

# Restoring Orthopedic Services in Haiti

## *A report to the AAOS and its associated organizations*

### Introduction

I first need to reveal that a good portion of this report is a reflection of the experiences which I have accumulated during the past 16 years while I have been traveling to Haiti. I do not wish to give the impression that I am in any way an expert on Haiti. I have had the wonderful opportunity to meet many people and see a number of their health care facilities in southern Haiti. This is a combination of my personal experiences there and my four trips in the past 12 months to have meetings with the members of the “*Societe Haitian Orthopedie Traumatology*”(SHOT).

**The Haitian Clubfoot Treatment Program (HCTP).** In the past 6-7 years the major emphasis of my work in Haiti has been to develop a country-wide program for the treatment of clubfeet. Previously, clubfeet in Haiti’ if treated at all’ underwent surgical releases with very poor results. About 10 years ago Dr Rick Reed from Charleston, South Carolina, started teaching one of the attendants in a small pediatric rehabilitation facility in Jacmel on the southern coast of Haiti. He demonstrated that individuals with no medical background could be taught to manipulate the feet of children with clubfeet and apply casts using the Ponseti technique and achieve good results. This led to the expansion to other clinics in Port au Prince (PaP) in which well over 100 children were receiving treatment each year. The only surgery required was for someone with surgical training to do the percutaneous tenotomies. Thus, similar treatment programs were set up at Ecole St. Vincents and Healing Hands for Haiti. About five years ago CURE International assumed sponsorship of the Haitian Clubfoot Treatment Program. They supplied the plaster and cast padding and payment to the facilities for the application of the casts. Dr Idgie Garnier, the only partially trained pediatric orthopedic surgeon, in Haiti was designated as the medical director.

In the years 2008-2009 St. Vincent’s rehabilitation facility had 864 patient visits in which 2664 casts were applied and 66 percutaneous Achilles tenotomies were performed. The purpose of the discussion in this report to the AAOS is to demonstrate that Haitians with little or no previous medical experience can be taught to perform somewhat sophisticated orthopedic procedures and conduct clinics on their own. This does, however, require a long term commitment on the part of non-Haitian medical personnel supervising the program to provide frequent re-enforcement and close monitoring of their work. This is necessary to be sure that the quality is satisfactory to achieve the desired results.

### **Orthopedics prior to the 2010 earthquake.**

To appreciate the conditions following the earthquake one has to have a picture of what the conditions were prior to 12 January 2010. Things had begun to deteriorate in the orthopedic community. There was very little interest in getting orthopedists from other countries to participate in any long-term assistance programs in Haiti.

**Limited resources.** A few private hospitals in Haiti had the ability to provide quality orthopedic care to their patients in PaP. However, in the smaller hospitals in the outlying towns, it was difficult to practice orthopedics prior to the earthquake in Haiti. This was because very few facilities outside PaP had the equipment necessary to manage acute injuries using primitive methods (*Figure 1*).



**Figure 1 a.** Femoral shaft fracture being treated with tibial pin traction. **b.** A fabricated external fixator for an open fracture of the tibia.

In addition, since primary care is often not available in small hospitals or remote areas, the few orthopedic surgeons that are working in those areas are often presented with delayed displaced fractures or chronic infections not seen in medical facilities in the North America (**Figure 2**). These can be a challenge to many surgeons from North America who do not have much experience treating these conditions. In addition, the diagnostic resources available in North America often are not available at these Haitian facilities. In many cases the only image study that can be obtained is a poorly exposed plain x-ray film.



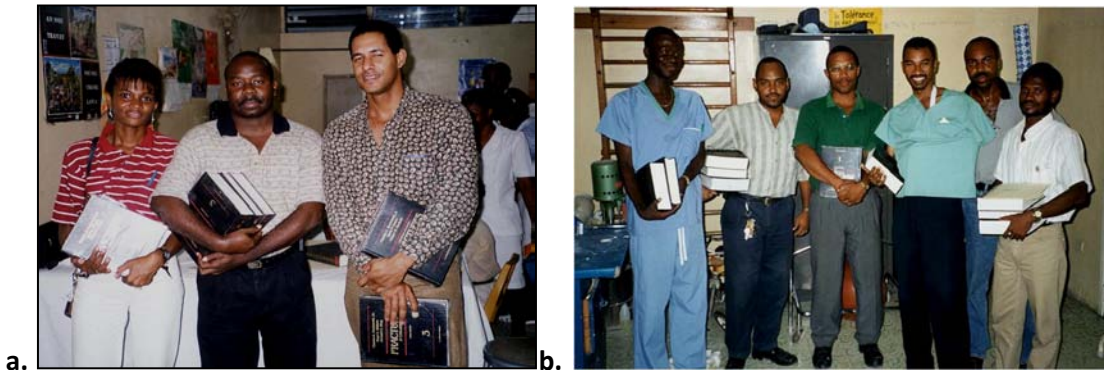
**Figure 2 a.** A tibial plateau fracture that is three weeks post injury awaiting surgical correction at HUEH. **b.** Chronic osteomyelitis in which the sequestered tibial shaft is being

In the public hospitals the primary treatment is often delayed because of limitations imposed by lack of the proper implants or functional surgical facilities. For example, once the patients are evaluated at the Hopital de L Universite Etat D Haiti (HUEH) and determined that surgery will be necessary, they are placed in a large pre-operative waiting area next to the emergency room. They remain until they are sent to the surgical suite. This wait can be as long as a month (**Figure 3**). All of the non-medical nursing care, such as feeding and bathing, must be provided by family members. This means that there are often many people occupying the patient's area.



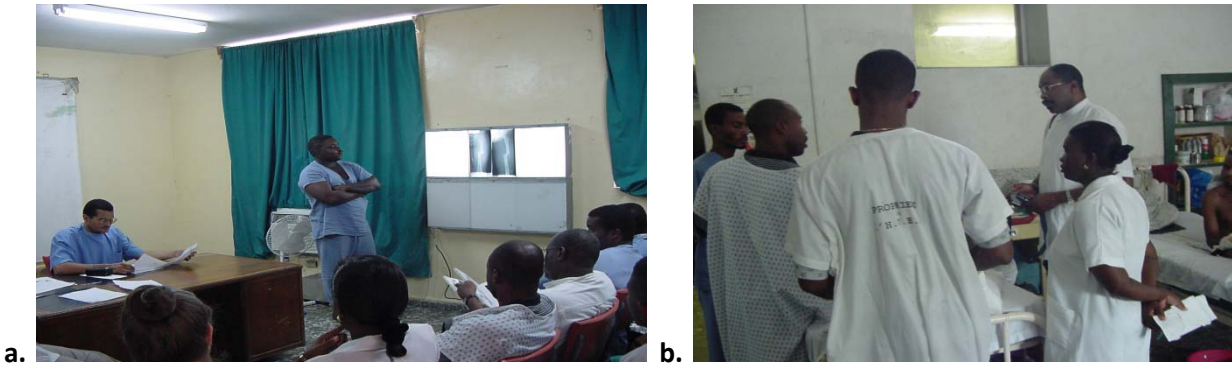
**Figure 3.** The preoperative waiting area next to the ER where the patient's wait until they have their surgery performed. Note also the presences of family members providing non-medical nursing support. This image represent only one-fourth of the total patients in this waiting area.

**Training of orthopedic surgeons in Haiti.** In the past the main orthopedic training program for residents was at HUEH in Port au Prince. Because there is a lack of equipment to use in treating orthopedic conditions, many graduate orthopedic surgeons leave Haiti to find a better environment in which to practice the skills that they have learned during their residency (**Figure 4**). In North America it is very competitive to obtain a position in an orthopedic residency. In Haiti it is difficult to recruit young graduates to apply for a residency position in orthopedics because they know that it will be difficult to find a location in Haiti where they can utilize the skills that they are taught in their residency training.



**Figure 4 a,** These residents were part of the groups training in the late 1999. None of them are now working in Haiti as practicing orthopedic surgeons. **b.** Only three of the six residents who graduated in 2000 are still practicing in Haiti.

**The Residency Program at program at HUEH** During my previous visits to Haiti in the early part of the last decade I made it a point to visit the residents and staff at HUEH giving lectures and making rounds with the residents. At that time they had an active training program with good local faculty participation. They had daily rounds to present the cases recently admitted with the orthopedic staff. The faculty often followed this conference with ward rounds (**Figure 5.**) Within their limited resources, they had an organized program and some quality teaching. Unfortunately, there were not a lot of individuals coming from outside Haiti to present lectures. During this time I had the opportunity for some of the residents to come to the Christus Santa Rosa Children's Hospital to participate in observerships.



**Figure 5 Orthopedic rounds at HUEH. a.** A resident presenting case admitted the previous night to Dr. Adrian Andre and the other staff and residents. **b.** Ward rounds with Dr. Bernard Nau

After 2005 when there was a lot of unrest following the collapse of the presidency of Aristide, activities at HUEH began to deteriorate. The hospital was effectively closed down for days and even weeks because of strikes and demonstrations. During my last visit in December 2009, I found that they had very little resources to perform even the simplest of orthopedic procedures. There also was very little staff supervision. Thus, orthopedic training was on the downswing prior to the earthquake.

**The Functioning of the Orthopedic Community.** Most of the practicing orthopedic surgeons were concentrated in the PaP area where there were some private hospitals that were sufficiently equipped to permit the performance of basic orthopedic procedures. These were supplemented by the NGO facilities in the area. Fortunately, the organization “[Médecins Sans Frontières](#)” had a facility that provided acute care for the common emergencies which occurred when HUEH was non-functional because their frequent work stoppages. This organization was extremely efficient in providing care for the earthquake victims.

A group of orthopedic entrepreneurs banded together and produced a state of the art orthopedic hospital in PaP with a CT scan and well-equipped operating rooms. It was meeting with limited success. Unfortunately, it went bankrupt following the earthquake. The reasons for its demise will be discussed in a later section of this report.

The Haitian orthopedic society, *Société Haitienne de Traumatologie et d'Orthopédie* (SHOT), was a very active organization in the 1990s. They had frequent meetings with a lot of communication between the practicing orthopedic surgeons. In the first decade of 2000, things changed. Following 2001 they had no meetings. Thus, there was very little communication between the local orthopedic surgeons.

**Political unrest.** For many years Haiti was dominated with dictators such as **François "Papa Doc" Duvalier** and his son **Jean-Claude Duvalier** “Baby Doc” followed by **Jean-Bertrand Aristide**. The last two were transported out of the country involuntarily (**Figure 5a.**). Fortunately, since President Astride left the second time in 2004, there have been reasonably peaceful transitions and the Presidents have been able to complete their terms. Despite this however, the some Haitians are a volatile and it is not unusually to have political demonstrations which can disrupt normal activities in the big cities (**Figure 5b**). Needless to say this political instability, combined with the high crime rate, is part of the reason for the recent US State Department travel warnings advising against travel to Haiti (**Figure 5c.**). These travel warnings have impacted the ability of many aid agencies to bring their recovery programs to Haiti.

**Rulers & Heads of Government in Haiti**

Name/Title	Term	Outcome
Nord Alexis President	Dec 21, 1902 – Dec 2, 1908	OUTSTED/EXILED
Antoine Simon President	Dec 17, 1908 – Aug 2, 1911	OUSTED/EXILED
Cincinnatus Leconte President	Aug 14, 1911 – Aug 8, 1912	BLOWN UP IN PALACE
Tancrede Auguste President	Aug 8, 1912 – May 2, 1913	DIED IN OFFICE
Michel Oreste President	May 4, 1912 – Jan 27, 1914	OVERTHROWN
Leslie F. Manigat President	Feb 7, 1988 – Jun 19, 1988	OVERTHROWN
Gen. Henri Namphy Military President	Jun 20, 1988 – Sept 17, 1988	OUSTED/EXILED
Gen. Prosper Avril Military President	Sept 17, 1988 – Mar 10, 1990	RESIGNED/EXILED
Gen. Herard Abraham Military President	Mar 10, 1990 – Mar 13, 1990	END OF TERM (3 DAYS)
Ertha P. Trouillot Provisional President	Mar 13, 1990 – Feb 6, 1991	END OF TERM
Jean-Bertrand Astride President	Feb 7, 1991 – Sept 30, 1991	OUSTED/EXILED

**UN peacekeepers killed in Haiti**



**Gun battles in Haiti between UN troops and rebels have left four people dead, including two peacekeepers.**

a.

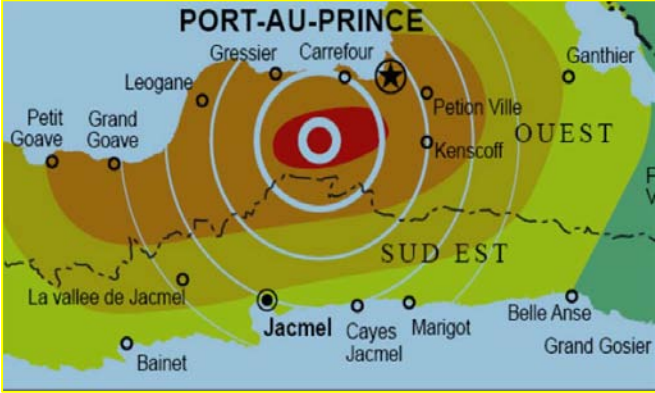
b.

**c. Travel Warning U.S. DEPARTMENT OF STATE Bureau of Consular Affairs Haiti December 09, 2010**  
 The Department of State warns U.S. citizens of the risks of traveling to Haiti and recommends against non-essential travel. This notice replaces the Travel Warning dated June 24, 2010 to reflect continued high crime, the cholera outbreak, frequent disturbances in Port-au-Prince and in provincial cities, and limited police protection and access to medical care. The Department of State strongly urges U.S. citizens to avoid non-essential travel to Haiti. The level of violent crime in Port-au-Prince, including murder and kidnapping, remains high, and Haitian authorities have limited capacity to deter or investigate such acts or prosecute perpetrators

**Figure 5. Political unrest and criminality in Haiti** a. The fate of Haiti’s past presidents up to 1991. b. Image from newspaper detailing an incident of political unrest. c. The most recent US State Department Travel advisory.

**Orthopedics following the Earthquake in Haiti**

The 7.0 magnitude earthquake that struck Haiti on the afternoon of 12 January 2010 produced wide devastation of property and killed a reported 220,000 inhabitants and left close to 1,500,000 homeless. Its effects were felt from PaP to Jacmel on the southern coasts, and as far west as Petit Goave, with the epicenter being between PaP and Leogane (**Figure 6**). Many of the medical treatment facilities became nonfunctional and temporary facilities had to be provided.



a.

b.

Figure 6. The extent of the destruction produced by the January 12, 2010 earthquake. The epicenter is indicated in red.

The response was tremendous with relief workers coming from countries throughout the world. The majority of the injuries were orthopedic. It was recorded that close to 450 AAOS members were involved in one way or another in providing assistance to the people of Haiti. I termed this *“the combat phase”* of the relief efforts.

We have long since moved into the rehabilitation phase which requires rebuilding programs and long term commitments. We now need to look at the effects upon the Haitian Orthopedic Community.

The present situation for the orthopedic community can be summed up in the recent comment by Dr Hans Larsen the President of SHOT

***“Like you know, the orthopedic situation is not the best. We still have young fellows in a difficult economical situation and new graduates with no clear future”***

**The orthopedic community has suffered a number of significant losses:**

- 1. Loss of physical facilities**
- 2. Loss of a functional residency training program**
- 3. Loss of working graduate orthopedic surgeons**
- 4. Loss of orthopedic practices**

**What should be the response of orthopedic organizations from North America?**

There was a well of enthusiasm immediately following the earthquake for orthopedic surgeons from North America wanting to come to Haiti to participate in orthopedic services. Unfortunately, some of this initial enthusiasm is beginning to subside. Likewise, the majority of those now wanting to visit Haiti desire mainly to perform surgical procedures. The goal of visiting orthopedic surgeons now needs to be changed from a mission of service to one of education. In visiting with the members of SHOT, the following items were discussed as their priorities:

**1. Rebuilding the former residency training program**

Everybody agrees that the present resident training program at HUEH is non-functional. The most ominous sign of the failure of the residency program is there are no applicants for the coming year. Dr. Adrian Andre who has been the main individual involved in the resident teaching at HUEH is now moving his focus to another Government hospital, Hopital “La Paix” in Delma, which is an eastern suburb of PaP.

SHOT would like to have more input in the future reorganization of the residency training program.

Initially they had some concerns about the proposed orthopaedic trauma care specialist (OTCS) program for Haiti by Dr. Andrew Pollak. It is to be led by and based at the University of Notre Dame du Haiti School of Medicine. The Catholic Relief Services (CRS) will be providing logistical support for this program. Now that the SHOT members have seen all the effort that Dr Pollak has put into this program and what it will do, they are very excited and want to support the program.

Their major concern is that it covers only trauma. They want to try to organize a supplementary program to teach the orthopedic residents how to manage the many non-traumatic conditions that they see in their everyday practices. Because of the present collapse of the training at HUEH, it is hoped that a good portion of this secondary orthopedic training could be under the supervision of SHOT. They hope to utilize the model set up by Dr. Pollak. The practicing Haitian orthopedic surgeons could be the instructors in the functioning non-government hospitals in PaP. They would like to supplement the teaching with a program in which members of AAOS or other visiting orthopedic surgeons could assist in setting up lecture series and other types of hands-on training sessions for the non trauma conditions. They would also like to recruit French speaking orthopedists from both Canada and France to be instructors as well.

## **2. Coordination of the teaching efforts provided by the various organizations working in Haiti**

The members of SHOT have been informed from various sources that there are plans for many orthopedic groups to travel to Haiti to organize education programs for individuals providing orthopedic care at the various medical educational and service centers. Such groups would include: AAOS, OTA, POSNA, and the Catholic Relief Services program proposed by Dr. Pollack. They would like to have some input in the selection of the types of teaching projects and the subjects to be considered. There was concern that some of the subjects to be presented would not be of any use at this time. They would like to give suggestions for other topics to be presented.

It was also hoped that there would be coordination between these groups coming so there would not be any duplication. In summary, they want to have input in the development of the future educational ventures in their country

## **3. Setting up administrative support**

One of the main problems SHOT has is that they do not have any administrative support. All their correspondence and contact work is done out of the offices of the officers and members of SHOT. As a result, there is very little coordination for their society affairs and educational projects.

In the best case scenario, what they would like to have is an office and an individual manning the office and phone for minimum of five days a week. This individual could also take care of organizing their electronic library. Such an office manned with an individual fluent in English would greatly enhance the communication with other organizations and individuals wanting to come to Haiti to provide orthopedic care. For example, if a system is set up to notify SHOT when various visiting orthopedic surgeons are making plans to come to Haiti, this would give those individuals a specific address and phone number to contact SHOT.

## **4. Communication with visiting orthopedic surgeons.**

They realize that there are often many orthopedic surgeons who come to work in Haiti that have unique teaching and training skills. They would like to set up a system whereby the members of SHOT could be informed of the pending arrival of these orthopedists. They would like to have some interchange with these surgeons so they could benefit from the knowledge that they are leaving in Haiti. This would require the improvement of a system of communication with SHOT with the prospective visiting surgeons.

## **5. Developing a system of accreditation for the orthopedic surgeons in Haiti**

This is one of their major priorities. They have proposed a pyramid system of obtaining CE credits and developing various levels of expertise. Here is a summary of their proposals:

- a. Make a directory of all local practitioners in the field and subscribe them to a program of Continuing Education (CE)*
- b. Have our foreign friends transmit a list of the human resources (visiting professors) we can use in our program*
- c. Make a list of Haitian orthopedists working abroad and motivate them to participate in our CE program*
- d. Create a comprehensive program of CE based on the local needs and taking into account the resources available in the country and abroad*
- e. Create new rules in the organization that will base future qualifications on the new program of CE units (a first mandatory step towards standardization)*
- f. Use the CE units/program as an incentive by annually making public the names of surgeons who will have followed the program.*

## **6. Developing long term relationships**

It has become obvious to SHOT that the best way to get programs completed is to have individuals from the AAOS or other orthopedic organizations develop long-term relationships with the various orthopedic centers in Haiti. It takes time for visiting individuals to gain credibility with the local providers and determine their specific needs.

## **7. Solving the problem of a lack of surgical instrumentation**

The primary concern that the members of SHOT have is the unavailability of surgical equipment to perform high-quality surgical procedures. They pointed out that Haiti is a very small market and thus is largely ignored by the major orthopedic equipment providers. They suggested that possibly there can be some grouping of the various facilities providing orthopedic care in Haiti. This goes along with their idea of concentrating orthopedic services in PaP in a few centers with qualified surgeons and the proper equipment.

## **8. Establishment of new medical and surgical facilities**

One major concern expressed was that there are often new hospitals and other medical facilities being organized and constructed in Haiti without any Haitian input. They would like to be able to provide input when these facilities are being planned and built. They would like for the various NGO facilities to have more Haitian orthopedic surgeons involved in providing of the orthopedic services to their own citizens.

They mentioned that Médecins Sans Frontières (MSF), also known as “Doctors Without Borders”, was very good in hiring Haitian orthopedic surgeons to provide orthopedic care in their facilities. They would like other NGOs to follow that example.

One of the major problems with the new graduates is having a place to practice. Thus, they would like to encourage the various NGOs to consider adding Haitian orthopedic surgeons to their staffs.

## **9. Development of a pediatric orthopedic teaching and training center**

There has never been any real pediatric orthopedic training or treatment facility in Haiti. SHOT has as one of its major goals to develop a center providing pediatric orthopedic care.

Prior to the earthquake, Ecole St. Vincent’s provided the only semblance of pediatric orthopedic care. It was a very low level treatment facility with a single operating room supplied with limited instrumentation. The care there was provided by Dr. Idgie Garnier who had no formal training in pediatric orthopedics. She was simply being trained on the job by various visiting pediatric orthopedic surgeons. She was able to do an outstanding job of treating the many patients there with limited resources. Unfortunately, the main facility at St. Vincent’s was totally destroyed with the January earthquake. Dr. Garnier is presently living with her children in Montreal, Canada. It is unclear whether or not she will be returning to Haiti anytime soon.

Dr. Francel Alexis, a recent graduate from the HEUH orthopedic program, is presently participating in a pediatric orthopedic fellowship at the CURE Children’s hospital in Santa Domingo in the Dominican Republic. The hope is for him to return to Haiti after his training to develop a pediatric orthopedic service.

The major problem is that there is no facility in Haiti where major pediatric orthopedic procedures can be performed. The new St. Damian Children’s Hospital situated next to the American Embassy is presently filled with other non-orthopedic services and has not been anxious to develop a pediatric orthopedic program. Dr. Hans Larsen is currently involved with the construction of the St. Luc facility being built next to the present St. Damien Facility. Supposedly, this is to be primarily a center providing orthopedic care. It is hoped that this can become a major center providing pediatric orthopedic care in the future.

## **10. The price of “free care”**

The visiting orthopedic surgeons need to be aware of the fact that when they work at a local medical facility, this puts an economic burden on that facility. The hospital still has to pay their employees and the overhead for running

the hospital. The visiting surgeons should be prepared to provide some financial assistance to the institution where they will be working. In addition, the provision of free care keeps the patients from seeking private care from the local orthopedic surgeons. Unfortunately, providing all the free relief care has decimated the private practices of the local orthopedists

### **Final personal comments**

Based on this information that I have presented, I would like to present a few suggestions and provide some ideas as to how to work with the Haitian Orthopedic Community. I need to add that these are strictly my personal opinions.

#### ***Final suggestions:***

1. Have Dr Pollak and SHOT work together towards combining his very good program of training individuals to treat traumatic conditions with the desire of SHOT to include the teaching of Non-traumatic conditions to the orthopedic trainees. This may involve the recruitment of other AAOS members with expertise in designing orthopedic training programs.

2. Gather together all the organizations desiring to have a part in the rebuilding of the Haitian orthopedic programs as a single group or task force so everybody can come up with a well-coordinated plan incorporating all aspects of orthopedic care. This would include individuals from AAOS, OTA, POSNA, The Canadian Orthopedic Association jus to mention a few. This would create a group whose only focus would be to help rehabilitate the Haitian orthopedic community.

3. The organizations planning to provide relief services in Haiti have to accept and work around the restraints imposed by the "US State Department Travel Advisories.

#### ***Things I have learned in working with the Haitian Orthopedic Community:***

1. Be willing to develop a long-term commitment
2. Be satisfied with achieving only small goals
3. Learn to accept that one's original goals may not be achieved first time around
4. Be persistent; it takes time and patience to accomplish things in Haiti.
5. Credibility comes only with demonstrating commitment.
6. The Haitians have had experiences with many groups and individuals coming to Haiti with great plans, only to have these individuals lose interest and not follow up as originally promised.
7. It is important to first get to know the individuals with whom you will be working and develop their confidence.
8. First, listen to our Haitian colleagues and find out their needs and desires.
9. Do not immediately tell them what they need, take time to determine out what they want
10. Remember their orthopedic resources are limited.
11. The techniques taught have to be adjusted to what they can realistically accomplish with the resources they have.

**Thanks for your continued interest,**

***Respectively submitted***

***Kaye Wilkins***

***13 February 2011***