

Physical and Psychological Impact of Limb Loss Among Haiti Earth Quake Survivors

Terrence Sheehan, MD: Medical Director, Adventist Rehabilitation Hospital and
Medical Director Amputee Coalition of America

Stephen Wegener, PhD: Associate Professor and Director Division of Rehabilitation Psychology
and Neuropsychology, Johns Hopkins University School of Medicine

March 3, 2010 (4:00- 5:00 pm EST)

Coordinator: Welcome and thanks for standing by. At this time all participants are in a listen-only mode. During the question-and-answer session please press star 1 on your touchtone phone.

Today's conference is being recorded. If you have any objections you may disconnect at this time. I will now turn the call over to Miss Loretta Jackson-Brown. Thank you, ma'am. You may begin.

Loretta Brown: Good afternoon. My name is Loretta Jackson-Brown and I am representing the Clinician Outreach and Communication Activity, COCA with the emergency communication system at the Centers for Disease Control and Prevention.

Welcome to today's COCA conference call, Physical and Psychological Impact of Limb Loss Among Haiti Earth Quake Survivors. We are very excited to have Dr. Terrence Sheehan, from Adventist Rehabilitation Hospital and Amputee Coalition of America and Dr. Stephen Wegener, from John Hopkins University, School of Medicine.

We are using a PowerPoint presentation for this call. You should be able to access from our Web site. If you have not already downloaded the

presentation please go to emergency.cdc.gov/coca, click on conference call Information, Summaries and Slide Sets. The PowerPoint can be found under the call in number and pass code.

The objectives for today's call are that participants will be able to describe epidemiology, physiology and classifications of limb loss; compare and contrast the incident, management of limb loss in the United States with post earth quake Haiti; identify amputee preoperative predictors of outcome for rehabilitation and lifelong follow through; discuss essential information for the management of psychosocial issues following limb loss.

In compliance with continuing education requirements, all presenters must disclose any financial or other relationships with the manufacturers of commercial products, suppliers of commercial services or commercial supporters, as well as any use of unlabeled product or products under investigational use.

Presentation will not include any discussion of the unlabeled use of a product or products under investigational use. There is no commercial support for this presentation.

The information and view points in this presentation are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention, the Agency for Toxic Substance and Disease Registry.

At this time I would like to introduce Mary Helen Witten, Project Officer for Amputee Coalition of America and the National Center on Birth Defect and Developmental Disabilities at the Centers for Disease Control and Prevention. She will introduce today's presenters. Mary Helen?

Mary Helen Witten: Thank you. Our first presenter will be Dr. Terrence Sheehan, who is Medical Director for the Amputee Coalition of America and chairs the Medical Advisory Committee.

In 2006 Dr. Sheehan led the collaborative effort between the Amputee Coalition and the Commission on Accreditation of Rehabilitation Facilities to establish the first ever national standard of care for addressing the needs of individuals with limb loss.

These standards became effective in 2008. Dr. Sheehan is working with the ACA to convene the inaugural national limb loss task force meeting which will be held in April 2010 in Washington D.C. He has worked with Physicians for Peace and Healing Hands for Haiti to bring contemporary care to individuals with limb loss in the Dominican Republic and Haiti.

Our second presenter will be Dr. Stephen Wegener. Dr. Wegener's clinical activity is focused on providing psychological services to persons with chronic illness or traumatic injuries, including chronic pain, amputations and spinal cord injury.

As a rehabilitation psychologist his research has focused on theories and projects that have the potential to improve function and reduce disability for persons with chronic illnesses and impairments. These projects emphasize the importance of patient centered care models, patient self management and the use of motivational interviewing by providers.

Dr. Wegener's work is supported by active grants from the National Institutes of Health, the Centers for Disease Control and Prevention and the Department of Defense and several foundations.

Thank you, Dr. Sheehan and Dr. Wegener. Dr. Sheehan?

Terrence Sheehan: And thank you both, Miss Jackson-Brown and Miss Witten, for that introduction and good afternoon, everybody. I am a Physiatrist, Rehab Specialist, practicing right outside Washington D.C. in Maryland. I'm a Chief Medical Officer for a rehab hospital, where I work with those with limb loss.

I've also had the opportunity to work with the Amputee Coalition of America which is the only non-profit amputee advocacy group and we partnered with the CDC.

Within my work I've also had the opportunity to go down to the Dominican Republic and Haiti before the earth quake and will be going again this next month. And what I would like to do today is give a snap shot of limb loss in America, compare that to what has happened and what is happening in Haiti. And give some overview of the process of a successful care for the person with limb loss.

So right now I'm on the statistics slide and that's where we'll start. If we look at - in the United States there's approximately 1.9 million people living with limb loss. And beyond that is the breakout. And what's important to see is the 70 to 80% of this is from vascular and diabetic with a small number, 15% that is relevant to traumatic limb loss.

What we have projected through the work that's been done at Johns Hopkins is that this number of 1.9 million will grow to just under four million by 2050. And that is because of this vascular - disvascular is was we term it population.

Why is it happening? It's one, the demographics of the population where we have an aging group. And most of the limb loss in America is occurring in those over 60. And then you have the obesity and diabetic bursts or epidemics as we're calling them, that are all coming together and leading to limb loss.

So the rate of major amputations, because of vascular disease has actually decreased, but it's because of this number in the population that it's going to increase and are we ready for it.

What we're going to see, especially in the geriatric population that this will grow and double by 2030 to where it currently is.

The risks as we know for peripheral vascular disease or otherwise knows as peripheral arterial disease is the diabetes, but smoking has a profound effect, two to three fold in causing peripheral arterial disease. And then hypertension, hyperlipidemia, obesity, inactive lifestyle and these are all the same risk factors that we see for coronary artery disease, as well as stroke.

It's just not as well known out there in the general circles, because of all the intervention we see for coronary artery disease and now stroke. But we're hoping to see more for the prevention of limb loss.

When we think of 225 people have amputations due to the complications of diabetes each day in America, this is going to have a profound effect. And what you see there is one of the publications from the Amputee Coalition of

America. And where they really developed a niche to help those in the clinical field is through education materials, both for those who are experiencing limb loss, but also for those who are caring for them whether it be a caregiver or a professional.

What is also an alarming statistic that is once you have one amputation, the likelihood in the next three to five years to have a second amputation is greater than 50%.

So when we think of Haiti and in the United States, amputation should not be thought of as a failure of treatment, but as a treatment of choice.

As a Physiatrist we look at the function and that's holistically what is working and what isn't with regard to the body and also in their cycle social structure. And we try to get a sense of where we would go. And hopefully before an amputation is done we are able to advise the team on what outcomes possibly could be taking into account the whole person.

If - I'm now on the Haiti slide. And if you - my work down in Haiti has been with the Walking Free Program with Physicians for Peace. And this is an outreach to help educate those on the ground on the care of those with limb loss. And that has to do with a team approach which includes therapists, prosthetist or limb makers and then the ability to make that.

And there is and what's little to know infrastructure when I was down there over the past three years. And unfortunately the places where I would be able to go and work as part of this collaborative team were destroyed during that - the earth quake. And at that time what we were seeing was traumatic amputations. Very different from what we see in the United States, with most

amputations occurring from trauma, such as motorcycle or gunshot and most of them in men.

Now when we look at the post earth quake, the estimates currently are 2000 to 3000 people with limb loss. The majority are women and children. And they feel that that's because of the poorly constructed buildings and the earth quake occurring during the day and that this was who was in the structures, in the home, in the different schools. Because of the need to do immediate surgery you have many different outcomes and no resources on the ground when this first occurred.

So the anticipation as I go down in a week is that I will see a number of people who've - were not - had the opportunity honestly to have a surgery that would give the best outcome when we think of using a prosthesis. The majority are felt to be below knee amputations, as - those with more proximal trauma did not survive, because of the vital vessels and the deep infections that are potentially there.

It is a sense that because of small - the small tissue bulk on the limbs that deep infections if not treated will go to the bone and that would be an indication for further, so there's the sense that there will be a second wave for further need for an amputation, because of even minor trauma that occurred in Haiti.

Here the next is a slide and it's a diagram. And it just gives a sense of how we use a classification when talking about the amputation of the limbs. And you see the upper extremity and the lower. The most common is going to be your transtibial and that is a below knee.

And the next most common is your transfemoral for the lower extremities. It's uncommon, especially in Haiti that I would see a symes or a hip disarticulation, because of the complexity of the surgery and the limited resources to do such surgery.

In the upper extremity it would be similar that the most common levels are going to be your transradial and your transhumeral.

When we look at salvaging a limb after trauma there are different criteria that we look at for the upper extremity versus the lower extremity. In the lower extremity weight bearing is mandatory.

If there is poor sensation, if there has been nerve or a lot of soft tissue injury you're going to have poor sensation. And that would not be helpful. An assisted limb is not helpful. One that has terrible pain from nerve injury, as well as for skin and contractures, so as one looks at should I amputate or try to wait this out and salvage.

Those important pieces come in to that decision and what it comes down to, if you don't have a limb that is able to wait there and you can have good sensation and good skin coverage that most likely an amputation at a level that would have those qualities is what is suggested.

As I move on to the next slide which is the surgeon should plan for the prosthesis at the time of surgery. I talked about the - referring to the surgery itself and the surgery, as all surgeries are very particular. And where you place the incision and the shape of the limb, so that is the tissue bulk and an incision across the limb like a smile on a - below the amputation. In the front is what's

preferred, as opposed to one that is vertical that could open or one that is irregular.

You also want to have padding in the right place. We weight bear through the tendon in their knee. We do not weight bear through the end.

Next is - just with the bone. The bone can have sharp edges. If the bone isn't appropriate prepared during the surgery to get rid of those edges, it can break through the skin, cause ulcers and then you can't use a prosthesis. A limb length for an above knee amputee, as much length as possible is preferred to get the stronger lever on.

For the below knee, five inches is good. And what I refer to with a picture here and if we think of and know of some of the stories that I've already heard about on the ground about the need to amputate with whatever materials you have there and with little knowledge of the appropriate surgery. You have someone here who has a very long limb and than where some of the other criteria held, such as incision placement, soft tissue, taking care of the particular nerves.

If you do not properly handle the nerves during surgery you can end up with neuromas. Neuromas on the surface of the skin would stop somebody from being able to have something touch that skin. Very important in the whole surgery piece when we're considering the end result is in using the prosthesis. So the anticipation is that there's going to need to be second and possibly third surgeries to help those who've been affected get to where they're going.

When we have limb amputation there is specific ways of handling the muscle. And what I am now at is the ampsearch.org Web site. And this is a very

helpful Web site where any surgeon can go to the Web site, see the surgery start to finish on how to properly handle that. And that was a collaborative effort through the ACA and Washington University.

Now when we look at the post-operative and pre-prosthetic management, the overview has to do with wound care, edema control, the therapy program, of course pain control, addressing the psychosocial issues. And then what we do here of course is where somebody's going or disposition planning and a huge effort to educate the person who is going through the limb loss, so that they can properly care for themselves as time goes on. And as they return to their life and live with the loss of limb.

So when we look at that early rehabilitation phase we're looking at adequate pain control. We're looking at controlling the edema. We want to mold the limb, so that it is ready for the prosthesis. We want to prevent flexion contractures, so range of motion and maintaining. If you've developed a contracture it's very hard to use a prosthesis. We want to keep the muscle strong and minimize the atrophy of both the affected limb and also the other limbs.

Maintain body symmetry, this is very important in the upper extremity. Where we lose symmetry the more limb that is lost. And then also to maintain two handed function.

So the wound care is not anything out of the ordinary about keeping it clean and dry with sterile dressings. We have the opportunity for different type of dressings. This would not be the case on the ground in Haiti. So a clean and dry dressing is the most important.

There's not been the opportunity for skin grafts that we do often here and that allows us to salvage limbs at a longer length and then ultimately better function, because of their opportunity to have both the dressings, as well as skin graft techniques.

We usually take sutures and staples out at about two to three weeks for traumatic and three to six weeks for vascular. And we concentrate on the edema control, because the wounds heal faster.

So we do this through ace wrapping compression and I actually usually advise not to use ace wrapping, but what we call a shrinker which is a uniform garment of the same material, but it allows for more uniform control of the edema, as opposed to it being dependent on the person who's wrapping. And you can wrap too tight or wrap unevenly and develop some problems.

And I do have some pictures of that coming up. There's also the possibility of putting a cast on a limb. And this is done more at the University Centers in the United States, but the outcomes are better in that edema is controlled from the time of surgery it's not allowed to expand and the limbs heal faster, especially in someone who's traumatic.

So ideally for someone who's traumatic it is - to put them in a cast and potentially also put a - some prosthetic components on the end of the cast and allow somebody to start to walk as earlier as they possibly can. And also not lose that regular ability to mobilize.

In the United States after somebody is amputated particularly with those who are traumatic, are goal and is often the case that I say that we can get them up and in a prosthesis functional within that first month. And someone who's

disvascular we see that occur maybe in a six week to two month period, depending on the healing. But with that team approach it works very smoothly.

As - I'm on the Wrapping Slide and I just want to have this as a reference and that is for the transfemoral or above knee on the bottom and then for the transtibial or below knee.

We also start to initiate therapy early. We want to work on keeping all muscle groups strong, but especially the ones that are going to be involved in using the walker, in balance and try to prevent other problems from happening before someone receives the prosthesis, as well as to be most successful when somebody receives the prosthesis.

Here are some examples. In the stretching you see just simple ways of keeping the knee straight in the top for a below knee, and then I also added for a below elbow simple instructions that can be used. And this is going to be important for those on the ground in Haiti, to understand very simple techniques, but can have huge effects later when someone is using a prosthesis and develop in preventing development of a contracture.

And this would be for someone who is an above knee and stretching those hip flexors both sides and very simple techniques, but can have important effects in the long run.

So the therapy program also takes into consideration the shaping, the shrinking, the soft tissue mobilization. Allowing the tissue, just as you move the tissue on the back of your hand very loosely you should be able to move the tissue in the residual limb.

And this is because any tethered skin or scar tissue can create problems when you use the prosthesis with ulcers and skin tear. And then of course you want to convey and educate the person with limb loss on every piece of what you're doing, so they can do it themselves.

Pain is an important issue and it needs to be addressed very early. In the United States we are able to use a number of medications, techniques to help with and understanding. On the ground in Haiti the medications are limited and we are going to be using more the modalities to help with this.

There's the post-surgical team and that is from the bone of course and the edema which has the pain mediators in it. Infection and differentiating when there's infection and that pain is related to it. And there's neuromas which I had spoken about, bone spurs. And then prosthetic related pain. And then within that is the neuropathic pain or phantom pain. So to distinguish between these is very important and to be able to use the medications appropriately, narcotics for that post-surgical pain and anti-inflammatories for that edema and then of course the neuropathic agents for the nerve pain.

If you look at the common examples of that phantom sensation, what you have is pain that really takes off at night and it is annoying, eating, stabbing, burning, squeezing type pain, as these pictures are able to show us. And shooting pain and what you have is a sense of the limb that is lost, having pain in it or that you want to scratch it or move or that there's a cramp there. And it does not respond to the narcotics or the anti-inflammatories. We use the anti-seizures and the tricyclics to help with this. We use rub and massage and compression to help with this as well.

I'm now at the towel pull and this helps with the contracture, but that type of aggressive movement with the residual limbs is very helpful. It gives important feedback to the brain to tell the brain what has been lost and how to reorganize the brain with regard to this.

The next slide is about the topical agents that we can use and the heat and cold, stretching, massaging and exercise that helps with that. Traumatologically you can develop heterotopic bone and this is what this picture shows is that faint edge. These sharp edged pieces of bone that allow - that can break through the skin and cause significant pain.

Next is a very gory picture about just resecting and the following is the resection of that bone. And that allows this person again to be able to use prosthesis appropriately. This is more common - heterotopic bone formation is more common in traumatic amputation as opposed to disvascular, for the ability to do the surgery is going to be difficult on the ground in Haiti for someone who knows how to do this. And the timeframe usually is about a year or more after that occurs.

We then get into very detailed issues when talking about the prosthesis, the condition of the skin, the length of the limb, the strength, range of motion. And we have such choice, because of technology in the United States and these pictures are type of prosthesis whether below knee or below, talk about all components and it's the foot, the shank, the socket, the liners, the socks, the coverings.

This is not what we are going to face in Haiti and I will show you in another slide a different one size fits all type of prosthesis. But the fit as we look at the

slide with the diagram with the patella tendon that we wait there through the tendon, but we have contact - intimate contact with the rest of the limb.

And it is an art form to shape these limbs, to allow pressure to be relieved in some areas and pressure to be applied in others. And this has evolved over years. What you have as I move down and I've moved through a couple of slides is a different form that we're going to use in Haiti, as opposed to the complex issues in the United States.

In the United States prosthesis can cost from 15 to \$50,000 depending on the materials used. And 15 is the lower number. If you look at this limb, called the monolimb, we're looking at a limb that is a polymer that can be constructed for about \$200.

Other ones that we'll see being used and shipped to Haiti are about 300. We have a foot that will cost \$20. What this - the real controversy here is once you do the fit often that fit needs to be changed and adjusted and changed and adjusted in the immediate first year after amputation. But then after years that's somebody's actual limb changes with further shrinking of the soft tissue and muscle.

So when we think of the end result it's the correct surgery, the immediate rehabilitation training and a well fitting prosthesis are all equally important.

Now as I'm coming to the end of my time I have included slides for upper extremity and those are for reference, but not as far as concepts a lot different than the lower extremity, but with the complexity of the limb changing, because we use more myoelectrics when we come to prosthetics.

In the efforts in Haiti we need to get back to educating those on the ground to be able to take care of those who have lost limb on the ground to maintain a system of care down there. And this is what we've tried with the Walking Free program. And these are some of the slides of educating professionals in training to be able to take care of those with limb loss.

And the last slide, the Haitian picture, shows the amount - these are recent pictures of children who were affected and then also some of the direr equipment that they're faced at using, such as the types or prosthesis that they've tried. And these are types that have been shipped down there and also make shift wheel chairs that they've been able to use.

And with that I will introduce and pass this on to my colleague, Dr. Stephen Wegener.

Loretta Brown: Thank you, Dr. Sheehan. Our next presenter is Dr. Wegener. Please welcome Dr. Wegener.

Stephen Wegener: All right. Thank you. Thank you all for coming today. I'm speaking to you here from Baltimore at John Hopkins. And Terry, thank you for that great overview. I thought we'd spend maybe about 10 or 15 minutes here together looking at some of the psychosocial issues following limb loss and the issue of adapting in the context of a national - natural disaster. And hopefully that will leave us about 10 or 15 minutes for questions.

So let me proceed on to this slide that's labeled Responses to Stress and Loss. And I think the first concept we want to all be mindful of is that when people come into a traumatic injury or other kind of stressful event, the response is

not uniform. So that is people are coming along, if you will, this white line across the slide being kind of their baseline.

Most people are doing relatively okay. We feel like some people there in the light blue line who aren't doing very well to start with. And the stress then hits them and people can take a number of courses. The course that we're most - pay most attention to generally in the healthcare system are those in the light blue, the maladaptive folks, who with the onset of the stress have a very negative emotional, cognitive and functional reaction end up doing very poorly as time goes on.

But what we should remember is that most people and we'll see this in the data here very shortly, that most people are doing generally okay at baseline and that when they have a stressful event they may have some deterioration of their psychological and social functioning, but they generally get back to baseline.

There are others of course in the - represented in the blue line there, the royal blue, who are doing okay. And they are more resilient. They don't have any negative - or really strong negative psychosocial sequelae from the stressful event and they get back to baseline.

And there are in fact some people, who in the face of stressful events have a resilient or growth response that is a transformative experience for them. So the first thing we should be thinking is just because someone has an amputation it doesn't mean they're necessarily going to do badly from a psychosocial perspective. Most people in fact cope relatively well.

The next slide kind of overviews the ICF Model and I included this slide to remind us of the fact that peoples' activities and their participation in their societal roles, whether that be working, home making, parenting, participation in church or social activities, this is a mostly determined event that's a result of both their health condition, but also their personal factors which of course as a psychologist I tend to pay more attention to.

But I think a lot more of us need to pay attention to the environmental factors that either produce disability or facilitate participation. And I think this particular issue is an important one in the Haitian experience, where the environment in which people with physical impairments are functioning is full of barriers. And while they may have very resilient personal psychology the environment is really a significant barrier to their participation in society.

So when we think about interventions our public health colleagues are always thinking about what can we do in the environment to facilitate participation, not so much the personal factors. And we should be thinking about that when we think about response to these kinds of natural disasters.

So just moving on to the next slide on key personal factors in psychosocial adaptation, I tried to distinguish in this slide that medical factors including pain and disability status and age they play a part really in participation and adaptation. But actually a smaller part, it's much more people's cognitions about their body image, their affective responses, the kind of interpersonal factors or social support that they're experiencing, as well as their coping style that play the biggest roles in psychosocial adaptation.

Another way of saying this is an individual with a less functional amputation may in fact function better psychosocially if their psychology is in alignment

and is a facilitating factor, so physical impairment is not the determining factor in terms of someone's psychosocial adaptation.

So moving on here, the people who experienced a limb loss have to deal with some significant body image issues and there are three things this individual must kind of bring together, their view of them self before the amputation, after their amputation and then how they integrate their prosthetic into their life.

It appears that people who are able to make this integration very early tend to have very good adaptation. Where as those who are very self conscious about their amputation tend to do poorly in the long run. In fact it does appear that people with upper extremity amputations tend to have poorer psychosocial adaptation, probably due to the fact that they have more reduced function. It's more visible and our upper body tends to be more central to our body image.

If we move on and look at the affective responses to limb loss, just looking at the overview slide here, the rates of affective distress, depression, anxiety. They're higher than the general population, but they're similar to other medical population. And the depression prevalence rates range from about 20 to 35% in those with lower limb amputation.

We have very little data on upper extremity amputation. And the data I want to present today are virtually all from western society, that is U.S., Canada, Western Europe. We have very little data on these mood disorder rates from lower and middle-income countries.

The other thing surprisingly is we don't have very good data on what the anxiety prevalence rates are in people with amputation, although we know it's higher in those who have traumatic amputation.

The next slides looks at - provides some more detailed data on the rates of depression and not surprisingly, those with inpatient units have a higher level of depression as compared to outpatient. And you can see there that the point prevalence rate in the general population is about 4 to 10% and medical/surgical patients is like 6 to 14%. But in amputees 21, about the same amount when you get to the outpatient side.

What kinds of things are risk factors for depression following limb loss? The first one is recency of the amputation. It appears that those who are less than two years post amputation have a higher rate - have higher rates of depression. Younger age in adults is associated with greater levels of depression. That is folks as we move into the 50s, 60s and 70s the depression rates go down in those groups with amputations at that time.

People who have more activity restrictions, those who have more social discomfort, that is feel more self conscious in public and people in pain are at significantly higher risk for depression which obviously could be an issue in Haiti where we may have poor pain control going on.

As I mentioned before there is very little evidence on PTSD and other sorts of acute stress disorders in people with amputation. I included some data here looking at people following motor vehicle crashes. And we certainly think that these rates which you see range between 24 and 39% post MVCs are probably very reasonable estimates or perhaps actually even the low side of what we

might expect in people following a large natural disaster like this. But really the data really aren't there to make any firm statements.

If we look at some of the interpersonal risk factors there are two factors that had been pretty well identified in the literature and that is, is that people who have a perceived social stigma, that is they see themselves as being less desirably socially, they're at higher risk for poor adaptation. And this is not just a perception of people, as in most cultures there is a documented negative bias against people with limb loss.

The second thing is people are often times develops perceived vulnerability to crime, less able to defend themselves, may be more victimized and certainly folks with those kinds of perceptions or accurate assessments are more likely to have a poor adaptation.

There are three coping factors that have been pretty well identified in the literature, at least in Western society. That is those with poor social support, those with avoidant coping styles, that is people who tend to sweep their problems under the rug and want to avoid discussion of problems or taking action do poorly.

And those individuals who engage in what we call catastrophizing or negative thinking styles, these are folks who say I'm never going to get better, it's not going to work out, my life is ruined, people who talk this way over and over and over again are at higher risk for poor adaptation.

There is a growing literature that's beginning to identify some of the positive coping factors. In psychology, like in medicine we're generally taking a pathological approach. But we're beginning to look at what are some of the, if

you will, facilitators of adaption in people with limb loss. And there are four possible candidates here that appear to have some merit. One is people who are able to shift their values. That is, base their self worth based on who they are as a person, as opposed to what they can do.

Second of all, those individuals who tend to make downward social comparisons. That is some people naturally - as human beings we naturally compare ourselves one to the other. Some people just naturally tend to compare themselves to those who they think are less worse off than themselves. Other people tend to have a predilection to compare themselves who they perceive as being better off. Those who make the downward comparisons tend to be more resilient.

There are some growing evidence that people who have spiritual religious beliefs and practices may have some benefit there. And those people who are able to find if you will the silver lining. Some people are able to find benefits in loss and difficulties and perceive their own strengths. These are things that we're just beginning to understand as we go forward.

Moving now to the Haiti experience, obviously the psychological care of these individuals is something that's going to be a growing concern over time. At the present time obviously we're very focused on the - just saving lives and providing basic services. But as this crisis, if you will, matures, there's going to be more to be thought about.

I just want to touch briefly on some of these points and I have some other Web sites or sources you might want to go to, to learn more. The first point we want to recognize is that mental health and psychosocial problems encompass far more than the experience of PTSD or trauma or depression.

We just focus only on the psychological trauma, we tend to miss the fact that there are - first of all other pre-existing problems of infrastructure which I think we're most aware of in Haiti, but also it tends to - for us to minimize the assets or resources the communities have that can support their own mental health and psychosocial well being.

Just - I was speaking just the other day with Dr. Jeanne LaBlanc who's out of Vancouver, who has been to Haiti three times now doing psychological care of some of these patients. And these are some of the comments that she shared with me.

And some of the issues are ones you might expect, that people are wondering if they had did something that may have caused God to be mad at them in some way. She heard the same kind of concerns you might hear anywhere in the world. Such that, you know, what their wife or husband or children, how they might view them now.

And then the final point, I think is a real valid concern, is that people are concerned that how are they going to support themselves or their families. As we move to more substituent cultures, people's physical abilities become increasingly important to their survival. And so the desirability or acceptability of a physical limitation becomes increasingly problematic as you move to a more challenging physical environment and substituent culture.

As we think about these folks and think about them psychologically we need to recognize that there's a number of normal reactions to crisis and loss that people are going to be sad, they're going to be anxious, they're going to be fearful, angry or guilty. These are not pathological reactions.

We need to have a high index of suspicion in terms of recognizing the fact that there's going to be lack of concentration problems, potentially an increased risk of violence or alcohol. And that social problems of isolation and violence are likely to be a natural out coming from these kinds of disasters.

There are people who are going to have severe reaction to crisis and loss. So if you're in this kind of situation you're looking for these signs, people who are disoriented, who are not responding to conversations, who are putting themselves in dangerous situations, suggestively not thinking things through, they're threatening to harm themselves or others, or they're unable to do basic activities. They're not taking care of themselves in terms of grooming or eating. These are all signs of a severe reaction that requires more attention and diagnosis.

As we begin to think about building in psychosocial support I would direct you to the slide here with the pyramid, right before that suggesting that, you know, we need to recognize the fact that there is support in these communities, that they do have people who - community leaders. There are people who people have turned to before for support. And that needs the mobilization of their infrastructure needs to be part of any kind of disaster psychosocial care.

And if you look at the pyramid here we see it's a layered system of complementary supports. Starting with making sure people have basic secure services and security, then naturally bringing in the community and family supports that were pre-existing. We then as the crisis matures move to more focused, non-specialized support.

We are moving away from the idea of what they call critical incident debriefing. There are some literature that suggests that it's not very helpful in these kinds of situations. And then finally, you know, a very few number of people are going to need specialized services. So really in this kind of situation we need to think of a public health approach to mental health as opposed to a one-to-one provider approach.

I did include here some basics on psychological first aid. So we're going to - using an ABCDE Model, where we're going to assess people for safety, physical needs. People with serious reactions we discussed before. Being attentive to the person in a respectful kind of way, comforting them through your presence and addressing them - the D, do addressing practical needs, helping people problem solve and linking them back with their natural support system.

And keeping in mind that you're going to be exiting and that you need to prepare yourself for them for this, as well as preparing yourself for taking care of yourself.

The last couple slides here. Just let me touch briefly on cultural competency. Just a couple of highlights, we know in the Haitian culture, as in many other culture there's a stigma about reporting and discussing signs and symptoms of mental illness or distress. That in this cultural there are different and culturally appropriate ways to express grief or pain, particularly referring to physical symptoms of stress, as describing the stress in physical terms rather than in emotional terms is very, very common in this culture.

And that there are very specific customs that deal with the dead and for grieving that if you're going to be there you need to be aware of and follow those kinds of things.

I added a couple of slides that provided some resources. There are four very good Web sites that people who have been to Haiti have used. And they recommended these to me.

There is a nice chapter in the (Nicolas et al.), describing on the strengths of Haitians in coping with natural disasters to give you a more balanced view in thinking about these individuals. Not just seeing them as victims, the people who have real resilience.

You know on the final slide there I gave you some references and resources on psychosocial aspects of limb loss. Once again primarily focused based on Western literature, but some of those concepts I think have relevance.

So let me stop there. And we have about 10 minutes left by my East coast clock and turn it back over to our moderator and see if we have any questions or things you'd like us to elaborate on.

Coordinator: Thank you. We will begin the question-and-answer session. If you'd like to ask a question please press star 1. Please un-mute your phone and record your name when asked, to withdraw your request press star 2. Again if you do have a question or a comment please press star 1 and record your name. One moment please while we wait for the first question.

Our first question comes from (Nicoletta). Your line is open. Go ahead.

(Nicoletta): Hi. I'm with the Chicago Department of Public Health and Emergency Preparedness and Response. I have a question. I didn't quite catch when they were explaining - when it was explained in the presentation, very interesting information regarding when people attribute they have a better outcome.

I wasn't clear if they consider they're situation, they're better off when they compare to someone who is worse than them then they have a better outcome. And then something else was mentioned. Can I get some clarification on that please?

Stephen Wegener: Sure. This is Steve Wegener responding. We're talking there about making social comparisons.

(Nicoletta): Yes.

Stephen Wegener: That as human beings we tend to compare - to assess how I'm doing I tend to compare myself to others. This is a natural response, a natural way of taking stock. And there is some data that suggests that people have various, if you will styles of doing this.

Some people tend to have a style of regularly comparing themselves to people who they feel are better than them in some way, richer, prettier, thinner, whatever it might be. People who make what we can an upward comparison, that tends to depressed aspect, not surprisingly.

Some people tend to make downward comparisons, compare themselves to someone who's better off. So a patient might say, yeah I lost my leg, but at least I'm not dead. Where as somebody else might say is, boy, you know, I lost my leg and that person got off without anything happening to them.

Obviously you can see how those cognitions lead to a very different affective state. The question that we don't know about the comparisons is, is it possible to change this?

Certainly it's not helpful clinically to say to a patient, you shouldn't feel bad, Mr. Jones, in the next bed has a cancer much worse than yours. That's not a helpful intervention by treating healthcare providers. But we do know that people who do this naturally tend to have more resilience. So the real question emerging in the literature now is can you teach this to people or is it something that is, if you will, stylistic that is very difficult to change.

(Nicoletta): Thank you.

Coordinator: And if anyone has a question or comment please press star 1 and record your name.

Loretta Brown: Operator?

Coordinator: Currently we have no additional questions at this time.

Loretta Brown: Hi. This is Loretta Jackson-Brown, the moderator. I do have a question. Given the limited formal mental health providers in Haiti, what community resources can be mobilized to help folks adapt to amputation?

Stephen Wegener: Yeah. This is Steve Wegener responding. I think Loretta the issue is, is that people going into a situation need to learn something about the community and identify spiritual leaders, community leaders, who we know are working

there already and being very mindful of them, so that people can tie folks back into these natural occurring communities.

We tend to think in terms of providing a one-to-one care to patient, as opposed to saying, okay, you know, tell me who's important in your life that's around here. What were you doing before you became injured and trying to link them back to those people and those resources rather than trying to think about, I as a clinician are going to work solely with this patient. It's much more of a community focused mental health service, as opposed to an individual focused mental health.

If I might has a question of Dr. Sheehan. This is Steve Wegener. Terry, can you talk a little bit about some of the long-term healthcare needs of these folks. I mean obviously people are mobilized in the short run, but a lot of the problems you talked about in terms of need for re-fitting of prosthesis or develop of heterotopic bone. But those are going to be longer-term problems. And have you heard much what the planning is for managing those problems?

Terrence Sheehan: Hi. This is Dr. Sheehan. Thanks, Steve. I - what I have heard is that they are currently just building the structure which is a tent hospital. And this is at Port-au-Prince. And that is one. And they're putting in mobilizing teams to go down to Haiti on a week-to-week basis. And what I was explaining to a colleague today was that as you go through this process as I've outlined of first healing and that's if you can heal and you've had an appropriate surgery. It all starts, you may need to go back to the OR and then start the healing process. And then it's keeping somebody in shape that they are finally at a point that you are able to be fit with a prosthesis. Well it's not one size fits all and it is not what fits in March will fit in April, will fit in August and so on.

And then for the rest of your life it becomes an every six month type of issue. I know that there has been a hospital in Haiti, Albert Schweitzer Hospital that has received a significant donation of a prosthetic lab from one of the large prosthetic companies here in the United States, Hanger.

And they are now with that equipment hoping to develop the manpower that would be able to handle the changes and the adjustments and be there not just in 2010, but in 13 and 15 and 20. And as the thought is that these are young healthy people that it's going to be a lifetime of prosthetic needs and care that will need to be addressed.

Stephen Wegener: Yeah. Sounds very good.

Terrence Sheehan: So in essence they're just getting beyond the search and rescue to this healing phase. And they're not up to the lifetime care yet. But I think there is some vision. I just put out an email today to our academy to ask - there's a projection that they'll need 80 Physiatrists to rotate down to go and help with the whole process of handling those. Not just with limb loss, but spinal cord injury and head injury.

Stephen Wegener: Thank you.

Loretta Brown: This is Loretta Jackson-Brown. We have time for one more question.

Coordinator: Currently on the audio side we have no questions at this time.

Loretta Brown: I want to thank our presenters for providing our listeners with this information. And I would also like to thank our participants for joining us today.

If you have any additional questions for any of our speakers please email the Clinician Outreach Communication Activity, COCA at coca@cdc.gov. Please indicate the speaker's name in the subject line of your email and we will ensure that they are forwarded to the appropriate person for a response. Again that email is coca@cdc.gov. The recording of this call and the transcript will be posted to the COCA Web site at emergency.cdc.gov/coca within the next week.

You have a year to obtain continuing education for this call. All continuing education credits and contact hours for COCA conference calls are issued online through the CDC training and continuing education online system at www.2a.cdc.gov/tceonline/.

Thank you again for participating and have a great day.

Coordinator: This concludes today's conference. You may disconnect at this time.

END