

Haiti Update POSNA/COUR Committee. Friday Jan 29, 2010

COUR Committee is asking that surgeons who have completed a volunteer trip send us a very brief 1-2 page summary of their activities that we can post on the POSNA website, COUR Section, so others can learn from your experience as they prepare to volunteer. We suggest the following format:

- 1) Brief summary of what you did (who, what, when and where)
- 2) Lessons learned- what worked and what did not work
- 3) What to do differently for future trip
- 4) Advice and recommendations.
- 5) One pearl or trick of the trade. We may then ask you for more details.
- 6) A relevant image from the trip attached to the Word document.

1. POSNA Member Activity in Haiti

During this past week the following POSNA members have provided us an update of their volunteer work.

Michael Vitale. Mgv16@yahoo.com

1/22/10 "I'm on the border in Haiti w nurse anesthetists from Kansas. More leave Sunday. I'm desperate for a sag saw. Any way you can procure one before sun am?"

Jan 24, 2010. "Used all my fixators. Going to a new ortho rehab camp set up by Harvard on Haitian side of border now with team. There are 500 hastily placed fixators and wounds to manage. Its evolving fast, so don't really know. I have sporadic email only. Are CHOP teams coming? I have learned a lot and would be happy to talk but need to set up call via UN phones. I'm fine." Sent from my Verizon Wireless BlackBerry.

JH Beaty. jbeaty@campbellclinic.com.

1/23/10 We have a group going from Campbell Clinic and Le Bonheur Children's Hospital Derek Kelly from our program will be the first pediatric orthopaedic surgeon. We have many of our staff that have volunteered and are working thru the process to follow Derek.

Brian Kakala. hakala@mac.com. I will be leaving 1/23/10, for Port au Prince to assist with pediatric orthopaedic relief work with Community Coalition for Haiti. I may be reachable by email or Iridium phone 8816.5141.2104. Thank you very much for the COUR updates. Information from fellow POSNA members has been very helpful. Sincerely, Brian Hakala.

Kosmas J. Kayes. Peyton Manning Children's Hospital. Indianapolis. kjkayes@indy.rr.com.

1/24/10 "We are planning on leaving for Haiti Thursday morning Jan 28 from Florida and staying a week. We think we will be in Petite Riviere de L'Artibonite or Visitation hospital. We are not sure yet."

Hank Chambers. Hchambe1@san.rr.com.

1/25/10 "I'm headed for the Sacre Coeur Hospital in Milot to relieve the crew there on Friday. I'm going with Hud Berry and a team from the University of Florida in Jacksonville. I'll let you know how it's going."

Karl Rathjen Karl.Rathjen@tsrh.org.

1/25/10. "When we left for Haiti last week there was some discussion of AAOS helping identify US Hospitals willing to accept patients. I'm currently at the HCH hospital that was established as a "beachhead" by Scott Nelson 2 days after the quake. Scott has brought a tremendous amount of equipment from DR which facilitated the treatment of a large number of patients (20-30 femur fractures w/ Kutschner and Sign nails last weekend). Although Scott has developed a "first world" Ortho OR we have limited medical support. There are 6-12 elderly patients with pelvic /acetabular or multiple extremity injuries that we feel are at high risk for post op complications (PE, blood loss, cardiac, etc) that we do not have personnel or equipment (Intra-op blood transfusion, Greenfields, etc) to support. (We have had one peri-operative death and are aware of another at a different institution). Obviously best chances for these patients survival is at a "modern / western facility". Any chance you could pass this up (and down) the line ? We have excellent communication and logistical support - if we can identify hospitals willing to accept these patients we can get to work on transport. (May need high level AAOS involvement to resolve immigration / family / return issues). Thanks in advance." Karl will be there until Jan 29.

Frances Farley Fafarley@med.umich.edu

"30 medical people from the University of Michigan are going to a Navy built hospital in Haiti related to the Navy Ship 'Comfort'. The plan is for the temporary hospital to recover and do further surgery on the patients who have been operated on the ship. I am concerned about safety as the reports coming out of Haiti are so dire but I figure that the Navy should have good security. I will give you feedback when I return. Take care, Fran"

David S Feldman. David.feldman@nyumc.org 212-533-5310

"Been in port au prince general hospital for the past week. Largest hospital in Haiti. Seems this hospital was never really functioning orthopedically even before the quake. Orthopedics and ortho plastics is by far the biggest surgical problems. Hundreds to thousands of under treated or non treated open fractures. Soft tissue injuries post amputation and crush also not treated. There is little to no infrastructure. This will require a sustained presence in Haiti by US orthopedic surgeons to treat these difficult management problems as well as train Haitian surgeons and paraprofessionals... I think there are more than enough quality locations in Haiti to enable the children to be treated here. There is already resentment by the Haitians regarding the number of amputations performed early on and the separation of families when patients went on the Comfort. (This is being addressed). Through many relief organizations, volunteers and industry, if there is coordination, the children should be able to receive the care they need in most circumstances. Hope that makes sense. It is late. Dave"

2. Other Reported Needs, Opportunities and Resources.

I take this opportunity to tell you that I received a message from Dr Ovile in PAP who is an Orthopaedic surgeon and is short of external fixators. Can you help? His e-mail is:

edouville@yahoo.com Best wishes F.Fassier

1/24/10. I would like to make you aware that Atlantic Health System in Morristown, NJ is committed to offering humanitarian support for the devastation that has occurred in Haiti. The Pediatric Orthopedists, Pediatric Anesthesiologists, supporting hospital staff and administration stands ready to accept children from Haiti who require our services. I have also secured the support of the large local Haitian community to act as hosts for these children. We stand ready to act IMMEDIATELY. Our world's most precious resource is our children and we stand ready to protect and heal them. I can be reached at 973-214-2504 cell 973-538-9426 office private line. Please ask for Jennifer.
Mark A. Rieger, MD Member, AAOS, POSNA

Sent: Fri, Jan 22, 2010 3:28 pm Subject: Welcome Haitian Patients. "I have a commitment from CHOC Children's Hospital/ St. Joseph Hospital in Orange, California to accept up to 10 patients for surgery and inpatient care from Haiti. We are a specialty Children's Hospital and want complex pediatric orthopaedic patients. We will accept up to 3 inpatients at a time, and total patients not to exceed 10. I am sure we can provide housing for family members. We are anxious to participate in the care of these patients! Please let me know how we can facilitate this program. Thank you very much!" Samuel Rosenfeld, MD
osseousmd@aol.com

Sent: Mon Jan 25 17:30:33 2010
Subject: RE: Haiti Update from the POSNA COUR Committee
"In deployment settings we use what is referred to as the military ex fix kit. It has several 5mm pins, 2 five-hole clamps, a few bars, and a hand drill. It is the Hoffman II. I will check with the team on the USNS Comfort in Haiti regarding their ex fix supplies and the availability to extend those and get back to you." From: Eric D. Shirley DMS99
Eric.D.Shirley.DMS99@Alum.Dartmouth.ORG 212-533-5310

3. More Detailed Interim Reports from POSNA Members

1/24/10 Report from Ed Fink efink@cnmc.org, who worked at Sacre Coeur Hospital in Milot very early after the earthquake.

Greetings to all. From our little compound here, internet access was out for two days. So, a compressed accounting of the experiences down here. I will fast forward to Friday morning. After five days of intense work under the most extreme circumstances imaginable, and after the arrival of reinforcements, I treated myself to a morning off. High on a nearby mountain, seven miles from the city and 3000 feet altitude, sits a citadel built some 300 years. I decided to hike up to it, climbing along a steep road of switchbacks and 7% gradients, passing through remote villages of thatched huts modest farming. Those who know me will readily surmise my preference for a bicycle. Two hours later I arrived at the fortress and standing on its walls, surveyed a vast expanse of undulating mountains, rich blue skies, and an utter tranquility. How eerie, I thought, that something so beautiful could unleash a force so devastating and destructive. The quick descent was a somber return to reality. Fortunately, with the great outpouring of response, our numbers and supplies were multiplying. While we were only three orthopedic surgeons and one anesthesiologist for the first frenetic four days, now we

counted six and three. Yet, unfortunately, the numbers of wounded Haitians that were brought to our hospital continued to arrive with increasing frequency. We were receiving as many as six helicopter flights per day, bringing up to six individuals per flight. And more. Yet now, and with increasing capacity and in the ensuing days with the arrival of emergency room doctors and nurses, we had the ability to start IV's, administer morphine and antibiotics, and make critical assessments within minutes of their arrival. We created a makeshift emergency triage center in the schoolyard's basketball court across the street, a secondary hospital to accommodate the post-operative patients in another school, and turned the main hospital into a surgical center.

Yet, the devastating injuries and medical problems manifesting themselves were almost outpacing our efforts. While the beautiful faces and ages of the incoming Haitians were all so individual, their injuries were variations on the theme of debilitating crush injuries suffered up to eight days before. We were seeing incredible numbers of pelvic fractures, open and closed femur and tibial fractures, ankle, foot, and hand crush injuries. Those fractures that had associated skin opening were almost all infected and draining pus. Increasingly we were detecting devastating compartment syndromes that often accompany crush injuries, wherein there is massive swelling in the arms or legs, and the blood flow is impeded, leading to death of the muscles, nerves and eventually would result in amputations. Cases of acute tetanus, rhabdomyelitis with renal failure, all very uncommon, were diagnosed. Yet, with the increased capacity for surgical and medical management, treatment was provided more rapidly.

To have an amputation in any culture or country creates a significant disability. In a resource poor environment of a developing country, an amputated extremity is tantamount to a life sentence of hardship and poverty, aside from the social stigmata. People fear only death to having to undergo an amputation. I four days ago I saw a beautiful boy of 11 years old who sustained an open tibia fracture in the quake and was brought to us. The radiograph acquired showed not only the fracture, in which the bone ends were protruding through the skin, yet the pre-existence of infection of the tibia, which he had for several years previously. Yet his sensation and neuro exam of the foot was normal. Several doctors on the team wanted to amputate. I thought we had an opportunity to save his leg. Since coming here, I have been in touch with the doctors from the Pediatric Orthopaedic Society of North America, and they had informed me that many hospitals in the US were willing to accept kids for comprehensive treatment that was not available in Haiti for free. This child would require removal of almost all of his tibia, the main bone in the lower leg, with treatment for up to one year to allow it to regrow. I fervently felt that we should do everything to save this boy's leg. I performed the surgery two days ago, will perform another operation this morning to wash out the wound again, and along with many individuals in the US, are working diligently to get him to the US. If anyone has any government connections, especially with the state dept, or access to public media and attention to help facilitate his transfer, please let me know, as this is the main area of delay.

Well, off to my last day of work down here. I am planning to return home tomorrow. Yet actually, I think that I have a seat on one of the small planes shuttling people and supplies to and from bases in Florida. I do not know where I will return in Florida, or even how or when I

will arrive home in DC. Yet it hardly matters, for what I will be leaving behind has made an indelible impact on my life. And I hope that I may have left some small part of me here in Haiti. Edward

PS-- After many days of rooster crowing and early awakenings, I decided to talk with the roosters. You cannot imagine how difficult it is to arrange a talk with the rooster elders.

When finally meeting face to face, I suggested that I desired a dialogue of open cross cultural communication. They demanded that I remove the scalpels from my back pocket. I asked that they reconsider their crepuscular activities and conform to western standards of proper circadian rhythms. They chastised me for sending out insensitive emails and demanded that I delete the responses that I have received, like the one from friends in Montreal suggestion rooster coq au vin, one suggesting ways to prepare the rooster kosher, and a recipe for rooster gumbo. We reached an impasse. The dialogue continues....

4. End of Trip Reports

A. Elhanan Bar-On Trip Report. Jan 28, 2010

I have just landed back from Haiti where I headed the Orthopedic department in the Israeli Defense Forces Field Hospital.

We deployed on Thursday 1.14, landed in Port au Prince on Friday evening and started seeing patients on Saturday 10:00. Although the hospital contained most elements including internal medicine, pediatrics, ObGyn, ICU, NICU, X ray, Lab, it basically became an orthopedic hospital in the beginning with all other staff supporting the orthopedic activity. We operated in two theatres and in addition had another anesthetist giving sedations for casts and debridements. On Tuesday we were joined by a mobile surgical unit of the Colombian armed forces who set up their unit in our camp increasing our surgical capabilities by another two beds.

When compared to the activity of the field hospital we set up in India after the Gujarat earthquake 9 years ago, the main differences – besides the huge quantity here, were a. the absence of government to coordinate efforts and b. the absence of a referral center for those patients who are beyond the capabilities of a field hospital such as ours.

Both these issues are now gradually being solved, with some order being put into the chaos, and the establishment / reestablishment of several more advanced "real" hospitals as well as the USS Comfort to which we evacuated many of our patients for continued care. We disbanded the hospital yesterday and got back home today.

Although it is early for me to start summarizing – I think that although we are in the second phase – wound care and coverage, redoing the cases stabilized in a Damage Control situation, and secondary amputation for those limbs who didn't make it despite our efforts at limb salvage. However, we will be very soon entering the next phase – that of rehabilitation. This tends to be the less dramatic one with less press coverage and of course less money but I don't know how many prosthetists and physiotherapists there are in the whole of Haiti for the

thousands of amputees who will remain after the disaster. I feel that this is an area where POSNA will be able to be very effective. Elhanan Bar-On

B. Ed Fink End of Trip Report. Jan 28 2010

ORTHOPAEDIC SURGERY AND THE HAITI RELIEF EFFORTS

Two weeks have now slowly passed since the earthquake devastated Haiti and its fragile infrastructure, leaving in its wake over 150,000 dead, hundreds of thousands homeless, and tens of thousands of survivors with significant injuries, the overwhelming majority of a musculoskeletal nature. Assessment and treatment of the injured can be divided into three phases with overlapping boundaries:

Phase 1—Acute injuries and access to treatment (first three weeks) Individuals with acute fractures, open fractures, mangled and crushed extremities, identified and treatment provided at local facilities or airlifted out- amputations performed immediately for significant crush injuries; most open fractures became infected requiring amputations; damage control orthopaedics with placement of external fixators to stabilize fractures, intraoperative fluoro usually not available; most closed fractures of the upper extremity which would usually require ORIF were casted and patients discharged, asked to return in two weeks.

Phase 2—Repeat washouts, revision amputations, and definitive fracture management (weeks three to eight). Individuals with large soft tissue loss and infections/open fractures will require multiple debridements, dressing changes, and skin loss management, often under conscious sedation- exchanging external fixation for definitive stabilization and treatment of closed fractures- anticipated that many patients will arrive 'late' for fracture management

Phase 3—Rehabilitation and disability management (immediate to months and years) Planning for and implementing this phase is critical, and needs to begin now, if not earlier. Thousands of individuals with bad crush injuries with swollen and painful extremities, with or without fractures, some with untreated compartment syndromes, many with nerve injuries, particularly radial nerve palsies- require intense and early PT and OT to prevent joint stiffness, persistent swelling, and pain syndromes.

THE HAITIAN MEDICAL INFRASTRUCTURE

Hard working group of doctors, nurses, and staff operating with little technology. I was told that Haiti has no Haitian orthopaedic surgeon due to the prohibitive costs of equipment and implants, the latter which the patient must purchase before any procedure. Anticipated need for foreign assistance for many years.

SUGGESTIONS FOR ORTHOPAEDIC SURGEONS

--Pack lightly, and carry many supplies- you will most likely spend most of your time in scrubs.

--Malaria is present in Haiti. Prophylaxis is recommended. Chloroquine 500mg started one to two weeks prior to entry, once per week while in country, and once per week for four weeks upon return.

--Supplies to bring: external fixators, pulse lavage, xeroform or adaptic dressings, lovenox-autoclaves if your suitcase is big!

--Team mates—bring PTs and OTs.

--Review flap rotation procedures and skin grafting, as there will be many defects to cover.

--Keep notes-- on innovative techniques used when materials etc in short supply, how to improve disaster relief efforts, and how to improve communication.

--Be humble, be sensitive, and be caring.

Ed Fink