

**Columbia University
Mailman School of Public Health**

HOSPITAL FOR SPECIAL SURGERY

The CEO's Dilemma

John R. Reynolds, the President and CEO of the Hospital for Special Surgery (HSS), a 142 bed orthopedic specialty hospital in Manhattan, was facing a curious dilemma regarding both the future direction of his institution and the evolving nature of his role as Chief Executive of the Corporation. HSS had just completed, under Reynolds' direction, a major consultative project with the British National Health Service (NHS). Originally undertaken as a study of the transferability of clinical 'best practices' in orthopedic surgery, the effort had generated considerable interest both within the clinical community and at the highest levels of hospital management. As a result, Reynolds was now considering a number of proposals and possibilities that might dramatically change the future direction of his institution and his presidency.

In recent months, a number of general hospitals, in the US and overseas, have contacted Mr. Reynolds regarding either his availability as a consultant or the possibility of a collaborative project with HSS. Orthopedic surgery is an important revenue source for all of these hospitals, and, in each hospital, orthopedic patients, particularly those undergoing Total Hip Replacement, have had considerable trouble in multiple areas. In general, their patients have had significantly longer patient stays, higher infection rates, and more post-operative rehabilitation mobility problems compared to national benchmarks.

These hospitals had become aware of an initiative that Reynolds and HSS had undertaken with the United Kingdom National Health Service (NHS) to transfer HSS' best practices initiative in Total Hip Replacement. This initiative had resulted in the building of a freestanding orthopedic specialty hospital in the UK. Early results of this ongoing collaboration appeared to have dramatically reduced problems in the UK hospital for patients undergoing hip replacements. The dramatic results of this initiative had been widely circulated and discussed among many CEOs within the hospital industry. Despite widely differing health care systems and relationships among physicians and hospital administrators, the UK patients in this initiative had significantly lower infection rates, shorter lengths of hospital stay, and better post-operative rehabilitation results than the pre-initiative U.K. national average.

The results were so impressive that those hospitals currently seeking HSS input are but a portion of those in the USA and abroad that have approached Reynolds with proposals for a working relationship. The US CEOs, in particular, in seeking Reynolds assistance, have done so with the hope that the results demonstrated in the UK might be able to be duplicated in other hospital environments and systems, leading to better results in hip replacement surgery and healthier bottom lines for their institutions.

Reynolds not convinced that the HSS results might have more widespread applicability. It is unclear, for example, whether the time intensity needed to duplicate the UK experiment is worth the diversion of human and financial resources necessary to replicate the initial projects successfully in other settings. He also has been uncertain whether the HSS model can be directly applied to an existing general community hospital, particularly those in differing states with differing regulatory statutes and different corporate cultures.

Additionally, Reynolds has struggled whether expanding the United Kingdom initiative could or should be part of the strategic focus of his hospital. He is uncertain whether expanding HSS's services to other hospitals within and outside of the United States fits with its fundamental mission and also whether it reflects appropriately the fundamental values under which HSS functions so well. The mission emphasizes excellence in clinical care, but it also includes the equally important elements of graduate and postgraduate medical and surgical education and orthopedic and rheumatologic research. Reynolds questioned, however, whether the stated mission call to "lead the world" extends to becoming a consultant and advisor to the industry [See Exhibit 1].

Reynolds understands that a commercial exploitation of the successful UK initiative might open up a new line of business as a consulting organization for the hospital. He is aware that it may detract attention and focus from the present highly successful and profitable enterprise in New York. He has considered whether he should adopt instead an overall strategy of creating more HSSs in other geographic locations and questions whether the health care environment and future direction in the country is capable of supporting such efforts that are outside the direct provision of specialty orthopedic care.

Perhaps equally importantly, the three legged stool which has made HSS one of the leading orthopedic hospitals in the world, that of clinical care, teaching, and research, may, in fact, be undermined by business or consulting efforts outside its stated and recognized purpose. In addition, Reynolds is concerned that the successful transfer of HSS best practices would, in effect, result in strengthening his strongest HSS competitors. While he has recognized the stated mission of HSS remains to "provide the highest quality patient care—for all—regardless of race, color, creed, sexual orientation, and ethnic origin", he has wondered whether he would be able to convince the HSS Board that the hospital's interests are indeed served if these care improvements were to be accomplished at other institutions so close to HSS.

The Hospital for Special Surgery

Founded in the late 19th century as The Hospital for the Ruptured and Crippled, its name was changed to The Hospital for Special Surgery in 1940, as the surgical care of musculoskeletal problems became an important branch of medicine. HSS affiliated with New York Hospital-Cornell Medical in 1951 and moved to its present Upper East Side location in 1955. Following the trend of close association between medical care and surgical care for arthritis, the Orthopedic and Rheumatology services and clinical practices maintained a close association, collaborating in research and clinical treatment protocols. As rheumatologic care became centered on outpatient therapy, more beds became available for surgical patients, and surgical volume grew.

HSS has been known as a pioneering surgical institution. When reconstruction of arthritic joints became a possibility in the mid 1960's, HSS surgeons were among the first in the United States to perform these procedures. It was among the first hospitals to perform Total Hip Replacement Surgery, and it developed and implanted the first Total Knee Replacement. More recently, its surgeons had designed both Total Shoulder and Total Elbow Replacement systems for patient implantation.

By 2004, HSS had become a 142-bed non-profit hospital with over 2500 employees, not counting those physicians in private practice. As seen in the accompanying financial statement, its annual revenue exceeded \$350 million [See Exhibit 2]. In addition, it received \$30 million in investment revenues from the Hospital for Special Surgery Fund, a not-for-profit that supports the fundraising and investment activities of HSS. Its 50-member Board of Trustees included influential community members (many of whom were former patients), elected medical and surgical staff, and hospital administrative officers, including the CEO [See Exhibit 3].

Its reputation was widespread for excellence in clinical care. It was rated first in the Northeast in Orthopedics and Rheumatology, and HealthGrades gave it five stars for clinical quality and performance excellence in orthopedics. In addition, it was the first New York City hospital to receive the Magnet Award for excellence in nursing and the New York State Patient Safety Award for initiatives aimed at improving the safety and quality of patient care.

The HSS medical staff served as team physicians for the New York Giants, the New York Mets, the New York Power women's soccer team, the Association of Tennis Professionals (HSS later became team physicians for the New York Knickerbockers and New Jersey Nets and a men's professional lacrosse team), and a number of college athletic teams, including St. John's University, St Peter's College, Iona College, and Marist College.

With clinical success came increasing patient demand for services. The Hospital's 19 operating rooms operated at capacity 6 days/week, and more than 16,000 orthopedic surgical procedures were performed each year. The surgical staff included more than 60 orthopedic attending staff, whose offices were either within the Hospital itself or adjacent to it. These attendings were in private practice but had relationships with the Hospital through medical staff appointments, payment of rental and malpractice expenses, and teaching and research responsibilities.

The academic role played by HSS physicians was central to the Hospital's mission. Through its affiliation with Cornell University's Weill Medical College, it had become a leader in undergraduate and graduate medical education. Its orthopedic residency attracted 500 applications for its 8 training spots each year. The Hospital's educational programs included mentoring and hands on training of these 40 orthopedic residents, who were taught by and assisted the attending physicians in patient care. In addition there were more than 50 one-year Fellows in various specialties within Orthopedics, more than 40 Fellows in the fields of Anesthesiology, Rheumatology, Neurology, and Physiatry. In addition, HSS hosted more than 400 visiting physicians from around the world in positions as "observers" both in and out of the operating room. The attending staff all had faculty appointments at Cornell Medical School. The faculty included national and international leaders in education, many of them holding important leadership positions in orthopedic and subspecialty national organizations.

The third leg of the "three-legged" stool was the amount of basic science and clinical research to which the Hospital was committed. Launched in 1998, a research-focused fundraising campaign had raised over \$95 million in five years, and this was used for research programs and facilities located adjacent to the main hospital building.

HSS Surgeons and Staff

The orthopedic surgeons have been self employed, private practice doctors with staff privileges at the Hospital. Many have rented office space at the Hospital, used Hospital billing services, and participated in the self-insured medical malpractice company established with its own independent board. The physicians referred patients to the ancillary hospital services, such as rehabilitation and radiology. A small percentage of surgeons were affiliated with other hospitals as well and had the option to utilize either HSS or competing ancillary services. The surgeons flourished under this arrangement as independent practitioners in an academic environment with teaching and research opportunities. Entrepreneurial opportunities were frequent and encouraged, and HSS established ongoing consulting relationships with medical device and orthopedic implant companies.

The private practice of what was almost universally elective, non-emergency, orthopedic surgery presented logistical challenges for the Hospital. While private practice encouraged the surgeons to partner with the Hospital in maximizing patient volume, the occupancy rates were determined by the chosen work schedule of the surgeons. Occupancy rates diminished during popular vacation time while, during much of the year, surgeons and operating rooms functioned well into the night, six days each week, creating staffing, available bed, and administrative challenges.

The nursing staff consisted of 250 licensed nurses. After the patients were released from the post operative recovery room, the floor nurses became the leaders and essential coordinators of what was a multidisciplinary team, consisting of nurses, therapists, social workers, and chaplain personnel. Through the entire patient's hospital stay, the nurses were in charge of guiding the patient through each individual clinical care pathway, which included for the most part activities occurring on the patient's own floor. Because nursing comprised the largest labor expense for hospitals, and shortages of nurses contributed to increase in length of stay, increased infection rates, and other problems, HSS considered nursing job satisfaction critical. HSS was not unionized. Its nursing turnover rate was 8% compared with 20.7% nation wide. A "three step" clinical ladder rewarded nursing excellence as individuals, and gave nurses significant opportunity for job advancement, salary increase, personal fulfillment, recognition and respect, and management opportunity.

Physical therapists also played a critical role in achieving successful surgical outcomes for orthopedic patients. For example, as part of the *Pathway to Recovery* system [see below], the HSS therapists developed functional milestones to assess rehabilitation progress of all hip replacement patients prior to discharge. This established realistic rehabilitation goals for the entire care team. Thus, different staff members with potentially widely varying experience could compare rehabilitation progress and improve rehabilitation skills. Rehabilitation of these patients occurred both in the patient rooms and in specialized floor areas to further encourage

patients to achieve these goals within a supportive environment amidst other patients with similar problems. By 2004, HSS employed over 80 physical and occupational therapists, many of which had long experience in specialized musculoskeletal care. The clinical and academic environment was also attractive to therapists, and the average length of service was six years, with a turnover rate of 6.5%.

Total Hip Replacement in the United States

Total Hip Replacement [THR], in which the arthritic ball and socket of the hip is replaced with a prosthetic joint, is among the most common orthopedic procedures. In 2000, more than 254,000 were performed in the United States. Most candidates for this operation were more than 70 years old, and most were covered under Medicare. Between 1996 and 2003, there was an 80% increase in the number of hip replacements, thought to be due to increasing technological and anesthetic advancements and an aging population.

While the standard Total Hip Replacement patient spends five days in the hospital and months recovering, recent advances in minimally invasive surgery (MIS) have been thought to have the benefit of shortened hospital stay and recovery time because the operation is done through a shorter incision with less trauma to the surrounding hip muscles. Because of shorter incisions and less wide surgical exposure, some surgeons have expressed concern that MIS may be associated with higher complication rates. It has been argued that only about 20% of hip replacement patients were ideal candidates for this procedure.

While hip replacement surgery was extremely common, as Medicare reimbursement fell, hospitals frequently lost money on these patients, with cost per discharge being about \$14,150 and Medicare reimbursement being \$9,239. MIS carried a higher DRG code, so reimbursement was higher. HSS typically did not lose money on hip operations because of its ability to negotiate volume discounts with vendors and the ability to mix Medicare with higher reimbursed international and commercial insurance patients.

Surgeon reimbursement for the operation was variable nationally, but averaged about \$1300 for the Medicare patient. Fees could be increased to commercial carriers, and patients might be billed for the balance not covered by the insurer. Because MIS required more operative time and work and considerably more training to become proficient, many surgeons used a different billing code for increased charges, but it was to be expected that 2-4 years would be the lag time until increase in fees would become routinely accepted for this newer procedure. Nevertheless, for patients outside the Medicare system, higher reimbursement was routinely sought and achieved.

The Pathway to Recovery - THR at HSS

In 1993, HSS moved to a new treatment system to be used following Total Hip Replacement by developing a clinical pathway that standardized all treatment for the procedure. This 'best-practices' care map, called *Pathway to Recovery*, coordinated all activities of the

multidisciplinary team to ensure that all professional staff had a clear sense of the protocol following hip replacement. This included protocols for patient education, case management, medicine, nutrition, anesthesia, nursing, surgery, infection control, and rehabilitation. By the late 1990s, HSS developed a "fast track" clinical care pathway for the new minimally invasive procedures.

The clinical pathway begins a few weeks before surgery, when the patient is brought to the Hospital on a volunteer basis for preoperative testing, counseling, and orientation. This included medical evaluation and screening and meetings with case managers and therapists to make clear what should be expected and performed post-operatively and to identify any potential problems any individual might have which might hinder recovery. At this time, a 90-minute education class was offered, in which a team of specialized nurses, therapists, and surgeons, met with classes of patients and their family to clarify each step in the upcoming surgery, hospital stay, rehabilitation, and aftercare.

This classroom education class was attended by over 98% of THR patients and offered them a forum to express concerns and address questions in an unthreatening and relaxed environment with members of the staff, their families, and other patients. Those who did not attend, as well as those who did, were given a *Pathway to Recovery* manual that reviewed all the material covered in class. In a study published by the Hospital, patients who attended the class had a shortened length of stay, higher satisfaction, less pain, and a higher perception of functional improvement than those who simply were given the manual alone. This class became the mainstay of the *Pathway to Recovery* program.

The day before surgery, patients were called by their nurses to go over all aspects of the upcoming operation, including what to eat, what to bring with them, and where to go upon arriving at the Hospital. Following surgery and a short stay in the recovery room, patients were brought to their rooms on one of four specialized floors. All hospital services were then centered on the patient floors — radiology, therapy, and social services. Patients never had to leave the floor. After about five days (two for the fast track), patients were typically discharged and sent home with a cane. All their post-operative needs such as cooking plans, assistive devices, and specialized bed and bathroom adaptations had been clearly arranged, discussed, and clarified via the preoperative teaching.

Weeks later patients were asked via a confidential survey, developed and administered by an outside firm, to rate their experience. The survey results were analyzed and collated, then compared with known national statistics. HSS patients gave their experience an overall mean score of 94.2, compared with 87.3 nationally and 84.8 in New York City.

HSS Culture and Staff Interaction

The clinical pathway was, of course, the ideal solution. Its implementation was not without difficulty. HSS administration and senior medical staff felt that a team culture which was founded on institutional pride, core protocols, shared values and culture, and respect for professional competence was the essential ingredient for HSS to compete effectively in an

environment characterized by increasing financial constraints. This was a challenge to institute, however, as the culture of the Hospital was a mix of egos, professional independence, and personal preferences of each surgeon. This made it difficult to secure conformity to a repeatable way of performing the operation and managing its aftermath.

It was essential for the nursing department and rehabilitation department to be able to work together to this common goal. Beginning first with a pain management protocol on which there was little disagreement, they were able to broaden consensus around other case management protocols. The heads of nursing and rehabilitation related their success to team building around important decision making factors in hiring, individual accountability, and attention to staff education. Hiring centered on recruiting people anxious to learn and make a difference in patient care. In return, the Hospital offered excellent opportunities for promotion and career advancement into management positions.

The HSS interdisciplinary THR team had both broad and deep experience, consisting as it did of nurses, surgeons, case managers, therapists, nutritionists, and ancillary staff, each becoming more and more knowledgeable in this area as each gained the expected experience. The clinical pathway was constantly reviewed and changes, modifications, and adjustments made as necessary. In addition, the pathway was capable of being adapted to the specific needs of each patient.

In keeping with the institutional team philosophy, Hospital committees were also cross-disciplinary, all in an effort to drive continuous quality improvement. These included Quality Improvement, Clinical Patient Safety, Strategic Process Improvement, and Risk Management, all of which reported to other Hospital-wide committees, which reported in turn to the Board. HSS management demanded considerable personal accountability of all employees for ongoing clinical quality, safety, and efficiency. There were staff-driven "standards of practice" for each department, peer review of problem cases, and yearly performance evaluations.

The staff was empowered and encouraged to embrace change on an ongoing basis, and this attracted employees who were motivated, high achieving, adaptable, open to new ideas, and ambitious. Each employee went through a two-day orientation focused on customer service, an initiative developed in 1999 with input from over 200 interdepartmental teams. The goal was "to create a first class organizational culture of customer service" that served patients, their families and guests, hospital co-workers, and anyone else who performed or sought service at the Hospital. Workshops provided guidance on personal appearance, telephone and face-to-face interactions, elevator etiquette, patient transport, sensitivity to disabilities, confidentiality and privacy, respect for co-workers, and respect for each member of the team. This contributed to a culture in which every worker, from Surgeon-in-Chief to security guard and cafeteria worker had a sense of pride in the institution. The Hospital was not unionized, which facilitated management's ability to be facile with new programs and ideas and made labor unrest a rarity.

A critical component of what made employees able to unite around a common vision was that the surgeons recognized the importance of these factors contributing to the HSS culture. The Hospital's medical staff consisted of 90 orthopedic surgeons, 60 rheumatologists, 30 anesthesiologists, 15 pediatricians, 10 radiologists, 10 neurologists, 10 physiatrists, and a smaller

number of pathologists and other medical and surgical specialists. The small size and focus of the Hospital on a small area of surgical care was felt to be one reason for the ability to maintain excellence and permit responsiveness in timely fashion to positive change. Collaboration and mutual respect among physicians and surgeons generated and fostered this sense of institutional pride. The clinical, educational, and research collaboration among medical and surgical staff was a critical component of HSS' success, as referrals from the rheumatology staff accounted for 40% of the annual surgical volume, and the rheumatologists not only screened the patients, but also consulted and managed them during their post operative care. It was felt by most staff that this degree of cooperation, collegiality, and interdependence was unparalleled at most health care institutions.

This environment attracted a certain type of surgeon and physician. According to the CEO, HSS physicians were "selected for their excellence, which creates an *esprit de corps* here that is not present at other institutions where surgeons may be added for their volume rather than quality". Recruiting of physicians focused on collaboration, academic and clinical excellence, demonstrated ability to teach, and educational track record and background. HSS administration sought to recruit medical staff whose reputation would immediately engender peer respect and foster the spirit of clinical, research, and academic cooperation.

THR Outcomes — Pathway To Recovery

After implementation of the clinical pathways, marked improvements in areas such as length of stay, infection rate, and rehabilitation milestones were achieved. Within 2 years of implementation, average length of stay [LOS] decreased 17% from 8.7 days to 7.2 days. By 2003, LOS had further decreased almost 50% to 4.6 days. Although national length of stay also decreased during this time due to technological innovation, the clinical care pathway generated healthier, more functional patients at HSS for the same LOS compared to other hospitals.

HSS patients also experienced an infection rate for THR that was significantly lower than national averages. Surgical site infections are widely recognized to be a tremendous problem when they occur and can lead to loss of prosthesis and expensive, disabling, and risky revision surgery. HSS established a multidisciplinary infection control committee — and infection control was integrated into every aspect of hospital operations. Between 1992-2003, a study of 300 hospitals in the US revealed that the infection rate following hip replacement was 0.88%. At HSS, during this same period of time, the infection rate with this operation was 0.18% - 0.31%, and hospital wide, for all operations (of which there were more than 16,000), the infection rate was 0.33%.

A major focus of the post-operative care process involved challenging and encouraging patients to reach functional milestones quickly. After the clinical pathways protocol was instituted, the days to achieve all functional milestones decreased about 5% each year. Patients who achieved functional milestones sooner were more likely to be discharged directly to home after surgery, as they were more independent and mobile. Fully 70% of HSS total hip patients were discharged directly to their home rather than a nursing facility or intermediate care rehabilitation center compared to only 24.5% of patients nationwide during this same period of time.

The United Kingdom — Health System and Hip Replacement

In the UK, public health spending is administered through the National Health Service (NHS), which was established in 1948 to provide universal health care to all citizens. This agency is governed by the Department of Health at the national level and local trusts in local markets. Physicians are self employed but contracted with the NHS. Financial incentives are mixed, and included fee-for-service, capitation, and salary. While all citizens are entitled to medical care, there has been long-standing governmental underfunding, which has been seen as depressing quality and accessibility. There have been fewer doctors, nurses, hospital beds, and technological advancements such as MRI scanners than in comparable developed nations.

The New York Times reported that, "General acceptance among Britons that inconvenience, barebones amenities, long waiting times, lack of consumer choice, and personal indignities were the legitimate price of free and comprehensive care." Waiting times and lengths of stay were a great problem, and, as elective hip replacements were deferred for more urgent care, this troubled many in the system. Long wait times for elective hip surgery created an environment in which patients able to afford it sought care outside the UK. In 2002, the mean wait time for an elective Total Hip Replacement was 244 days, and the average length of stay was 11.4 days. The long length of stay following surgery compounded the wait list problem, as in-hospital logjams contributed to the backlog of surgical cases.

Because of overcrowding and lack of prevention focus, infection was also a great problem. In 2002, the overall hospital infection rate at surgical sites was 10%. Over 40% of these were resistant to standard antibiotics. More specifically, the Total Hip infection rate was 2.2 %, three times that in the United States.

In terms of rehabilitation success, UK patients experienced major mobility restrictions following hip replacement. Twelve months after surgery 26% of patients reported limping and 23% reported severe walking restrictions, astronomical rates compared to the US for the same operation. After twelve months, only about one-half of UK patients could walk without a cane or other assistive device.

These factors led to increased costs, poorer outcomes, diminished expectations and low patient satisfaction. The NHS was moved to explore alternative ways to improve results of their surgical cases and encouraged their medical specialists to look for innovations and 'best practices' at international meetings and in published results in other countries. This was not only a source of concern about the quality of care, but also led to wounded national pride. The problems were particularly acute in the area of orthopedics in general, and, more specifically, in THR, which was generating tremendous negative publicity despite being the most common orthopedic operation in the UK.

The Quality Transfer Project – Beginnings of a Consulting Practice?

At one of the orthopedic conferences in London, during which HSS staff and its CEO spoke about the *Pathway to Recovery* initiative, several UK hospital executives expressed a desire for

institutional consultation focusing on quality improvement for THR in their country. One particular plan piqued the interest of the HSS representatives. The NHS had plans to build an elective orthopedic center in London dedicated to hip and knee replacement surgery. HSS was asked to consult for a three-year period - taking the hospital through planning, construction and opening. HSS was interested in determining if its system of patient care could be exported, and Reynolds assembled an interdisciplinary team, matched it with its U.K. counterparts, and initiated the process of quality transfer.

A three-year period of site visits, workshops, both in New York and London, ensued. Together, the institutions developed and instituted new clinical protocols and clinical pathways in an integrated, interdisciplinary partnership. Many differences between the NHS process the US environment and between the cultures of the two hospitals and health systems needed to be addressed in order to assess what was and was not transferable or adaptable. For instance, at HSS, there was a team-based culture, grounded in mutual respect across disciplines, in which all stakeholders provided input and contributed to the final clinical product. In the UK, the structure was very hierarchical, with nurses, therapists, and other medical staff strictly adhering to physician orders with their input neither asked nor desired. The prestige imparted to the surgeons who had a 'long waiting list' emerged as a major element of the prevailing culture that needed to be overcome. Differences in surgeon reimbursement were not inconsequential obstacles to the success of this initiative. At HSS, a pure fee-for-service encouraged efficiency in anesthesiology and surgery in order to drive up volume, while in the UK there was little incentive to improve productivity or raise volume.

The final cultural hurdle was the sense on the part of doctor and patient that there was little importance in getting the elderly to rapidly be moved through efficient clinical and rehabilitation protocols. There was little expectation among staff and among patients themselves that the elderly were motivated enough to make investment in rehabilitation status worthwhile. It was not clear that the British patients would be willing participants in what was in New York a mutually relied upon partnership. These patients had become too accustomed to a system of long waits and overcrowded, marginally clean hospitals. There was very little sense nationally of the patient as consumer, and it was unclear whether the HSS model could be successfully transferred. Additionally, long wait times often resulted in patients being sicker at the time of the operation, making it more difficult to adhere to developed patient-centered protocols and pathways.

However, after the opening of the hospital and initiation of the Total Hip initiative, in the first year of the program the results were dramatic. For the first seven months of operation, the hospital performed 1128 hip replacements and was on track to perform 3000 in the first year and 95% of the patients attended pre-operative classes.

Other results were equally dramatic. In its first 3 months, the length of stay dropped to an average of 5.8 days, compared with a country-wide average of 8-12 days. This translated into shorter waiting lists, cost savings per patient of \$3000, and fewer sick patients. Patients raved about the new, clean facility, and it was felt to be a model for infection control around the country. While early data were unavailable about rehabilitation success, therapists and patients were impressed by an apparent quantum shift in post-operative rapid return of mobility.

The NHS initiative in London was the first step in an effort to launch a number of fast track surgical centers — some managed by for profit companies, some by the NHS. The NHS saw this as the initial stage of an effort to institute a new model of health care — patient centered, more efficient, shorter wait, and high quality.

Choosing the Future - Strategic Directions for HSS

John Reynolds has been CEO of HSS for eight years, and prior to that, its CFO for 12 years. He knows the institution well - its culture and its premier position among orthopedic hospitals - and has confidence in his organization and the management teams of each of his departments. He has encouraged the creation of a culture of teamwork that has resulted in excellent clinical outcomes, a strong reputation in research and medical educations, and a fiscally sound institution. He also knows that HHS operates in a dynamic, highly competitive market and industry and that the Hospital cannot be allowed to become complacent or to rest on its laurels.

As is often the case for successful organizations and successful CEOs, he now finds himself considering a number of seductive and potentially exciting possible future directions for the Hospital and for himself. He also knows that, as strong as HSS presently is, it does not have the resources to pursue all of these options simultaneously and that each might lead the institution in very different and potentially conflicting directions. Thus, significant choices regarding direction and the commitment of major resources will have to be made.

The first set of options would involve pursuing dramatic expansion within the current HSS portfolio. Even here there are competing issues of major thrust and direction. He could, for example, undertake to drive the model for Total Hip Replacement into all programs and areas of the Hospital, perhaps resulting in improved quality measures which could be applied to all of the more than 16,000 elective surgeries performed in the Hospital each year.

On the other hand, he could seek to expand the THR/TKR 'franchise' that HSS has earned by seeking to grow this product line dramatically, either by significantly increasing the Hospital's capacity and staff in its present New York location or by opening a series of standalone orthopedic in other locations with attractive potential patient mix profiles such as in Florida and Arizona. Should the Hospital focus on growing its core business at home, in which roughly 1/3 of its patients come from New York City, 50% come from the outlying tri-state area, and 15% came from distant areas of the United States and abroad, or should it 'go to the customers'?

He is uncertain whether geographical expansion is wise either within the United States or abroad. Kaiser Permanent has not had success in expanding its health care system to the Northeast, and their attempts to do so have resulted in large financial losses. The Jacksonville and Scottsdale satellites of the Mayo Clinic had met with only modest success, as the name being utilized without corresponding medical staff excellence had resulted in mixed feelings about its reputation outside the home base. Cleveland Clinic, having opened a branch hospital in Naples Fla., had also found expanding its system outside of Ohio difficult. Is there something unique about the particular mix of market and history that would prevent successful replication of HSS

elsewhere? Is his system capable of managing a multi-site organization effectively? Looking outside of HSS, Reynolds sees opportunities to provide consulting, managerial, educational, and/or research services and products either on an occasional basis or as separate, revenue-generating lines of business. Having instituted educational programs for his own middle management taught by present employees and outside educators, he knows that HSS has developed an effective approach to institutional professional development that could be packaged and marketed to other health care organizations.

He also knows that the breadth and depth of managerial competence developed at HSS probably is sufficient to permit him to utilize management heads outside the Hospital for future quality initiatives similar to that in the UK, either as consultants, project managers, or venture partners. He has already been approached by a number of institutions both in the US and abroad about applying the HSS model to future quality transfer initiatives.

He has struggled with the potential implications of each of the requests for consultation or collaboration. Unlike HSS, many of these hospitals are much larger and are general rather than specialty hospitals. For example, one hospital requesting a partnership has 950 inpatient beds, 57,000 inpatients per year, 485,000 outpatient visits per year, and 63,000 emergency room visits per year. It is affiliated with 5900 employees, 1740 physicians, and 59 medical and surgical specialties, including orthopedics. Its orthopedic department performed over 380 total hip replacements within the past year. It has recognized that there are quality issues that seemingly might be addressed by applying the HSS model. Its length of stay is 7.5 days, its infection rate 2.5%, and only 20% of the THR patients are discharged directly home, many instead going to expensive rehabilitation centers far from the patients' homes. In general, this has produced an unsatisfactory and unsatisfied group of patients, and the hospital is concerned that it is in danger of serious loss of market. The demonstrated success at HSS has impressed its administration, which has offered to engage HSS as a consultant, a partner, or a management services provider.

Reynolds recognizes the implications of this request and others. He has always felt that it is important to impart lessons learned and to share HSS's knowledge with other hospitals, not only to satisfy its institutional mission of improving the quality of patient care to all patients around the world, but also to further the status of HSS nationally and internationally as a world leader in orthopedic care – and, not incidentally, perhaps, to secure HSS's financial future. But there are limited resources and for accomplishing these goals – and clearly competing and worthy uses, as well as the potential for distracting attention away from the core clinical mission of HSS itself.

Weighing all of these possibilities, Reynolds is uncertain about both the professional and the economic benefits of seeking to export the HSS experience. He wonders how extensive any attempts at replication should be either in the competitive US market or abroad. Other options might be to begin a hospital consulting business or orthopedic hospital management business, open a chain of orthopedic hospitals, or enter into a series of alliances and partnerships. It is known that the U.S. hospital consulting and management market was estimated at \$2 billion in 2002. Alternatively, he has considered pulling back and concentrating on his home institution.

Exhibit 1

Mission Statement – The Hospital for Special Surgeries

The Mission of The Hospital for Special Surgery is to provide the highest quality patient care, improve mobility, and enhance the quality of life for all and to advance the science of orthopedic surgery, rheumatology, and their related disciplines through research and education. We do this regardless of race, color, creed, sexual orientation, or ethnic origin

Vision

The Vision of The Hospital for Special Surgery is to lead the world as the most innovative source of medical care, the premier research institution, and the most trusted educator in the fields of orthopedics, rheumatology, and their related disciplines.

Values

- Excellence
- Integrity
- Compassion
- Respect
- Teamwork
- Quality
- Safety
- Innovation
- Education
- Efficiency

Exhibit 2 2004 Financial Information

<i>Financial Information</i> ⁽¹⁾⁽²⁾		
Hospital for Special Surgery and Affiliated Companies		
Statement of Income ⁽³⁾		
<i>(In Thousands) Year Ended</i>	2004	2003 ⁽⁴⁾
Hospital for Special Surgery		
Total Revenue ⁽⁵⁾	\$357,069	\$308,478
Total Expenses	346,598	304,019
Operating Income from Hospital for Special Surgery	\$ 10,471	\$ 4,459
Affiliated Companies		
Total Revenue ⁽⁶⁾	\$ 37,068	\$ 32,108
Total Expenses	35,749	34,239
Operating Income/(Loss) from Affiliated Companies	\$ 1,319	\$ (2,131)
Operating Income	\$ 11,790	\$ 2,328
Statement of Financial Position		
<i>(In Thousands) December 31</i>	2004	2003
Assets		
Current Assets (Excluding Investments)	\$ 96,248	\$ 95,338
Investments ⁽⁷⁾		
Current	109,372	83,152
Long Term	48,334	40,021
Assets Limited as to Use	44,261	29,612
Property, Plant and Equipment – Net	236,996	237,301
Other Non-Current Assets	30,678	24,521
Total Assets	\$565,889	\$509,945
Liabilities and Net Assets		
Current Liabilities	\$100,388	\$ 88,502
Long Term Debt	148,293	135,534
Other Non-Current Liabilities	14,699	13,140
Total Liabilities	263,380	237,176
Net Assets	302,509	272,769
Total Liabilities and Net Assets	\$565,889	\$509,945
⁽¹⁾ Includes activities relating to Hospital for Special Surgery and its affiliates (Hospital for Special Surgery Fund, Inc., HSS Properties Corporation, HSS Horizons, Inc., HSS Ventures, Inc., and Medical Indemnity Assurance Company, Ltd). ⁽²⁾ Complete audited Financial Statements of both Hospital for Special Surgery and affiliates are available upon request from the HSS Development Department at 212.606.1196. ⁽³⁾ Excludes \$21.5 and \$20.1 million of restricted philanthropic contributions in 2004 and 2003, respectively. ⁽⁴⁾ For purpose of comparison, certain reclassifications have been made to the 2003 column to conform with the 2004 presentation. Such reclassifications had no effect on changes in net assets. ⁽⁵⁾ Includes \$0.9 million of revenues from affiliated companies that are eliminated in consolidation in 2004 and 2003, respectively. ⁽⁶⁾ Includes \$23.8 million and \$20.2 million of revenues from Hospital for Special Surgery that are eliminated in consolidation in 2004 and 2003, respectively. ⁽⁷⁾ Hospital for Special Surgery is the beneficiary in perpetuity of income from an outside trust. The fair value of investments in the trust are not included above and were \$35.0 million and \$32.9 million at December 31, 2004 and 2003, respectively.		

Exhibit 3

Officers and Board Members

(As of April 1, 2005)

Officers

Co-Chairs

Dean R. O'Hare
Aldo Papone

Vice Chairs

Winfield P. Jones
Mrs. Emil Mosbacher, Jr.

President and Chief Executive Officer

John R. Reynolds

Surgeon-in-Chief and Medical Director

Thomas P. Sculco, MD

Executive Vice President and Treasurer

Stacey L. Malakoff

Executive Vice President

Lisa A. Goldstein

Executive Vice President

Deborah M. Sale

Vice President and Secretary

Constance B. Margolin, Esq.

Chairmen, Emeriti

Henry U. Harris, Jr.
Richard L. Menschel

Board Members

James M. Benson
Richard A. Brand, MD
Finn M.W. Caspersen
Barrie M. Damson
Mrs. James D. Farley
John H. Foster
Louis R. Gary
Melvin J. Glimcher, MD
Jo A. Hannafin, MD, PhD
Henry U. Harris, Jr.
David L. Helfet, MD*
James R. Houghton
Thomas J. Hughes
Winfield P. Jones
David H. Koch
Randolph D. Lemer
Marylin B. Levitt
Alan S. MacDonald
Carl B. Menges
Richard L. Menschel
Mrs. Emil Mosbacher, Jr.
Carl F. Nathan, MD
Dean R. O'Hare
Stephen A. Paget, MD*
Aldo Papone
Samuel S. Polk
Hollis C. Potter, MD
Francesco Ramirez, PhD*
Charlton Reynolds, Jr.
John R. Reynolds*
William R. Salomon
Thomas P. Sculco, MD*
Donald Stone
Daniel C. Tully
Alberto W. Vilar
Mrs. Douglas A. Warner, III
Russell F. Warren, MD
Gene Washington
Torsten N. Wiesel, MD
Henry A. Wilmerding, Jr.
Kendrick R. Wilson, III
Philip D. Wilson, Jr., MD
Scott W. Wolfe, MD*
Edward M. Yorke
Mrs. Ezra K. Zilkha

**ex officio*

Life Trustees

Loring Catlin
Katherine O. Greenberg
Beverly Silts Greenough
J. Peter Hoguet
David M. Mixer
John J. Phelan, Jr.
Katherine O. Roberts

International Advisory Council

Chair

Sir Dennis Weatherstone

Finn M.W. Caspersen
Louis R. Gary
Dr. Henry A. Kissinger
Richard S. Laskin, MD
Richard L. Menschel
David Rockefeller
Sergio Schwartzman, MD
Paul Volcker
Torsten N. Wiesel, MD
The Honorable
John C. Whitehead

Exhibit 4 Replacement Surgery Functional Milestones Form

Exhibit 4 Total Hip Replacement Surgery Functional Milestones Form

HSS TOTAL HIP ARTHROPLASTY - FUNCTIONAL MILESTONES FORM																
REHABILITATION DEPARTMENT																
PHYSICAL THERAPY																
PT Initial: _____																
Diagnosis: _____ Age: _____																
Right / Left / Bilateral																
Porous / Hybrid / Cemented																
Initial / Revision																
WBAT PWB TTWB NWB																
Height _____ (in) Weight _____ (lbs)																
Day of Surgery: Su M T W Th F Sa																
Anesthesia: EPI GEN																
PCA: EPI IV																
Nerve Block: Psoas / Sciatic / None																
Pre-op Class: YES NO																
Pre-op Amb: w/o bound <1 1-5 6-10 >10 Blocks																
Pre-op Assistive Device: Cane / Crutches / Walker / None																
Need to negotiate stairs: YES NO																
Pre-op Lives Alone: YES NO																
BID																
Discharge																
Stairs Unassisted																
Stairs Assisted																
Cane Unassisted																
Cane Assisted																
Walker Unassisted																
Walker Assisted																
Stand Only																
Transfer Unassisted																
Transfer Assisted																
Pain Level																
Date of Surgery																
P.O.D	RR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Discharge To:	Home	Rehab	SNF													
If D/c to home:	Home PT	Outpatient	No PT													
If D/c to home, with:	Family/Friends/Other	Alone														
Complications/PT Held:																

Source: Company document.

Consulting Assignment

Your firm has been engaged by John Reynolds to advise him and his senior management team on the determination of the future strategic direction of The Hospital for Special Surgery. While Mr. Reynolds and his team have considerable experience and success in the management of the Hospital, he realizes that decisions about the institution's future will involve considerations well beyond the familiar landscape of hospital management. In particular, the Hospital is presently entertaining proposals and opportunities that range broadly from forming a network of alliances with other not-for-profit hospitals and medical centers to a number of lines of business that might lead the Hospital into competitive for-profit ventures. Mr. Reynolds is looking for your firm to assist him in sorting out these various possibilities and in charting a future direction that will be true to the institution's mission and history and also insure its place as a leading edge, financially sound organization.

Among the specific deliverables that he expects in your Report and Presentation are the following:

- I. A complete analysis and comparison of the pros and cons of each of the proposed directions that the Hospital is facing, including an assessment of the economic, organizational, and cultural implications of each; be specific as to the criteria to be used in assessing the viability and appropriateness of these proposals for the Hospital;
- II. A recommended strategy for the Hospital, including specific guidance regarding the disposal of each of the above-noted proposals, that will define the intended program portfolio, organizational form [profit, not-for-profit, holding company, etc.], and key relationships to be pursued;
- III. A delineation of the action plan actions needed to implement the above-recommended strategy, included but not limited to the prioritization of key actions along a specific timeline with appropriate checkpoints and metrics.