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Lee FitzGerald Logan

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TOTAL QUALITY MANAGEMENT IN GOVERNMENT:

Can TQM Work in a Small VA Facility?

By

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CHAPTER ONE

INTRODUCTION, BACKGROUND, PROBLEM STATEMENT

In the 1970's and 1980's American business and the media began to recognize the tremendous business success of the Japanese. Since then, schools of management theory have espoused various concepts of "Japanese management," from corporate culture to quality circles.

This style of management is credited with many positive changes in corporate America. It stresses the importance of worker involvement in improving product quality. Improved quality results in decreased cost, increased productivity, lower prices and greater customer satisfaction. With increased customer satisfaction, the company captures a greater share of the market, leading to increased employment. Increased worker involvement also contributes to improved worker satisfaction and quality of work life.

This management concept is known by various names in the American companies which have adopted it, for example, Total Quality Improvement, Team Management, Continuous Quality Improvement and Total Quality Management, to name a few. Throughout this paper the concept will be referred to as Total Quality Management (TQM) because this is the title it is most often given in the Federal sector.

Beginnings in the Private Sector

There are many TQM gurus. One of the first was W. Edwards Deming, an American statistical consultant who went to Japan in 1950 to help the Secretary of War conduct a
population census. He stayed on to teach Japanese managers, engineers and scientists how to ensure quality in manufacturing. The highest Japanese award for business excellence is now named for Dr. Deming.²

Deming was relatively unknown in the United States until 1980, when he appeared in a network television documentary titled, "If Japan Can, Why Can't We?" comparing industrial productivity in Japan to that of the U.S. Shortly after the documentary aired, Deming began consulting for Ford Motor Company. Deming's work has now spread to hundreds of American companies including 3M, AT&T, Hewlett-Packard, Harley-Davidson, and Xerox.³

Dr. Deming has been chosen as the focus for contrast with the philosophy and practice of Federal sector management. Deming emphasizes the need to build in quality during production, rather than placing the emphasis on inspecting the end product for defects. While most U.S. manufacturers have traditionally addressed customer satisfaction through large customer service and warranty programs, TQM advocates customer satisfaction through quality of the product. The ultimate goal would be to eliminate the need for warranty work or complaint departments through superior quality. To accomplish this aim, Deming expects companies to continually review and improve specific production procedures. Statistics are used to evaluate quality at each stage of production; product
specifications are made more standardized and precise with a goal of total quality. He also stresses the need for constant customer research - quality is to be defined as whatever the customer needs and wants.  

On the human resource side, Deming is an advocate of worker participation in decision making. According to Deming, responsibility for quality control should be shared by each worker during the production process, not limited to the inspector at the end of the assembly line. To do this, workers must be well trained; they must clearly understand what to do, how to do it right the first time, and how to continue improving the process. He believes in what he calls the 85-15 Rule: The majority of problems (85 percent) encountered by an organization are management, process or system problems. Only 15 percent of an organization's problems can be attributed to the workers.

Deming's philosophy is summarized by his 14 points for management:

1. Create constancy of purpose toward improvement of product and service.
2. Adopt the new philosophy. We can no longer live with commonly accepted levels of delays, mistakes, defective materials, and defective workmanship.
3. Cease dependence on mass inspection. Require instead, statistical evidence that quality is built in.
4. End the practice of awarding business on the basis of price tag.
5. Find problems. It is management's job to work continually on the system.
6. Institute modern methods of training on the job.

7. Institute modern methods of supervision of production workers. The responsibility of foremen must be changed from numbers to quality.

8. Drive out fear, so that everyone may work effectively for the company.


10. Eliminate numerical goals, posters, and slogans for the workforce, asking for new levels of productivity without providing methods.

11. Eliminate work standards that prescribe numerical quotas.

12. Remove barriers that stand between the hourly worker and his right to pride of workmanship.

13. Institute a vigorous program of education and retraining.

14. Create a structure in top management that will push every day on the above 13 points.⁶

Application of these principles has resulted in a number of well-publicized success stories in the private sector. For example, "samurai management" is given credit for boosting the public image and curbing costs for Florida Power and Light, the 1988 winner of the Deming Prize. The company has cut 15 minutes from the average power outage time per customer in less than two years.⁷ Canon, Inc. claims an increase in its manufacturing efficiency rate of 165 percent and a decrease of over 60 percent in its defect rate in a nine year period.⁸ Ford Motor Company's Chairman Donald Peterson used Deming's principles to design and build
a line of automobiles. He also cites over a 50 percent improvement in quality of products in a six year period and attributes this to use of quality management principles.  

**Total Quality Management Enters the Federal Government**

Adoption of TQM by the Federal government became policy in 1988 with Executive Order 12637 which established a government-wide program to "improve the quality, timeliness, and efficiency of services provided by the Federal government." With the Executive Order came formation of the Federal Quality Institute (FQI), under the administrative jurisdiction of the U. S. Office of Personnel Management (OPM). The function of the FQI is to furnish literature, advice and briefings for executives on Federal Total Quality Management, and provide information concerning how to get started.

On September 29, 1989, President George Bush issued a statement of executive branch support for TQM efforts similar to those in the private sector:

*Reasserting our leadership position will require a firm commitment to total quality management and the principle of continuous quality improvement... Quality improvement principles apply to small companies as well as large corporations, to service industries as well as manufacturing, and to the public sector as well as private enterprise.*

Despite the President's stated support for establishing quality programs similar to those in the private sector, government progress toward that goal has been inconsistent. Like FQI, the Office of Management and Budget (OMB) set up a
quality management staff whose announced role was to deregulate the Federal manager. Ironically, OMB's original approach to this role was to set up policy requiring implementation of TQM by agencies as a productivity improvement program. OMB also planned to add new reporting requirements for agencies in areas related to productivity. The idea of adding more reporting requirements was seen as inconsistent with the announced goal of deregulating Federal managers, and based upon advice from a public-private sector task force OMB dropped these proposed requirements.\(^{12}\)

Cancellation of these requirements met with mixed responses from individuals involved in government TQM efforts. John Franke, Director of the Federal Quality Institute, agreed that forcing agencies to adopt TQM was inconsistent with the principles of TQM. But he did express some concerns about how government would create an impetus for implementation of TQM. Franke stated of TQM:

> Very hard to define. Very difficult to implement. Very easy to misinterpret. Could be costly. Think of all those circumstances. No OMB or President sitting there saying, 'We're going to check on you.' It's totally voluntary. Who's going to bring that expense and pain on themselves?\(^{13}\)

As the head of the FQI, Franke should be considered a leader in the initiative to bring TQM to government. Yet his concerns, as expressed above, summarize just how difficult that task has been. If TQM begins with management commitment, Franke appears to be uncertain of how to create that level of commitment in government managers. David
Carr, a management consultant for a firm with many large Federal TQM consulting contracts, believes that government has not done anything to solidify TQM in federal government since the OMB requirement was eliminated. While Carr may have a vested interest in seeing TQM become a federal requirement, his concern points out the lack of consistent centralized support for TQM in government.

In his book, *Out of the Crisis*, Deming specifically addresses TQM in government. He believes TQM lends itself to government in many ways. Unlike industry, government has no market to capture. Instead, agencies should deliver the service prescribed by law economically. The aim for government agencies should be "distinction in service." He believes that continual improvement of service would earn the appreciation of the American public, thereby holding jobs in government. Despite these encouraging words, Deming's book contains little reference to TQM in government. Deming's 14 points appear to be fundamentally at odds with present principles and practice of the Federal government. It appears that the major inhibitors to implementation of TQM in the Federal government include a hierarchical bureaucratic structure, restrictive laws and regulations, the management style of Federal managers, employee response to and support of TQM, and possible management motives.
The Federal government is universally recognized as having a strong hierarchical structure. Max Weber's observations on the characteristics of bureaucracy, published in the United States in 1946, still apply today. The characteristics described by Weber include:

-- Fixed and official jurisdictional areas, which are generally ordered by rules, laws or administrative regulations.

-- Firmly ordered system of super- and subordination in which there is a supervision of lower offices by higher ones.

-- Management is based upon written documents (standard operating procedures).

-- Specialized professional office management which supposes thorough and expert training.

-- Official business is the manager's primary concern.

-- Management follows general rules which are more or less stable, exhaustive and which can be learned.\(^{16}\)

While the Weberian model is an ideal type, this hierarchical structure has been generally followed by U.S. agencies. It has, in the eyes of many critics, led to dysfunction in government. Sociologists such as Robert Merton accused bureaucrats of suffering from "trained incapacity." According to Merton, an over-reliance on rules and regulations has led to over-conformity. Creative thinking and problem solving skills are not thought to be inherent in the American bureaucrat.\(^{17}\)
March and Simon summarized other dysfunctions of bureaucracy. These include loyalty to specific work units rather than to broad organizational goals and the fact that rules convey minimum expectations which employees then take to be their goals.\textsuperscript{16}

These phenomena work against the principles outlined by Deming. Creative thinking and problem solving are inherent in his principles. One of Deming's fourteen principles is to eliminate organizational "turf battles."

Several other Federal requirements fly in the face of Deming's basic principles. Federal procurement regulations, for example, require Federal managers to award contracts and make purchases based upon the lowest bid. The 1972 Civil Service Reform Act established the requirement for annual written performance appraisals, a practice which Deming believes destroys teamwork and encourages short term performance at the expense of long term planning.\textsuperscript{19} Both Merit Pay positions and Senior Executive Service encourage mobility of government managers, something Deming believes discourages both a manager's understanding of the organization and long term planning.\textsuperscript{20}

Acceptance of TQM requires commitment on the part of management to the principles of Deming, or those of similar quality improvement advocates. These principles require change to a more participative form of management, adoption of a continuous process of self-evaluation and improvement,
a new emphasis on customer satisfaction. TQM requires willingness and ability to change on the part of the manager and the organization undertaking it.

The characteristics of bureaucracy discussed above will affect the implementation of TQM in Federal government. In a highly regulated and politicized environment such as government, the principles of TQM may be more difficult to implement. It is questionable whether or not the Federal bureaucracy has or will allow the flexibility needed to make such sweeping changes. Federal managers may not be willing to make broad changes in management style and philosophy. These issues are important to the practicality of implementing such a management approach in the public sector.

**TQM in the Department of Veterans Affairs**

The U.S. Department of Veterans Affairs (VA), the second largest Federal agency in the U.S. and the largest health care system in the world, is advocating the concept of Total Quality Management. Facility directors are being asked to implement its principles at their individual VA Medical Centers and Regional Offices.

VA is organized in a traditional, pyramid-type hierarchy, and is highly regulated. This hierarchical and regulatory structure extends downward into the individual VA
medical centers and regional offices throughout the country. To adopt TQM would require a substantial change in bureaucratic structure and management philosophy.

Centralized agency support for TQM is illustrated by the VA Management Efficiency Pilot Program (MEPP). MEPP was initiated October 1, 1987, as a pilot program which allowed directors of eleven pilot facilities to request authority from the VA Central Office in Washington, D.C. to waive internal VA provisions. The implementing policy explained that "a growing body of incremental constraints in law, regulation, and policy has unduly complicated VA operational management." The intent was to increase management flexibility by allowing facility directors to waive certain VA policies which were complicating their jobs. VA planned to later expand MEPP flexibility beyond agency policy by encouraging and supporting individual facility requests for waivers of Federal laws, regulations and policies.\(^{21}\)

There are important similarities between MEPP and TQM. The stated purpose of MEPP was to improve management at VA facilities. The premise of the MEPP project was that a better managed facility would result in improved timeliness and quality of services to veterans. It was expected to:

Facilitate the Department's ability to implement employee recommendations for improvement in a timely fashion and to take the kind of expeditious action that would be expected of prudent and competent managers in the non-federal sector.\(^{12}\)
An interim study of MEPP was done after two years. The findings were that MEPP had been somewhat successful. Initially sixty-seven general program indicators were selected to assess changes in efficiency and effectiveness of program areas. After the test, it was concluded that these indicators were of little help because a causal relationship between reported changes and MEPP could not be demonstrated. This evaluation of the pilot project indicated that VA Central Office was not as responsive as it might have been:

-- Directors at MEPP facilities reported that when they requested the waiver of a particular internal VA policy and that waiver was turned down, they did not always receive complete information on the reasons for disapproval.

-- Although a majority of MEPP waivers were approved, 35 percent of requested waivers were not granted.

-- Despite a VA Central Office commitment to act upon waiver requests within 5 days, one pilot station reported only 2% of their requests were processed in that time, with an average Central Office response time of 46 days.

-- A MEPP newsletter which the Central Office intended to improve networking between pilot stations was never published.

-- While only a small percentage of waiver requests required legislative changes before they could be implemented, not one VA MEPP-related legislative proposal was enacted by the Congress.

In spite of these problems, the two-year evaluation of MEPP concluded that it was meeting expectations because it demonstrated innovation and positive change. Expansion of MEPP VA-wide was recommended if the final three-year
evaluation reported similar success. To date, this final evaluation of MEPP has not been made, nor have the changes which resulted at pilot stations been authorized for use by other VA facilities.

If TQM is to be successful on a large scale in VA facilities, management must have the flexibility to make changes as needed. A lesson of MEPP, though, is that agency-wide change comes slowly. Wide scale implementation of TQM will be an extremely slow process unless the agency can allow this flexibility.

In spite of the problems of slow response time and lack of flexibility demonstrated by the VA Central Office in the MEPP Project, one individual VA field facility, the Veterans Affairs Regional Office and Insurance Center in Philadelphia, is seen as a leader in introducing and acting upon TQM in government. The Insurance Center administers veterans' life insurance policies. Through TQM initiatives, the Insurance Center reduced its loan processing time from 3.3 to 1.7 work days per loan. A toll free number has cut the time it takes to resolve most customer concerns from an average of 11 days to a matter of minutes. Complaint letters are down by 89 percent.25

The Department of Veterans Affairs is encouraging its other field stations to implement TQM. However, it is not providing important centralized support to local managers by waiving rules and regulations. In order to implement TQM at
their field stations, directors would exercise flexibility in terms of their own local policies only. The Philadelphia Insurance Center has demonstrated that TQM can have some local success without government-wide or agency-wide changes. The issue examined in subsequent chapters is whether aspects of TQM can be successfully applied at the VA Medical and Regional Office Center at Fort Harrison, a small VA facility in Montana. It is important to assess the relative success of small quality improvement projects at Fort Harrison in order to develop any recommendations or changes which may be needed prior to a station-wide implementation of TQM.
Planning for Total Quality Management at Fort Harrison

Facility-wide implementation of TQM at the Fort Harrison VA Medical & Regional Office Center is in its planning stages. A task force was formed at Fort Harrison in 1990 to review the principles of TQM and make recommendations to the director on methods of implementation at the facility. This group is made up of eight department managers who volunteered to serve on the committee. The members were given reading assignments on the basic concepts of TQM. They also attended a satellite broadcast on the implementation of TQM at a number of medical centers, both private and Federal. None of these managers received formal TQM training.

As one of its first tasks, the group listed the facility's quality improvement initiatives to date, both successful and unsuccessful. Since Fort Harrison did not have a formal TQM program in place the group identified recent projects which, in its estimation, focused upon quality improvement. The seven projects were:

-- Extra Touch - A guest relations and employee recognition program which focuses upon quality and the concept that "everyone has a customer."

-- Ambulatory Care Task Force - A multi-disciplinary group established to assist the medical center in controlling workload in the Ambulatory Care area.
Pharmacy Service Medication Order Entry Program - A project to implement a new computer package on the hospital wards.

Nursing Care Plan - Staff nurses volunteered to research and formulate a plan for improvement of care plans.

Employee/Patient Fitness Center - A joint management-employee initiative to develop and manage a fitness center at the facility.

Recycling Program - An employee initiative to begin a recycling program at the facility.

Personnel Service Customer Survey - A customer satisfaction survey conducted by the Personnel Office.

The task force discussed potential obstacles to implementation of TQM at the facility. The consensus was that a large percentage of employees had a long-term commitment to living in Helena and, because of favorable federal pay rates, to federal employment. The low turnover rate, while a positive feature in many ways, was also seen as contributing to resistance to change. Another concern was employee reaction to an earlier quality initiative, the Extra Touch Program (ET). Implemented in 1988, ET met with resistance from some employees, professionals and other key staff. This is discussed in more detail below.

Task force members discussed potential concerns managers might have about "full" implementation of TQM, such as hesitation to accept recommended solutions from employees, a perception of lack of control, concern about government inflexibility and regulation. The task force also discussed the perceived lack of support for TQM by the department's
key leaders in Washington, D.C. Finally, the group discussed the compatibility of TQM principles, which were developed and thrived in production-oriented private business, with the mission of federal government. Issues of who the customer is and how to define quality of service seemed especially fuzzy when applying Deming's 14 points to government.

Extra Touch

An important concern about implementation of TQM at Fort Harrison is the negative reaction employees expressed toward the Extra Touch program. Extra Touch (ET) is an ongoing guest relations and employee recognition program instituted in 1988. It is seen by management as somewhat of a precursor to TQM because of its focus on quality and the concept that "everyone has a customer." ET had set the ambitious goal of making sweeping organizational changes in the workplace.

The basic ET training course consisted of nine hours of staff training, which was conducted in 1988 and 1989. The program focused on:

1. Introducing and adopting an Extra Touch value statement for Fort Harrison.
2. Improving knowledge of the various services offered at Fort Harrison.
3. Team-building and communication skills.
4. Building empathy with clients, who were defined as patients, visitors or fellow employees.
5. Changes employees could make within themselves to assist in being effective ET practitioners, and methods to use to bring about such changes.27

The basic program was mandatory and over 97 percent of employees, supervisors and managers attended. This was considered an indication of management commitment to the program, especially in a facility where a large number of staff work rotating shifts.

In March 1988, before ET training began, approximately 207 questionnaires were distributed to staff by the Quality Management Coordinator responsible for the ET program. Survey responses indicated that a majority of employees had positive feelings about their jobs, the quality of service provided to patients and clients and their own level of interpersonal skills (listening, empathy, appreciation of others, problem solving, etc.). At the same time, a majority of employees indicated negative feelings about other employees' enjoyment of their jobs and about supervisors' and managers' interest in employee morale and well-being.28

The same survey was repeated in June, 1989, after 97 percent of the staff had attended the nine-hour ET program. The results of this survey indicated the same positive and negative trends as the 1988 survey. Additionally, there was an 11 percent drop in perception of quality of service, and a 14 percent drop in employee perception of management.
interest in employee morale. Responses did indicate a 9 percent improvement in the way they perceived employee courtesy to one another.

These survey results were reported with the following conclusion:

It is difficult to determine a positive impact of the ET program from examining the responses to this survey. Mandatory attendance at ET is clearly resented by many employees, and over one third of the employees answering the questionnaire indicated that they do not feel consumer relations training will help them in improving their service. The key theme echoed by many of the comments is a lack of communication by managers and supervisors and the impact of that lack upon employee morale. This interpretation of the narrative comments is supported by the increased negative responses to the questions regarding feeling part of a team and bosses' interest in employee morale.29

The reasons for ET's mixed reception are not the subject of this paper, but employee perception of and reaction to ET could affect the level of employee support given to TQM at Fort Harrison. Rather than opening lines of communication, ET was seen as a one-way form of communication - from management down.

An important part of TQM is employee quality improvement initiatives. These could take the form of quality circles or some other form of group problem solving which directly involves employees. Thus it is important for management to understand possible reasons for the employees' negative reaction to ET.

Possible causes of the negative reaction are described by Guillermo Grenier in his case study of quality circles.
In his book, *Inhuman Relations: Quality Circles and Anti-Unionism in American Industry*, Grenier described a situation in a Johnson and Johnson manufacturing plant in New Mexico where quality circles were used to control employees and defeat a bid for union representation in the plant. Grenier believes that managers have turned to the rigid, highly controlled society of Japan and its management techniques to pacify the American work force.  

According to Grenier, Quality Circles at this plant were "... designed to exert control over workers not only over on the job behavior but, when the design works well, over attitudes about their work and how they feel about what they do..." The outcome was worker distrust of management and of the quality circle process. Workers had been led to believe that quality circles would give them more power or input into management of the plant. Instead, they came to see the quality circles as a method for management to convey pro-management sentiments in a group setting.

The feedback from Fort Harrison's ET program regarding one-way communication points out a potential problem for TQM or any program which seeks to involve employees in group quality initiatives. Perhaps, similar to Grenier's experience, employees perceived ET as a means for management to convey a point of view without a reciprocal line of communication for workers.
Despite the barriers and concerns discussed above, TQM has been implemented at some individual VA facilities. The Director of the Fort Harrison facility intends to introduce TQM there as well. By examining two projects which were considered to have been successful at Fort Harrison, a better understanding may be gained of improvements or adjustments which could be made to group quality initiative projects prior to official implementation of TQM.

**Methodology**

Two projects were selected for study. These projects were considered successful by the TQM task force and by the supervisors directly involved. The two were selected from seven projects which had been identified by the TQM task force. They represent different approaches to obtaining employee input and involvement. Medication Order Entry was selected because of the variety of health care occupations involved and the Nursing Care Plan because of its team management approach.

Data was collected in April 1991 by surveying supervisors and employees who participated in these projects. Because the survey was conducted by the Personnel Officer, there was a concern that responses might be inhibited and the results biased. Employees who participated were therefore surveyed by mail. The supervisor responsible for initiating each project was personally interviewed.
Medication Order Entry

The Pharmacy Medication Order Entry project was completed in 1989. The project implemented a new centralized computer package for use by the hospital wards and the hospital pharmacy.

The former procedure called for registered nurses to transcribe medication orders by hand from the patients' charts to medication administration sheets. These forms were then telefaxed to the pharmacy where they were filled by pharmacists and taken to the wards. Under the new system, medication orders were to be telefaxed from the hospital wards to the pharmacy, where they would be entered into the computer by a pharmacist. The medication could then be delivered to the wards. Prior to implementation, pharmacy personnel believed the new computer entry system would improve quality of patient care. The nursing staff was concerned about increased workload on the hospital wards.

The project undertaken by the Medication Order Entry group was to implement the change to a computerized system as smoothly as possible. Planning was done in several ways. The primary vehicle was a series of meetings with key nursing supervisors and pharmacy staff. During these meetings, potential problems were identified and addressed and a phased implementation and training process was planned. Twenty-one employees, nurses, practical nurses,
pharmacists and pharmacy technicians were involved at this stage. These participants were the subjects of the survey. Based upon plans formulated at these meetings, the pharmacy supervisor conducted small group meetings with all nursing staff prior to implementation. She described these meetings as a "sales pitch" to build support for the change. Nurses on the first ward received individualized training from pharmacy staff in mid-May, 1989. Training and implementation on the other wards followed at approximately three week intervals. Hospital-wide implementation took approximately five months - from May through September, 1989.

**Nursing Care Plan**

The Nursing Care Plan project involved nine employees; all were surveyed. The problem addressed by these employees was that patient charts contained numerous forms which had to be completed by the nurses for each inpatient. They included a five-page nursing profile, two-page care plan, and one page each for discharge planning and patient categorization. All of this documentation is required by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The documentation consisted of separate forms which were filed in different places throughout the patient chart.

Nursing Service quality assurance chart audits had found a lack of documentation in several places, in particular,
the patient education and care plans. The head nurses responded that the care was being given but nurses often did not have the time to document this in four separate locations in the patient's chart. The documentation tool was felt to be disjointed and lengthy.

Based upon this information, a Nursing Service task force was formed by Nursing management to streamline and consolidate the charting requirements. Each nursing unit provided two volunteers to participate in the project. The task force was made up of nine registered nurses (one has since resigned and could not be surveyed) and one practical nurse. The clinical coordinator, a nursing supervisor, was the only manager on the task force.

**Group Process Survey**

Survey questions (See Group Process Survey, Appendices A and B) focused on participants' reaction to the project as well as their perception of project effectiveness. These responses were compared with the managers' perceptions. The emphasis of survey questions was on whether the projects achieved their original objectives, whether TQM methods were used, and whether these methods were perceived as contributing to the effectiveness of the project. Responses were reviewed for a relationship between employee satisfaction with the project outcome and the amount of participation and authority employees perceived that they had in solving the problem. Whether employees felt
empowered to make decisions and solve problems was also an important factor. Because of assumptions made by the TQM Task Force, information on participants' length of service at Fort Harrison was also gathered to ascertain whether any connection could be made between attitude toward the project and length of service.

By comparing management and employee expectations, the survey attempted to learn whether participative management techniques and employee empowerment indicative of TQM were in fact employed in the group projects and whether they were successful in these specific situations. These projects were considered by managers at Fort Harrison to be successful examples of quality initiatives. It is hoped that information from the survey will give managers an idea of whether their perceptions of successful quality improvement projects were shared by employees. Finally, some insight was sought regarding what worked and what did not in group problem solving activities.
CHAPTER THREE
RESULTS AND ANALYSIS

A two step process was utilized to survey participants of the Medication Order Entry and the Nursing Care Plan projects. The supervisor involved with each project was first interviewed in order to gain an understanding of the project, how it was conducted, the level of supervision provided to the group, and the supervisor's view of the project results. Each supervisor was also asked if she would have done anything differently in order to improve the group problem solving process or the outcome of the project. After both supervisors had been interviewed, questionnaires were sent to the participants of the two projects. Results are reported below, followed by analysis.

Interviews with Supervisors

During the interview, the pharmacy supervisor was asked why she felt this project had been identified as a quality management initiative by the TQM task force. She replied that it had been a very complex undertaking which required input from a number of different employee groups including registered nurses, practical nurses, pharmacists and pharmacy technicians. This process represented a major procedural change and corresponding change in responsibility. Pharmacists are now doing what nursing once did: taking their medication orders from the patient charts. Staff physicians had to change their ordering habits to be
more consistent with each other and consider maximum effectiveness for each drug. Collaboration was essential in identifying and addressing all potential problems associated with implementation. The supervisor noted that Fort Harrison is one of the few VA Medical Centers which has implemented the computer program, and one of the few where pharmacists enter the medication orders. She considers the project to have been innovative and successful, with the exception of computer down time which has been experienced recently. It was her perception that nursing employees, in particular, were reluctant to implement the program in the beginning. It is her opinion that they now see ways the process has helped them perform their jobs better.

Now, approximately 18 months into implementation of medication order entry, advantages are numerous, especially in terms of quality:

-- Fewer medication errors are expected because typewritten labels are easier to read.

-- Input provides data for workload statistics.

-- Patient drug profiles are convenient to access.

-- Automatic renewal notices are issued on expired drug orders.

-- More consistency across wards in medication administration times means more effective utilization of drugs.

-- There is early identification of incomplete orders because of initial pharmacist review, and early clarification of confusing orders.
Patient action profile allows convenient reordering of medications by physicians when a patient transfers to another ward.

A patient education indicator code on the medication label corresponds to a medication education list. This helps nurses to give patients instructions on appropriate use of medications (watch for drowsiness, take with water, not with dairy products, etc.).

Some input was extremely helpful and, in the supervisor's opinion, contributed to quality improvement. For example, the head nurse for the intensive care unit suggested a special code to cross reference instructions and warnings about specific drugs. This was adopted and is used to increase patient and staff teaching on the wards. Nursing input was also essential to determine the best way to type labels and for an understanding of ward procedures for administration of medications.

The goal of the Nursing Care Plan project, in the supervisor's opinion, was to produce a documentation tool which would be efficient but meet JCAHO requirements. The ultimate goal was to improve the quality of documentation. The project took almost seven months, with less than two months required to design the new documentation tool but roughly another five months to secure necessary committee reviews and approvals. The approval process has not yet been completed.

According to the supervisor, group members had equal authority in the group process. There was no designated group leader. The supervisor described her role as that of
"facilitator and recorder." She stated that she did not lead the group or make any of the decisions. The supervisor reported the project as a success, resulting in an improved process. Whether it will result in improved quality of documentation remains to be seen; the supervisor anticipated that it will. Another perceived improvement was an increased level of communication between units.

The nursing supervisor believed the TQM task force identified this project as a quality management initiative because it involved staff-level problem identification and solution. It dealt with a process and focused on improving the process with the hoped-for result of improving quality of the end product. Level of group support for, and participation in, the initiative was perceived to be very high at all stages.

In hindsight, she wishes she had given the group more information about station organizational structure and review procedures. This project must be reviewed by several committees before final implementation. While it is being received very well by the reviewing bodies, it does delay implementation which could cause frustration on the part of the staff and group members. The supervisor felt that management has an obligation to let a group know in advance the resources available to them and any restrictions. In the future, she believes information on group dynamics, negotiating, and communicating would also be helpful.
Survey Results and Analysis

The twenty-one participants of the planning group for Medication Order Entry were surveyed. Sixteen responded, representing a 76 percent response rate. A summary of responses is contained in Appendix C. Some significant results are discussed below.

Survey items 2a through 2j asked respondents to indicate their level of agreement or disagreement with statements which described the project as a success in a number of ways. These included team effort, ability to share expertise, employee support of results, improved communication, quality and procedures. Item 2d is an exception, however, and will be discussed in more detail below.

All respondents expressed agreement that the Medication Order Entry project was a team effort (Strongly Agree - 39 percent, Agree - 61 percent). They stated they were able to share their expertise during the project (Strongly Agree - 17 percent, Agree - 83 percent). The respondents also indicated that the team approach was a good method for implementing the project (Strongly Agree - 44 percent, Agree - 56 percent).

A majority of respondents agreed that the project was a success (Strongly Agree - 28 percent, Agree - 61 percent), that other employees supported the results (Strongly Agree - 6 percent, Agree - 89 percent), the project improved
communication within their Service (Strongly Agree - 11 percent, Agree - 78 percent), it improved communication with other Services (Strongly Agree - 22 percent, Agree - 56 percent), the project resulted in improved quality (Strongly Agree - 11 percent, Agree - 72 percent), and improved procedures (Strongly Agree - 6 percent, Agree - 83 percent).

Disagreement on project success was limited but somewhat consistent. Seventeen percent disagreed with the statement that the project improved communication with other Services. Eleven percent disagreed with statements that the project was a success, improved communication within their Service, improved quality of service, and improved procedures. No one answered Strongly Disagree in response to the series of statements about success of the project.

Item 2d asked whether respondents agreed or disagreed with the following statement, "The result would have been as good if a decision had been made without group involvement." Responses to this statement indicated that fifteen participants either Strongly Disagreed or Disagreed. Two respondents agreed that the result would have been as good without group involvement.

Most respondents felt they participated either Very Often or Fairly Often in the project. Eleven percent stated they participated Sometimes. No respondents rated their participation as Never or Hardly.
Questions 5 and 6 were designed to assess level of authority or empowerment of participants. These questions were intended to present graduated levels of autonomy from which respondents could choose. Question 5 attempted to ascertain the level of autonomy in identifying and solving problems. Question 6 asked about the level of authority in making group decisions. In reviewing the responses, it appears the questions may have been confusing, either because of wording, based upon the context of this particular group project, or because the number of options respondents were given to choose from was too limited.

There were 18 responses to the survey itself. Almost all respondents answered questions 2 through 4, but only 12 replied to question 5, and 13 to question 6. Replies to questions 5 and 6 do not present a clear trend as to the level of authority in identifying and solving problems or in making decisions.

Questions 5 and 6 also provided an option to select another response, indicating that respondents could write in a phrase which best described what they experienced. There were several write-in responses to question 5; these are summarized below:

-- The group was given a problem and collaborated to find a solution and to implement it.

-- The group was consulted concerning Nursing's needs to provide an efficient way to take off medicine orders and times for dispensing medication.
The group was given the package and discussed it and worked out problems as they occurred.

The group brought different disciplines together to problem solve.

The group had to devise a procedure to put the new order entry system into effect, subject to the supervisor's approval.

Write-in responses to question 6 were more limited. They indicate the group was empowered to:

-- Recommend options to the Nursing committee and as a group decide on the best way to make the change.

-- Decide how to make the change on our ward.

-- Brainstorm and make recommendations to Nursing and Pharmacy.

Although questions 5 and 6 did not provide usable data about level of authority or empowerment of employees, write-in responses appear to confirm the views of both the pharmacy supervisor and the TQM Task Force that this group was involved in a productive problem-solving activity.

Question 7 asked what the supervisor could have done to make the project more productive. Respondents could choose from seven suggested changes, make their own suggestions, or specify that no changes were needed. They were asked to choose as many responses as applied. Sixty-seven percent (twelve of eighteen) replied that no changes were needed. The other responses are summarized below. Options suggested by more than one respondent are so indicated.

-- Provide a group facilitator (not the leader) to get and keep discussion on focus.
-- Explain the group assignment in more detail.

-- Provide a resource person to help gather data and analyze statistical information. (Two responses.)

-- Allow employees to select a leader or lead group.

-- Give employees more authority to choose or carry out solution. (Three responses.)

-- Some selection in package options such as labels for standard medication orders. (Summary of write-in response.)

Demographic information indicated that 67 percent of respondents had worked at Fort Harrison between 5 to 15 years. Sixty-one percent had been in their present job 5 to 15 years. Professional employees made up 67 percent of the respondents. There was no identifiable, significant trend in demographic data.

As described by the pharmacy supervisor, this project was very complex because it involved implementation of a new computer package for a number of employees with limited computer literacy. It also required changes in established work routines on the part of pharmacy staff, nursing staff and physicians. The project definitely had an impact upon several different health care disciplines, including physicians, nurses, and pharmacists and required crossing of organizational boundaries. It had the potential for suspicion and "turf battles" from the beginning. Despite these challenges, it appears from the responses that this project was a team effort with a high level of participation. The fact that 89 percent of respondents
considered the project a success appears to be a positive indication of potential for future projects. The level of support for the results of the project (95 percent) was also considered to be high. This is an indicator that complex, multi-disciplinary problems which require change in many work areas have the potential to be successfully solved through a group quality initiative.

All nine employees who participated in the Nursing Care Plan project were surveyed. Six responded, for a response rate of 67 percent. A summary of responses is contained in Appendix D. Significant responses are discussed below.

All of the respondents indicated that the team approach was a good method for revising the nursing documentation tool (Strongly Agree - 17 percent, Agree - 83 percent). Five of six respondents believed that revising the nursing documentation tool was a team effort (Strongly Agree - 50 percent, Agree - 33 percent), that they were able to share their expertise during the project (Strongly Agree - 33 percent, Agree - 50 percent), and that the project improved procedures (Agree - 83 percent).

Unlike the Medication Order Entry project, responses to the remaining questions on project success were more sharply divided. A majority did not agree the project was a success (Agree - 33 percent, Disagree - 50 percent, Strongly Disagree - 17 percent). A majority did not believe the project was supported by other employees (Agree - 33
percent, Disagree - 60 percent). Only half thought the project had improved communication within Nursing (Agree - 50 percent, Disagree - 50 percent). A majority did not think the project had improved communication with other Services (Agree - 33 percent, Disagree - 50 percent, Strongly Disagree - 17 percent). A majority did not believe the project had improved quality (Agree - 33 percent, Disagree - 67 percent).

On item 2d, which stated that the result would have been as good if the decision had been made without group involvement, all of the respondents either Disagreed (50 percent) or Strongly Disagreed (50 percent) with the statement.

Level of participation in the group project appeared to be high. Most respondents felt they participated either Very Often (67 percent) or Fairly Often (17 percent), with one respondent participating Sometimes. All indicated that they believed other team members had participated (Very Often - 50 percent, Fairly Often - 50 percent).

Problems in understanding or interpreting responses to Questions 5 and 6 were mentioned in the discussion of Medication Order Entry results. Responses here were more consistent which may indicate that the suggested responses fit the group's experience more closely than in the case of the Medication Order Entry project. It appears that group members perceived themselves as having a fairly high level
of authority in the project. Of the five respondents to Question 5, four stated they were given a problem statement and asked to find a solution. One stated she was given a solution and asked to find a procedure to carry it out.

In response to Question 6, three respondents said their group was authorized to make decisions and carry them out. One felt the group was empowered to recommend a preferred option to management for a decision. Two felt they were only to provide information to the supervisor for a decision. There were no write-in responses to questions 5 and 6.

Everyone who responded to Question 7 made a suggestion for improvement to make the project more productive. These included:

-- Allow employees to select leader or lead group.
-- Appoint a group leader in advance.
-- Provide a resource person to help gather data and analyze statistical information.
-- Explain the group assignment in more detail.
-- Need more evaluation of final form. (Summary of write-in response.)
-- Need training with employees for input and understanding of new form. (Summary of write-in response.)
-- More example care plans to work from (Summary of write-in response.)
-- Participants could have made a list/example of changes they would like to see implemented. (Summary of write-in response.)
What was most beneficial was setting a date and time to do project and keeping away from usual work area. (Summary of write-in response.)

Demographic information indicated that 83 percent of the employees had worked at Fort Harrison between 5 and 15 years and 67 percent had been in their present job between 5 and 15 years. Demographic questions were added to the survey to examine the task force members' premise that length of time on the job caused employees to be more resistant to change. There did not appear to be any identifiable, significant trend in responses to evaluate this premise.

Because of the sharp splits in response to this survey, individual responses were reviewed to see if there was a relationship between negative responses about project success and any aspect of group performance. Of four respondents who did not consider the project a success, three participated Often or Very Often. Three of four felt procedures had been improved but none believed quality had been improved.

Thus there was no apparent relationship in these responses between lack of group success and lack of participation by the respondent. In addition, all of the respondents indicated that a group project was a good method for revising the nursing documentation tool. Several possible reasons for this split should be explored:

-- The end product did not represent group consensus.

-- The documentation tool is new and has not been fully tested.
Delays in implementation, caused by required committee review, could have caused frustration.

The respondents agreed that a procedure had been improved, but not quality of service. One likely explanation would be that the task was seen as purely procedural with no relationship to quality of care.

In addition to these potential explanations, it appears from respondents' suggestions that the group could have benefitted from more structure or orientation to the group assignment. This corresponds to suggestions made by the nursing supervisor who served as the facilitator.

From findings of both the Medication Order Entry and the Nursing Care Plan surveys, it appears group quality management initiatives can be effectively used to solve problems and gain input from employees. A large percentage of participants in each group believed that the group problem solving method was the best method to use for their project. Surveys showed that participation in both group projects was high. This is a positive sign in an organization with a strong hierarchical structure.

It also appears this approach to project implementation could help improve cooperation between departments. The Medication Order Entry project had the potential to result in "turf battles" between Pharmacy and Nursing Services. By actively including all players, and focusing on the problem, disputes may have been avoided.
Responses, especially those from the Nursing Care Plan, provided many suggestions for improvement of the group process. Most of these centered around giving the groups more structure, explaining the group assignment in more detail and assisting with data gathering and analysis. After project completion, feedback from management to the group on the status of its recommendations is important.
CHAPTER FOUR

SUMMARY AND CONCLUSIONS

Summary of Case Studies and Relationship to TQM

To date, examples of successful application of Deming's principles are more often found in the manufacturing industry than in government or other service industries. In government TQM has so far fit best into a production-oriented environment. Tom Shoop in his article, "Uphill Climb to Quality," states that ship and aircraft overhaul centers, supply depots and other manufacturing related operations in the Defense Department were the first to implement TQM.\(^{33}\) The VA Philadelphia Insurance Center, while not a manufacturing operation, is production-oriented in that its mission is to process a specific number of claims or answer a specific number of inquiries in a certain number of days.

There are concerns about how the principles of TQM will translate to a health care setting where it is more difficult to set numerical goals and objectives. But TQM does offer some principles which can be utilized in any environment. TQM emphasis on continuous review and improvement of the process is different from a quality assurance review of the end product. Quality control inspections of the finished product often do not identify how the error occurred or allow elimination of the problem. TQM, on the other hand, acknowledges that a product is the
culmination of many processes; errors can be made at any step of the process. This philosophy could translate well to a health care organization where many different work units have a direct impact upon the quality of care a patient receives.

Deming's 85/15 Rule contends that most organizational problems are the result of management or process problems, while only 15 percent can be attributed to employees. TQM shifts the focus from that of placing blame and finding the worker or work unit which made the mistake, to finding the systems problems or barriers which hinder quality. This is a healthy approach to take toward solving a problem.

As Weber described, bureaucracy operates on rules and standard operating procedures. Many of these procedures could be reviewed and improved. Weber also described the bureaucratic characteristic of fixed organizational jurisdiction and hierarchy. TQM seeks, to some extent, to eliminate these characteristics by asking managers to allow workers more participation in the problem solving and goal setting of the organization. It also seeks to develop worker loyalty to organizational goals rather than to their individual work units.

The surveys of the Medication Order Entry and the Nursing Care Plan projects at Fort Harrison were conducted to draw conclusions about whether quality improvement initiatives were being utilized at Fort Harrison, whether
they were perceived to have been successful, and what improvements could be made to the quality improvement initiative process itself.

From the Fort Harrison survey findings, it appears that TQM can be an effective problem solving tool. A large percentage of participants in each group believed that the group problem solving method was the best method to use for their project. The supervisors agreed. Responses showed a high level of participation in each project. These projects dealt with complex information and required input from technical and professional staff. These group initiatives appear to have contributed to cooperation between staff and departments. In particular, the inclusion of both nursing and pharmacy staff in the Medication Order Entry project may have resulted in a smoother implementation and more support from both Pharmacy and Nursing Services.

The Nursing Care Plan survey indicated that perception of project success is not solely a matter of whether the employees had an opportunity to participate. In this project there was a high level of participation, yet most respondents did not believe the project was a success. Here the perception of success appears to be linked to feedback about and final disposition of the group effort. The nursing supervisor attributed the group's frustration, in part, to delays in implementation of the suggested solution.
Recommendations for TQM at Fort Harrison

VA Central Office is advocating TQM, talking about it during management conferences, and scheduling training sessions for managers. What the Central Office is not doing is providing flexibility in the policies and regulations which restrict local managers. Nevertheless, TQM can be implemented locally. Since laws and regulations are not being waived or simplified at the national level, local success of TQM is partially dependent upon what local policies can be changed to allow more flexibility for quality initiatives.

In adopting TQM, top and middle management at Fort Harrison must decide to empower employees to solve problems and make decisions. There are varying levels of risk for management in empowering employees. For example, another VA Medical Center has initiated three quality improvement teams to solve local problems. One team is led by the director, one by the associate director and the third by the chief of staff. Since the teams are led by the highest level managers at the facility, all team members are subordinate employees. There is no departure here from the hierarchical structure of bureaucracy described by Weber. Even if these top management officials make no overt attempts to influence the group members, it is likely that their presence will limit the amount of discussion and innovation generated by the group. By becoming leaders of the first quality
improvement groups at their facility, these managers may have influenced the outcome of the group activities. The management took very little risk because it limited the amount of power it gave to employees in those quality improvement teams. This is not consistent with the principles of TQM.

Under the tenets of TQM, employee participation in quality improvement projects improves quality, increases productivity and contributes to employee satisfaction. While this can be the case, it will only be with genuine commitment on the part of management. Group interaction should be fostered with care. In his book, Inhuman Relations: Quality Circles and Anti-Unionism in American Industry, Guillermo Grenier described the morale problems which can arise when management uses group initiatives such as quality circles to control the behavior of its employees. This type of manipulation has been addressed by other critics of the human relations school of management.

In his 1965 article, "Applied Organizational Change in Industry: Structural, Technological and Humanistic Approaches," Harold Leavitt discussed the various humanistic approaches used by managers to achieve organizational change. In one approach, the "manipulative people approach," the management establishes a relationship with employees, such as in a group project or quality circle, and uses the relationship as a lever to force change. This can
be done through dishonesty or coercion. One other key factor in the manipulative approach is that management maintains all power in the relationship.

Leavitt contrasts this with the "power equalization approach" advocated by the human relations school of management theory. Under this approach determination of goals, communication and decision making are collaborative. Involvement of employees increases commitment to the mission of the organization.34 This is in line with Deming's principles. Changes can be made if management is willing to empower employees to identify and remove barriers.

A more recent discussion of the factors of organizational change (1983), "The Architecture of Culture and Strategy Change" by Rosabeth Moss Kanter, puts more emphasis on the role of leadership in accomplishing change. While not human relations theory, Kanter's article also stresses the importance of employee participation and the adverse effects of manipulation.35

To avoid these problems, the management at Fort Harrison should remember the lessons of the Extra Touch program. The primary criticisms of ET were that it was mandatory and that it was a form of one-way communication, from management down to employee. Employees were not empowered to recommend or make changes. Grenier's case study of Johnson and Johnson's quality circles described management attempts to instill its point of view through one-way communication with workers.
Group problem solving activities, as intended by the quality circle concept, could be the key to avoiding the problem or perception of manipulation. The group activity must be genuinely geared toward problem solving and the group must be given some power to determine goals, communicate with management and/or make decisions.

The Nursing Care Plan survey tends to indicate that empowerment of employees is not sufficient in itself. Respondents believed they had some authority to make a change but they did not consider the project a success. One possible reason was offered by the nursing supervisor: It took less than two months to change the care plan, but almost five months to approve/adopt the results. Furthermore, the plan had not been completely approved at the time of the survey. There is some indication that employees were frustrated by delays in adoption and feedback. This same frustration was echoed by VA directors in their evaluation of the MEPP program. The VA Central Office had promised pilot stations that their suggestions for waivers of VA policy would be acted upon within five days. The evaluation indicated that such action actually took an average of 46 days, and facility managers expressed frustration with the limited feedback they received when their ideas were not adopted.
The initial orientation of employees is also important. As suggested by the nursing supervisor at Fort Harrison, employee quality improvement groups should be informed of the resources available and restrictions placed on them before undertaking a project. Fort Harrison's survey responses also indicate the need for more help with evaluation of data and group facilitation or leadership. This is a regular part of formal TQM training and should be provided if the management of Fort Harrison decides to formally implement TQM.

The following recommendations are offered if TQM is to be implemented at Fort Harrison:

1. Management should be prepared to examine and waive local policies which present barriers to quality.

2. Employees must be empowered to identify and remove barriers to quality. Managers may not always agree with recommendations of employee groups but should be prepared to give up some control in the interest of responsiveness and flexibility.

3. Management must beware of using quality improvement groups as vehicles for communicating management policy.

4. Leaders must give quality improvement groups genuine projects to work on. If possible, the groups should define the approach and/or problem.

5. Management must recognize employee efforts by giving employees feedback to their suggestions and making suggested changes as soon as possible.

6. Management must orient the quality improvement groups thoroughly, for example, explain the time line for any approval, concurrence or review process and any limitations placed upon them.
7. Management must provide training on problem solving and group interaction and/or provide a trained facilitator.

**Political Constraints Upon Future Application of TOM in the Federal Government**

TQM has been endorsed by the President, the Office of Personnel Management and the Office of Management and Budget. These should be key players in providing leadership and an improved level of flexibility for agencies in the adoption of Total Quality Management. Yet in order to become official government policy, the principles of TQM require more than endorsements by the executive branch. Successful implementation of TQM requires organizational and managerial flexibility both of which are limited in the Federal government. The bureaucratic system which evolved to define scope of authority has also ensured that these laws, rules, regulations and standard operating procedures are not easily changed.

As discussed in Chapters I and II, OMB progress toward "deregulating government managers" has been extremely slow. In the Department of Veterans Affairs, the MEPP pilot program has not resulted in any legislative changes. Furthermore, responses by the VA Central Office to suggestions which are within its control have been limited.

The problem of slow response and inflexibility of the system cannot be changed easily. Some managers at individual VA facilities believe that TQM can bring about
changes which are worth making, though. They have concluded that TQM results in improvement of management, quality and employee job satisfaction. Absent centralized leadership and guidance, these managers are adopting TQM for situations which are within their control.

Another key obstacle to TQM in the Federal government is conflicting expectations about the role of agencies. It would appear that the principles of TQM and the role of Federal government are often philosophically incompatible. This is well demonstrated by an observation Dr. Deming makes about the U.S. Postal Service. Deming says that poor quality of mail service is caused by Postal Service managers, who had never had the privilege to decide the priority and function of first class mail. "Should it be slow, infrequent, and cheap, or speedy with more deliveries at higher cost?" In this example, it appears that improvement of mail service is a question of defining management priorities. Management must decide whether the agency's job is to provide affordable service which may be slow or faster service at a higher cost. This is a key difference between private industry and public service. The agency does not define its mission or priorities nor, really, does the customer. Priority determinations of the magnitude alluded to in Deming's Postal Service example are normally controlled by law. Expansion of services offered by government are limited by budget.
The Department of Veterans Affairs also faces this problem. Health care costs are rising rapidly. Even the private sector, which can increase charges to offer more complex and varied services, is struggling to control costs. In a dilemma similar to Deming's Postal Service example, a decision must be made whether it is the role of VA to serve the largest possible number of clients, or to offer a broader range of services to a limited number of clients. These priorities often conflict. In delivery of government benefits many would argue that a Federal agency cannot achieve customer satisfaction. If the agency mission is to follow the law; this will not always result in satisfied customers.

The cost factor for implementation of TQM is another important policy issue. John Franke, the Director of the Federal Quality Institute, acknowledges the cost is high. FQI includes in its handbook a listing of management consulting firms who contract to provide advisory services on TQM. These services are generally expensive and are difficult to include in a budget, or may require extensive bidding procedures.

Generally TQM offers some useful principles for improvement of management and quality. However, major policy and philosophical changes would have to be made before TQM could be accepted in its totality and supported as government policy. Unless some of these key issues are
addressed at a national level, the full TQM vision for Federal government could be destined to be just another government fad.
ENDNOTES


3. Ibid.

4. Ibid.

5. Deming, Out of the Crisis, 55-56.


9. Dobyns, Smithsonian, 78.


13. Ibid.


15. Deming, Out of the Crisis, 6.


19 Deming, Out of the Crisis, 102.


21 Veterans Administration, VA Pilot Program on Management Efficiency, draft circular 00-87- , 1.


23 Ibid., 13.

24 Ibid., 15.


26 Ibid., 2.

27 Ibid., 4.


29 Ibid., 2.


31 Ibid., xviii.

32 Ibid., 91.

33 Shoop, "Uphill Climb to Quality," 17.


36 Deming, Out of the Crisis, 214.
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"Total Quality Management (TQM)." Department of Veterans Affairs Minneapolis Regional Medical Education Center Newsletter, Vol. 15, No. 3, June 1990, 1, 3, 7.


Villasenor, Ruth. "Management Objective is Quality: Western Region Implements TQM." VA Western Region Newsletter, 3.
Appendix A

GROUP PROCESS SURVEY
Medication Order Entry

GENERAL INSTRUCTIONS: Either a pen or pencil may be used to complete this questionnaire. Most of the questions may be answered by placing an X in the appropriate box, a few questions ask for brief write-in answers. You may write in additional comments whenever you wish to do so.

1. Briefly, the goal of the project was (write in):

2. Listed below are statements which are sometimes made about group projects and their results. We would like your opinions as they relate to the project you took part in. Beside each statement, please indicate whether you strongly agree (SA), agree (A), disagree (D), or strongly disagree (SD).

   a. Implementing the medication order entry computer package was a team effort.  
      SA  A  D  SD

   b. I was able to share my expertise during the project.  
      ( ) ( ) ( ) ( )

   c. I consider the project a success.  
      ( ) ( ) ( ) ( )

   d. The result would have been as good if a decision had been made without group involvement.  
      ( ) ( ) ( ) ( )

   e. Other employees seem to support the project results.  
      ( ) ( ) ( ) ( )

   f. The team approach was a good method for implementing medication order entry.  
      ( ) ( ) ( ) ( )

   g. The project improved communication within my Service.  
      ( ) ( ) ( ) ( )

   h. The project improved communication with other Services.  
      ( ) ( ) ( ) ( )

   i. The project improved quality of service.  
      ( ) ( ) ( ) ( )

   j. We improved some procedures as a result of this project.  
      ( ) ( ) ( ) ( )
3. I participated in this project: (Check one)
   ( ) Very often
   ( ) Fairly often
   ( ) Sometimes
   ( ) Never or hardly

4. Other team members participated in the project: (Check one)
   ( ) Very often
   ( ) Fairly often
   ( ) Sometimes
   ( ) Never or hardly

5. In the project, I was: (Check one)
   ( ) Given a problem statement and asked to find a solution.
   ( ) Given a solution and asked find a procedure to carry it out.
   ( ) Given a solution and a procedure and asked to implement it.
   ( ) Nothing was explained to me.
   ( ) Other (write in):

6. My group was authorized to (Check one):
   ( ) Make decisions and carry them out.
   ( ) Recommend one preferred option to nursing supervisor for decision.
   ( ) Recommend several options to nursing supervisor for decision.
   ( ) Provide information to nursing supervisor for a decision.
   ( ) Other (write in):

7. Which of the following could the supervisor have done to make the project more productive? (Check as many as apply.)
   ( ) Appoint a group leader in advance.
   ( ) Provide a group facilitator (not the leader) to get and keep discussion on focus.
   ( ) Provide a resource person to help us gather data and analyze statistical information.
   ( ) Allow employees to select leader or lead group.
   ( ) Give employees more authority to choose or carry out solution.
   ( ) Give employees less authority to choose or carry out solution.
   ( ) Explain the group assignment in more detail.
   ( ) No changes needed.
   ( ) Other (write in):
8. So that we can compare your opinions with people of similar background please provide the following facts about yourself.

a. Indicate which occupational group your present job falls into:
   ( ) Job requires an associate degree or higher in a specific field (Ex. RN, Medical Technologist, Pharmacist etc.)
   ( ) Job requires post high school or on the job technical training to meet minimum qualifications for job (Ex: Practical Nurse, Pharmacy Technician, etc.)
   ( ) Clerical/Office Worker
   ( ) Management/Supervision (Supervisors check this response regardless of profession.)
   ( ) Blue Collar: Wage Grade

b. Length of time worked at Fort Harrison
   ( ) Less than 1 year
   ( ) 1 to 4 years
   ( ) 5 to 15 years
   ( ) 16 years and over

c. Length of time in present job:
   ( ) Less than 1 year
   ( ) 1 to 4 years
   ( ) 5 to 15 years
   ( ) 16 years and over

Please mail this survey in the attached envelope. It should reach Dr. Patrick Edgar, P.O. Box 2727, Missoula, MT 59806 by April 15, 1991. If you prefer you may return it to Lee Logan, Personnel Officer (05). Questions may be referred to Dr. Edgar at 251-4229 or to Lee Logan at Ext. 7560.

Thank you for your assistance. Your responses will remain confidential.
Appendix B

GROUP PROCESS SURVEY
Nursing Care Plan

GENERAL INSTRUCTIONS: Either a pen or pencil may be used to complete this questionnaire. Most of the questions may be answered by placing an X in the appropriate box, a few questions ask for brief write-in answers. You may write in additional comments whenever you wish to do so.

1. Briefly, the goal of the project was (write in):

2. Listed below are statements which are sometimes made about group projects and their results. We would like your opinions as they relate to the project you took part in. Beside each statement, please indicate whether you strongly agree (SA), agree (A), disagree (D), or strongly disagree (SD).

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
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<tbody>
<tr>
<td>a. Revising the nursing documentation tool was a team effort.</td>
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<td></td>
</tr>
<tr>
<td>b. I was able to share my expertise during the project.</td>
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<tr>
<td>c. I consider the project a success.</td>
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<tr>
<td>d. The result would have been as good if a decision had been made without group involvement.</td>
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<tr>
<td>e. Other employees seem to support the Project results.</td>
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<td></td>
</tr>
<tr>
<td>f. The team approach was a good method for revising the nursing documentation tool.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>g. The project improved communication within my Service.</td>
<td></td>
<td></td>
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<tr>
<td>h. The project improved communication with other Services.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>i. The project improved quality of service.</td>
<td></td>
<td></td>
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<tr>
<td>j. We improved some procedures as a result of this project.</td>
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</tbody>
</table>
3. I participated in this project: (Check one)  
( ) Very often  
( ) Fairly often  
( ) Sometimes  
( ) Never or hardly

4. Other team members participated in the project: (Check one)  
( ) Very often  
( ) Fairly often  
( ) Sometimes  
( ) Never or hardly

5. In the project, I was: (Check one)  
( ) Given a problem statement and asked to find a solution.  
( ) Given a solution and asked find a procedure to carry it out.  
( ) Given a solution and a procedure and asked to implement it.  
( ) Nothing was explained to me.  
( ) Other (write in):

6. My group was authorized to (Check one):  
( ) Make decisions and carry them out.  
( ) Recommend one preferred option to nursing supervisor for decision.  
( ) Recommend several options to nursing supervisor for decision.  
( ) Provide information to nursing supervisor for a decision.  
( ) Other (write in):

7. Which of the following could the supervisor have done to make the project more productive? (Check as many as apply.)  
( ) Appoint a group leader in advance.  
( ) Provide a group facilitator (not the leader) to get and keep discussion on focus.  
( ) Provide a resource person to help us gather data and analyze statistical information.  
( ) Allow employees to select leader or lead group.  
( ) Give employees more authority to choose or carry out solution.  
( ) Give employees less authority to choose or carry out solution.  
( ) Explain the group assignment in more detail.  
( ) No changes needed.  
( ) Other (write in):
8. So that we can compare your opinions with people of similar background please provide the following facts about yourself.

a. Indicate which occupational group your present job falls into:
   ( ) Job requires an associate degree or higher in a specific field (Ex. RN, Medical Technologist, Pharmacist etc.)
   ( ) Job requires post high school or on the job technical training to meet minimum qualifications for job (Ex: Practical Nurse, Pharmacy Technician, etc.)
   ( ) Clerical/Office Worker
   ( ) Management/Supervision (Supervisors check this response regardless of profession.)
   ( ) Blue Collar: Wage Grade

b. Length of time worked at Fort Harrison
   ( ) Less than 1 year
   ( ) 1 to 4 years
   ( ) 5 to 15 years
   ( ) 16 years and over

c. Length of time in present job:
   ( ) Less than 1 year
   ( ) 1 to 4 years
   ( ) 5 to 15 years
   ( ) 16 years and over

Please mail this survey in the attached envelope. It should reach Dr. Patrick Edgar, P.O. Box 2727, Missoula, MT 59806 by April 15, 1991. If you prefer you may return it to Lee Logan, Personnel Officer (05). Questions may be referred to Dr. Edgar at 251-4229 or to Lee Logan at Ext. 7560.

Thank you for your assistance. Your responses will remain confidential.
Appendix C - Summary of Responses

MEDICATION ORDER ENTRY - Group Process Survey

Meaning of Responses
SA = Strongly Agree (4)
A = Agree (3)
D = Disagree (2)
SD = Strongly Disagree (1)
VO = Very Often (4)
FO = Fairly Often (3)
S = Sometimes (2)
N = Never or Hardly (1)

Total Responses 18 Distribution of Responses
SA  A  D  SD

2. GROUP RESULTS QUESTIONS
A. Team Effort 7 11 0 0
B. Share Expertise 3 15 0 0
C. Project Success 5 11 2 0
D. Quality Group Results 0 2 7 8
E. Employee Support 1 16 1 0
F. Team A Good Method 8 10 0 0
G. Inter-Svc. Communication 2 14 2 0
H. Intra-Svc. Communication 4 10 3 0
I. Improved Quality 2 13 2 0
J. Improved Procedures 1 15 2 0

* - ONLY 17 OF 18 RESPONDED TO THIS QUESTION

PARTICIPATION

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<td>7</td>
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GROUP AUTHORITY

5. Problem Solving 3 3 6 0
6. ISolutions 4 1 3 5

* - ONLY 12 OF 18 RESPONDED TO THIS QUESTION

DEMOGRAPHICS

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Percentage of Responses

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<td>17%</td>
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<td>28%</td>
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<td>39%</td>
<td>44%</td>
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<td>6%</td>
<td>89%</td>
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<tr>
<td>44%</td>
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<td>22%</td>
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* - ONLY 13 OF 18 RESPONDED TO THIS QUESTION
## Average Response Of Group Results Questions

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### Percentage of Responses

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### Average Response of Participation Questions

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### Percentage of Responses

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### Average Response of Group Authority Questions

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### Percentage of Responses

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## Meaning of Responses

SA = Strongly Agree (4)  
A = Agree (3)  
D = Disagree (2)  
SD = Strongly Disagree (1)  
VO = Very Often (4)  
FO = Fairly Often (3)  
S = Sometimes (2)  
N = Never or Hardly (1)

### Total Responses

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### Distribution of Responses

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### 2. GROUP RESULTS QUESTIONS

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* - ONLY 5 OF 6 RESPONDED TO THIS QUESTION

### PARTICIPATION

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* - ONLY 5 OF 6 RESPONDED TO THIS QUESTION

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### Percentage of Responses

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### Average Response of Group Results Questions

#### 2. GROUP RESULTS QUESTIONS

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<td><strong>H. Intra-Svc. Communication</strong></td>
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#### Percentage of Responses

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#### Average Response of Participation Questions

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#### Average Response of Demographics

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<td><strong>8C. Time in Job</strong></td>
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</table>

#### Average Response of Years

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>8B. Time at Ft. Harrison (Yrs)</strong></td>
<td>2.16</td>
</tr>
<tr>
<td><strong>8C. Time in Job</strong></td>
<td>2.33</td>
</tr>
</tbody>
</table>