



# Table of Contents

Executive Summary	3
Letter from the Directors	4
Vision and Mission Statement	5
Who we are	6
Magnitude of the problem	7
What we do	10
Staffing and Training	10
Support for local surgeons	
Support for surgical missions	
Information and Networking	11
Website	
Database	
Newsletter	
Events	
Speaker's bank	
Research	13
How we accomplish our goals	15
Organization	
Implementation of plans	
Resources needed	
Cooperation and linkages	
Marketing	
Costs	
Budget	19
Funding sources	20
Achievements	21
Appendix I:	22
Appendix II:	23



# Executive Summary

## Vision

NYSIHS will be recognized as a global leader in the improvement of surgical care in developing countries.

## Mission Statement

The New York Society of International Humanitarian Surgeons (NYSIHS) improves surgical care in resource poor environments by linking surgeons to hospitals in developing countries, supporting local surgical staffing and training programs, and investigating the burden of surgical disease.

## Magnitude of the problem

The World Health Organization predicts that an escalation in the incidence of injuries and non-communicable disease will increase the need for surgery. For billions of people living in the developing world, basic surgical care is severely limited. Only an estimated 5-10% of necessary operations are performed in many of the world's poorest countries - leading to a disproportionate amount of death and disability. Poorly trained health workers, limited access, and insufficient resources are the hallmark of surgical care in these locations.

## What we do

- Support hospitals in the developing world to help educate and retain local surgeons.
- Facilitate member involvement in surgical missions.
- Function as a networking forum for surgeons wishing to assist in resource poor facilities.
- Collaborate on global surgery research initiatives.

## How we do it

- Provide financial assistance to local surgeons working in low income countries.
- Fund surgical missions that aim to educate staff and decrease personnel shortfalls.
- Host meetings to facilitate knowledge transfer and networking.
- Maintain health facility and surgeon databases and an interactive website.
- Assist in the development and dissemination of standardized surgical texts.
- Work with the World Health Organization, local ministries of health, and other organizations to document the global surgical burden of disease.

## Funding

NYSIHS seeks funding from individuals, private foundations, and corporate donors. Our 2008 budget is US\$ 117,000. Over 98% of funds will be spent on surgical programs.



# Letter from the Directors

NYSIHS began from the modest idea of creating an organization in New York to link surgeons interested in working in developing countries. What started with a small, local group of passionate and dedicated surgeons has rapidly evolved into an international organization with a membership that spans the globe - all with a common goal: improving surgical care in developing countries.

Our vision and mission statement reflects the direction in which we wish to proceed. We are happy with our achievements so far, but in the next year, as we expand operations, we hope to begin addressing the issues of shortfalls in surgical manpower, the unmet surgical needs of local populations, enhance surgical education and training, and facilitate surgeon involvement in developing countries; all while continuing to establish linkages between interested surgeons.

We have met an unbelievable array of surgeons, physicians, residents, students, and laypeople who share our passion for addressing basic surgical needs throughout the world.

This is an exciting phase for NYSIHS and we look forward to expanding our membership and supporters as we reach further into the developing world to help care for patients in need.

## **NYSIHS Board of Directors**

Adam L. Kushner, MD, MPH  
T. Peter Kingham, MD  
Alex Guerrero, MD

New York, NY  
December 2008



## **Vision**

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## **Mission Statement**

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# Who we are

## Bios

**Adam L. Kushner, MD, MPH** is a board certified general surgeon who practices exclusively in developing countries. After studying history and international relations at Cornell University and working as an international trade specialist in Europe and Asia, he went on to study medicine. He received an M.D. from the Mount Sinai School of Medicine and a Masters of Public Health from Johns Hopkins. He completed his general surgery residency at the University of Texas Health Science Center - San Antonio.

Dr. Kushner has worked as a general surgeon and educator in Malawi, Sierra Leone, Sudan, Ethiopia, and Haiti. In addition, he has led landmine assessment missions to Azerbaijan and Kosovo; conducted human rights assessments in Iraq; taught trauma care and landmine injury management in Nicaragua, Ecuador and Colombia; and worked as a health specialist following the 2005 tsunami in Indonesia. Since 2003 he has participated in US military training exercises as a subject matter expert for human rights and humanitarian assistance issues.

**T. Peter Kingham, M.D.** received a B.A. in the history of medicine from Yale University. Prior to obtaining his M.D. from SUNY Stony Brook School of Medicine, he worked for the New York City - Emergency Medical Services. He is currently administrative chief resident at New York University Hospital. As part of his surgical residency, he did two years of cancer research at the Memorial Sloan-Kettering Cancer Center and started a certificate degree program in international surgery. He has participated in medical and surgical missions to Tanzania, South Africa, Malawi, and Mexico, and was a Yale/Johnson & Johnson international health scholar for surgery. He has been accepted for a surgical oncology fellowship at Memorial Sloan-Kettering Cancer Center.

**Alex Guerrero M.D.** received his M.D. from the Oregon Health Sciences University. He was subsequently a visiting reader in General Surgery at Green College in Oxford, UK and later studied trauma surgery at the Chris Hani Baragwanath Medical Centre and the Johannesburg General Hospital in South Africa. He has participated in multiple missions with Cielo Para Los Ninos de Ecuador assisting in the management of congenital and traumatic hand deformities. He is currently a senior surgery resident at New York Methodist Hospital.



# Magnitude of the Problem

## What is the surgical burden of disease?

Surgical diseases in developing countries are increasingly recognized as a major health problem that urgently needs attention. Globally, 10% of all deaths and 20% of deaths in young adults result from surgical conditions. Traditionally it was felt that surgical diseases were too costly an investment in time and money and that scarce resources would be better spent addressing problems associated with infectious diseases or other public health concerns. This view has recently changed with new data documenting the economic benefits that result from treating surgical diseases.

Currently there are no comprehensive and reliable measurements for the global burden of surgical disease. Optimally, we would know the number of patients suffering from each surgical condition; how many present to a health facility where they can be treated; how many receive treatment and by what method; what the outcome of the treatment is. This information exists in fragments, but not on the grand scale necessary to guide overarching health policy decisions. What is clear, however, is that without treatment, surgical diseases increase the acute and chronic burden of disease and have an enormous negative impact on local micro and macro economies. A simple example of this is a fractured tibia – a broken leg; if fixed correctly the patient is able to walk and continue with a normal, productive life. Without correct treatment, complications can occur, leaving the patient instead with a chronic disability.



Recently the question of what is the most cost-effective way to treat diseases in low and middle-income countries has been raised. The World Health Organization (WHO) and World Bank developed a health gap measure called the disability adjusted life-year, or DALY, to more easily quantify the burden of various diseases and measure the effectiveness of interventions.<sup>1</sup> One DALY equals one year lost of healthy life. Approximately 11% of the worlds DALYs are from conditions that would require surgery, including injuries, cancers, congenital problems, obstetrical complications, and cataracts. In the World Bank document *Disease Control Priorities in Developing Countries* published in 2006 Debas *et al* calculated that the cost per DALY for surgical diseases was similar to well accepted practices such as measles vaccinations. To date, no data exists on the utility of programs to increase the access and outcome of surgery for conditions such as hernia repairs or abdominal conditions.



The only surgical intervention thoroughly evaluated has been for cataract surgery; analysis of the data revealed a cost of US\$57 per DALY averted. Debas *et al* showed that cost per surgical DALY averted in a district hospital in sub-Saharan Africa is US\$33. Gosselin *et al* reviewed data from a hospital in Sierra Leone and found 11,282 total DALYs were averted over a 3-month period.

Surgical services accounted for 38% of this total with a final cost of US\$33 per DALY averted.

<sup>1</sup>DALY= the sum of potential years of life lost (calculated by number of deaths times the life expectancy at the age of death) because of premature mortality added to the years of productive life lost (the number of incident cases multiplied by the disability weight) because of disability.

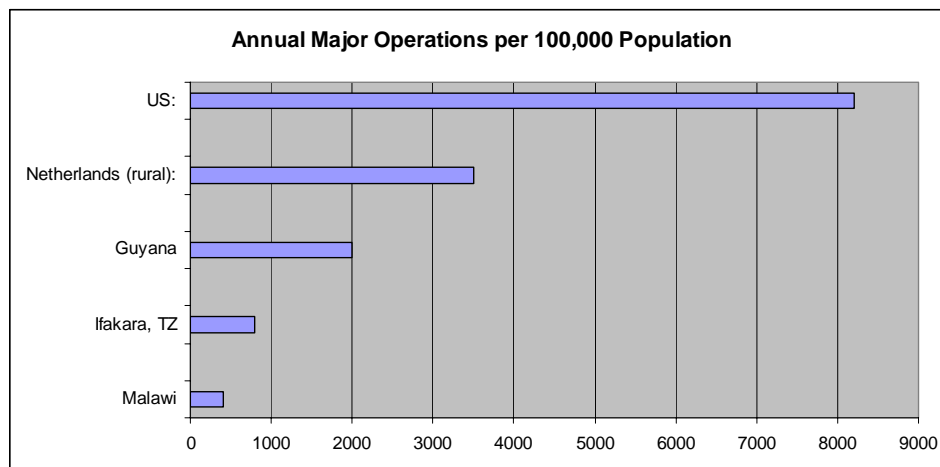


The conclusion was that surgical interventions for both injuries and non-traumatic conditions were a meaningful component of DALYs averted. Access to adequate surgical services reduces the burden of disease by reducing preventable deaths, returns patients to productive roles in their economy and family, and averts DALYs.

## What is the role of surgeons from developed countries?

There have been many attempts to assist developing countries with the management of surgical diseases. Ron Lett, a Canadian surgeon, described much of the 20<sup>th</sup> century as the colonial era where there was an inappropriate use of technology and no sustainability. He also describes the “Dark Ages” of international surgery where from 1978 to the turn of the century funding for international surgical initiatives was extremely limited due to a lack of appreciation of the role of surgical diseases in the global burden of disease. Since 1993 the World Bank has continuously shown the importance of investing in international health and specifically surgical care; lately cost-effectiveness has begun to be studied.

For many of the 2.4 billion people living in the world’s poorest regions (low-income countries with an annual per capita GNP less than US\$ 905: World Bank 2006) only 5% of the needed emergency and essential surgery is performed. Estimations show that in the US and Europe nearly 10,000 operations are performed annually for every 100,000 persons. In places such as Tanzania, Pakistan, and Malawi the number is roughly 300 per 100,000. In the absence of trained surgeons and adequate supplies and equipment, millions of people face avoidable death and severe disability.



Surgical assistance helps increase the cases that can be performed and helps ease the great backlog of patients who need surgery. In addition, it allows for local surgeons to take a much needed rest or even attend a conference.

Visiting surgeons can also assist in training surgical personnel. Training surgeons in developing countries can be very challenging due to the lack of resources: both financial and logistic.



With the migration of trained surgeons (brain drain) to countries with greater resources, some low income countries are training clinical officers to perform basic surgeries. Experience has shown that adequately equipping available facilities and providing essential basic training to local personnel is both feasible and successful.



Problems with surgical training include poor resources, low salaries, low morale, few opportunities for professional advancement, and professional isolation. Sustainable long-term surgical training can be achieved by twinning with medical schools and western surgeons. This cooperation can improve funding for local training by convincing governments to increase spending on surgical services, and by assisting with travelling fellowships.

In an effort to establish a global standard of surgical care, the WHO in 2005 launched the Global Initiative for Emergency and Essential Surgical Care (GIEESC). GIEESC aims to coordinate efforts to improve emergency and essential surgical care, standardize curriculums, promote training workshops and develop research protocols.

It is hoped that this effort by WHO will also help to coordinate some of the humanitarian organizations and volunteer agencies that are providing varying and uncoordinated relief efforts to facilities throughout the developing world.

Thus:

- 1- The magnitude of surgical diseases that need treatment is large
- 2- It is economically beneficial to spend time and money on treating surgical diseases and training surgical personnel
- 3- Research and manpower investments are required to meet the growing need of patients with surgical problems



# What we do

The NYSIHS is an organization devoted to improving surgical care in resource poor environments. Its tripartite mission includes developing novel staffing and training programs, functioning as an information and networking resource for surgeons, and supporting surgical research.

## Staffing and training assistance

### Support for local surgeons

One of the biggest problems affecting health facilities in resource poor environments is the lack of highly trained health personnel capable of performing safe surgery. NYSIHS endeavors to help with this situation both financially and academically.



#### *Financial support*

Local health care workers who agree to abide by ethical and international standards of providing safe surgery to local populations will receive financial assistance from NYSIHS. To properly implement this program, a few basic conditions are necessary: a local contact person must be identified who will take responsibility for disbursing the necessary funds; local salary needs and candidates must be identified; and the proper arrangements made so that monies can be disbursed fairly and equitably.

We are initially looking to support surgeons in Sierra Leone, Malawi, and Tanzania. We hope to assist 40 surgeons the first year and expand the program over the ensuing years. Ultimately we hope to implement this program in most if not all 53 countries that the World Bank defines as low-income.

#### *International standards and best practices support*

In an effort to promote safe and standardized surgical curricula, NYSIHS members work along with international and academic organizations. NYSIHS members are involved in the Global Initiative on Emergency and Essential Surgical Care (GIEESC), and this cooperation will continue as plans for future dissemination of the Integrated Management of Emergency and Essential Surgical Care (IMEESC) tool kit continues.

Efforts to develop protocols on safe surgery and surgical indicators will also benefit local populations by defining the surgical needs of populations and assuring their safety.

#### *Training opportunities:*

Training opportunities for local surgeons and surgical providers will be conducted as members identify needs and facilities request assistance for local staff.

#### **Low-income Countries**

(World Bank)

Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Congo, Dem Rep., Ivory Coast, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, India, Kenya, Dem. Rep. Korea, Kyrgyz Republic, Laos PDR, Liberia, Madagascar, Malawi, Mali, Mauritania, Mongolia, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Tajikistan, Tanzania, Timor-Leste, Togo, Uganda, Uzbekistan, Vietnam, Yemen, Zambia, and Zimbabwe.

(GNI per capita 2006 less than USD 905)



#### *Training material dissemination*

In cooperation with other official bodies (WHO, ACS, COSECSA, COSWA) proper training and educational material will be used and disseminated.

#### *Telemedicine:*

To assist with real time advice and consultations, telemedicine portals will be identified and run through the NYSIHS website. This technology will allow surgeons in developed countries to interact with counterparts in developing countries allowing for the exchange of advice and assistance. Such a system will also allow for distance learning, continuing medical education programs, mentoring, and partnerships.

#### *Outcome measures:*

Results of programs will be measured by the number of members who assist in developing countries, the number of patients treated, number and type of surgeries performed, and the number of trainees supported. The long-term result for assisting surgical training will be to demonstrate how many surgeons who receive assistance continue their work in their home country.

#### *Ad hoc programs*

Members are encouraged to work with NYSIHS headquarters to identify needs and propose novel projects to help care for patient requiring surgical services in developing countries. The first such ad hoc program will be to assist patients with esophageal cancer. The program will provide training and stents to surgeons and hospitals in Malawi. Such a program can bring significant palliative care to suffering patients and their families. The program will also collect data on stent placement in an effort to encourage the Malawian Ministry of Health to purchase stents in the future. For full proposal see Appendix II.

## **Support for surgical missions**

#### *Funding:*

A major portion of NYSIHS programs include assisting surgeons in developed countries make contact with their counterparts in the developing world. This program identifies hospitals in need of assistance and matches them with available surgeons. Many non-governmental organizations supply surgeons to hospitals in active crisis areas, but the majority of large and small hospitals in developing countries are struggling without any external assistance. Funding for these missions will facilitate surgeons to participate in training programs and alleviate shortages in personnel.

#### *Information:*

NYSIHS acts as a resource to provide background information and standards on how to work and function in resource poor environments. Information is available through the NYSIHS website and through communication with NYSIHS members. A blog will offer real time interaction for registered members.

#### *Buddy system:*

A system will be developed to enable surgeons with limited experience to partner with more experienced colleagues. This system will also allow students and residents to contact surgeons and programs that can also assist with their placement.

## **Information and networking**

As a focal point for surgeons desiring to work in developing countries, NYSIHS maintains a website, a member and facility database, publishes a quarterly newsletter, and organizes events and speakers.



## Website

The NYSIHS website is divided into four sections: About Us, Opportunities, Events, and Resources. On-line donations are solicited through [groundspring.org](http://groundspring.org).

### *About Us:*

This section describes the goals of NYSIHS and contains information on board members.

### *Opportunities:*

The opportunities section contains a list of facilities for which outside surgical assistance has been requested. Interested persons must contact NYSIHS staff in order to establish contact with listed facilities. CVs must be submitted in order for facilities to ascertain the appropriateness of interested surgeons. The list of facilities is displayed on the website in general terms; once more facilities are located there will be searchable functions grouped by specialty, region, and other attributes.

This section also includes a facility questionnaire for adding additional facilities to the database and an application for membership. In the future, information on funding and opportunities for assisting with research will be posted.

### *Events:*

The events section has information on upcoming events and meetings, but also is a resource of past events. Videotaped presentations with accompanying PowerPoint slides will be accessible on the website.

### *Resources:*

The resources section contains links of interest to members and visitors. All efforts are made to keep these links as up-to-date as possible. At the moment there are links to members' personal websites or photographs, however, in the future there will be a place for individualized member pages where each member can update where they have been or where their future missions will be. Links to mission reports and photos will also be available for viewing.

Case studies, mission reports, information on specific locations or diseases will be viewable as will be contact information for telemedicine and assistance for persons working in resource poor environments who wish to contact persons in other locations. Results of research studies will also be posted here.

### *Donations:*

Donations are handled by a secure link through Networking for Good and Groundspring. Receipts are automatically generated and sent to the donor. Emails also notify board members and a direct deposit system is in place to enable the secure transfer of collected funds.

### *Blog:*

A blog is to be incorporated into the website so that real time reports from the field will be available to members and interested visitors.

### *Contact info:*

The main point of contact at this time is Peter Kingham, MD a director and board secretary - [peter@nysihs.org](mailto:peter@nysihs.org). Once an administrative assistant is identified and employed many of these functions can be routed through them.



## **Database**

As a resource for linking surgeons and health facilities - a goal of NYSIHS is to develop the most extensive database of surgeons interested in assisting in resource poor environments and to have the largest list of facilities in need of assistance. Through partnerships with academic programs, NGOs, international organizations, and local ministries of health, the NYSIHS database will be the premier source of information on personnel and opportunities.

Interested persons are requested to submit applications. Health facility information is entered when needs and contact information is provided. With member permission, the surgeon list will be accessible to NGOs, government and UN organizations, hospitals and other surgeons. The hospital list will be a resource for NGOs looking for facilities to assist, surgeons looking to work, and as a source for research projects for students, residents and others. In the future, additional software will facilitate the database being updated and allow easier access.

## **Newsletter:**

A quarterly newsletter is published and distributed by email to members and interested parties. The newsletter serves as a marketing and informational resource. Society updates are published, new members and facilities are listed, and facilities are featured. Member mission reports and case studies are also published. Members are encouraged to submit articles which are then edited for length and appropriateness. A board of reviewers will be developed in the future.

## **Events:**

Dinner meetings are held in New York. These meetings serve as a networking and social gathering for surgeons. Keynote addresses will consist of mission reports or other topics of interest to NYSIHS members. The meetings will be held at distinctive venues with invited keynote speakers. Meetings will be open to members, their guests, and interested physicians and students. CME credit will be available for attendees. Each meeting will be videotaped and the resulting presentation will be available for viewing on the NYSIHS website.

Conferences will be held in conjunction with other national and international meetings such as those held by the International Society of Surgeons, American College of Surgeons, or International Federation of Rural Surgeons.

Business meetings will be held on a quarterly basis.

Training courses for surgeons wishing to work in resource poor environments will be developed and held in conjunction with universities and hospitals.

## **Speaker's bank**

NYSIHS members are available to give lectures and speak at national and international meetings. Topics include international humanitarian surgery, surgical research in developing countries, and other educational/inspirational topics. Audiences consist of departments of surgery, medical schools, lay public, NGOs, United Nations forums and governments.

## **Support for Research**

NYSIHS looks to support research into the global burden of surgical disease. It is believed that before additional resources will be allocated for surgical diseases there needs to be a better definition of the underlying problem. Two major areas of research are already identified, comparative operation rates for all countries and the global burden of surgical diseases including the unmet need.



**Comparative operation rates**

A baseline study looking into comparative operation rates should be undertaken as a broad indication of the relative lack of surgery being performed in developing countries.

**Burden of surgical disease:**

A large community based study needs to be undertaken in order to accurately understand what are the surgical needs of developing country populations. Initial studies are planned for refugee populations. Populations need to be identified and then studied.





# How we accomplish our goals

## Organization

NYSIHS is organized as a not-for-profit corporation under section 501(c)(3) of the Internal Revenue Service tax code. NYSIHS headquarters is based in New York City. Members are not limited to any geographical location and exist throughout the world.

### **Membership**

Membership is open to all surgeons and medical personnel interested in working in developing countries. There is no membership fee. All expenses are covered by donations from individuals, corporations, or foundations.

### **Board**

The board consists of three surgeons who are interested in promoting international humanitarian surgery. Additional board members will be recruited as there are interested persons who will be able to forward the mission of the society.

### **Advisory Board**

A group of advisors will be recruited to assist in planning and implementation of the NYSIHS mission. These individuals will be surgeons and lay-persons with the necessary skills and interests.

## Implementation of plans

In order to accomplish our goals a number of conditions must be met. Firstly there is an imperative to develop our membership and facility database and to raise funds. As initial member invitations has been done by personal contacts an increased effort must be undertaken to explore other options such as mailing lists of surgeons, residents, students and other physicians.

A more robust website is needed for greater interactivity and membership access and ability to create individualized pages and post information. The website should be seen as interactive and useful to members and non-members alike. This will encourage its use and help to attract other members.

Additional projects are currently being solicited in an effort to support surgeons and care for surgical patients in developing countries.

## Resources needed

### **Staffing**

Currently the staff consists of the three board members, additional assistance with administration, communications, and accounting will be obtained through the help of pro bono supporters.

### **Legal advice**

Pro bono legal advice has been obtained and will continue to offer high quality advice.

### **Volunteers**

Volunteer positions to assist with administrative work and with setting up New York meetings will be solicited from interested person and others wishing to assist with international humanitarian surgery.



**IT/website assistance**

The website was developed on a pro bono basis and continued pro bono assistance will be sought to continue with a high level of design and utility.

**Fund raising**

Funds will be solicited from individuals through personal relationships and during fund raising events and lectures. Currently Groundspring.org is providing the website support to allow for secure on-line donations.

In addition to seeking support from individual donors, grants from foundations will be sought to assist with ad hoc projects and for other limited and short-term undertakings.

**New member recruitment**

New members will need to be recruited through outreach to other surgical and medical societies, medical schools and through social networking means. Social networking sites will also be explored.

**New facility identification**

New facilities will be identified and added to the database through personal contacts and by partnering with NGOs, International Organizations and local ministries of health.

### **Cooperation and linkages**

NYSIHS will benefit from a close cooperation with the World Health Organization and the Global Initiative on Emergency and Essential Surgical Care (GIEESC). NYSIHS will actively support the GIEESC initiative and the standardized texts and workshops in an effort to promote safe surgical care. It is hoped that through this cooperation with WHO, in the future NYSIHS will be considered an implementing partner and a main source of referrals for facilities in need of surgical assistance and staffing support.

NYSIHS will seek to form strong ties with Operation Giving Back (OGB) of the American College of Surgeons. OGB seeks to be a resource for surgeons wishing to volunteer both domestically and abroad. NYSIHS can be a major partner to assist surgeons in identifying appropriate facilities in the developing world.

NYSIHS will have a presence at the annual ACS meetings with presentations by members on missions and research.

### **Marketing**

**Advertising**

Pro bono advertising support will be utilized in order to attract additional members and facilities for the database.

**Public relations**

As part of our fundraising initiatives it will be useful to have support of public relations organizations to help raise awareness of the issue and possibly locate a celebrity to assist with advocacy.



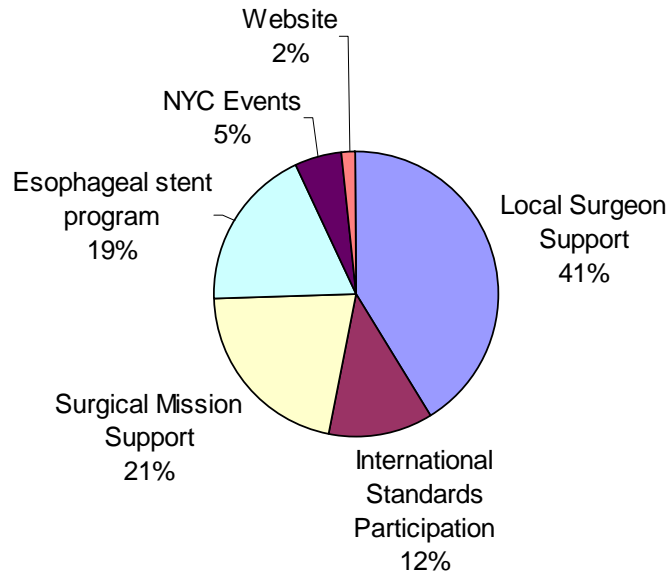


## Costs

### **Local surgeon support:**

Financial support to local surgeons will be one of the hallmark programs on NYSIHS. Currently locations and local contact personnel are being identified in order to establish this program. It is estimated that this program will rely on volunteers in each country who will administer the funds, and that funding should be on a level commensurate with each local situation. However, we are currently using a model of US\$100 per surgeon per month as a supplement to their official salary. We would hope to have approximately four sites the first year and upwards of 10 sites the second year with 5 to 10 surgeons supported at each site. This would equal an amount of US\$ 120,000 per year to support 100 surgeons.

### **2008 Projected Expenses**



### **Surgical mission support**

Support for surgeons wishing to assist in developing world district hospitals will be the most costly program for NYSIHS. Initially missions will be supported at US\$ 5,000. NYSIHS encourages member wherever possible to have extended missions with a minimum of one month. All members will be encouraged to purchase their own international medical evacuation insurance.

During 2008 we plan to assist at least 5 surgeons in month long missions for an estimated cost of US\$ 25,000. We hope to increase this to 25 surgeons per year in years 2-5.

### **Website**

We will endeavor to rely on pro bono assistance in developing the website; however, in the future there may be a need to automate some of the procedures and to develop a more robust databasing ability. In addition developing a more interactive component will require an upgrade of the system.

### **Database**



Currently all database information is entered by hand on Google-documents. With expanding membership and facility lists it will be necessary to upgrade the data basing capability in order to maintain a list of member and to allow quick access and messaging.

### **Newsletter**

Currently voluntary staff assembles and edits the newsletter. When the society grows there will be a need to employ a part-time person to handle such matters. This will allow for more robust copy and greater utility.



### **Events**

Dinner events in New York will initially be the most costly functions. An estimated \$3,000 will be needed to secure the event location, provide for meals and a small honorarium for visiting guest lecturers. As the Society grows it is felt that these meetings will grow as well and can be advertised at other national meeting.

There is the possibility of seeking donations

from pharmaceutical companies or other corporate sponsors, however, they will be require to keep a very low profile at the events.

### **Organization**

Currently the organization functions solely from voluntary staffing, however, as the work and the organization grow it will be necessary to hire or pay for executive and administrative undertakings. Salaries will be commensurate with industry standards.

It is hoped that an administrative assistant can be located or volunteer students can be recruited to assist with some of the work.

### **Research**

Research into the surgical burden of disease will be crucial if the magnitude of the problem is to be identified and if programs are to be evaluated properly. Such research will be costly to do properly. The results of this study will be disseminated in surgical journals, conferences and other organizations in order to promote interest in international humanitarian surgery.

### **Ad hoc programs**

In 2008, it is projected that an ad hoc project to help treat esophageal cancer patients in Malawi will cost US\$ 22,000. This project will include two training workshops in Lilongwe and Blantyre and provide stents and training to assist in the palliative care for these patients. Data on the use of these stents will be collected with the hope of convincing the Malawian Ministry to Health to purchase additional stents in the future.



# 2008 Projected Budget

## NYSIHS Budget 2008 (US\$)

### Local surgeon support

#### Direct staff support

Country	US\$ 100/mo	# staff	
Sierra Leone	1,200	10	12,000
Malawi	1,200	10	12,000
Tanzania	1,200	10	12,000
Nepal	1,200	10	12,000
			48,000

#### International standards and best practices support

Global Initiative			9,000
Surgical Indicators			2,000
International cooperation			3,000
			14,000

### Events- 2 NYC meetings

Venue	1,000	2,000	
Honorarium	1,000	2,000	
Meals/drinks	1,000	2,000	
			6,000

### Surgical mission support

5,000 per mission		5	25,000
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### Website

Webhosting	1,000		
Donations setup	500		
Database	500		
			2,000

### Esophageal stent program

Stents	19,000		
Training workshops	3,000		
			22,000

### Total

117,000



# Funding sources

## Individuals

In order to reach funding goals, NYSIHS will solicit private donations from individuals. As a 501(c)(3) these donations are tax deductible. It is estimated that initially individual donations will compose 80% of funding; later as other sources are developed this percentage will decrease to approximately 50%.

## Foundations

Grants from foundations will be pursued for issues such as research and development of educational and teaching resources. Such funding will be delayed until such time as appropriate personnel are available to manage the grant seeking procedures and accounting processes.

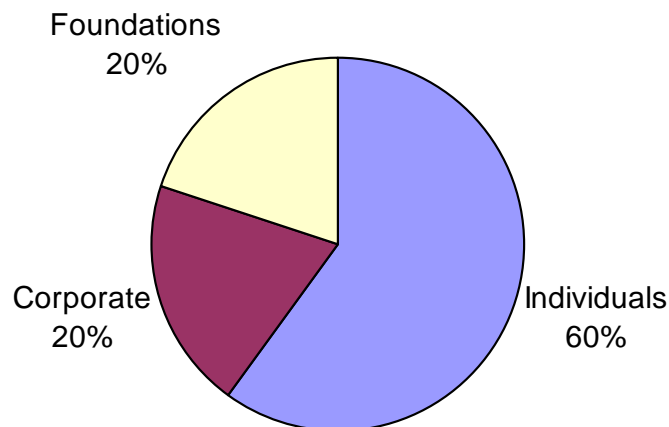
## Corporations

Corporate donations will be solicited for meetings. No corporate moneys will be used toward research projects.

## Governments

As the mission of NYSIHS is accomplished and there is a proven track record of success, we intend to apply for government development assistance from such organizations as USAID and other international donor organizations.

## Funding Sources



# NYSIHS Achievements

April '07	Aug '07	Sept '07	Nov '07	Dec '07
NYSIHS founded	Website launch	501(c)(3) granted		
		NYSIHS represented at WHO GIEESC in Dar es Salaam, Tanzania	NYSIHS represented at WHO GIEESC in Geneva, Switzerland	
	ISS presentation in Montreal, Canada		Surgery Grand Rounds Bassett Healthcare Cooperstown, NY	
NYSIHS members work in Malawi		NYSIHS member linked to Uganda		
		NYSIHS member receives Interplast fellowship		



# Appendix I

## Low and Middle Income Countries (World Bank 2006)

### Population data:

Low income 2,403,283

Middle income 3,085,943

Lower middle income 2,275,898

Upper middle income 810,045

Low & middle income 5,489,226

### Low-income countries (53):

Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Congo, Dem Rep., Ivory Coast, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, India, Kenya, Dem. Rep. Korea, Kyrgyz Republic, Laos PDR, Liberia, Madagascar, Malawi, Mali, Mauritania, Mongolia, Mozambique, Myanmar, Nepal, Niger, Nigeria, Pakistan, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Tajikistan, Tanzania, Timor-Leste, Togo, Uganda, Uzbekistan, Vietnam, Yemen, Zambia, and Zimbabwe.

### Lower middle-income countries (55):

Albania, Algeria, Angola, Armenia, Azerbaijan, Belarus, Bhutan, Bolivia, Bosnia and Herzegovina, Cameroon Cape Verde, China, Colombia, Rep. Congo, Cuba, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Fiji, Georgia, Guatemala, Guyana, Honduras, Indonesia, Iran, Iraq, Jamaica, Jordan, Kiribati, Lesotho, FYR Macedonia, Maldives, Marshall Islands, Micronesia, Moldova, Morocco, Namibia, Nicaragua, Paraguay, Peru, Philippines, Samoa, Sri Lanka, Suriname, Swaziland, Syria, Thailand, Tonga, Tunisia, Turkmenistan, Ukraine, Vanuatu, West Bank and Gaza.

### Upper middle income countries (41):

American Samoa, Argentina, Belize, Botswana, Brazil, Bulgaria, Chile, Costa Rica, Croatia, Dominica, Equatorial Guinea, Gabon, Grenada, Hungary, Kazakhstan, Latvia, Lebanon, Libya, Lithuania, Malaysia, Mauritius, Mayotte, Mexico, Montenegro, Northern Mariana Islands, Oman, Palau, Panama, Poland, Romania, Russian Federation, Serbia, Seychelles, Slovak Republic, South Africa, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Turkey, Uruguay, Venezuela.

*Income group:* Economies are divided according to 2006 GNI per capita, calculated using the World Bank [Atlas method](#). The groups are: [low income](#), \$905 or less; [lower middle income](#), \$906 - \$3,595; [upper middle income](#), \$3,596 - \$11,115



# Appendix II

## Esophageal Cancer Stent program for Malawi

Malawi, one of the world's poorest countries, lacks the resources to provide basic care for much of its population. With an annual per capita GNP and health expenditures of US\$ 190 and US\$ 25 respectively, cancer patients often receive minimal treatment. Esophageal cancer is very common, and most patients present in an incurable state. Patients are generally sent home without treatment; their esophagus closes off; they are unable to eat or drink, or even swallow their own saliva - they die a horrible death.

An effective technique for providing palliative care to these patients, to allow them and their families to more comfortably tolerate their inevitable death, is by inserting a special tube (stent) that keeps the esophagus open, thereby allowing food and liquid to bypass the tumor.

These stents are relatively expensive, costing approximately US\$800 each; however, there are companies offering steep discounts (US\$ 170) to developing countries on the condition that they be used solely for populations in need.

We plan to procure 120 stents (20 additional stents are provided for orders of 100 or more) and distribute them to the 6 major hospitals in Malawi: (Kamuzu, Mzuzu, Zomba, Queen Elizabeth Central, Maiwathu, and Blantyre Adventist Hospitals). Patients seen in the private hospitals will have to cover the cost of the stents. Those treated at public hospitals will receive care free of charge. Dr. Leo Vigna (lvigna@malawi.net), a general surgeon in Malawi and a NYSIHS member will be the contact person responsible for ordering, storing, and distributing the stents.

To assure proper usage and increase local awareness of the problems and management of esophageal cancer, a surgeon currently working in Kenya with significant experience in this technique will teach two workshops: one in Lilongwe for the central and northern regions and one in Blantyre for the south. It is estimated that each workshop will take one full day.

A database on the stent usage will document the utility of the procedure and provide evidence in an attempt to convince the Ministry of Health to purchase additional stents in the future. The program goals are to provide for immediate patient care and longer-term establishment of a sustainable solution to this horrific problem.

### Budget:

Stents:	US\$ 170 per stent (20 free with purchase of 100)	
	Total for 120 stents	US\$ 17,000
Storage and distribution:		US\$ 2,000
Training course x 2 (US\$ 300 each)		US\$ 600
Instructor costs		
Airfare: Kenya to Malawi		US\$ 500
Accommodations (5days)		US\$ 400
Meals (5 days)		US\$ 200
Transport		US\$ 250
Administrative 5%		US\$ 950
Total:		US\$ 21,900

