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Study Trip to The Mayo Clinc, Rochester, Minnesota
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Introduction

Visiting the Mayo Clinic in Rochester, Minnesota is an inspiring experience. Here is a culture with a clear purpose: compassionate and respectful patient care, with education and research that develops both the caregivers and knowledge they need to improve clinical practice.

This goal demands a culture or social system that engages the values of all its members — physicians, administrators, nurses, technicians, service employees. The structure of group practice has the purpose of creating a borderless organization, so that it is natural for specialists to work together in cross disciplinary teams focussed on complex medical problems. The departments have the role of maintaining and developing excellence in particular specialties.

The goal of the patient-first culture is to provide immediate care at an affordable cost. The ideal is to move patients with as little delay as possible from diagnostic work-up with tests and a team of specialists who are called in as needed, to perform necessary procedures, including surgery.

In the immense new Gonda building, Mayo will try out a product line approach with clinical centers e.g. cardiovascular, cancer, women's health. Mayo leadership seeks to increase cross specialty teamwork, but it also recognizes the need to guard against new fiefdoms and to maintain the group practice teamwork that can respond to complex medical problems which do not fit into one discipline. The Gonda Building will be hard-wired with the latest of Mayo's medical information system. It will be the first Mayo Building to not have the elaborate trolley system for moving paper medical records, which was innova-

tive eighty years ago. The Gonda Building will be built in phases with its foundation able to support 37 stories.

Because of the character of the founders, W. W. Mayo and the Mayo brothers, and the Sisters of St. Francis who partnered in building St. Mary's hospital from 27 to 1100 beds, the Mayo Clinic has a spiritual core unlike other health systems we have studied. The Mayo Clinic makes its rich history known and important to new employees and visitors. Throughout the elaborate campus in Rochester there are many historical exhibits that explain and educate, and the spiritual soul of the social system can be felt in the caring focus and responsiveness of the staff.

Today the Mayo Foundation is a charitable, not-for-profit organization that comprises the medical clinic, a graduate school, a medical college, and research activities spread across a unified three-campus system. The Mayo mission is to provide the highest quality compassionate care at a reasonable cost through a physician-led team. Unlike most academic health centers which are dominated by a research agenda, at Mayo, clinical care is the big front wheel on the tricycle, with research and education behind and supporting the clinical mission. Yet last year Mayo had $109 million in research grants, largely from NIH, DoD, and commercial sources and ranked 13th nationally for medical research grants. Mayo added $97 million of its own funds bringing the research budget to $206 million for the year. The Mayo educational budget was $105 million. The Mayo Medical School has about 40 students in each class out of an applicant pool of 4,000. The Mayo Graduate School of Medicine has 1,100 residents and trainees and the Mayo Graduate School has 135 Phd students offers degrees in seven areas.

The Mayo foundation is governed by a 30 member Board of Trustees consisting of 16 public members, including national figures, and 14 Mayo physicians and administrators. There is an extensive system of committees of the board which study and decide on all issues of direction and governance. Since all doctors are salaried, the board committee on salaries, made up of public board members, studies national standards and sets salaries each year at well above the 50th percentile but not at the very top of national norms for a specialty. The committee system also functions to identify potential leaders among the hundreds of doctors who serve on committees. Mayo CEOs and leaders are selected internally in this way, and the committee system creates involvement and trust.

The Mayo Clinic Rochester has 1,300 doctors in its group practice, the Mayo Clinic Jacksonville, and the Mayo Clinic Scottsdale both have about 275 doctors. 65% of Mayo staff is Mayo trained and educated. The Mayo Health System (MHS) is a network of more than 500 affiliated physicians, 7,600 allied health staff, and 13 hospitals operating in southern Minnesota, western Wiscon-

sin and northern Iowa. Mayo educational and research activities include 350 clinical and research associates and fellows, and 1,600 residents and students. When all physicians, scientists, administrative and allied health personnel are included the total exceeds 33,000 people.

The Mayo emphasis is to be the provider of comprehensive care. Internal medicine is the largest department, and an internist is often the team leader with responsibility for a patient. About 40% of Mayo doctors are internists, and specialists often have a foundation in internal medicine. Mayo doctors see about 4 new patients a day, before patients go on to specialists in a team that may include a patient educator (non-doctor). The Mayo Clinic is a specialty clinic, with a focus on surgery, but this is rooted in a systematic, and speedy diagnostic process, described more below. It is important to point out that the hospitals are attached to the group practice but are not the epicenter or corporate determinant of the Mayo practice of medicine, unlike many other medical systems where the hospital is a major force in corporate dynamics. More than 85% of the patients who come to Mayo are treated as outpatients, and fewer than 15% are hospitalized.

Although Mayo is clearly physician led, nursing is a partner with physicians in shared governance and decision-making, and has strong leadership to make this work. Nurses sit as equals on the major committees. They are involved in research. Nurses know they work for the Department of Nursing and not for a particular doctor or department. Each clinical department has a nurse manager and a clinical manager. The Department of Nursing closely monitors where there are not enough or too many nurses in each service and reassigns nurses accordingly. This nurse staffing to workload based on patient need also takes into account what rotations serve the education and development of nurses. By gaining experience in ambulatory as well as intensive care settings, nurses increase their competence and value to Mayo. Nurses feel they have the authority to criticize doctors if something was not done properly, and there are institutional protections for speaking up. We were told that nurses accept physician leadership, but not physician control.

Mayo views nursing as a profession which must be led by nurses. While there is a national trend to do away with nursing departments, Mayo has made theirs strong. In addition to the Department of Nursing which is responsible for staffing, there is a Nursing Council which advocates for the nursing staff, and clinical directors are regularly invited to its meetings. There is also a Nursing Executive Center which features monthly speakers and develops nurse leaders, and nursing has an article every month in the Mayo internal newsletter. 85% of nurses are RNs, and 10.6% of Mayo nurses are male which is twice the national average. There are 6,000 nurses across the system with a turnover rate of 4.1% compared to the 13.6% national rate for nurses. Last year 525 new

nurses were recruited, at a time when other health centers found it difficult to attract nurses.

Half of Mayo Clinic Rochester patients come from Minnesota, 85% from the upper Midwest, and about 2.5% from outside the United States.

Although the rich and famous come to Mayo for treatment, everyone pays standard fees which are cost competitive with other health systems. Mayo believes that the best marketing is sending a happy patient home, and patients respond appreciatively with gifts that totaled $101 million last year from 85,000 donors. 40% of patients are Medicare patients, and while Mayo does not make money on this population, Mayo is committed to accepting anyone in need. Mayo has a policy of "dignified conversation" between the business office and the patient and has always followed a policy of never attaching property to pay a bill. In 1999 the Mayo Clinic made $71 million net from patient care on $2.75 billion dollars of patient care revenue.

Mayo is building partnership relationships with corporate neighbors like Hormel which has a direct contract with Mayo Medical Services Inc. (Mayo's third party administrator) in which Mayo manages employee health and the partners share profit at the end of the year. In the Mayo project with John Deere, there are disease management programs for depression, congestive heart disease, and arthritis.

The Mayo Clinic is now in an intense period of growth driven by demand, expanding more in the past 10 years than in the previous 100 years. It has established clinics in Scottsdale, Arizona and Jacksonville, Florida and expanded southward in Minnesota through the affiliated Mayo Health System (MHS) of primary care clinics and secondary hospitals. Unlike many academic health centers whose health systems of regional clinics are losing money, MHS is producing net revenue from operations in part because it is managed to cover its expenses plus a required return and uses a production based compensation plan.

It was initially difficult to transplant the Mayo culture to Arizona and Florida. People hired locally lacked the Mayo values. Eventually even lower level staff had to be relocated from what is called Mother Mayo in Rochester.

The original Scottsdale strategy of an integrated community focussed delivery system was abandoned. Mayo has changed leadership in Scottsdale and refocussed to its core competence, a group practice of specialists including surgeons and a fully owned hospital.

The Study

In September, we first met for half a day in Washington, D.C. with Robert Waller, MD who had just retired from 12 years in the CEO role to take on other duties including public policy liaison to Washington. Dr. Waller described the Mayo culture and governance. We spent one and one half days at Rochester and interviewed 18 people. (Appendix A) Those interviewed were, for the most part, open about issues facing the Mayo culture. At the end of our visit, we had a one and one half hour interview with the new CEO, Michael Wood, MD and the chief administrator, John Herrell.

Mayo Clinical Model

Openness, self criticism, and self renewal in the spirit of continuous improvement are significant strengths at Mayo. The key is the focus on what is best for the patient.

In 1998, the Clinical Practice Committee produced a report on the Mayo Clinical Model of Care that is meant to be a framework for evaluation of current and future initiatives, and a basis for mentoring new and present staff, including potential leaders. The report concluded that:

> The Mayo Clinical Model of Care is defined by high quality, compassionate medical care delivered in a multispecialty, integrated academic institution. The primary focus, meeting the needs of the patient is accomplished by embracing the following core elements (attributes) as the practice continues to evolve.
>
> **Patient Care**
>
> - Collegial, cooperative, staff teamwork with multispecialty integration. A team of specialists is available and appropriately used.
> - An unhurried examination with time to listen to the patient.
> - A physician takes personal responsibility for directing patient care over time in a partnership with the local physician.
> - Highest quality patient care provided with compassion and trust.
> - Respect for the patient, family, and the patient's local physician.
> - Comprehensive evaluation with timely, efficient assessment and treatment.
> - Availability of the most advanced, innovative diagnostic and therapeutic technology and techniques.
>
> **The Mayo Environment**
>
> - Highest quality staff, mentored in the culture of Mayo and valued for their contributions.
> - Values professional allied health staff with a strong work ethic, special expertise, and devotion to Mayo
> - A scholarly environment of research and education.
> - Physician leadership.

- Integrated medical record with a common support services for all outpatients and inpatients.
- Professional compensation that allows a focus on quality, not quantity.
- Unique professional dress, decorum, and facilities. (This means physicians wear business suits, not white coats, when talking with patients.)

These conclusions were reached by a working group that combined brainstorming, in-depth interviews, focus groups, patient perceptions and staff surveys. The working group also reviewed the history of the clinic and the precepts of the Mayo brothers.

The committee refers to an aura of expertise and a certain grandeur, yet also warmth and friendliness. Physicians are called consultants because they are available for consultation. They do not wear white coats which might distance them from the patient who should be part of the team. The Mayo brothers emphasized the spirit of collegiality, also service to humanity rather than material advancement or enrichment of the individual. Although staff live well, they are not driven by greed. By doing away with monetary incentives, they can do an unhurried examination and put the patient's interests first.

Issues

The Clinical Practice Committee also flagged issues that could adversely affect the Mayo Model of Care. These include:

- An increasing departmental focus that results in silos that get in the way of continuity of care.
- Size and the loss of collegiality.
- The physician-administrator relationship was seen by some as becoming adversarial.
- Threats of economic pressures and managed organizational referrals. Pressures to see more patients causing physicians to become rushed.

In our interviews, we learned that some of the issues facing Mayo Clinic leadership are, in a way, the obverse of their strengths. The following are issues referred to by leaders we interviewed.

- Difficulties in learning from best practice.

As in many of the best organizations we have studied, there is an attitude on the part of some people that little or nothing can be learned from the out-

side. This is a distinct contrast to the tradition of the Mayo brothers who would travel great distances to observe and learn new surgical techniques.

At the present time, some physicians resist practice guidelines, and administrators have not kept up with advances in office efficiency.

• The emphasis on respect means that leaders hesitate to push physicians to change their behavior. Depending on the leadership of chairs, some departments have made significant strides in evidence-based medicine and quality systems while others lag behind.

One Mayo leader said: “Many physicians are still in a cottage industry and resist evidence-based medicine.” He went on to say that the departments still act as fiefdoms. Despite all the talk of teamwork, it still takes time to negotiate between departments (e.g. oncology and radiology), which results in patients having to wait for appointments. (One person suggested that patients bring along a Russian novel to occupy them during long waits).

Of course, this is a matter of degree. Compared to other academic health centers, the walls at Mayo are very permeable, and waiting time between appointments is usually much greater elsewhere.

• Mayo leadership has committed resources to develop its IT system and put a unified electronic medical record (EMR) online. They had worked with HP but this relationship was abandoned.

Currently there is an antibiotic system (instituted in 1994) and about 100 physicians have an order entry system from IDX which is providing the EMR software. IDX and Mayo are partnering in the design of advanced medical informatics. Mayo gets a system customized for them, IDX gets a system they can market to others with the Mayo seal of approval. The total IS budget for next year is about $100 million. There are 600 people working in house in 6 divisions: system support, infrastructure, database, hardware, clinical applications, and financial applications. In addition there are 200 contractors who mainly provide technical help desk functions.

The IT goals are to make it easier for patients, facilitate communication among physicians, improve outcome knowledge that can be used to demonstrate more efficient and effective practice, and develop a system that will help physicians make better decisions using guidelines and protocols.

• Although mutual respect is recognized as a core value, some of those we interviewed, particularly non-medical leaders, indicated a gap between ideal and practice. One senior administrator said: “MDs act like they know everything.

They act like everyone else is a dummy." It was noted that in designing the hospital at Scottsdale, nurses were not asked for their input.

Commenting on this, another administrator blamed some administrators for being too passive, overawed by physicians and hesitant to take contrary positions. Still another administrator, a former nurse, felt that administrators who lacked direct clinical experience were less able to understand the values that drive physician thinking and behavior.

However, another administrative leader said that physician leaders are becoming more respectful. "In the recent past, some physicians at the operational level were very controlling." Robert Waller, MD recently retired CEO and Michael Wood, MD, newly appointed CEO, have demonstrated a respectful and collaborative approach that has had a positive impact. Leaders are carefully chosen, emerging by being recognized for their human qualities and devotion in committee work. It is important that those who are promoted into leadership are people who are both respected and who are, in a sense, loved. This is not a culture that advances dynamic innovative leaders who may be somewhat abrasive. The Mayo ideal is servant leadership and harmony.

It is important to emphasize that physician leaders at Mayo believe it is essential that they devote some time to clinical work. The CEO, Dr. Wood, an orthopedic surgeon, operates one day a week. However, he has narrowed his practice to hand surgery, because he recognizes that with a limited practice, he cannot stay up with the broader field.

• Concern was expressed that Mayo leaders are not communicating a compelling vision of the future, and that they are too tied up in "what we have always been" and problem solving. Some Mayo leaders believe that the speed of Mayo's recent growth is outstripping Mayo's ability to absorb the increase in size and scale. One person pointed out that at the current rate of 6% increase in FTE's a year, Mayo will double its staff in 12 years. Mayo's focus on excellent patient care, operational problem-solving, and rapid growth has some leaders wondering what is the ideal future that is being sought.

Lessons from Mayo

Academic health centers can learn from Mayo. Indeed, if it did not exist people would doubt that it could be created.

A central message from Mayo has to do with values as the active ingredient in a social system. Mayo takes the soft elements of organization at least as seriously as they do the hard elements of structure, control systems, strategy. By focussing on the needs of the patient and mutual respect, Mayo staff avoid the worst of the feudal system that characterizes academic health centers. The group practice structure would not function well unless infused with Mayo val-

ues. The move to centers will be carefully evaluated according to Mayo values. These values, taken seriously, allow and encourage open discussion, including the kind of conflict and criticism that in another setting could become destructive. As long as Mayo people focus on what is best for the patient, issues of power and turf dissolve. W. Edwards Deming made a similar point about creating a quality industrial system, that it could only happen if the focus was on satisfying the customer.

Another strength is the emphasis on research. Much of this is practical, carried out to improve practice. For example, a physician at the Kasson clinic had just done research showing that 60 percent of the patients coming to the clinic had psychological problems (e.g. depression, substance abuses, etc.)

Mayo leadership have created and maintained a social system with a clear purpose and a spirit that connects with the values of its people. People whose values are out of synch will not last long at Mayo. For this system to maintain its dynamism, and continue to develop trust between people, it is essential that the respectful relationships between people are maintained. A recent survey of staff showed that what most determined job satisfaction was respect and recognition. Where this has broken down, Mayo people have become dissatisfied. Job satisfaction flourishes where leaders and supervisors model respectful relationships.

Mayo weakness can be conceived in terms of the need to move fully from a craft mode of production, given that Mayo has organized this better than anyone else, to a learning mode of production including the best of the craft tradition and making use of what has been learned from total quality management. Some of the leaders see this as a problem of variability, resistance to evidence-based medicine, need to emphasize patient education, lack of standards for practice, need to develop IT and so on. Others refer to a lack of vision, a focus on problem solving rather than designing a future.

In a sense, Mayo is so good at what it does and has, justifiably, developed such a great reputation that it becomes somewhat difficult to refocus. Yet, given Mayo's excellence and the awareness of many people we met, change may be achieved by re-thinking the role of leadership. Leaders may need to take a more active role teaching, encouraging and rewarding new practices. It is notable, where the most progress has been made toward a learning mode of production, as in surgery, leadership has been more than a servant, actively engaging physicians and nurses in moving toward an ideal future. Some Mayo physicians and leaders said they would welcome a vision that could initiate a dialogue about how best to define and develop quality given the increased complexity of technology. Implementing such a vision would require strong leadership.

Mayo leaders could learn about teaching evidence-based practice from Intermountain clinical program leaders, just as Intermountain could learn from Mayo how to develop a patient-focussed social system with open dialogue.

Mayo's governance system has emphasized participation in decision making. At its best, this has developed trust and commitment and served as a protection against power-grabbing. In the hospital, shared decision making produces better decisions and happier nurses. However, without visionary leadership, participation can be overly time consuming without clear direction.

Other Observations

- Some of the leaders we interviewed referred to the changing values of "generation X." Younger nurses don't want to work nights but will do so if paid more. In the Kasson Clinic, 18 miles from Rochester in a small rural town, the issue was raised of a need for work standards and rewards, since there is a variability in work ethic. Our experience with the new generation is that they respond to leadership which allows them to participate in a dialogue about how best to reach corporate goals and establish fair rules.

- The composition of Mayo is changing. In the medical school, 49% of students are women. Twenty-five percent of the practicing doctors are foreign born. Most of the legal staff are women, including the general counsel.

- Mayo has not lost a malpractice case since 1989. They do not settle out of court unless convinced they are clearly at fault.

- Bottom up planning has been instituted only within the last five years. Targets are set at the top and each department must work in line with this. One of the frontline physicians we met told us that he focusses on expenses, not revenues. He complained that he could not get funding for patient education for chronic conditions. This is a general problem, since insurance does not pay for this education.

- Chairs have a dashboard of measures they must take into account.

- Leadership was not formally taught until recently. Now there are courses that emphasize the soft skills.

List of people interviewed at Mayo Clinc, Rochester, NY

Jill Beed, JD
Chair, Legal Department

Matthew E. Bernard, MD
Family Medicine Residency Program Director

Robert Brigham
Administrator, Surgical Services

Jane Campion
Public Relations

Terrence Cascino, MD
Mayo Medical Center Board of Governors member
Chair Operational Planning Group

Dave Ebel
Chair, Department of Finance

Doreen Frusti, RN
Chair Department of Nursing

Jessica Grosset
Electronic Medical Records

John Herrell
Chief Administrative Officer
Mayo Foundation

Doug Holton
Systems and Procedures

Helen Mundahl
Administrator, Development

Michael Murray, MD
Consultant, Department of Anesthesiology
Public Affairs, Strat. Alliances

Peter Pairolero, MD
Chair, Department of Surgery

Robert Smoldt
Chair, Division of Planning Services
Mayo Foundation

Sylvester Sterioff, MD
Chair, Mayo Health System
Mayo Medical Center Rochester

Donald Vestweber
Systems and Procedures

Robert Waller, MD
CEO Emeritis
Mayo Foundation

Michael Wood, MD
President and Chief Executive Officer
Mayo Foundation

MICHAEL MACCOBY, Ph. D.
DIRECTOR

Study Trip to Mayo Clinic, Scottsdale, Arizona
April 11-12, 2000

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Introduction

The essential conclusion we reached is that the Mayo culture has been successfully transplanted, although not without costly missteps on the way. Most important, in Scottsdale as in Rochester, the patient comes first. However, leadership still sees gaps between the ideal and current practice. Furthermore, the vision of the Mayo Foundation, one organization in three regions, is still on the horizon. It would require expansion of research and education in Jacksonville and Scottsdale.

Mayo Clinic Scottsdale (MCS) opened in June, 1987, and includes the first hospital planned, designed and built by the Mayo Clinic. MCS has its own board and leadership structure separate from Mayo Rochester, although its performance is reported to the Mayo executive committee and is included in the integrated Mayo Foundation annual report. The Mayo executive committee is chaired by Michael Wood, MD, president and CEO of the foundation and includes members from the three Mayo sites. Of its twelve members, ten are physicians and two are administrators.

MCS has seen patients from over 50 states and 80 countries, although half its patients reside in the Phoenix area and one quarter from elsewhere in Arizona. MCS is an integrated, multi-campus regional system that includes the 178 licensed bed Mayo Clinic Hospital, the clinic, a research facility, and seven primary care centers throughout the valley. The clinic includes an outpatient surgery center with 5 operating rooms equipped for general anesthesia, and the hospital has 14 operating rooms for inpatient and outpatient surgery. MCS has expertise in 21 different surgical specialties.

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MCS employs more than 250 physicians in 66 medical and surgical specialties and a support staff of over 1,900 in the clinic and over 950 in the hospital. There are also more than 50 residents and fellows each year. 8 research investigators have their own research facility where they are studying molecular genetics, cell and molecular biology. Currently, more than 600 clinical research studies are in progress, and research enrollment averages 600 new patients a year. Clinically MCS is expanding its group practice to include: The Mayo Center for Women's Health, staffed by women physicians, and Cancer Care.

MCS has had to overcome mistakes. In 1992, a new physician leader came to Scottsdale. Deviating from the Mayo focus on specialized care, he set out to create a broad integrated delivery system. This was a time when IDS was being touted by government and consultants as the right direction for academic health systems. The result was over expansion, confusion about Mayo's mission and low morale. This leader also was felt to be more directive and autocratic than the traditional Mayo style of leadership. It took Rochester three years to realize they had made a mistake. The leader retired, and a new executive, Michael O'Sullivan, MD, came in 1997 from Rochester. Jim Anderson also came with him as the chief administrator. They have spent the last three years refocusing the clinic and doing a lot of healing as they move MCS toward the traditional Mayo mission of specialty care.

Although MCS has lost money since its founding, it appears that this year they will be profitable or at least break even. However, MCS hesitates to withdraw precipitously from primary care. One of the clinics, Thunderbird, houses the family practice residency. Furthermore, once patients have experienced Mayo-type primary care, many are not happy going back to primary care physicians who do not share the Mayo value of taking all the time a patient needs. Also, in the summer when there are fewer patients coming for specialty care, primary care patients are more welcome.

MCS leadership expects that in time, the high-growth area of north Phoenix will be further developed, greatly increasing the population needing health care. The Mayo Clinic decided to locate in Scottsdale, Arizona and Jacksonville, Florida in large part because these were areas of growth that would attract the kind of patient who would use the Mayo Clinic. The Scottsdale location is affected by a "seasonality problem" from June to September when temperatures regularly exceed 100 degrees Fahrenheit and many winter residents have departed for home in cooler climes.

MCS has developed partnering relationships with American Express (over 3,000 employees) and American West (about 9,000 employees) focusing on wellness as well as care.

Though less than 15% of MCS patients require hospitalization, patients requiring hospitalization are seen at the closed-staff MCS hospital by Mayo physicians. MCS clinic and hospital are about 30 minutes driving time from each other, and each is located on large expanses of Sonoran Desert land with no other developments near them. The hospital site is 210 acres, the clinic site 284 acres. Why wasn't the hospital built closer to the clinic? Local resident opposition was a factor, but more important was the need to be closer to a new highway system, important for serving patients needing emergency treatment.

The MCS hospital has a five-story atrium so that patients have easy access to natural light and views of the desert landscape. The hospital was built with the capability to expand vertically another three stories, as well as horizontally. The hospital does bone marrow, liver and kidney transplants and there are plans for developing more quartenary care. The operating rooms are adjacent to a sterile core with each room opening to the core so staff can receive sterile instruments and supplies. State-of-the-art cleaning systems allow quick clean-up and preparation between procedures. The hospital includes a modern emergency room equipped with computers for monitoring patient status and a visual signal system over each emergency room door which eliminates the need for intrusive public address signals. The ER has 14 examination rooms and 4 observation areas, with separate walk-in, ambulance, and helipad entrances.

The whole hospital has a monitoring system in the ceilings of halls and rooms that alert the staff if a patient's heart experiences irregularities. System alerts appear on monitors at nursing stations and pinpoint the location anywhere in the hospital of a patient whose attached monitor is signaling so that staff can be dispatched immediately. All doctors and nurses carry cell phones and locators, which facilitates rapid communication with the appropriate staff closest to the distressed patient, without the usual disruptive paging. Because of systems like this, and the holistic design incorporated into the layout, the hospital is unusually quiet, beautiful and serene.

The hospital has a 30-room critical care unit with separate waiting area for families which include facilities for overnight stays with reclining sleeper chairs, showers and microwaves. The intermediate care rooms in this unit can be easily converted to fully-equipped critical care rooms should they be needed. All patient rooms in the hospital have been designed to permit flexible adaptation to changing patient needs for care and for comfort. As in the design of the patient's family rooms, the large adaptable patient rooms are an architectural expression of the Mayo principal of putting the patient first. Patient rooms throughout the hospital are arranged in 12-bed 'pods' with a nursing station in the middle, with nurses within 20 steps of any room.

MCS has moved aggressively into broad application of advanced telecommunication technologies. It is on a fast track to establish a digital patient informa-

tion system including electronic records and filmless imaging. In the hospital, computer monitors enable nurses to enter information at bedside, and this system gives physicians and nurses bedside access to the patient's history, up-to-the-minute test results, treatment plan, and patient progress. If needed, a MCS physician can create an audio-visual consultation with consultants at Mayo Rochester or Mayo Jacksonville via a satellite communications system. Patient education videos can be played through TVs in patient rooms as needed. In addition, the MCS clinic has a Patient and Health Education Center which houses a patient library including health related videos.

The Scottsdale labor market is competitive and it is hard to find all the people needed. Thirty nursing positions were open. MCS still uses nurse travelers for 70 FTEs provided by a traveler company. However, the use of travelers is on the decline and the goal is to build a more permanent nursing staff. Travelers are usually women in their twenties who like coming to Scottsdale in the winter. We were told that they tend to settle down in their 30s.

Some administrators believe that it takes 5-7 years to become part of the culture. However, some people find from the start that it fits their ideals.

When physicians are hired, there are two days of interviewing by many staff members. However, MCS recruits aggressively from its own residency programs and from training programs at other Mayo sites.

The Study

We spent two days at MCS and interviewed 22 people in leadership roles (Appendix A). Before the interview, individuals filled out a gap questionnaire based on the expressed values and goals of the Mayo Foundation and some attributes of leadership that we included. (Appendix B) This questionnaire was basically the one we used at Rochester.

After finishing our interviews, we had a feedback session with Dr. O'Sullivan and Mr. Anderson, the medical and administrative leaders of MCS.

Appendix C reports the survey results. The lowest gaps, the areas in which MCS behavior is most consistent with its ideals are the following:

- *The needs of the patient come first.* This is the essential value of the Mayo culture and it implies taking the time necessary for patients. This together with integrated practice model and the commitment to education and research as well as clinical care are the elements of Mayo that are not up for debate.

- *Physician directed.*

- *Physicians share leadership functions.*

- *Widespread participation on committees.* Mayo uses committees to develop and discover potential leaders. However, we heard criticisms of committees as slowing things down and sometimes giving a misleading impression that all decisions are made by consensus. Yet, as one leader put it, "The Mayo brothers did not run things by committee. They used the input and decided."

- *Compassionate highest quality care*.

- *Mutual respect*. There were some complaints about the way physicians treated entry level employees. One administrator said that given the tight labor market, "employees won't accept disrespect from doctors." He noted that Dr. O'Sullivan continually emphasizes the importance of respect. (Note that at Rochester respect was the most important factor in employees satisfaction at work.)

- *Work ethic*. The work ethic is strong. However, it was pointed out that employees in Scottsdale demand a more balanced life than in Rochester. One administrator remarked that "Rochester was built on spousal neglect, and you can't expect that anymore." The problem of dealing with colleagues down the hall who do not work as long and hard as most was raised, and we'll return to this when reporting on the leadership gaps.

- *Teamwork*. This is an important element of Mayo culture. There was a complaint that not enough attention is focussed on the roles and relationships of the physician — administrator leadership teams.

High Gaps

We grouped the largest gaps in two main categories: learning and leadership. These gaps are, on the whole, smaller than we have found at other academic health centers. Their was also a gap for "The Mayo Compensation System is Fair." This was mainly expressed by administrators concerned about retaining employees in the competitive labor market of the Phoenix area.

Learning

- *Research and education strengthen clinical practice*. MCS has had to concentrate on generating revenue and cutting costs. Although there has been work done, such as research with mice on understanding asthma, clinical research has been from a relative point of view, sacrificed. While 600 clinical studies are in progress, MCS physicians have not even used the available research funds for protocol or outcome research. This is recognized as a gap in

terms of the Mayo ideal. Ideally, according to one physician leader, Mayo physicians should publish at least one research paper each year.

• *Learning from best practice*. A few people noted that Mayo, like many elite organizations, suffers from the not-invented-here syndrome. A member of the governing board said: "Remember that the Mayo brothers looked anywhere in the world for new things. They were learners. We've lost that." This criticism was also mentioned at Rochester, and it refers to administrative as well as clinical domains.

• *Shared utilization management and continuous improvement of cost and quality*. Not all physicians are on board. Some give too many tests. This gap has to do with a basic issue of physician individualism. It is said that the Mayo Clinic is an experiment in cooperative individualism. Although there is a strong tradition of peer review at Mayo, physicians don't like to confront inadequate behavior in colleagues. It was suggested that MCS physicians are even more individualistic than MCR physicians who, generally, will question colleagues if it has to do with what is best for the patient. We'll return to this in discussing leadership gaps.

• *Use of clinical pathways.* Again, developing common protocols requires leadership. "You can't tell doctors. You must help them figure things out. You must be able to present convincing data."

Different physicians, we were told, have their own pathways. Furthermore, some skepticism was expressed about pathways, given the Mayo practice of focussing on the total patient, rather than on one health problem. One physician asked: "Is evidence based medicine the new buzzword like the Integrated Delivery System?" However, most of the physician leaders believe outcome research is needed. While there is some done now, it does not include long term outcomes, including quality of life. In the future, it is likely that patients and buyers will demand to see outcome measures. One division physician leader said "We need a good interactive data base."

• *Information systems support physician decisions*. MCS has invested in technology directly related to care. There are still gaps in physician support systems. And billing systems are a problem.

Leadership

• *Coaches*. A number of leaders believe that a major role of leadership is in developing future leaders. Yet, there are divergent views about coaching and mentoring. While some believe this is essential and point to the benefit of having been themselves mentored, others believe potential leaders need to take

the opportunity to develop themselves. Some leaders hesitate to coach because it implies superiority. It conflicts with the ethic of individualism.

There is also concern about leaders using their position to create followers and fiefdoms. Mayo is alert to the danger of charismatic leaders while at the same time recognizing that change must be led.

What we heard was that many people in leadership roles avoid dealing with conflict. They are "Minnesota nice."

We were told that strong leaders do not get ahead at Mayo because they are seen as abrasive. Yet the consensual culture can stifle creativity and block entrepreneurial initiative. It is always easier to say no and the naysayer has no accountability. Opportunity costs are not measured.

However, one of the younger members of the Mayo executive committee appreciates that she was mentored and believes young potential leaders need to be "Mayonized," to learn how to be successful in the culture. She also believes that Mayo needs leaders who are comfortable responding to a rapidly changing world. The physician executive role is relatively new, with new challenges and there needs to be a more structured approach to developing Mayo physician leaders.

Robert Waller, MD, the former CEO, told us that he carefully brought along his successor Michael Wood, MD. Clearly, mentoring has been valuable for some leaders, while others have taken a more individualistic path.

• *Empowers*. We heard a number of complaints about micromanagement, particularly on the part of administrators. One nurse administrator said while there is a heavy emphasis on quality and making sure things are done right, "leaders at the top don't have enough trust that the professionals at the frontline deliver proper care."

Together with concerns about empowerment, people mentioned the need for more soft motivation, including recognition and appreciation.

One leader stated: "We need more emphasis on people as opposed to technology."

• *Practices Openness*. People feel that sometimes, there is a lack of transparency about the reasons for decisions, that reasons given are sometimes "politically acceptable" but not the real reasons. One physician said: "It is important to put the truth out there and get people creatively engaged in how to solve it."

• *Holds People Accountable.* This is related to the unwillingness of leaders to bring up unpleasant criticism and to evaluate performance. Some of the administrators we interviewed complained about never having been evaluated.

• *Communicates a Vision.* The people we interviewed see Michael O'Sullivan as a leader they can trust: "he motivates with goals, knows how to do tough love, is transparent and works at keeping his ego out." But they would like more of a vision, an issue also identified at the foundation level. At MCS, those interviewed ask about the future of primary care. If MCS is moving into tertiary and quartenary care, will there be the supportive research and teaching capability? One person said: "Michael O' Sullivan needs to give us more of a vision than service excellence, automated records, tertiary care and a cancer center. We need to hear where we are going and why."

Of course, this depends not only on Dr. O'Sullivan, but also decisions at the foundation level of strengthening research and education at MCS.

In conclusion, the role of leadership at MCS as at Rochester is essential in adapting to the changing environment. People need an understanding of the business realities as well as constant reinforcement and interpretation of the Mayo values. The challenge of being a leader in a culture of cooperative individualists requires the ability to communicate a vision and also create a productive dialogue about implementation. The need to move to evidence based medicine has to be clarified. Concerns need to be discussed openly. The gaps will be closed only through this kind of focussed dialogue.

MCS leadership has been remarkably successful in healing the wounds of the previous period and placing the organization in the right direction. One of the challenges will be to involve people in realizing a vision that engages their values and aspirations. That requires directive yet interactive leadership. That means leadership that explains why new directions are essential and initiates a dialogue about closing the gaps between the present and an ideal future.

List of people interviewed at Mayo Clinic, Scottsdale

Michael B. O'Sullivan, M.D.
Chair, Board of Governors
Mayo Clinic Scottsdale

Michele Y. Halyard, M.D.
Chair, Department of Radiation Oncology
Member, Board of Governors

Russell I. Heigh, M.D.
Division of Gastroenterology
Vice Chair, Board of Governors

Pasquale J. Palumbo, M.D.
Chair Department of Internal Medicine
Member, Board of Governors

Scott K. Swanson, M.D.
Chair, Department of Urology
Member, Board of Govenors

Prince Zachariah, M.D.
Regional Internal Medicine

Richard G. Zimmerman, M.D.
Division of Neurosurgery
Mayo Clinic Hospital (MCH) Medical Director)

James G. Anderson
Chair, Department of Administration
Member, Board of Governors

Thomas C. Bour
MCH Administrator

Tina R. Emerson
Operations Administrator
Internal Medicine

Ann Fecteau
Operations Administrator
Clinical Automation

Mary J. Hoffman
Chief Financial Officer
Secretary, Board of Governors

Mandy Impson
Operations Administrator

Janice Kaplan
Operations Administrator
Community Internal Medicine

Robert Kuschel
Information Systems

Jason Little
Administrative Trainee

Owen McClure
Chair, Research Services

Matthew F. McElrath
Chair, Division of Human Resources

Bryan D. McSweeney
Chair, Division of Facilities

Clifford Romme
Chair, Division of Systems Support

Maire Simington
Marketing/Communications

Judith Whitman, R.N.
Manager, Critical Care

Gap Survey used at Mayo Clinic, Scottsdale, NY

These are elements of the Mayo health system. Consider each one.
How **important** is each one for the success of the system?
At what **level today** is Mayo achieving each of them?

	IMPORTANCE low high	**LEVEL TODAY** low high
Strategies		
• The needs of the patient come first	1 2 3 4 5	1 2 3 4 5
• Physician directed	1 2 3 4 5	1 2 3 4 5
• Physicians share leadership functions with other professionals.	1 2 3 4 5	1 2 3 4 5
• Research and education strengthen the clinical enterprise.	1 2 3 4 5	1 2 3 4 5
• We continuously improve the cost and quality of our services.	1 2 3 4 5	1 2 3 4 5
• We learn from best practices.	1 2 3 4 5	1 2 3 4 5
Systems That Support Strategies		
• Utilization management is shared by all physicians.	1 2 3 4 5	1 2 3 4 5
• Information systems support physician decision-making.	1 2 3 4 5	1 2 3 4 5
• Physicans use clinical pathways, protocols and guidelines.	1 2 3 4 5	1 2 3 4 5
• Individual performance is evaluated regularly.	1 2 3 4 5	1 2 3 4 5
• The Mayo Compensation system is fair	1 2 3 4 5	1 2 3 4 5
• Widespread participation on committees	1 2 3 4 5	1 2 3 4 5
Leadership		
• Communicates a vision	1 2 3 4 5	1 2 3 4 5
• Practices openness	1 2 3 4 5	1 2 3 4 5
• Coaches	1 2 3 4 5	1 2 3 4 5
• Empowers	1 2 3 4 5	1 2 3 4 5
• Resolves conflicts	1 2 3 4 5	1 2 3 4 5
• Develops relationships of trust	1 2 3 4 5	1 2 3 4 5
• Inspiring	1 2 3 4 5	1 2 3 4 5
• Holding people accountable	1 2 3 4 5	1 2 3 4 5
Shared Values		
• Compassionate highest quality patient care	1 2 3 4 5	1 2 3 4 5
• Mutual respect	1 2 3 4 5	1 2 3 4 5
• Work ethic	1 2 3 4 5	1 2 3 4 5
• Teamwork	1 2 3 4 5	1 2 3 4 5
• Research	1 2 3 4 5	1 2 3 4 5
• Education	1 2 3 4 5	1 2 3 4 5

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April 11, 2000
Mayo Clinic Scottsdale

	IMPORTANCE					LEVEL TODAY					GAP	Mean
	1	2	3	4	5	1	2	3	4	5		Importance
The needs of the patient come first	0	0	0	1	21	0	0	5	9	8	0.82	4.95
Physician directed	0	0	1	7	14	0	0	1	8	13	0.05	4.59
Physicians share leadership functions with other professionals.	0	0	0	6	16	0	1	2	9	10	0.45	4.73
Widespread participation on committees	0	0	2	16	4	0	0	11	7	3	0.47	4.09
Compassionate highest quality patient care	0	0	0	1	21	0	0	3	9	10	0.64	4.95
Work ethic	0	0	0	8	14	0	0	8	9	5	0.77	4.64
The needs of the patient come first	0	0	0	1	21	0	0	5	9	8	0.82	4.95
Resolves conflicts	0	0	3	10	9	0	4	7	8	2	0.89	4.27
Mutual respect	0	0	0	3	19	0	0	7	12	3	1.05	4.86
Practices openness	0	0	0	9	13	0	1	9	10	1	1.07	4.59
Teamwork	0	0	0	3	19	0	0	10	7	5	1.09	4.86
Develops relationships of trust	0	0	1	5	16	0	3	7	8	3	1.16	4.68
Education	0	0	2	6	14	0	3	10	7	2	1.18	4.55
The Mayo Compensation system is fair	0	0	0	6	16	0	3	8	6	4	1.20	4.73
Inspiring	0	0	2	9	11	0	6	9	4	2	1.31	4.41
We continuously improve the cost and quality of our services.	0	0	0	5	17	0	1	11	9	1	1.32	4.77
Communicates a vision	0	0	0	1	21	0	1	7	14	0	1.36	4.95
Individual performance is evaluated regularly.	0	0	1	13	8	1	7	5	8	0	1.37	4.32
Coaches	0	1	1	10	10	1	5	9	6	0	1.37	4.32
We learn from best practices.	0	0	2	8	12	1	2	14	5	0	1.41	4.45
Physicans use clinical pathways, protocols and guidelines.	0	0	3	11	6	3	6	4	3	2	1.43	4.15
Empowers	0	0	1	7	14	0	5	8	8	0	1.45	4.59
Holding people accountable	0	0	1	9	12	1	4	10	5	1	1.45	4.50
Information systems support physician decision-making.	0	0	0	9	12	0	5	9	6	0	1.52	4.57
Research and education strengthen the clinical enterprise.	0	0	1	3	18	0	2	14	5	1	1.55	4.77
Utilization management is shared by all physicians.	0	0	0	13	8	0	7	11	2	0	1.63	4.38
Research	0	0	1	7	14	1	7	8	4	2	1.64	4.59

High Gaps

Learning

- Research and education strengthen clinical
- Learning from best practice
- Shared utilization management
- Use of clinical pathways
- Continous improvement of cost and quality
- Information systems support physican decisions

Leadership

- Coaches
- Empowers
- Holds people accountable
- Practices openness
- Communicates a vision
- Individual performance is evaluated regular
- Mayo compensation system is fair

Low Gaps

- The needs of the patient come first
- Physician directed
- Physicians share leadership functions
- Widespread participation on committees
- Compassionate highest quality care
- Mutual respect
- Work ethic
- Teamwork