

# Himalayan Family Healthcare Project Health Needs Assessment

Sonam Ongmu Lasopa, M.Phil  
Linda B Cottler, PhD, MPH  
Devi Gurung States, DHSc, MPH  
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Department of Epidemiology  
College of Public Health and Health Professions  
College of Medicine



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## INTRODUCTION

Nepal is a land-locked country, with a population of nearly 27 million people (2006). Nearly one third (31%) of the population is living below the poverty level (CBS, 2007). With a Gross Domestic Product (GDP) per capita of only US \$440, Nepal is one of the least developed countries in the world. Nepal has faced a decade of political unrest until very recent times which hampered the country's economic development and affected progress in social and health areas (Millennium Development Goals, 2010).

Major communicable diseases, including TB and HIV/AIDS, persist as major public health problems. Non-communicable diseases related to life style and risk factors (e.g. diabetes, hypertension, cardio vascular disease and cancer) are on the rise (MOHP, 2007; Millennium Development Goals, 2010). Rural-urban disparities persist: poverty is 22% in rural areas compared to 8% in urban areas. Gaps between the rich and the poor and between urban and rural areas are wide especially in healthcare access (Country Cooperation Strategy, 2006; CBS, 2007). Without access to care, mild illnesses get treated at home and by traditional healers (Jimba et al., 2003). As in many poor countries, rural health services in Nepal are beset with numerous deficiencies that affect the quality of services offered. For instance, shortages of trained staff, equipment and drugs are common. Many Health Centers, Health Posts and Sub Health Posts are poorly utilized mainly due to the lack of trained health workers or insufficient medical supplies (Rai et al., 2001).

Some progress has been made over the years in reducing both communicable and non-communicable diseases, particularly through expansion of immunization programs in Nepal. However, much remains to be done. Disability adjusted life years (DALY) lost due to ill health remain the highest in the Southeast Asian region and are second only to sub-Saharan African regions (WHO, 2007). According to the CIA World Fact Book (2011 estimates), the infant mortality rate is ranked 55th among all countries, representing 44.46 deaths per 1,000 live births. Average life expectancy is also poor, ranking 164th among all countries, at 66.16 years. By comparison, Canada is 81.38 years and the U.S. is 78.37 years.

The Manang Valley (1880m–8136m elevation), a trans-Himalayan district close to the Nepal-Tibet border, is a hilly region accessible only by trek or helicopter. It is a favorite tourist location because of its scenic beauty. However, health indicators such as the infant mortality rate (89 per 1000) and a low average life expectancy (57 years) make it worse than Nepal as a whole. Sanitation problems are widespread with 64% of households having no toilets. Absence of trained health professionals coupled with lack of medicine and proper health care facilities are major health problems. Access to even basic health care is lacking (Sustainable Development Plan for Mustang and Manang, 2008).

Based on these facts and the interests of the authors to reduce disparities, the present study was launched to better understand the health and health needs of the community in the Manang District. At the time of this study, there was no health data repository specific to Manang. A community based participatory research study was adopted to determine health needs of residents in a community non-profit organization partnership. The community members and other stakeholders were valued and respected partners in research and employed local knowledge in the understanding of health problems and the design of interventions thereby establishing mutual trust that enhanced both the quantity and the quality of data collected.

The health needs assessment was specifically launched to provide a baseline analysis of the needs of this area. The data were elicited to understand the level of need for the establishment of a hospital in the immediate area and areas for medical focus. The Himalayan Family Healthcare Project undertook this study. Founded in 2009 by Dr. Devi States, a U.S. resident who was formerly a child on the streets of Kathmandu, the Himalayan Family Healthcare Project seeks to improve the health of children and their families living in the Manang District and surrounding regions of Nepal.

The Himalayan Family Healthcare Project is a 501(c)(3) non-profit organization dedicated to providing services that are community-driven for primary health care to the people of Nepal's Manang District and surrounding areas. The Himalayan Family Healthcare Project Board of Directors is comprised of representatives of various sub populations in the district representing the community and members from the United States of America: Dr. Devi Gurung States, Founder and Board President, Melissa Marshall, M.D., HFHCP Board Vice Chair, Jennifer A. Betz, Esq., HFHCP Board Treasurer, Randall Siefert, HFHCP Board Secretary, Sujata C. Buck, M.D., M.P.H., F.A.A.P., F.A.C.P.M., Linda B. Cottler, Ph.D., M.P.H., Joseph S. Grimaud, DDS, HFHCP Director of Communications, Majesh Makan, M.D., F.A.C.C., F.A.S.E., Lesley McLaren, M.D., M.P.H., and Brian Stokes, Esq.

The Project is also served by an Advisory Board comprised of James H. States, M.D., Richard L. Buck, M.D., MPH., F.A.C.P.M., Gyan K. Kayastha, M.D., M.P.H., Jessica Kenerson, M.D., M.P.H., M Michael D. Kyzer, M.D., MPH., Kedar Narsingh K.C., M.D. and Devi Bahadur Shrestha, Sc.D., M.S.

This preliminary study report sheds light on important issues of concern regarding the health needs of the people of Manang, Nepal and suggests potential points for intervention in the future.

## **Aims**

The overall purpose of the study was to acquire health data specific to the Manang District, Nepal, in order to:

1. Identify community health needs to serve as a guide to the health partnership that will build a hospital in the area and to prioritize health promotion interventions and programs.
2. Identify and engage stakeholders in a collaborative partnership needed in the Community Based Participatory Research (CBPR) framework.
3. Serve as a model for other districts that also want to acquire health data specific to their district.

## **METHODS**

### **Sample**

Purposive sampling was utilized for a descriptive cross-sectional design. All 15 villages in the Manang District comprised the sampling frame and a door-to-door survey was carried out. The final sample consisted of one key informant from each household (204) in the Manang District who gave information about the health status and needs of all persons living in that household (HH).

### **Instrument Used**

A health needs assessment questionnaire was specially designed for the study by the Epidemiology and Prevention Research Group, Department of Psychiatry, Washington University School of Medicine, St Louis, USA, after collaborative discussions with the Himalayan Family Healthcare Project Board of Directors in the spirit of CBPR.

The Health Assessment Needs questionnaire consisted of items relative to the household and specific to the key informant. Household composition (gender and age of household members) was the only information collected specific to individual household members other than the key informant. Household demographic characteristics included: income, education, religion, number of generations living in the household and whether any member of the households worked or lived outside the home country. Key informant characteristics included age, gender and ethnicity. Household health data elicited included diseases any household member had suffered, overall rating of family health and number of deaths in the household in the last five years. The questionnaire also assessed the use and pattern of substance use in the household (alcohol, cigarette or chillum smoking and cannabis use). Key informant's health data included: number of meals eaten in a day, visits to a doctor in the last six months, checkups in the last year, three top health concerns and health services they would utilize had there been a hospital in their area. Hypothetical items measured at what level key informants might consent to participate in a health related study, particularly in relation to giving blood samples, taking medication or

staying overnight in a hospital. Information about the knowledge of HIV/AIDS, its prevention and transmission were also elicited from the key informants.

### Data Collection

Community health volunteers were trained in administering the questionnaire. These volunteers collected data via door-to-door survey of households in their assigned area. Every household head who consented was interviewed. Each informant was read a consent statement before survey administration and informed that participation was voluntary and anonymous. Informants were administered the questionnaire only after providing written informed consent to participate. Data collectors conducted interviews between October 2010 and December 2010.

### Statistical Analysis

Data was entered using Microsoft Access and the analyses were performed using SAS 9.2. Proportions are reported for descriptive analysis.

## RESULTS

### Villages

Manang District, Nepal has a population of 9,587 (2001) and is comprised of villages. Table 1 shows that the survey was carried out in fifteen villages of Manang District, Nepal.

Table 1. Villages Surveyed in the Manang District from the Himalayan Family Healthcare Project Health Needs Assessment		
	<i>Number of Households</i>	<i>Percentage</i>
Tachai	38	19%
Sirantal	28	14%
Tilche	27	13%
Ngawal	25	12%
Odar	17	8%
Chamay	11	5%
Tal	7	4%
Ngachai	9	4%
Thonche	7	4%
Timang	8	4%
Pisang	6	3%
Manang	6	3%
Dharapani	5	2%
Humde Airport	5	2%
Gelanchowk	4	2%
Total number of Households	204	100%

Most of the households came from the Tachai village (19%). The 204 households (with 1127 people) represented 11.8% of people in the Manang District. For this report data will be described in three ways:

- For the household(s) (HH) (N=204)
- For the key informant(s) (KI) (N=204)
- For the number of people in the household (HH members) (N=1127)

One key informant from each household (204) in the Manang District gave information about the health status of the persons living in the household.

### Demographics of Households

As shown in Table 2a HH were not particularly large; overall, 58% of HH were comprised of 4 to 6 members. About one in ten HH (9%) had 10 or more persons living together. The median HH size was 5. Three fourths (76%) of the HH had two generations living together. Almost all HH members were born in Nepal (96%) and one fourth of the HH had at least one member living or working outside of Nepal (22%).

Table 2a. Household Composition in the Himalayan Family Healthcare Project Health Needs Assessment		
	<i>Number</i>	<i>Percentage</i>
Household Size (N=202)		
1-3	35	17%
4-6	117	58%
7-9	33	16%
10 and above	17	9%
Number of Generations Living Together (N=162)		
1	10	6%
2	122	76%
3	26	16%
4	3	2%
All HH Members Born in Nepal (N=203)	195	96%
At Least One HH Member Living or Working Outside of Nepal (N=142)	45	22%

### Education

As shown in Table 2b, the highest level of education achieved by 71% of HH was secondary school. Further, 16% reported only primary school education.

***Income***

The average monthly HH income in Nepali Rupees (NRs) was 20,100 or \$ 261. More than half (68%) of the HH in the Manang district had per capita income lower than the WHO poverty index of \$1.25 a day per person (approximately \$37.50 or NRs 2888 per month) Millennium Development Goals, 2010).

***Religious Identity***

In terms of religion, nearly half the HH were Buddhist (48%) and the other half Hindu (51%). Only 1% of the HH reported following other religions (Christianity 0.5% and Islam 0.5%).

Table 2b. Household Characteristics in the Himalayan Family Healthcare Project Health Needs Assessment		
	<i>Number</i>	<i>Percentage</i>
Highest Educational Level (N=175)		
Primary	28	16%
Secondary	125	71%
Higher Secondary	15	9%
15 Years and More	7	4%
HH Income (in NRs) (N=183)		
0-4999	25	14%
5000-9999	59	32%
10000-14999	30	16%
15000-19999	15	8%
20000-29999	33	18%
30000-39999	9	5%
40000-49999	1	1%
50000-59999	3	2%
60000 and above	8	4%
Per Capita Income (HH Income/HH Size) (N=180)		
<2900	123	68%
2900-5999	34	25%
6000 and above	23	17%
Religion (N=202)		
Hindu	103	51%
Buddhist	97	48%
Islam	1	0.5%
Christian	1	0.5%



### Demographics of Key Informants

Nearly all KI were male (91%); mean age of the KI was 49.9 years (std: 13.9; range: 22 to 80 years). As shown in Table 3, all KI were Nepalese and majority of them reported being of Gurung ethnicity (94%). Half of the KI reported eating at least three meals a day (49%).

Table 3. Characteristics of Key Informants (KI) in the Himalayan Family Healthcare Project Health Needs Assessment		
	<i>Number</i>	<i>Percentage</i>
Male Gender (N=202)	184	91%
KI Mean Age $\pm$ std (N=179)	49.9	$\pm$ 13.9
Nationality (N=203)		
Nepalese	203	100%
Specific Ethnic Group(N=140)		
Gurung	132	94%
Ghale	4	3%
Lama	3	2%
Newar	1	1%
Number of Meals Eaten Per Day (N=201)		
One	1	0.5%
Two	101	50%
Three	98	49%
Four	1	0.5%

### Demographics of Household Members

Three-fourths (72%) of the HH members were adults (18 years and above). More than half of the HH members were between 18 and 50 years old (56%); only 8% of the sample was 61 years and older.

Table 4. Demographic Characteristics of HH Members in the Himalayan Family Healthcare Family Project Health Needs Assessment			
Age (N=994)			
1-5 Years	70	7%	
6-17 Years	208	21%	
18-50 Years	553	56%	
51-60 Years	78	8%	
61 and Older	81	8%	
Adults (18 Years and Above)	716	72%	
	Male	375	52%
	Female	341	48%
Children (17 Years and Below)	278	28%	
Total Number of People in the HH	1127		

**Household Health**

***Overall Health Rating***

The survey asked KI to give an overall rating of their family’s health. Table 5 shows that approximately two-thirds of KI (65%) rated their HH health as fair. Another one-fourth rated their family’s health as good and 8% rated it poor.

<b>Table 5. Household Health in the Himalayan Family Healthcare Project Health Needs Assessment</b>		
	<i>Number</i>	<i>Percentage</i>
<b>Rating of Overall Family Health (N=201)</b>		
Excellent	1	1%
Very Good	4	2%
Good	49	24%
Fair	130	65%
Poor	17	8%
<b>Death in Household in the Last 5 Years (N=196)</b>		
One Death (N=20)	16	75%
Two Deaths (N=20)	4	25%
<b>Diseases in Households (N=202)</b>		
Back Pain	118	58%
Allergies	109	54%
Headache	102	51%
Bone Pain	90	45%
Teeth Related	89	44%
Angina	80	40%
Hearing Loss	59	29%
High BP	53	26%
Liver Disease	35	17%
Tinnitus	32	16%
Dementia	29	14%
Blood Clots	28	14%
Anemia	27	13%
Arthritis	27	13%
Pneumonia	25	12%
Blindness	21	10%
Head Injury	20	10%
Heart Disease		

### ***Recent Deaths in Households***

One in ten (10%) HH faced at least one death in the last five years; of those 25% faced two deaths. The mean age of death was 53 years (range=3 to 78).

### ***Disease Conditions***

Table 5 also shows the prevalence of disorders of the HH members as reported by the KI. More than half of the HH had a member who had experienced back pain (58%), allergies (54%) or headaches (51%). Bone pain and teeth problems were present in 45% and 44% of the HH, respectively. Cardiovascular disease (40%) and angina (40%) were also commonly reported.

### **Health of Key Informants**

#### ***Health Concerns***

The survey asked for the KI's top three health concerns in an open ended question without prompts. Only 33 informants did not volunteer a health concern. As shown in Table 6, 61% of the 171 KIs who did have a health concern mentioned gastritis. Breathing and lung problems were reported by more than half the KI (53%), followed by vision problems (21%). Other health concerns spontaneously volunteered by at least 5% of the KI were: other digestive problems (16%); headaches (14%); high blood pressure (10%); bone pain (8%); access to health care (8%); heart disease (6%); infectious disease (5%) and hearing problems (5%). Lastly, asthma (4%), dental problems (4%), environmental health (3%), skin (3%), staying healthy (3%), arthritis (2%), women's health (2%), addictive behavior problems (2%), brain and spinal (1%), mental health (1%) and smoking cessation (1%) were mentioned by between 2 and 7 KI

**Table 6. Health Concerns of Key Informants in the Himalayan Family Healthcare Project Health Needs Assessment**

	<i>Number</i>	<i>Percentage</i>
<b>Health Concern (N=171)</b>		
Gastritis	105	61%
Breathing and Lung problems	90	53%
Vision problems	35	21%
Other Digestive problems	28	16%
Headaches	24	14%
High Blood Pressure	17	10%
Bone Pain	14	8%
Access to Health Care	13	8%
Heart Disease	11	6%
Infectious Diseases	9	5%
Hearing Problems	8	5%
Asthma	7	4%
Dental	7	4%
Environmental Health	6	4%
Skin Problems	6	4%
Staying Healthy	4	2%
Arthritis	4	2%
Women's Health	4	2%
Addictive Problems	3	2%
Brain and Spinal	2	1%
Mental Health	2	1%
Smoking Cessation	2	1%

***Perceived Need of Health Services***

Most important to the study was the assessment of what services villagers would utilize had there been a hospital in the area. Nearly all KI indicated a high need for the following services: dental care (97%), women's health (95%), pediatric services (95%), men's health (94%), surgery (94%), vision (92%) and hearing (91%).

**Table 7. Perceived Need of Health Services Reported by Key Informants in Himalayan Family Healthcare Project Health Needs Assessment**

	<i>Number</i>	<i>Percentage</i>
Dental (N=198)	192	97%
Women’s Health (N=201)	191	95%
Pediatrics (N=201)	191	95%
Men’s Health (N=201)	189	94%
Surgery (N=193)	181	94%
Vision (N=196)	180	92%
Hearing (N=192)	175	91%
Visit to a Doctor in the Last 6 Months (N=198)	123	62%
Physical Check up in the Last 1 Year (N=198)	140	71%

The degree of health care utilization in the KI seemed high as 62% reported visiting a doctor in the last 6 months and nearly three-quarters (71%) of the KI had a physical check up in the past year (Table 7).

***Participation in Health Research Studies***

Because quality care goes hand in hand with research, KI were queried about conditions under which they would consent to participating in health research studies. Table 8 shows that 41% of KI would participate in a study even if they had to stay overnight in a hospital, and 79% would agree to take medicines; however only 8% would agree to provide a blood sample as part of research.

**Table 8. Participation in Health Research Studies by Key Informants in Himalayan Family Healthcare Project Health Assessment**

Would participate in a Health Study that involved....	<i>Number</i>	<i>Percentage</i>
Overnight Stay in a Hospital (N=200)	82	41%
Taking Medicines (N=200)	158	79%
Giving Blood Samples (N=200)	16	8%

**Knowledge of HIV/AIDS Risk and Transmission**

Knowledge regarding HIV/AIDS risk and its transmission was assessed. As shown in Table 9, 84% of the KI had heard of HIV/AIDS. Among them, only 1% erroneously believed that one can tell if someone has AIDS by looking at them; only 3% believed that there are medications to treat patients with HIV/AIDS. Nearly all KI who had heard of HIV/AIDS believed that HIV/AIDS can be transmitted by the sharing of infected needles and syringes (98%) and through the transfusion of infected blood (95%). The majority of KI were aware that condoms reduce the chance of transmission of HIV/AIDS (93%). Questions were asked with regard to public health messages given by health and allied professionals. More than two-thirds of KI have reported that doctors talk to patients about HIV/AIDS (69%); half reported that pharmacists give preventive messages for HIV/AIDS (51%) and almost two thirds report seeing advertisements about HIV/AIDS and its prevention on TV (62%). Knowledge of Hepatitis C was lower, with only 36% of the respondents reporting having heard of the disease.

Table 9. Knowledge of HIV/AIDS in Key Informants Himalayan Family Healthcare Project Health Needs Assessment		
	<i>Number</i>	<i>Percentage</i>
Heard of HIV/AIDS (N=199)	168	84%
Can Tell if Someone has HIV by Looking at Them (N=167)	1	1%
Medications Treat HIV (N=167)	5	3%
Sharing of Infected Needles Can Transmit HIV/AIDS (N=167)	164	98%
Can Get HIV/AIDS From a Blood Transfusion (N=164)	155	95%
Condom Use Can Reduce Chance of Getting HIV/AIDS (N=167)	154	92%
Doctors Talk to Patients About HIV/AIDS(N=167)	115	69%
Pharmacists Give Prevention Messages for HIV/AIDS (N=144)	73	51%
Seen Advertisements for HIV/AIDS Prevention on TV (N=165))	102	62%
Heard of Hepatitis C (N=198)	71	36%

**Substance Use in Households**

***Alcohol Use in Households***

KI from 64% of the HH reported that males in their HH used alcohol compared to only 9% for females. Drinking patterns (Table 10a) show that in HH where one or more males used alcohol, 41% drank nearly every day. A similar proportion of female drinking HH had nearly daily drinking by females (39%), as shown in Table 10b.

We also found that 40% of male alcohol users drank between 4 and 5 glasses daily, that 38% drank between 2 and 3 glasses and 11% drank between 6 and 10 glasses per day. The comparison to HH where one or more females used alcohol (Table 10b), found that 6% (1 HH) drank between 4 and 5 glasses per day; 61% (11 HH) drank between 2 and 3 glasses daily and one-third (33%; 6 HH) drank one glass per day. There were no HH where women drank more than 5 glasses in a day.

<b>Table 10a. Alcohol Use by Males in the Himalayan Family Healthcare Project Health Assessment Households</b>		
	<i>Number</i>	<i>Percentage</i>
Households in Which At Least One Male Uses Alcohol (N=203)	130	64%
Frequency (Use in One Month) (N=130)		
1-5 Days	7	5%
6-10 Days	10	8%
11-15 Days	33	25%
16-20 Days	20	15%
21-25 Days	6	5%
26-30 Days	54	41%
Quantity (Glasses per Day) (N=129)		
1 Glass	12	9%
2-3 Glasses	49	38%
4-5 Glasses	51	40%
6-10 Glasses	14	11%
11-16 Glasses	3	2%
Source of Alcohol:		
Made at Home (N=130)	124	95%
Got from Family (N=130)	72	55%
Got from Friends (N=130)	62	48%
Got at Market (N=130)	17	13%
Got from Dealers (N=130)	2	2%
Type of Alcohol		
Home Brewed (N=129)	128	99%
Beer (N=129)	20	16%
Whisky (N=129)	15	12%
Wine (N=129)	21	16%

Most of the alcohol used by men and women in Manang was homebrewed liquor and the main source of alcohol was the family or the home. The survey also assessed alcohol use among children. KI reported that 2% of the HH children used alcohol in the last 30 days.

<b>Table 10b. Alcohol Use by Females in the Himalayan Family Healthcare Project Health Assessment Households</b>		
	<i>Number</i>	<i>Percentage</i>
Households in Which At Least One <u>Female</u> Uses Alcohol (N=203)	18	9%
Frequency (Use in One Month) (N=18)		
1-5 Days	0	0%
6-10 Days	3	17%
11-15 Days	6	33%
16-20 Days	2	11%
21-30 Days	7	39%
Quantity (Glasses per Day) (N=18)		
1 Glass	6	33%
2-3 Glasses	11	61%
4-5 Glasses	1	6%
6-10 Glasses	0	0%
11-16 Glasses	0	0%
Source of Alcohol		
Made at Home (N=18)	17	94%
Got from Family (N=18)	10	56%
Got from Friends (N=18)	8	44%
Got at Market (N=18)	1	6%
Got from Dealers (N=18)	0	0%
Type (N=18)		
Home Brewed	18	100%
Beer	1	6%
Whisky	0	0%
Wine	4	22%

Questions assessed whether any person in the HH needed or wanted treatment for alcohol use. KI from 43% of HH reported that there was a person in the HH that needed or wanted treatment.



**Smoking in Households**

KI from more than one-third (34%) of HH reported that men in their HH smoked cigarettes or chillums (see Table 11a). As expected, the rate of smoking in females (8%) was considerably lower. In HH where at least one male smoked, nearly half smoked between 6 and 10 cigarettes a day (47%); 22% smoked between 16 and 20 cigarettes and 13% smoked between 4 and 5 cigarettes. In comparison to males, 44% of females used between 6 and 10 cigarettes daily, one fourth smoked between 4 and 5 cigarettes. None of the HH females smoked more than 10 cigarettes in a day.

Table 11a shows the amount of time spent smoking. Among HH where one or more males smoked, 42% spent an hour a day smoking; more than a quarter (26%) smoked between 2 and 3 hours and 22% smoked for 4 hours and more. This compares to households where one or more females smoked in which more than half (53%; 8 HH) smoked an hour a day, 33% (5 HH) smoked between 2 and 3 hours and 14% (2 HH) smoked for 4 hours and more.

Table 11a. Smoking by Males in the Himalayan Family Healthcare Project Health Assessment Households		
	<i>Number</i>	<i>Percentage</i>
Households in Which At Least One <u>Male</u> Smokes (N=201)	69	34%
Quantity (Cigarettes per Day)(N=69)		
1 Cigarettes	3	4%
2-3 Cigarettes	3	4%
4-5 Cigarettes	9	13%
6-10 Cigarettes	32	47%
11-15 Cigarettes	5	7%
16-20 Cigarettes	15	22%
21-30 Cigarettes	2	3%
Duration of Smoking (Hours per Day) (N=69)		
1 Hr	29	42%
2-3 Hrs	18	26%
4-5 Hrs	6	9%
6-10 Hrs	13	19%
11-20 Hrs	3	4%

**Table 11b. Smoking by Females in the Himalayan Family Healthcare Project Health Assessment Households**

	<i>Number</i>	<i>Percentage</i>
Households in Which At Least One Female Smokes (N=201)	16	8%
Quantity (Cigarettes per Day)(N=16)		
1 Cigarettes	1	6%
2-3 Cigarettes	1	6%
4-5 Cigarettes	4	25%
6-10 Cigarettes	7	44%
11-15 Cigarettes	3	19%
16-20 Cigarettes	0%	0%
21-30 Cigarettes	0%	0%
Duration of Smoking (Hours per Day) (N=16)		
1-Hrs	8	53%
2-3 Hrs	5	33%
4-5 Hrs	1	7%
6-10 Hrs	1	7%
11-20 Hrs	0	0%

The survey also asked if children in the HH used cigarettes. KI reported that 11% of children (17 years and below) smoked at least one cigarette daily.

## CONCLUSION

A health needs assessment carried out by the Himalayan Family Healthcare Project has highlighted the health concerns in the Manang District, an underserved population in Nepal. Preliminary results of the assessment indicate that 73% of the informants reported that their household health was fair or poor. High rates of digestive problems, breathing and lung problems, pain, allergies and cardiovascular risk factors have been reported. Rates of substance use (alcohol and tobacco) in males were high, further contributing to cardiovascular disease risk. Many informants have gone out of the district to visit a doctor (62%) and to have a health check up in the last year (71%). Considering the absence of a health post in the area and the fact that villagers have to travel by foot to the nearest health post, the rate is quite high. However, over 94% say that they would use a local hospital for their health needs (women's health 95%; men's health 94%). Establishing a hospital in the Manang District would increase access to healthcare for this population by 25 percentage points.

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