

# SCALPEL'S EDGE

*Scalpel* AT THE CROSS  
A Christian Medical Mission  
to the Peruvian Amazon

A GIFT OF LIGHT, HOPE AND SURGERY TO PERU

SPRING 2020 | ISSUE 30

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“ Now lest he reach out his hand and take also of the tree of life and eat, and live forever –” therefore, the LORD God sent him out from the garden of Eden to work the ground from which he was taken. He drove out the man, and at the east of the garden of Eden he placed the cherubim and a flaming sword that turned every way to guard the way to the tree of life. ”

Genesis 3:22b-24 (ESV)



## THE TREE OF LIFE

by Peter A. Cole, M.D.  
*President, Scalpel At The Cross*

Each time I see the courtyard at Hospital Amazonico, I am captivated by “The Tree.” There is a certain magnificence about this plant, not only because of its rich green beauty against the azure blue sky, but its location in front of the operating rooms where our surgeons reconstruct limbs and our teams mend lives.

On 7:00 a.m. arrival at the hospital, our truck turns the corner through the gates to pull up under the lush tree which arches like a guidepost to healing; family members await

the arrival of another Scalpel team under its broad-leafed cover. One lady wonders, “Which patient will be called first?” and “will my brother be postponed again?”, while another holds out x-rays to get the attention of the team leader; yet another woman nurses her baby next to a splinted man on a moto. The life represented in this human collage makes me wonder, “What do their homes look like, when did their love begin, what sins haunt them and what is their



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## THE TREE OF LIFE

hope?” I snap out of this transient meditation to direct the team to haul trunks inside. Hupp to!

Within minutes, patients on stretchers have been rolled down the sidewalk by tidily clad nurses. The tree marks the entrance to new beginnings, new life. There are but four cramped OR's inside, tucked at the end of a hallway lined with vulnerable patients on creaky beds--awaiting, awaking, anguishing. Scrub-dressed Scalpel team members scurry with equipment and holler directives, while pre-surgical planning ensues at a desk, and a prayer team huddles in the corner around a stretcher. There is no room for family members inside the structure; rather, they await news under the magnificent tree, the tree of life.

Sometime mid-day after a 5-hour femoral reconstruction, scrubs sweat-soaked, I plunge out of the OR facility doors for a stretch in the fresh air, with lunch of “pollo a la huanacaina” in one hand and a bottle of filtered water in the other. Thirsty, a moment of peace fills my mind during breaktime; suddenly I'm riveted by the cry of new families under the tree. “How did surgery go?” one mama asks. “Can you take a look at my baby?” another wants to know. “We traveled 3 days to find you!” another claims. I set my lunch down to give hopeful feedback. Relief seems to fill the parking lot. A flock of parakeets spook out of the tree's branches, screeching into the sky above. Another thick, humid, hot day in the jungle. I need the shade from this tree of life.

“Doc, you ready? Next patient's asleep!” our Director shouts through the doors. I whisper a prayer for the patients and crush my water bottle. I leap to action, looking for my surgical teammates, and smile at the people who have graciously given me some tree-moments alone. Thank you, Jesus. Help me Lord!

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For a few moments in transit, I contemplate what the Bible said about the Tree of Life in the Garden of Eden, referred to by our Lord. Adam and Eve could have chosen to enjoy its fruit and remain in paradise for eternity in God's favor without sin and all its repercussions; yet it was shunned in favor of the Tree of Knowledge to which Eve and then Adam were tempted by Satan—the serpent said they could be like God if they ate its fruit, and they did. They chose, and the consequence was to live in separation from our creator, with toil and sin, anxiety, stress, tears, fears, death--shunned from paradise, the Garden of Eden no more. Here I am at a hospital to relieve suffering; my thoughts connect. God committed them to such life until a time when their descendants would have a new choice, to enjoy saving grace once again through acceptance of God's son Jesus, the new Tree of Life.

You who read these words right now have that choice just as Adam and Eve did, “Now lest he reach out his hand and take also of the tree of life and eat, and live forever --” therefore, the LORD God sent him out from the garden of Eden to work the ground from which he was taken. He drove out the man, and at the east of the garden of Eden he placed the cherubim and a flaming sword that turned every way to guard the way to the tree of life.” Genesis 3:22b-24 (ESV) What is, “the way” which is referred to in the same verse? The way is Jesus. In verse 24, Scripture is making clear to us that heaven is

guarded by “flaming swords”, as if to instruct us that no one enters and contaminates heaven, no one enjoys paradise, unless choosing “the way,” the new tree of life, asking Jesus into your life, indeed making the choice that Adam and Eve did not.

“Time out!” I call out in OR 1 to signal the start of a new case, scope out my new surroundings, and evaluate my helpers. I place my palm on the patient's body and say a prayer to guide my hand to put a woman together so she may function again, care for her children, love her husband, and above all, claim the tree of life. My knife glides silently through tissue planes until hours later, I am again dressing a wound. At this point I just want to go and help the team pack up our trucks. I've been on my feet 14 hours, and I'm feeling aching arches and tight quads. I make my way to the exit and swing open its doors. There in front of me, in the darkness of the courtyard, are shadows coming from more people, more patients standing under the tree of life with whites of eyes and teeth piercing the night; they're hoping. I contemplate the tree of life and hope-filled hearts; how fitting.

There's no matter more important than the one which launches in the book of Genesis and concludes in the book of Revelation. “He who has an ear, let him hear what the Spirit says to the churches. To the one who conquers I will grant to eat of the tree of life, which is in the paradise of God.” BOOM! There it is in Revelation 2:7, wow! The Tree of Life with fruit for a lifetime, Jesus and eternity, by the grace and mercy of our Creator. “She is a tree of life to those who lay hold of her; those who hold her fast are called blessed.” Proverbs 3:18 She is true wisdom, saving faith, Christ.









# ADDRESSING AN EPIDEMIC

*By Bradley Lezak*

Musculoskeletal disorders and injuries represent a substantial proportion of the global burden of disease, accounting for 11.2% of the total disability-adjusted life-years worldwide. This burden is particularly prevalent in low- and middle-income countries, which already suffer from insufficient healthcare resources, and claim well over 90% of all injuries...a burden that far outstrips their treatment capacity. Many of these countries are experiencing rapid fiscal growth and with it, expansion of their infrastructures. This growth, accompanied by increased wealth and technological advances, has led to a transition from foot or bicycle transport to the use of motor vehicles, without concomitant safety laws or infrastructure, as well as significant increase in the number of injuries from motor vehicle accidents, accounting for an estimated 1.5 million deaths and 50 million nonfatal injuries per year worldwide. These factors have led to a “Global Orthopaedic Trauma Epidemic.” At about 5.8 million lives claimed each year from injury, the number surpasses deaths due to malaria, tuberculosis and HIV/AIDS combined, and for every trauma-related death, ten to fifty more people sustain permanent disability. Consequently, addressing this epidemic is of utmost importance from both a medical and a public health standpoint, as well as an economic standpoint.

The traditional view of injuries as “accidental” has resulted in historical neglect of this area in public health. However, as the “Global Orthopaedic Trauma Epidemic” grows, literature on the subject has expanded. The World Health Organization (WHO) estimates that by 2030, trauma from road-traffic accidents alone will be the third most common cause of both mortality and disability worldwide, following only ischemic heart disease and cerebrovascular disease. Additionally, consequences of musculoskeletal trauma have implications well beyond healthcare. A recent prospective, longitudinal study in Uganda to determine the socioeconomic implications of isolated tibial and femoral fractures caused by road traffic accidents with two-year follow up found 1) the average patient lost 88.4% of their pre-injury income level; 2) only 12% of patients recovered both economically and physically; 3) one-third of patients had not reentered the workforce post-injury; and, 4) economic hardships associated with injury forced 39% of patients’ dependents to drop out of school. These grim figures personify the austere healthcare condition of the majority of the world and highlight the need for established orthopaedic personnel to recognize their unique skillset as a remedy to help address this growing epidemic.

Scalpel At The Cross (SATC) was founded in 2004 by Mrs. Nancy Cole, a clinical psychologist, and Dr. Peter Cole, an orthopaedic trauma surgeon, after a variety of factors came together to ignite their passion for service in Latin America. Pucallpa, Peru, home of SATC, is a rapidly growing port town, and is now home to over 300,000 people. In contrast to Lima, which has modern, colonial areas, Pucallpa is a continuous maze of cramped, subsistence housing and dusty open-air markets. Pucallpa represents the prototypical environment, commonly seen in much of Latin America, wherein a trauma epidemic outpaces the medical, human, and capital resources in place to combat it. Due to its accelerated urbanization, there exists a chaotic and dangerous road-scape where drivers, passengers and pedestrians alike increasingly sustain serious injuries. Pucallpa, and the areas that surround it, are examples of “disease conferred by emerging prosperity”, where the highest number of deaths are caused by motor vehicle accidents and other traumatic mechanisms. Witnessing the unmet need for orthopaedic specialists, the Coles founded SATC and have seen it grow over the last 15 years.

From 2005-2019, SATC has deployed 423 volunteers on 32 surgical campaigns to Pucallpa for 10-day periods to provide orthopaedic treatment. SATC has provided



approximately \$8.1 million US in total medical care, while investing approximately \$2.1 million US in implementation and overhead. Primary medical contributions are medical personnel, donated equipment, and patient care; primary expenses are program services, administrative management, and patient outcomes management. Value is tracked for SATC's board members and donors as follows:

#### Value of Medical Personnel:

**\$675,961 USD**

#### Value of Donated Medical Supplies and Equipment:

**\$2,047,112 USD**

#### Value of Patient Care:

**\$5,405,450 USD**

#### Total Value of Medical Care:

**\$8.1 million USD**

Over the course of its 15-year history, SATC has demonstrated that it is possible to grow and sustain a program to help relieve human suffering from musculoskeletal trauma, in an austere environment, in a low- and middle-income country. It is essential that leadership be strong and centered on a purpose and vision, executed through a clear staffing model with results-oriented accountability. A rigorous fundraising strategy is paramount for sustainability. In addition, an intentional vector of organizational shift from a relief organization to one which promotes development inside the environment where it serves is essential. Given the projected increase in trauma in low- and middle-income countries, the SATC model may be increasingly relevant as a blueprint for other medical professionals to take on similar endeavors. There has been much learned, some of which we have conveyed, but certainly research into the effectiveness of various organizational models is necessary to advance surgical services in low- and middle-income countries.



#### About the author:

*Bradley Lezak is a second-year MD/MPH student at the University of Miami, Miller School of Medicine. He grew up about 30 miles north of Los Angeles in Oak Park, California with twin brother Matthew and little sister Juliette. Bradley had the opportunity to play collegiate baseball at Lewis & Clark College in Portland, Oregon, where he also studied Biochemistry & Molecular Biology. After graduating from Lewis & Clark, he moved to Washington, D.C. to work at the National Cancer Institute as a research fellow studying acute lymphoblastic leukemia, while also working as a Firefighter EMT the local Fire Department. He started at UM Med last year and met Peter Cole, Jr. who introduced him to SATC and to Dr. Cole later in the year. They were able to bring together Bradley's interests in public health and working with underserved communities in the United States and abroad, with his goal of pursuing a career in orthopaedic surgery, to formulate this project with SATC last summer. Results of this work were recently published in the JBJS.....*

*Bradley looks forward to continue working with SATC to achieve the goal of a developing a new clinic in Pucallpa.*

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## THE ORTHOPAEDIC FORUM

### The Development of a Surgical Mission in the Peruvian Amazon

#### A 15-Year Expedition

Bradley A. Lezak, BA, Peter A. Cole Jr., MHA, Lisa K. Schroder, BS, MBA, and Peter A. Cole, MD

**Abstract:** Musculoskeletal disorders and injuries represent a substantial proportion of the global burden of disease. This burden is particularly prevalent in low and middle-income countries that already have insufficient health-care resources. The purpose of this paper is to highlight the vision, the history, the implementation, and the challenges in establishing an orthopaedic surgical mission in a developing nation to help address the epidemic of musculoskeletal trauma.

Scalpel At The Cross (SATC) is a nonprofit Christian orthopaedic surgical mission organization that sends teams of 10 to 20 members to Pucallpa, Peru, a rural town in the Amazon, to evaluate patients with musculoskeletal conditions, many that require surgery. The organization employs 4 full-time staff members and has included over 400 medical volunteers in 32 surgical campaigns since 2005. SATC has provided approximately 8.1 million U.S. dollars in total medical care, while investing approximately 2.2 million U.S. dollars in implementation and overhead.

Given the projected increase in trauma in low and middle-income countries, the SATC model may be increasingly relevant as a possible blueprint for other medical professionals to take on similar endeavors. This paper also highlights the importance of continued research into the effectiveness of various organizational models to advance surgical services in these countries.



A.W. Tozer once reminded us that "A scared world needs a fearless church!" Perhaps, for many of us, this rings truer now than ever before. As Director of our SATC Prayer Posse, God has been taking me deeper with regard to utilizing prayer in response to His promises and drawing on His reserves for daily bread. Particularly in response to this healthcare pandemic, there is both a confidence and a fervency in my pleas to the Almighty to make good on what He has promised. "He who did not spare His own Son but gave Him up for us all, how will He not also with Him graciously give us all things?" (Romans 8:32) Quite honestly, I am learning to trust God in places that do not necessarily feel comfortable, and I am beginning to more fully appreciate the Glory due Him when His palpable support arrives. There is truly something to the equation: my faith + His power = my help + His Glory. So basic a notion, yet so much wrestling required before getting the particulars right.

Part of my struggle is in exchanging the conversation my mind naturally gravitates to as I power through life challenges, for the truths the Lord would actually have me call to mind. Being mindful of God's ability to unleash a reservoir of resources at His own beck and call, should be enough to still my soul. But to achieve this end I must *remember* to *remember* the steadfastness of His love for me and the unceasing demonstration of His daily mercies as a help-mate. The Psalmist, of course, exhorts us for this very reason to "...meditate on His mighty deeds." (Psalm 77:11-12)

Even though remembering the fulfillment of God's many promises imports my defeated ways of thinking to hope-filled anticipation and possibility, I still grapple with trusting His timing. My tendency has been to pray, and then readily evaluate my circumstance to assess how responsive the Lord has been in answering my pleas. I have often misconstrued God's timing, thinking He could or should have intervened sooner, and I've doubted His loving intentions. Rather than seeing His hand in delayed deliverances, I've been quick to judge God for tarrying. Though in retrospect I've gained

# PRAYING GOD'S PROMISES

*Nancy E. Cole, SATC Halo Ministry*



*Cashibococha's covenantal rainbow*

understanding of the Lord's ways with me, in the thick of the refiner's fire I fail to appreciate God's purpose in delivering me with grace supplied in accordance with His timeframe. The learning curve of trusting God's judgment during periods of suffering (even when ultimately delivered from them) has been steep. That said, I am choosing to believe in advance perhaps what makes sense only in retrospect, namely, that God works all things well and in accordance with His divine purposes whether or not I fully understand His rationale and/or timing.

Trusting the sufficiency of God's sustaining power for me, even while His grace is poured out in a manner different than I've envisioned, has been buttressed through my involvement with our Prayer Posse across time. Ministry prayer requests/answers have spurred my growth as I've witnessed the Lord work by both denying immediate deliverance and then supplying appropriate grace...knowing just how to apportion it best for us and for His own ultimate glorification. Some examples of recent challenges which

God has answered in both strategic and faithful ways are as follows:

- Our beloved mission director of 5+ years (Peggy Gasior) stepped down this past year, and while we waited through a period of prayerful uncertainty, the Lord brought another talented leader (Kara Rodriguez) whose giftedness is meeting challenges for unparalleled growth and development.
- We struggled with letting go of a patient tracking system that presented challenges for many years, but after much prayer and consternation, landed an IT solution which is meeting our mission expansion needs.

It is with great expectation, therefore, that we anticipate the Lord continuing to grace Scalpel with just what we need, just when we need it. Please join us in praising God for many evidences of His favor:

- January 2020 vision trip to introduce prospective donors to the mission and to begin strategic planning for our Orthotic Prosthetic & Orthopaedic Rehabilitation Project.





- Successful October 2019 and February 2020 campaigns; thankful for smooth customs process with implants and power supply tools. February's campaign included 8 knee arthroplasties, the first knee arthroplasties done in the Amazon, and a dental clinic (16 consults, 5 cleanings, 13 fillings, 8 extractions and 4 sealants).
- Though necessarily postponing our April campaign, we are grateful for having been stateside when this crisis took center stage.
- New roofs for Jungle Bunks, our beloved Peruvian home, and other areas of our Cashibo campus to help prevent moisture and critters during the rainy season.
- Contractors beginning groundwork to enclose a portion of our campus exposed to squatters who threaten to take ownership of the property by illegal force.
- The addition of a 4th lead surgeon to advance us towards quarterly medical campaigns.

While offering praises for the above, please join us in lifting up our world as uncertainties unfold and fear grips the hearts and minds of so many. May this be a time of standing

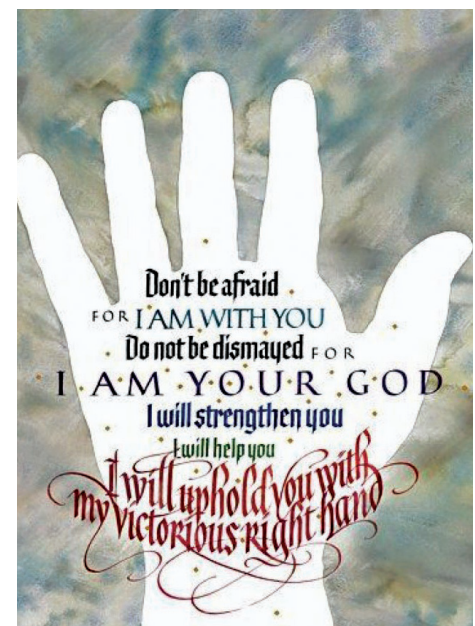
together as one...humbling ourselves before the God of the universe, recognizing our human frailty, repenting of our self-driven tendencies, confessing our illusion of control, and praying for a spiritual revival that literally reaches every nation, tongue, and tribe, as people realize they were created for relationship. Social distancing has created an absence that makes us keenly aware of our relational need. At a time like this, anything else we've relied upon to fill that God-spaced vacuum (i.e. health, materialism, work, status) is literally failing before our very eyes.

As God's people, may we be of encouragement to those whose hearts are heavy and find themselves despairing and without hope, whether attributable to physical illness, emotional distress, or financial hardship. Are we prepared to use this unprecedented world crisis to give the answer as to why we hope in God? Can we help carry others' burdens in a manner that fluidly loves and empathizes with powerlessness and weakness? Might we be beacons that shine impenetrable gospel light into areas that have thus far preferred



darkness? Even as we practice quarantine and containment, would the good news of Christ's resurrection power forth with rapid fire rate to reach greater height and depth than ever known previously? Could it be that this Easter 2020, in the throes of social confinement, we begin to fully value a personal relationship with the living Christ and embrace the significance behind His sacrificial death on the cross in new and profound ways? Leaning into Christ's ever-present companionship in dependent faith has never been more comforting to me than now, and remembering that every suffering moment is an opportunity for beauty to be born of ashes makes the future very promising.

Out of this "living hope" that we've been born into through Jesus Christ, may the Lord be pleased to arouse us all to greater depths of allegiance and joy in trusting Him going forward.





# 2020 SATC YTD MISSION VITALS



**1** **TRIP**  
FEBRUARY

**\$131,382**

ESTIMATED VALUE OF  
MEDICAL SUPPLIES



**14** **TEAM**  
MEMBERS

**\$53,365**

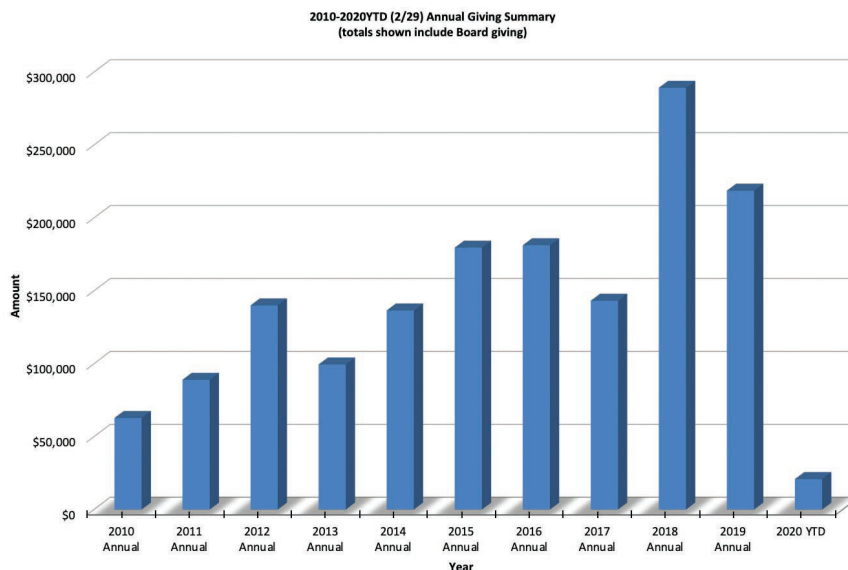
ESTIMATED DONATED  
TIME OF PERSONNEL



**24** **SURGICAL**  
PATIENTS

**\$302,200**

ESTIMATED VALUE OF  
MEDICAL CARE



*please support  
our mission*

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