.a(2)**	**6.2.a(3)**
	Add Value: - Reduce exposure - Cost avoidance (no fines) - Promote desired culture - Ensure integrity, timeliness, reliability, security, accuracy and confidentiality of data on systems utilized by customers	Key Requirements: - Timely - Accountability Stakeholder input incorporated - Government Regulation - Industry Standards - SFHRPP	Designed to meet requirements: - Regulatory compliance - Industry standards - External consultant design - Dedicated teams (patch management, homeland security, HIPAA security, data protection) - Computer Authorization Form (CAF) Technology incorporated through e-CAF Implementation to meet requirements: - CQI - PPM - Plan/Do/Study/Act
	6.2a(4)	**6.2a(5)**	**6.2a(6)**
	Key Performance Measures: - % Compliant - Audit Findings - Viruses detected and destroyed - Number of Spam emails blocked	Minimize costs/rework: - Standardization - CQI	Process improvement identified: - CAF Process Improvement Team - HIPAA coordinators meetings - Employee feedback - SFHRPP - CQI

Figure 6.2-1 – Support Processes.