

SCALPEL'S EDGE



A GIFT OF LIGHT, HOPE AND SURGERY TO PERU

FALL 2015 | ISSUE 18

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—Peter A. Cole MD

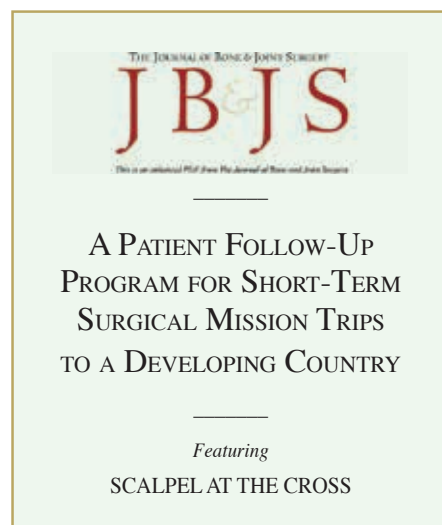


SCALPEL PATIENT OUTCOMES PROGRAM SCORES!

*By Peter A. Cole, MD
President and Co-Founder,
Scalpel At The Cross
Ministries*

Our patient follow-up program has been accepted for publication in the most prestigious orthopaedic journal, The Journal of Bone and Joint Surgery. This acknowledgement represents a milestone for our surgical mission and is significant in several ways. First, it attests to the quality of our surgical program, having met the highest level of peer review in scientific literature. Second, it will serve as a springboard to effective grants, which could help sustain the program and improve it. Third, it underscores the amazing teamwork alive at Scalpel At The Cross!

From the outset of our mission, it bothered me that we were operating on patients in the Amazon without knowing how they did after our surgeries. Sure, we fixed and straightened bones, and I shared hope and optimism for their outcomes. But I could not prove it. With honesty, I needed to admit that it was irresponsible to operate in an austere environment and assume that infection and healing rates were acceptable.



The Hippocratic Oath I took on graduation day from medical school includes an important principle of treatment, *Primum non nocere*—"First, do no harm." With the buy-in from our Scalpel Board, we launched an effort to identify a Peruvian medical doctor who could follow our patients and report back to me. This would be a costly matter, but I felt I had no choice. To me, not following my patients was akin to not closing a wound after surgery. It is simply part of responsible patient care.

Continues on back cover

FROM THE FRONT PORCH

By Dan, Laurie and Lyndi Porch

FIRST IMPRESSIONS

by Dan Porch



One of the first questions people seem to ask us here in Peru is... *How long will you be here?* It is a fair question since we are coming from a different land. And it makes you wonder if they are trying to figure out their own measure of investment in our lives. Our

response has been... *We are in the hands of God and are planning to be here for many years.*

And you might ask: *Has your heart felt this same commitment each day?* No! Transitions to new places never get easy even for those who have experienced them often. A new land ... a new people ... a new language ... a new set of rules ... new friendships ... new hardships ... a new working environment ... a new set of troubles ... all come together to make our transition an ongoing walk of faith in the One who has called us to this place.

Are there blessings and encouragements? Oh my, yes! From the 'get-go' we have seen God at work in and through our lives. Our presence here has been seen by many as a blessing even before we had spoken a

word. Yes, God is blessing and encouraging through our lives. And you know that when your life is used to bless others, there is a return that bubbles over in delight and thanksgiving. So, yes, we are experiencing more and more the delight of spending our lives for the good of others.

In a nutshell, we have been working hard to upkeep our facilities for Scalpel At The Cross ... always battling the creeping and destructive forces of the Amazon jungle with its termites, mildew, and rot. We have also been working alongside of Dra. Rosa Escudero and Isaac Mendoza in the follow-up of patients who have received implants and operations in the past. And we have begun to take some spiritual leadership for missionaries both formally and informally. It is a beginning. And we are thankful that the fruit of our lives depends not on us but on our great God working through us.

We are thankful to be here in Peru. There are many opportunities for service, and we pray the Lord will continue to open many doors for our Scalpel ministry in this place.

on your left, AND on your right. And if a moto-taxi is passing on your left, there may be somebody else passing on his left simultaneously. On roads with two-way traffic, there is an understood shared middle lane used for passing. If you have never played "chicken" before, here is your opportunity. You may encounter entertainment at stoplights...anything from juggling to gymnastics. You did not ask to be entertained, but you will be asked to chip in a bit for the kind service offered. People have to make a buck somehow.

And what about snakes? There are poisonous snakes in the jungle. I almost stepped on one...the feared "her-gon." Thankfully, I had taken the advice to always carry a flashlight while walking at night. I have seen three other varieties of snakes. I do not know about their poisonous status, so I still have to learn about them. Advice given if ever bitten: Look at the snake so you can describe it. There is the option to zap the snakebite with voltage in order to break down the chemistry of the venom (we had to look up how to do that), and then get to the hospital as fast as you are able. I don't like thinking about this lesson.



Where do you get a good cup of coffee? This is Peru, and they export coffee! I envisioned buying fresh beans in the market, becoming an expert roaster, and offering awesome coffee to family and friends. But...there are no beans in Pucallpa...this is the jungle, and the beans grow in the mountains! There are only ground beans in the grocery store. We suffered with those for a bit, and drank some instant Nescafe. We were feeling quite desperate. Then, in a coffee shop downtown...behind the register...in a jar...were whole beans. That is obviously where we buy coffee beans now and are much happier with our morning brew.

In many ways, we feel like children learning our ABCs in this culture. We feel savvy at nothing. We are not the go-to people for advice or expertise. We are learners. And being a learner is a good thing if you are teachable.

We want to be teachable, particularly with the things the Lord has to teach us in the classroom of Peru. Contentment during hard or discouraging days, trust in Him for our every need and for every need of our children spread far and wide, belief that He has good in mind for every situation, including things we don't understand, faith in Him every day... child-like, ABC-like faith.

LEARNING OUR ABC'S

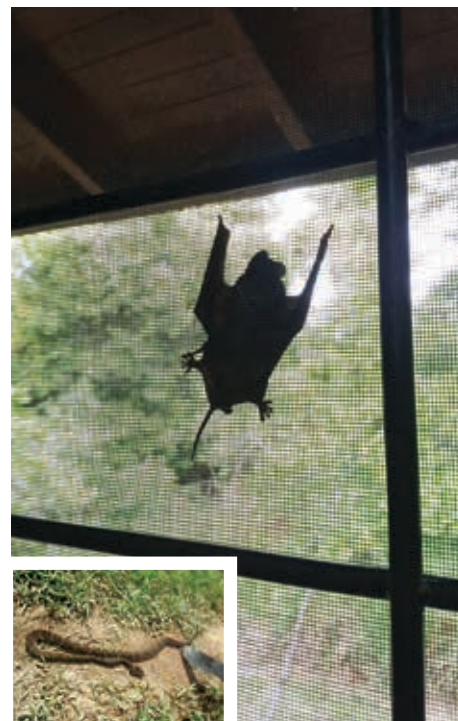
by Laurie Porch

You've got to start somewhere. We are at the ABC level. We moved to Peru 17 weeks ago. We did, and we do, have a lot to learn. There are the obvious lessons you expect to encounter when moving to a different country like language, navigating new systems, and learning how to get around in your newly adopted culture. But then there are those things you need to learn that you never really anticipated. Something comes up, and you just have to figure it out.

Take bats, for example. How do you get rid of bats in your roof that were happily living in unoccupied space until you

arrived? Well, my husband had to ask this question and do some research. Answer? You plug every interior and exterior hole with styrofoam and seal the edges with silicone. You leave occasional one-way doors (that you manufacture with cardboard) so they can exit and not re-enter. Then you gradually seal up those doors. You sit in your dark living room with a flashlight and feel a twinge of delight when they knock up against their exit but cannot re-enter. You rejoice when you don't hear squeaking at night.

Learning how to drive here is quite the experience. Did you know that in Peru you advance on a red light with 2-4 seconds remaining on the stoplight timer? This has implications for yellow-light behavior. You definitely stop and do not speed up on a yellow. Mototaxis pass



NEW IN PERU

by Lyndi Porch

Imagining experiences from afar is different from walking through them. My life in Peru has given me many more opportunities than I had expected. Stateside, I never have imagined myself being in an operating room watching surgeries. But here in Peru, I am able to participate with

teams as they come and am able to see the physical changes patients experience through surgery. On follow-up visits, I join with Doctora Rosa in taking out stitches and seeing how life improves for these patients. It is incredible to think that I am a part of this great work. I am excited for future teams coming down.

Peru has also been very inviting in terms of friendships. I have been able to make Peruvian friends very easily. They have a warm and friendly culture, and they make you feel at home. Although I cannot communicate as well as I would like, they are gracious; laughter often becomes our main language. In the future, I hope to improve my Spanish skills so I can communicate with the people around me and be more helpful to the mission teams.



Imagine going from a public school class of 400 to a high school of nine. It has been an extreme change from the past few years of my life. But I have found a fun group of friends among the missionary kids. I am enjoying life here! This opportunity of living in Peru is giving me a chance to grow and learn a new culture and language, as well as a chance to get to know many different people. I am excited to see what God has in store for my future here.

CROSSCARE

The Newest Innovation

By Lori Most, CrossCare Founder and Manager

Scalpel At The Cross has a long tradition of using innovative techniques during our surgical campaigns in Peru. This year we are debuting an exciting new innovation: CrossCare - a custom-built application to manage our patient data and track their outcomes.

BRINGING SCALPEL INTO THE DIGITAL AGE

CrossCare really began years ago when the Scalpel team realized the benefit of digitizing the mission's patient paperwork by taking photos of the patient, their injury site, x-rays, and clinic and surgery forms using donated iPad minis. This allowed the team to bring the patient information back with them to the States for review and tracking. Additionally, Dra. Rosa Escudero was able to take the same types of pictures during local follow-up appointments that could quickly be shared with the surgeons in the States. This has allowed our surgeons to follow post-surgical progress and give input into their patients' follow-up care, which improves the patients' overall outcome.

And now, we have an app for that! We created CrossCare as an iOS App that runs on any Apple device (iPad, iPad mini, iPhone) and as a web-based application that runs from a url within a browser like Chrome or Safari. CrossCare uses the Google Cloud Platform to securely store our patient data in one location.

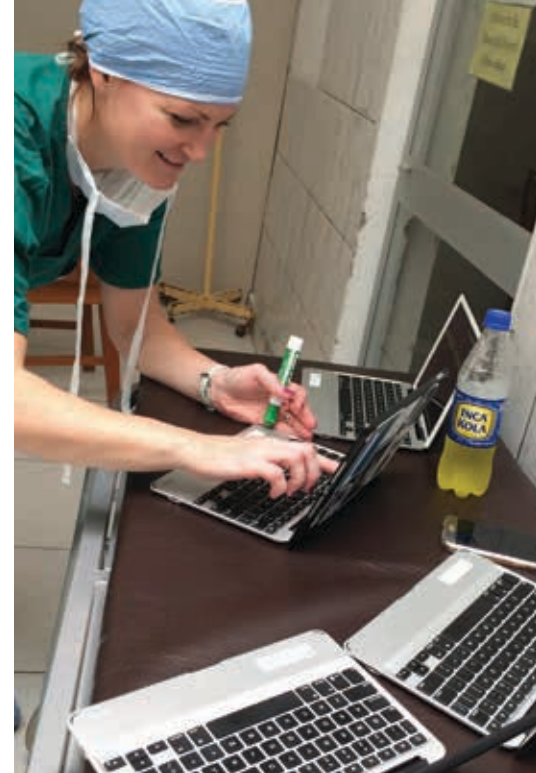
SO MANY BENEFITS

Our campaign volunteers can now type patient information into the CrossCare App screens rather than handwriting the information on a paper form. This increases our patient data accuracy by eliminating the need to read handwritten forms, and decreases the amount of time it takes to capture the patient's information.

CrossCare has electronic screens to replace all of our current paper forms with sections to attach photos along the way. We can now track a patient's profile, clinic, surgery, and outcome information together in a central location, giving us quick access to our patients' complete histories with a simple search.

The CrossCare App also enables fast data sharing, even in the middle of the Amazon! While in Peru, we create our own Wi-Fi with a portable router that connects our devices (i.e. iPads) to the Google Cloud data storage. To guard against potential poor internet connectivity, CrossCare ensures quick data sharing between devices during fast-paced clinics using a method called Peer-to-Peer data sharing. This allows the devices to immediately share data with our other devices, even if connections to the internet (and our Google Cloud Storage) are lost. So for example, if a volunteer enters a patient's profile using an iPad in the Patient Intake area, when the patient walks into the Exam Room, the examining doctor can immediately pull up that patient's data on the iPad in the Exam Room.

CrossCare can also be accessed from any location, allowing near real-time visibility to campaign data from across continents. For example, a physician could document a follow-up appointment in Peru, and the patient's surgeon could view the patient's progress through uploaded information and photos from within the U.S. This enables



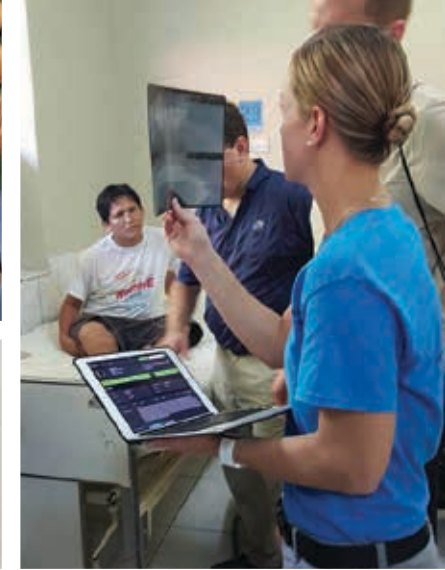
even quicker and more streamlined data sharing within our Outcomes Program!

With all of the patient data captured electronically, we can run metrics on almost any campaign or patient details that have been stored, which allows us to better view trends and measure our performance.

HOW DID WE MAKE THIS HAPPEN!?

Building custom software is expensive. So imagine our excitement when we were asked, through Dr. Peter Cole's relationship with the AO Foundation, to submit a proposal for a grant that would further our Outcomes Program! The AO Alliance Foundation (AOAF), which was founded in February 2014 specifically to further advancement in orthopaedics within developing countries, accepted our proposal that outlined our full Outcomes Program, complete with a new custom-built application that would track a patient from clinic, to surgery, and through their final follow-up appointment.

Once funds were secured, we partnered with a Minneapolis software development vendor, Lift SKG LLC, to create



our new application. We started to design the software in June, and completed our initial version of CrossCare just before the November Campaign.

FIELD TESTING AND RESULTS

Our real test came during our pilot run of CrossCare during the November Campaign. We ran clinical evaluations without paper forms, using CrossCare to document patient data and photos. All surgical and post-surgical notes were entered into CrossCare and attached to the original patient entry. Corresponding follow-up appointment information will also be attached to the same entries. The campaign data is already organized by patient and is accessible to Scalpel Administration on the iPads or any browser in Peru or anywhere in the U.S.

Our process saw huge improvements! Our team was surprised at the ease of use and ability to log a patient so quickly. Our clinic day ran smoothly with a very orderly intake process that

saw previous bottlenecks during patient intake eliminated! Additionally, our process of reviewing all surgical candidates at the end of the clinic took much less time with all of the patients' information in one place and quickly searchable within CrossCare.

Post-surgical rounds also saw improvements with the ability to pull up each patient's record and add pictures and notes directly to the patient file. This removed the need to quickly scratch notes that would later need to be added to that patient's surgery paper, as well as removing the need to match up post-surgical photos afterwards. Even our Peruvian physician partners noticed the improvements with CrossCare, and requested a full demo of our new system.

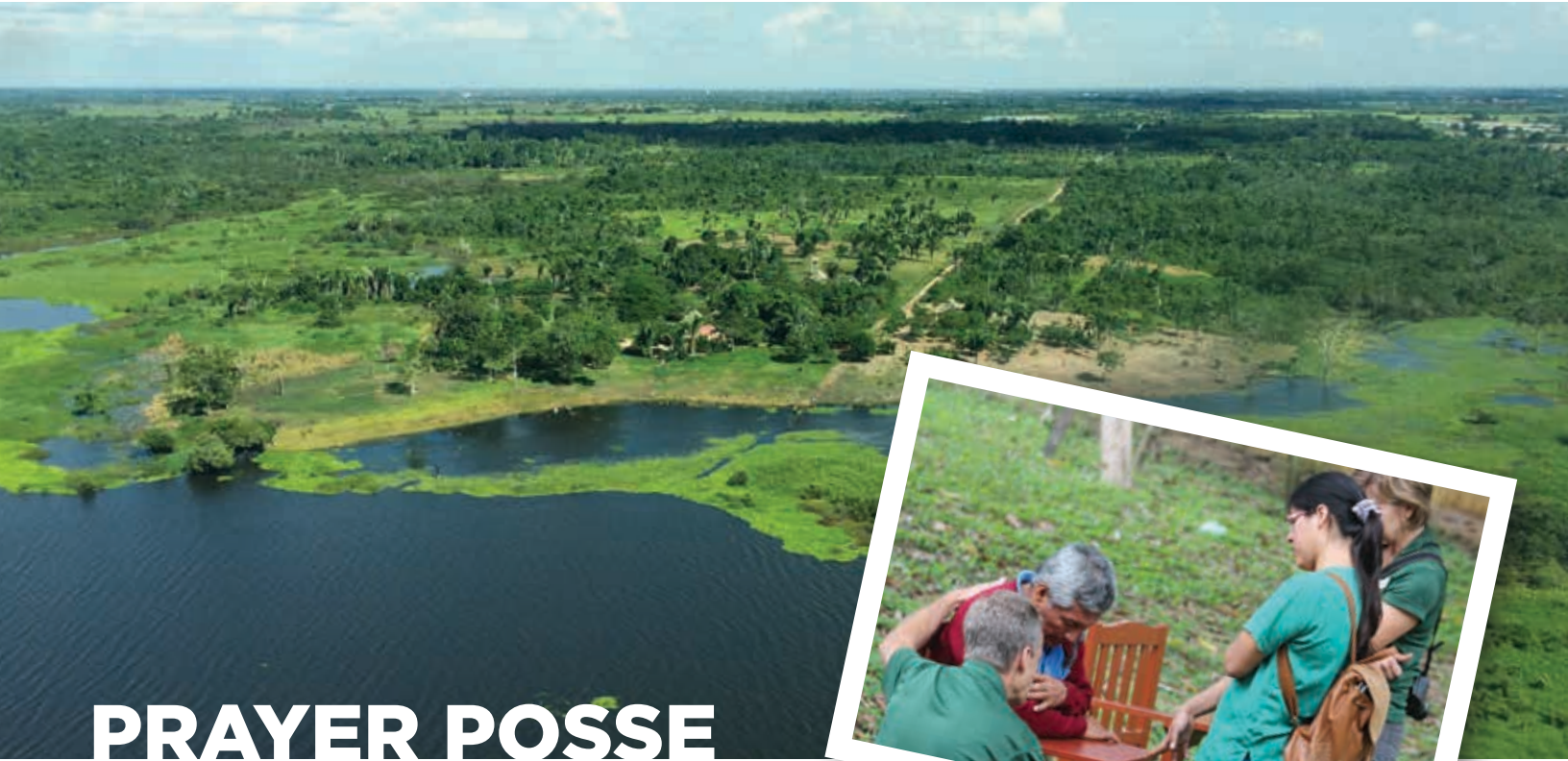
Connectivity in the jungle was one of our biggest concerns, so we were relieved when we saw a cellular tower right outside of the clinic window! We had a strong signal, and had great

performance loading data to our cloud storage. We were also able to connect all of the iPads together to allow direct data sharing with limited issues.

STEP BY STEP

Now that we have tested this initial version of the software, the opportunities for CrossCare are endless. There are so many ideas for additional CrossCare features that will create efficiencies for the mission and improve our Outcomes Program. We plan to continue enhancing CrossCare in phases based on fund and resource availability. A few key features are enhanced app security, usage by other global organizations, a visual metrics dashboard, expansion to Android and Windows devices, a patient summary display, and queues for patients in the clinic and for follow-up appointments.

Look for updates on our CrossCare initiative in future issues of Scalpel's Edge! ✚



PRAYER POSSE

Nancy E. Cole on behalf of the Prayer Posse

Even the strongest darkness is no match for the weakest light

*“For He has rescued us from the dominion of darkness and brought us into the kingdom of the Son He loves.”
Colossians 1:13*

The contrast of darkness and light is pervasive throughout God’s Holy Scripture. Both Old and New Testaments use light, and the lack thereof, metaphorically, to demonstrate good/evil (“Everyone who does evil hates the light, and will not come into the light for fear that their deeds will be exposed.” John 3:20), wisdom/foolishness (“For with you is the fountain of life; in your light, we see light.” Ps. 36:9), and revelation/un-enlightenment (“The unfolding of your Word gives light; it gives understanding to the simple.” Ps. 119:130). We’ve all experienced the reality of this through our physical senses... the brilliance radiating from a solitary motorcycle headlight witnessed miles away from its source, the illumination of a dark stadium or concert hall by a multitude of dimly lit cell phones, and the vividness of the starry host amidst the backdrop of a darkened sky far removed from city lights.

If these physical manifestations are so revealing, is it any wonder that the light of Christ, the Creator of light in its essence, should have even more capacity to shine brightly through the lives of His children (often emanating from the “cracks” in their armor I might add)? Absolutely not! We are assured that this profound light cannot and will not be overpowered by the darkness and sin-infestation that prevails. “The light shines in the darkness and the darkness will not overcome it.” John 1:5

This promise, that light will vanquish its enemy, has evidenced itself time and again in Scalpel At The Cross’ decade-long history, and perhaps most poignantly it would seem, over the course of the past 12 months. As we commemorate this 10-year anniversary marker in the life of Scalpel, we continue to both reflect on and marvel at the manner in which God has repeatedly illuminated the appearance of many dark passages.

ILLUSTRATIVE OF THIS, ALLOW ME TO RECAP THIS YEAR’S HIGHLIGHTS:

—God’s intervening grace subsequent to our initial despair upon learning of our medical clinic break-in and robbery this past summer, which eventuated in the disappearance of expensive orthopaedic implants collected over many years. As only He can, ...God saw to it, not only to replace the trove of stolen goods from our clinic, but to do so beyond our wildest imagination with a completely miraculous donation equaling over five times the original inventory we had in storage to use for our patients. Light casting out darkness through the tireless efforts of Kevin Mannion and Mike Purcell from Stryker to secure this donation for the ministry. Heartfelt thanks and appreciation to them both!

—The willingness of one very devoted Scalpel friend, Lori Most, to devote hour upon precious hour to development of a uniquely tailored electronic medical record system (CrossCare) that will enable us to

interface “real time” with one another from various stateside and Peruvian settings as we track initial patient work-ups, treatments, and follow-ups. This will simplify and organize our patient record keeping, and save us untold amounts of time in the process. Light casting out darkness by the spirit of one who took initiative with her time and talents to do mighty things for our humble ministry...

—The securing of an AO Foundation grant in the amount of \$100,000 which is being utilized in the development and procurement of the aforementioned CrossCare (IT consultants, hardware, software). Light casting out darkness by lofty ambition, hard work, and eventual return the size of which dreams are made...

—The fortification of our Scalpel infrastructure in the Amazon following a move by the Porch family (missionaries leaving St. Paul, Minnesota, to create a permanent presence in Pucallpa) near summer’s end. Over the years, our short-term medical campaigns have generated a sizeable patient base, which can now be ministered to both medically and spiritually by the long-term missional efforts of this family. Utilizing Dan’s pastoral and Laurie’s medical/educational expertise, the Porch’s main aim is to broaden Scalpel’s scope by reaching the unreached with the gospel through restoration of health clinically/surgically, relationship building, cultural exchange, and discipleship. Ah...fulfillment of the Great Commission by expanding Scalpel’s epicenter. “Magnifico,” as is said in Espanol! Light casting out darkness by virtue of short-term mission trips effectively advancing long-term goals, ultimately bringing the nations to our Lord Jesus...

John Piper reminds us that “If the pursuit of God’s glory is not ordered above the pursuit of man’s good...man will not be well served and God will not be duly honored.” In stating such, Piper is not pleading for diminishment of missions by any means, but rather, for magnification of our great God. Since God’s desire is to be glorified among the nations, we would submit to you that our Scalpel mission work exists to counteract the deficiency in our knowledge of God, and bring about the worship of Him accordingly...that which is sorely lacking in today’s world. Thank you for supporting us as we utilize medical means to physically uplift, all the while sharing the Good News with a natural and most necessary emphasis.

*“Let your light so shine before men, that they may see your good works and glorify your Father whom is in heaven.”
Matthew 5:16*

PRAISE

For a relatively smooth transition for the newest addition to our Scalpel Team Family (Dan, Laurie, and Lyndi Porch) as they have settled into life in Pucallpa and are grafting into the culture and study of the Spanish language.

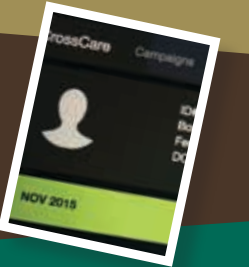


Over seeds planted during our fall fundraiser in Charlottesville, Virginia.



For the safe arrival of Dra. Rosa Escudero’s precious little girl, Camila, who arrived November 7th and was received into the welcoming arms of brother, Sebastian, and daddy, Miguel. Heartfelt congratulations to the Escudero family!!!

For the successful test run and implementation of our newly automated patient data collecting system (CrossCare) to be utilized both in Peru and stateside.



At God’s expedient and abundant provision for replacement of orthopaedic implants, stolen from our clinic this past summer.

PRAYERS

For selection of a Miami-based Mission Coordinator who can assist our Mission Director, Peggy Gasior, on a day-to-day basis with general operation of the ministry.

For reliance upon God’s goodness to keep Scalpel solvent as we continue to expand our vision and scope for 2016.

For our current Mission Coordinator, Kelli Hooks, who has served so faithfully over the years, to continue working on team trip coordination from her Rochester, Indiana, home while pursuing other employment opportunities.

For the upcoming bi-annual board meeting in January, 2016.

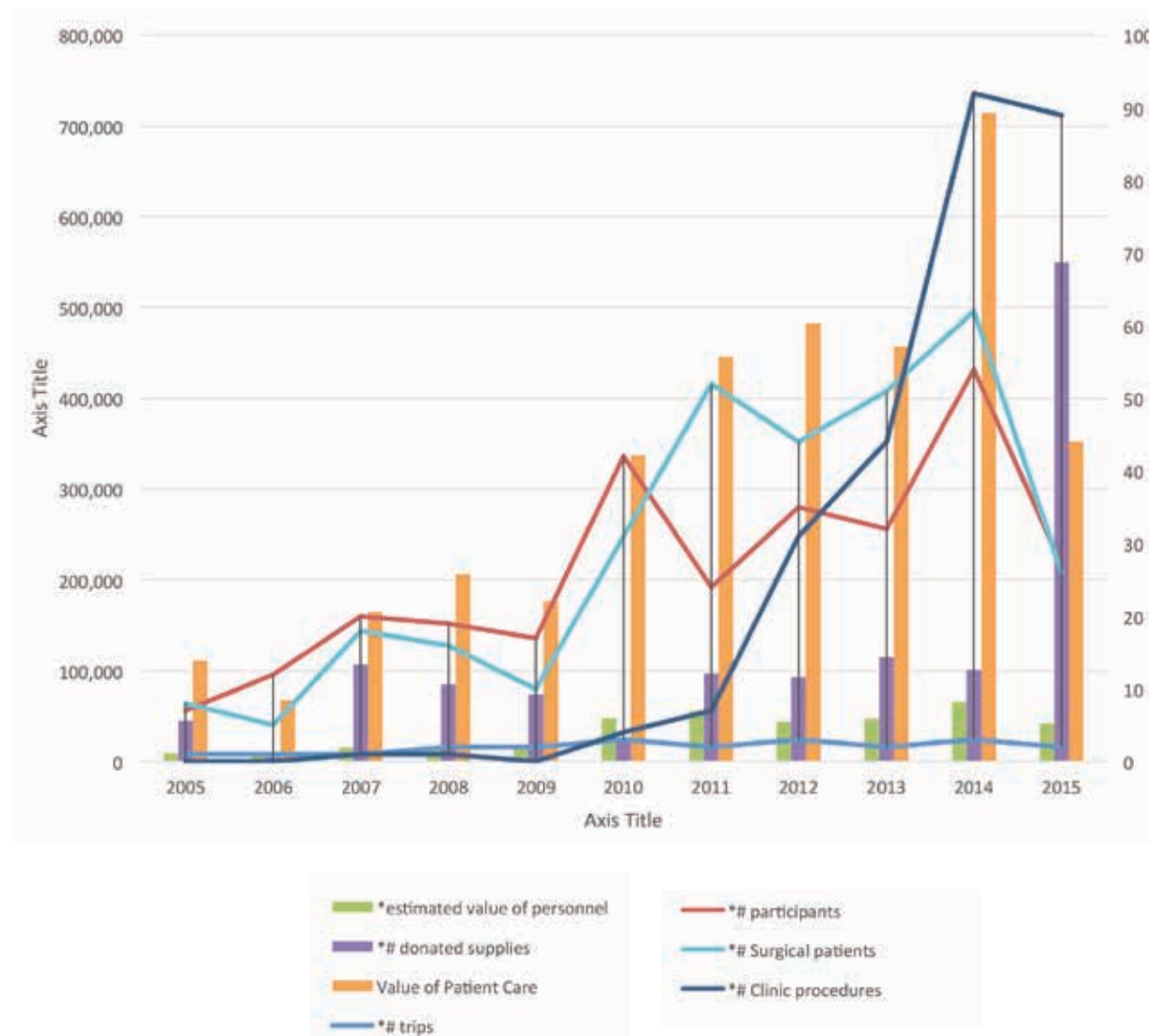


10 YEARS AT-A-GLANCE

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
*# trips	1	1	1	2	2	3	2	3	2	3	2
*# participants	7	12	20	19	17	42	24	35	32	54	27
*estimated value of personnel	9,400	10,300	15,700	17,400	14,500	47,500	55,600	43,900	47,000	65,500	42,000
*# donated supplies	45,000	5,000	107,000	85,000	74,080	21,425	96,743	92,825	115,341	101,024	550,000
*# Surgical patients	8	5	18	16	10	31	52	44	51	62	26
Value of Patient Care	\$111,000	\$67,500	\$164,500	\$206,200	\$176,450	\$337,600	\$445,400	\$482,800	\$457,300	\$714,500	\$352,000
*# Clinic procedures	0	0	1	1	0	4	7	31	44	92	89

*Through July, 2015

ALL DATA

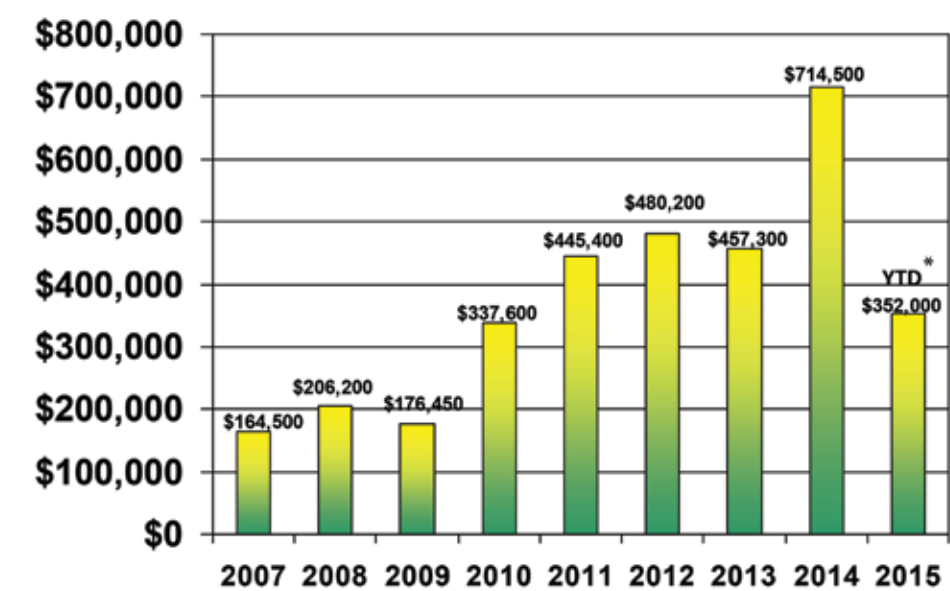


2007-2015 ANNUAL VALUE OF DONATED TEAM MEMBER TIME



*Through July, 2015

ANNUAL VALUE OF MEDICAL CARE PROVIDED



*Through July, 2015



*“May the God of hope fill you with
all joy and peace in believing,
so that by the power of the Holy
Spirit you may abound in hope.”*

Romans 15:13



The season of reflection and gratitude that surrounds Thanksgiving each year also ushers in Advent, pointing us to the hope we have in Christ. As we give thanks for the Lord’s provision during another year of ministry, we ask you to join us in sharing the hope that He brings by supporting Scalpel At The Cross with your year-end giving.

There are many ways to give to Scalpel At The Cross that will help serve our mission as we continue show the love of God and provide orthopaedic surgical care to the people of Peru.

Please give online by going to:
<https://e-giving.org/ScalpelAtTheCross>

























or you may reach us at:
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Miami, FL 33255
Email: contact@scalpelatthecross.org
Phone: 305-467-2715

*Join us in looking back with deep thanksgiving
and looking forward with joyful hope!*

P.O. Box 558436, Miami, FL 33255 | O. 305-467-2715 | www.scalpelatthecross.org
A Gift of Light, Hope and Surgery to Peru



SCALPEL PATIENT OUTCOMES PROGRAM SCORES!

Name & Date of Surgery Blinded Surgery)				
	Paper	Anatomy		X-rays
Clinic				
Surgery				
2-wks				
6-wks				
16-wks				
36+ wks				

In 2007 we hired Dra. Rosa Escudero from Lima, Peru, who has worked tirelessly with our ministry on the Peru side. Her primary responsibility is to follow all the patients, much as we would in my North American practice. We invested in a model of data retrieval, including images of the patients' wounds, limb motion and x-rays, and we attempted to accomplish this at 2, 6, 12, 24, 52 weeks (See figure above). Stateside, we tracked our outcomes and gave feedback as necessary, reacting to complications by communicating a plan, in some cases following up with surgery on subsequent trips. After a few years, I decided to "unlock" the data to assess how our outcomes were.

Over a five-year period (2007-2012) we tracked 127 consecutive patients, which were operated on over 8 mission trips. We have an 82% follow-up rate at one year, with an average of 3.7 patient visits in that period. Key findings included an infection rate of 2% and a union rate of 97% in previously uninfected patients. Outcomes according to the patients were "good or excellent" in 96% of the patients. These findings were amazing to me given the major surgeries we were performing, the majority of which included fractures, bone deformities, and bones that did not heal at all. These results were also amazing, because I knew it was impossible to maintain the

same standards for sterility, equipment resources, and rehabilitation, in such an stark environment.

I believe that there are several possible explanations for these results, including the fact that the patients likely have fewer co-morbidities since their lifespans are much shorter than in North America, and thus, they don't have such advanced disease such as cardiovascular problems and diabetes. Additionally, it is rare that patients have poor lifestyle choices such as smoking and overeating. Obesity, for example, is rare.

Third, they are generally nourished, and although very poor socioeconomically, their intake of fruits, vegetables, and protein is high. However, I was still amazed by the paucity of complications. I am sure the power of prayer is at work. Prayers come from hundreds of people supporting the mission, the team members themselves on a daily basis during the trip, as well as during follow-up by our on-site pastoral support.

Do not be anxious in anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God. Philippians 4:6

We trust that the Lord will continue to bless our patients and help us remain humble, understanding our role as instruments in the hands of the all-mighty healer. Please access our article online at www.jbjs.org. Our innovative surgical outcome program costs our mission approximately \$25,000/year to run. ***If you would like to contribute specifically to our ministry to fund a year or even six months of this vital program, please indicate this on your gift of support.***

Philippians 4:6

Do not be anxious in anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God.