# West Florida Regional Medical Center

*Curtis P. McLaughlin*

West Florida Regional Medical Center (WFRMC) is a Hospital Corporation of America (HCA)-owned and operated, for-profit hospital complex on the north side of Pensacola, Florida. Licensed for 547 beds, it operated approximately 325 beds in December 1991 plus the 89-bed psychiatric Pavilion and the 58-bed Rehabilitation Institute of West Florida. The 11-story office building of the Medical Center Clinic, P.A., was attached to the hospital facility, and a new cancer center was under construction.

The 130 doctors practicing at the Medical Center Clinic and its satellite clinics admitted mostly to WFRMC, whereas most of the other doctors in this city of 150,000 practiced at both Sacred Heart and Baptist Hospitals downtown. Competition for patients was intense, and in 1992 as many as 90% to 95% of patients in the hospital would be admitted subject to discounted prices, mostly Medicare for the elderly, CHAMPUS for military dependents, and Blue Cross/Blue Shield of Florida for the employed and their dependents.

The continuous quality improvement (CQI) effort had had some real successes over the previous four years, especially in the areas where package prices for services were required. All of the management team had been trained in quality improvement techniques according to HCA's Deming-based approach, and some 25 task forces were operating. The experiment with departmental self-assessments, using the Baldrige Award criteria and an instrument developed by HCA headquarters, had spurred department heads to become further involved and begin to apply quality improvement techniques within their own work units. Yet John Kausch, the Center's CEO, and his senior leadership sensed some loss of interest

among some managers, whereas others who had not bought into the idea at first were now enthusiasts.

## THE HCA CQI PROCESS

John Kausch had been in the first group of HCA CEOs trained in CQI techniques in 1987 by Paul Batalden, M.D., Corporate Vice President for Medical Care. John had become a member of the steering committee for HCA's overall quality effort. The HCA approach was dependent on the active and continued participation of top local management and on the Plan-Do-Check-Act (PDCA) cycle of Deming. Exhibit 4–1 shows that process as presented to company employees. Dr. Batalden told the case writer that he did not work with a hospital administrator until he was convinced that that individual was fully committed to the concept and was ready to lead the process at his or her own institution—a responsibility that included being the one to teach the Quality 101 course on site to his or her own managers. John Kausch also took members of his management team to visit other quality exemplars, such as Florida Power and Light and local plants of Westinghouse and Monsanto.

In 1991, John Kausch became actively involved in the Total Quality Council of the Pensacola Area Chamber of Commerce (PATQC), when a group of Pensacola area leaders in business, government, military, education, and health care began meeting informally to share ideas in productivity and quality improvement. From this informal group emerged the PATQC under the sponsorship of the Chamber of Commerce. The vision of PATQC was "helping the Pensacola area develop into a total quality community by promoting productivity and quality in all area organizations, public and private, and by promoting economic development through aiding existing business and attracting new business development." The primary employer in Pensacola, the U.S. Navy, was using the total quality management (TQM) approach extensively, was quite satisfied with the results, and supported the Chamber of Commerce program. In fact, the first 1992 one-day seminar presented by Mr. George F. Butts, consultant and retired Chrysler Vice President for Quality and Productivity, was held at the Naval Air Station's Mustin Beach Officer's Club. Celanese Corporation, a Monsanto division, and the largest nongovernmental employer in the area, also supported PATQC.

The CQI staffing at WFRMC was quite small, in keeping with HCA practice. The only program employee was Ms. Bette Gulsby, M.Ed., Director of Quality Improvement Resources, who served as staff and "coach" to Mr. Kausch and as a member of the quality improvement council. Exhibits 4–2 and 4–3 show the organization of the council and
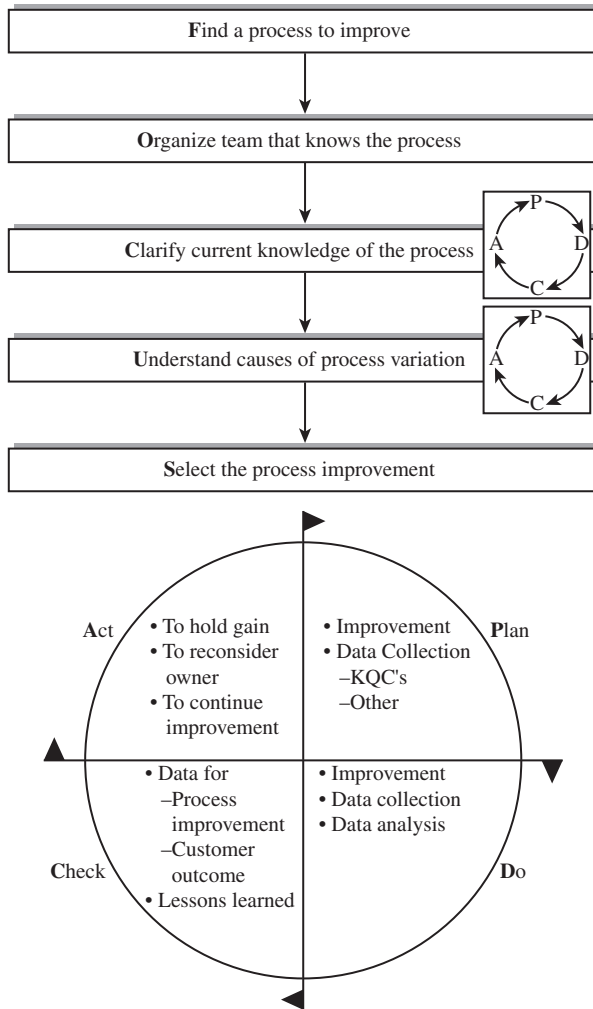


**Exhibit 4–1**  HCA's FOCUS–PDCA Cycle. Source: Hospital Corporation of America, Nashville, Tennessee, ©1988, 1989. Not for further reproduction.

the staffing for Quality Improvement Program (QIP) support. The "mentor" was provided by headquarters staff, and in the case of WFRMC was Dr. Batalden himself. The planning process had been careful and detailed. Exhibit 4–4 shows excerpts from the planning processes used in the early years of the program.
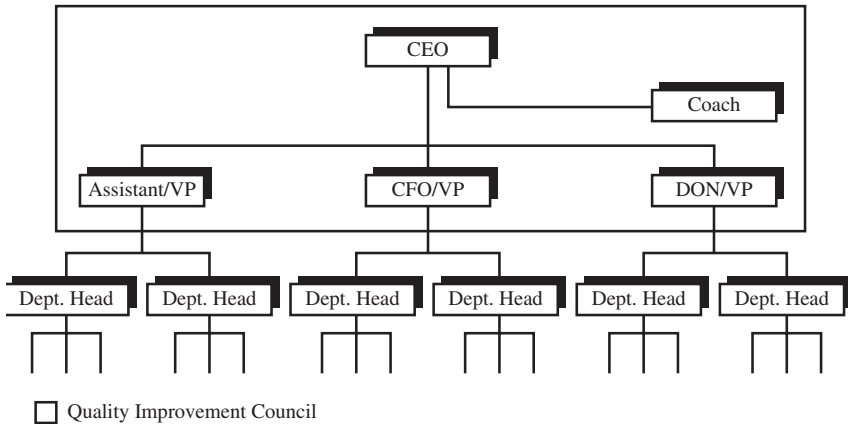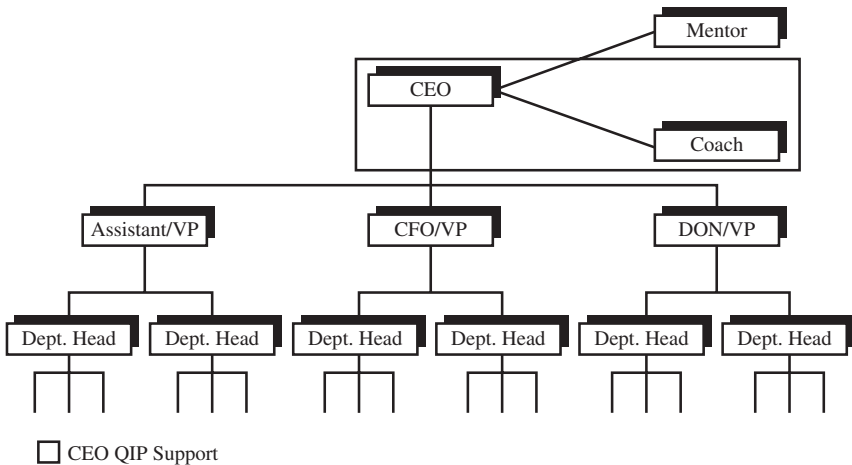


☐ Quality Improvement Council

**Exhibit 4–2** Organization Chart with Quality Improvement Council.



☐ CEO QIP Support

**Exhibit 4–3** Organization Chart with CEO QIP Support Mentor.

**Exhibit 4–4**   Planning Chronology for CQI

| | |
|---|---|
| **Initiation Plan—3 to 6 months, starting May 25, 1988** | |
| May 25: | Develop initial working definition of quality for WFRMC. |
| May 25: | Define the purpose of the Quality Improvement Council and set schedule for 2–4 PM every Tuesday and Thursday. |
| May 25: | Integrate Health Quality Trends (HQT) into continuous improvement cycle and hold initial review. |
| June 2: | Start several multifunctional teams with their core from those completing the Leadership Workshop with topics selected by the Quality Improvement Council using surveys, experience, and group techniques. |
| June 2: | Department Heads complete "CEO assessment" to identify customers and expectations, determine training needs, and identify department opportunities. To be discussed with assistant administrators on June 15. |
| June 16: | Present to QIC the Task Force report on elements and recommendations on organizational elements to guide and monitor QIP. |
| June 20: | Division meetings to gain consensus on Department plans and set priorities. QIC reviews and consolidates on June 21. Final assignments to Department Heads on June 22. |
| June 27: | Draft initial Statement of Purpose for WFRMC and present to QIC. |
| June 29–July 1: | Conduct first Facilitator's Training Workshop for 16. |
| July 1: | Task Force reports on additional QIP education and training requirements for: <br> • Team training and team members' handbook <br> • Head nurses <br> • Employee orientation (new and current) <br> • Integration of community resources (colleges and industry) <br> • Use of HCA network resources for Medical Staff, Board of Trustees |
| July 19: | Task Force report on communications program to support awareness, education, and feedback from employees, vendors, medical staff, local business, colleges and universities, and HCA. |
| August 1: | Complete the organization of the Quality Improvement Council. |

**Exhibit 4–4**  continued

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**Quality Improvement Implementation Plan to June 30, 1989**

| | |
|---|---|
| Fall: | Pilot and evaluate "Patient Comment Card System." |
| Oct. 21: | QIC input to draft policies—guidelines regarding forming teams, quality responsibility, and guidelines for multifunctional teams. Brainstorm at Oct. 27 meeting, have revisions for Nov. 10 meeting, and distribute to employees by November 15. |
| Oct. 27: | Review proposals for communicating QIP to employees to heighten awareness and understanding, communicate on HCA and WFRMC commitments; key definitions, policies, guidelines; HQT; QIP; teams and improvements to date; responsibility and opportunities for individual employees; initiate ASAP. |
| Nov. 15: | Prepare statements on "On further consideration of HCA's Quality Guidelines;" discuss with department heads, hospital staff, employee orientation; use to identify barriers to QI and opportunities for QI. Develop specific action plan and discuss with QIC. |
| Dec. 1: | Identify and evaluate community sources for QI assistance—statistical and operational—including colleges, companies, and the Navy. Make recommendations. |
| Early Dec.: | Conduct Quality 102 course for remaining Dept. Heads. Conduct Quality 101 course for head nurses and several new Dept. Heads. |
| Jan. 1, 1989: | Develop and implement a suggestion program consistent with our HCA Quality Guidelines, providing quick and easy way to become involved in making suggestions/identifying situations needing improvement, providing quick feedback and recognition; and interfacing with identifying opportunities for QIP. |

**QIP Implementation Plan, July 1989–June 1990**

| | |
|---|---|
| Aug. 1: | Survey Department Heads to identify priorities for additional education and training. |
| Sept. 14–15: | Conduct a management workshop to sharpen and practice QI methods. To include practice methods; to increase management/staff confidence, comfort; to develop a model for departmental implementation; to develop process assessment/QIP implementation tool; to start Quality Team Review. |

**Exhibit 4–4**  continued

| | |
|---|---|
| September: | Develop a standardized team orientation program to cover QI tools and group process rules. |
| Fall: | Expand use of HQTs and integrate into Health Quality Improvement Process (HQIP)—improve communication of results and integration of quality improvement action plans. Psychiatric Pavilion to evaluate and implement HQT recommendations from "Patient Comment Card System"—evaluate and pilot. |
| October: | Incorporate QIP implementation into existing management/communication structure. Establish division "steering committee functions" to guide and facilitate departmental implementation. Identify QI project for each Department Head/Assistant Administrator. Establish regular Quality Reviews into Department Manager meetings. |
| December: | Evaluate effectiveness of existing policies, guidelines, and practices for sanctioning, supporting, and guiding QI teams. Include Opportunity Form/Cross Functional Team Sanctioning; Team leader and Facilitator responsibilities; Team progress monitoring/guiding; Standardized team presentation format (storyboard). Demonstrate measurable improvement through Baxter QI team. |
| Monthly: | Monitor and improve the suggestion program. |
| January: | Pilot the Clinical Process Improvement methodology. |
| All year: | In all communications, written and verbal, maintain constant message regarding WFRMC commitment to HQIP; report successes of teams and suggestions; and continue to educate about principles and practices of HQIP strategy. |
| January: | Successfully demonstrate measurable improvement from focused QIP in one department (Medical Records). |
| Spring: | Expand use of HQTs and integrate into HQIP.<br>• Pilot HQT in Rehab Center.<br>• Evaluate and implement Physicians' HQT.<br>• Pilot Ambulatory Care HQT. |
| Summer: | Expand use of HQTs and integrate into HQIP.<br>• Human Resources—Pilot HQT.<br>• Payers—Pilot HQT. |

WFRMC has been one of several HCA hospitals to work with a self-assessment tool for department heads. Exhibit 4–5 shows the cover letter sent to all department heads. Exhibit 4–6 shows the Scoring Matrix for Self-Assessment. Exhibit 4–7 shows the Scoring Guidelines, and Exhibit 4–8 displays the five assessment categories used.

**Exhibit 4–5**   Departmental Quality Improvement Assessment

In an effort to continue to monitor and implement elements of improvement and innovation within our organization, it will become more and more necessary to find methods which will describe our level of QI implementation.

The assessment or review of a quality initiative is only as good as the thought processes which have been triggered during the actual assessment. Last year (1990) the Quality Improvement Council prepared for and participated in a quality review. This exercise was extremely beneficial to the overall understanding of what was being done and the results that have been accomplished utilizing various quality techniques and tools.

The Departmental Implementation of QI has been somewhat varied throughout the organization and although the variation is certainly within the range of acceptability, it is the intent of the QIC to better understand each department's implementation road map and furthermore to provide advice/coaching on the next steps for each department.

Attached please find a scoring matrix for self-assessment. This matrix is followed by five category ratings (to be completed by each department head). The use of this type of tool reinforces the self-evaluation which is consistent with continuous improvement and meeting the vision of West Florida Regional Medical Center.

Please read and review the attachment describing the scoring instructions and then score your department category standings, relative to the approach, deployment, and effects. This information will be forwarded to Bette Gulsby by April 19, 1991, and following a preliminary assessment by the QIC, an appointment will be scheduled for your departmental review.

The review will be conducted by John Kausch and Bette Gulsby, along with your administrative director. Please take the time to review the attachments and begin your self-assessment scoring. You will be notified of the date and time of your review.

This information will be utilized for preparing for the next Department Head retreat, scheduled for May 29 and 30, 1991 at the Perdido Beach Hilton.

**Exhibit 4–6**　A Scoring Matrix for Self-Assessment

| APPROACH | DEPLOYMENT (Implementation) | EFFECTS (Results) |
|---|---|---|
| • HQIP design includes all eight dimensions* <br> • Integration across dimensions of HQIP and areas of operation | • Breadth of implementation (areas or functions) <br> • Depth of implementation (awareness, knowledge, understanding, and applications) | • Quality of measurable results |

*The eight dimensions of HQIP are: leadership constancy, employee mindedness, customer mindedness, process focused, statistical thinking, PDCA driven, innovativeness, and regulatory proactiveness.

| | APPROACH | DEPLOYMENT | EFFECTS |
|---|---|---|---|
| 100% | • World-class approach: sound, systematic, effective HQIP based, continuously evaluated, refined, and improved. <br> • Total interaction across all functions. <br> • Repeated cycles of innovation/improvement. | • Fully in all areas and functions. <br> • Ingrained in the culture. | • Exceptional, world-class, superior to all competition in all areas. <br> • Sustained (3 to 5 years), clearly caused by the approach. |
| 80% | • Well developed and tested, HQIP based. <br> • Excellent integration. | • In almost all areas and functions. <br> • Evident in the culture of all groups. | • Excellent, sustained in all areas with improving competitive advantage. <br> • Much evidence that they are caused by the approach. |
| 60% | • Well planned, documented, sound, systematic. HQIP based, all aspects addressed. <br> • Good integration | • In most areas and functions. <br> • Evident in the culture of most groups. | • Solid, with positive trends in most areas. <br> • Some evidence that they are caused by the approach. |
| 40% | • Beginning of sound, systematic, HQIP based; not all aspects addressed. <br> • Fair integration | • Begun in many areas and functions. <br> • Evident in the culture of some groups. | • Some success in major areas. <br> • Not much evidence that they are caused by the approach. |
| 20% | • Beginning of HQIP awareness. <br> • No integration across functions. | • Beginning in some areas and functions. <br> • Not part of the culture. | • Few or no results. <br> • Little or no evidence that any results are caused by the approach. |
| 0% | | | |

**Exhibit 4–7**  Departmental Quality Improvement Assessment Scoring Guidelines

In order to determine your department's score in each of the five cate-
gories, please review the Scoring Matrix for self-assessment. The opera-
tional definitions for Approach, Deployment, and Effects are listed in the
small boxes on the top of the scoring matrix. Each criteria is divided into
percentage of progress–implementation (i.e., 0%  to 100%). For example,
you may determine that your departmental score on category 3.0 (QI
Practice) is:

| APPROACH | DEPLOYMENT | EFFECTS |
|:--------:|:----------:|:-------:|
| 20% | 20% | 20% |

   This means that your departmental approach has fair integration of QIP
practice, your departmental deployment is evident in the culture of some
of your groups, and your departmental effects are not actually evidence
that they are caused by the approach.
   Please remember that this is a self-assessment and only you know
your departmental progress. This assessment is not a tool to generate
documentation. However, if you would like to bring any particular docu-
ment(s) to your review, please do so. This is only meant to provide a fo-
rum for you to showcase your progress and receive recognition and feed-
back on such.
   Remember, review each of the self-assessment criteria of approach, de-
ployment, and effects and become familiar with the levels or percentages
described. You have three scores for each Departmental QI Assessment
Category (categories 1.0–5.0)

## FOUR EXAMPLES OF TEAMS

### IV Documentation

   The nursing department originated the IV Documentation Team in
September 1990 after receiving documentation from the pharmacy de-
partment that over a 58-day period there had been $16,800 in lost charges
related to the administration of intravenous (IV) solutions. Pharmacy at-
tributed the loss to the nursing staff's record keeping. This was the first

time that the nursing department was aware of a problem or that the pharmacy department had been tracking this variable. There were other lost charges, not yet quantified, due to recording errors in the oral administration of pharmaceuticals as well.

The team formed to look at this problem found that there were some 15 possible reasons why the errors occurred, but that the primary one was that documentation of the administration of the IV solution was not entered into the medication administration record (MAR). The MAR was kept at the patient bedside, and each time that a medication was administered the nurse was to enter documentation into this record.

The team had to come to understand some terms as they went along. The way that Pharmacy kept its books, anything that was sent to the floors but not billed within 48 to 72 hours was considered a "lost charge." If an inquiry was sent to the floor about the material and what happened and a correction was made, the entry was classified as "revenue recovered." Thus the core issue was not so much one of lost revenue as one of unnecessary rework in pharmacy and on the nursing floors.

The team developed Pareto charts showing the reasons for the documentation errors. The most common ones were procedural—for example, "patient moved to the operating room," or "patient already discharged." Following the HCA model, these procedural problems were dealt with one at a time to correct the accounting for unused materials. The next step in the usual procedure was to develop a run chart to show what was happening over time to the lost charges on IVs. Here the team determined that the best quality indicator would be the ratio of lost charges to total charges issued. At this point pharmacy management realized that it lacked the denominator figure and that its lack of computerization led to the lack of that information. Therefore, the task force was inactive for three months while Pharmacy implemented a computer system that could provide the denominator.

Ms. Debbie Koenig, Assistant Director of Nursing, who was responsible for the team, said that the next step would be to look at situations where the MAR was not at the patient bedside but perhaps at the nursing station so that a nurse could not make the entry at the appropriate time. This was an especially bothersome rework problem because of nurses working various shifts and because occasionally an agency nurse had been on duty and was not available to consult when pharmacy asked why documentation was not present for an IV dose of medication.

**Exhibit 4–8** Departmental QI Assessment Categories

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**1.0  DEPARTMENTAL QI FRAMEWORK DEVELOPMENT**

The QI Framework Development category examines how the departmental quality values have been developed, how they are applied to projects in a consistent manner, and how adoption of the values throughout the department is assessed and reinforced.

Examples of areas to address:

- Department Mission
- Departmental Quality Definition
- Departmental Employee Performance Feedback Review
- Departmental QI Plan
- QI Methods

| APPROACH | DEPLOYMENT | EFFECTS |
|----------|------------|---------|
| _____% | _____% | _____% |

**2.0  CUSTOMER KNOWLEDGE DEVELOPMENT**

The Customer Knowledge Deployment category examines how the departmental leadership has involved and utilized various facets of customer-mindedness to guide the quality effort.

Examples of areas to address:

- HQT Family of Measures (patient, employee, etc.)
- Departmental Customer Identification
- Identification of Customer Needs and Expectations
- Customer Feedback/Data Review

| APPROACH | DEPLOYMENT | EFFECTS |
|----------|------------|---------|
| _____% | _____% | _____% |

**3.0  QUALITY IMPROVEMENT PRACTICE**

The Quality Improvement Practice category examines the effectiveness of the department's efforts to develop and realize the full potential of the work force, including management, and the methods to maintain an environment conducive to full participation, quality leadership, and personal and organizational growth.

Examples of areas to address:

- Process Improvement Practice
- Meeting Skills
- QI Storyboards

*continues*

**Exhibit 4–8** continued

- QI in Daily Work Life (individual use of QI tools, i.e., flow chart, run chart, Pareto chart)
- Practice Quality Management Guidelines
- Departmental Data Review
- Plans To Incorporate QI in Daily Clinical Operations
- Identification of Key Physician Leaders

| APPROACH | DEPLOYMENT | EFFECTS |
|----------|------------|---------|
| _____% | _____% | _____% |

## 4.0   QUALITY AWARENESS BUILDING

The Quality Awareness Building category examines how the department decides what quality education and training is needed by employees and how it utilizes the knowledge and skills acquired. It also examines what has been done to communicate QI to the department and how QI is addressed in departmental staff meetings.
Examples of areas to address:

- JIT Training
- Employee Orientation
- Creating Employee Awareness
- Communication of QI Results

| APPROACH | DEPLOYMENT | EFFECTS |
|----------|------------|---------|
| _____% | _____% | _____% |

## 5.0   QA/QI LINKAGE

The QA/QI Linkage category examines how the department has connected QA data and information to the QI process improvement strategy. Also examined is the utilization of QI data-gathering and decision-making tools to document and analyze data. (How the department relates the ongoing QA activities to QI process improvement activities.)
Examples of areas to address:

- QA Process Identification
- FOCUS-PDCA Process Improvement
- Regulatory/Accreditation Connection (Joint Commission)

| APPROACH | DEPLOYMENT | EFFECTS |
|----------|------------|---------|
| _____% | _____% | _____% |

**Universal Charting**

There was evidence that a number of ancillary services results, "loose reports," were not getting into the patients' medical records in a timely fashion. This was irritating to physicians and could result in delays in the patient's discharge, which under DRGs [diagnosis-related groups] meant higher costs without higher reimbursement. One employee filed a suggestion that a single system be developed to avoid people running over other people on the floor doing the "charting." A CQI team was developed and led by Ms. Debbie Wroten, medical records director. The 12-member team included supervisors and directors from the laboratory, the pulmonary lab, the EKG lab, medical records, radiology, and nursing. They developed the following "Opportunity Statement":

> At present six departments are utilizing nine full-time equivalents 92 hours per week for charting separate ancillary reports. Rework is created in the form of repulling of inhouse patient records creating an ever-increasing demand of chart accessibility. All parties affected by this process are frustrated because the current process increases the opportunity for lost documentation, chart unavailability, increased traffic on units creating congestion, prolonged charting times, and provides for untimely availability of clinical reports for patient care. Therefore, an opportunity exists to improve the current charting practice for all departments involved to allow for the efficiency, timeliness, and accuracy of charting loose reports.

The team met, assessed, and flow-charted the current charting processes of the five departments involved. Key variables were defined as follows:

- Charting timeliness—number of charting times per day, consistency of charting, and reports not charted per charting round.
- Report availability—indicated by the number of telephone calls per department asking for reports not yet charted.
- Chart availability—chart is accessible at the nurses' station without interruption.
- Resource utilization—manhours and number of hours per day of charting.

Each department was asked to use a common "charting log" track for several weeks of the number of records charted, who did the charting, when it was done, the preparation time, the number of reports charted, the number of reports not charted (missed), and the personnel hours consumed in charting. The results are shown in Exhibit 4–9.

These data gave the team considerable insight into the nature of the problem. Not every department was picking up the materials every day. Two people could cover the whole hospital in three-quarters of an hour each or one person in 1.5 hours. The clinical chemistry laboratory, medical records, and radiology were making two trips per day, whereas other departments were only able to chart every other day and failed to chart over the weekends.

The processes used by all the groups were similar. The printed or typed reports had to be sorted by floors, given room numbers if missing, taken to the floors, and inserted into patient charts. If the chart was not available, they had to be held until the next round. A further problem identified was that when the clerical person assigned to these rounds was not available, a technical person, who was paid considerably more and was often in short supply, had to be sent to do the job.

A smaller team of supervisors who actually knew and owned the charting efforts in the larger departments (medical records, radiology, and clinical chemistry) was set up to design and assess the pilot experiment. The overall team meetings were used only to brief the department heads to gain their feedback and support. A pilot experiment was run in which these three departments took turns doing the runs for each other. The results were favorable. The pilot increased timeliness and chart availability by charting four times per day on weekdays and three times per day on

**Exhibit 4–9** Charting Log

| | Mean Records | | Mean Hours | | |
| Department | Per Day | Range | Per Day | Range | Comments |
| --- | --- | --- | --- | --- | --- |
| Medical Records | 77.3 | 20–40 | 1.6 | 0.6–2.5 | Daily |
| Pulmonary Lab | 50.3 | 37–55 | 1.0 | 0.7–1.5 | MWF |
| Clinical Lab | 244.7 | 163–305 | 3.2 | 1.9–5.4 | Daily |
| EKG Lab | 40.2 | 35–48 | 0.8 | 0.1–1.0 | Weekdays |
| Microbiology | 106.9 | 3–197 | 1.4 | 0.1–2.2 | Daily |
| Radiology | 87.1 | 6–163 | 1.5 | 0.1–2.9 | Daily |

weekends. Report availability was improved, and there were fewer phone calls. Nursing staff, physicians, and participating departments specifically asked for the process to be continued. The hours of labor dropped from 92 weekly to less than 45, using less highly paid labor.

Therefore, the team decided that the issues were important enough that they should consider setting up a separate Universal Charting Team to meet the needs of the entire hospital. However, an unanticipated hospital census decline made impractical the possibility of requesting additional staffing, etc. Consequently, the group reevaluated the possibility of continuing the arrangement developed for the pilot using the charting hours of the smaller departments on a volume basis. It was discovered that this had the effect of freeing the professional staff of the smaller departments from charting activities and a very minimal allocation of hours floated to the larger departments. It also increased the availability of charters in the larger departments for other activities.

The payroll department was then asked to develop a system for allocating the hours that floated from one department to another. That proved cumbersome, so the group decided to allocate charting hours on the basis of each department's volume. "In the event that one or more departments experiences a significant increase/decrease in charting needs, the group will reconvene and the hourly allocation will be adjusted."

The resulting schedule has the lab making rounds at 6:00 AM and 9:00 AM and radiology at 4:00 PM and 9:30 PM Monday through Friday, and Medical Records at 6:00 AM, 1:00 PM, and 8:00 PM on Saturday and Sunday. Continuing statistics were kept on the process, which is shown in Exhibit 4–10. The system continued to work effectively.

## Labor, Delivery, Recovery, Postpartum (LDRP) Nursing

Competition for young families needing maternity services had become quite intense in Pensacola. WFRMC Obstetrical (OB) Services offered very traditional services in 1989 in three separate units—labor and delivery, nursery, and postpartum—and operated considerably below capacity.

A consultant was hired to evaluate the potential growth of obstetrical services, the value of current services offered by WFRMC, customers' desires, competitors' services, and opportunities for improvement. Focus group interviews with young couples (past and potential customers) indicated that they wanted safe medical care in a warm, homelike setting with

**Exhibit 4–10** Universal Charting Team FOCUS–PDCA Outline

F **Opportunity Statement:**
At present, six departments are utilizing 9 full-time equivalents 92 hours a week for charting separate ancillary reports. Rework is created in the form of repulling of inhouse patient records creating an ever-increasing demand of chart accessibility. All parties affected by this process are frustrated because the current process increases the opportunity for lost documentation, chart unavailability, increased traffic on units creating congestion, prolonged charting times, and provides for untimely availability of clinical reports for patient care.
Therefore, an opportunity exists to improve the current charting practice for all departments involved to allow for the efficiency, timeliness, and accuracy of charting loose reports.

O Team members include:
Debbie Wroten, Medical Records Director—Leader
Bernie Grappe, Marketing Director—Facilitator
Joan Simmons, Laboratory Director
Mary Gunter, Laboratory Patient Services Coordinator
Al Clarke, Pulmonary Services Director
Carol Riley, Pulmonary Services Assistant Director
Marlene Rodrigues, EKG Supervisor
Patti Travis, EKG
Debra Wright, Medical Records Transcription Supervisor
Mike West, Radiology Director
Lori Mikesell, Radiology Transcription Supervisor
Debbie Fernandez, Head Nurse

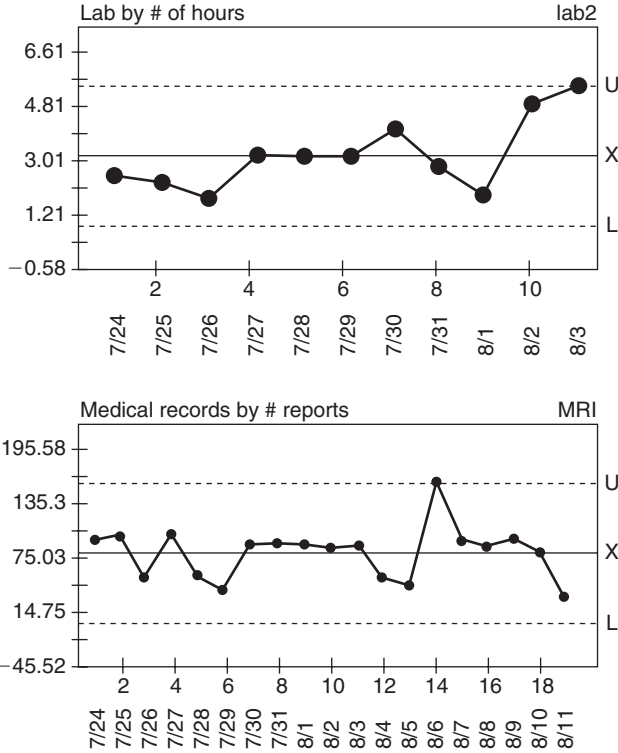C Assessed and flow charted current charting practices of departments.
Clarified and defined key quality characteristics of the charting process:

Charting Timeliness—number of charting times per day, consistency of charting, and reports not charted per charting round.
Report Availability—indicated by the number of telephone calls per department asking for reports not yet charted.
Chart Availability—chart is accessible at nurses' station for charting without interruption.
Resource Utilization—manhours and number of hours per day of charting.

U Gathered data on departments charting volumes and time spent on charting.

Department:

Charting Log

| Date | Charting Tech vs. Clk. | Prep Time | # Reports Charted | # Reports Not Charted | Charting Time (amt) | Hour of Day | Comment |
|------|------|------|------|------|------|------|------|
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**Exhibit 4–10** continued

Lab by # of hours — lab2

Medical records by # reports — MRI

S Data gained through the pilot indicated that significant gains were available through the effort to justify proceeding with the development of a Universal Charting Team.

The team developed a flow chart of the charting process using a universal charting team rather than previous arrangements. In order to pilot the improvement, the group decided to set up a UCT using current charters from the three major charting departments-medical records, laboratory, and radiology. The team also developed written instructions for both the charters and participating departments. A subgroup of the team actually conducted a one-day pilot before beginning extensive education to ensure that the UCT would work as planned and to be sure that the charters from each of the large departments were well versed on possible situations that might occur during the pilot.

D Piloted proposed Universal Charting Team using current charting personnel from radiology, laboratory, and medical records to chart for all departments.

C Pilot results were positive and indicated that the UCT concept offered significant advantages over the previous charting arrangements. Results were:

**Exhibit 4–10** continued

Timeliness/Chart Availability—Pilot reduced daily charting to four scheduled charting times daily for all departments. Smaller departments did not chart daily prior to pilot. The charting team also reduced the number of occasions that charters from different departments were on the nursing unit needing the same chart.

Report Availability—Telephone calls were reduced and nursing staff, physicians, and participating departments specifically asked for UCT following the pilot.

Resource Utilization—Number of manhours spent charting and preparing to chart was reduced from 92 hours weekly to less than 45 hours. The improvement also allowed the use of less expensive staff for charting.

A The group reached consensus that the easiest configuration for the UCT would be to set up a separate UCT that would serve the needs of the entire hospital. This was to be proposed to administration by the team as the conclusion of their efforts. However, an unanticipated hospital census decline made impractical the possibility of requesting additional staffing, etc. Consequently, the group reevaluated the possibility of continuing the arrangement developed for the pilot using the charting hours to the smaller departments on a volume basis. It was discovered that this had the effect of freeing the professional staff in the smaller departments from charting responsibilities while a very minimal allocation of hours floated to the larger departments, and it increased the availability of charters in the larger departments for other activities. The payroll department was then involved in order to develop the proper mechanism and procedure for floating hours.

This modification of the previous pilot was piloted for a month with continued good results. Streamlining of the hours floating process may be necessary to place less burden on the payroll department.

Since no major changes were required following the pilot, the group has elected to adopt the piloted UCT format. Allocation of charting hours is based on a monthly review of charting volumes for each department. In the event that one or more departments experiences a significant increase/decrease in charting needs, the group will reconvene and the hourly allocation will be adjusted.

**LESSONS LEARNED**

Because of the size and the makeup of the team, which included a number of department heads, it was found helpful to set up a smaller team of three supervisors who actually knew and owned the charting efforts in the major departments. This group designed and assessed the initial pilot and actually piloted the pilot before bringing departmental charters into the process. As a result, overall team meetings were used primarily to brief department heads and gain their feedback and consensus.

the least possible number of rules. Most mothers were in their thirties, planning small families with the possibility of only one child. Fathers wanted to be "actively involved" in the birth process. The message came back, "We want to be actively involved in this experience and we want to make the decisions." The consultant challenged the staff to develop their own vision for the department based on the focus group responses, customer feedback, and nationally trends.

It became clear that there was a demand for a system in which a family-centered birth experience could occur. That system needed to revolve around the customers' preferences rather than making the customers follow a rigid traditional routine. Customers wanted all aspects of a normal delivery to happen in the same room. The new service would allow the mother, father, and baby to remain together throughout the hospital stay, now as short as 24 hours. Friends and families would be allowed and encouraged to visit and participate as much as the new parents desired. The main goals were to be responsive to the customer's needs and to provide safe, quality medical care.

The hospital administration and the six obstetricians practicing there were eager to see obstetrical services grow. They were open to trying and supporting the new concept. The pediatricians accepted the changes, but without great enthusiasm. The anesthesiologists were opposed to the change. The OB supervisor and two of the three nursing head nurses were also opposed to any change. They wanted to continue operations in the traditional manner. When the hospital decided to adopt the new LDRP concept, it was clear that patients and families liked it but that the nursing staff, especially management, did not. The OB nursing supervisor retired, one head nurse resigned, one was terminated, and the third opted to move from her management position to a staff nurse role. Ms. Cynthia Ayres, R.N., Administrative Director, responsible for the psychiatric and cardiovascular services, was assigned to implement the LDRP transition until nursing management could be replaced.

One of the issues involved in the transition was clarification of the charge structure. Previously each unit charged separately for services and supplies. Now that the care was provided in a single central area, the old charge structure was unnecessarily complex. Duplication of charges was occurring, and some charges were being missed because no one was assuming responsibility.

Ms. Ayres decided to use the CQI process to develop a new charge process and to evaluate the costs and resource consumption of the service. Ms. Ayres had not been a strong supporter of the CQI process when it was first introduced into the organization. She had felt that the process was too slow and rigid, and that data collection was difficult and cumbersome. Several teams were organized and assigned to look at specific areas of the LDRP process.

To reach a simplified charge process, as well as a competitive price, all aspects of the process had to be analyzed. Meetings were held with the

nursing and medical staff. Management of OB patient and physician preferences in terms of supplies and practices were analyzed. A number of consensus conferences were held to discuss observed variations. For example, each of the six obstetricians specified a different analgesic for pain control. All of these drugs appeared effective for pain control, but their cost per dose ranged from $10 to $75. The physicians agreed that the $10 product was acceptable since the outcome was the same.

Another standard practice was sending placentas to the pathology laboratory for analysis after every normal delivery. This involved labor time, lab charges, and a pathologist's fee for review. The total procedure cost $196. When questioned about the practice, the current medical staff did not feel it was necessary medically nor the current practice nationally, but felt that they were just following the rules. Upon investigation, the team found that an incident involving a placenta had occurred 15 years ago that had led the service chief (since retired) to order all placentas sent to the lab. The obstetricians developed criteria for when it was medically necessary for the lab review of a placenta. This new rule decreased the number of reviews by 95%, resulting in cost savings to the hospital and to patients.

The team reviewed all OB charges for a one-year period. They found that in 80% of the normal deliveries, 14 items were consistently used. The other items were due to variations in physician preferences. The teams and the physicians met and agreed which items were the basic requirements for a normal delivery. These items became the basic charges for package pricing.

The team met weekly for at least one hour for over a year. Some meetings went as long as five hours. Initially, there was a great deal of resistance and defensiveness. Everyone wanted to focus on issues that did not affect himself or herself. The physicians objected that they were being forced to practice "cookbook medicine" and that the real problem was "the hospital's big markup." Hospital staff continued to provide data on actual hospital charges, resource consumption, and practice patterns. The hospital personnel continued to emphasize repeatedly that the physicians were responsible for determining care. The hospital's concern was to be consistent and to decrease variation.

Another CQI team, the Documentation Team, was responsible for reviewing forms utilized previously by the three separate units. The total number of forms used had been 30. The nursing staff was documenting vital signs an average of five times each time care was provided. Through

review of policies, standards, documentation, and care standards, the number of forms was reduced to 20. Nurses were now required to enter each care item only one time. The amount of time spent by nurses on documentation was reduced 50%, as was the cost of forms. Data entry errors were also reduced.

The excess costs that were removed were not all physician-related. Many had to do with administrative and nursing policies. Many were due to old, comfortable, traditional ways of doing things. When asked why a practice was followed, the typical response was, "I don't know; that's just the way we've always done it." The OB staff became comfortable with the use of CQI. They recognized that, although it requires time and effort, it does produce measurable results. The OB staff continued to review their practices and operations to identify opportunities to streamline services and decrease variation.

**Pharmacy and Therapeutics Team**

In late 1987, a CQI team was formed jointly between the hospital's Pharmacy and Therapeutics (P&T) Committee and the pharmacy leadership. The first topic of concern was the rapidly rising costs of inpatient drugs, especially antibiotics, which were then costing the hospital about $1.3 million per year. The team decided to study the process by which antibiotics were selected and began by asking physicians how they selected antibiotics for treatment. Most of the time physicians ordered a culture of the organism believed to be causing the infection from the microbiology lab. A microbiology lab report came back identifying the organism and the antibiotics to which it was sensitive and those to which it was resistant. Some physicians reported that they would look down the list until they came to an antibiotic to which the organism was sensitive and order that. That list was in alphabetical order. A study of antibiotic utilization showed a high correlation between use and alphabetical position, confirming the anecdotal reports. Therefore the team recommended to the P&T committee that the form be changed to list the antibiotics in order of increasing cost per average daily dose. The doses used would be based on current local prescribing patterns rather than recommended dosages. The P&T committee, which included attending physicians, approved the change and reported it in their annual report to the medical staff. Exhibit 4–11 shows what happened to the utilization of "expensive" antibiotics
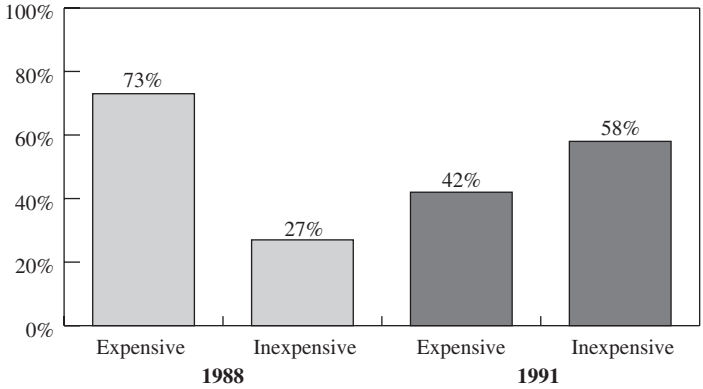
**Exhibit 4–11** Antibiotic Utilization Ratio, Expensive: Inexpensive Doses Dispensed (expensive ≈ $10.00 per dose)

(more than $10 per dose) from 1988 to 1991. These costs were not adjusted at all for inflation in drug prices during this period. The estimated annual saving was $200,000.

Given this success, the team went on in 1989 to deal with the problem of the length of treatment using antibiotics. Inpatients did not get a prescription for ten days' supply. Their IM and IV antibiotics were continued until the physician stopped the order. If a physician went away for the weekend and the patient improved, colleagues were very reluctant to alter the medication until he or she returned. The team wrestled with how to encourage the appropriate ending of the course of treatment without hassling the physicians or risking undue legal liability problems. They settled on a sticker that was placed in the chart at the end of three days stating that the treatment had gone on for three days at that point and that an ending date should be specified if possible. The hospital newsletter and the P&T committee annual report noted that the physician could avoid this notice by specifying a termination date at the time of prescribing. This program seemed to be effective. Antibiotic costs again dropped, and there were no apparent quality problems introduced as measured by length of stay or by adverse events associated with the new system.

In 1990 the team began an aggressive Drug Usage Evaluation (DUE) program, hiring an assistant director of pharmacy clinical services to ad-

minister it. The position had to be rigorously cost-justified. DUE involved a review of cases to determine whether the selection and scheduling of powerful drugs matched the clinical picture presented. For example, if the physician prescribed one of three types of antibiotics known to represent a risk of kidney damage in 3% to 5% of cases, the DUE administrator ordered lab tests to study serum creatinine levels and warn the physician if they rose, indicating kidney involvement. There was a sharp decline in the adverse effects due to the use of these drugs. This program was expanded further to incorporate looking at other critical lab values and relating them to pharmacy activities beyond antibiotics, for example, use of IV solutions and potassium levels. By 1991, the unadjusted antibiotic costs for roughly the same number of admissions had dropped to less than $900,000.

## LOOKING AHEAD

One of the things that had concerned John Kausch during 1991 was the fact that implementation had varied from department to department. Although he had written in his annual CQI report that the variation had certainly been within the range of acceptability, he was still concerned about how much variation in implementation was appropriate. If maintaining enthusiasm was a concern, forcing people to conform too tightly might become a demotivator for some staff. This issue and the four mentioned at the beginning of this case study should all be addressed in the coming year.

## CASE ANALYSIS

This is a hospital with a large group of physicians closely tied to it, both economically and geographically. It is also operating in an area of intense competition and tight cost controls. The fact that 90% to 95% of the hospital's compensation is case-based (DRGs) and not procedure-based has a profound impact on management motivation. Intense support for the CQI implementation was provided by Dr. Batalden and his staff at HCA corporate headquarters.

## ASSIGNMENT QUESTIONS

### Introduction

1. What were the strategic reasons behind West Florida Regional Medical Center's (WFRMC's) decision to invest heavily in TQM?
2. How did the program undertaken at WFRMC reflect this strategic impetus?

### Basics

3. What were the strengths and weaknesses of the TQM program as it was implemented here?
4. What were the influences of corporate headquarters in this effort?
5. What effort has been made to measure the impact of the program on the hospital, especially in terms of supporting its strategic directions?

### Implementation

6. What effort has been made to use TQM to support tactical programs within the hospital?
7. What should John Kausch do next in dealing with continuous improvement?

### Application

8. If West Florida Regional Medical Center was to introduce an internal medicine residency program, how should the concepts of microsystems be incorporated into its current quality efforts?

### Class Exercise

Visit a large local health delivery institution. Document how they are motivating participation in continuous improvement by various types of clinical and administrative staff. Compare and contrast their approach with the HCA approach outlined in the West Florida case.