



QUARTERLY NEWSLETTER

SUMMER 2009
VOLUME 3, ISSUE 3

HELLO FROM HEADQUARTERS!

“

Dear SIHS members and supporters,

This summer has been a busy one for SIHS. Several key programs have been initiated under our operational program: Surgeons OverSeas (SOS). We started assisting with an esophageal stenting program in Malawi in June and patients with obstructing esophageal tumors are already being treated. We also organized the first large scale mock mass casualty training exercise in Sierra Leone. Several SIHS members have been busy around globe participating in their own projects, some of which are featured in this newsletter.

As SIHS grows with more members around the world, we hope to increase your involvement in both our SOS clinical and research initiatives and to hear about where you are working. There have been several fruitful collaborations that have evolved through people meeting via SIHS, and we feel that is one of the values of this forum. We look forward to your continued involvement as SIHS continues to grow.

”

Peter Kingham, MD
Adam L. Kushner, MD, MPH

Find out more about [our SIHS directors](#).



Connaught Hospital, Freetown, Sierra Leone
Photo credit: Susan Braun

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SURGEONS OVERSEAS (SOS)

Surgeons OverSeas (SOS) is the flagship program of SIHS. The aim is to provide support to local surgeons, hospitals and ministries of health to assist them in developing long-term surgical capacity. SOS programs concentrate on emergency and essential surgical care - basic and life saving procedures that can easily be undertaken and taught in resource-limited environments. Much of the material is based on the World Health Organization's Surgical Care at the District Hospital. SOS also provides a forum for surgeons and residents in developed countries to more easily connect with colleagues in developing countries.

For more information, check out the SOS webpage at <http://www.surgeonoverseas.org>



NEW MEMBERS

We welcome the following new members into SIHS!

- **Elizabeth Horowitz**, Columbia Presbyterian Hospital, USA
- **Allison Berndtson**, University of California-Davis, USA
- **Daniel Lollar**, UCSF-Fresno, USA
- **Zubin Bamboat**, Massachusetts General Hospital, USA
- **Sowdhamani Bellapu**, New York Medical College, USA
- **Keith Apelgren**, Michigan State University, USA
- **Janeil Belle**, Duke University, USA
- **Marilyn W. Butler**, Stamford University, USA
- **Gloria Marie F.K. Tumbaga**, University of Hawaii, USA
- **Loki Skylizard**, University of Alabama, USA
- **Robert D. Becher**, Wake Forest University Medical Center, USA
- **Edmundo Inga-Zapata**, Hospital Dos de Mayo, Peru
- **Andrew Kingsnorth**, Peninsula Medical School & Derriford Hospital, UK
- **Hazel Morrison**, University of Nottingham, UK
- **Olawale A. Babalola**, College of Medicine and Allied Health Sciences, Sierra Leone
- **Mohamed Awny Ali Labib**, University Teaching Hospital, Zambia

- **Abubakar Muhammad Musa**, Federal Medical Center, Nguru, Nigeria
- **Natalie Watson**, University of Sydney, Australia

A full list of existing members is listed [here](#).

Members are given access to the hospital facilities database and are given preference for mission support. Member reports and updates are also posted on the blog and highlighted in our quarterly newsletter.

Membership is free to all interested health care providers. Simply fill in the membership application form available [here](#).



SURGICAL OPPORTUNITIES

Facilities interested in surgical assistance include:

Asia:

- Afghanistan: General, Ortho
- Cambodia: General, Ortho
- China: Laparoscopic
- Nepal: Laparoscopic, Ortho
- India: (20 hospitals) General, Ortho, OB/GYN

Africa:

- East Africa: (120 hospitals) Plastics, Urology, Ortho
- Ghana: General, Trauma, Ortho
- Kenya: VVF, Pediatric, Urology, Ortho
- Liberia: General, OB/GYN
- Malawi: (3 hospitals) General, Urology, OB/GYN, Ortho, Neuro
- Nigeria: Endoscopic, Laparoscopic, Urology
- Sierra Leone: General, Ortho
- Tanzania: General, Ortho
- Uganda: General

A "Surgical Facility Database" is available for all SIHS members.



Editor Note: For more information about potential mission opportunities at the above facilities, or recommendations of surgical facilities, please contact: peter@humanitariansurgery.org

JOURNAL CLUB

Quantifying Surgical Capacity in Sierra Leone: A Guide for Improving Surgical Care

T. Peter Kingham, MD; Thaim B. Kamara, MD; Meena N. Cherian, MD; Richard A. Gosselin, MD; Meghan Simkins, BA; Chris Meissner, BA; Lynda Foray-Rahall, MD; Kisito S. Daoh, MD; Soccoh A. Kabia, MD; Adam L. Kushner, MD, MPH

Arch Surg. 2009;144(2):122-127. [download [full article in .pdf](#) (83kb)]

Lack of access to surgical care is a public health crisis in developing countries. There are few data that describe a nation's ability to provide surgical care. This study combines information quantifying the infrastructure, human resources, interventions (ie, procedures), emergency equipment and supplies for resuscitation, and surgical procedures offered at many government hospitals in Sierra Leone.

Safe Surgery Prevents Infection

The Lancet Infectious Diseases 2009; 9(4): 203

Hospitals in eight cities around the globe have successfully demonstrated that the use of a simple surgical checklist, developed by WHO, during major operations can lower the incidence of surgery-related deaths and complications by one third. Results from a multi-center trial involving hospitals in each of the six WHO regions show that the rate of major complications following surgery fell from 11% in the baseline period to 7% after introduction of the checklist, a reduction of one third. Inpatient deaths following major operations fell by more than 40% (from 1.5% to 0.8%). The overall proportion of procedures leading to surgical-site infection fell from 6.2% to 3.4%. At one-site in a developing country, surgical site infection even decreased from 20.5% to 3.6%; this was where appropriate antibiotic use, owing to the use of the checklist, rose from 30% to 96%.



Adam Kushner, SIHS

Scrubbing up for surgery with no running water, Sierra Leone.

Field-improvised war surgery in Kosovo: use of kitchen utensils as surgical instruments

Hoxha B. Singh KP. Muzina R. Lu Y. Flaherty D.

Military Medicine. 173(6):529-33, 2008 Jun.

After years of conflict between Serbia and neighboring Kosovo, a full-blown war started in March 1999 when the Serbian and Yugoslav armies began a statewide military crackdown against ethnic Albanians and the Kosovo Liberation Army. Most ethnic Albanians were displaced to Macedonia or Albania. Some, however, found refuge in the Molopolce mountain region of Kosovo among military personnel, thus necessitating the creation of a field medical facility. Patient treatment at the field-improvised Nerodime Military Hospital, and the management of work took place under very difficult conditions including a chronic lack of appropriate medical equipment. Improvised lifesaving surgeries were performed with kitchen utensils serving as retractors at the field hospital. This article compares the treatment of patients between the two hospitals, and is the first article to date describing the war experience in general at the field hospitals in Kosovo.



Improvised surgical instruments used during surgery and author with postoperative patient.



Improvised kitchen utensils used as surgical instruments and portable anaesthesia machine with theatre light.

SOS UPDATES FROM DIRECTORS

"MALAWI ESOPHAGEAL CANCER PALLIATIVE PROGRAM"

For 6 months Mary B. has been progressively unable to swallow food. Last week she was admitted to the hospital; she could not swallow liquids - not even her own saliva. Prior to this week, Mary, like hundreds of previous Malawians with inoperable esophageal cancer, would have been sent home to die; her family would have watched in horror as she slowly starved to death. Today, however, Mary can eat and drink.

Surgeons OverSeas (SOS), the flagship program of the **Society of International Humanitarian Surgeons (SIHS)**, along with the **Lions Club of Blantyre** and the **Malawi Press Trust**, sponsored an exciting and innovative strategy to assist patients with inoperable esophageal cancer throughout the entire southern African country of Malawi.

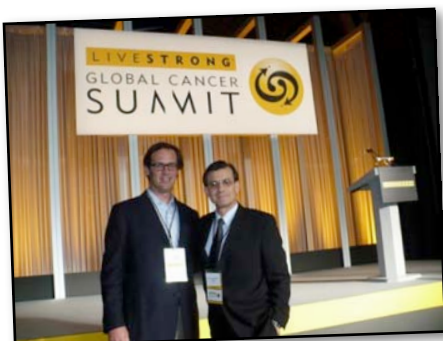


In Malawi, esophageal cancer is the 3rd most common cancer, but few patients receive treatment. Most patients come to the hospital too late to be cured, however, a small metallic mesh tube (stent) can be placed into the esophagus and used to push the tumor to the side, opening the blockage and allowing patients to eat. This procedure is not a cure, but patients get significant relief and often live comfortably for an additional 6-12 months - a much better alternative to dying horribly in a matter of weeks.

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"LANCE ARMSTRONG FOUNDATION LIVESTRONG INTERNATIONAL CANCER SUMMIT 2009"

I just returned from the 1st Lance Armstrong Foundation LIVESTRONG International Cancer Summit held in Dublin, Ireland. Our involvement in the Summit was featured in [an article in USA Today](#). The **SOS** Press Release for our LIVESTRONG Global Cancer Commitment is available [here](#).



I had the opportunity to represent **SOS**, along with Dr. Leo Vigna (left), an **SOS** member and surgeon in Malawi, to discuss a program we are supporting there. Although the majority of **SOS'** efforts continue to concentrate on building surgical capacity in Sierra Leone, we felt this was an opportunity we couldn't pass up.

Patients such as Mercy T. (right), arrive at hospitals in Malawi almost daily, unable to eat, drink, or even swallow their own saliva, due to advanced esophageal cancer. Leo and colleagues in Malawi developed a program to place stents (tubes) into the esophagus so these patients can eat and drink for the remain-

To assist patients with incurable esophageal cancer a three part program including surgeon training, nurse education, and research was developed. The program first consisted of workshops held in the Malawian cities of Blantyre and Lilongwe. Surgeons learned to place stents and nurses learned about caring for patients with esophageal stents and how to educate the patients' family. A total of 18 local surgeons and 46 nurses from 15 hospitals received training.

The surgeon workshops were taught by Dr. Russell White, Chief of Surgery and Endoscopy, Tenwek Mission Hospital in Kenya. Dr. White is a recognized world expert in the insertion of these stents - having assisted over 1,300 patients with this procedure.



The final part of the project is research. Clinical data, including risk factors, symptoms, tumor size, and follow-up, along with biopsy specimens are being collected. These data will assist in providing a clearer picture of the problem and suggest solutions for prevention. Additionally, the data will be useful in advocating for additional resources to care of patients with esophageal cancer.

More information on the project can be found in a Malawi Daily Times newspaper article at: www.dailytimes.bppmw.com/article.asp?ArticleID=13582

der of their lives. The local surgeons also raised money to buy the stents.

SOS supported two training courses for 18 surgeons and 41 nurses from 11 hospitals to care for these patients who arrive at these facilities suffering. Amazingly, they are able to eat and drink as soon as the stents are placed - even on the operating room table!

Dozens of patients have already received these stents, and we hope that this vital program can continue to provide comfort to patients and their families during the last years of their lives.

We have a busy fall planned, with containers of supplies, district hospital surgery training courses, and working towards the surgical residency program in Sierra Leone. Our fall fundraiser will be in Manhattan on Thursday, October 29th - invitations will be coming out soon.

We thank you again for all of your support - please share this email with anyone you think might be interested in joining our mission. We have seen first hand the massive effect that your support has on patients and surgeons in Sierra Leone and now Malawi - and we thank you for making it possible for us to continue saving lives through improved surgical care.



Mercy T immediately after his stent

“SOS ORGANISES DISASTER SIMULATION DRILL IN FREETOWN, SIERRA LEONE”

I've been here for a week now, and I've been witness to a horrific event. There was a large fire yesterday, with several explosions and 30 burn and trauma patients. I saw 1 pt, a 24yo with massive burns on his chest and abdomen, barely conscious. Next to him was a woman who had several fractures and burns and was 32 weeks pregnant.

I was present at the burn scene, where the Freetown Police Dept and Fire Dept performed admirably to remove the patients from harms way, and the Red Cross and military were mobilized to treat the victims. Security was a bit dodgy, as a crowd of about 200 on lookers was near riot stage. I went with the patients to Connaught Hospital, where a few surgeons, an anesthetist, and other doctors were waiting. Unfortunately 2 died in our arms en route.

This was the 1st ever large scale disaster simulation drill in Sierra Leone and it was organized by SOS. This was done in response to a horrible explosion in April, where 24 of 40 patients who made it to the hospital died of their burn injuries.

Because of this and a few other large disasters, we worked with the surgeons, anesthetists, and doctors at Connaught Hospital and with the Office of National Security of the Sierra Leonean government to perform a realistic exercise to help improve the response to disasters in order to save lives in the future.



In keeping with the SOS model that stresses local involvement in training exercises, half of the faculty were Sierra Leonean doctors who had lived through many difficult mass casualty events in Freetown. The results of this 2 day symposium that culminated with a mock mass casualty event were amazing. Doctors and agencies that had never worked together were suddenly treating patients side by side and developing new avenues of communications to help streamline patient care. Patient lives will be saved by the new skills and relationships taught by this course.

Patients were triaged rapidly, and some required emergency surgery. The ER was overrun with screaming patients, but as the chaos was sorted out, all patients were examined and treated. The OR staff and surgeon on call rushed with 3 patients to the OR to try to save them.

The good part of all of this experience is that prior to a scalpel touching skin we ended the exercise and all the dying patients (actually 3rd year Sierra Leonean medical students) stood up and washed off the fake blood.

MISSION REPORT I

"The Physician Shortage in the Solomon Islands: Sustainable solutions."

Dr. Eileen Natuzzi, MD FACS

The physician shortage in the Solomon Islands is a crisis that cannot be ignored. The ratio of practicing physicians to the population is 1:20,000! Cuba has begun sending doctors to assist with the critical doctor shortage and programs have been put in place for Solomon Island students to get their medical education in Havana. Certainly this will help. Pacific Partnership (PP), a US Navy supported program, has treated patients in the western part of the Solomon Islands during their missions in 2007 and 2008. They will be returning to the Solomon Islands this summer. So will the Loloma Foundation, who I work with. We have coordinated our efforts in the Solomon Islands with Pacific Partnership in order to provide seamless care. The Loloma Foundation and PP'09's annual medical trips collectively aid in the care of the people of the Solomon Islands. While these programs are admirable, we must recognize that they are "Band-Aid" solutions for medical care in a country that needs a comprehensive program in order to end the physician shortage and improve the delivery of health care to its people. This type of program would require an initial infusion of volunteer manpower in the form of physicians, PAs, NPs and nurse anesthetists. The program must include training and recruitment of the indigenous people of the Solomon Islands in order to create a sustainable health care force.



This is our team working at the National Referral Hospital where most surgical and specialty care takes place.

The infrastructure will need to be improved as well. Crumbling clinic buildings and hospitals will need to be upgraded or replaced. Surgical services must be considered a part of the "preventative medicine" strategy and therefore fully functional operating theaters and surgical care must be distributed throughout the islands. Without this type of public health scaffolding money from WHO, AusAid and the Global Fund that is directed toward treating specific diseases such as malaria and TB could be wasted and could actually make things worse for the people of the Solomon Islands by stealing resources away from the current anemic health care system.

In June while working at and site visiting provincial hospitals in the Solomon Islands I met with the health representatives

of the countries invested in health care in the Solomon islands as well as the Ministry of Health and the WHO. I introduced them to the program the Loloma Foundation has developed, The Solomon Islands On Site Training Program (SIOSTP)

where 3 US universities will partner with Fiji School of Medicine in order to bring post graduate training into the provincial hospitals located on the outer islands. There would be full time teaching of medicine, surgery, anesthesia, obstetrics and preventative medicine by fully trained and experienced doctors, nurse

practitioners and nurse anesthetists. Frequent specialty visits by consultants would augment the training. Every agency with a stake in assisting with health care in the Solomon Islands (AusAID, NZAID, ROC Taiwan, JICA) received the program enthusiastically and wants to partner with SIOSTP. This included the Ministry of Health. That was the easy part.

I believe it is time for the US to take part in partnering with all of the agencies I met with as well as the people of the Solomon Islands in creating a sustainable health care system. The Loloma Foundation is working towards this goal. We have applied for a USAID American Schools and Hospitals Abroad grant in order to fund this program. If that does not come through we will move on to other private funding options.

If countries like the Solomon Islands have adequate numbers of doctors and nurses as well as well-stocked clinics and hospitals the life expectancy and maternal mortality, measures of how well a health care system is providing for its people, will improve. Only then will the eradication of diseases such as malaria, TB and HIV follow.



Sometimes we work on the stern of the boat that we charter.



Sonosite-loaned ultrasound machine at work in a make shift clinic

Editor note: Find out more about the Loloma Foundation on their [website](#). If you have any questions for Dr Natuzzi, you can [contact her via email](#).

MISSION REPORT 2

“My time in Dakoro, Niger”**Dr. Reinou Groen, MD**

It has been 6 months now since I'm working as medical doctor with obstetric skills in a district hospital in the south of Niger. Normally there are only 2 local doctors available for the care of 380,751 people in the district. They had the same training as I have: after medicine one year of surgery and one year of gynaecology. But now Medicine sans Frontiers (MSF / Doctors without borders) has overtaken all mother and child care. With me there are 9 other expats available for paediatric care, health centres and all the logistics and financial stuff that come with taking over a part of the health care. This mission is started because of the ongoing malnutrition crisis and is mainly focussed on children under 5. But (luckily) my job is to look after the obstetrics and gynaecology cases in the hospital.

have holes and not all the scissors are really cutting. But the team is motivated, the nurse anaesthetist is good and I have most often my own sized pair of gloves and no limit in suture material.

Also at night the deliveries take place in the hospital, which I think is a good sign. First of all the ambulance is active at night and secondly it is safe to travel at night in this area. Like last night at 4, just when I thought I could go back to bed, a lady came to the hospital with a carriage and a donkey in front of it. She was in labour but the arm of the kid was protruding. Without getting emotional, this life here with pregnant ladies on donkeys, does remind me a lot of the story we hear with Christmas.



Liaatou checking fetal sounds in the ward



Aishatou learning the ultrasound

Patients are coming really late with a lot of complications. Ruptured uterus, kidney failure, sepsis, anaemia as low as 1,5 g/dl and a lot of eclampsia and prolonged labour with foetal death in utero. There are limited possibilities for investigations and treatment. I can order a WBC, Hb, faeces, urine and spinal fluid investigations and syphilis and malaria diagnostics. Next to that there is also the possibility for X-rays and I can do abdominal ultrasounds with a small portable machine. The blood availability is usually fine; once a month a collection is held in one of the villages, yielding almost 100 pints of blood. But unfortunately almost a fifth needs to be thrown away due to hepatitis C and syphilis and occasionally HIV. The biggest difficulty is to stay optimistic and full of energy when you lose a mother due to anaemia, or when you need to do a c-section on a 14 year old girl simply because she is too small to deliver or when you get a death in utero because the lady has been in labour for more than a week (with the risk of getting a fistula).

One of my objectives here is to teach all midwives to do vacuum extractions. That is really rewarding. Everyone sees the benefit of the procedure and is eager to learn. Another target is to expand the family planning methods and knowledge, since that is, the best way to prevent complications.

The OR has really been in good use since MSF started working here. This means no c-sections with moonlight but with a good OR lamp. But water is from a bucket, the OR-dresses



Dr. Groen delivering a baby via Caesarean section in the theatre.

Editor note: Dr Groen graduated with a MD from The University of Groningen medical school in the Netherlands. She is a tropical doctor, with post-graduate training in surgery and obstetrics, and completed the Tropical Medicine and International Health course at the Royal Tropical Institute in Amsterdam. She worked in Sierra Leone on an SIHS mission and also spent time on missions in Tanzania, Nigeria and Ghana. This is her first MSF mission.

MISSION REPORT 3

“My time with Esperanza in Bolivia”

Dr. Keith Apelgren, MD

In July 2009, Dr. Keith Apelgren (General Surgeon) and Jorge Cubillos (Scrub Tech) travelled to Tarija, Bolivia in order to perform operations on poor people. They were supported logistically by the local Fundación Esperanza Bolivia team of Guadalupe Rodriguez, Leticia Pacheco, Secretary María Eugenia Fernández and Luis Flores. This support was extensive, including letters of introduction to get the supplies into the country, comprehensive and well-stocked supplies, and pre-screening of patients. Local surgeons José Vargas and Marcelo Durán, and local anesthesiologist Mauricio Barrios provided invaluable assistance in the operating room.



Surgeons Apelgren (green cap) and Vargas (dark blue cap) and tech Cubillos.

The team operated in three hospitals over two weeks, opening the OR's in two of them. The Municipal Hospital of Culpina, a five-hour drive from Tarija, was the site of activity the first week. Apelgren and Cubillos failed to realize that it was winter there and that the city was at 2,900 meters. They scrambled to find warm clothing. Cases done there included open cholecystectomy, hernia and colostomy closure. The local team performed varicose vein procedures simultaneously.

The second hospital, Fanor Romero, is located 30 km from Tarija in the city of Concepción. This brand new OR was opened by the Esperanza team (Culpina being the first). All of the equipment and physicians were supplied by the team. A headlight, supplied by Esperanza, was critical to the success of the operations at this site and at the other hospitals.

The third hospital was a large regional hospital, San Juan de Dios, in Tarija. This hospital had training programs in surgery and anesthesia. Residents in both programs participated in the cases. Procedures done there included laparoscopic cholecystectomy, incisional hernia, and colostomy closure. The last procedures were done after emergent re-



Surgeons Duran (left) and Zamudia (right) in the second OR in Culpina.

sections of the sigmoid colon for volvulus. The patients, however, could not afford to pay for the elective colostomy closure. Ostomy appliances are primitive there and these patients were social outcasts. Closure of the ostomy affected not only their physical health but also their social standing.

The team completed 46 procedures. Patient postoperative care was very thorough. Two patients from Culpina were transferred to Tarija for further management. One had a residual common duct stone and had to undergo a second procedure. The experience was very satisfying for all members involved.

Editor note: Dr Keith Apelgren is a Professor of Surgery at Michigan State University with 21 years experience in residency education. He was MSU's former program director (2001-07). Previous international experiences include Liberia, Zambia, Ecuador, and Mexico.

If you have any questions for Dr Apelgren, you can [contact him via email](#). His faculty profile can be viewed [here](#).

DOWNLOADABLE TEXTS AND SELECTED BIBLIOGRAPHY**War Surgery: Working with Limited Resources in Armed Conflict and Other Situations of Violence**

The International Committee of the Red Cross (ICRC) have developed surgical programmes for war victims over many years, based on "appropriate" responses for a given situation. This often involves making the best of limited resources in an austere environment.

This resource is an update of a 1998 publication ([ICRC: Surgery for Victims of War](#)). Currently, [volume 1 of 2](#) has just been published. Authored by ICRC war surgeons Chris Giannou & Marco Baldan, it covers the basics of managing war injuries, as well as general topics concerning the coordination, logistics, and principles underlying the ICRC approach. Other highlights include the "Special Characteristics of Surgery in Times of Conflict", "Applicable International Humanitarian Law" & "The Chain of Casualty Care". Recent developments in the field of trauma surgery have also been included.

You can either [order a hard copy](#) which includes a multimedia CD-ROM or [download the .pdf file](#) (6.31Mb).

**WHO: Surgical Care at the District Hospital**

The World Health Organisation developed this manual as a practical resource for individual practitioners and for use in undergraduate & postgraduate programmes, in-service training, and continuing medical education programmes. It includes material on General Surgery, Obstetrics, Gynaecology, Orthopaedics, Trauma Surgery, and Anaesthesia. The [table of contents](#) is available

You can either [order a hard copy](#) or [download the .pdf file](#) (6.96Mb).

Manual of Surgery

This manual, in its 6th edition (2006), is authored by Professor Alexis Thomson and Mr. Alexander Miles, distinguished surgeons from Edinburgh Royal Infirmary. The 1st volume is devoted to General Surgery, the other 2 to Regional Surgery.

You can [view it online here](#).

Surgery and Healing in the Developing World

First written in 2005 by [Glenn Geelhoed](#), Professor of Surgery, George Washington University, this book reviews tricks of ancillary trades which add to the resourcefulness that can be brought to the field in laboratory, anesthesia, nursing services, and even such taken-for-granted supply of one's own utility services such as water, electricity and basic materials like IV fluids and suture. A table of contents and full description can be found [here](#).

You can [download the .pdf file](#) (4.7Mb)

Primary Surgery: Volumes One & Two

Primary Surgery is a three part textbook first published by Maurice King together with numerous experts in 1990. The work comprises the volumes Non-Trauma, Trauma and Anaesthesia. It was created to supply doctors with basic surgical knowledge to cope with all surgical symptoms, even far away from referral centers.

Since its original publication, it has become an essential guide for doctors working under limited conditions in third world countries. By means of clear illustrations it demonstrates examination and treating procedures step-by-step.

The latest version (last updated 2008) is available online ([Volume 1 - Non-trauma](#); [Volume 2 - Trauma](#)). You can also [download individual chapters](#) in .pdf format.

War Surgery in Afghanistan and Iraq: A Series of Cases from 2003-7

The ongoing battles in Afghanistan and Iraq are rewriting the war surgery textbooks. This volume, published in 2008 by Borden Institute of the US Army, reflects this. It describes the management of nearly 100 cases of acute combat trauma, conducted in the forward austere operative environment of war in the 21st century. Presented with vivid surgical photos, the cases encompass the spectrum of trauma that characterizes war today, as well as the medical interventions constantly evolving to treat these wounds. You can [view the table of contents](#) and download .pdf files of individual chapters.

SIHS on the Web

For more information about The Society of International Humanitarian Surgeons (SIHS), or its flagship program Surgeons OverSeas (SOS), refer to our website:

<http://www.humanitariansurgery.org>

For more frequent updates, check out our blog at:

<http://humanitariansurgery.org/blog/>

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Newsletter Editor

JEFFREY LEOW



A 4th-yr undergraduate medical student from Monash University (Australia), Jeffrey has a keen interest in Surgery & International Health.

He is due to graduate in Dec 2010. He keeps a blog at: [Vagus Surgiculis](#), and maintains an online "Surgical Grand Rounds" - [SurgeXperiences](#).