



Annual Report 2012-13 (2069-70)

ENHANCING RURAL HEALTH CARE







The Case of the Missing Health Worker

In a hospital in the mountains, at the end of a long, bumpy road - a curious thing happened: the health worker went missing. Now you might say that this isn't really such an uncommon thing, and I'd tend to agree. All over the world, it's hard to keep doctors and nurses in remote locations: hard to maintain the skills of multiple cadres isolated from their professions; hard to keep people motivated when their supervisors sit in offices far away in the big city.

But I'd also maintain that this is a curious case, and one worth trying to solve. For you will find some hospitals and health posts - even in government systems - where staff put in a full day of dedicated service and where they are eager to maintain their skills. In some places, the institution and workers provide consistent care to the local community and people living there still cling to the hope that if they are sick, there'll be someone nearby to help them. But in other places and other towns, on other mountains, the health care worker seems to be missing.

For the last seven years, the Nick Simons Institute has been working on this case. Building on a foundation that includes international and local research. first-hand experience in many Nepali government institutions, and dialogue with people • The Follow-up Enhancement in rural towns. NSI continues to implement and refine its approach to this worrisome problem.

During the past year, NSI made progress in a number of areas:

- Its Rural Staff Support Program - a bundle of human resource supports – moved into its seventh government district hospital. Like the previous ones, this hospital in Doti was soon converted into a place where the team performs emergency operations – and a lot more.
- The Mid-Level Practicum course became a part of the government's regular training of its 6000 auxiliary health workers who form the backbone of the rural health care team.
- The Anesthesia Assistant Course registered its second batch of students, giving long-term stability to a training that produces the essential anesthesia provider for hospitals where that specialist doctor is missing.
- The Biomedical Equipment Technician trainings conducted for three levels of workers and with its new training center just inaugurated - brought us a big step closer to establishing a government system for biomedical equipment care.

Program, NSI's pioneering effort to regularly follow-up graduates in the field, received the Health Ministry's endorsement to be nationalized.

These are some of the highlights you'll find in NSI's 2012-13 Annual Report - programs to promote retention and trainings to fill in missing skills. There are others too, like a new distance education course for doctors, an emerging training for hospital managers, and activities such as a cell-phone-based consultation system to create a network of rural health care workers.

The case of the missing health care worker will remain both curious and troubling. It's not likely to be cracked by one organization or by one breakthrough - the solution is elusive. But NSI remains committed to painstakingly finding the missing pieces. In the process, more and more dysfunctional health care institutions are becoming places where patients can find skilled, caring workers - places where local people can safely invest their hope.

Thanks for taking on this challenge with us.

> Dr. Mark Zimmerman **Executive Director**

The Effects of Missing Health Care Workers

 Only 34% (24/70) of Nepal's government district hospitals provide emergency obstetric services (C-sections).

[NSI 2013]

- Nepal's government faces a crisis of overcrowding in its referral hospitals as patients increasingly bypass primary and secondary institutions.
 - [MoHP 2012]
- Only 1% of Nepal's poorest quintile of pregnant women obtain C-sections (the ideal is 4.5%).

[NDHS 2011]

 11% of the poorest quintile (vs. 80% of the highest quintile) deliver babies within health care institutions.

[NDHS 2011]



What is NSI'S Approach?

OUR MISSION

To train and support competent health care workers for rural Nepal

OUR VISION

People in rural Nepal receiving quality health care services within their own communities.



The Nick Simons Institute focuses on the healthcare worker.

- Where they are missing, through programs that promote retention.
- Where they are under-skilled, through training.

- Where performance is substandard, through improvements in the enabling environment, especially management.
- In all cases, NSI raises a voice of praise for those who are present and providing healthcare in remote places.

Training

Five principles that underlie NSI's training programs

1. Find excellent partner hospitals with adequate patient numbers.

NSI trains through 18 partner hospitals, located right across the length of Nepal.

2. Choose cadres of worker most strategic to rural hospitals and health posts.

Based on government and NSI research, NSI fills critical gaps in the rural team.

3. Embrace 'task shifting.'

NSI trains Anesthesia Assistants, Mid-level Workers and Skilled Birth Attendant Nurses to do the work of the often-missing doctor.

4. Give priority to inservice training of existing government workers.

With a glut of medical and nursing colleges in Nepal – and no long-term program to deploy these graduates in rural areas – in-service training of current staff bears immediate fruit.

5. Follow-up graduates in the field.

NSI now follows up graduates from 5 of its training programs, which provides essential feedback to the trainers as well as an opportunity to coach and support the graduates in their workplace.



NSI's Training Programs

In collaboration with the National Health Training Centre

COURSE		# GRADUATES SINCE 2007
Anesthesia Assistant	One-year course in emergency anesthesia for nurses and health assistants	57
Biomedical Equipment Technician	One-year and two-month courses in repair and maintenance for science graduates	264
Skilled Birth Attendant	Two-month course in normal and complicated deliveries for nurses.	960
Mid-Level Practicum	Three-month course in diagnosis and treatment of common medical conditions for medical assistants	467
Ultrasound	Three-month course in obstetric and abdomen ultrasound for doctors	53
	5-Year Total	1811



Task Shifting to enable Safe Surgery

The problem is that no anesthesia doctors work outside of Nepal's cities. There is not one found in any of the government's 70 district hospitals.

The solution is one accepted the world over: train nurses and health assistants to provide basic, life-saving anesthesia.

NSI's role was to develop a 12-month course for Anesthesia Assistants that integrated classroom lectures, lab skills' sessions, and hands-on clinical practice towards all the necessary comptencies.

The scale-up began last year (2011-12) when the government's National Academy of Medical Science (NAMS) accredited the course and the National Health Training Center began entering students under a government budget.

During 2012-13, the first AAC batch graduated and the second batch of 14 was entered. The AAC utilizes 6 NSI partner hospitals for this training.

I Saw the Women and Children Dying

I'm the son of a government worker, so after I was born in Saptari, I lived in many places around Nepal. I entered the government service as a health assistant 7 years ago and spent most of that time in the hill district of Bhojpur. While there I saw the women and children dying, and I realized the need for emergency operations.

The MDGP doctor confidently leaves the anesthesia to me.

I read about the Anesthesia Assistant Course, applied and took the exam, and gained entrance into the second batch. Sure, my training at Bharatpur Hospital was worthwhile: I gained

life-saving skills. In addition to lectures and lab work, I conducted over 500 spinal anesthesias and 92 general anesthesias. I became fully competent intubating patients.

Government officials told me that the Ilam District Hospital needed an Anesthesia Assistant, so I agreed to come here after I graduated. I'm glad I came. In the first three weeks here the MDGP doctor has done 14 Caesarean sections, and he confidently leaves the anesthesia to me. With some support from this doctor, I think we



could do general anesthesia here too. With its central location, this hospital could now be doing many operations of different types.

Arjun Chaurdary

Anesthesia Assistant Ilam District Hospital

THE MID-LEVEL PRACTICUM COURSE

A MODEL OF NSI SCALE-UP

The problem was that government mid-level workers (health assistants and auxiliary health workers) did not have the skills to manage the health posts where patients counted on them as 'the doctor.'

The solution is a practice-based course that equips mid-levels to diagnose the most common patient problems – like headache and shortness of breath – and to perform essential procedures – like lancing an abscess and putting in an IV.

The pilot lasted from 2008 to 2010 and showed marked improvement in the skills of graduates.

The scale-up began last year (2011-12) when the government adopted the mid-level practicum (MLP) as their main course for the upgrade of 6000 workers in the government system.

During 2012-13, 300 mid-level workers received MLP training – for the first time utilizing the government budget for this course.



Patient-based training



Focusing on common medical problems



Decision-making through electronic algorithms



THE SOLUTION IS
A PRACTICE-BASED
COURSE THAT EQUIPS
MID-LEVELS TO
DIAGNOSE THE MOST
COMMON PATIENT
PROBLEMS

NEPAL'S MINISTRY

OF HEALTH AND

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BIOMEDICAL EQUIPMENT TECHNICIAN COURSES

AN EMERGING SYSTEM FOR THE NEPAL GOVERNMENT

Around the world, hospital directors know that the biomedical team is critical to the sustainability of their work. Without this group to perform preventive maintenance and repair, the skills of doctors and nurses are not fully utilized.

Nepal's Ministry of Health and Population is beginning to accept the need for a biomedical system to match its curative care system.

In partnership with NHTC, NSI has been conducting three types of biomedical course

- BMET one year course for science graduates
- BMEAT 2 month training for hospital maintenance staff



 Biomedical short courses for lab technicians and radiographers

In March 2013, the NHTC/NSI biomedical training and workshop building was inaugurated. This is now a center point for the government's emerging BMET system.



WHAT IS A FEP?

- (a) The Follow-up Enhancement Program
- (b) A process of ongoing mentoring by trainers of their graduates in the field
- (c) An answer to the government's policy that 20% trainees get follow-up
- (d) A way to feedback useful information to trainers, NSI, and the government.
- (e) All of the above

Realizing that the organization knew very little about the working situations of its graduates, in 2010 NSI began the Follow-up Enhancement Program (FEP) as a way to answer the question:

"What are our graduates doing now?"



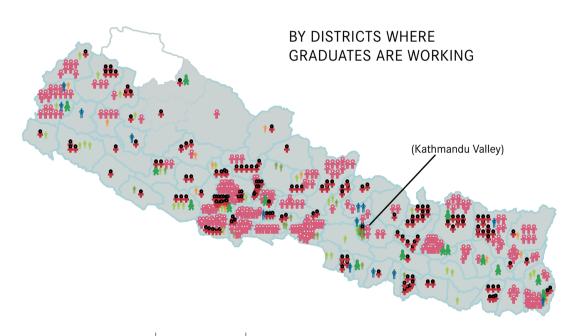




Graduates Followed Up in their Workplace

TRAINING CADRE	NUMBER OF GRADUATES FOLLOWED UP (SINCE 2010)	TOTAL NUMBER OF GRADUATES NATIONWIDE (SINCE 2002)
Anesthesia Assistant	44	94
Skilled Birth Attendant	339	4200
Biomedical Equipment Technician	30	78
Mid-Level Practicum	114	450
Ultrasound	25	61

Graduates Completing Training at NSI Sites (2012-13)



		2012-13	2011-12
TRAI	TRAININGS		Total # Trainees
🛉 Anesthesia Assistant		† Anesthesia Assistant 14	
- ¶ Sk	illed Birth Attendant	241	173
	† Technician	20	20
Biomedical Equipment	Asst. Technician	33	16
Equipment	† Short courses	40	10
4	Mid-Level Practicum	295	66
† Ultrasound		15	13
	TOTALS	658	307

Rural Staff Support Program

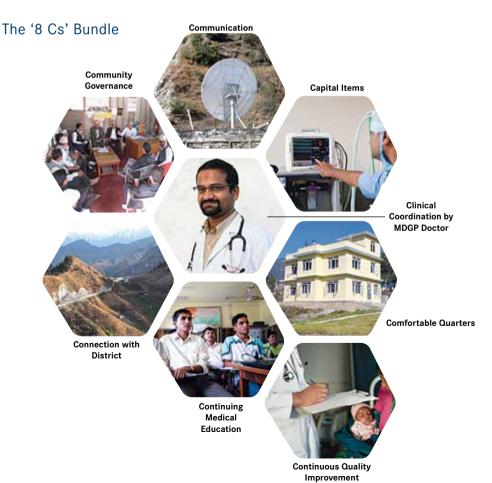
The Nepal Government's 70 district hospitals are critical links between the country's remote villages and the more developed cities. They are the 'port of first call' for rural patients who find themselves in an emergency situation. Many district hospitals, however, are not functioning because they lack highperforming health care workers.

NSI and the Health Ministry started the Rural Staff Support Program (RSSP) in 2007 as a pilot for three poorly functioning district hospitals. By 2010, those hospitals were beginning to show signs of revival and that year the program won an International Award of Excellence from WHO/GHWA. More importantly, the Nepal government called for the program's expansion to new districts.

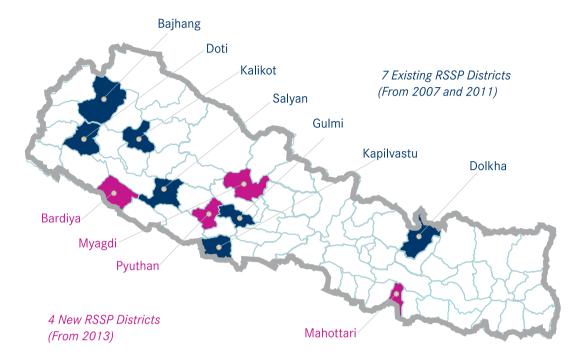
RSSP goes by the pneumonic the 8Cs, which stand for seven hospital 'enabling environment' supports and provision of one MDGP (Family

A Bundle of Supports for Struggling District Hospitals Whose Health Care Workers were Missing

Practice) doctor who trained under an NSI scholarship. MDGPs are capable of caring for a full range of patients, including those needing surgery, orthopedics, obstetric, pediatrics, and medical help. This combination fills gaps in the district hospital team.



RSSP DISTRICTS



CREATING A MODEL PROJECT

The RSSP has succeeded in starting operations in all seven of its hospitals. Outpatient visits, admissions, and deliveries have increased significantly. Local communities have expressed appreciation and asked the program to continue.

In 2013, Nepal's Health Ministry called for expansion of RSSP into four more districts. In the next phase of the work, NSI will work more closely with the Ministry's Family Health Division to blend their RSSP model with the government's own 'Comprehensive Emergency Obstetric Care' (CEOC) contract system. As with all NSI programs, the aim is for NSI's experienced-based learning to be applied more widely by the government.

A full mid-term assessment is due in 2014.

WHO WILL BE RESPONSIBLE?

Dr. Amogh Basnyat, MDGP, Kalikot District Hospital



It's been 2 months since I came here to Kalikot. The caesarean section (CS) we did this morning is the eighth one.

The monsoon is in full swing now and the roads and transportation are at their worst. Meanwhile, the locally produced electricity is also getting more and more unpredictable. Sometimes the voltage is high enough to fry the medical gadgets and at other times the light is nearly zero. The thick cloud cover hovering over these gigantic hills for so many days prevents the solar batteries getting charged. It's in such conditions that we have to tackle the case of a very short 20-year old lady in her first pregnancy who isn't making progress towards delivering.

In the operating room we have a solitary quarter-power solar lamp, no suction, no oxygen concentrator, uncharged saturation probe and Doppler whose battery is getting lower and lower by the hour. Cautery, of course, I haven't used even once since I came here. I resort to the only thing that I have been getting used to doing here so very often: I pray to my God. So then, let me leave everything at your disposal, Lord. Let me attempt this one now ... how dearly I miss

the places I trained: Teaching Hospital's specialized operating theater, Tansen Hospital's 24-hour preparedness, Western Regional Hospital's full complement of resources.

In this hospital, both the scrub nurse's and the assistant surgeon's jobs are taken on by a single person. Well, here I go with spinal anesthesia. Position, counsel, midline, quincke's - the spinal fluid gushes out and the flow is steady. I slowly and hesitantly push in the bupivacaine 0.5%. Thank God, it works! She is well anaesthetized below her waist, not able to lift up the legs, her pain is gone. One thing is done.

Now, for the lion's share of the beast. Scrub, gown, gloves.Layers of incision: skin, rectus sheath, linea alba....stretch, nurse, stretch! Yes, and we need to open this peritoneum still higher up. Doyen's. Yes, here we go ... plain forceps ... no that's the toothed one ... give me plain ... no that's the artery forceps ... plain means non-toothed ones. SUCTION ...oh sorry ... no suction today!

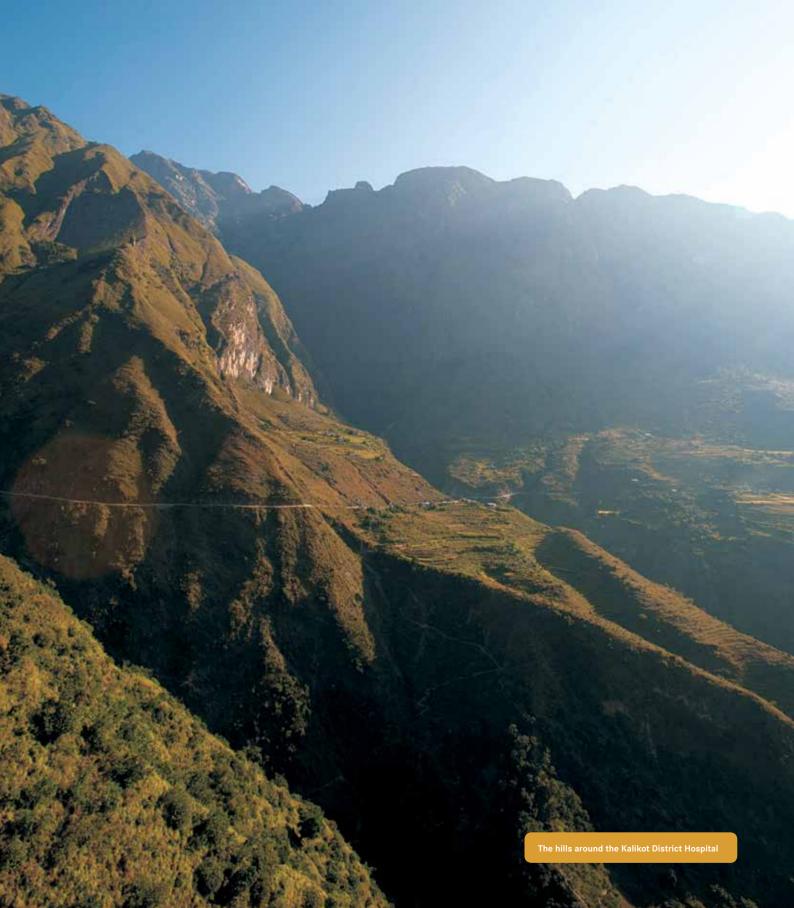
And there you have the head deep down in the pelvis, well engaged ... can I lift it out? ...nurse, hello, someone ...could you wear a glove and push it up for me? ... do you know what I mean? ... the head

is too deep into the pelvis ... can't get to it! Try, try, try ... ok, leave your gloves ... I have it now. And there it is ... head, shoulders, torso, buttocks – it's the whole baby – Momma's bundle of joy!

OK, now. Catgut stitches, controlled traction on the cord, and there we have it ... closed uterus, bleeding controlled. Close rectus sheath. Now, skin. CS is done! Sans light, sans suction ... the job is done!!

I walk to the ward. This one went well, hence not much to complain about. But, someday, something might go wrong. What then? Who will be responsible? The District Development Committee that promised long ago to provide us a continuous three-phase supply of electricity, but has turned a blind eye since then? The electricity department that needs to divide the supply equally among the local leaders' domicile hamlets? The office helpers who are never there to help? The Nick Simons Institute, that sent me here to be responsible for things that I have no control and authority over? Or me ... the doctor who ultimately is the face of the visible mishaps and wrongdoings within a hospital system?

But, for the time being, the happy faces of the mom and the baby keep me happy as well. Love you, God, for this position you've bestowed on me.



Advocacy



2012 Nick Simons Award winner AHW Firoj Rain with Health Secretary Dr. Praveen Mishra and Dr. Jim Simons at the Rural Healthcare Workers Conference.

The Nick Simons Institute works in multiple ways to improve the situation of rural health care workers. In addition to training and staff support programs, NSI influences the attitudes and decisions of people at various levels of society.

With international partners

- NSI was invited to an India government policy-level meeting to discuss how the Nepal MDGP model could be disseminated in India.
- NSI was invited by the Bhutanese government to set up MLP and SBA training there.

With the Nepal Government and public

- NSI participated in several policy-level committees.
- NSI, through a forum and individual lobbying, catalyzed creation of new posts for MDGP doctors and Anesthesia Assistants.
- NSI created models such as its Rural Staff Support Program and Follow-up Enhancement Program, which the Health Ministry is in the process of incorporating.
- NSI writes regular articles and appears in television to promote the achievements of rural healthcare workers.

With rural healthcare workers

- NSI publishes a twice yearly newsletter that links 4000 healthcare workers throughout Nepal.
- NSI organizes a yearly rural healthcare workers conference, which includes selection of the Nick Simons Award for outstanding worker.
- NSI maintains an SMS texting network for news and health education reminders.

RECENT NSI PUBLICATIONS

Medical students' characteristics as predictors of career practice location: retrospective cohort study tracking graduates of Nepal's first medical college

British Medical Journal 2012;345:e4826

This study located 98% of 722 graduates from the first 22 classes of the Institute of Medicine and showed that rural birth, paramedical training, and low class rank were associated with eventual practice in underserved areas. This findings could be used to construct admission criteria more likely to produce doctors who remain in-country or in rural areas.

Career choices and what influences Nepali medical students and young doctors: a cross-sectional study

Human Resources for Health 2013, 11:5 doi:10.1186/1478-4491-11-5

Among 1112 medical students studied, 42% came from a rural background and 51% had a specialty preference at the time of medical school entrance – but only 0.5% said they preferred general practice as a career. This highlights the need for general practice to have a more prominent role in undergraduate medical education in Nepal.

ACTIVE NSI RESEARCH PROJECTS

Nurse retention, job satisfaction and motivation

Recruiting and retaining Staff Nurse and Auxiliary Nurse Midwives with Skilled Birth Attendant training in rural areas is an essential step towards increasing maternal and newborn survival in Nepal. Recruitment of nurses by health facilities has been identified as a strategy that may encourage locally appropriate recruitment and increase access to maternal health care. This study evaluates the effectiveness of local recruitment of nurses, specifically examining their job satisfaction, motivation, and retention in rural areas.

April 2012 - November 2013

E-Algos: Clinical Diagnosis Mobile Application for Rural Health Care Workers

During the development of the Mid Level Practicum (MLP) curriculum, the clinical decision making algorithm was created. With the advent of mobile phone technology, there have been some moves to use electronic algorithms to improve treatment of common health problems. NSI has adopted the original clinical algorithms into an electronic mobile application. NSI is currently running the beta version and is looking for feedback.

November 2012 – December 2013

Evaluating a mobile phones intervention to support rural health workers

Globally, there is a great deal of optimism about the potential for 'mhealth' interventions to increase access to medical care in hard to reach populations. In Gulmi district we are piloting an intervention where Auxiliary Health Workers, Health Assistants, and Auxiliary Nurse Midwives have access to a free phone line to the General Practitioner doctor in the district hospital. We hope that our intervention decreases inappropriate referrals and decreases professional isolation of mid level health workers.

June 2012 - Uncertain

What is the Impact of NSI's Work?

- 7 previously struggling government district hospitals are now able to provide life-saving operations and other needed healthcare services.
- Two thousand health workers have graduated from NSI training programs and most are now serving communities throughout Nepal.
- Nepal's Ministry of Health and Population are now incorporating a number of NSI's initiatives:
 - Mid-level Practicum Training
 - Anesthesia Assistant Course
 - Follow-up Enhancement Program
 - Rural Staff Support Program
 - Posts for MDGP doctors and Anesthesia Assistants
- NSI's influence has begun to spread to other countries through advocacy, research and consultancies.

In short, NSI's work is contributing to solve 'The Case of the Missing Health Worker.'





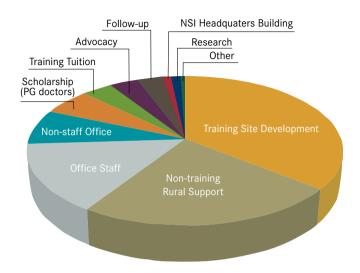
Einance

The Nick Simons Institute was established in 2006 as a charitable Nepal-based organization. NSI operates under a Board of distinguished Nepali professionals chaired by Dr. Bhekh B. Thapa.

NSI receives its funding from the Nick Simons Foundation, a non-profit organization operating out of New York. Both organizations were founded by Jim and Marilyn Simons in memory of their son.

Nick was a young man who, after graduation from college, came to Nepal in 2002 to work in an NGO. His 9 months in Nepal led him to set his dreams on a career as a doctor and to tell his mother not to be surprised if he spent most of his life in a country like Nepal. Some months later, however, Nick died while swimming in Bali.

PROPORTION OF EXPENDITURE



NSI's mission is to train and support competent health care workers for rural Nepal.

Rather than conducting training in its own center, NSI's training modality is to work through 18 partner institutions across the country. One of its main expenses is in the development and maintenance of excellent training sites – which is an ongoing, continuous process. NSI is also involved in national curriculum development, but only a small proportion of its budget goes directly into tuition; students' trainings are mostly funded by the Nepal government and its other donors.

Alongside training is NSI's other major area of work: the revitalization of government district hospitals. As this number has grown from 3 to 7 and soon to 11 hospitals – the Rural Staff Support Program has become the largest part of NSI's program budget.

About 30 NSI administrative and technical staff are located in the NSI center with extensive work to rural partners. This constitutes 15% of the budget.

Summary of Expenses for FY 2069/70 (2012-13) (in Nepalese Rupees)

GROUP	PREVIOUS YEAR'S ACTUAL	FY 69/70 ACTUAL	FY 69/70 Budgeted
1. Training			
1.1 General Training	1,120,229	1,611,570	2,360,000
1.2 Bio Medical Equipment Technician	2,951,633	4,565,269	3,850,000
1.3 Anesthesia Assistant Technician	5,794,143	4,383,931	7,039,384
1.4 Skilled Birth Attendant			
	6,614,994	6,321,445	7,891,133
1.5 Mid Level Practicum	10,274,953	6,737,186	8,709,439
1.6 Ultrasound	319,290	889,530	3,140,000
1.7 CME	474,392	1,169,484	905,882
1.8 Hospital Management	132,757	1,218,509	2,522,200
Total Training Expense	27,682,391	26,896,924	36,418,038
2. RSSP			
2.1 Communication	204,733	387,563	800,000
2.2 Continuing Med Education	560,043	615,027	2,200,000
2.3 Community Governance	1,087,111	1,080,000	2,200,000
2.4 Connection with NSI Centers	269,766	292,645	1,600,000
2.5 Children's Education	236,000	130,800	100,000
2.6 Captaincy by MDGP	11,010,445	17,128,025	16,300,000
2.7 Capital Subsidy	3,648,256	3,288,822	3,500,000
2.8 Comfortable Quarter	, ,		
	1,248,152	3,172,808	4,650,000
2.9 Continuous Quality Improvement	250,000	1,950,522	2,700,000
2.10 Administration	2,892,879	344,862	700,000
2.11 RSSP General	1,416,968	2,743,991	4,000,000
Total RSSP Expense	22,824,354	31,135,064	38,750,000
3. Scholarships	(704 500	0 (75 500	40.500.000
3.1 MDGP	6,704,530	8,675,590	12,500,000
3.2 Anesthesia		350,459	900,000
Total Scholarship Expense	6,704,530	9,026,049	13,400,000
4. Monitoring & Evaluation (M & E)	505.404		0.075.000
4.1 Research	505,184	981,482	2,075,000
1.2 Follow-up Enhancement Program (FEP)	2,223,874	3,116,068	2,100,000
Total Monitoring & Evaluation Expense	2,729,058	4,097,550	4,175,000
5. Advocacy			
5.1 Marketing	490,479	1,299,948	1,361,708
5.2 Advocacy General	444,482	489,881	650,000
5.3 Rural Healthcare Workers Conference	2,865,846	3,689,526	3,000,000
Total Advocacy Expense	3,800,807	5,479,355	5,011,708
6. Office			
5.1 Staff Salary	19,305,089	22,873,906	21,504,400
5.2 Staff Development	1,311,972	719,574	1,400,000
5.3 Consultants	1,566,153	1,285,375	2,000,000
6.4 Insurance	823,413	896,416	1,050,000
5.5 Utilities	590,778	576,623	700,000
6.6 Office Consumables	1,000,428	1,004,383	680,000
6.7 Rent & Equipment	1,162,225	2,443,055	2,930,000
6.8 Other	4,192,459	5,861,841	4,335,000
Total Office Expense	29,952,518	35,661,173	34,599,400
TOTAL RECURRING EXPENSES (1-6)	93,693,658	112,296,115	132,354,146
7. Building	0 783 /3/	1 718 602	2 364 030
7.1 NSI Office	9,783,434	1,718,692	2,364,930
7.2 AMDA Maternity Block	7,420,285	1,772,397	1,800,000
7.3 BMET Training Center	10,761,030	31,926,366	28,000,000
7.4 Bharatpur	-	2,900,000	10,000,000
7.5 Kapilvastu Renovation	-	6,116,534	5,745,986
7.6 Tansen Hostel	-	2,500,000	5,000,000
7.7 Dadeldhura Team Hospital Training Center	11,500,000		500,000
Total Building Expense	49,464,749	46,933,989	53,410,916
O 1	143,158,407	159,230,104	185,765,062

[1 USD = 96 Nepal rupees]



