

## CASE STUDY

### **PUTTING PATIENTS AND FAMILIES FIRST: THE TOTAL JOINT REPLACEMENT PROGRAM AT MAGEE-WOMENS HOSPITAL, UNIVERSITY OF PITTSBURGH MEDICAL CENTER**

**Organization:** The Total Joint Replacement Program, Magee-Womens Hospital, University of Pittsburgh Medical Center, Pittsburgh

**Objective:** Magee-Womens Hospital uses patient- and family-centered care to transform the ordinary care experience into the ideal care experience—on every level—for patients and families. The positive effects of patient- and family-centered care, now practiced not only within Magee-Womens Hospital but in other programs and hospitals in the University of Pittsburgh Medical Center, were first demonstrated in the Total Joint Replacement program.

**Solution:** Focusing on the patient's and family's experience—seeing every aspect of care from their point of view—helps any caregiver provide an exceptional care experience for all patients and families.

**Outcomes:** Patient- and family-centered care results in improved patient safety, better patient outcomes, more efficient delivery of care, decreased lengths of stay, and increased patient and family satisfaction.

*“ One cannot go wrong putting patients first. Every outcome that stems from putting patients first is a step toward closing the gap between the current state and the ideal state in patient care delivery. ”*

—Anthony DiGioia III M.D.<sup>2</sup>

How many health care institutions—even those committed to delivering compassionate and patient- and family-centered care—have gone so far as to completely redesign their approach to delivering care so that it conforms to patients' and families' needs rather than to the needs of physicians and the institution? Since 2006, the Total Joint Replacement program of Magee-Womens Hospital, University of Pittsburgh Medical Center—in collaboration with Renaissance Orthopaedics and the Orthopaedic program of Magee-Womens Hospital—has done just that. The Total Joint Replacement program focuses on delivering the full cycle of care from the patient's and family's perspective. The program organizes resources and personnel around patients rather than around the hospital's specialized departments and practitioners.

Establishing the program first required the staff to evaluate their care processes from the patient's and family's point of view using the process of “patient and family shadowing”; it then required realigning the way staff had been providing services, including pre- and postsurgical intervention and hospitalization, to follow the way patients and families actually flowed through the system. Anthony DiGioia III, M.D., Renaissance Orthopaedics and Clinical Associate Professor of Orthopaedic Surgery, University of Pittsburgh School of Medicine, and colleagues designed their program “‘from the ground up,’ as a ‘hospital within a hospital,’ including location and facility

design, staff recruitment and development, care delivery services and protocols, and scope of care (for example, prevention, diagnosis, treatment, posthospital services, and ongoing management).”<sup>2</sup>

The Total Joint Replacement program aims to make the presurgical, postsurgical, and rehabilitation process easy for patients and families, limit their anxiety as much as possible, and reduce pain using a multipronged approach that targets staff behind the scenes and patients and families in front.<sup>2</sup>

“*Our goals are to create a stress-free hospital experience and obtain 100% patient and family satisfaction and loyalty. Our program offers a complete continuum of care, spanning diagnosis and teaching, surgery, inpatient hospital recovery, and the rehabilitation process.*”

—Anthony DiGioia III, M.D.<sup>2</sup>

## Behind the Scenes

Staff hiring is both a process and a methodology, according to DiGioia, and is one of the most important behind-the-scenes activities conducted in the Total Joint Replacement program.<sup>2</sup> “The entire team of physicians, nurses, therapists, and ancillary staff [is] part of the patient- and family-centered care focus and are recruited and retained with an emphasis on attitude: being committed to meeting and exceeding the needs of patients and families.”<sup>2</sup>

Staff members participate in weekly meetings of the Total Joint Replacement program’s patient- and family-centered collaborative care working group to examine the patient’s experience along the care pathway and to continuously identify problems and areas for improvement. The group selects baseline care measures, compares future performance against them, and uses a rapid-cycle quality improvement process to identify and improve processes and care: They evaluate, measure, evaluate, and try again. The working group includes representatives from all areas that influence patients’ experiences, including physicians, nurses, physical and occupational therapists, parking staff, office staff, dietary staff, pharmacists, social workers, home care staff, and others as needed. The hospital’s chief operating officer is part of the working group and attends the weekly meetings, as does the hospital president periodically. The participation of hospital administrative leadership gives weight to the working group and serves to remove barriers that may otherwise be difficult to overcome.<sup>2</sup> A sample of the projects working group members have implemented and evaluated includes direct patient care initiatives such as the following:

- Innovative protocols to control pain and nausea using preoperative pain expectation education and postoperative complimentary and music therapies
- Placing supplies and medications at the bedside to improve efficiencies in nursing care
- The use of video game fitness technology to enhance the patient’s physical therapy experience
- Streamlining the discharge process to reduce waiting times for patients and their families
- Focusing on noise reduction in and around the patient rooms
- Team collaboration of all involved staff to “huddle” and plan care strategies individualized for each patient’s needs
- Providing special touches to enhance the overall patient experience, such as access to

massage therapists during patients' stays and providing personalized water bottles to promote proper hydration during recovery

Other projects have included the following:

- Facility redesigns and way-finding signage upgrades
- Introduction of a concierge/bellhop program to direct patients
- Parking initiatives such as the use of valets and traffic controllers to help with congestion and provide better traffic flow around the hospital campus

Quality-of-care feedback tools have also been implemented and evaluated, including the following<sup>2</sup>:

- Patient shadowing on the day of surgery to record real-time feedback from patients and staff for process improvement
- Video monitoring of patient rooms to evaluate patient/staff encounters throughout the hospital stay
- Patient-driven satisfaction surveys and comment cards to measure satisfaction and encourage critical ideas for improvement
- Automated follow-up phone calls postoperatively to capture the entire spectrum of the patient experience
- Medical resource management using safety lessons learned from the aviation industry

The surgical staff is a team dedicated specifically to the Total Joint Replacement program, which, according to DiGioia, promotes standardization and reduces variability, downtime, and stress for the surgeon and operating room (OR) staff, while improving quality and productivity, leading to reproducible results. DiGioia notes that dedicated OR staff and reduced variability lead to enhanced skill development for the entire team.<sup>2</sup>

*“ We have learned that as health care organizations and providers attempt to improve the quality of health care that the systems of care delivery have been organized to promote the convenience of those who deliver care rather[,] those who receive it. As we move forward, any new innovations must result in cost effective value improvements from the patients' perspectives. ”*

—Anthony DiGioia III, M.D.<sup>2</sup>

### **The Patient and Family Experience**

“No surgery is ever pleasant,” according to former patient Mary Horsmon, “but the approach used by DiGioia and his staff is so incredible that they come close. They do everything possible to ensure that you and your family stay informed, encouraged, and supported throughout the care process.” She continues, “I have had three total replacements at age 61 and feel blessed to be able to do all the things I enjoy without pain.” Horsmon’s experience in the Total Joint Replacement program reflects the goals of the staff: to provide a positive experience and a successful outcome through ongoing education, communication, and collaboration and to deliver these services in a comfortable, relaxed setting to make patients and families feel at home.

Involving patients and families from the beginning of the care process and at every step thereafter is a hallmark of the program. When a patient is found to be a candidate for surgery and elects to proceed, the patient then schedules a visit for a preoperative evaluation with the Orthopaedic Program. This visit, which takes place approximately three weeks before surgery, is organized as one-stop testing and education to set the stage for hospitalization. At this visit, patients and their families meet other patients who will be having surgery at the same time, as well as the other families and staff members. A social worker meets with patients and families for presurgery discharge planning at this first visit, when they discuss discharge to home and develop a home care plan. At the same time, the office staff schedules a postoperative follow-up visit with the physician, which reduces patients' anxiety about how and when they will receive follow-up care. Then the patient chooses a coach—a family member or friend—who will help during the patient's postsurgical recovery phase and will provide a single point of contact and communication among health care providers, patients, and other family members. Patients receive a guide entitled "Patient's Pathway to Recovery," which familiarizes them with the steps of their journey and describes in detail everything the patient and his or her family will need to know, from the preoperative visit to home life after he or she leaves the hospital.<sup>2</sup>

On the day of surgery, the physician meets with the patient and the patient's coach in the holding area and marks the surgical site with their concurrence. Patients also meet the anesthesiologist at this time and learn more about special anesthesia techniques and options for managing postoperative pain.<sup>2</sup>

Rehabilitation begins the day of surgery as the staff encourages patients to dress themselves in regular clothes when they return to their hospital rooms. On the evening after surgery, physical and occupational therapists help patients get out of bed, and patients learn how to transfer from bed to chair and begin walking. The staff encourages patients to put their socks and shoes on by themselves, with no restrictions on their range of motion. Patients receive physical and occupational therapy twice a day throughout their hospital stay and participate in group therapy in the on-unit, state-of-the-art gym and fitness area, which the staff also encourages families to visit to provide additional support.<sup>2</sup>

The unit, with its large private rooms and special family areas, was designed to provide a comfortable, relaxed setting for patients and families to enjoy. Amenities include the following:

- Internet access
- Computer kiosk
- Full café-style room service that allows patients to order directly from a menu anytime of the day or night
- An in-room freezer for patients' ice packs, which enables patients to use the ice independently and begin to participate in their own care (which helps prepare them to care for themselves at home)
- Valet parking
- A concierge service to help reduce and eliminate delays at the hospital entrance
- A massage therapist for patients

The family room has rocking chairs and couches, a big-screen television, a massage chair, and a fully stocked refrigerator (see Figures 4-1 to 4-3 on pages 57–58).

Once a week the program sponsors “theme” parties, such as video games, holidays, luaus, and movie nights for patients and their families to enjoy.<sup>2</sup>

The Patient and Family Advisory Council, which includes patients who have had total joint replacement, was launched in June 2007. The council plays a prominent role in ensuring the delivery of high-quality care and enhances communication among patients, families, caregivers, and staff. The council publishes the quarterly newsletter *No Bones About It*, with regular feature articles that include a message from the director of the Orthopaedic Program, patient stories, and updates on the Total Joint Replacement program’s responses to suggestions and concerns raised by council members. Subjects of other articles have included what to expect at different points in the care and rehabilitation process, seasonal safety tips, patient and family activities, and more (see Figure 4-4 on page 59).

The clinical program works closely with the Innovation Center at Magee-Womens Hospital to develop the patient- and family-centered care “toolbox,” which contains tools providers can use to improve the care experiences of patients and families. One of these is the video observation tool

**FIGURE 4-1. MAGEE-WOMENS HOSPITAL LOUNGE**



*Magee-Womens Hospital offers a lounge where patients and their family members can get comfortable while awaiting treatment.*

*Source: Magee-Womens Hospital, Pittsburgh. Used with permission.*

**FIGURE 4-2. MAGEE-WOMENS HOSPITAL PATIENT ROOM**



*Magee-Womens Hospital strives to offer comfortable rooms to make patients feel as at home as possible.  
Source: Magee-Womens Hospital, Pittsburgh. Used with permission.*

**FIGURE 4-3. MAGEE-WOMENS HOSPITAL THERAPY ROOM**



*The therapy room offers patients options in therapeutic exercises in a comfortable atmosphere.  
Source: Magee-Womens Hospital, Pittsburgh. Used with permission.*

**FIGURE 4-4. MAGEE-WOMENS HOSPITAL PATIENT AND FAMILY ADVISORY COUNCIL NEWSLETTER**

# No Bones About It

THE PATIENT & FAMILY ADVISORY COUNCIL NEWSLETTER

Fall Issue 2008



## A Message from the Director

By Gigi Crowley, RN  
*Director, The Orthopaedic Program*

I am continually impressed with the hard work and dedication of the Orthopaedic Team members. This newsletter serves as a small example of the efforts put into each exceptional patient care experience.

In this issue, we have highlighted our Orthopaedic OR Team. This team of professionals is, by far, the most experienced, efficient, and hard working group in the region! Their days begin before most of us are even out of bed. They contribute endless hours and produce flawlessly under pressure. I could not be more proud of a group of individuals. They have made leadership through collaboration an easy task!! Please take the time to see their highlighted article on page 3.

Secondly, the annual Patient Reunion is approaching. This is a fun time for both patients and staff and we

## PFAC Projects Update

By Janice Harmon, RN

Exercise Booklets 

The Exercise Booklets have been completed and are now being given to patients when they schedule their surgery. This allows patients to begin their exercise regimen several months in advance of their surgical date.

Physical/Occupational Therapy Open House

On June 19<sup>th</sup> the first ever Physical/Occupational Therapy Open House was held at Magee-Women's

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are looking forward to another great event. If your surgery date falls between January 2004 and June 2008, we look forward to seeing you at Heinz Field. If your surgery date falls after June 30, 2008, please look forward to hearing from us next year.

Please enjoy our fall issue of the newsletter.



Hospital auditorium. Over 70 therapists from all over the region were in attendance to learn more about the Orthopaedic Program here at Magee along with the process and the rehab that the patients go through. In addition, they were treated to a tour of the Orthopaedic in-patient unit on 4100 and also the gym on 4100. All of the therapists were asked to bring a business card or pamphlet about the facility that they work at and from this information we are hoping to build a directory of out patient facilities for our patients to use as a resource when choosing their therapist.

*The Patient and Family Advisory Council newsletter, No Bones About It, publishes regular articles to keep patients in the loop on what is going on in the Total Joint Replacement program.*

*Source: Magee-Womens Hospital, Pittsburgh. Used with permission.*

known as “Reality TV for Caregivers.” Video cameras placed unobtrusively in the patient’s room allow observers, who can view the tapes shortly after they are recorded, to see who enters the room and to assess various aspects of care, including what staff members do, how they do it, and how much time they spend with the patient. Viewing the tapes helps the staff determine whether there is room for improvement in any aspect of care. Magee-Womens Hospital and other hospitals in the University of Pittsburgh Medical Center system also use this video observation system in the OR to examine processes and flow to improve safety, promote team development, and increase efficiency.

The Innovation Center is now developing rehabilitation gaming systems for use during post-operative care, including the use of computer simulation feedback provided during routine rehabilitation exercises to promote optimal range of motion and functional achievements.

## Results

Does all this sound too good to be true, and furthermore, does it work? The results, based on a review of 618 patients who underwent total hip or knee replacement in the Total Joint Replacement program in 2006, speak for themselves<sup>3</sup>:

- **High satisfaction:** Survey results indicated a mean overall patient satisfaction score of 91.4 while also ranking the program nationally for the most recently published Hospital Consumer Assessment of Healthcare Providers and Systems data on overall hospital rating.
- **High functional status:** Ninety-three percent of patients could walk without handheld assistance at the time of discharge. Pain had no effect on the ability of 99% of patients to perform postsurgical physical therapy, including therapy starting the same day as surgery.
- **High compliance with antibiotic guidelines:** Ninety-eight percent of patients received antibiotics within the 1-hour window before surgery; 93% of patients who had hip replacement and 94% of those who had knee replacement had their antibiotics discontinued within 24 hours after surgery. In addition, the appropriate antibiotic was selected for 99% of patients receiving total hip replacement and for 98% of those receiving total knee replacement.
- **Low infection rate:** The overall infection rate for all patients in the program was 0.3%, compared with national rates of 0.86% to 2.52% for total knee replacement, and 0.88% to 2.26% for total hip replacement (average rates vary depending on the risk profile of the patient).
- **Reduced length of stay:** Average length of stay was 2.8 days for total knee replacement, below the national average of 3.9 days, and 2.7 days for total hip replacement, also below the national average of 5.0 days.
- **Well-above-average rates of discharge to home:** Of patients undergoing total joint replacement, 91% were discharged directly to home, compared with national averages of 29% for patients undergoing total knee replacement and 23% for patients undergoing total hip replacement.