

# OrthoTimes

Exceptional Care. Exceptional Service

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#### **Going Above and Beyond for Patients**

Jaime Crespo

For Children's Hospital Boston's Department of Orthopedic Surgery, customer service has long served as a key component to delivering exceptional care. The department conducts patient satisfaction surveys, encourages outstanding customer service through its Gold Star program and even developed a concierge service — all in an effort to improve the overall patient experience.

After all, as one of the first comprehensive, interdisciplinary programs for the treatment of children with orthopedic problems and ranked #1 in Orthopedics by U.S. News Media Group's 2010 edition of America's Best Children's Hospitals, it is also one of the busiest in the nation. Its bustling clinic on Fegan 2, can serve up to as many as 300 patients a day. As a result of this overwhelming demand, and the fact that the department never turns away individuals in need of urgent care, patients can sometimes experience extended wait times.

Now, in an effort to bring customer service to the next level, orthopedics became the first department in Children's to implement a customer service coordinator position, hiring **Krystal Spencer**, a former ambulatory service representative, to assume this role. As the new customer service coordinator, Spencer serves as a friendly point of contact for busy families and lends a helping hand to ensure that their visit is as pleasant as possible.

"Families are bringing children here who are sick and who are often in pain, so they deserve not only excellent clinical care, but also excellent customer service," says **Susanne Ellard, department administrator**. "There is no reason why the service shouldn't be at the same standard."

Patient satisfaction surveys conducted by orthopedics revealed the need to improve communication to patients regarding wait times. So with a warm smile, Spencer now regularly announces delays and lets parents know how long their wait will be. If it will take extra long to see them, she offers to take their cell phone number and call them when the doctor is available. This allows families a chance to grab a bite to eat or to take a walk to pass the time more comfortably.

"Even saying hi to a patient who has been waiting for a long time and offering any help makes a difference," Spencer says. "Sometimes they say no, but they always thank me for asking. They know they have someone to talk to."

A crying child is often her cry to help a girl or boy get through a difficult moment. Spencer regularly scans the waiting room in search



Orthopedic concierge Krystal Spencer with young patient.

for children who are nervous or in pain, offering an array of colorful and fun stickers, toy cars, bouncy balls, squeeze toys, and bracelets. She can be found walking the floors of the clinic, knocking on doors and poking in to greet and offer magazines to parents and toys to children if she knows they have been waiting for a long time. She recently escorted a concerned family to Dana Farber's Jimmy Fund Clinic, offering help along the way.

"A mom recently came in and was having a difficult time with one of her three children, which included a newborn. Krystal offered to help and spent an hour playing with the child," says **William Frederick, practice administrator**. "This helped both the mother and staff out tremendously by turning a difficult situation into a pleasant one. It's nice for someone to approach families and show what we care."

According to Ellard, the position has also helped improve communication and workflow among employees. "With this new position, we have been able to improve our communication with each other and our patients and families," says Ellard. "Now, there is communication from the midlevel providers to the nurses to the doctors during clinic which is being taken back up to the front desk so our ambulatory service representatives are aware of and can communicate delays to the families. Ultimately, this helps us to provide the best care possible to our patients."

## Inside this issue

Going Above and Beyond For Patients
Tibial Shaft Fractures in Children
Pursuing Perfection
Communicating Delays

Sports Medicine Research Mike's Story Kid's Corner General Announcements

#### Tibial Shaft Fractures in Children — Risks for Compartment Syndrome

Benjamin Shore, MD, FRCSC

Tibial shaft fractures (TSF) are the third most common long bone fracture in children, accounting for 15% of all long bone fractures. The tibia is the larger of the two long bones found between the knee and ankle. TSF can occur as a result of a variety of different injury mechanisms from low-energy accidents (twisting mechanism), sports-related trauma or high-energy motor vehicle accidents (MVA). The majority of tibia fractures in children heal rapidly with few complications.

Compartment syndrome is a condition which can occur when swelling in a confined space becomes too great, causing compression of nerves and blood vessels. Thick layers of tissue, called fascia, separate different groups of muscles into discrete compartments within the arms and legs. Fascia covers these compartments much like insulation covering electrical wires. In the tibia there are three large compartments each containing muscles, nerves and blood vessels. The diagnosis of compartment syndrome can be made by clinical examination or through measurement of the pressures within the affected compartments. Once the diagnosis of compartment syndrome is made, the treatment is surgical release of the tight fascia through long incisions, which decreases the pressure within.

In adults, the risk of compartment syndrome after TSF ranges from 1-9%. However, in children the risk of compartment syndrome after tibial shaft fractures is not well known. Only a handful of studies have reported the risk of compartment syndrome and the estimated rate is approximately 5%. Delayed diagnosis of compartment syndrome is associated with poor patient outcomes, increased reoperation rates and delayed healing.

We decided to design a retrospectively study to try and identify what the true risk of compartment syndrome is after TSF in children.

In addition, we tried to identify what are some of the important risk factors for developing compartment syndrome after TSF. We found that over a five-year period at Children's from 2002 to 2007 there were 216 TSF, which occurred in 212 children. The average age of the study group was 13.6 years. There were 160 boys and 56 girls who sustained TSF. The majority of fractures occurred as a result of a sporting injury (56%, 120/216), while 26% (57/216) occurred as a result of a MVA.

There were 25 cases of compartment syndrome during the study period, for an incidence of 11.6% of developing compartment syndrome after TSF. This rate of compartment syndrome is two times greater than the previously reported rate.

The second portion of the study was designed to identify predictors of developing compartment syndrome. We found two very strong predictors (1) age and (2) mechanism of injury. We grouped mechanism of injury into low-energy (sports and falls) and high-energy (motor vehicle accident). We found that in children older than 14 years, with a TSF from an MVA, the risk of developing compartment syndrome increased from 11.6% to 55%. This means that 1 in every 2 children older than 14 years involved in an MVA with a tibial shaft fracture could develop compartment syndrome after their injury.

This study provides valuable information for doctors treating children suffering from lower leg fractures. We now understand that there are certain groups of children who are more at risk for developing compartment syndrome than others. With this information, we feel that we are better equipped to treat children with tibial shaft fractures.

I would like to thank Drs. Travis Matheny, Michael Glotzbecker, David Zurakowski and Daniel Hedequist for their help with this project.

#### **Pursuing Perfection**

Marie Harris

Delivering care that is safe and of high quality is at the heart of our vision at Children's. How do we know that we are delivering the best care possible? We know by measuring and tracking patient health outcomes. The Program for Patient Safety and Quality (PPSQ) at Children's has set a strategic goal for hospital departments to have clinical outcome measures for all conditions for which care is offered by 2015.

Orthopedic surgeon, **Dr. James Kasser**, is Surgeon-in-Chief for the Hospital and is part of the senior leadership team that oversees PPSQ. He has helped establish this vision for quality and champions the movement to collect data on health outcomes. In order to create health outcome measures, the Department of Orthopedic Surgery has assembled a team known as the Quality Triad. Orthopedic Clinical Chief, **Dr. Peter Waters**, oversees

the triad, which consists of a Physician Champion — **Dr. Susan Mahan**, a Nurse Champion — **Corrie Bledsoe**, and Quality Improvement Consultant — **Marie Harris**.

The Orthopedic Quality Triad is responsible for developing measurement plans and tools to collect data on clinical outcomes. This data will be tracked and used to compare our patient outcomes to those of other pediatric

orthopedic programs across the country. The Department of Orthopedic Surgery strongly believes that sharing patient outcome data with other orthopedic providers is critical for establishing best practices and advancing the quality of care provided to our patients. As this initiative progresses, we will provide you with periodic updates on our progress. Our goal is to find the most effective ways to ensure children are getting the best care possible.

### **Communicating Appointment Delays**

Krystal Spencer

The Exceptional Care Exceptional Service program at Children's strives to enhance the overall patient experience. We have made efforts to provide service that exceeds patient expectations and to make every interaction a positive one. The department of Orthopedic Surgery is focused on communicating to you any appointment delays that may occur during your visit. A delay in your appointment may occur for a variety of reasons, including appointment volume, urgent care, and diagnostic testing. With more than 85,000 visits per year at our Boston and satellite locations; Orthopaedics has one of the highest patient volumes at Children's.

Along with our regularly scheduled appointments there are a number of urgent visits that arise everyday which may contribute to a delay in your appointment. In addition to these factors, your visit to the with us may not be your only appointment of the day. You may need to visits other areas in the hospital including radiology, brace shop, cast room or occupation & physical therapy. All of these factors can contribute to a delay in your appointment.

We recognize that your time is valuable and delays in your appointment can be frustrating. Our Customer Service Team is always looking at ways to make your appointment run as smoothly as possible. Through our annual Patient Satisfaction Survey your feedback helped us realize one area we need to focus on is communicating any delay that may affect your appointment. At the time of your arrival; the front desk staff will inform you if your provider is running on schedule. We encourage you to approach any of our front desk staff or Orthopedic Concierge to inquire about the status of your appointment at anytime. We value your thoughts and encourage your feedback; we want to make your time at Children's as positive as possible.

#### **Sports Medicine Research**

Valerie Ugrinow

The Division of Sports Medicine provides care for patients of all ages with sport-related orthopedic injuries. As well as treating current injuries, Sports Medicine performs pre-participation evaluations and educates on injury-prevention strategies. Our team treats a wide range of overuse and trauma injuries. We hold a specialized sports concussion clinic as well as a dance medicine program. As a result, our research is diversified amongst all of these areas. One of our research areas aims to explore the relationship between injuries and the "relative-age effect." Are children born in the middle of the year (June-September) more likely to be injured? Are some athletes born during certain months more or less likely to suffer sports injuries; either more, because of their size, or less, because they simply are not selected for competitive teams, so they do not have the opportunity to be injured? From our data, which spans

ten years, we also plan to explore relationships between Body Mass Index (BMI), flexibility and injuries sustained.

We are also currently working with Dance/USA Taskforce to collect health screens used by professional dance companies around the United States. The overall purpose of this research is to provide dancers with information about their health in order to educate them about wellness and safety; and secondly to, evaluate the effectiveness of a screening tool in identifying injuries and predicting risk for injury or illness over time.

Concussion is another a major area of our research. **Dr. William P. Meehan III,** Director of the Sports Concussion Clinic, is currently analyzing data to describe the mechanism, symptom duration, assessment, and management of sport-related concussions. Dr. Meehan is applying for funding to further research the treatment of sport-related mild-traumatic brain injuries. The above-mentioned studies have the potential to impact the way sports are played as well as the prevention and treatment of sport-related injuries.

A concussion is diagnosed when, after a head injury, an individual experiences symptoms such as a loss of consciousness, amnesia (forgetting), headache, dizziness, nausea, vomiting, difficulty concentrating, slowed or frequently interrupted speech, or other symptoms. Most people will fully recover from a sport-related concussion within 10 days. However, recovery times vary. Some people will take months before they recover completely.

#### Mike's Story

Belinda Messersmith

You don't necessarily plan on being a TV star when going in for surgery, but that was Mike's story...

After a year or so of planning and consultations with **Dr. Lyle Micheli** in the Division of Sports Medicine, the raw but sunny
December day arrived when we drove to Boston for Mike to undergo
knee surgery for a torn ACL. As always, we were made extremely comfortable by the nursing staff and Dr. Micheli, and Mike's surgery went
smoothly and well. We were spending the night at the hospital and
planning on coming home after physical therapy the following day.

That day, however, began a little ominously with a phone call from my husband at our home on the Cape, to tell me that it had started snowing, and that all reports showed it could be a bad storm. He urged me to get home as early as I could. With that news in mind, we began all the necessary 'exit' procedures, making sure that Mike was in excellent shape, comfortable and had everything he needed to continue his home care. Children's Hospital does not economize on the very best of care, however, by the time Mike got his discharge papers, the first snowflakes were falling in Boston. By the time I got Mike comfortable in the car for our two-hour trip home, it was snowing heavily and the 'powers that be' in Boston decided it was a good idea to call a 'state of emergency' at 1 PM and basically 'dismiss' all the city workers. What a disaster.

The sheer volume of traffic along with the snow completely shut down the city. It had taken us two hours to get to Mass Ave and we were totally stuck in traffic. As the minutes continued to pass, Mike's comfort and pain meds were diminishing quickly and I knew that I had to get him to a bed and the special knee machine that was critical to his recovery.

I called the hospital to tell them of our predicament and ask what I should do. **Tammy Hill** said she would talk to Dr. Micheli and get right back to me. It was decided that we had to abandon our trip home and get Mike back to the hospital; except at that point they had no room at the hospital that evening, so they were going to arrange for us to stay at the local hotel and they would arrange for nursing care.

Directions were given and we were expected shortly to be there. Not the case. Traffic was horrendous and after another two hours I had barely managed to get half way back to the hospital. To say that I was



Mike Messersmith. Photo courtesy of Belinda Messersmith

starting to panic would be an understatement. The staff in the Division of Sports Medicine were incredible though. They were constantly in touch with me, checking on Mike's condition and helping me try to navigate my way back. After another hour or so, it was decided that Mike's wellbeing was becoming critical and we talked about the possibility of an ambulance to get us back to the hospital. This, however, was again impossible with the massive traffic jam in the city.

Through the blizzard I managed to identify my location and the incredible staff decided that if we couldn't get to them, they would come to us! I was told to inch my way up a certain street which was now about six blocks from the hospital and to keep a look out. A short time later, what an incredible sight – four administrative staff members from Sports Medicine with a wheelchair came into view. Coats flapping, piles of blankets and the struggle to get the wheelchair through the snow. What to me was even more astonishing, but incredibly comforting was the sight of Dr. Lyle Micheli himself right behind them.

My son was lifted from the car and wrapped in blankets, and was then carried by this amazing surgeon and his staff all the way back to the hospital. Words cannot do justice to the relief I felt as a mother knowing that after six hours or so being stuck, my son was once again

Continued on back page.

- 3 -

## KID'S CORNER

#### **Bones, Dinosaurs and Spring Flowers**

Bones Tryannosaurus
Fibula Carnivores
Humerus Herbivores
Radius Omnivores
Tibia Chrysanthemum

Ulna Daisy
Fossil Petunia
Velociraptor Poppy
Brachiosaurus Sunflower

Stegosaurus Triceratops

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Surgery Foundation
300 Longwood Avenue, Fegan II
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Tulip



Phone: 617.355.6021
option #2 speak with a nurse
option #3 schedule/cancel/confirm
an appointment
option #4 speak with a surgical schedule



childrenshospital.org/ortho

#### Continued from page 3.

being taken care of by this dedicated, compassionate bunch. They got Mike back to the hospital, made sure he was safe and comfortable and Dr. Micheli returned in the snow to guide me and my car to a safe parking lot. Unbelievable. Dr. Micheli then escorted me back to my son and personally arranged a special dinner for Mike (who was now grinning from ear to ear!), set him up with his knee machine, and a special show on the television. After making sure that Mike was once again comfortable and pain free, Dr. Micheli then made a point to make sure that I and his dedicated 'snow rescue' staff were comfortable. An incredible team, led by an incredible doctor.

There were some pretty angry motorists that night and many tales on the TV reporting frustration. My husband contacted Fox News to tell them about our amazing rescue - a positive story amidst the anger; and the next morning, Mike, Dr. Micheli and his amazing staff members all became TV stars for their 15 minutes of fame. Mike and I will never forget the totally unselfish acts that snowy eve-

ning of these devoted, caring human beings. Thank you, once again to all.

#### **General Announcements**

Brian Snyder, MD, PhD, director of the Cerebral Palsy Program, was recently honored with the A. Clifford Barger Excellence in Mentoring Award. Dr. Snyder is one of three Children's faculty members being honored by Harvard Medical School with their 2010-2011 Excellence in Mentoring Awards.

Mininder Kocher, MD and Michael Millis, MD have recently published a text-book, entitled *Operative Techniques: Pediatric Orthopaedic Surgery* by Elsevier Saunders. This textbook provides detailed surgical techniques for 60 pediatric orthopaedic operations.

NFL Charities, the charitable foundation of the NFL owners, has awarded Children's a grant to support sports-related medical research on concussions, specifically examining how genetics may influence a person's health

after repeated concussions. William Meehan, MD, director of the Sports Concussion Clinic, is excited to receive the grant, which will help his program further research and treat these injuries.

Mininder Kocher, MD, MPH, associate director of the Division of Sports Medicine, and director of the Clinical Effectiveness Research Center, was elected to the Board of Directors of the American Academy of Orthopaedic Surgeons (AAOS) at its 2011 Annual Meeting in San Diego.

Peter V. Hauschka, PhD, has been selected to serve in the new position of Director of Scientific Resources for Children's Hospital Boston. In this role, Dr. Hauschka will work with Research Administration and the Research Strategy Committee to oversee existing Research Core Labs at Children's, and to establish new Cores as needed. In addition he will facilitate the implementation of new Research Information Systems and provide an interface between the scientific community and Research Computing.