

Tibetan Refugee Eye & Medical Project

Pokhara, Nepal
April 2010



The Explorers Club
Flag #176 Report

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Project Volunteers

The Explorers Club

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Lars Perkins

Indira Kairam M.D.**
Steve Pearse
Constance DiFede
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** Project Medical Director

Pema Ts'al Sakya Monastic Institute

Lama Khunga Dhondup
Lama Tashi
Leckshey Tenpa
Ngawang Rigzin
Ngawang Choedup
Tenzin Phuntsok
Ngawang Lhundup
Ngawang Kalden
Leckshey Rigzin
Ngawang Rinchen
Dhakpa Gyatso
Jampa Dhakpa
Saskia Enthoven

Khenpo Kunga Jamphal
Lobsang Tsering
Leckshey Phuntsok
Ngawang Tsondue
Leckshey Tsering
Kunga Sangpo
Ngawang Palden
Ngawang Phuntsok
Ngawang Palbar
Ngawang Tsultrum
Ngawang Tashi
Stephen Schoonmaker R.N.

Mission Himalaya

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Karishma Chand Thakur

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Himalaya Eye Hospital

Narayan Baral
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Santosh Kumar Karna
Ramesh Lama

Bronx Lebanon Hospital

Ram Kairam M.D.
Sivani Priya Nattami

Luz-Amaro Quizera O.D.

Project Partner Organizations

Pema Ts'al Sakya Monastic Institute

Ven. Lama Khunga Dhondup, Director
Mr. Lobsang Tsering, Executive Secretary

Mission Himalaya

Mr. Bhibu Thakur, Founder & Director

Himalaya Eye Hospital

Mr. Narayan Baral, Chief Administrator

Intermed Foundation – Dooley Foundation

Verne Chaney, M.D., Founder & President

This project was conceived and organized with four key organizational partners. Without the wholehearted dedication and cooperation of these key individuals and organizations the project would not have been possible.

The Pema Ts'al Sakya Monastic Institute coordinated the local Nepal arrangements and hosted The Tibetan Refugee Eye & Medical Project at their Institute, providing all facilities and advanced students as assistants and tri-lingual (Nepali, Tibetan, English) translators. They also provided meals for our volunteer team, and served as the local liaison for the Tibetan Refugee Settlements. Lobsang Tsering, Executive Secretary of the Pema Ts'al personally coordinated the transportation logistics, surgeries and distribution of prescription eyeglasses.

Himalaya Eye Hospital (HEH), a highly respected regional teaching hospital based in Pokhara, Nepal, with approximately 40 staff, performs nearly 4,000 surgeries annually, with overall jurisdiction over the entire Western Nepal region. The hospital sent a highly skilled team to assist on-site with this project, and accepted patients referred from our Clinic for advanced treatment and surgeries on a discounted price.

This project was also arranged in cooperation with Mr. Bibhu Thakur, Founder and Director of the Nepal based charitable organization Mission Himalaya. Mission Himalaya serves as the Nepal agent for Intermed International - Dooley Foundation, a USA based 501(c) 3 not-for-profit.

Intermed International - Dooley Foundation, provided funding for the project.

Bronx Lebanon Hospital – The team thanks key individuals from the Bronx Lebanon Hospital who volunteered their time and expended a great deal of energy supporting this project even though they were not able to join us in the field:

Dr. Ram Kairam, for his assistance, guidance, and encouragement throughout the project. Sivani Priya Nattama for outstanding services volunteered in the creation of a computer based patient data entry and management system. Richard Neugebauer, Ph.D., M.P.H. Epidemiologist who provided useful input in creating the patient data management system. And to Luz-Amaro Quizera, O.D. for volunteering many hours instructing team members in the art and science of refraction.

The team would also like to acknowledge the generous contributions of: Faanya Rose, Rob & Maria Poor, Steve & Betsy Pearse, Dr. William Meis, & Dr. Ram Kairam.

With special thanks to Dr. Indira Kairam, for her tireless efforts to organize all the medications and supplies, and for her selfless service throughout as Medical Director this project.

Purpose/Objectives and Plan of Expedition:

Our ultimate goal was to provide those in need with the “Gift of Sight”

Our Explorers Club team, in cooperation with organizations based in Nepal, planned and conducted a multi-day medical project treating eye & vision and general medical issues for an underserved population comprised of Tibetan refugees, students, and local inhabitants residing in the vicinity of Pokhara, Nepal.

The Tibetan Refugee Eye & Medical Expedition team’s mission was both humanitarian and scientific. The team successfully examined, refracted as needed, and treated upwards of 627 patients over a 4-day period. This included both general medical issues supervised by Project Medical Director, Dr. Indira Kairam, and eye and vision examinations with Dr. Henry Goldstein and the Himalaya Eye Hospital.

In planning this project, the expedition team developed a model for screening large groups of patients efficiently in a remote environment. This system integrated process-flow procedures with high technology in the vision screening process. The team incorporated use of a compact, battery powered SureSight autorefractor for vision “triage” and to assist in primary detection and analysis of refractive disorders.

The project team acquired data on all patients in order to facilitate further analysis at a later date in an effort to identify prevalent vision issues in the local population that may be uniquely based on age, location or other criteria. This included custom creation of a laptop based patient data retention and management system using “pull-down” data entry fields, linked with Visual Basic macros to facilitate data entry into an Excel spreadsheet program. See Appendix for details.

Tibetan Refugee Eye & Medical Project 2010 - Summary:

The project was scheduled for five consecutive days, April 27,28, 29, 30, & May 1, 2010, at the Pema Ts'al Monastic Institute in Pokhara, Nepal. However, a major Maoist-led country-wide general strike was called on May 1st, so the Clinic was completed in just 4 days, ending April 30th. The team treated general medical issues under the supervision of Dr. Indira Kairam, and performed eye and vision examinations, with Dr. Henry Goldstein and a team of experts from the Himalaya Eye Hospital. All subsequent eye referrals were evaluated and treated by physicians at Himalaya Eye Hospital. All Explorers Club team members covered their personal costs of airfares, lodging and other expenses, and volunteered their time to this project without compensation.

Summary Statistics

Total Patients by Day

27th April, 2010 - 128

28th April, 2010 - 141

29th April, 2010 - 274

30th April, 2010 - 84

Total Number ----- 627patients

Patients by Residence Location

1. Pema Ts'al Sakya Monastic Institute -	99 patients
2. Jampaling Tibetan Refugee Settlement -	36
3. Paljorling Tibetan Refugee Settlement -	68
4. Tashiling Tibetan Refugee Settlement -	64
5. Tashi Palkhil Tibetan Refugee Settlement -	145
6. Tashi Gang Tibetan Refugee Settlement -	14
7. Lodrik Old Aged Home (Jampaling) -	25
8. Dhodenling OA Home (Tashi Palkhil) -	35
9. Shree Manjushree School (Paljorling) -	82
10. Mt. Kailash School (Tashi Palkhil) -	23
11. Local Nepali -	10
12. Miscellaneous -	26

Total Number----- 627 patients

Summary Statistics of General Medical Patients (as of 6/1/10)

Indira Kairam, M.D. Project Medical Director

Total Patients examined and treated 438
Diagnoses include:

Pulmonary Disease	Asthma
Pneumonia, Upper Respiratory	Urinary Tract Infection
Intestinal Parasites	Diarrhea
Heartburn	Arthritis and muscle pains
Headache	Dermatitis*
GYN infections	STD
Ear infections	Hypertension
Amebiasis, Dysentery	Abdominal pain, cramps
Malaria	Persistent nausea
Tuberculosis	Tumors
Colles fracture	Parkinson's disease
Heart failure	Depression
Stroke	

* Prevalent scalp disease was diagnosed among monastic students, tinea capitis, and a treatment plan was designed and implemented for the entire monastic population, including medications, instruction on specific hygiene protocols to minimize cross-contamination vectors, and recommendations for ongoing nutritional supplements.

Summary Statistics of Eye & Vision Patients (as of 6/1/10)

SICS Cataract Surgeries Performed	27
Phacoemulsification Cataract Surgery	1
Laser Surgery Procedure	3
Retinal Surgery*	1
Prescription Eyeglasses Dispensed	190
Reading Glasses Dispensed	133**

31 people were determined to be candidates for cataract surgeries. All patients were examined, treated and provided with eyeglasses and/or surgeries without any charge.

*Retinal surgery was performed at Tilganga Hospital in Kathmandu.

** 80 pairs of reading glasses were donated by Milford Pa. Lions Club

Heine Corporation donated a portable HSL-150 Slit Lamp for the project (on loan).

Clinic Evaluation & Review

Simultaneous Eye & Medical Clinics

In this project we ran two simultaneous, yet separate, clinics. An Eye & Vision Clinic, and a General Medical Clinic. In an ideal world these two clinics might have been scheduled at separate times. A large number of patients presented with both eye and medical issues necessitating visits to both clinics. This created a certain amount of additional complexity as the clinics were operating simultaneously, in the same building, yet on separate floors. In addition, buses and vans were hired by our clinic to transport groups from remote settlements. By staggering the scheduled arrivals, and by making some real-time adjustments in transportation schedules, the patient flow and waiting times were kept manageable. If the eye clinic were run separately it would have been possible to structure the clinic to be able to process many more patients in a day. The general medical clinic, with a single physician, Dr. Indira Kairam, was at full capacity continuously throughout the project. Processing additional patients for general medical issues would have required additional physicians or skilled medical technicians.

Medical & Eye Examinations & Cultural Issues:

Remote 3rd world medical clinics are obviously very different from the typical practice of medicine in the Western world. Indeed, some Western physicians may be shocked at the setting, rapidity of patient flow, and general lack of infrastructure (basic things like electricity and running water). Western physicians are also often impeded by language and cultural barriers in these settings, requiring time-consuming translations. There is also minimal benefit in spending time diagnosing conditions that cannot be treated given the local culture, unlikely patient compliance, lack of education, lack of funding and medications and lack of availability of surgical intervention. In this project we enlisted the assistance of highly skilled technicians from the Himalaya Eye Hospital. Their ability to communicate with, rapidly screen and evaluate patients was excellent and was essential to the success of the project. The team also enlisted the services of a number bi-lingual (Nepali, English) speaking local Nepali volunteers, as well as young tri-lingual monastic students (Tibetan, Nepali, English) from Pema Ts'al to assist with the eye and general medical examinations and clinic staffing requirements.

Volunteer Team:

Volunteers are clearly an important component in any project. However, the level of training, expertise, aptitude, and commitment to such a project varies considerably. In terms of staffing a project, this is the single largest "wild-card", particularly on a multi-day project involving large numbers of patients. Typically, in projects such as this, some members are fully committed, others tire, become "bored" or disenchanted with their assigned tasks and ultimately gravitate toward other activities, such as sightseeing. The physical settings for such projects are often rough, and the cultural aspects including sights, sounds, smells, language barriers, and potential exposure to

pathogens can also be upsetting to volunteers. This created some difficulties on this project, possibly due to the relatively close proximity of attractive alternatives, such as Internet cafes, restaurants, and sightseeing opportunities.

Patient Registration & Discharge:

A one-page patient form was developed for Medical patients and for Eye & Vision Patients (sample on the following pages). These were intentionally kept very basic. The eye patient form also served as the eyeglass prescription, if needed. During the registration process each patient was also assigned a patient number. This number was logged at the registration desk, and also written boldly on the upper right hand corner of the patient form. Patients carried the form with them from station to station, thereby providing each caregiver with a (albeit brief) patient history. Caregivers were encouraged to write legibly and in large font, using block letters, and only on the face of the form (compliance with this request varied considerably). At the discharge station (final stop for all patients) all information was verified, all treatments verified, any needed follow-up arranged, and counseling was provided to cataract surgery candidates.

Data Capture:

At the discharge station a digital image of each individual patient was to be recorded using a simple point & shoot camera. The concept was to capture, in a single image, a full-face picture of the patient holding their patient form below their chin, thus providing a complete record of the patient, diagnosis & treatment, all in a form that could be easily transported and readily transcribed for later detailed analysis. This system was also to provide a simple and efficient backup to the paper patient form.

Such a system requires cooperation on the part of all stations involved in providing care, legible handwriting, with consistency and diligence at the discharge station. As we learned, it is also important to provide a spare memory card & battery, or even a back-up camera to ensure that all data is captured effectively. Our effort was impaired by insufficient battery supply. The original plan was to have patient data entered nightly into a laptop based spreadsheet program for redundancy, and for ease of future analysis. For a variety of reasons this data capture was not able to be implemented during the project.

Subsequently, with major assistance from Ram Kairam, M.D., Richard Neugubauer Ph.D. (Epidemiology), and especially Sivani Nattama a VISTA volunteer computer expert, all affiliated with Bronx Lebanon Hospital in New York City, a easy-to-use laptop based data entry system was developed. This data management system integrates an "pull down" menu approach, based on Visual Basic Macros, to enter data into an Excel spreadsheet. It was designed collaboratively and created specifically for the Eye & Medical Clinic by Sivani Nattama, This newly developed system was placed on a

dedicated laptop computer and hand-carried by a returning member of the Pema Ts'al community to Nepal. Upon its deployment in August 2010, data from all the Eye and Medical patient forms will be manually entered into this computer based data management system. The costs associated with actual the data entry are funded by Dooley-Intermed Foundation. In addition to allowing future detailed analysis of the patients from this project, another major motivation is to provide a base population and data set for future medical studies. This new data capture system can be easily modified to include additional data points and additional patients to facilitate data capture for a wide variety of future studies.

Visual Acuity Testing:

Visual acuity testing (utilizing tumbling “E” eye charts) was performed simultaneously in two outdoor lanes using trained assistants. Charts were placed outdoors due to the low light levels available indoors. A basic visual acuity measurement of 20/30 was used as the threshold for further evaluation. If patients had no complaints, had no obvious eye problems (see eye screening questionnaire) were under age 40, and had eye chart visual acuity of 20/30 they were deemed to have no visual impairment and were sent to discharge. As roughly age 40 is where many individuals begin to need reading glasses, individuals between age 40 – 65 received further near-vision evaluation. This was performed using near vision cards as needed, and also using a portable Welch Allyn SureSight autorefractor, and by streak retinoscopy. All patients age 65 and over were referred for streak retinoscopy followed by slit lamp examination. The vast majority of slit lamp examinations were performed without dilation.

Welch Allyn SureSight Autorefractor:

The Welch Allyn SureSight, is a “high technology” compact, portable, battery powered, objective, vision testing device that enables detection of refractive error. This extremely compact device provides sphere, cylinder and cylinder axis measurements, along with a “reliability” rating of the measurements taken. An essentially similar device, the SureSight Vision Screener, is widely used for pre-school vision screening, and is used by many Lions Clubs in the USA for school vision screening programs.

Traditional visual acuity testing of young children, using eye charts, suffers from low compliance, poor specificity (false positives), and poor sensitivity (false negatives). This can also be the case with illiterate and underdeveloped populations where language barriers and compliance can be problematic.

Results provided by an autorefractor are typically used as an objective starting point for manual refraction. The cylinder & cylinder axis readings are particularly useful as they can be a significant time-saver in determining the extent and axis of patient astigmatism during manual refractions. In our experience the device performed reasonably well as a

screening tool. The “learning curve” for operation is fairly steep and requires some time to master. The device is quite sensitive to ambient lighting conditions, and that created some difficulty as there were no useful electric lights available and therefore operation depended entirely on ambient light levels that changed throughout the day. Also, the dark iris of Tibetan patients made the pupillary opening more difficult to ascertain than on Western eyes. Overall, the SureSight proved to be a useful tool in this project. Had we not had the assistance of a highly skilled streak retinoscopist from HEH, its value would have been of considerably greater. Autorefractometry can considerably speed manual refraction, when needed, if typical trial lenses are used. The integration of this portable high technology can significantly increase patient flow rate, while increasing specificity and refractive accuracy. [The team thanks Mr. Fletcher Brown of the Denver Colorado Lions Club for advice based on his experience with thousands of school vision screenings using the SureSight autorefractor].

Streak Retinoscopy:

Streak retinoscopy is a technique whereby a skilled practitioner can measure the refractive condition of a patient's eyes by observing the reflections of light projected by a retinoscope onto a patient's retina. The only equipment required is a small battery powered hand-held retinoscope and a set of trial lenses. By evaluating the shape and movement of the reflected light, a skilled practitioner can determine sphere, cylinder and cylinder axis rapidly and accurately.

Retinoscopy can be particularly useful in determining corrective lenses for patients who are unable to understand the practitioner due to language or other impediment. In most cases it is used, like an autorefractor, as a basis for further refinement by subjective refraction. It should be noted that streak retinoscopy is a bit of a “black art” in that it takes months or even years to master. Skill levels vary dramatically, even among Ophthalmologists. Some are highly proficient and use the technique regularly, while others do not. This skill proved to be of enormous value in our remote eye clinic setting. We were fortunate to have the services of an extremely skilled streak retinoscopist from the Himalaya Eye Hospital (HEH) who could perform streak retinoscopy competently on both eyes of a patient and provide a final refractive prescription in as little as 2 or 3 minutes. This was considerably faster than could have been accomplished using traditional the traditional trial lens & frame “this or this” type of refraction, even with an objective starting point provided by an autorefractor. However, as mentioned above, it is of maximum benefit in the hands of highly skilled and proficient practitioner. Our Himalaya Eye Hospital retinoscopist was sufficiently skilled to be able to provide final refractions, without further refinement using trial lenses. However, on the last day of the clinic, operating with a skeleton crew and without assistance from HEH or an Ophthalmologist, a trained team volunteer successfully performed a number of refractions combining the use of the SureSight autorefractor and the traditional trial frame and lens methodology. Both streak retinoscopy and the autorefractor were used for screening infants, handicapped patients, and patients with mental disabilities.

Such patients would have been difficult or impossible to screen using eye charts.

In any remote area vision project where there is a high anticipated patient load and limited equipment, limited expertise and especially limited time available for detailed refractions, the integration of a portable autorefractor device or the inclusion of a highly skilled streak retinoscopist, should significantly enhance the project's ability to swiftly and accurately render appropriate refractive care.

Eyeglass Dispensing:

Dispensing of prescription distance eyeglasses was facilitated by Himalaya Eye Hospital by setting up a dispensary at Pema Ts'al Institute during 3 days of the clinic. Pupillary distance and frame sizes were measured on-site. Most prescriptions requiring only simple sphere correction were produced on-site from an available stock of lenses and fitted to frames with a generator powered edging machine. Complex prescriptions including cylinder correction and bifocals, were produced at Himalaya Eye Hospital and distributed several days later to patients in each Refugee Settlement. Simple reading glasses (drug store type) of various refractive strengths were provided at the dispensary and, as needed, dispensed subsequent to slit-lamp examinations. [The team thanks the Milford Pennsylvania Lions for donation of 80 pairs of reading glasses to the clinic, all dispensed to needy patients without charge.]

Cataract Surgeries:

All complex cases, and patients requiring cataract or other surgery or specialized eye care were referred to the Himalaya Eye Hospital. The majority of cataract surgeries performed at the Himalaya Eye Hospital were SICS (Small Incision Cataract Surgery) with insertion of intra-ocular lens. In one special case phacoemulsification was performed instead of SICS, and also three laser procedures were performed.

Patients were transported to Himalaya Eye Hospital (HEH) on the same day (or the day after) they were examined at the clinic, and operated on the following day. On the day of arrival Biometry, Keratometry, Fundus Evaluation and other pre-surgery examinations were performed. Patients were kept overnight prior to surgery the following morning. Post-surgery, patients spent an additional night in the hospital (total of 2 nights) primarily to avoid risk of complication (rural Nepal habitations are not particularly sanitary). Then, the following day, were discharged after being examined by an HEH Ophthalmologist. Patients were advised to come for follow-up examination after two weeks (but few generally do so). Eye drops & medicines (primarily antibiotics & steroids) were provided for patients to use at home.

Appendix

The Following Section is an appendix to this report, and contains a flow chart, information on organizing and staffing patient processing stations, sample patient forms etc. that may serve as a useful model in the context of developing other large scale eye and medical screening programs in remote locations;

- List of Medical Supplies
- Sample Pages from Patient Data Management System
- Eye & Vision Patient Processing Stations
- Eye & Vision Clinic Layout & Staffing
- Quick Eye Exam Guidelines
- Eye & Vision Clinic Registration Form
- Autorefractor Referral Criteria
- General Medical Room Layout & Staffing
- General Medical Form
- Eye & Vision Clinic Flow Chart

- Additional Information about Project Partner Organizations:
 - Pema Ts'al Sakya Monastic Institute
 - Mission Himalaya
 - Himalaya Eye Hospital
 - Intermed International – Dooley Foundation

List of Project Medical Supplies

Condition to be treated	Medications	General Medical supplies		Medications and Supplies acquired	Medications Acquired	Supplies Acquired to take with us		Supplies to be obtained in Nepal	
Pulmonary Diseases		Rubbing alcohol		Avelox 50 tabs				Rubbing alcohol 1 or 2 bottles	
Asthma	Bronchodilator pumps, Bronchodilator	Betadine		35 asthma inhaler pumps and Singulair tabs 70 tabs				Betadine, 100 ml bottle	
Pneumonia	Amoxicillin	Hydrogen Peroxide			Amoxicillin 250 mgms x500 tbs and Amoxicillin 500 mgms x 1500 tabs			100 ml Bottle	
Upper Resp Tract Infection	Penicillin, Ampicillin, Amoxicillin, Azithromycin	Colton swabs		Pen V K 250 mgs x 1000 tabs				.	
Urinary Tract Infection	Ampicillin, Nitrofurantoin	Gauze Tape		Ampicilin 250 mgms x 1000 tabs.				Nitrofurantoin 100 mgms x 20 tabs	
Worms	Thiabendazole	Band aids				Betadine Swabs, Foley catheters and bags, Adult pampers, Face masks, Tongue depressors, gauze, Syringes and Needles, Band aids, Ace Bandages		Thiabendazole tabs at 8 pills per course we will need at least 240 tabs	
Diarrhea	Imodium, Peptobismol, Cipro	Thermometer		Imodium 2 mgms x 100 tabs				Peptobismol	
Heartburn	Prilosec, Nexium	Blood pressure machine		Nexium 650 caps in 26 bottles of 25 caps in each ready to dispense.		BP machine and Stethoscope			
Arthritis and Muscle pains	Tylenol, Ibuprofen	Blood sugar, Accucheck machine		Voltaren Gel 7 tubes, Acetaminophen 500 tabs, Alleve 40 tabs		Accucheck machine and 3 bottles of test strips			
Headache	Ibuprofen, Maxalt	Syringes and needles		Dolgesic 15 tabs and Maxalt		Syringes and needles		Mycostatin cream	
Dermatitis	Cortisone, Mycostatin, Lotrisone	Tetanus Toxoid		Zovirax ointment for Herpes x 4 1 gm samples	Hydrocortisone oint 30 gms x 15 tubes			Chlortrimazole cream 1 tube	
Gyn infections	Flagyl, Mycostatin cream	Vit B12 injection		Vit B 12 injection x 30 doses	Bactracin oint 3.5 gms x 288 little pacs			Thermometer	Mycostatin Vaginal cream 2 or 3 tubes
STD	Penicillin inj.	Multivitamins		1,000 tab bottles x 10	Flagyl 250 mgms x 1000 tabs			.	.
Ear infections	Antibiotic ear drops	.		Ciprodex x 12 bottles of 1.5 ml		Tongue depressors		.	.

PATIENT EYE & VISION DATA - Patient Data Forms, utilizing “pull-down” menu to facilitate data entry into Excel spreadsheet on dedicated laptop computer

Patient Data

Input Date (dd-mm-yyyy) Previous

First Name: Last Name:

ID No: Contact Info Student

Address

Sex Male Female Age:

Height cm Weight kg

Blood Pressure / mmHg Pulse bpm

AutoRef | Manual Refraction | EyeChart | Complaint | Medical History | Diagnosis | Treatment

Dist:	Sph	Cyl	Axis	Reliability
OD:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
OS:	<input type="text"/>	<input type="text"/>	<input type="text"/>	

Patient Data

Input Date (dd-mm-yyyy) Previous

First Name: Last Name:

ID No: Contact Info Student

Address

Sex Male Female Age:

Height cm Weight kg

Blood Pressure / mmHg Pulse bpm

AutoRef | Manual Refraction | EyeChart | Complaint | Medical History | Diagnosis | Treatment

Dist:	Sph	Cyl	Axis	Add
OD:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
OS:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Patient Data

Input Date: (dd-mm-yyyy) Previous

First Name: Last Name:

ID No: Contact Info: Student

Address:

Sex: Male Female Age:

Height: cm Weight: kg

Blood Pressure: / mmHg Pulse: bpm

OD	Dist	Near	Diagnosis
	20/ <input type="text"/>	20/ <input type="text"/>	<input type="text"/>
OS	20/ <input type="text"/>	20/ <input type="text"/>	Treatment
			<input type="text"/>

with Rx? Refer to Himalaya Hospital

GENERAL MEDICAL DATA - Patient Data Forms, utilizing “pull-down” menu to facilitate data entry into Excel spreadsheet on dedicated laptop computer

This screenshot shows the 'Patient Data' form with the 'Complaint' tab selected. The form includes fields for 'Input Date' (with a '(dd-mm-yyyy)' format hint), 'Previous' checkbox, 'First Name', 'Last Name', 'ID No.', 'Contact Info', 'Student' checkbox, 'Address', 'Sex' (Male/Female radio buttons), 'Age', 'Height' (cm), 'Weight' (kg), 'Blood Pressure' (mmHg), and 'Pulse' (bpm). The 'Complaint' tab contains a grid of checkboxes for various conditions: Bodvache, Worms, Stomach Problems, Arthritis, Fatigue/Weakn, Abdominal Problems, Couch/S, Urine Problems, Gynecological Problems, and Headach. A 'Misc.' text field is also present.

This screenshot shows the 'Patient Data' form with the 'Medical History' tab selected. The form includes the same fields as the previous screenshot. The 'Medical History' tab contains a grid of checkboxes for conditions: Diabetes, Heart Disease, Hypertension, and Surgery. It also features 'Misc.' and 'Medications' text fields.

Patient Data

Input Date (dd-mm-yyyy) Previous

First Name: Last Name:

ID No: Contact Info Student

Address

Sex Male Female Age:

Height cm Weight kg

Blood Pressure / mmHg Pulse bpm

AutoRef | Manual Refraction | EyeChart | Complaint | Medical History | **Diagnosis** | Treatment

Hypertension Bronchitis Skin Disease

Heart Disease Urinary Infection Pschiatric

Asthma Gastritis

COPD Intestinal Parasites

Misc

OK
Cancel
Clear

Patient Data

Input Date (dd-mm-yyyy) Previous

First Name: Last Name:

ID No: Contact Info Student

Address

Sex Male Female Age:

Height cm Weight kg

Blood Pressure / mmHg Pulse bpm

AutoRef | Manual Refraction | EyeChart | Complaint | Medical History | Diagnosis | **Treatment**

Antibiotics Pain Inhaler/ Asthma Medication

Vitamins Diabetes Medication Skin Ointment/ Cream

Blood Pressure

Misc.

OK
Cancel
Clear

Eye & Vision Clinic Patient Processing Stations

5 stations:

- 1) Registration & Quick Exam, \geq age 40 Eye Chart exam**
 - 2) Autorefracton & Exam Review**
 - 3) Refraction & Dispensing**
 - 4) Eye Doctor / Dilation Area**
 - 5) Discharge Desk**
-

Registration & Quick Exam:

- Fill out forms, assist patients
 - Questionnaire and quick exam for obvious eye issues such as: redness, irritation, discharge, pathology, eye complaints etc.
 - Over age 40, Eye Chart vision screening, near & distant vision
-

Autorefracton:

- Welch Allyn SureSight Autorefractor – computerized vision analyzer
 - Review quick exam, eye chart exam, and direct to MD, Refraction /Dispensing or Discharge Desk as appropriate.
-

Eye Doctor & Refraction:

- Eye & vision issues
- Fine tuning of refractive prescription prior to fitting with eyeglasses using trial lens set. Simple - performed by team technicians: Complex – by eye doctor. Refraction stations will be located side-by-side in the same room.

Dispensing:

- Fit glasses if available
 - Otherwise review prescription, frames size, measure and include PD
 - This can be located in same room as Refraction (at the other end of the room)
-

Dilation Area

- Dilation area in room adjacent to Eye Doctor
-

Discharge Desk:

- verify correct patient
- record all patient information, age, M/F, address, refraction results
- record all treatments rendered, eyeglasses provided etc.
- eyeglass orders
- referrals, including surgical referrals to Himalaya Eye Hospital

EYE & VISION CLINIC Room Layout & Staffing Requirements

Overview: The Eye & Vision Clinic had several areas operating simultaneously. Please see the “Flow Chart” and the “Eye Clinic Stations” for additional details.

REGISTRATION:

This was the area where patients first arrive and, with help, filled out a registration form. The next step was a “quick exam” for a visual check for obvious pathology such as watery eyes, redness, drooping eyelids etc. and questioning regarding eye related issues.

Space Requirements:

Sufficient room to process 2 patients simultaneously and with room for assistants / translators. Ample desk space for completing the forms. Also a waiting area for patients who have completed forms and waiting for further examination.

Assistants Needed: 2-4

Eye Chart Area:

If patients are age 40 or over, after Registration (above) assistants will administer a simple vision test using eye charts to test both distance and close vision: The vision chart will need to be at a distance of 20’ (approx 7m) from the patient. Charts to be placed on the wall at eye level height while standing. The charts should be well lighted, but away from windows or other sources of bright lights or distraction. It is also best if this can be done around a corner or out of direct view of other patients (both for privacy, and to prevent new patients from memorizing the answers of earlier patients)

Assistants Needed: 2

AUTOREFRACTION:

This is the computerized vision analyzer station. The test only requires the patient to look at the device with their eyes wide open for a few seconds. This will provide a preliminary refractive analysis.

Space Requirements: Need a small table with one tall chair and one short chair on each side, plus 2 chairs for assistant (patients need to be eye-level with the

autorefractor, which is hand-held, and battery powered) short patients will sit in a tall chair with operator in a short chair etc.) In addition, we need a small waiting area with 4 chairs only. It is good if these chairs are placed near, but slightly behind the station so waiting patients can see the process before they are examined, but are not distracting to patients being examined.

It is important that this station be located in an area with moderate / dim lighting, away from windows with bright lights etc. and away from distractions. There should be nothing distracting in the area behind the autorefractor, a blank wall area behind is best.

Assistants Needed: 1-2

EYE DOCTOR & REFRACTION AREA:

Space Requirements: Need a table with a desk type lamp, and 4 chairs. Several chairs should be placed outside the room as a patient waiting area.

2 separate Eye charts will be placed on the wall 20' (approx 7m distance) from the table. The eye charts will need to be well lighted at all times.

The room needs to have moderate lighting, but with the ability to make it darker swiftly, as needed (but not completely dark, there still needs to be enough light to see). A classroom where electric lights can be switched off and on is perfect.

Assistants Needed: 2

REFRACTION:

Space Requirement: This can be set up in the same room with the Eye Doctor. Refraction will share the same table, chairs and desk lamp, but with a separate eye chart they will use. Request a rug under this table to help prevent glass lenses from breaking if dropped accidentally.

Assistants:2

DISPENSING:

Space Requirement: A large table and 3 chairs, in same room as Eye Doctor and Refraction.

Assistants: 1

DILATION AREA:

Space Requirements: A room right next to the Eye Doctor Room would be ideal for patients that require dilation. This room must have dim lighting, and no bright lights. A classroom where electric lights can be switched off and on is perfect.

The room will need 10 chairs, lined up against a wall. This is for patients having their eye dilated for detailed examinations. The drops make eyes very sensitive to lights for several hours. It takes about 20 minutes for the special eye drops to take effect. It will also need a desk, table light and 2 chairs.

Assistants Needed: 1

Note: original plan was to dilate virtually all of the older patients. Once in the field this plan was swiftly abandoned due to the complexity and time involved.

DISCHARGE DESK:

Space Requirements: This can be located near the Registration Desk, or near the Refraction Area, wherever is best. It does not require a separate room. Need 2 tables (or 1 large table) and 4 chairs.

This is the final station for all patients. Forms will be reviewed for completeness, information recorded and filed. Information to be recorded for eyeglass orders, eyeglasses dispensed, for surgical procedures, and any other issues.

Assistants Needed: 2

Quick Eye Exam Guidelines

Do the eyes look normal? Y / N

- o eye turns in or out;
- o crusty or red eyelids;
- o drooping lids;
- o different size pupils or eyes;
- o swelling of eyelids;
- o conjunctivitis ("pinkeye").

Possible signs of vision problems

- o Complaining of blurred vision; near _____ distance _____
- o Headaches;
- o Squinting, frowning or scowling when looking at objects
- o rubbing the eyes, or excessive blinking;
- o Covering or closing one eye;
- o Holding objects too close, or avoiding activities requiring distance vision;
- o Preferring to be very close to work or reading;
- o Poor performance in school;
- o Clumsiness or lack of coordination in physical activities;
- o Family history of vision problems;
- o Red, itchy or watery eyes.

EYE & VISION CLINIC REGISTRATION FORM

_____ Last Name First Name _____

ID # (if applicable) _____ Age _____

Male / Female Student Y / N

Contact (phone or other) _____

Address _____

AutoRef Sph Cyl Axis

OD: _____

OS:

Eye Chart

OD; Dist 20/ Near 20/

OS; Dist 20/ Near 20/

(w Rx Y / N)

=====

Manual Refraction

Dist: Sph Cyl Axis

OD: _____

OS:

Add

OD: _____

OS:

=====

Notes _____

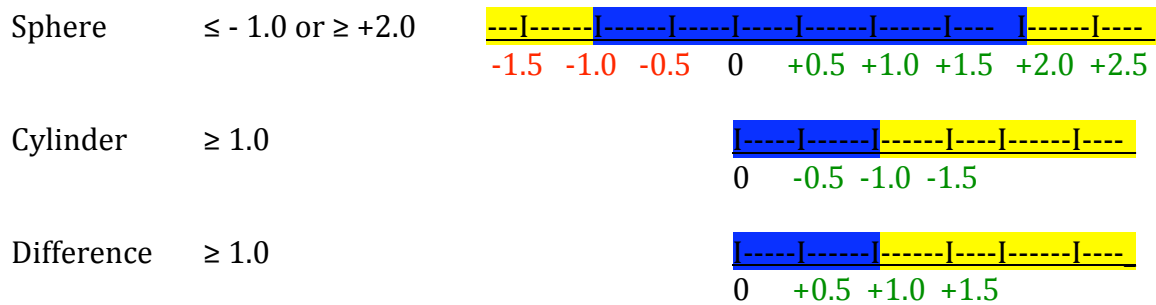
No vision problems noted _____

Eyeglasses Dispensed, Dist / Near _____

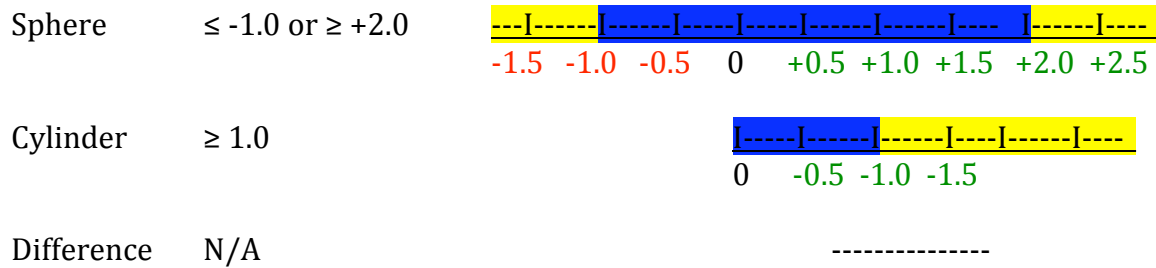
Refer for Surgery or Other _____

AUTOREFRACTOR REFERAL CRITERIA

3 – 6 years



Adult (> 7 yrs)



from Welch Allyn SureSight documentation

**Web link to Welch Allyn SureSight portable autorefractor:
<http://www.welchallyn.com/documents/EENT/Vision%20Screeners/SureSight%20Vision%20Screeener/SM2277EU%20RevC%20071608%20SureSight.pdf>

GENERAL MEDICAL EXAMINATION & TREATMENT

Dr. Indira Kairam

Room Layout & Staffing Requirements

Space Requirements:

- 3 rooms, preferably side by side.
- Rooms need to have some type of privacy screen inside because patients will need to undress to be properly examined by the doctor. This can be a wall, partition or curtain that allows the patient to undress as needed within the room without risk of being seen if the door to the room should unexpectedly open.
- Each room should have good lighting, and be equipped with a small table and one stool or chair.
- Each room needs an exam table of some sort, where patients can lie down for examination by the doctor. This can be a wide bench, bed or something similar if an actual exam table is not available.

[note: by having 3 exam rooms, Dr. Kairam can move from one to the other as patients are made ready for examinations, re-dress etc. this will greatly increase the number of patients that can be seen and treated]

- There will need a small table and 3 chairs outside the examination rooms, for processing patients prior to their examination and treatment.
- Need a trash container, preferably lined with a plastic bag to hold various waste materials.
- If possible it would be good to also have a scale available (for weighing patients)
- A waiting area with chairs is also requested so that patients may wait comfortably prior to being examined.

Assistants Needed: 4

Dr. Kairam requests that a capable young female and a capable young male be available to assist with examinations and treatment, as well as translation, etc. It will also be useful to have a 3rd assistant to coordinate the waiting area and registration process, and a 4th to count and dispense medications as prescribed.

PEMA TS'AL INSTITUTE
MEDICAL CAMP APRIL 2010

M
F

DATE:

NAME:

DOB:

CONTACT INFO:

HT:

WT:

BP:

CHIEF COMPLAINT:

PAST MEDICAL HISTORY:

EXAMINATION:

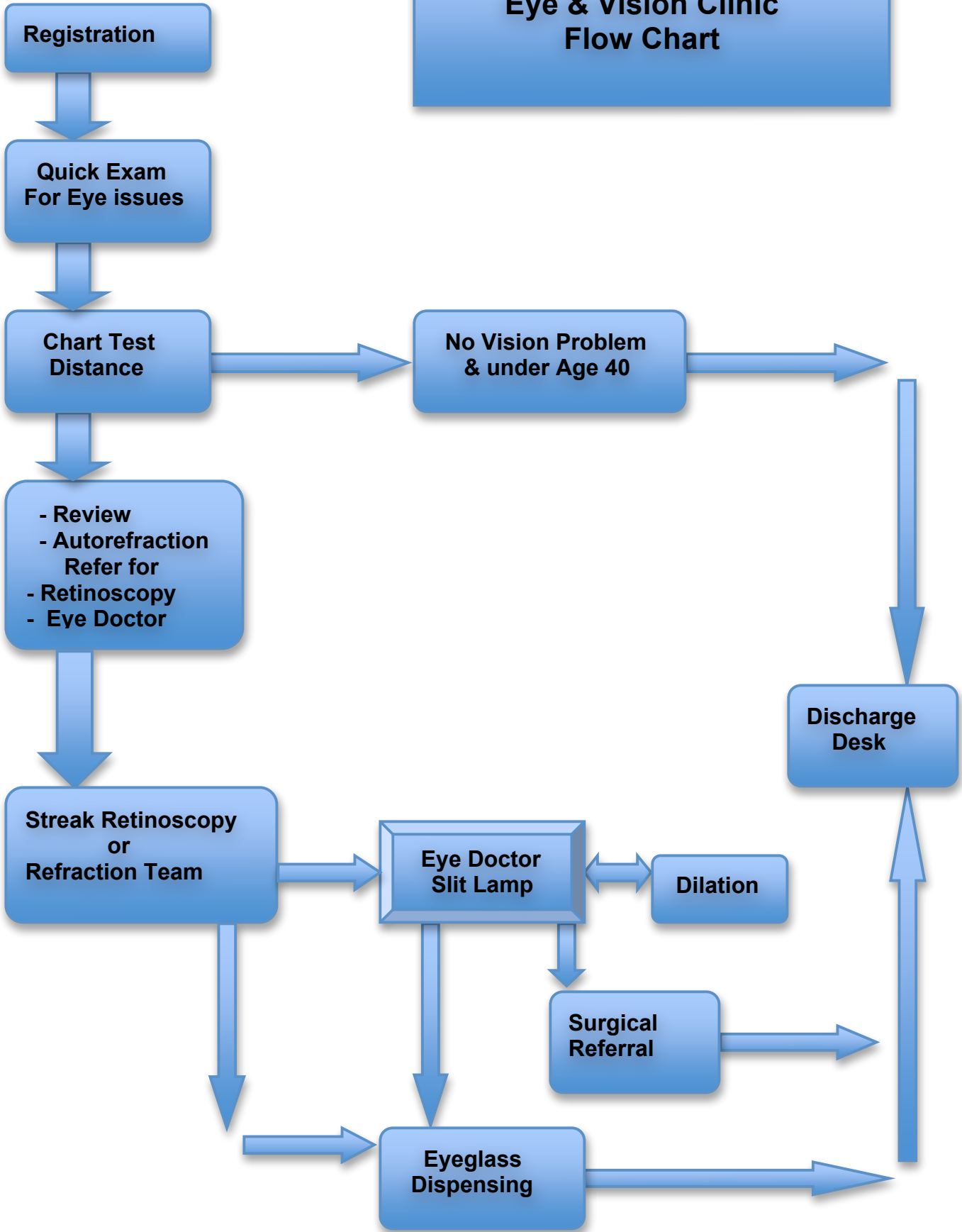
PAST

MEDICATIONS:

DIAGNOSIS:

TREATMENT:

Eye & Vision Clinic Flow Chart



Pema Ts'al Sakya Monastic Institute:

The Pema Ts'al Sakya Monastic Institute was established in March of 1999 representing many of the different villages of Mustang as well as five Tibetan refugee settlements around Kathmandu and Darjeeling in India. In February 2002, the Monastic Institute moved to their current home in Pokhara, Nepal.

Mustang, a remote border region in northwest Nepal, was once a part of Tibet, both culturally and ethnically, and is one of the smallest Buddhist kingdoms. Because of its isolation, it was protected from the Chinese invasion of Tibet and has remained entirely Tibetan. For the last 40 years there has been a constant exodus of Tibetans as they seek refuge in other countries throughout the world.

The Institute's Goals are:

- To provide free education and complete care for the Tibetan children of the most destitute families in Mustang through a modern education combined with traditional monastic training.

- To create a model for the community, where education is highly valued, by providing a better opportunity for learning through discipline, dedication and hard work.

- To inspire the community to preserve its cultural identity and ethical values in a changing world, and to empower students to become a responsible part of the larger community.

- To establish the institution in all fields of study as the future Mustang University. Students study traditional monastic curriculum, but are also learning Western subjects including English, math and science, preparing them well for life in a modern world. For additional information see www.pematsal-sakya.org

Mission Himalaya

Mission Himalaya was founded in July 2008 by a group of socially committed professionals including teachers, tourism entrepreneurs and social workers. It is registered with the Office of the Company Registrar, Government of Nepal as Company not Distributing Profit. Its purpose is to help orphaned children, providing primary health care, education and nutrition as well as to care to the disabled and the old aged people of the society. Mission Himalaya serves as the Nepal agent for the Intermed International - Dooley Foundation. In addition to this project, Intermed International – Dooley Foundation and Mission Himalaya have worked together to support the NYCDS Orphanage in Kathmandu for a number of years, and are currently involved in the building of a new orphanage facility near Dhulikel, Nepal. For more information see www.missionhimalaya.org

Himalaya Eye Hospital:

Pokhara has a well-respected institution, the Himalaya Eye Hospital, (HEH), capable of producing eyeglasses with prescription lenses, as well as performing complex medical and surgical procedures including cataract operations and other ophthalmological procedures. HEH is a highly respected regional teaching hospital with approximately 40 staff, performing nearly 4,000 surgeries annually, with overall jurisdiction over the entire Western Nepal region. The hospital gave its advance approval to this project, and was willing to accept patients referred from the Clinic for advanced treatment on a discounted price basis due to its charitable nature. Please see the Himalaya Eye Hospital website for additional information www.heh.org.np

Intermed International - Dooley Foundation:

All funding for the project was provided by Intermed International - Dooley Foundation, a USA registered 501(c)3 non-profit, non-governmental, non-sectarian, non-political, private voluntary organization receiving its financial support entirely from private contributions. It neither seeks nor receives government grants or contracts. The purpose of Intermed International, Inc. is to provide medical assistance to refugees, children, and villagers in the less privileged parts of the world with emphasis on self-help projects in the areas of preventive medicine, public health, family planning and health worker training. Intermed International – Dooley Foundation presently supports aid projects in four countries: Laos, Nicaragua, Nepal and Thailand. For additional information see www.dooleyintermed.org

