DEPARTMENT OF DEFENSE BLOGGERS ROUNDTABLE WITH DR. BRENDAN PATTERSON, CHIEF OF ORTHOPEDIC TRAUMA SURGERY AT METRO HEALTH MEDICAL CENTER IN CLEVELAND, OHIO, VIA TELECONFERENCE TIME: 3:01 P.M. EST DATE: TUESDAY, DECEMBER 2, 2008



(Note: Please refer to www.dod.mil for more information.)

LT. COL. WILLY HARRIS: What we will do, basically, today -- the purpose of today's Blogger Roundtable is to basically talk about some of the innovations that the military pretty much is doing to help military personnel to be able to recuperate and reintegrate once they have been treated for medical injuries.

What I'm going to do is, I'm going to -- if you don't mind, I'm going to take this opportunity to let Dr. Brendan Patterson do a brief introduction, and after his introduction he'll take questions.

Dr. Patterson?

DR. PATTERSON: Thank you, Colonel Harris. Well, this is an unusual format for me. I'm an orthopedic surgeon. I was trained in New York City at Hospital for Special Surgery; spent a year in Seattle, Washington, at Harborview Medical Center; and then have been an attending orthopedic trauma surgeon at Metro Health in Cleveland for 16 years.

This program is a collaborative effort between the American Academy of Orthopedic Surgeons, the Orthopedic Trauma Association and the Department of Defense, largely through the Army, to have civilian orthopedic trauma surgeons work side by side with military surgeons at Landstuhl Base in Germany to provide intermediate-level care alongside the military surgeons.

The military has really done an extraordinary job in coordinating a program that allows some of the expertise from the civilian sector in the United States to be used for the care of our injured soldiers and also provide the civilian surgeons with an experience that is relevant to their practice once they return to the U.S. I think the Department of Defense, based upon the experience of the other trauma surgeons who have been there, are really doing the optimal care process, through the battlefield to the care at intermediate levels, such as Landstuhl, and Walter Reed.

And they're making substantial investments in identifying new technologies and new treatments that will hasten the healing and the return to a productive capacity once these injured soldiers come back to the United States.

I'm certainly honored to be one of the few who go to Germany. I know this is a very popular program among the orthopedic surgeons in the United States, and I'm very pleased to have been selected to serve.

LT. COL. HARRIS: Dr. Patterson?

DR. PATTERSON: Yes, sir. I'm getting the "sir" part down.

LT. COL. HARRIS: (Laughs.) Okay.

Right now we're going to open up the lines of communication for our bloggers to ask you any particular questions.

Q (Inaudible.)

Q (Inaudible.)

LT. COL. HARRIS: Could you identify yourself and ask your questions, please?

Q Yeah. Colonel, the normal format is that you'd go right down the list and ask one blogger after another, and that way everybody gets in and they don't walk on each other.

LT. COL. HARRIS: Okay. I'm sorry. Do we have Chuck Simmins on the line?

Q That's me, yeah.

LT. COL. HARRIS: Okay. Chuck, I'm sorry. I apologize. I'm new to this.

Q Yeah. (Chuckles.)

LT. COL. HARRIS: Normally Lindy Kyler (sic; Kyzer) is the moderator, but she's not with us today.

Q No, she's in a much warmer place. LT. COL. HARRIS: (Laughs.) Yeah. So ideally, I guess I'm a poor substitute for Lindy, but I'll try to do the best I can. But Chuck, if you would, if you have a question for Dr. Patterson, we'll welcome that now.

Q All right. Dr. Patterson, the initial e-mail that we received that talked about TBI -- is that an area you're working in, or should I question you on something different?

DR. PATTERSON: Well, I don't work directly in traumatic brain injury. I do see patients here in the U.S. at the institution I work who sustain injuries and -- to the brain. And this is one of the really different aspects of the casualties in Iraq and Afghanistan, is the volume and quantity of patients, soldiers who are the victims of a blast injury, and the resulting damage to the brain is much higher than prior conflicts.

Q So, you're more involved with --

DR. PATTERSON: Extremity injury.

Q Okay. Then let's talk about amputations. To what degree are we successfully saving limbs versus having to do amputations, given that the vast majority of our injuries right now are blast- related?

DR. PATTERSON: Yeah, and the decision-making for limb salvage is very, very difficult. There are -- there are many factors that are integrated into the decision. Unfortunately, it's a binary decision. It's yes or no. But the constellation, the spectrum is very broad. And at times, the decision to salvage a limb can put the patient's life at risk. So there needs to be a decision made.

The techniques and technologies available for limb salvage are really quite good. And the ability to regenerate bone and transfer tissue from one part of the body to another are extraordinary. So many limbs that would have been amputated in the past are being salvaged today, but the magnitude of the injury in a blast often creates a foregone conclusion in the sense that amputation is really the only alternative.

Q Thank you, doctor.

LT. COL. HARRIS: Are there any other questions?

Q Were you speaking of bone regeneration?

DR. PATTERSON: Yes.

Q Can you explain that a little bit more?

DR. PATTERSON: There are techniques and technologies available today that permit surgeons to actually stimulate the bone to grow. I don't know if the audience here has any knowledge or familiarity with Ilizarov techniques, but it's basically a series of rings that are applied outside the body, with wires that connect to a segment of bone within a leg or arm.

The bone is cut. We call that an osteotomy. And then that segment of bone is slowly pulled through the limb, and in its wake, if it's pulled at the appropriate rate, which is about a millimeter per day, will create bone as that segment is pulled down through the leg. So, gaps up to 10 to 12 centimeters can be restored, regenerated, with this approach to management of an injury.

Q (Three-year ?) process. Ten centimeters, right?

DR. PATTERSON: I think the maximum I've heard successfully done is 15, but when you get to -- 10 is reliable. When you get between 10 and 15, the results are less predictable in this.

Q Thank you.

LT. COL. HARRIS: Could you identify yourself before you ask a question, please?

Q Sure. My name is Ray Sawyer (sp).

LT. COL. HARRIS: And could you identify the outlet you're affiliated with?

Q MetroHealth System in Cleveland.

LT. COL. HARRIS: Okay.

I'd like to offer an opportunity for another representative to ask a question.

Q Okay. Dr. Patterson, this is Kathleen Henry. I'm with thedonovan.com. We're a military blog. And first of all, I would like to ask, on the bone regeneration process that you were just talking about, you called it a specific name. Could you spell that? (chuckles.)

DR. PATTERSON: I hope I can get it right, Kathleen. I think it's I-L-I-Z-A-R-O-V. Ilizarov. You'll have to check that, but that's ballpark.

Q Okay.

DR. PATTERSON: It's actually a technique pioneered in Siberia, believe it or not. Q Seriously.

DR. PATTERSON: Seriously.

Q Something good comes out of Siberia. (Laughs.)

DR. PATTERSON: A Russian Jew in Siberia built a 1,000-bed hospital next to a bicycle factory and used the technology from the bicycle factory to restore bone in limbs that were deformed or missing segments.

Q That's very interesting.

I believe that, I think, it was last week or might have been the week before. I was on a different roundtable. And they were discussing also bone regeneration through some other new programs that are being possibly, I think, they're being set up or being looked at through like the Mayo Clinic and Rice University, where they're using molds.

DR. PATTERSON: There's some very innovative programs, in the field of tissue engineering, where they're trying to develop protein scaffolds that can be infiltrated with various bone-stimulating proteins and technologies that allow the ingrowth of vascular supply so that, in theory, these tissues could be molded, placed within the body. And over time, the body would incorporate these as bone. And there are a number of different approaches that are being developed around the country.

Q Great.

So you were talking about you went over the Landstuhl. And about how many physicians, do you know, how many physicians are usually granted access to this program?

DR. PATTERSON: Well, I think, Colonel Harris probably has the exact number. But I think there has been 15 to 20. The process, the program is a two-week rotation. And we have someone going almost every month.

Q And are you participating in any surgeries or just observing?

DR. PATTERSON: No. We're working side by side with the military surgeons actively throughout the two-week program.

Q When did you get there?

DR. PATTERSON: I depart on Saturday and I'll be there for two weeks.

LT. COL. HARRIS: Now we'd like to offer an opportunity for another blogger to ask a question. Q What are your impressions of the care that the patients, you're seeing, are receiving from the time they're wounded, in the battlefield, until they get to Germany?

DR. PATTERSON: Well, I've not actually seen, but I've talked to a number of my colleagues who've participated in the program. And the field resuscitation, care in the field, and the evacuation process, the staging at a field hospital, and then the varying patients, soldiers, in the extremely well-equipped transport planes, has been a breakthrough process for care of the injured soldiers.

Q Dr. Patterson, Chuck Simmins again. Last week we had a roundtable and they were talking about some of the presentations that are going to be happening at the Army Science Conference, which is going on right now. And one of the things they talked about was the use of cells from pig bladders. Two -- they showed two gentlemen that apparently had the -- would it be the proximal phalange? The last phalange on their finger.

DR. PATTERSON: Distal. Distal phalange.

Q Distal phalange -- regrown by repeated application of these pig bladder cells. Are you familiar with that at all?

DR. PATTERSON: No. I've tried to stay away from pig bladders in my orthopedic career. But the concepts of using xenografts, basically tissues from different species, has been a surgical technique for many, many years. And providing a biologic dressing of a tissue from a different species can often enhance the human potential for healing.

Q Doctor, the colleagues that you have spoken with that have been over there, have they noted any differences in protocol that they thought were significant, or differences in approach to specific injuries that they --

DR. PATTERSON: Well --

Q -- that they've remarked on?

DR. PATTERSON: Yeah, and we've actually seen a number of modifications, improvements in some of our civilian protocols.

I mean, the military has advanced a massive transfusion protocol, in which once a trigger level of transfusion has been reached, that there are multiple other components of the body's circulation system that need to be enhanced at a certain level.

I think the care of really severely traumatized tissue -- tissue that's been really quite battered -- I think the military has really been at the forefront of evolving techniques in the care of these injuries. The pig bladder is an example, but there's other technologies. There's vacuum dressing. There's skin expansion and mobilization to cover these limbs with a durable

layer such that prosthetic fitting is possible. I think there's been a number of advances really led by the military in these domains.

Q And so in your -- in your practice there in Cleveland, you're actually going -- seeing some changes to treatment of auto accident victims or industrial accident victims that come directly from the military.

DR. PATTERSON: Well, much of the modern trauma care in the civilian sector has been built upon advancements created in wartime. When you look at the helicopter transport that we use today, routine in the United States for injured victims, this is a direct outgrowth of the military approach to evacuation. So these approaches, these techniques and technologies often find their way to the civilian sector from the experience gained in wartime by our military and their medical personnel.

Q Thank you, sir.

Q This is Kathleen Henry again from thedonovan, if I could. Since you're talking about --

DR. PATTERSON: No more spelling, Kathleen?

Q Yeah, no. (Laughs.) Just that -- just that one. Since you're talking about doing sort of intermediate care, what sort of patients are you looking at -- are you looking at seeing from the military? Are you all part of, like, the CBO system? And if I need to explain that, I will. (Laughs.)

But the -- are you seeing a lot of military patients coming back that you are seeing doing intermediate care after they've received their trauma care at the military hospitals? What are we looking at?

DR. PATTERSON: We see some, but it's unusual. I think most of the casualties are still being treated within the military system, be it a military hospital or the Veterans Administration system.

Q Okay. So in a large part, this is -- this could be seen as sort of transferring traumatic injury care techniques to the civilian sector? Or is this an -- or vice versa or both? Are you exchanging information to help update care on either end?

DR. PATTERSON: Well, I think this is -- you know, teachers are learners and learners are teachers. I think this is a program in which there are benefits to both sides.

And a tremendous amount of social value is created through the relationship that we have with the military surgeons and they have with us. So one of the hopeful by-products of this is as the military surgeons return to the U.S. they have a network, a relationship system that continues as a ongoing mentoring program.

Q And on a more technical note, reading up on previous information regarding traumatized extremities and amputations, et cetera, what are we looking at in terms of compartmental syndrome? Are we looking at new techniques? Do you know of any new techniques that we're looking at to hopefully reduce that and, you know, save limbs or save other types of injuries or --

DR. PATTERSON: Well, compartment syndrome is something that the window of opportunity for someone who's had a battlefield injury that is leading to a compartment syndrome -- rapid diagnosis and release of the compartment so the muscle can swell is really very important. So having medical personnel close to the zone of conflict and having patients identified who are at risk for compartment and releasing the compartments early will go a long way to reducing the late problems due to muscle not having enough oxygen, enough blood supply.

Q Okay. And could I ask one other thing? I know you're an ortho-physician -- surgeon. Do you specialize in any particular extremity? Are you, like, a hand or foot or leg doctor?

DR. PATTERSON: Well, I'd say probably 60 percent of my practice is pelvis and leg, so -- and then maybe 30 percent is upper extremity. I am not a hand surgeon. I do some upper extremity injury -- elbow, shoulder -- but most of my work involves lower extremity.

Q Do you think that there's a future or that it would be practical for physicians in the civilian community to maybe regularly have some sort of a partnership where they were able to go and see traumas in a military situation, since there is obviously a greater volume and different type of trauma that they wouldn't see on -- as frequently in civilian life?

DR. PATTERSON: Well, I do believe there's a benefit. And I think the benefit resides in multiple locations. I think the patient is helped. I think the civilian surgeon, their knowledge can be advanced. I think there's likely some knowledge that can be transferred to the -- to the military service. And I think many of the advancements in trauma in the United States have come from experiences people have had in wartime.

Q I'm just wondering in what way do you think you will be able to take those back and really implement them, to sort of pass them along to the next generation of surgeons? Not just your own -- obviously, you're going to be bringing your own knowledge and your own experience into the operating room back in Cleveland, but, you know, in terms of the next generation of doctors who may not have benefit from that experience, do you think it's something that --

DR. PATTERSON: Well, if --

Q -- they have to go in firsthand?

DR. PATTERSON: No, because I think -- we train ten residents per year so that they're -- the ongoing annuity here is that the experience gleaned by the surgeons in this program -- the vast majority of those surgeons are actively engaged in teaching the next generation of orthopedic surgeons for the United States. So we graduate 10 residents per year and I fully believe that the experience I have will be transferred to them upon my return. So the -- you know, there's an old saying that teachers influence eternity.

And I think the knowledge gleaned by the experience of those who've gone over will be shared and transferred to succeeding generations because they served in role of teacher.

Q And do you have particular goals for yourself that you certainly want to take -- that you want to take away from this experience?

DR. PATTERSON: I hope to be able to transfer what I've learned in Germany to those that are training at Metro Health. And I also hope that we learn that this is a very challenging burden that we place on our young people, and we have to be extremely judicious about our use of conflict as a means to resolve disagreement.

Q How many doctors are there in the program, such as yourself, who've come from significant practices in the U.S. to Germany?

DR. PATTERSON: I think there are somewhere from 15 to 20 who are doing this, and the program is a two-week rotation once a month.

Q Are they all orthopaedy?

DR. PATTERSON: Yes. Yes, they are all orthopedic surgeons, they have to have 10 years of experience in a civilian trauma center and be members of the Orthopedic Trauma Association.

LT. COL. HARRIS: Dr. Patterson, could you talk a little about your procedures for rehabilitation and reintegration?

DR. PATTERSON: Well, I think that's perhaps the most critical step in the chain of care -- the transition back to civilian life after a devastating extremity injury is fraught with challenge. And this is, I believe, the area where perhaps the greatest investment can be made, and back-to-work programs, training programs, investments in prosthetic technology for injured soldiers is really one of the key points that the military has focused on -- and appropriately so.

LT. COL. HARRIS: Ideally -- we had invited a representative from the secretary defense health affairs to talk a little bit about some of the rehabilitation practices and procedures that the military conducts, and if anyone has any particular questions regarding that subject, feel free to pass them on to me. We had invited Brigadier General Loree Sutton, who is the special assistant to the assistant secretary of defense and health affairs, but unfortunately she was unable to make it today.

She was going to be our subject matter expert, and basically her area of expertise basically deals with anything from the neck up. She is the highest-ranking psychiatrist in the Army and she was going to pretty much deal with the Army's policies and procedures for rehabilitation and reintegration. But with that being said, are there any other questions that our bloggers may have?

Q Well, I wanted to -- this is Chuck Simmons again -- when asked, Dr. Patterson, about your field of expertise -- pelvic injuries -- what's new in pre-hospital care that you find helpful, exciting -- I'm an EMT, I know they're a difficult injury to manage.

DR. PATTERSON: Well, I think there's a couple of things. One is the resuscitation protocols. So pelvic injuries are associated with major blood loss in many circumstances, so the ability to administer fluids and blood products in the field is really very important. I think one of the other things that has developed in the last couple of years is the ability to apply a binder so that there are a number of techniques that essentially allow personnel in the field to wrap the patients pelvis securely, reduce the volume of the pelvis so that, if there is any bleeding, that bleeding can be controlled with what is

effectively indirect pressure. And those two approaches -- the field binder and/or fluid resuscitation that starts soon after the injury -- can dramatically improve the outcome from a pelvic ring injury.

Q And that's all at the corpsman's --

DR. PATTERSON: Sure.

Q (Inaudible) -- on the medevac helicopter on the way back to the base hospital?

DR. PATTERSON: The pelvic binder could easily be carried in a corpsman's pack and applied in the field, there's no intervention, no incisions. A significant pelvic ring injury can often be diagnosed just by laying hands upon a patient and doing a little compression maneuver or compression test. If the pelvis moves, the likelihood of an injury is high and applying a T-POD or applying a binder can often reduce the level of pain and anxiety, but also help control bleeding.

Q Thank you, sir.

Q Are you seeing -- this is Stephan Hinreagen (sp) -- are you seeing new materials for repair of the pelvis? For instance, we were discussing bone regeneration and you were talking about the Ilizarov technique. What is the current process for repairing, for instance, crushed pelvis?

DR. PATTERSON: Well, most of the implants for repairing the pelvis are at a fairly stable level of innovation. So many of these devices have been around for a decade or more. They are very well tested; they're gold-standard approaches and techniques for stabilizing a pelvis, and I think the advantages or the improvements made are the degrees to which we can do this through smaller incisions. So today we can fix a damaged pelvis using much smaller incisions with much less blood loss than in the past.

LT. COL. HARRIS: Are there any other questions?

Q I think I have one last one -- is there any chance we're going to have a follow-up when Dr. Patterson returns so he can give us a little down-low about what he --

Q That would be great, yeah.

LT. COL. HARRIS: What my hope -- my plan is to contact the public affairs office at Longfield (sp) Hospital and set up an opportunity for Dr. Patterson to actually call back to the United States and conduct a -- this is actually the beginning, the introduction, of this particular hospital doing -- participating in this process. So, ideally, we'd like to actually talk to Dr. Patterson again and talk about some of the practices and procedures that are going on at Landstuhl Hospital.

Q Absolutely, that would be fantastic.

Q Yeah.

LT. COL. HARRIS: And hopefully, the next time -- I know we talked about the traumatic brain injury -- and it was my hope to kind of be able to balance this off and have a subject matter expert talk about traumatic brain

injuries as well. Excuse me. Hopefully, during our next roundtable, we will have a subject matter expert to talk about that as well; I know that is of interest to a lot of folks, and hopefully, we will be able to cover that as well.

Q Okay, well, we look forward to hearing from Dr. Patterson and I hope we -- (chuckles) -- hope we didn't ask him too many strange questions.

DR. PATTERSON: No, no. The question -- there's no such thing as a strange question.

Q Very much appreciated.

LT. COL. HARRIS: Okay, I know we are a little bit ahead of schedule here. I'd like to thank everyone for participating. Kathleen, I know you were a late entry; I do have your information here on my e-mail account and I appreciate both of you for participating today -- Chuck, as well. I'd like to offer Chuck an opportunity to have any closing comments or questions before we wrap up, and then we'll give Kathleen an opportunity. Q No, I just want to thank Dr. Patterson, both for volunteering for the program -- this program -- and for volunteering to go to Landstuhl. It's been a very informative presentation.

DR. PATTERSON: Well, thanks, and hopefully, we'll get a chance to speak again.

LT. COL. HARRIS: Okay, Kathleen, would you like to say anything?

Q No, I think I'll just reiterate what I said, that it was -- yeah, and what Chuck said -- very interesting, and I appreciate it. I hope we have the opportunity to follow up and learn some more about what the exchange process has -- is giving to Dr. Patterson and vice versa. Thank you very much.

LT. COL. HARRIS: Okay, Dr. Patterson, do you have any closing comments?

DR. PATTERSON: No, I'm spent. (Laughter.)

LT. COL. HARRIS: Okay, well, with that being said, again, this is Lieutenant Colonel Willy Harris. I work in the media relations division for the Department of Army Public Affairs at the Pentagon. I'd like to thank everyone for participating today. I anticipate the transcript and the audio will be on the defenselink.mil blogger site. Hopefully, and maybe the officials that actually moderate can correct me -- I'm thinking Friday.

Q Actually, it will -- sorry, sir -- it will be up tomorrow.

LT. COL. HARRIS: Oh, great. That's even better.

Q Yes, sir.

LT. COL. HARRIS: Okay, and what we want to do is have this be a springboard of bigger and better opportunities to let the public know what we're doing to improve the medical care of our military personnel, because it's very critical that we continue to improve the procedures and policies for rehabilitation and reintegration with all of our personnel to make sure that they're receiving the proper medical treatment. With that being said, if there

are any questions -- follow-up questions -- please feel free to call me directly or send an e-mail, and I'll be glad to contact the subject matter expert and get the correct answers for you.

Q Thank you very much.

LT. COL. HARRIS: Okay, this concludes our blogger roundtable.

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