

5 Working Conditions of the Health Workforce in Nepal



A Report of Operational Research

MAY 2012



Disclaimer

This publication is part of an Operational Research entitled “Barriers to Effective Policy Implementation and Management of Human Resources for Health in Nepal” under the project *Support to Health Workforce Through Civil Society Engagement* funded by the European Union and the Ladham Trust. The contents of this publication are the sole responsibility of SOLID Nepal and can in no way be taken to reflect the views of the funding organisations.

Copyright © SOLID Nepal 2012

Any part of this publication may be freely published with appropriate acknowledgment.

Cover Photo © SOLID Nepal 2011

Design and Printings

The Creative Hands (SELF-MOTIVATED, INDEPENDENT & CREATIVE DEAF GROUP)
Chhetrapati, Kathmandu, Nepal

Principal Investigator

Dr Khem Bahadur Karki (MBBS, MPH)

Report Writers

Ms Chandika Shrestha (BPH)
Ms Manju Neupane (BPH, MSc Int’l Hlth)

Recommended Citation

Society for Local Integrated Development Nepal (SOLID Nepal) and Merlin Nepal. Barriers to Effective Policy Implementation and Management of Human Resources for Health in Nepal: Working Conditions of the Health Workforce in Nepal. Lalitpur, Nepal: SOLID Nepal; 2012



Ref:

Government of Nepal
Ministry of Health & Population



Phone: 4.

262987
262590
262802
262706
262935
262862

Ramshahpath, Kathmandu
Nepal

Date:17th July 2012.....

Preface

Ministry of Health and Population has committed, through its second Nepal Health Sector Programme Implementation Plan (2010-2015), to improve the health and nutritional status of the people by providing them equal opportunity to receive quality health care services free of charge or at affordable cost thereby contributing to poverty alleviation. The ministry promotes access to and utilisation of essential health care and other health services, emphasising services to women, children, and poor and excluded. The plan and programmes are focused to changing risky life styles and behaviours of most at-risk populations through behaviour change and communication interventions.

The health sector requires competent and motivated health workforce to achieve the stipulated goals and targets of the health plan and the programmes. Nepal health sector is facing critical human resources for health (HRH) crisis for service delivery. Deployment and retention, production of skill mix human resources and their equitable distribution, availability, productivity, performance and accountability of the human resources for health are some of the major issues to be addressed by the health system. On the other hand, non-communicable diseases, accident and injuries and other new emerging diseases will require more epidemiologists and public health experts. A scientific and robust strategic plan for managing HRH both in public and private sectors, maintaining equilibrium in supply and demand, delivering efficient services to people so as to achieve MDGs, is now a prime concern for the Ministry.

The Ministry of Health and Population has prepared a HRH Strategic Plan (2011-2015) aiming to ensure the equitable distribution of appropriately skilled human resources for health to support the achievement of health outcomes in Nepal and in particular the implementation of Nepal Health Sector Programme-2 (NHSP-2). The HRH Strategic Plan has given main focus to achieve the appropriate supply of the health workers, equitable distribution of them, improved health workers performance, effective and coordinated HR planning, management and development across the health sectors.

Both the NHSP-2 and HRH Strategic Plan has highlighted the need of operational researches to find out the bottlenecks of health system in terms of policy implementation and HRH management there by to recommend the appropriate actions to strengthen the health system.

This operational research carried out by Society for local Integrated Development Nepal (SOLID Nepal) and Merlin with financial support from the European Commission and Ladham Trust helps to generate empirical evidence highlighting the key gaps and existing challenges in six key areas : a) Distribution and skill mix of HRH, b) Training, recruitment, placement and retention, c) performance and accountability, d) HRH management, e) working conditions and f) Civil Society Organisation's engagement. This will definitely support MoHP for further human resources planning and its effective implementation.

The MoHP would like to thank SOLID Nepal, Merlin, the European Union and Ladham Trust for carrying out this research. There is great appreciation to all research and logistics teams for their efficient work and to the research participants, for their valuable contribution to the research study.

Dr. Praveen Mishra
Secretary

Kupondole - 1, Lalitpur
PO Box 8975, EPC 1641
Kathmandu, Nepal

T (977-1) 5544250
F (977-1) 5544450
E Kathmandu@merlin-nepal.org

Chair **Lord of Ewelme**
Chief Executive **Carolyn Miller**
Charity Numbers **113511161016607**



Foreword

It is my great pleasure to introduce this report on the *Barriers to Effective Policy Implementation and Management of Human Resources for Health in Nepal*. This report was the result of a comprehensive piece of nationally representative operational research, conducted by Society for Local Integrated Development (SOLID) Nepal in partnership with Merlin Nepal, which encompassed all Nepal's development regions and ecological belts. That research and, subsequently, this report were made possible with the financial assistance of the European Union and the Ladham Trust.

Every man, woman, youth and child has the right to enjoy the highest attainable standard of physical and mental health. The practical realisation of this right, however, has one significant precondition: To enjoy the highest attainable standard of health, every individual must first have access to suitably qualified and motivated health workers. While fundamental, this requirement remains a major challenge in many countries, particularly those which have significant geographical, economic and/or human resource constraints.

The Nepal Health Sector Programme – Implementation Plan II (NHSP-IP II, 2010-2015) mentions that Nepal has experienced a 35% growth in population since 1991, however the public workforce only increased by 3% during the same period, and approximately 25% of the total health workforce are unskilled. While having an adequate number of qualified health workers physically in place is obviously vital to ensuring access to quality healthcare, so too is the distribution and mix of those health workers, the quality and appropriateness of their training, their workplace performance and accountability, the effectiveness of their management structures and their working conditions. All of these contributing factors were assessed and analysed as part of this operational research.

SOLID and Merlin also recognise the proactive role civil society organisations (CSOs) can play in regard to human resources for health. As such, the current and potential roles of CSOs were considered throughout this research.

It is our hope that this publication will not only provide a holistic picture of the current health worker situation in Nepal, but also present all stakeholders engaged in Nepal's health sector with tangible recommendations which will, in turn, facilitate every Nepali accessing their right to the highest attainable standard of health.

More information on the importance of health workers and the challenges they face can be found on Merlin's Hands Up for Health Workers campaign site: www.handsupforhealthworkers.org.

Catherine Whybrow
Country Director
Merlin Nepal

स्थानीय एकीकृत विकास समाज नेपाल

Society for Local Integrated Development Nepal

Acknowledgements

It is our immense pleasure to bring forth the series of reports of operational research entitled "Barrier to Effective Policy Implementation and Management of Human Resources for Health in Nepal" under the project "Support to Health Workforce through Civil Society Engagement". This operational research highlighted six crucial thematic areas of Human Resources for Health (HRH) in Nepal: 1) Distribution and skill mix of health workforce; 2) Recruitment, training, placement and retention of health professionals with an emphasis on public-private partnership; 3) Health workforce performance and accountability; 4) HRH management from central to district level; 5) Working conditions of health workforce; and 6) Role of civil society in HRH.

We would like to express our heartfelt thanks to the secretary of Ministry of Health and Population, Dr. Prabin Mishra for his steady and constructive support from the very beginning of the project. We highly acknowledge the senior officials from the ministry namely Dr. Baburam Marasini, *Senior Public Health Administrator*; Ram Chandra Khanal, *Senior Public Health Administrator* and Kabiraj Khanal, *Undersecretary* for their support in each and every step of the operational research especially for thorough review of the research findings and providing substantial inputs. Our sincere thanks also go to other officials in the ministry and its departments for their valuable supports.

It will be a true injustice if we do not acknowledge Mr. Raghu Ghimire, an *HRH expert in Nepal* for his selfless reviewing of the reports and providing valuable feedbacks in all the reports. We are also indebted to Prof Dr. Chop Lal Bhusal, *Chairman*; Dr Shanker Pratap Singh, *Member Secretary*, Nepal Health Research Council for their encouragement and guidance in the research processes. Dr Rajendra BC, a well known researcher has also contributed a lot to refine and make the research meaningful. Thank you Dr BC.

We never forget associate professors, Dr. Amod Kumar Poudyal and Bidhan Acharya for their great contribution in research design and also report writing.

We also would like to mention a constant support provided throughout the research from Catherine Whybrow, *Country Director* (Merlin Nepal). We are equally thankful to Maxime Piasecki former *Country Director*, Dr. Mukesh Prajapati, *Former Country Health Director*, Dr. Sayed Masoom Shah, and *Former Country Health Programme Manager of Merlin Nepal* for their inputs in the research process. We highly appreciate the work done by Gabriella Saunders for enriching the reports. Similarly, we are equally indebted to Lizzy Berryman, *Health Advisor*; Dr. Rajesh Narwal, *Health Officer*; Marta Persian, *Regional Programme Coordinator*; Dr. Samson Agbo, *Head of Health*; Gabor Beszterczey, *Head of Asia Region*; Katherine Schwarz, *Former Regional Programme Coordinator*; Pete Jones, *Former Programmes Assistant* and Charlotte Rooney, *Programmes Assistant* of Merlin UK for their valuable feedbacks and suggestions in research processes and reports.

Sincere gratitude goes to the energetic and innovative report writing teams from both SOLID Nepal and Merlin Nepal, without their creative penning, the reports would not have come to this form.

Lastly, we are very much thankful to European Union and Ladham Trust for providing the fund for the whole project. We are also very much grateful to the entire SOLID Nepal Team as well as Merlin Nepal for their continued support. We highly acknowledge all the individuals, institutions and stakeholders who have actively participated in this research processes.



Dr. Khem B. Karki,
Executive Director/Principal Investigator
SOLID Nepal
May 2012



Head Office

Satdobato, Lalitpur

GPO Box No. : 9565 Kathmandu, Nepal

Tel. No. 977-1-5-548455, Fax : 977-1-5-553770

Email : solidnepal@wlink.com.np, Website : www.solidnepal.org.np

ACRONYMS

AHW	Auxiliary Health Worker
ANM	Auxiliary Nurse Midwife
CBOs	Community Based Organizations
CDR	Central Development Region
CMA	Community Medical Assistant
CSO	Civil Society Organization
DA	Daily Allowance
DDC	District Development Committee
DHO	District Health Office
DoHS	Department of Health Services
DPHO	District Public Health Office
EC	European Commission
EDPs	External Development Partners
EDR	Eastern Development Region
FCHV	Female Community Health Volunteer
FGD	Focus Group Discussion
FWDR	Far Western Development Region
GEFONT	General Federation of Nepalese Trade Union
GoN	Government of Nepal
HA	Health Assistant
HFOMC	Health Facility Operation and Management Committee,
HP	Health Post
HQ	Head Quarter
HRH	Human Resources for Health
ILO	International Labour Organization
I/NGO	International Non-Governmental Organization
KII	Key Informant's Interview
MCH	Maternal and Child Health
MCHW	Maternal and Child Health Worker
MoHP	Ministry of Health and Population
MWDR	Mid-Western Development Region
NGO	Non-governmental Organization
NHP	National Health Policy
OR	Operational Research
PHC	Primary Healthcare Centre
PPE	Personal Protective Equipment
SBA	Skilled Birth Attendant
SHP	Sub-health Post
TA	Travel allowance
VDC	Village Development Committee
VHW	Village Health Worker
WDR	Western Development Region
WHO	World Health Organization

GLOSSARY

Ecological Belts	Geographically, Nepal is made up of three ecological belts running laterally across the country: the Mountain belt in the northern highlands, Hill in the central belt, and Tarai lowland plains in the southern belt.
Birthing Centre	A health facility with the equipment and skilled birth attendants to assist women to give birth safely.
Community Facilities	In this report, community facilities include market places, roads, schools and entertainment facilities.
Deputation	Secondment of personnel, irrespective of the number of sanctioned posts, for a given period of time.
Development Regions	For administrative purposes, Nepal is divided up into five Development Regions: Eastern Development Region (EDR), Central Development Region (CDR), Western Development Region (WDR), Mid-Western Development Region (MWDR), and Far-Western Development Region (FWDR).
Facilities	For the purpose of this report, facilities can mean either those provided to Health Workers i.e. housing, or those in the health centre i.e. x-ray machines etc.
HRH	Human Resources for Health (HRH) include those 'engaged in actions whose primary intent is to enhance health' (1).
Income	Income means the earning or benefit received in return of any work, investment or reward.
Paramedical staff	Paramedical staff are a section of the health workforce representing basic and mid-level technical categories including Health Assistants, Auxiliary Health Workers, Laboratory Assistants, Laboratory Technicians, Radiographers and Pharmacists.
Working conditions	working conditions refer to the working environment and all existing circumstances affecting service providers in the workplace, including job hours, physical aspects, legal rights and responsibilities.

NEPALI HEALTH STAFF ACRONYMS

AHW	Auxiliary Health Worker: AHWs are trained for one year after secondary school. They are the Sub-Health Post in-charge and also service providers in the HP, PHC and Hospitals. Their main role is to provide promotive and preventive care in the community and refer to primary healthcare facilities.
ANM	Auxiliary Nurse Midwife: ANMs are based at Health Posts to conduct maternal and child health care services. They are trained for 18 months and like the MCHW, the ANM's main job is to conduct antenatal clinics, provide TT immunization, nutrition education, conduct normal deliveries, recognise danger signs and refer women to for more specialised care. ANMs also conduct postnatal clinics and provide immunization services for children. They counsel couples and provide family planning services. ANMs are also responsible for conducting PHC/ORCs in their areas and supervision and support to MCHWs.
FCHV	Female Community Health Volunteers: FCHVs are grassroots level health volunteers based in their respective Wards, who are selected by the Mothers' Groups and trained for 18 days on basic healthcare. They are responsible for conducting Mother's group meetings and delivering health messages to the Mothers and distributing pills, condoms, polio drops, oral rehydration salts and Vitamin A. The government provides training and refresher training to them.
HA	Health Assistant: HAs are based in Health Posts as the Health Post In-charge, holding a Proficiency Certificate in Medical Science (General Medicine). They perform promotive, curative and preventative roles and are responsible for supervising the Health Post staff and Sub-Health Posts in their area. HAs report to the District Public Health Office (DPHO)/DHO at district level.
MCHW	Maternal and Child Health Worker: MCHWs are selected mainly from the local VDC. MCHWs are based in Sub-Health Posts to provide maternal and child health services, after receiving six months' training. MCHWs conduct antenatal clinics, provide TT immunization, post natal clinic nutrition education, and conduct normal deliveries. They also provide counseling to couples on family planning and provide Family Planning services. They are also responsible for conducting EPI clinics and PHC/ORCs.
SBA	Skilled Birth Attendant: "An accredited health professional, such as a midwife, doctor or nurse, who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period and in the identification, management and referral of complications in women and newborns"(2).
VHW	Village Health Worker: VHWs are the community level government employee with six months' initial training. Together with MCHWs, they conduct outreach clinics in their villages, and are involved in immunization of children under the age of one year. In addition, they distribute contraceptive pills, condoms and refer clients for other methods of family planning. They supervise FCHVs and attend Mother's group meetings. They also provide health education in the village.

EXECUTIVE SUMMARY

Introduction: The low level of motivation among health workers has been identified as a key issue in the current human resources crisis in the health sector. Yet the focus on motivation and performance of health workers through improved working conditions is often overlooked by governments in favour of macroeconomic issues. In Nepal, ensuring a comprehensive strategy that maximises health worker motivation is crucial, particularly in remote areas where the low retention of health workers creates an enormous challenge within the health system. This report examines working conditions of health workers in Nepal in relation to income and incentives, work supplies and equipment, issues on safety and security and the role of local authorities and the community.

Methodology: A cross-sectional descriptive study was conducted using mixed method with observation checklist. Fifteen districts representing eco-developmental regions of Nepal were selected using multi-stage cluster sampling method. Out of 404 sample, 747 health workforce from 375 health institutions were interviewed (<10% non-response rate) using the Probability Proportionate to Size method as per WHO guideline. Observation was carried out in 256 health facilities. Further, secondary review was carried out for triangulation of findings.

Key Findings: Health workers' high expectations were not in line with salary provisions or the analysis of average annual savings, which demonstrated that the salary provided to mid-level health workers, was sufficient to meet their basic needs. Government policies do not clearly define the provision of non-financial incentives. The poor management on the provision of living quarter facilities resulted in poor condition and unavailability of such facilities. There is also a clear gap between entitlements stated in government policies and access & availability to these services on the ground. The provision of incentives is hampered by poor quality monitoring systems, which often leads to disputes and de-motivation among staff, as well as undermining efforts to improve maternal and child health. This was highlighted through FGDs, where FCHVs expressed their dissatisfaction with the irregular provision of non-financial incentives and HWs involved in deliveries stated inconsistencies in the process of receiving maternity allowance.

Ecological disparities in the working conditions of HWs were found. Lack of career development opportunities and inaccessibility to travel allowance in the Mountain belt were found higher compared to Tarai, where HWs have greater accessibility to amenities and opportunities. The opportunity for private practice was also higher in Tarai, emphasising the importance of effective supervision to ensure that HWs are stationed at their health posts during appropriate working hours.

Poor provision of infrastructure, equipment and supplies in health facilities was found to be an issue, particularly in rural areas, and was a contributing factor to low motivation among health staff, poor staff availability and conflict between service users and providers. The key challenge for a well-managed and robust distribution system in remote areas is necessary for improvements in health outcomes.

Health Workers perception of security is influenced by local factors, such as conflict with service users within the health institution, as well as more distal factors, such as political instability, which is a barrier to effective HRH management in Tarai. Local authorities are responsible for conflict management, recruitment of local staff and the provision of supplies and equipment, though these systems are often weakened by budget constraints and poor management.

Despite the fact that communities are often involved in the provision of non-financial rewards, not all health workers feel that their work is appreciated by the community. The community's role can therefore be strengthened to provide more support to health workers, particularly in remote areas.

Conclusion and Recommendations: Poor work conditions compromise health workforce supply, retention and quality of care. Recommendations focus on improvements in the management of human resources, equipment and supplies, and more robust monitoring systems for incentive-based systems, particularly those related to maternal and child health outcomes.

TABLE OF CONTENTS

Acronyms	I
Glossary	II
Descriptions of Nepali Health Staff Acronyms	III
Executive Summary	IV
List of Tables and Figures	VII
Chapter I: Introduction	1
1.1 Background	1
1.2 Aims and Objectives	3
Chapter II: Methodology	4
2.1 Primary Data Collection and Analysis	4
2.1.1 Quantitative Methods	4
2.1.1.1 Sample Design	4
2.1.1.2 Research Participants	5
2.1.1.3 Data Collection Tools and Processes	5
2.1.1.4 Data Analysis	5
2.1.2 Qualitative Methods	5
2.1.2.1 Research Participants	5
2.1.2.2 Data Collection Tools and Processes	5
2.1.2.3 Data Analysis	5
2.2 Secondary Data Collection and Analysis	6
2.3 Validity and Reliability	6
2.4 Ethical Issues	6
Chapter III: Income and Incentives	8
3.1 Financial incentives	8
3.1.1 Salary	8
3.1.2 Allowance	9
3.1.3 Performance-based Incentives	11
3.1.4 Additional Income	11
3.2 Non-Financial Incentives	12
3.2.1 Leave	12
3.2.2 Living Quarters in Government Health Institutions	13
3.2.3 Working Hours	14
3.2.4 Career Development Opportunity	14
3.2.5 Incentives for FCHVs	15

TABLE OF CONTENTS

Chapter IV: Work Supplies and Equipment	17
4.1 Condition of Infrastructures in Observed Health Facilities	17
4.2 Condition of Available Equipment at the Time of Survey	18
4.3 Community Facilities Available Around the Periphery of the Working Place	19
Chapter V: Safety and Security	20
5.1 Health and Safety	20
5.2 Compensation	20
5.3 Conduct	20
5.4 Security in Working Place	21
5.5 Relationship Between Health Workers and Community	22
5.6 Compensation Provided by Working Institution in Workplace Accidents	23
Chapter VI: Role of Local Authorities and the Community	25
6.1 District Development Committee	25
6.2 Village Development Committee	26
6.3 Health Facility Operation and Management Committee (HFOMC)	26
6.4 Civil Society Organizations	27
Chapter VII: Conclusions and Recommendations	29
7.1 Income and Financial Incentives	29
7.2 Non-financial Incentives	30
7.3 Supplies and Equipment	30
7.4 Safety and Security	31
7.5 Support from Local Authorities and Community	31
References	32
Appendices	34

LIST OF TABLES AND FIGURES

TABLES

Table 1: Selected Districts for Research Study, Nepal 2011	4
Table 2: Classification of Health Workers According to Level	8
Table 3: Analysis of Yearly Savings for Paramedical Staff	9
Table 4: Surveyed Districts Categorized According to Their Remoteness	10
Table 5: Daily Allowance Provision for Government Health Workers	11
Table 6: Percentage Distribution of Birthing Center	18
Table 7: Type of Compensation Provided to Health Worker in Case of Work Place Accident	24
Table 8: Health Workers of the Institution Awarded for Their Good Work by the Local Community	28
Table 9: Facilities Managed by Institution or Community for Health Workers	28

FIGURES

Figure 1: Levers to Enhance Health Workforce Performance	2
Figure 2: Condition of Living Quarters	13
Figure 3: Percentage of Career Development Opportunities According to HWs by Ecological Belt	15
Figure 4: Health Workers' Feeling of Security in the Workplace	21
Figure 5: Arguments between Health Worker and Local Community During Treatment	22
Figure 6: Percentage Distribution of Harassment in the Workplace	23

CHAPTER I INTRODUCTION

1.1 Background

The low level of motivation among health workers has been identified as a key issue in the current human resources crisis in the health sector (3). Evidence suggests that despite the need to prioritise the motivation and performance of health workers through improved working conditions, these factors are often overlooked by governments in favour of macroeconomic issues, such as the size of the workforce (3). In Nepal, the need to ensure a comprehensive strategy that maximises health worker motivation is crucial, particularly in remote areas where the low retention of health workers creates an enormous challenge within the health system and an increased risk to the health of vulnerable populations.

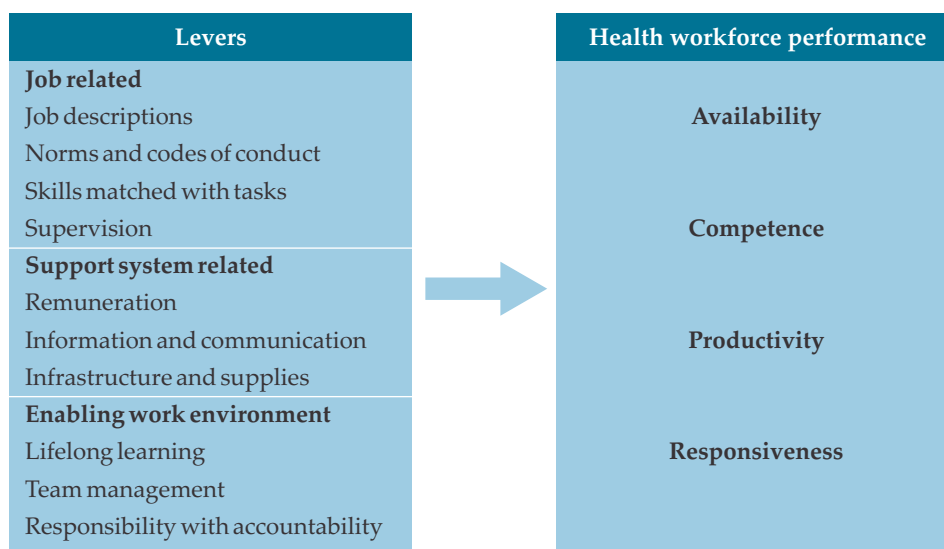
Working conditions refers to the working environment and all existing circumstances affecting labour in the workplace, including working hours, physical aspects and legal rights and responsibilities (4).

In this research study, working conditions refer to:

- Income and (financial and non-financial) incentives
- Means of working (physical infrastructure, equipment and supplies, communities and facilities)
- Safety and security within the work place and in the periphery
- Management and support (from the local authorities and local community)

The purpose of providing attractive and supportive work environments is to create incentives for entering and remaining in the health workforce, and to provide conditions that enable health workers to perform effectively to achieve high-quality health services. The World Health Report 2006 has outlined that favorable working conditions, which directly impact on performance, rely on various factors such as how the health system is organized and how the health workers are paid, supervised and managed. As shown in Figure 1, the four dimensions of performance (availability, competence, productivity and responsiveness) are highly influenced by factors related to the job, support systems in place and an enabling work environment (5). The levers that influence health workers' performance emphasize supervision, remuneration, infrastructure and supplies as the key factors for improvements in the performance of health workers.

Figure 1: Levers to Enhance Health Workforce Performance



Source: WHO, World Health Report, 2006

In Nepal, research has highlighted key challenges in the working conditions of health workers, including inadequate salaries and allowances, lack of diagnostic facilities, lack of living quarters with basic facilities (computers, internet, and library), lack of social security (benefits) and fewer private practice opportunities, which affect motivation and job satisfaction (6). Thus, improvements in the working conditions of health workers with a specific focus on the mechanisms that link policy entitlements to the reality of what is happening on the ground, are essential.

This research study aims to strengthen research evidence on availability and accessibility to entitlements that improve the working conditions of health workers in Nepal. Most significantly, it examines disparities between policy and practice and how this affects health workforce supply, retention and quality of care (7). It explores health workers' expectations regarding improvements to their working conditions.

Furthermore, improvements in the working conditions and motivation of health workers are often understood as limited to financial compensations; yet non-financial incentives, which are considered as important retention strategies, merit further investigation in the country. This study examines the working conditions among health workers in Nepal, and the importance of both financial and non-financial incentives in the motivation of health staff, as well as perceived safety and security. It examines the any discrepancies between policy and practice in meeting the needs of the health workforce, and provides recommendations at central and local levels.

1.3 Aims and Objectives

This report is part of an operational research project which aims to facilitate the improved delivery of healthcare in Nepal through strengthened human resources for health (HRH) policy development and implementation by enhancing civil society engagement.

The overall objective of this research paper is to examine the overall Working Conditions of the Health Workforce in Nepal. Specific objectives are as follows:

1. To analyse the financial and non-financial incentives provided to the health workforce.
2. To examine the work supplies and equipment in health institutions.
3. To analyse the safety and security conditions of health workforce in the workplace and in the periphery.
4. To assess the role of local authorities and the community to improve working conditions of the health workforce.

CHAPTER II

METHODOLOGY

A cross-sectional descriptive study, using both qualitative and quantitative research methods, was conducted in 15 districts of Nepal to obtain comprehensive information on the Human Resources for Health (HRH) situation in the country.

2.1 Primary Data Collection and Analysis

2.1.1 Quantitative methods

2.1.1.1 Sample Design

A multi-stage cluster sampling method was used to select a representative sampling frame for this study (see Appendix 1). Of the 75 districts in Nepal, 15 districts were selected, one from each of the three ecological belts (Mountain, Hills and Tarai) and each of the five development regions (Far-Western, Mid-Western, Western, Central and Eastern) using a random sampling method.

Table 1: Selected Districts for Research Study, Nepal 2011

Development Region	Far-western	Mid-western	Western	Central	Eastern
Ecological Belt					
Mountain	Darchula	Mugu	Manang	Rasuwa	Sankhuwasabha
Hills	Doti	Pyuthan	Palpa	Lalitpur	Panchthar
Tarai	Kailali	Bardiya	Kapilvastu	Dhanusha	Jhapa

The sampling frame consisted of 5146 health institutions in the selected 15 districts, including Government Hospitals (Regional, Zonal or District), Primary Health Centres, Health Posts, Sub-health Posts, Ayurvedic Centres, Non-governmental and Private health outlets. A total of 404 health institutions were then selected using the Probability Proportionate to Size (PPS) method, based on the size of health institution by available HRH, as per WHO guidelines (8). (see Appendix 2). Out of the selected health institutions, data was collected from 375 health facilities (see Appendix 3). A total of 29 health facilities were not included in the study due to the unavailability of staff, demonstrating a response rate of 93 per cent.

2.1.1.2 Research participants

Research participants were service providers including Doctors, Specialists, Nurses, Midwives, Public Health Workers, Health Assistants, Auxiliary Health Workers, Laboratory Technicians, Radiographers and Pharmacists.

2.1.1.3 Data collection tools and processes

An interviewer-administered questionnaire was carried out by Public Health graduates trained as enumerators with 747 health workers from the 375 selected health institutions in 15 districts, selected on the basis of WHO guidelines (8). An observation checklist was also carried out by research supervisors in 256 health facilities, in keeping with WHO standards of observing at least one third of health facilities from the sampling frame (8).

2.1.1.4 Data analysis

Quantitative data was entered into a computer software system (EpiData 3.1) by trained data entry personnel. In order to validate the data, 10% was randomly cross-checked. After editing and cleaning, the data was transferred onto a statistical software package (SPSS 17.0) for analysis.

2.1.2 Qualitative Methods

2.1.2.1 Research Participants

Based on availability, a total of 645 participants were selected for the qualitative study, which aimed to support quantitative research findings (see Appendix 4). Participants were selected from the following groups: service providers, as in section 2.1.1.2, and also inclusive of Female Community Health Volunteers (FCHVs), Maternal and Child Health Workers (MCHW); service users, such as exit-patients of health service outlets; and lastly the facilitator group which included members of Government Health Institutions including District Public Health Office, District Health Office, District Development Committee, and Village Development Committee; Professional Associations; Civil Society Organizations and people working in Trade Unions and the field of advocacy, civil rights, media and social campaigns; local leaders, social workers and school teachers.

2.1.2.2 Data Collection Tools and Processes

Key data collection tools included Focus Group Discussions (FGDs) and Key Information Interviews (KIIs), conducted by Public Health graduates. A series of 74 FGDs were held, with at least one group of service providers, service users and Facilitators in each district. Purposive sampling was used to select 29 informants to take part in semi-structured KIIs. A consultation workshop was also held with MoHP and other key stakeholders to discuss findings and recommendations.

2.1.2.3 Data Analysis

Qualitative data was transcribed and translated into English, and was then analyzed according to different thematic areas based on the relevant research objectives. The data was then triangulated with quantitative and secondary data findings.

2.2 Secondary Data Collection and Analysis

A review of the literature on national and international research papers on HRH was carried out. The review also included key national MoHP health Policies, Plans and Acts (9-16). Key findings from secondary data were triangulated with both qualitative and quantitative data.

2.3 Validity and Reliability

1. A standard statistical tool was used to determine the sample size and sampling strategy to reduce systematic error in the design phase of the study, based on WHO Standards.
2. Internal consistency reliability was ensured in quantitative data analysis by obtaining Cronbach's Alpha on key variables (>0.85).
3. To avoid questionnaire information bias, questionnaires were pre-tested in three districts, and feedback from the pre-test was incorporated into the final questionnaire design to improve validity and reliability.
4. To avoid interviewer information bias, interviewers, who were Public Health graduates, were trained for two days on data collection tools and methods according to WHO standard protocols.
5. Regular supervision visits were carried out, with appropriate feedback ensured from the central level during the collection of data.
6. Triangulation of primary and secondary data ensured consistency of the research data.

2.4 Ethical Issues

Ethical approval for this study was obtained from the Nepal Health Research Council (NHRC), and researchers adhered to national NHRC standard operating procedures and ethical guidelines for health research. Informed consent was obtained from each respondent, and confidentiality in terms of information disclosed and identity of respondents was also ensured.

CHAPTER III INCOME AND INCENTIVES

Financial measures have traditionally been used to increase performance of individuals and organizations, as well as increase retention and motivation among staff in remote areas. Improving working conditions involves more than providing an adequate salary and equipment but also means opportunity for career development and training. A survey conducted by Research Triangle Institute International, one of the world's leading research institutes, on expectations of worldwide recent graduates in terms of incentives found that approximately 41 per cent of respondents were in favour of non-financial incentives, including academic support for further training, whereas 29 per cent of respondents expected a higher salary (17). Thus, evidence suggests that a comprehensive strategy to maximise health worker motivation in a developing country context must take into account both financial and non-financial incentives.

This chapter examines the entitlements and expectations related to income and incentives in Nepal. In this research study, the term income indicates any monetary payment received as regular salary for the services provided and financial allowances. Other activities, such as income from private clinics and pharmacies, research etc. are considered to be additional sources of income.

3.1 Financial Incentives

3.1.1 Salary

Section nine of the Health Service Act 1997 (2053) provides a description of all income and allowances of government health workers (HWs). The salary scale for HWs is published at the start of every fiscal year by the Ministry of Finance, once the budget has been approved by parliament. The salary structure of HWs is given in Appendix 5. Each employee is entitled to an increment in salary upon completion of one year of service, except if the employee has not crossed the government's "efficiency bar" or has committed an act of misconduct, as specified in Clause 73 of the Health Service Act 1997. Each employee is entitled to receive their salary, and any allowances associated with their work on a monthly basis, including if they are on leave or have been relieved of service pending an investigation. This excludes those who are on unpaid leave or suspended for investigation. (See Appendix 5 for salary details).

The Health Services Act 1997 categorises government HWs into 10 levels, as shown in table 2 below. The employees serving in the first and second classes of the Nepal Health

Service were adjusted to the third class in the amendment in 2006, so levels three to five are Assistant positions and levels six to twelve are Officer Positions. The monthly basic salary for government HWs ranges from \$410 (NRs 31,680) for Level 12 Officers to \$135 (NRs 10,000) for the lowest level staff.

Table 2: Classification of Health Workers According to Level

Level	Designation Examples
3rd	(Mukhiya) VHW/MCHW
4th	(Kharidar), AHW, ANM, Laboratory Assistant
5th	HA, SN, Laboratory Technician, Pharmacy (PCL), Sr. AHW
6th	Sr. HA, Sr. SN Inspectors
7th	PHO and other officer level of health services
8th	Officers (Medical Officer) and senior PHOs
9th	Health/Nursing administrators/ Public Health consultants
10th	Sr. Public Health Administrator, Sr. Nursing Administrator, Sr. Health Administrator
11th	Chief Public Health Administrator, Chief Nursing Administrator, Chief Health Administrator
12th	Medical Specialist

Source: Work plan of Department of Health Services, 2061 BS, Health Services Operating Manual, 2004, GoN, MoHP, DoHS, Teku Kathmandu

Based on information provided by a representative of the MoHP Finance department, the salary increment in Nepal's government system is based upon the inflation rate, and is decided on an ad-hoc basis by the cabinet at Ministerial level. There is also a grading system in addition to the salary, which is provided on the basis of the duration of the service provided by the government employee, and is dependent on the level of the employee. Grading starts from the first year of service, and ranges from \$4 (NRs 230) for Level 12 Officers to \$1 (NRs 80) for the lowest level staff (see Appendix 5 for details).

According to discussions with members of trade unions there is no fixed salary rate for HWs in the private sector, as this depends on individual as well as collective bargaining by groups of health workers to the respective authorities at the health facility. The minimum salary for any level worker is \$80 (NRs 6200) per month or \$4 (NRs. 231) per day.

Qualitative research explored the expectations of HWs with regards to their salary scales. Service providers and Management Committees in Jhapa, Panthar, Manang, Kailai, Mugu, and Darchula Districts expressed their dissatisfaction with the salary scales during Focus Group Discussions (FGDs). Service providers felt that the salary they were receiving was insufficient to manage their everyday needs. This was emphasised during a Key Information Interview (KII) with a District Health Officer (DHO) from the Mountain belt: *"The benefits provided by the government for working in rural districts is not enough even to manage 10 per cent of health workers' expenses"*.

An analysis of the average annual income and savings of paramedical staff, who make up 50.3 per cent of health workers in the research survey, was carried out to verify the information gained from the qualitative data, shown in Table 3 below.

Table 3: Analysis of Yearly Savings for Paramedical Staff

Average per capita consumption: NRs.34,829*
Average family size: 4.7
Total consumption per family per year: NRs.163,696.3
Basic Salary of Paramedical: NRs16,363/month
Average basic salary per year of NRs16,363/month multiplied by 12 = NRs.196,360,
Yearly saving = 1,96,360 - 1,63,696.3 = NRs 32,663.7
= 16.63% of total income

Source:* Nepal Living Standard Survey III, 2010/2011

Analysis shows that the average income for paramedical staff is sufficient as per the calculated total average consumption per family, with annual savings of 16.63 per cent. These findings do not validate the HWs claims regarding the insufficiency of their salary. Furthermore, salaries are increased based upon the inflation rate of the market, which is declared by Nepal Rastra Bank. This emphasises the need to focus on non-salary incentives, which will be explored further in this chapter.

3.1.2 Allowance

Policy documents demonstrate the different types of allowance, which are outlined below. In total, 47 per cent of HWs stated that they received an allowance, which was highest in the Mountain belt (78%) and lowest in Tarai (20%). This can be explained by the government-allocated remote allowance incentive, which is allocated in many of the remote Mountainous districts. Likewise, the share of allowance by the health cadre found that HA/AHW earned the highest amount from the allowance (51%) followed by nurses (29%) and least by Technicians (6%). This is due to the fact that a greater number of HAs and AHWs are working in the remote PHCs while more doctors, nurses and technicians are working in the hospitals. Interviews with Trade Union members revealed that the allowance system is not revised on a regular basis.

a. Dress allowance

An annual dress allowance of NRs.7500, to purchase work wear, has been provided to government HWs since the fiscal year 2068/69 (2011/2012). Discussions held with services providers showed that the government employees are satisfied with the amount given for their work wear.

b. Remote location incentives

The government of Nepal provides remote location incentives for the health workers residing in 28 remote districts, as categorised by the government. Government HWs who are placed in one of the 28 districts are entitled to a monthly remote location incentive. These districts are separated into 5 categories (A-E) according to their remoteness (see Appendix 6 for details). Table 4 shows the remoteness categories of survey districts.

Table 4: Surveyed Districts Categorized According to Their Remoteness

Development Region Ecological Belt	Far-western	Mid-western	Western	Central	Eastern
Mountain	Darchula (B)	Mugu (A)	Manang (A)	Rasuwa (E)	Sankhuwasabha (D)
Hill	Doti (D)	Pyuthan (D)	Palpa	Lalitpur	Panchthar (E)
Tarai	Kailali	Bardiya	Kapilvastu	Dhanusha	Jhapa

Source: HRH Field Survey 2011

They are further categorized into two groups within each district: those that are within 6 miles from the District Headquarters and those that are more than 6 miles from the Headquarters. The first category (for the area in and within 6 miles from the Headquarters) receives a lower incentive than the second category. Those districts in category A receive the highest amount for remote location and lowest for the districts under E category. The monthly remote incentive amount ranges from NRs.460 to NRs.4,500 for support staff and NRs.1,820 to NRs.20,370 for the special class staff (see Appendix 6). This remote location incentive is effective only for the public sector staff. In the non state-sector, there is the provision of hardship allowances.

The findings of the FGD and KII among health service providers and DHOs revealed that the amount provided as the remote incentive was not sufficient compared to the high expenses in some of the remotest districts of Nepal. This is due to the fact that the only means of transportation for both people and goods are by airplane or helicopter, which increases the cost of living in hard to reach areas.

Participants of FGDs carried out in Mugu, Panchthar, and Darchula conducted among the facilitators group revealed that remote location incentive should be increased. One of the representatives of NGO in KII Pyuthan said that *“Policy regarding promotion, bonus, incentive and other facilities should be based on geography and performance which will encourage health workers to go to remote and rural areas”*. Health workers in remote areas, such as those in the Mountain and Hill belts, demanded an increment in remote allowances, as it does not take into consideration the high cost of living in those areas.

Furthermore, the management committee and the service users expressed the need to revise the system regarding the issue of those health workers who only stay in the remote areas with intention of passing the time for their career development rather than proving the health service to the people.

c. Festival expenses and other facilities

An employee of the health service working under state or non-state sectors receives an amount equivalent to one month's salary for festival expenses. Thus, each employee is entitled of 13 months' salary each year.

d. Maternity Incentive to service provider

A payment of NRs.300 is provided to staff classified as trained HWs for attending a delivery either at home or in the health facility, as a motivation for staff to provide safe deliveries. Findings from the research show that often due to poor management of record keeping, HWs do not always receive the allowance, resulting in conflict and disputes in such a situation.

e. Daily and Travel Allowance

The Government of Nepal provides a daily and travel allowance when HWs are required to travel within the country for official purposes, such as training, supervision and deputation (see Table 5). The travel allowance is provided on the basis of the actual cost of the travel ticket.

Table 5: Daily Allowance Provision for Government Health Workers

Level	Daily Allowance (NRs)	Lodging Allowance (NRs)
Very special class	750	As per the bill
Special class	500	1200
First class	450	800
Second class	400	500
Third class	350	350
Fourth class	300	300

Source: Financial Procedures Rules 2064 (2007), Nepal

Research findings show that the unavailability of travel allowances when requested was highest among HWs in the Mountain belt (50%) compared to Tarai (35.8%) and Hill (33%) belts. Despite the fact that HWs in Darchula, Mugu and Manang are entitled to receive an additional 20 per cent of the daily allowance due to their remote location in the country, uptake of travel allowances is low. This is due to the lack of public transport facilities in the remote regions, and so HWs are forced to walk within the district, even for official purposes as they receive travel allowance only on the basis of having purchased a ticket, and are therefore not entitled to the reimbursement without ticket as they travel by foot.

3.1.3 Performance-based Incentives

A bonus of 5 grade salary increments is provided to employees who have secured the highest marks during work performance evaluation, pursuant to the Rules framed under the Health Service Act 1997. The Head of Department is responsible for deciding the amount of the reward, which is accompanied by a letter of appreciation. Cash prizes are given annually to the best performing civil servants, including health staff. However, HWs and Trade Union members have said that in practice, this reward system is limited and is not carried out on a regular basis or recorded appropriately.

3.1.4 Additional income

Article 59c of the 'Health Service Act' does not permit HWs to be involved in private practice without prior consent from the working institution. However, it does not include the procedure for disciplinary action, resulting in a high percentage of the HWs involved in private practice. Of the 747 respondents included in the study, 337 (45%) were found to be involved in activities for additional income, such as private practice, private pharmacies, research and trainings. Of those involved in additional income activities, 18.3

per cent were involved in private practice and 17.8 per cent were running private pharmacies, though these figures may be prone to under-reporting.

Of those involved in additional income, 56 per cent were from the Tarai belt, 27 per cent were from the Hill belt and 17 per cent were from the Mountain belt (see Appendix 7 for details). FGDs conducted with service providers in districts within the Tarai belt and with representatives from the management division of DoHS provide an explanation for such a high percentage. They suggested that service providers are able to make profit from the high population and disease burden in the region.

HWs in the EDR, FWDR and MWDR also benefited from additional income, with WDR having been involved the least (11%) in private practice. HAs and AHWs were found to be highly involved in additional income generating activities, with 49% involved in private practice and 52% involved in private pharmacy (see Appendix 7).

There were many cases revealed in the qualitative data that most of the health workers were involved either in their private pharmacy or private clinic. For instance one case study in Mugu district revealed that: *"The In-charge of the PHC is busy with his own private clinic so most of the time the PHC is closed and people are not able to get the service, which is their right"*.

AKII with a senior representative of an NGO in Kailali in the FWDR of the Tarai explained the situation in relation to the wage that doctors receive: *"Doctors get an amount of Rs.2500 per day in their private clinic, and for this reason they stay less time in hospital and spend their much time in the private clinic."*

3.2 Non-financial Incentives

Non-financial incentives are in-kind or non-monetary benefits which MoHP staff are legally entitled to under their terms and conditions of employment e.g. scholarship, training opportunities, career development opportunities, health insurance, social services and utilities.

3.2.1 Leave

The Health Service Regulation 1999 (last amendment 2012) stipulates that all government staff are entitled to 30 days home leave per year in addition to 12 days of sick leave, 12 days of casual/festival leave excluding Dashai and Tihar, study leave for up to 4 to 6 years as well as extraordinary leave up to 3 years (the employee must have worked for at least 2 years). Substitute leave is only available for staff who work in hospitals and is provided based on the extra hours that the employee has contributed. Study leave is not included in the 240 minimum working days per year and is a separate entitlement. However, staff must work in their designated work station for a minimum of 240 days per year. Female staff are entitled to 60 days (10 weeks) maternity leave, and fathers are entitled to 15 days of paternity leave. The time allocated for maternity leave is not in line with the International Labour Office Global Standard, which calls for a minimum of 12 weeks for maternity leave, although 14 weeks is recommended (18).

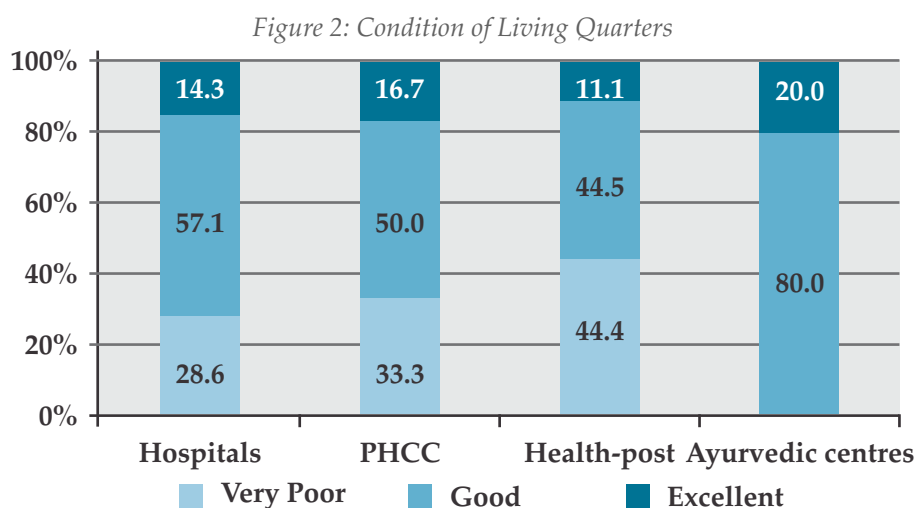
Leave was mentioned as one of the major contributing factors to health staff unavailability and long-term absenteeism. Participants of a FGD conducted among the HFOMC of the PHCC in the EDR explained that many posts were unstaffed because staff were on different types of leave, which brought about difficulties in health service provision in their catchment areas. They expressed their uncertainty of the whereabouts of health staff: *“It has been 3 months since the doctor went on leave; the other staff here says that he has gone for the training”*. Thus, poor management and monitoring of the leave process means that HWs are unaccountable for their absenteeism from the health facility.

3.2.2 Living Quarters in Government Health Institutions

Hws are not entitled to accommodation in their terms and conditions of the employment. However some facilities/authorities, particularly at District HQ levels, have introduced accommodation for staff which is outside the MOHP’s contractual obligations to staff. According to representatives from the Management Division of the DoHS, HWs are provided with living quarter facilities, depending on the availability of the accommodation, and if available, priority is usually given to clinical staff. The research study highlighted that s are responsible for managing issues related to living quarter facilities.

Due to the fact that the provision of living quarters in government health facilities is not outlined in any government policies, this has resulted in a poorly managed, fragmented system. According to KIIs with representatives of Trade Unions, there were no clear cut demarcations on entitlements to living quarters.

Among the 256 health institutions observed, living quarters were not available in 61.5 per cent of Ayurvedic Centres, 35.7 per cent of Health Posts and 29.4 per cent of PHCCs, compared to Hospitals, all of which had living quarter facilities. FGDs with Health Facility Management Committees explained their role in monitoring the living quarter facilities, and that investments had been made to improve the living quarters. The condition of available living quarters at various levels of health facilities is illustrated in Figure 2 below:



Source: HRH Field Survey 2011

The study also highlights the importance of non-financial incentives for health workers serving in remote areas of the country, who expected additional non-financial incentives, such as food, internet, and mobile phones, to retain them in those areas. HWs in remote areas requested to be provided with living quarter facilities, though this depended on the availability of such facilities.

3.2.3 Working hours

Chapter III of the Labour Act 1992 states that HWs in the public sector are entitled to a one hour break during an eight hour working day, and one day of leave during a 48 hour working week (19). Health services are usually available until 2pm, after which HWs should be engaged in administrative tasks. In the non-state sector, these conditions depend on the specific organizational policy.

Observation showed that several health institutions closed before the appropriate time and service providers were not always present at their working stations. Informants of KIIs in Dhanusa/Kapilvastu with I/NGO representative had observed staff coming to the health facility to confirm their attendance and then leaving immediately. They expressed the lack of awareness on appropriate time provisions dedicated to administrative tasks as well as the lack of supervision and monitoring in health facilities as reasons for these challenges. They also emphasised the impact that this had on service delivery. Informants highlighted the disparity between records of attendance and presence of health workers. Health workers were able to receive their salaries, as a result of being present according to attendance records, despite their absence from the facility. FGDs conducted among the representative from various I/NGOs, DHO, Political leaders and other stake holders of Mugu district emphasised the negative implications for health service delivery, due to support staff providing these services in place of health workers: *“HFs are opened and run most of the time by support staff. They distribute the medicine if they have any. Quality of healthcare is compromised due to the absence of designated health workers. But to the surprise the HWs are present on the paper and on that basis they are given salary. People are compelled to come to DH walking 3-4 days since no HWs available at local HFs. It aggravates the illness of patients and land with the referral advice of doctors at DH”*.

3.2.4 Career development opportunity

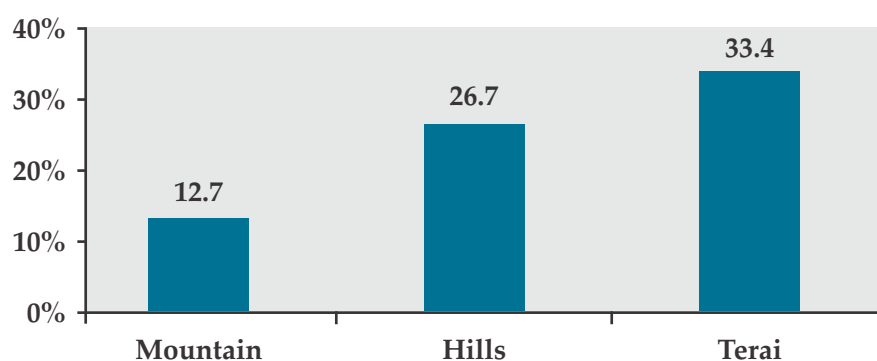
The Health Service Act 1997 puts forward various career development opportunities to nominated candidates, such as further study, training or national/international study tours, based on the following grounds:

- The subject of study, training or study tour should be useful and relevant.
- Nomination for scholarship, training or study tour is based on priority from amongst the employees who secure higher marks for educational qualifications, seniority, experience of service in geographical region and work performance evaluation pursuant to Section 29.
- Candidates must be under the age of 45 years in the case of any educational degree.
- An employee must have worked in a remote area for at least two years in order for the employee to be a candidate for promotion after the commencement of this Section.

The Health Service Act also states that career development opportunities should be encouraged in remote areas, through a system which allows HWs to obtain more marks during assessments for promotions or scholarship schemes. A key informant from NHSSP stated: “...the health sector should be able to show a clear cut career path in the health sector so that health workers are motivated to work”.

HWs in the Tarai belt (33.4%) were found to have more opportunities for career development, compared to those in the Mountain belt (12.7%). (see Figure 3)

Figure 3: Percentage of Career Development Opportunities According to HWs by Ecological Belt



Source: HRH Field Survey 2011

HWs in urban locations (80%) had greater career development opportunities than HWs in rural areas (70%). With respect to type of health cadres the highest percentage of cadres stating that they had good career development opportunities were technicians followed by doctors. Career development opportunities include not only government provisions but also individual capacity building and private practice opportunities available in the area (see Appendix 8).

According to FGDs conducted among service providers in Dhanusha, the reason for this is that in urban areas, particularly in Tarai, there are more institutions and nearby facilities, which makes further study and involvement in other skills development activities more accessible than in the more remote areas, such as in the Mountain belt.

3.2.5 Incentives for FCHVs

Female Community Health Volunteers (FCHVs) are considered to be the pillars of public health programmes in Nepal. They are the volunteers who serve at the grassroots level of the country and work directly with the community. The Family Health Division of the DoHS is responsible for monitoring provisions for FCHVs, which are delivered by the VDC. Yet despite their contribution to the improvement of health outcomes, particularly those related to maternal and child health, research shows that there is no provision of a regular salary for FCHVs, due to their volunteer status, and the provision of non-financial incentives are poorly managed.

FCHVs receive NRs. 4000 as an annual allowance from the VDC. As per the FCHV Fund Operational guideline (2004), there is also a fund for FCHVs, in which there is the contribution of money from the VDC/DDC, Municipality and I/NGOs. The interest gained from the fund and any amounts received from other sources are also collected and deposited in the FCHV fund (20). With these funds, FCHVs are provided with of a range of facilities, such as transportation costs to attend meetings, identity cards, FCHV board, and the required programme-related materials, drugs and equipment. FCHVs also receive free health care services, mentioned in the Free Healthcare Guidelines. FCHVs are also entitled to receive a uniform from the VDC, in contrast to government health workers who are given NRs.7500 as uniform allowance. There is also the provision of an award letter of appreciation and observational tour for those who show good performance during their work, in collaboration with local government for the FCHVs (21) .

The majority of FGDs conducted among FCHVs highlighted the disparity between the incentives that they were entitled to and what they expected to receive because of their high work load. A FCHV in Panthar District stated: *“We are given NRs.200 monthly by (along with NRP 4000 by the VDC) when we go to submit the monthly report but that amount is low compared to our job responsibilities given”*. Most of the FGDs in Kapilvastu district conducted among the FCHVs emphasised their difficulty in working, without some of the minimum utilities such as a torch, bicycle, radio and mobile telephone.

Furthermore, according to the MoHP National FCHV Programme Strategy 2067, the provision of a uniform for FCHVs should be provided on a regular basis. However, the FCHVs expressed their dissatisfaction due to the irregularity with which they received this incentive. Often they would only receive this incentive once per year, resulting in them wearing clothes that were worn out within a few months. This shows that there is a distinct gap between policy and practice and that improvements in mechanisms for the provision of incentives for FCHVs should be improved (see Report 3 in this series: *Health workforce performance and accountability (availability, competency, responsiveness and productivity for further information)*).

CHAPTER IV WORK SUPPLIES AND EQUIPMENT

The working environment for a health worker is also determined by the availability of the working means thereby having opportunity to fully utilize the skills learned by health worker. Availability of means of working within the facilities is an important motivation factor for retaining HWs in their job. The saying “No commodities, no programmes” is a popular slogan followed by organizations and the community. The health institutions under MoHP have been guided in terms of the means of working, such as the standards of SHP, HP, PHCC, DH, Zonal Hospital and Central Hospital. There is a policy for the provision of consumable and non consumable goods to each facility in the government of Nepal (22) There are standard norms on building, equipment, consumables and commodities for each of the health facilities (22).

The working environment depends on the available infrastructure (i.e., availability of staff living quarters and medical facility building and non-medical and medical services, equipment and supplies within), which seemed to be poor based on the findings of the operational research particularly in rural settings. Some health institutions are based in rented houses or as is the case in SHP, share the space at other government buildings such as VDC buildings. For example, the MoHP has started posting new MBBS graduates from scholarship schemes to PHCs. However, basic diagnostic facilities such as X-rays and laboratories are lacking in most district hospitals. The 2008 RTI report states that more than half of the PHCs have insufficient space for the maternal health service that they wanted to provide, and limited access to piped water, electricity and telephone lines (7).

4.1 Condition of Infrastructures in Observed Health Facilities

Information on the condition of the infrastructure of 256 health institutions was collected, and included the following: buildings, rooms, furniture, birthing centres, fixtures, ventilation, cleanliness, toilets, water supply, electricity, internet, land, availability of living quarters and waste disposal pits. Data was analysed according to eco-development region and locality (urban vs. rural). The condition of the infrastructure was graded between poor and excellent, and was then converted into an index form.

Indexing analysis was carried out on available goods. A total of 14 different goods available within the health institutions were taken and the indexing method was applied. The condition of infrastructure was found to be better in the Hill belt among the ecological belts and FWDR from among the development regions. The condition of selected facilities within the health institutions were below average. Health facilities in urban areas were found to be above average in comparison to rural facilities (see Appendix 9). The challenges in rural health

facilities and their impact on service delivery was highlighted by a service provider in Panchthar: *“Though some of the equipment, such as refrigerators, are provided by the government, due to the lack of electricity we are unable to use them which results in difficulty in maintaining the cold chain”*.

With regards to equipment and supplies relating to maternal and child health, the FGDs and KIIs conducted among the health workers and members of the management committee expressed their expectation of the provision of birthing centres in all health institutions and maternity services down to the HP and SHP level. This, however, is dependent on government mandate and policy, as only an upgraded SHP that has appropriate infrastructure and a Skilled Birth Attendant (SBA) trained ANM are eligible to provide maternity services.

Of total 324 (43%) respondent said that their health facility had a birthing Centre (see Table 6). About 61 institutions in mountain, 43 per cent in hill land 38 per cent in Tarai had birthing Centres. Ninety four per cent PHC and 89 per cent hospital had a birthing Centre. Similarly, 65 per cent HP and 21 per cent SHP respondent mentioned that their health institutions had birthing Centres.

Table 6: Percentage Distribution of Birthing Center

Birthing Center	Number	Per cent
Ecological Belts		
Mountain	73	60.8
Hill	117	42.9
Tarai	134	37.9
Type of Institutions		
Hospital	94	88.7
PHC	49	94.2
Health Post	78	64.5
Sub-Health Post	58	21.0
Private Clinic/Hospital	22	40.0
I/NGO Clinic/Hospital	23	22.5
Total	324	43.4

Source: HRH Field Survey 2011

4.2 Condition of Available Equipment at the Time of Survey

The MoHP has allocated standards for equipment that should be used in different health facilities. Equipment in this research study refers to medicine, cold chain/vaccines, surgical and diagnostic equipment, sets for minor surgical procedure, delivery sets, sterilization facilities and hospital beds. The availability and condition of the equipment in observed health facilities were graded using an index form.

The condition of the available equipment at all observed health institutions was below average, and information from qualitative data reinforced many of the challenges faced by HWs through lack of equipment (see Appendix 10).

One case study in Mugu district revealed that HWs were not willing to stay in government health institutions, even during office hours, due to lack of adequate drugs. One AHW asked: *“Why should we be blamed for not providing healthcare? What if people argue with us for not providing paracetamol, even if health workers are present there? Isn't this a threat to us from our own system?”* This highlights the interrelation between lack of equipment and HWs not completing the full amount of working hours. A FGD with a facilitator group in Mugu district emphasised the ineffectiveness of the push system at the central level, which was impacting on the local level: *“Medical supplies for one year do not even last for six months. The planners at the central level do not provide appropriate projections on the medicines required. The push system in allocating resources from central level to district level has a bad impact practically and HWs have to face it at local levels”*

Some of the FGDs conducted with service providers and case studies explained that when drugs are not available at health institutions, they have no option other than only to advise people to go to nearby private pharmacies, at that time HWs get embarrassed when people ask them *“why you are here then?”* Both the findings from FGD and KII conducted in Palpa have shown that there was inadequate equipment and supplies or infrastructures were in obsolete condition. They showed the example of rusted scissors which was supplied long time ago of SHP establishment. The health workers in the Mountain belt had the same sentiment, and expressed that when they stay at the health institutions for the service provision because of the lack of the equipment and drugs they faced insecure conditions from the local people due to lack of equipment and drugs. They requested regular and routine supervision and monitoring of supplies, in order to ease their working conditions in those remote areas.

Similarly, a FGD conducted among service providers of PHC in Panchthar, revealed that *“Doctors do not want to stay at the facility as there is lack of proper equipment such as x-ray machine and USG machines, as a result of which they cannot use their skills properly”*. A FGD from Pyuthan revealed that despite the fact that there was an x-ray machine available, it was not in use due to the lack of human resources to operate the machine.

4.3 Community Facilities Available Around the Periphery of the Working Place

Community Facilities include the market place, road, schools and entertainment facilities. All the respondents were asked for their rating on the basic facilities available at the working place. The availability of basic facilities were analysed through the index form. The index in different ecological, development region and rural/urban area are depicted below:

The indexing was done for the analysis of available community facilities. A total of 4 different facilities available around the health institutions were taken and indexing was carried out. The table above shows that the condition of Community Facilities in the Hill belt was better (0.46) compared to the Mountain belt (0.30).

Similarly, the availability of community facilities was higher in urban locations (0.75) compared to rural locations (0.37). Among the development regions, CDR has the highest mean score of index and least mean score of index in EDR and MWDR. Likewise, the comparison of the community facilities according to the type of health institution demonstrated a higher score in the private and I/NGO clinics (see Appendix 11).

CHAPTER V SAFETY AND SECURITY

This chapter examines the safety and security of health workers, and seeks to analyse an often fraught relationship between service users and providers.

5.1 Health and Safety

Chapter V, Sections 27–36 of the Labor Act 1992 includes the standards for the Health and Safety of workers. It sets the standards for sanitation and cleanliness, modern lavatories, waste disposal, adequate ventilation and lighting, and control of temperature, protection from dust, fumes and other impurities, avoidance of overcrowding in any room of the establishment, provisions for drinking water and fire extinguisher, necessary personal protective equipment (PPE) to avoid any adverse impact on health, separate modern toilets for male and female, and declares the workplace a ‘no smoking zone’ (11).

The Act also includes the provision of medical examinations for HWs at least once a year due to their exposure to health hazards during certain clinical and medical procedures. The act stipulates a number of accident preventive measures, such as protection against chemical hazards and fire, guarding against dangerous machinery, prohibition on lifting a heavy load, and safety measures for pressure plants. A provision has been made for compulsory notice of any kind of accident or disease within the workplace. The concerned health authorities’ example Administrative Officer/ Chief of the hospital / management of the concerned health facility is responsible for ensuring the preventive measures of health workers (11).

5.2 Compensation

If any worker or employee suffers a physical injury, becomes disabled, or dies while working in an establishment, the worker, employee or his family are paid compensation as prescribed by the concerned health authority or Health Worker and Health.

5.3 Conduct

Legal provision regarding conduct is as follows (13):

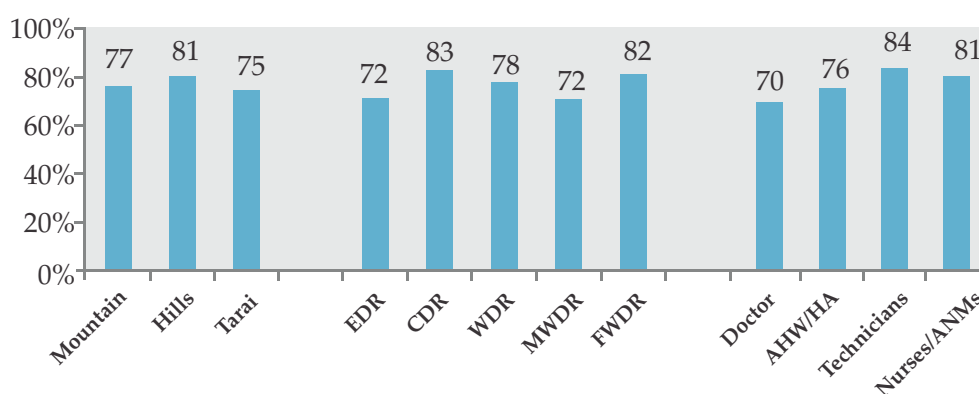
- Section 59(a) of Health service act restricts government health workers doing private practice to open and operate any health clinic or private hospital or nursing home or work in such health clinic or private hospital, without prior approval.
- Restriction on taking part in politics Section 60.

- Restriction on staging strike, detention and Gherau (section 62): In the policy document of Security of the health workers and health organization Act section 3, it is clearly stated that no one is allowed to cause any of the following acts like detention (Gherau), manhandling or doing degrading treatment to any health worker on the issue of medical treatment, destruction, setting fire to any health organization or doing similar other acts. Similarly, in the Act it clearly states that for the safety and security of health workers there is the health worker and health organization security coordination committee. In central level there is provision of Health Worker and Health Organization Security Coordination Committee (HWHOSCC), comprising 7 members chaired by chief specialist of medical service division of Ministry. Main functions of this committee is to approve plans and programmes related to security, maintain coordination between the concerned bodies, provide compensation, providing suggestions to the Government of Nepal (GoN) and performing other related functions. Likewise, this document also focuses if any person commits or attempts to commit any act against health worker or in any health organization in contravention of section 3 such health worker or health organization may make a request to the local administration for security. If a request for the security is made the local administration is responsible to arrange the security immediately. If there is any obstruction in the provision of the services or there is likely to be a permanent arrangement of security should be provided by the Health Worker and Health Organization Security coordination Committee (23).

5.4 Security in Working Place

Health Workers were asked about their feeling of security in the workplace, which was highest in the Hill belt (81%), and lowest in the Tarai belt (75%), as shown in Figure 4 below.

Figure 4: Health Workers' Feeling of Security in the Workplace



Source: HRH Field Survey 2011

Similarly according to development region, HWs in CDR felt most secure in contrast to HWs in EDR and MWDR. With respect to type of health worker, technicians felt more secure (84%) compared to doctors (70%).

In the KIIs conducted in Tarai districts of Nepal such as Bardiya, Dhanusha and Kapilvastu, respondents reported that it was difficult to take any decision regarding management of staff due to high political pressure. For example, though a staff member is transferred to the Tarai

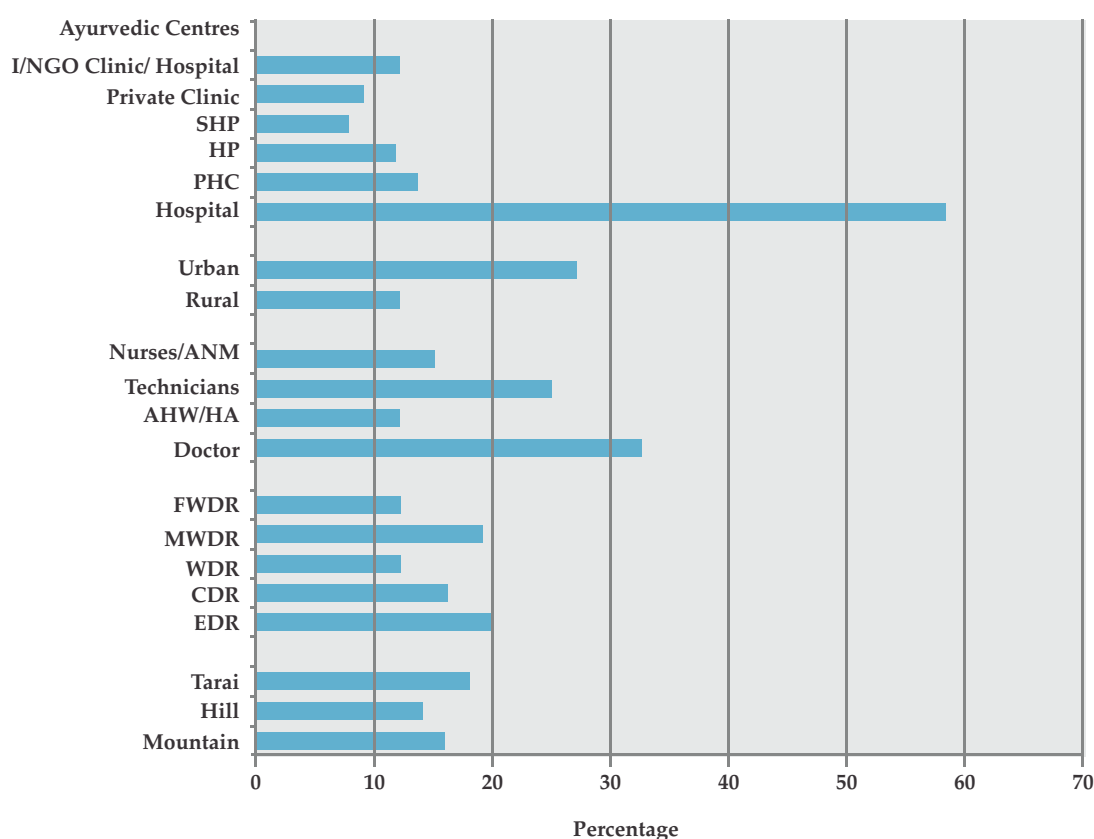
district, they are able to remain in their district using the authority of different unions and parties. This shows that HWs are using the political power/pressure to remain in the district where they work.

One of the chief (DHO) of Hospital in Hill belt, whose permanent address was in Tarai said: *“The reason behind my transfer to the Hill region is increasing political insecurity in Tarai”.*

5.5 Relationship between Health Workers and Community

Sixteen per cent of HWs faced some level of arguments with service users, during the course of treatment. This problem was found to be higher in Tarai, urban areas, among doctors and was three times higher in hospitals settings than in other health institutions, obviously associated with relative complexity of curative services provided (see Figure 5).

Figure 5: Arguments between Health Worker and Local Community During Treatment

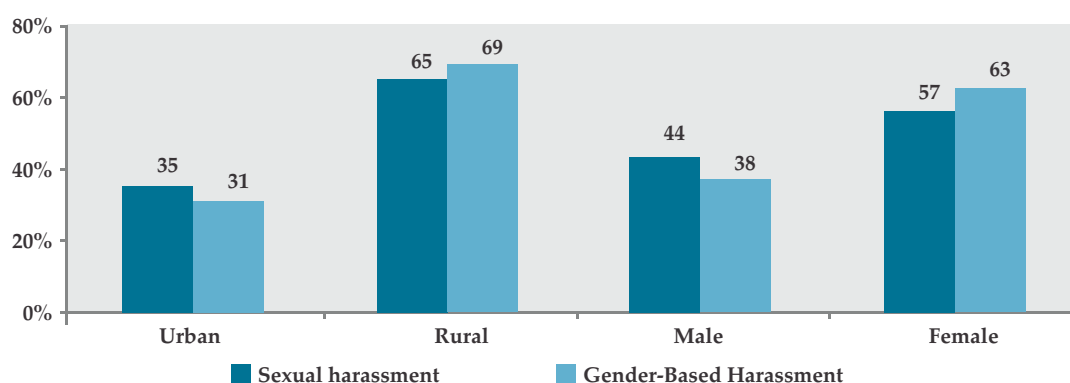


Source: HRH Field Survey 2011

A requirement of local administration, as per Security of the Health Workers and Health Organization Act 2066, is to settle local disputes. However, HWs only received support from local administration in 24 per cent of cases. In MWDR, more than 94% cases were settled by the HWs themselves (see Appendix 12 for details). This demonstrates the low support from local administration for settling disputes.

The staff expressed that there were some cases with severe impact of those argument. In total there were seven deaths due to the severe consequence of such argument, which is strictly prohibited in the Security of Health workers and Health workers Act, 2066 (2010). However from the above data it indicates that such severe events are still occurring.

Figure 6: Percentage Distribution of Harassment in the Workplace



Source: HRH Field Survey 2011

Harassment is the act of systematic and/or continued unwanted and annoying actions of one party or a group, including threats and demands. The most common types of harassment were gender harassment, sexual harassment and caste/ethnicity harassment. Gender based harassment as well as sexual harassment was higher among female HWs. All types of harassment were higher in rural areas. Caste/ ethnicity harassment was higher in Tarai region (46.5%) and least in the Mountain belt (36%) (see Appendix 13). These findings emphasize the need for effective community feedback or complaint mechanisms and punishment systems. These are not in place in health institutions, but are essential for improvements in workforce performance as they can be used not only to provide information on misconduct, but can also provide positive feedback from the community and can strengthen motivation among health workers.

Higher level staff working in the health institutions were identified as those that harassed HWs in the Mountain belt and urban areas, whereas the community was identified as the main source of harassment by HWs in the Tarai and rural areas (see Appendix 14).

5.6 Compensation Provided by Working Institution in Workplace Accidents

The data showed that in all three ecological regions provision of compensation and treatment was highest in Tarai (14.3%) in the event of an accident in the workplace. Despite the provision of the compensation to the health workers there were some cases where the health workers were also dismissed from the job (5.8%); Findings also revealed that 12.4 per cent of urban HWs received compensation and treatment facility. (see Table 7).

Table 7: Type of Compensation Provided to Health Worker in Case of Work Place Accident (%)

Birthing Center	Compensation and treatment facility	Pension or Incentive	Manage paid leave	Fire from the job
Total	30.7	22.2	29.2	5.8
Ecological Belts				
Mountain	5.4	3.2	4.8	1.3
Hill	11.1	9.4	9.9	1.7
Tarai	14.3	9.6	14.5	2.7
Development Regions				
EDR	8.3	5.5	8.3	0.9
CDR	6.2	5.5	6.3	1.9
WDR	5.2	3.2	2.3	0.7
MWDR	3.6	4.1	4.3	1.3
FWDR	7.5	3.9	8.0	0.9
Service Categories of HRH				
Doctors	3.5	2.1	2.9	0.5
HA/AHW paramedicals	14.6	14.1	15.0	2.3
Technicians	3.5	0.5	2.5	0.8
Nurses/ANMs	9.2	5.5	8.7	2.1
Types of Institutions				
Hospital	5.1	3.6	5.1	1.3
PHC	2.5	2.7	3.1	0.4
Health Post	3.6	4.0	4.3	0.4
Sub-Health Post	8.6	9.8	10.0	1.1
Ayurvedic Centers/Ausadhalaya	1.2	1.2	1.1	0.7
Private Clinic/Hospital	2.1	0.1	2.3	0.7
I/NGO Clinic/Hospital	7.6	0.8	3.3	1.2

Note: N=747

Source: HRH Field Survey 2011

CHAPTER VI ROLE OF LOCAL AUTHORITIES AND THE COMMUNITY

The participation of local authorities and the community in the improvement of working conditions is essential for increased motivation among health workers at all levels of health service provision (23). This chapter examines the role of District Development Committees (DDCs), Village Development Committees (VDCs), Health Facility Management Committees(s) and Civil Society Organizations (CSOs) in the improvement of working conditions in health facilities.

6.1 District Development Committee

The health sub-committee under the DDC monitors the health-related activities in the district. The role of the committee is as follows:

- To operate and manage the district level health posts, hospitals, Ayurvedic centers, health centers, health offices etc.
- To formulate and implement health programmes such as family planning, mother and child welfare, extensive vaccination, nutrition and population education and public health.
- To give approval to open sub-health posts in the village development areas under the district development area and inspect and monitor them.
- To make arrangements for the supply of such medicines and materials and equipment relating to treatment as required for the district development area, and to inspect and monitor the quality of standards.
- To prohibit or remove anything that would cause danger to the health of the population in the district development area.
- To prohibit the sale, distribution and consumption of such consumable goods as may cause adverse impacts on Public Health.

Service providers in Bardiya revealed during a FGD that DDC had been supporting HRH activities and health facility construction, as well as conducting different health awareness programmes. The DDC had also supported the FCHVs through allocation of funds to the FCHV fund.

6.2 Village Development Committee

The Local Self-governance Act 1999 (LSGA) stipulates that local government bodies manage and supervise Sub Health Posts or Health Post (S/HP) and their functioning. Local committees and Village Development Committee (VDC) have to provide sites for the location of SHPs. Other Roles of VDC relating to the health service are:

- To operate and manage village level health centres, health posts and sub-health posts.
- To prepare programmes on primary health education and sanitation and disposal of waste in the village development area and to implement the same.
- To launch programmes on family planning and maternity and child care (23).

Qualitative data shows that the VDC has supported health institutions through the recruitment of mid-level health workers, such as ANMs and Laboratory Technicians. The VDC has also supported in developing the local action plan in conjunction with staff at the health institutions. Similarly, the VDC in Jhapa supported the health institution by conducting outreach work in health camps.

6.3 Health Facility Operation and Management Committee (HFOMC)

Management of HWs is the responsibility of the Health Facility Operation and Management Committee (HFOMC) at the local level which exist in each health facility. The HFOMC makes decisions on the management of staff, the physical infrastructure, and requests for the supply of drugs and equipment, as well as managing the mobilisation of resources within that catchment area. The HFOMC also has the responsibility to plan, implement and monitor the programme and maintain good governance.

The HFOMC monitors the filling of all sanctioned posts and recommends staff for deputation, trainings and workshops. The committee also approves the leave of staff for up to 7 days and refers to the district authority for the leave greater than one week. The committee also has authority to recruit the additional staff based on the need and the budget availability. HFOMCs in Panthar and Pyuthan stated in FGDs that they have been actively involved in the management of the health facility, including the local recruitment of mid-level staff and support in the management of supplies and equipment, allowances for FCHVs and the management of living quarter facilities for health workers.

The HFOMC also evaluates the performance of the health workers and makes various decisions to motivate the FCHVs (24). In line with this, the HFOMC also conducts meetings to solve emerging issues and to plan further activities in the health facilities.

However, FGDs with health workers in Bardiya (Tarai belt), Mugu and Darchula (Mountain belt) emphasised that the work of the HFOMC was not always effective. Administrative representatives from a DHO expressed concern over the inactiveness of their management committee. Health workers had expressed their expectations to the HFOMC to manage issues relating to the provision of living quarters more effectively. Furthermore, the research study has shown (in Section 3.2.1 of Chapter I) that the duration that HWs take for leave is not being managed appropriately, resulting in high levels of absenteeism among Health Workers. The living quarter facilities are either not available or in poor condition in various health facilities.

A FGD with service providers in Palpa also emphasized the inactive role of the HFOMC: *“There is a management committee but they are less active and they don’t have much of a role in the development of the hospital. Sometimes meetings for the management committee are conducted at VDC. Likewise, they also provide little support to the SHP”*. A FGD conducted among the service providers in Jhapa found that although there were four sanctioned posts, only two were filled. They also stated that medicines had become useless due to poor management. One informant said *“There is the need for a management committee which can really manage this health centre”*.

One of the major constraints in meeting Health Workers’ demands in relation to the working environment and infrastructure was the lack of budget, which was mentioned during discussions with the DHO and HFOMC in various districts. Thus, management issues should be addressed in tandem with issues of budget availability.

6.4 Civil Society Organizations

In Nepal, various Civil Society Organizations (CSOs) are involved in the health sector where they occupy the role of junior partners and advocate on behalf of local people for improved state services. Current national health policies and strategies have illustrated the government’s commitment to involve CSOs in improving health human resources. For example the NHSP IP II has given considerable emphasis on partnering with the NGO community to provide basic health services especially for poor and marginalized communities, and expects more specialized services in the rural areas. Local community groups have been shown to be involved in supporting different areas of the healthcare system, such as maternal and child health, security of health workers and the provision of incentives and rewards.

Mothers groups, who work on a voluntary basis in each ward for improvements in maternal and child health, are an important network at the VDC level. Their role in recommending candidates for FCHV posts is outlined in the FCHV guideline, and they hold regular meetings with FCHVs and VHWs to discuss MCH issues. These issues are taken forward by the FCHVs and VHWs. Research findings from a FGD with a facilitators’ group in Rasuwa revealed that mothers’ groups had been providing financial support to the health intuitions to manage the obstetric emergency care. One of the PHO of Rasuwa claimed that *“Civil Society Organizations have supported us by providing the health computers, internet connections, additional health workers and moral support”*.

The FGDs among the service providers’ and facilitators’ groups showed that Cooperatives in Palpa had started the ‘Health Security Fund’ programme for improvements in the security of health workers in the district. Similarly, the media, I/NGOs and different clubs have supported in raising health awareness messages and providing free advertisements in the region. A KII with the representative of a NGO told of their provision of additional health workers to the health institutions. However, often this support can go unrecognized, as was the case in a discussion during a FGD among service providers in Palpa district, who expressed that they do not play a functional role in support to health care services.

The local community is also involved in awarding health workers for their good work, through the local authorities such as political leaders and members of the Management Committee. The level of support is shown to be dependent on the region and locality, according to Table 8 below:

Table 8: Health Workers of the Institution Awarded for Their Good Work by the Local Community

Characteristics		Number of HWs awarded for good work	Percentage
Ecological Regions	Mountain Region	6	11
	Hill Region	28	50
	Tarai Region	22	39
Types of Locality	Rural	38	68
	Urban	18	32

Source: HRH Field Survey 2011

The above table shows that the percentage of HWs who had been awarded for their good work by the local community was highest in the Hill belt (50%) compared to being the lowest in the Mountain belt (11%). In terms of locality, health workers in rural setting were awarded highest (68%) from the local community and as compared to urban health workers which is 32%. This shows locality differences in fostering of relationships between health workers and the community.

Local communities are also involved in the management of living quarter facilities, which was highest in the Mountain belt (48%) and lowest in Tarai (32%). The study also showed that the community had managed quarter more for doctors (54%) and least for Nurses and ANMs (34%) despite the fact that they are considered to be the key health personnel for providing the 24 hour maternity services (see Table 9 for details).

Table 9: Facilities Managed by Institution or Community for Health Workers

Characteristics	Accommodation (%)	Total (N)
Ecological Belts		
Mountain	48.1	52
Hill	40.4	109
Tarai	31.6	114
Development Regions		
EDR	31	84
CDR	34	50
WDR	29.7	37
MWDR	47.6	42
FWDR	50	62
Type of health cadres		
Doctor	53.5	43
HA/CMA	35.6	101
Technicians	39.4	33
Nurse/ANM	2.4	98

Source: HRH Field Survey 2011

CHAPTER VII CONCLUSIONS AND RECOMMENDATIONS

This report has examined the working conditions of the health workforce, with a specific focus on incentives (financial and non-financial), supplies and equipment, safety and security and support from local authorities and communities.

On the basis of descriptive qualitative and quantitative findings discussed in chapters, the following summary of major findings is presented below.

7.1 Income and Financial Incentives

Conclusions

- Salary increment is based upon the inflation rate and remote locations allowance is also provided, though the health workers are not satisfied with the salary and remote allowance they are getting. However, comparing the current salary with average consumption of a family, according to NLSS 2010/11, the current salary income of a mid-level health worker was sufficient for basic expenses of a family.
- The involvement of health workers in other activities for additional income, such as private practice, which was 56 per cent in Tarai compared to 17 per cent in Mountain. This highlights the gap between policy and practice, and the importance of effective supervision to ensure that HWs are staffing their health posts at appropriate times.

Recommendations

- Evaluation of the performance management system should be strengthened by the MoHP, to ensure greater transparency, equity and access.
- More robust monitoring systems should be put in place at the health facility level, to ensure that maternity allowances are distributed accordingly. This should be managed by the HFOMC.
- The Health Service Act should be amended to include a disciplinary action for those Health Workers involved in private practice without prior approval from the government. This will need to be followed up by regular monitoring by the management division of the MoHP.

7.2 Non-financial Incentives

Conclusions

- Despite the importance of incentives, particularly non-financial incentives, research has shown that their provision is often hampered by poor quality monitoring systems, which often lead to disputes and demotivation among staff, as well as undermining efforts to improve maternal and child health. This has been shown in the lack of availability and poor conditions of living quarter facilities in government health institutions; FCHV dissatisfaction with the provision of non-financial incentives on an irregular basis; and inconsistencies in the process of receiving maternity allowances.
- Furthermore, the study found ecological disparities in the working conditions of HWs, such as a low percentage of HWs who had been awarded for their good performance by the community, lack of career development opportunities and access to travel allowance in the Mountain belt, compared with Tarai where there is greater accessibility to amenities and opportunities for health staff.

Recommendations

- The MoHP should revise the Health Service Act to include entitlements of health staff to living quarters. The provision of living quarter facilities for clinical staff such as doctors, nurses and midwives should be provided in all types of health institutions, including SHPs, and should be managed by districts. This will ensure that emergency services, particularly maternity services, are available at all times so as to improve maternal and child health outcomes. Likewise, non-financial incentives should be provided to HWs including FCHVs to increase their motivation towards work.
- Maternity leave should be extended to 12 weeks, which is in line with the minimum time recommended for maternity leave by the International Labour Office (18).
- Reward and punishment system should be effectively implemented and monitored to limit absenteeism and unauthorised private practice.

7.3 Supplies and Equipment

Conclusions

- Poor provision of infrastructure, equipment and supplies in health facilities, particularly medicine, is a contributing factor to low motivation among health staff, poor staff availability and conflict between service users and providers. The research study has shown that this is a particular problem within health facilities in rural areas.
- Despite the need of birthing centres up to SHP level and also well documented in government policy, most of the health institutions do not have such facilities.

Recommendations

- A needs based, or pull distribution system of medical supplies should be standardised across all districts, to ensure that requests for medicine are sent from the local to district and district to central levels, as per the needs (25) and stock-outs are prevented. The system from the central to district levels may need to incorporate both push and pull systems, to take into account the needs of the local population.

- A robust monitoring system as well as capacity building of health staff at central and regional levels on stock management systems is essential, as the success of this system relies on adequate human resources to calculate the quantity of medicines for a certain defined period of distribution.
- The CSOs should be empowered so that they can lobby district health management teams for effective implementation of policy documents to address the local needs such as birthing centres for improved maternal and child health.

7.4 Safety and Security

Conclusions

- Health Workers perception of security is influenced by local factors, such as conflict with service users within the health institution, as well as more distal factors, such as political instability which is a barrier to effective HRH management in Tarai.
- Though the GoN has allocated the task of conflict management to the local authority, it is not effective in practice. Furthermore, quantitative data has shown that staff were dismissed from their jobs due to workplace accidents, rather than receiving compensation.

Recommendations

- The MoHP should devise an Occupational Health and Safety Act, and that health workers are sensitized on occupational hazards and their rights to compensation.
- The role of Civil Society Organization in conflict resolution, negotiation and mitigation in addressing disputes between service users and service providers, particularly in Hospitals, should be explored further.

7.5 Support from Local Authorities and Community

Conclusions

- The VDC, DDC and HFOMC play an important role in the management of the health institutions. They have good stake in management of HRH by hiring local level staff, and have emphasised their concern in the management of accommodation, electricity, drinking water etc. However, this study has also shown poor indicators related to management in several key aspects of health workers' working conditions, which directly impacts on motivation and performance. Civil Society Organizations also have an important role to play in the improvements of working conditions of health staff.

Recommendations

- The role of VDC, DDC, HFOMC and CSOs should be strengthened to manage the lack of facilities and HRH problems in local health institutions. This lack need to be considered from both service user-service provider perspectives and a robust monitoring system should be put in place to ensure that changes are implemented within a given timeframe, with CSOs monitoring the effectiveness of the feedback mechanisms.

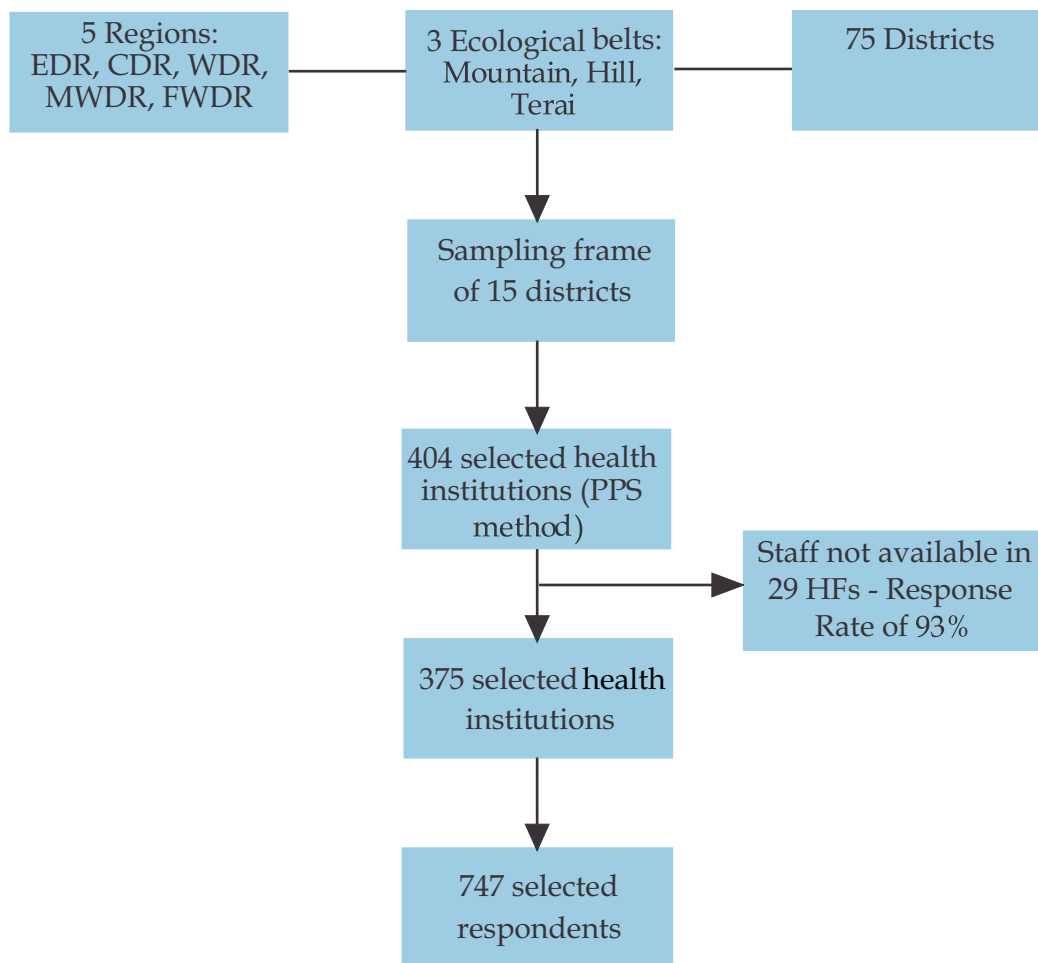
REFERENCES

1. WHO SEARO. Health Systems Development- Human Resources for Health. [Electronic] 2008 [updated June18, 2008; cited 2012 February 16]; Available from: <http://www.searo.who.int/en/section1243/section1308.htm>
2. WHO, ICM, FIGO. Making pregnancy safer: the critical role of the skilled attendant. Geneva, Switzerland: WHO; 2004.
3. Mathauer I, Imhoff I. Health worker motivation in Africa: the role of non-financial incentives and human resource management tools. *Human Resources for Health*. 2006;4(1):24.
4. USLegal.com. Working Condition Law & Legal Definition. [cited 2012 February 7]; Available from: <http://definitions.uslegal.com/w/working-condition/working>
5. World Health Organization. World Health Report 2006: Working Together for Health. Geneva, Switzerland: WHO; 2006.
6. Dieleman M, Harnmeijer JW. Improving health worker performance: in search of promising practices. World Health Organization 2006 [cited 2012 February 18]; Available from: http://www.who.int/hrh/resources/improving_hw_performance.pdf.
7. RTI International, Ministry of Health and Population Nepal. Costing study on incentives packages for Nepal's health care professionals. Research Triangle Park, NC, USA2008.
8. World Health Organization. Assessment of Human Resources for Health: Survey instruments and guide to administration: WHO, Geneva; 2002.
9. Government of Nepal. Financial Procedures Rules, 2064 (2007). Kathmandu: Government of Nepal; 2007.
10. Central Bureau of Statistics. Nepal Living Standards Survey 2010-2011. Kathmandu: Central Bureau of Statistics, Government of Nepal; 2010.
11. Government of Nepal. Security of the Health Workers and Health Organizations Act, 2066 (2009). Government of Nepal; 2009.
12. Government of Nepal. Health Service Regulation 1999. Government of Nepal; 1999.
13. Government of Nepal. Nepal Health Service Act 1997 (5th Amendment 2010). Government of Nepal; 2010.
14. Ministry of Health and Population (MoHP) [Nepal]. Annual Report, Department of Health Services 2067/68 (2010/2011). Kathmandu: Ministry of Health and Population, Nepal; 2012.
15. Government of Nepal. Civil Service Act 1993. Government of Nepal; 1993
16. Government of Nepal. National Health Policy 1991. Ministry of Health, Government of Nepal; 1991.
17. RTI International. Human Resource Strategy Options for Safe Delivery. Research Triangle Park, NC, USA2009.
18. International Labour Office. An ILO special Report Maternity protection: How women are faring worldwide. *World of Work the Magazine of the ILO*: International Labour Office 1998.
19. Government of Nepal. The Labour Act 2048 (1992). Government of Nepal; 1992

20. Family Health Division. FCHV Fund Operational Guideline 2064. Kathmandu: Department of Health Services, Ministry of Health and Population (MoHP) Nepal.
21. Family Health Division. National FCHV Programme Strategy 2067. Kathmandu: Department of Health Services, Ministry of Health and Population (MoHP) Nepal; 2010.
22. Logistic Management Division. Standard list of equipment for District Hospital/Primary Health Care Centre/Health Post/Sub Health Post. 2012.
23. Paudel NR. Health Policy Design and Implementation in Nepal: A Policy Discussion. International Conference on 'Challenges of Governance in South Asia' December 15-16; Kathmandu, Nepal 2008.
24. National Health Training Centre. Training Manual for performance enhancement of Health Facility Operation and Management Committee 2067 (2010). Kathmandu: Department of Health Services, Ministry of Health and Population (MoHP) Nepal; 2010.
25. World Health Organization. Medicines Supply: Distribution of medicines. [Electronic]: World Health Organization; [cited 2012 March 04]; Available from: <http://www.who.int/medicines/areas/access/supply/en/index5.html>.

APPENDICES

Appendix 1: Sampling Method



Appendix 2: Derivation of Sample Size

Major features of sample determination:

1. Total Institutions = 5146
2. Total Hospitals, PHC/HC and HP = 1000
3. Proportion of Targeted Health Facilities = $1000/5146 = 0.194$
4. The formulae for calculating the sample size

$$n = Z^2_{1-\alpha/2} * p * (1-p) * deff * (1+nr) / d^2$$

Where:

$$Z^2_{1-\alpha/2} = 5\% \text{ level of significance} = 1.96$$

p = proportion of the targeted coverage of health institutions

Note: Since all categories of health workforce are found in District Hospital, Primary Health Care Centres/ Health centres and Health Posts, the total number of these institutions (1000) is divided by the total health institutions (5146) in the country to calculate the proportion.

deff = Design effect, which is set as to minimize sampling variability caused by cluster sampling

The design effect set for this sample determination is 1.5

nr = Non response rate, which is an estimated rate for the non-response of respondents and it is set as 10 percent (0.1) in this sample selection.

d = Allowable error, which is usually considered as 0.05 that indicates its range from 14.4 to 24.4 percent.

The equation for deriving the sample size is given as below.

$$n = Z^2_{1-\alpha/2} * p * (1-p) * deff * (1+nr) / d^2$$

$$\text{or } n = (1.96)^2 * 0.194 * 1.5 * (1+0.1) / 0.05^2$$

$$\text{or } n = (3.84 * 0.16 * 1.5 * 1.1) / 0.025$$

$$\text{or } n = 1.01 / 0.025$$

$$\text{or } n = 404$$

Appendix 3: Total Number of Institutions by Districts, Ecological Belts and Development Region

SN	Development Region	Ecological Belt	District	Selected Number of Institutions							
				District Hospital	PHCC/HC	Health post	Sub-Health Post	I/NGO - Clinic	Private Institution	Ayurvedic	Total Institution
1	Far-Western	Mountain	Darchula	1	1	5	10	0	0	1	18
2	Far-Western	Hills	Doti	1	1	4	16	1	0	3	26
3	Far-Western	Tarai	Kailali	1	2	3	13	2	1	2	24
4	Mid-western	Mountain	Mugu	1	1	1	4	2	0	0	9
5	Mid-western	Hills	Pyuthan	1	1	5	14	0	1	1	23
6	Mid-western	Tarai	Bardiya	1	1	3	9	6	0	1	21
7	Western	Mountain	Manang	1	0	2	1	0	0	1	5
8	Western	Hills	Palpa	1	1	4	23	1	0	3	33
9	Western	Tarai	Kapilbastu	1	1	3	27	1	0	1	34
10	Central	Mountain	Rasuwa	1	1	3	2	2	1	1	11
11	Central	Hills	Lalitpur	2	1	4	12	17	5	1	42
12	Central	Tarai	Dhanusa	1	2	4	37	2	0	3	49
13	Eastern	Mountain	Sankhuwasaba	1	1	4	10	1	1	2	20
14	Eastern	Hills	Panchthar	1	1	4	12	1	0	0	19
15	Eastern	Tarai	Jhapa	1	2	3	18	9	6	2	41
Selected number of institutions by ecological belts											
1	Mountain			5	4	15	27	5	2	5	63
2	Hills			6	5	21	77	20	6	8	143
3	Tarai			5	8	16	104	20	7	9	169
Selected number of institutions by development region											
1	Far-Western Development Region			3	4	12	39	3	1	6	68
2	Mid-Western Development Region			3	3	9	27	8	1	2	53
3	Western Development Region			3	2	9	51	2	0	5	72
4	Central Development Region			4	4	11	51	21	6	5	102
5	Eastern Development Region			3	4	11	40	11	7	4	80
Total				16	17	52	208	45	15	22	375

Source: HRH Field Survey 2011

Appendix 4: Qualitative Data Collection

District	Focus Group Discussions (FGD)							Key Informant Interviews (KII)				Grand Total of Participants
	Management Group		Service Providers		Service Users		Total # of FGD	Management Group	Service Provider	Service User	Total # of KII	
	# of FGD	# of Participants	# of FGD	# of Participants	# of FGD	# of Participants						
Sankhuwasabha	1	9	1	10	1	12	-	-	-	-	-	-
	1	6	-	-	-	-	-	-	-	-	-	-
Total	3	12	-	-	-	-	-	-	-	-	-	-
Panchthar	-	-	1	8	1	10	-	-	-	-	-	-
	-	-	1	13	1	6	-	-	-	-	-	-
	-	-	-	-	1	9	-	-	-	-	-	-
	-	-	-	-	1	7	-	-	-	-	-	-
Total	0	0	2	21	4	32	6	0	1	0	1	54
Jhapa	1	7	2	6	1	8	-	-	-	-	-	-
	-	-	1	10	-	-	-	-	-	-	-	-
	-	-	1	6	-	-	-	-	-	-	-	-
Total	-	7	3	22	1	8	5	1	1	0	2	39
Dhanusha	1	7	1	12	1	8	-	-	-	-	-	-
	-	-	-	-	1	10	-	-	-	-	-	-
Total	1	7	1	12	2	18	4	1	1	0	2	39
Lalitpur	-	-	1	4	1	9	-	-	-	-	-	-
	-	-	-	-	1	7	-	-	-	-	-	-
Total	0	0	1	4	2	16	3	1	1	1	3	23
Rasuwa	1	7	1	7	1	7	-	-	-	-	-	-
Total	1	7	1	7	1	7	3	0	1	0	1	22
Palpa	1	8	1	8	1	8	-	-	-	-	-	-
	1	-	1	7	1	9	-	-	-	-	-	-
	-	-	-	-	1	9	-	-	-	-	-	-
Total	2	8	2	15	3	26	7	1	1	0	2	51
Manang	-	-	1	7	1	10	-	-	-	-	-	-
Total	0	0	1	7	1	10	2	1	-	-	1	18
Kapilvastu	1	8	1	7	1	7	-	-	-	-	-	-
	1	6	-	-	1	6	-	-	-	-	-	-
Total	2	14	1	7	2	13	5	0	1	0	1	35
Mugu	1	14	-	-	1	8	-	-	-	-	-	-
Total	1	14	0	0	1	8	2	0	0	0	0	22
Pyuthan	1	6	1	7	1	9	-	-	-	-	-	-
	1	7	-	-	1	11	-	-	-	-	-	-
	-	-	-	-	1	9	-	-	-	-	-	-
Total	2	13	1	7	3	29	6	0	3	0	3	52
Bardiya	1	6	1	8	1	8	-	-	-	-	-	-
	-	-	1	8	1	9	-	-	-	-	-	-
	-	-	1	7	-	-	-	-	-	-	-	-
Total	1	6	3	23	2	17	6	1	2	1	4	50
Doti	1	8	1	9	1	11	-	-	-	-	-	-
	1	8	1	6	1	8	-	-	-	-	-	-
Total	2	16	2	15	2	19	6	0	1	1	2	52
Darchula	1	16	1	7	1	17	-	-	-	-	-	-
	1	8	-	-	1	15	-	-	-	-	-	-
Total	2	24	1	7	2	32	5	0	4	0	4	67
Kailali	1	9	1	6	1	6	-	-	-	-	-	-
	1	6	1	6	1	6	-	-	-	-	-	-
	-	-	-	-	1	9	-	-	-	-	-	-
	-	-	-	-	1	9	-	-	-	-	-	-
	-	-	-	-	1	12	-	-	-	-	-	-
Total	2	15	2	12	5	42	9	0	1	1	2	71
Grand Total	20	158	22	169	32	289	74	6	19	4	29	645

Appendix 5: Salary Scales of Government Health Workers Effective from 2068/04/01 (15th June 2011)

S.N.	Position	Beginning Salary	No. of Grades	Rate of Grade	Total Grade	Total	The special provision for the employees recruited before 2057/04/01 and getting technical salary scale		
							No. of Grades	Addition on beginning salary	Final Salary
1	Asst. 1st	10,000	20	80	1,600	11,600	2	160	11,760
2	Asst. 2nd	10,610	15	90	1,350	11,960	2	180	12,140
3	Asst. 3rd	11,290	15	100	1,500	12,790	2	200	12,990
4	Asst. 4th	13,650	15	110	1,650	15,300	2	220	15,520
5	Asst. 5th	14,480	17	120	2,040	16,520	2	240	16,760
6	Senior 5th	15,820	10	130	1,300	17,120	2	260	17,380
7	Officer 6th	18,790	8	160	1,280	20,070	2	320	20,390
8	Officer 7th	19,770	7	180	1,260	21,030	2	360	21,390
9	Officer 8th	21,080	7	190	1,330	22,410	2	380	22,790
10	Officer 9th	22,750	5	200	1,000	23,750	2	400	24,150
11	Officer 10th	24,740	5	230	1,150	25,890	2	460	26,350
12	Officer 11th	26,420	6	230	1,380	27,800	2	460	28,260
13	Officer 12th	31,680	0	0	0	31,680	0	0	31,680

Note: Except the technical employees recruited before 2057/04/01 and working in the same post, any employee promoted by any processes (level increment and star bridhi), the employees who are recruited after that period won't get any special provision mentioned above.

Appendix 6: The remote location allowance scale of GoN for health workers working in various remote districts

Designation	Category a		Category b		Category c		Category d		Category e	
	HQ and within 6 miles of HQ	6 miles and more than 6 miles from the HQ	HQ and within 6 miles of HQ	6 miles and more than 6 miles from the HQ	HQ and within 6 miles of HQ	6 miles and more than 6 miles from the HQ	HQ and within 6 miles of HQ	6 miles and more than 6 miles from the HQ	HQ and within 6 miles of HQ	6 miles and more than 6 miles from the HQ
Support staff	4,500	4,730	3,600	3,780	2,700	2,840	1,400	1,790	460	490
NG 4th	4,950	5,200	3,960	4,160	2,970	3,120	1,600	1,680	510	540
NG 3rd	5,400	5,670	4,320	4,540	3,240	3,400	1,820	2,000	560	590
NG 2nd	6,150	6,460	4,920	5,170	3,500	3,680	2,050	2,210	630	660
NG 1st	7,350	7,720	5,880	6,170	4,200	4,410	2,450	2,570	740	680
Gazetted 3rd	11,250	11,810	9,000	9,450	6,700	7,040	3,000	3,150	1,030	1,080
Gazetted 2nd	12,980	13,630	10,380	10,900	7,500	7,880	4,000	4,200	1,320	1,380
Gazetted 1st	15,750	16,540	12,600	13,230	8,600	9,030	5,000	5,360	1,680	1,770
Special class	19,400	20,370	14,400	15,120	10,400	10,920	8,400	8,820	1,820	1,920

Category Districts

A(KA) Manang, Dolpa, Mugu, Humla

B(KHA) Mustang, Bajhang, Bajura, Jumla, Kalikot, Darchula

C(GA) Rukum, Jajarkot, Dailekh, Achham

D(GHA) Taplegunj, Sankhuwasabha, Bhojpur, Terathum, Khotang, Okhalduguna, Solukhumbu, Myagdi, Rolpa, Salyan, Pyuthan, Dadeldhura, Doti, Baitadi

E(NGA) Panchar, Dhankuta, Ramechhap, Dolakha, Sindhupalchok, Rasuwa, Dhading (HQ), Gorkha, Lamjung, Baglung, Parvat, Gulmi, Arghakhachi

Source: Government of Nepal. Financial Procedures Rules, 2064 (2007)

Appendix 7: Involvement of Health Workers in Private Clinic and Pharmacy

Characteristics	Private practice Yes (%) N= 137	Pharmacy (%) N=133
Ecological Regions		
Mountain	17	19
Hill	27	27
Tarai	56	54
Development region		
Eastern	34	24
Central	16	11
Western	11	14
Mid-Western	16	19
Far-Western	23	32
Designation wise		
Doctors	13	10.5
HA/CMA Paramedics	49	52
Technicians	13	14
Nurses/ANM	25	23.5
Sex		
Female	35	34.5
Male	65	65.5

Source: HRH Field Survey 2011

Appendix 8: Opportunity for Career Development from Current Profession

Characteristics	Satisfied %			Not satisfied %	Not stated%	Total
	Excellent	Good	Fair			
Ecological Regions						
Mountain	1.3	4.0	7.4	3.0	0.2	120
Hill	2.8	10.6	13.3	8.9	1.0	273
Tarai	4.8	12.7	15.9	12.6	1.3	354
Development region						
Eastern	2.3	8.2	9.6	5.4	1.0	197
Central	2.3	7.5	9.1	6.3	0.6	192
Western	0.9	3.1	5.6	5.5	0.4	116
Mid-Western	0.8	3.3	5.0	4.0	0.1	101
Far-Western	2.7	5.2	7.2	3.6	0.1	141
Urban/rural						
VDC	8.4	24.7	36.9	27.6	2.4	534
Municipality	10.3	33.8	35.7	17.4	2.8	213
Type of health facility						
Hospital	10.4	25.5	36.8	22.6	4.7	106
PHC	9.6	25.0	50.0	13.5	1.9	52
Health post	10.7	24.0	35.5	29.7	0.0	121
Sub-Health post	6.2	24.3	35.9	30.4	3.2	276
Ayurvedic Centers	8.6	11.4	40.0	40.0	0.0	35
Private Clinic/Hospital	14.5	36.4	34.5	11.0	3.6	55
I/NGO Clinic/Hospital	9.8	43.1	32.4	12.8	2.0	102
Types of service provider						
Doctors	13.8	30.0	31.3	21.3	3.8	80
HA/AHW	7.2	22.6	35.4	32.8	2.1	376
Technicians	19.6	26.8	33.9	16.1	3.6	56
Nurses/ANMs	7.7	34.0	40.9	14.9	2.6	235
Total	67	204	273	184	19	

Source: HRH Field Survey 2011

Appendix 9: Index of Observed Physical Infrastructure of Health Facilities

Characteristics		Mean score of Infrastructure	Total N=256
Ecological Belt	Mountain	0.35	62
	Hill	0.41	91
	Tarai	0.35	103
Development Regions	EDR	0.40	45
	CDR	0.34	85
	WDR	0.39	43
	MWDR	0.34	34
	FWDR	0.41	49
Urban/Rural	Urban	0.69	32
	Rural	0.39	224

Source: HRH Field Survey 2011

Note: Likert's rating scale zero to one: where zero denotes the poorest condition and one denotes excellent condition.

Appendix 10: Index of Condition of Available Equipment at the Time of Survey

Characteristics		Mean score of Status of Equipment	Total N
Ecological Belt	Mountain	0.34	62
	Hill	0.40	91
	Tarai	0.36	103
Development Regions	CDR	0.32	85
	WDR	0.40	43
	MWDR	0.32	34
	FWDR	0.43	49
	EDR	0.38	45
Rural/Urban	Urban	0.80	32
	Rural	0.37	224

Source: HRH Field Survey 2011

Note: Likert's rating scale zero to one: where zero denotes the poorest condition and one denotes excellent condition.

Appendix 11: Index of External Facilities Available at the Working Place

Characteristics		Mean score of community facilities	Total
Ecological Belt	Mountain	0.30	62
	Hill	0.46	91
	Tarai	0.41	103
Rural/Urban setting	Rural	0.37	224
	Urban	0.75	32
Development Region	EDR	0.34	45
	CDR	0.45	85
	WDR	0.40	43
	MWDR	0.34	34
	FWDR	0.40	49
Types of Institution	Hospital	0.67	14
	PHC	0.47	17
	Health Post	0.35	42
	Sub-Health Post	0.32	144
	Ayurved Centers	0.52	13
	Private clinic/Hospital	0.75	09
	I/NGO Clinic/Hospital	0.68	17

Source: HRH Field Survey 2011

Note: Likert's rating scale zero to one: where zero denotes the poorest condition and one denotes excellent condition.

Appendix 12: Authority to Help Resolve Dispute

Characteristics	Self settlement (%)	Administration and police solve (%)	Higher Authority (%)	Working Organization (%)	Local people (%)	Nobody solve (%)	Total (N)
Ecological Regions							
Mountain	80.0	55.0	15.0	50.0	20.0	30.0	20
Hill	81.1	59.5	21.6	51.4	24.3	21.6	37
Tarai	82.3	56.5	29.0	64.5	22.6	11.3	62
Development region							
Eastern	85.4	48.8	17.1	48.8	17.1	17.1	41
Central	80.6	51.6	16.1	64.5	22.6	19.4	31
Western	64.3	92.9	78.6	78.6	50.0	.0	14
Mid-Western	94.4	44.4	11.1	55.6	11.1	27.8	18
Far-Western	73.3	73.3	26.7	53.3	26.7	20.0	15
Locality							
Rural	86.9	36.1	13.1	50.8	21.3	18.0	61
Urban	75.9	79.3	36.2	65.5	24.1	17.2	58
Designation wise							
Doctors	92.3	65.4	19.2	69.2	3.8	19.2	26
HA/AHW	86.0	37.2	16.3	51.2	27.9	25.6	43
Technicians	78.6	78.6	42.9	71.4	28.6	7.1	14
Nurses/ANM	69.4	66.7	30.6	52.8	27.8	11.1	36

Source: HRH Field Survey 2011

Appendix 13: Percentage Distribution of Harassment in the Workplace

Characteristics	Sexual harassment/Yes (N=23)	Gender based harassment/yes (N=32)	Caste/ethnic harassment (N=43)
Ecological Region			
Mountain	13	3	36.4
Hill	52	62.5	38.0
Tarai	35	34.5	46.5
Development region			
Eastern	22	19	34.6
Central	22	31	40.0
Western	4	3	25.0
Mid-Western	22	19	30.0
Far-Western	30	28	64.0
Designation wise			
Doctors	13	9	21.4
HA/CMA Paramedics	30	35	14.0
Technicians	9	6	40
Nurses/ANM	48	50	31.4
Locality			
Rural	65	69	41.9
Urban	35	31	40.0
Sex			
Female	56.5	62.5	-
Male	43.5	37.5	-

Source: HRH Field Survey 2011

Appendix 14: Types of Harassers

	People from the community (%)	High level staffs of this institution (%)	Politician and Administrator (%)	Police and Army& Armed force (%)	Total (N)
Ecological Regions					
Mountain	37.5	50.0	25.0	0.0	8
Hill	57.1	57.1	22.9	8.6	35
Tarai	72.2	38.9	16.7	5.6	36
Development region					
Eastern	45.0	60.0	40.0	5.0	20
Central	60.0	50.0	5.0	0.0	20
Western	50.0	66.7	16.7	16.7	6
Mid-Western	81.3	25.0	12.5	6.3	16
Far-Western	70.6	47.1	23.5	11.8	17
Designation wise					
Doctors	37.5	87.5	25.0	0.0	8
HA/AHW	74.4	28.2	28.2	2.6	39
Technicians	40.0	60.0	0.0	0.0	5
Nurses/ANM	55.6	63.0	11.1	14.8	27
Locality					
Rural	68.4	43.9	24.6	8.8	57
Urban	45.5	59.1	9.1	0.0	22
Sex					
Female	54.1	62.2	10.8	10.8	37
Male	69.0	35.7	28.6	2.4	42

Source: HRH Field Survey 2011

Field Research Team

Research Management Team

SOLID Nepal

Dr. Khem B. Karki
Bhuwan Baral
Manju Neupane
Raju Prajapati
Binod Kumar Maharjan
Sarita Chhetri
Marichman Shrestha
Tika Adhikari
Jun Bahadur Tamang

Merlin Nepal

Catherine Whybrow
Anant Nepal
Dr. Khakindra Bhandari
Chandika Shrestha
Sajana Amatya
Daman Baij

Quantitative Data Entry/ Qualitative Data Transcription

Barsha Rijal
Chandra Laxmi Bhasima
Dip Prasad Khatiwada
Kirti Sagar Baral
Latshering Glan Tamang
Mona Giri
Mingma Glan Tamang
Pasang Devi Tamang
Pratikshya Khadka
Radha Devi Gurung
Roshni Poudel
Sarita Chhhetri

Research Enumerators/ Interviewers

Research Assistants

Dr Achyut Raj Karki
Ajit Acharya
Anita Bajgain
Anup Adhikari
Chandani Rana

Research Supervisors

Badri Prasad Mainali
Barsha Rijal
Chandra Laxmi Bhasima
Dinesh Bhandari
Kabita Adhikairi
Kalpana Rimal
Mona Giri
Pasang Devi Tamang
Pratiksha Khadka
Ranjila Joshi
Ranju Bhandari
Roshani Poudel
Sandeep Silwal
Sangita Bajgain
Sarita Adhikari
Shekhar Adhikari
Yubaraj Budhathoki

Anil Kumar Jha	Mahabir Yadav
Anita Tako	Mahesh Prasad Shah
Archana Shrestha	Manu Dulal
Bala Ram Aawasthi	Parmeshwori Shah
Basanta Katwal	Puspa Pandey
Basanti Thapa	Ram Dhulari Rana
Bhanu Neupane	Ram Nath Shah
Bharat Bhandari	Randip Kumar Kunwar
Chhaya Kumari Shrestha	Renu Gupta
Dhankala Kunwar	Roshan Neupane
Dilip Khanal	Sabita Acharya
Dipak Tamang	Sandesh Bahadur Sunar
Durga Rokaya	Sarita KC
Ganesh Prasad Shrestha	Shankar Bhattarai
Govinda Sharma Neupane	Shreejana Chaudhary
Gyanu Ojha	Sita Neupane
Hemlal Kunwar	Suman Shrestha
Jit Bahadur Shrestha	Suman Tamang
Keshav Ojha	Sundar Singh Bohora
Khem Raj Baniya	Sunil Adhikari
Kishor Shrestha	Sunita Kandel
Laxmi Rawal	Tara Nath Fulara
Laxmi Shah	Yeshu Bai Rai



Society for Local Integrated Development Nepal (SOLID NEPAL)
Satdobato, Lalitpur

GPO Box No : 9565, Kathmandu, Nepal

Phone : 977-1-5548455, Fax : 977-1-15553770

Email : solidnepal@wlink.com.np

Web : www.solidnepal.org.np