

**Progress Report on  
Major Health Related Research and Studies in  
2012/13**

**Report Prepared for Joint Annual Review (JAR)**

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## ACRONYMS AND ABBREVIATIONS

24/7	24 hours, seven days a week
AA	anaesthesia assistant
ANC	antenatal care
ANM	auxiliary nurse midwife
APEC	Alternative Energy Promotion Centre
ASBA	advanced skilled birth assistant
AWPB	annual work plan and budget
BCC	behaviour change communication
BC	birthing centre
BEOC	basic emergency obstetric care
BIA	benefit-incidence analysis
BPP	Birth Preparedness Package
CAPP	consolidated annual procurement plan
CS	caesarean section
CBNCP	Community Based Neonatal Care Programme
CDMA	code division multiple access
CEOC	comprehensive emergency obstetric care
CPR	contraceptive prevalence rate
DBP	diastolic blood pressure
DDA	Department of Drug Administration
DDC	district development committee
DFID	Department for International Development
DHO	district health office
DoHS	Department of Health Services
DPHO	District Public Health Office
DTO	district treasury office
DTT	district technical team
DUDBC	Department of Urban Development and Building Construction
EOC	emergency obstetric care
FCGO	Financial Controller General's Office
FCHV	female community health volunteer
FHD	Family Health Division
FP	family planning
GAAP	Governance and Accountability Action Plan
GESI	gender, equality and social inclusion
HFOMC	health facility operation and management committee
HHS	Household Survey
HIS	Health Information System
HIIS	Health Infrastructure Information System
HMIS	Health Management Information System
HP	health post
HR	Human Resources

HRH	Human Resources for Health
HTSP	healthy timing and spacing of pregnancy
INGO	International Non-Governmental Organisation
IEC	information education and communication
IPC	interpersonal communication
IUCD	intrauterine contraceptive device
IUD	intrauterine device
JAR	Joint Annual Review
JCM	Joint Consultative Meeting
JE	Japanese encephalitis
JFA	Joint Financing Arrangement
JTAA	Joint Technical Assistance Agreement
LF	Logical Framework
LGCDP	Local Governance and Community Development Programme
LHGSP	Local Health Governance Strengthening Programme
LMD	Logistics Management Division
LMIS	Logistics Management Information System
LSGA	Local Self-Governance Act
M&E	monitoring and evaluation
MCHW	maternal and child health worker
MD	Management Division
MIS	management information systems
MoF	Ministry of Finance
MoHP	Ministry of Health and Population
MTR	Mid-term Review
NDHS	Nepal Demographic and Health Survey
NHEICC	National Health Education and Communication Centre
NHIC	National Health Information Centre
NHRC	National Health Research Council
NHSP	Nepal Health Sector Programme
NHSSP	Nepal Health Sector Support Programme
NLSS	Nepal Living Standards Survey
NNM	neo natal mortality
OC	outcome
OCMC	One-stop crisis management centre
OP	output
OPD	outpatient department
PHCC	primary health care centre
PFM	public financial management
PNC	post natal care
PPICD	Planning, Policy and International Cooperation Division
RA	rapid assessment
RHD	regional health directorate
SBA	skilled birth attendant

SBP	systolic blood pressure
SHP	sub-health post
SSU	social service unit
STS	Service Tracking Survey
SWAp	sector wide approach
UNICEF	United Nations Children Fund
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VDC	village development committee
VHW	village health worker
WHO	World Health Organisation

# 1 INTRODUCTION

## 1.1 Background

The health system in Nepal has changed dramatically in the last few decades. Changes in the political system, technological improvements, enhanced access to information and services, increased urbanisation and connectivity, changes in the development process, the promotion of equity and social inclusion, and many other changes have shaped a new reality. These and other factors have had a profound impact on the epidemiological and health seeking behaviour patterns of the population. As a result, new and unique opportunities and new challenges are arising.

Facing this new reality calls for rethinking the concept of the government's role and public policy. It is time for innovation, for building new decision making capabilities, and for consolidating and ensuring stability and the effective operation of the government's health policy. With rising expectations and demand for health services, the government's responsibility to provide an efficient and purposeful health system has increased considerably. This includes protecting economically and socially vulnerable groups, combating poverty, ensuring universal coverage and social health protection, promoting equity, mobilising financial and human resources, protecting against catastrophic payments for treatment and so on. We should not underestimate the significance of the challenges, which place a premium on enhancing the efficiency and productivity of the country.

## 1.2 Objectives and Methods

The objective of this report is to assemble the findings from the main health research reports, published articles and studies conducted in 2011 to 2013 to enable policy makers to use this evidence for policy purposes.

This is not a systematic review, and does not validate or ensure the relevance of the research designs, or advocate the health policies presented. It simply collects and highlights evidence from various sources available to the author in the allotted time. The research reports were collected through email communications, visits to the research institutions and organisations, collection from the library of Nepal Health Research Council, and web searching of the research institutions in December 2013.

All research reports, published articles and studies carried out during 2011-2013 that were available to the author within the given time are included in this study. The main findings of the reports and articles that are relevant to existing major health policies for Nepal are summarised in this report.

## 2 RECENT MAJOR HEALTH-RELATED STUDIES

The following matrix shows major health related studies published in Nepal in the 2011–January 2014 period. As well as the 2013 and 2014 studies, studies from 2011 and 2012 are included as they are needed for tracking trends. This report also cites information from internal MoHP and DoHS management information systems including the Health Management Information System (HMIS) and HIIS.

This report refers to 28 studies including the most important health-related studies from 2013 and major ones from 2012 and 2011.

Note that this chapter also serves as the list of references that are cited in this report.

	Reference	Citation in text
<b>2014 published studies</b>		
1	Chakraborty, N.M.; Murphy, C; Paudel, M; and Sharma, S (2014). Knowledge and Perceptions of Intrauterine Devices Among Family Planning Providers in Nepal: a Cross-Sectional Analysis by Cadre and Sector (unpublished report).	Chakraborty et. al. 2014
2	Mehata S, Paudel YR, Dariang M and Barnett S. (2014). Correlates and Family Planning Needs during the First Two Years Postpartum in Nepal: An analysis of Nepal Demographic Health Survey 2011 (Unpublished).	Mehata et al. 2014
3	MoHP (2014). Service Tracking Survey 2013. Kathmandu: Ministry of Health and Population, Government of Nepal.	STS 2013
<b>2013 published studies</b>		
4	FCGO (2013) Financial Management Information System (FMIS). Kathmandu; Financial Comptroller General Office, Ministry of Health and Population.	FCGO, FMIS, 2013
5	FHD and NHSSP (2013) Responding to Increased Demand for Institutional Childbirths at Referral Hospitals in Nepal: Situational Analysis and Emerging Options. Kathmandu: Ministry of Health and Population.	Responding to increased demand 2012
6	HERT (2013). Nepal Health Sector Programme II (NHSP II). Mid-Term Review. Kathmandu: Health and Education Advice and Research Team and Ministry of Health and Population.	NHSP-2 mid-term (MTR) review, 2013
7	HMIS (2013). HMIS Bulletin: 6 years trend (FY 2007/8 – 2012/13). Kathmandu: Health Management Information System, Ministry of Health and Population.	HMIS Bulletin, 2013
8	Mehata, S., Baral, S.C., Chand, P.B., Singh, D.R., Poudel, P., Barnett S. (2013). Nepal Household Survey 2012. Kathmandu: Ministry of Health and Population.	STS 2012

	Reference	Citation in text
9	Mehata, S., Lekhak, S.C., Chand, P.B., Singh, D.R., Poudel, P., Barnett S. (2013). Service Tracking Survey 2012. Kathmandu: Ministry of Health and Population.	HHS 2012
10	MoHP (2013a). Budget Analysis. Ministry of Health and Population. Kathmandu: Ministry of Health and Population. Available at: <a href="http://www.moHP.gov.np/english/budget/Budget%20Analysis%202070-71.pdf">http://www.moHP.gov.np/english/budget/Budget%20Analysis%202070-71.pdf</a>	Budget analysis 2013
11	MoHP (2013b). Assessing Biomedical Waste Management Practices among Health Care Institutions of Nepal. Kathmandu: Nepal Health Research Council, Ministry of Health and Population.	MoHP 2013b
12	MoHP (2013c). Non-communicable Disease Risk Factors Prevalence Survey. Kathmandu: Nepal Health Research Council, Ministry of Health and Population.	NCDs risk factors prevalence survey 2013
13	MoHP (2013d). Human Resources for Health Nepal Country Profile. Kathmandu: Nepal Health Research Council, Ministry of Health and Population.	HRH Nepal country profile 2013
14	MoHP (2013e). Mapping the Human Resource Functions across the Ministry of Health and Population and Selected External Government Ministries, Departments and Agencies. Kathmandu: Nepal Health Research Council, Ministry of Health and Population.	HR Mapping 2013
15	RTI (2013). Rapid Assessment of Local Health Governance Strengthening Programme. Kathmandu: Research Triangle Institute (Unpublished report)	RA of LHGSP, 2013
16	Tuladhar S., Khanal K.R., K.C. Lila, Ghimire P.K., Onta K. (2013). Women's Empowerment and Spousal Violence in Relation to Health Outcomes in Nepal: Further Analysis of the 2011 Nepal Demographic and Health Survey. Calverton, Maryland, USA: Nepal Ministry of Health and Population, New ERA, and ICF International.	Tuladhar et al. 2013
17	Upreti SR, Baral S, Lamichhane P, Khanal MN, Tiwari S, Tandan M, Elsey H and Lievens T (2013). Rapid Assessment of the Demand Side Financing Schemes: Aama and 4ANC Programmes (The Seventh Rapid Assessment). Kathmandu: Ministry of Health and Population; Nepal Health Sector Support Programme and Health Research and Social Development Forum.	Rapid Assessment, round 6
<b>2012 published studies</b>		
18	Bell, S. K. Dahal, D. Thomas, C. Jha, H.N. Suvedi, and S. Prasai (2012). Voices from the Community: Access to Health Services, A Rapid Participatory Ethnographic Evaluation and Research (Rapid PEER) Study, Nepal. Kathmandu: Nepal Health Sector Support Programme.	PEER Study 2012

	Reference	Citation in text
19	Leander SS (2012). Benefit Incidence Analysis in Health. Kathmandu: Nepal Health Sector Support Programme.	BIA 2012
20	NFHP (2012). Evaluation of Health Facility Management Strengthening Programme, Kathmandu: MoHP: Nepal Family Health Programme.	HFMSp 2012
21	MoHP (2012). Budget Analysis. Ministry of Health and Population. Kathmandu: Ministry of Health and Population. Available at: <a href="http://www.moHP.gov.np/english/budget/MoHP%20Budget-Prog%202068-69.pdf">http://www.moHP.gov.np/english/budget/MoHP%20Budget-Prog%202068-69.pdf</a>	Budget analysis 2012
2	MoHP (2012). Monitoring and Evaluation Framework: Nepal Health Sector Programme (NHSP-2). Kathmandu: Ministry of Health and Population.	NHSP-2 Logframe monitoring review, 2012
23	Shrestha A, Khatiwada, R. Shrestha RL, Sharma D, Subedi HN, Ghimire S, Thomas D. (2012). Strategic Review of Equity and Access Programme, 2012. Kathmandu: Ministry of Health and Population, Government of Nepal.	Strategic Review of EAP 2012
24	Suvedi, B.K., Chand, P.B., Marasini, B.R., Tiwari, S., Poudel, P., Mehata, S., Pradhan, A., Acharya, L.B., Lievens, T., Hepworth, S., Barnett, S. (2012). Service Tracking Survey 2011. Kathmandu: Ministry of Health and Population.	STS 2011
25	Upreti SR, Baral SC, Tiwari S, Elsey H, Aryal S; Tandan M; Aryal Y; Lamichhane P; Lievens T (2012) Rapid Assessment of the Demand Side Financing Schemes: Aama Programme and 4ANC, 2012. Kathmandu: Ministry of Health and Population; Nepal Health Sector Support Programme and HERD.	Rapid Assessment, round 7
26	MoHP, New ERA, and ICF Inc. (2012). Nepal Demographic and Health Survey 2011. Kathmandu, Nepal: Ministry of Health and Population, New ERA, and ICF International, Calverton, Maryland.	NDHS 2011
<b>2011 published studies</b>		
27	Devkota, M., G. Shakya, N. Pratap K.C., M. Dariang, M. T. Upadhyay, S. Karn, L. Hulton, M. Koblinsky (2011) Readiness of Comprehensive Obstetric and Neonatal Emergency Care in Nepal, December 2011. Kathmandu: National Health Sector Support Programme and Ministry of Health and Population.	CEONC readiness study
28	Wang W, MacDonald VM, Paudel M, and Banke KK (2011). National scale-up of zinc promotion in Nepal: Results from a post-project population-based survey. Journal of Health, Population and Nutrition 29: 207-217.	Wang 2011

### 3 REPRODUCTIVE HEALTH

Chapter 3 to 11 present theme-wise key findings and recommendations of study reports and articles that are relevant to inform existing major health policies for Nepal. Information from the studies is presented theme-wise by identified issues, desired outcomes and recommended actions to provide easy access to theme-wise information.

#### 3.1 Family Planning

Identified issues	Desired outcomes	Recommended actions
<p><b>Low contraceptive prevalence rate (CPR) (43%) for modern methods</b> (NDHS 2011; HHS 2012) <b>and significant differences in CPR between population subgroups:</b></p> <ul style="list-style-type: none"> <li>Caste/ethnicity: Lowest CPR found amongst Muslims (HHS 2012 = 10%; NDHS 2011 = 23%). Use is highest among the Newar community (HHS 2012 = 58%; NDHS 2011 = 55%).</li> <li>Ecological zone: Contraceptive use lowest in hill districts (40%) and highest in mountain districts (47%) (HHS 2012)</li> </ul>	<p>LF Purpose 7: contraceptive prevalence rate: <b>2013 target =52%</b> <b>2015 target = 67%</b></p>	<ul style="list-style-type: none"> <li>Expand number of IUCD/implant training sites and strengthen training</li> <li>Provide on-site coaching of SBAs on IUCD/implants skills, especially at mobile camps.</li> <li>Providers need further support to manage side effects, and recognize women in times of high unmet need, such as post-partum or post-abortion women, as suitable candidates for IUDs.</li> <li>Intensify post-partum FP services through joint extended programme of immunization/FP services, and scale-up this approach following institutional deliveries.</li> <li>Include PNC checklist and post-partum FP (focusing on health timing and spacing of pregnancy [HTSP]) in SBA training programme.</li> <li>Develop HTSP audio-visual training for trainers and clients (women).</li> <li>Improve counselling skills of health providers to motivate couples and on post-FP acceptance advice.</li> <li>Develop mobilization strategies for informing men about FP and reproductive health issues, using male mobilisers, through partnerships with NGOs.</li> </ul>
<p><b>Many women (27%) have an unmet need for family planning</b> (NDHS 2011)</p>	<p>LF OC2.3: % unmet need for family planning: <b>2013 target = 20%</b> <b>2015 target = 18%</b></p>	
<p><b>Family planning needs for first two years postpartum</b> (Mehata et al. 2014):</p> <ul style="list-style-type: none"> <li>Women desiring another pregnancy within 24 months = 4%</li> <li>Women experiencing a subsequent pregnancy in less than 24 months (against WHO recommendation) = 50%</li> <li>Unmet need for family planning varied highly across age groups: highest among 0-5 months (85%), lowest among 12-24 months (56%) in postpartum women.</li> <li>The unmet need for pregnancy limiting was highest among first 24 months postpartum and was associated with ecological zone. The highest unmet need for limiting was noted in mountains and hills in comparison to Terai. However, spacing needs were highest in Terai compared to mountain and hills.</li> </ul>		
<p><b>Knowledge on IUCD among providers in Nepal:</b></p> <ul style="list-style-type: none"> <li>Over 50% of providers were able to name the four side effects most frequently associated with IUDs; however, one-third of providers found at least one of these side effects unacceptable. (Chakraborty et al. 2014)</li> </ul>		
<p><b>Limited availability of FP advice from health professionals:</b></p> <ul style="list-style-type: none"> <li>Most family planning non-users (88%) had not discussed family planning with a health worker (NDHS 2011).</li> </ul>		

Identified issues	Desired outcomes	Recommended actions
<ul style="list-style-type: none"> <li>Lack of same-sex health professionals said to inhibit discussion about, and use of FP; as did lack of skilled health staff capable of delivering FP services (PEER study 2012)</li> </ul>		
<p><b>Cultural barriers and religious preferences limit FP uptake:</b></p> <ul style="list-style-type: none"> <li>A strong son preference stops some people from using FP until at least one has been born. Religious beliefs and concerns about side effects also affect couples' willingness to use FP (PEER Study 2012).</li> </ul>		<ul style="list-style-type: none"> <li>Develop targeted communication based on local contexts to reach women, men, in-laws, and community influencers. May involve interpersonal communication (IPC) in homes, use of satisfied clients, and information sharing via mothers' groups and community events.</li> <li>Strengthen local planning: focus on religious leaders &amp; provision of home based services by FCHVs to Muslim women.</li> </ul>
<p><b>Too few women receive contraceptives after an abortion:</b></p> <ul style="list-style-type: none"> <li>41% of women received contraceptives after safe abortions in 2011 (HMIS).</li> <li>33% of women received contraceptives after an abortion in 2012 (HMIS).</li> <li>30% of women received contraceptives after an abortion in 2013 (HMIS).</li> </ul>	<p>LF OC2.5: % of women receiving contraceptives after safe abortion</p> <p><b>2013 target = 60%</b> <b>2015 target = 60%</b></p>	<ul style="list-style-type: none"> <li>Focus on improving availability of long term methods at health posts.</li> </ul>
<p><b>Very few women (9%) receive family planning information during their postpartum periods (NDHS 2011).</b></p>		<ul style="list-style-type: none"> <li>Include training on PNC checklists and post-partum FP (focusing on HTSP) in SBA training.</li> <li>Deliver PNC messaging to recently delivered women at hospitals using audio-visual technology.</li> <li>Scale-up PNC strengthening at institutional delivery (through roll-out of checklist and job-aids).</li> </ul>
<p><b>Few health posts (HPs) have at least five FP methods:</b></p> <ul style="list-style-type: none"> <li>13% of HPs had at least five FP methods (STS 2011).</li> <li>8% of HPs had at least five FP methods (STS 2012).</li> <li>18% of HPs had at least five FP methods (all STS 2013).</li> </ul>	<p>LF OP4.9: % of HPs with at least 5 family planning methods:</p> <p><b>2013 target = 35%</b> <b>2015 target = 60%</b></p>	<ul style="list-style-type: none"> <li>Expand no. of IUCD/implant training sites and strengthen training for health workers on related services.</li> <li>Provide on-site coaching of SBAs on IUCD/implant skills especially during mobile camps.</li> </ul>

### 3.2 Maternal and Newborn Health

Challenges identified	Desired outcomes	Recommended actions
<b>Basic emergency obstetric and neonatal care (BEONC)</b>		
<p><b>Low met need for emergency obstetric care (EOC):</b></p> <ul style="list-style-type: none"> <li>In 2011, 23% of emergency obstetric need was met (HMIS).</li> <li>In 2012, 16% of emergency obstetric need was met (HMIS).</li> </ul> <p>In 2013, 23% of emergency obstetric need was met (HMIS).</p>	<p>LF OC1.5: Met need for EOC (%):</p> <p><b>2013 target =43%</b></p> <p><b>2015 target =49%</b></p>	<ul style="list-style-type: none"> <li>Focus on improving monitoring of EOC service provision recording by strengthening HMIS (= underway).</li> </ul>
<p><b>Few primary health care centres (PHCCs) able to provide all BEONC signal functions 24/7:</b></p> <ul style="list-style-type: none"> <li>In 2011, 21% of PHCCs were able to provide all BEONC signal functions 24/7 (STS 2011).</li> <li>In 2012, 39% of PHCCs were able to provide all BEONC signal functions 24/7 (STS 2012).</li> <li>In 2013, 23% of PHCCs were able to provide all BEONC signal functions 24/7 (STS 2013).</li> </ul> <p>No. of PHCCs without BEONC in 2013 = 113 and without birthing centre (BC)/BEONC = 27 (FHD internal records)</p>	<p>LF OP 4.6: % of PHCCs providing all BEONC signal functions</p> <p><b>2013 target = 50%</b></p> <p><b>2015 target = 70%</b></p>	<ul style="list-style-type: none"> <li>Use regional health reviews to focus on PHCC without BCs/BEONC, BEONC, BEONC signal functions: <ul style="list-style-type: none"> <li>Assure trained SBA and equipment available in PHCCs to provide BEONC services.</li> <li>Trial system of rotating SBAs at birthing centres to work in hospital for a few weeks in order to gain skills in performing assisted delivery and removal of retained products.</li> </ul> </li> <li>Establish system for mentoring from hospital for SBAs working at PHCCs and lower level, for skill enhancement.</li> </ul>
<p><b>Of the seven BEONC signal functions, the weakest areas of provision are:</b></p> <ul style="list-style-type: none"> <li><b>Assisted deliveries:</b> 39% of PHCCs able to provide assisted delivery in 2011; 52% of PHCCs able to provide assisted delivery in 2012; 77% of PHCCs able to provide assisted delivery in 2013</li> <li><b>Remove retained products:</b> 50% of facilities able to remove retained products in 2011; 61% of facilities able to remove retained products in 2012. 68% of facilities able to remove retained products in 2013. (STS 2011, 2012 and 2013)</li> </ul>		
<p><b>PHCCs in Terai are not providing BEONC service due to community pressure to staff to guarantee outcome of delivery.</b> (Responding to increased demand 2012).</p>		<ul style="list-style-type: none"> <li>Consider revising model of BEONC service provision in Terai and mountain/hill districts to improve availability for remote communities.</li> </ul>
<p><b>Referral systems are not functioning effectively:</b></p> <ul style="list-style-type: none"> <li>The mean time taken for patients to travel between facilities was five hours (STS 2011).</li> <li>There is a 98% self-referral rate to hospitals and minimal secondary referral from birthing centres (BCs) to hospitals. (Responding to increased demand study 2012)</li> </ul>	<p>All facilities have effective referral system which is accessible to patients in need of higher level care</p>	<ul style="list-style-type: none"> <li>Draft national referral guidelines (underway with support of UNICEF).</li> <li>Disseminate and provide orientations on referral guidelines in districts to ANMs/staff nurses.</li> <li>Make transport between health facilities free. Policy approval needed for this.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<b>Comprehensive emergency obstetric care (CEONC) availability</b>		
<p><b>Access to CEONC care is improving:</b></p> <ul style="list-style-type: none"> <li>In 2011, 39% of districts had at least 1 public CEONC facility providing all CEONC signal functions 24/7 (STS, 2011), compared to 62% in 2012 (STS, 2012); and 76% in 2013 (FHD record).</li> </ul> <p><b>But blockages to CEONC functionality remain:</b></p> <ul style="list-style-type: none"> <li>Lack of understanding of CEONC fund management by hospital management committees.</li> <li>Discontinuity of services due to staffing gaps as a result of delays in receiving budgets.</li> <li>Lack of equipment and poor maintenance of equipment.</li> <li>Insufficient sanctioned posts and lack of staff available to fill posts (see HR section of report).</li> <li>Poor compliance of private sector with ToRs and performance monitoring.</li> <li>Issues in local management of CEONC.</li> <li>Lack of operating theatre registers and poor recording.</li> <li>Lack of blood supplies.</li> </ul> <p>(CEONC readiness study)</p>	<p>LF OP4.5: of districts have at least one public facility providing all CEONC signal functions</p> <p><b>2013 target = 68%</b> <b>2015 target = 76%</b></p>	<ul style="list-style-type: none"> <li>Continue to provide CEONC fund to overcome blockages to CEONC availability at district hospitals (short term recruitment, purchasing new equipment, maintenance and repair of existing equipment).</li> <li>Develop clear guidelines for hospitals and district public health offices (DPHO) on management of CEONC funds.</li> <li>Introduce multi-year contracting to improve continuity of human resources (HR) and thus service delivery.</li> <li>Increase production of CEONC service providers including advanced skilled birth assistant (ASBA) and Diploma in Gynaecology and Obstetrics, and anaesthesia assistants.</li> <li>Fill new posts created after organisation and management survey at the Ministry of General Administration (MOGA).</li> <li>Continue CEONC workshops and review meetings in selected district hospitals where management is inadequate.</li> <li>Clear guidelines and ToRs to private sector and regular review of performance</li> <li>Strengthen blood transfusion services in CEONC sites</li> </ul>
<p><b>Caesarean section (CS) targets being met nationally, but big differences in % deliveries performed by CS between sub-groups:</b></p> <ul style="list-style-type: none"> <li>Wealth quintile: Highest quintile more likely to deliver by CS than lowest (HHS 2012; NDHS 2011)</li> <li>Caste/ethnic group: Newar most likely to deliver by CS (HHS 2012; NDHS 2011)</li> <li>Residence: Urban women (13%) more than 4 times more likely to deliver by CS than rural women (3%) (HHS 2012).</li> <li>Ecological zone: 5% of women in Terai deliver by CS compared with 0% in mountain zone (HHS 2012).</li> </ul>	<p>LF OC1.6: % of deliveries conducted by CS</p> <p><b>2013 target = 4.3%</b> <b>2015 target = 4.5%</b></p>	<ul style="list-style-type: none"> <li>Expand CEONC services in remote districts.</li> <li>Continue and improve functionality of CEONC referral fund.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<b>Institutional Delivery</b>		
<p><b>Targets for institutional delivery rates being met nationally; but large differences between population sub-groups:</b></p> <ul style="list-style-type: none"> <li>• Caste/ ethnicity: Newars and 'other' ethnic groups most likely to deliver at a facility (HHS, 2012; NDHS, 2011)</li> <li>• Ecological zone: Women in mountains least likely to deliver in facility (HHS, 2012)</li> <li>• Residence: Rural women (34%) less likely to deliver at a facility than urban women (64%) (HHS, 2012)</li> <li>• Wealth quintile: Women from highest quintile significantly more likely to deliver in facility and women from the lowest quintile (HHS, 2012; NDHS, 2011).</li> </ul>	<p>LF OC2.4: % of births take place in a health facility:</p> <p><b>2013 target = 35%</b> <b>2015 target = 40%</b></p>	<ul style="list-style-type: none"> <li>• Increase no. of BCs in appropriate sites near to underserved community. District health teams to identify sites.</li> <li>• Develop innovative approaches to functionalise BCs that are accessible to, and trusted by, poor and excluded communities (e.g. positioning birthing centres to support a cluster of VDC's where there are underserved and high-population areas, and where BCs can also receive support from district and referral hospitals, including for example, rotational staff). This should be based on an understanding of why women are not using maternal health services, or dropping out.</li> <li>• Build BCs in strategic location – using planning at district level to identify appropriate sites.</li> </ul>
<p><b>Persisting belief that facility delivery not necessary/desirable:</b></p> <ul style="list-style-type: none"> <li>• Most commonly given reason for not delivering in a facility is belief that it is not necessary (62%) (NDHS, 2011)</li> <li>• Birth is still widely seen as a natural event which doesn't require medical expertise. Women perceived as weak if they cannot give birth naturally (PEER Study, 2012).</li> </ul>		<ul style="list-style-type: none"> <li>• Develop communication approaches to reach women, men and in-laws to recognise benefits of institutional deliveries, 4ANC visits, PNC and the dangers of home-based delivery (PEER Study, 2012).</li> <li>• Deliver messaging through BPP, Community Based Neonatal Care Programme (CBNCP) and misoprostol programme. Follow up during regional review and FCHV review meetings.</li> </ul>
<p><b>Considerable overcrowding at zonal hospitals is impacting quality of service provision:</b></p> <ul style="list-style-type: none"> <li>• Normal births at zonal hospitals rose 43% 2008-12.</li> <li>• No new zonal hospitals constructed in 15 years.</li> <li>• Bed occupancy rates in some hospitals = &gt;100%.</li> <li>• One hospital (Janakpur ZH) responsible for half of maternal deaths in the study hospitals in last 3 years. (Responding to increased demand, 2012)</li> </ul>	<p>Improve management of overcrowding in stretched facilities.</p> <p>Improved staffing to deal with overcrowding.</p>	<ul style="list-style-type: none"> <li>• Develop plans in affected districts with appropriate solutions (budget needed for support of implementation).</li> <li>• Extend eligibility for CEONC fund for referral hospitals (to fund additional staff).</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<p><b>The under-utilization of birthing centres (BCs):</b></p> <ul style="list-style-type: none"> <li>• Average utilization of BCs is 33%. Utilization of BCs needs to be 50–80% to be cost effective.</li> <li>• Only 12% of all births in selected districts were in BCs in 2011/12.</li> <li>• Very wide range of unit costs (NPR 1,500–18,000) between BCs.</li> </ul> <p>(Responding to increased demand, 2012)</p>	<ul style="list-style-type: none"> <li>• Better utilization of existing BC capacity where feasible.</li> <li>• Cut expenditure on high cost/low utilization BC maternal beds</li> </ul>	<ul style="list-style-type: none"> <li>• Trial rotation of staff between hospitals and BCs in at least three planning districts.</li> <li>• Learn lessons from well performing birth centres to identify strategies to cut costs/ increase utilization</li> </ul>
<p><b>Proportion of deliveries attended by skilled birth attendants (SBA).</b></p> <p>National targets met, but large differences between population subgroups:</p> <ul style="list-style-type: none"> <li>• Residence: More births attended by SBAs in urban areas than in rural areas (73% vs 32% respectively) (NDHS, 2011).</li> <li>• Ecological zone: Births most likely to be attended by SBAs in Terai and least likely to be attended by SBAs in mountain (NDHS, 2011; HHS, 2012).</li> <li>• Caste/ethnicity: Newars had highest SBA attendance rates and Muslims the lowest (HHS, 2012).</li> <li>• Wealth quintile: Women from highest quintile significantly more likely to be attended by a SBA than women from low quintile (HHS, 2012)</li> </ul>	<p>LF P10: 2013 target = % of births conducted by an SBA</p> <p><b>2013 target = 40%</b></p> <p><b>2015 target = 60%</b></p>	<ul style="list-style-type: none"> <li>• Establish BCs in strategic locations near to underserved areas.</li> <li>• Pilot use of community based auxiliary nurse midwives (ANM)/SBAs in underserved hill and mountain areas (as part of remote areas pilot).</li> <li>• Establish blood transfusion services in strategic location in remote areas (in pilot district)</li> <li>• Provide obstetric first aid training in health facilities of all levels in remote areas.</li> </ul>
<b>Antenatal care (ANC)</b>		
<p><b>Limited coverage of ANC and big differences in ANC coverage between population subgroups:</b></p> <ul style="list-style-type: none"> <li>• Around half of women (50% of women in NDHS 2011, and 43% of women from HHS 2012) received at least four ANC check-ups (HHS, 2012; NDHS, 2011)</li> <li>• Caste/ethnicity: Muslims least likely to receive 4ANC visits and Newars most likely (NDHS, 2011; HHS, 2012).</li> <li>• Wealth quintile: Women from highest quintile significantly more likely to receive 4ANC visits and women from the lowest quintile the least likely (HHS, 2012; NDHS, 2011).</li> <li>• Residence: Urban residents (65%) more likely to receive visits than rural residents (41%) (HHS, 2012).</li> </ul>	<p>LF P8: % of pregnant women attending at least four ANC visits:</p> <p><b>2013 target = 65%</b></p> <p><b>2015 target = 80%</b></p>	<ul style="list-style-type: none"> <li>• Develop communication approaches to reach women, men and in-laws to recognise benefits of institutional deliveries, 4ANC visits, PNC and the dangers of home-based delivery. (PEER Study, 2012).</li> <li>• Pilot use of community-based ANM in underserved hill and mountain to improve provision of ANC.</li> <li>• Trial use of antenatal ultrasound in selected remote districts.</li> <li>• Review the HMIS data used to measure ANC coverage. There seems to be a problem with the denominator whereby, previously all women, even second and third visits, were recorded under first visit. This may skew data.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<p><b>Knowledge of at least three pregnancy related danger signs.</b></p> <p>National targets met, but large differences between population sub-groups:</p> <ul style="list-style-type: none"> <li>• Caste / ethnicity: Knowledge of 3+ signs highest among Madhesi women (67%) and least among Janajatis (56%).</li> <li>• Ecological zone: Greatest knowledge among Terai (68%) and worst among Hill residents (54%).</li> <li>• Residence: Knowledge higher among rural residents (62%) than urban residents (54%).</li> </ul> <p>(HHS 2012)</p>	<p>LF OP5.2: % of women of reproductive age (15 – 49) knowing at least three pregnancy related danger signs:</p> <p><b>2013 target = 40%</b> <b>2015 target = 57%</b></p>	<ul style="list-style-type: none"> <li>• Develop targeted campaigns to increase 4 ANC uptake and improve knowledge of danger signs in poor performing districts.</li> </ul>
<b>Post natal care (PNC)</b>		
<p><b>Poor PNC coverage:</b></p> <ul style="list-style-type: none"> <li>• Majority of women (87%) do not have recommended 3 PNC visits as per guidelines (HHS, 2012).</li> </ul>	<p>LF P11: % of women having three post natal check-ups as per the protocol:</p> <p><b>2013 target = 43%</b> <b>2015 target = 50%</b></p>	<ul style="list-style-type: none"> <li>• Develop communication approaches to reach women, men and in-laws to recognise the benefits of institutional deliveries, 4ANC visits, 3PNC as per guideline and the dangers of home-based delivery.</li> <li>• Develop audio-visual message on PNC to be used at the health facility.</li> </ul>
<p><b>Constant provision of IFA to post-partum women:</b></p> <ul style="list-style-type: none"> <li>• 58% of postpartum women received a 45 day supply of iron folic acid (IFA) in 2012/13 compared with 56% in 2010/11 (HMIS Bulletin, 2013). <b>But this may be just due to denominator problem as in 1<sup>st</sup> ANC.</b></li> </ul>		<ul style="list-style-type: none"> <li>• Develop audio-visual messages on PNC to be used at health facilities.</li> <li>• Intensify community based/ FCHV based information (BPP, CBNCP) in remote districts and unreached populations. This needs local planning at district level.</li> </ul>
<b>Abortion</b>		
<p><b>Lack of local, affordable, safe abortion services</b></p> <ul style="list-style-type: none"> <li>• Women in rural areas report that they have to travel far for safe abortions, and that abortions are unaffordable. (PEER Study, 2012)</li> </ul>		<ul style="list-style-type: none"> <li>• Expand safe abortion services in strategic peripheral locations in remote rural districts.</li> </ul>
<p><b>Awareness of safe abortion sites.</b></p> <p>National targets met, but large differences between population sub-groups:</p> <ul style="list-style-type: none"> <li>• Wealth quintile: Women in highest quintile much more likely to be aware of safe abortion sites than women in lowest quintile (HHS 2012; NDHS 2011)</li> <li>• Caste/ethnicity: Highest proportion of women aware of safe abortion sites = Brahmin/Chhetris (HHS 2012; NDHS 2011)</li> </ul>	<p>LF OP5.1: % of women of reproductive age (15-49) aware of safe abortion sites</p> <p><b>2013 target = 35%</b> <b>2015 target = 50%</b></p>	<ul style="list-style-type: none"> <li>• Develop communication strategies to raise awareness of availability of safe abortion services, the dangers of 'unsafe/traditional' abortion methods, illegality of sex-selective abortion, the consequences of unsafe abortion on women's health, and the benefits of FP. This</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<ul style="list-style-type: none"> <li>Residence: Women from urban areas (42%) more likely to be aware than women from rural areas (26%) (HHS 2012).</li> </ul>		<p>will require the use of IPC, group based communication, and mass-media.</p> <ul style="list-style-type: none"> <li>Develop communication messages and social mobilisation to address the social and cultural beliefs and attitudes around abortion including stigma and taboos. These will need to be tailored to local contexts and populations, and involve community-wide approaches and champions.</li> </ul>
<p><b>Poor awareness that abortion is legal in Nepal (62%) and large differences in awareness between population subgroups:</b></p> <ul style="list-style-type: none"> <li>Residence: Women in rural areas less likely to know that abortion is legal.</li> <li>Caste/ethnicity: awareness differs by caste/ethnic group.</li> <li>Wealth quintile: Women from highest quintile more likely to know abortion is illegal than women from lowest quintile.</li> </ul> <p>(NDHS, 2011)</p>	<p>Widespread awareness that abortion is legal in Nepal and non-significant differences in awareness between population sub-groups.</p>	
<p><b>Social framing of abortion as immoral</b> impacts negatively on use of safe abortion services (PEER Study 2012)</p>	<p>Widespread social acceptance of abortion</p>	
<p><b>Quality of abortion care varies:</b></p> <ul style="list-style-type: none"> <li>49% of women who had abortions in past 5 years experienced complications before or afterwards.</li> <li>Dalit women most likely to experience complications during or after abortions.</li> <li>Women in lowest quintile almost twice as likely to experience complications from abortion as women in highest wealth quintile.</li> </ul> <p>(NDHS 2011)</p>	<p>LF P12: % of women of reproductive age experiencing complications from safe abortions.</p> <p><b>2013 target = &lt;2%</b> <b>2015 target = &lt;2%</b></p>	<ul style="list-style-type: none"> <li>NDHS captures information on patients' perceptions of complications. Identify a way of monitoring through HMIS.</li> <li>Scale up training on provision of comprehensive abortion care to service providers.</li> </ul>
<b>Newborn health</b>		
<p><b>High neonatal mortality rate:</b></p> <ul style="list-style-type: none"> <li>33 deaths per 1,000 live births (NDHS 2011)</li> </ul>	<p>LF G5: Neonatal Mortality Rate (per 1,000 live births)</p> <p><b>2013 target = 23</b> <b>2015 target = 16</b></p>	<ul style="list-style-type: none"> <li>Pilot use of community-based ANMs in underserved hill and mountain areas.</li> <li>Scale up CBNCP in all mountain and hills districts.</li> <li>Disaggregate target and monitoring data by ecological zone to enable focus on areas with highest mortality rates.</li> </ul>
<p><b>Newborn care practices:</b></p> <ul style="list-style-type: none"> <li>% of women who delivered in the last year who did not bathe their infant in first 24 hours = 64.7%.</li> <li>% of women who delivered in the last year who breastfed their infant within an hour of birth = 48.5%.</li> <li>% of infants delivered in a facility in the last year who had a check-up before discharge = 77.8%.</li> </ul> <p>(HHS 2012)</p>		

Challenges identified	Desired outcomes	Recommended actions
<p><b>Exclusive breast feeding.</b></p> <p>National targets met, but large differences between population sub-groups:</p> <ul style="list-style-type: none"> <li>• Caste/ethnicity: Muslims much more likely to exclusively breastfeed (92%) than other groups. (HHS, 2012)</li> <li>• Ecological zone: Terai residents (80%) most likely to exclusively breastfeed and mountain dwellers least likely (47%). (HHS, 2012)</li> </ul> <p>Notable: 9% of 6-11 months infant exclusively breastfed, which might be an underlying factor for stunting (Mehata et al. 2014).</p>	<p>LF P2: % of infants exclusively breastfed for first five months</p> <p><b>2013 target = 48%</b> <b>2015 target = 60%</b></p>	<ul style="list-style-type: none"> <li>• Scale up CBNCP in all mountain and hill districts.</li> <li>• Provide audio-visual PNC messaging at hospitals.</li> <li>• Scale-up PNC strengthening at institutional delivery (through roll-out of checklist and job-aids).</li> <li>• Provide audio-visual weaning massaging at health facilities and community.</li> </ul>
<p><b>Knowledge of newborn danger signs.</b></p> <p>National targets met, but large differences between population sub-groups:</p> <ul style="list-style-type: none"> <li>• Caste /ethnicity: Terai/Madhese women (58%) most likely to know 3 danger signs and Janajati women least likely to know.</li> <li>• Ecological zone: Women from hills (33%) least likely to know danger signs and women from the Terai (56%) most likely to know.</li> <li>• Residence: Rural residents (47%) have better knowledge than urban residents (33%).</li> <li>• Wealth quintile: Women from lowest quintile (52%) have better knowledge than women from highest quintile (45%). (HHS 2012)</li> </ul>	<p>LF OP5.3: % of women of reproductive age (15-49%) knowing at least 3 newborn danger signs:</p> <p><b>2013 target = 40%</b> <b>2015 target = 50%</b></p>	<ul style="list-style-type: none"> <li>• Scale up CBNCP in all mountain and hills districts.</li> <li>• Use FCHV review meetings to refocus on danger signs.</li> <li>• Provide PNC messages to recently delivered women using audio-visual technology at hospitals.</li> <li>• Scale-up PNC strengthening at institutional delivery (through rollout of checklist and job-aids).</li> <li>• Pilot use of community-based ANM in underserved hill and mountain to improve provision of ANC.</li> </ul>

### 3.3 The Aama Programme

Challenges identified	Desired outcome	Recommendation
<b>Client Awareness</b>		
<p><b>Awareness and understanding of Aama Programme is good but differs significantly between population groups:</b></p> <ul style="list-style-type: none"> <li>• Clients in hill and Terai districts are less aware of the transport incentive than those in mountain districts (where a precursor programme was implemented).</li> <li>• Clients in hill and Terai districts expect a higher incentive than prescribed by the programme (STS 2011).</li> <li>• Almost all clients from mountain zones were aware of the transport incentive (99%), whilst only 72% of clients from hill zones and 86% from Terai zone were aware.</li> </ul>	<p>High awareness and accurate knowledge of both Aama and 4ANC maintained across all population groups.</p>	<ul style="list-style-type: none"> <li>• Take advantage of influence of health workers in campaigns to raise awareness of Aama and other safe motherhood incentives.</li> <li>• Address clients' expectation of higher incentive by 1) integrating Aama and 4ANC incentives and 2) increasing 4ANC incentives.</li> </ul>

Challenges identified	Desired outcome	Recommendation
<ul style="list-style-type: none"> <li>Among clients aware of the transport incentive, most of the clients in mountain zones and hill (92%) and Terai (75%) districts were aware prior to their arrival at the health facility.</li> </ul> (STS 2013)		
<p><b>Limited awareness of 4ANC programme</b></p> <ul style="list-style-type: none"> <li>35% of women aware of 4ANC programme.</li> <li>Only 11% of women who had delivered in a health facility had received the 4ANC incentive.</li> </ul> (HHS, 2012)		<ul style="list-style-type: none"> <li>Adapt campaigns for inaccessible areas to make use of more locally available information sources such as FCHVs and radio programming.</li> </ul>
<p><b>Inconsistent practices in fund disbursement from DHOs/DPHOs to health facilities:</b></p> <ul style="list-style-type: none"> <li>This frequently results in a fund deficit at the DHO/DPHO and health facility level.</li> </ul> (Rapid Assessment, round 6 and 7)	Funds are disbursed to facilities in a timely and constant manner, thus ensuring that deficits are avoided.	<ul style="list-style-type: none"> <li>Revise Aama guidelines to include detailed instructions on the fund flow mechanism in order to avoid delays in disbursement of funds.</li> </ul> <i>(NB: Some factors, including government's budget approval and release, are beyond the control of FHD)</i>
<p><b>Women struggle to prove they meet 4ANC and delivery eligibility criteria</b> (Rapid Assessment, round 6 and 7)</p>	Women are able to easily access 4ANC programme to obtain incentives.	<ul style="list-style-type: none"> <li>Review criteria for accessing the incentive, taking into consideration the practicalities for women at the time of delivery.</li> </ul>
<p><b>Not all facilities are implementing Aama:</b></p> <ul style="list-style-type: none"> <li>Health posts (82%) are less likely than PHCCs (96%) and hospitals (94%) to implement Aama (STS, 2011)</li> <li>There is a drop in the proportion of HPs implementing Aama (82% in 2011 to 53% in 2012 and 68% in 2013) (STS, 2012; STS, 2013)</li> </ul> <p><b>4ANC programme is poorly implemented:</b></p> <ul style="list-style-type: none"> <li>4ANC programme is poorly implemented in all facilities. One of the explanations for this is the difficulty women face in meeting the criteria required to obtain the 4ANC programme incentives</li> </ul> (Rapid Assessment, round 6 and 7)	All public hospitals, PHCC and birthing centres implement Aama	<ul style="list-style-type: none"> <li>Monitor public health facilities on status of their implementation of Aama programme more closely.</li> <li>Carry out a review of the criteria for accessing the incentive, taking into consideration the practicalities for women at the time of delivery.</li> </ul>
Even though the aim of the Aama programme is to encourage institutional deliveries, home deliveries are still taking place without being reported. The explanation for this is that the criteria required for health workers to claim the incentive is a disincentive to the reporting of home deliveries. (Rapid Assessment, Round 6)		Encourage SBAs to report assisted home births as an HMIS reporting requirement, rather than solely as a means of accessing an incentive.

Challenges identified	Desired outcome	Recommendation
<p><b>Women frequently pay for ‘free’ delivery care under Aama:</b></p> <ul style="list-style-type: none"> <li>• 43% of women receive free care (STS 2011).</li> <li>• 40% of women receive free care (NDHS<sup>1</sup> 2011)</li> <li>• 88% of women receive free care (STS 2012)</li> <li>• 38% of women receive free care (STS 2013)</li> </ul>	Women receive free delivery care services in public health facilities and listed private facilities	<ul style="list-style-type: none"> <li>• Improve monitoring of public health facilities on their implementation of the Aama programme.</li> </ul>
<p><b>Women are frequently denied transport incentives</b></p> <ul style="list-style-type: none"> <li>• Around a third of maternity clients reported having not received their transport allowance (29% of mothers interviewed in NDHS and 37% of mothers in the STS 2011).</li> <li>• 17% of mothers didn’t receive transport incentive (STS 2012)</li> <li>• 17% of mothers didn’t receive transport incentive (STS 2013)</li> </ul>	All eligible clients receive their full transport incentive.	<ul style="list-style-type: none"> <li>• Improve monitoring of public health facilities on their implementation of the Aama programme.</li> </ul>
<p><b>Not all women are receiving free care:</b></p> <ul style="list-style-type: none"> <li>• Overall, 57% of clients (including at private facilities) are still paying some costs to health facilities for their deliveries. Explanations provided by HFOMCs of what the unit cost is used to cover and the distribution of the incentive among staff was not always clear. This may provide a grey area which may facilitate the misappropriation of funds. (Rapid Assessment, round 6 and 7)</li> </ul>		<ul style="list-style-type: none"> <li>• Improve orientation to the HFMOCC chairpersons and members on uses of the unit cost as specified in the Aama programme guidelines.</li> </ul>
<p><b>Incentives are frequently given to relatives, not women:</b></p> <ul style="list-style-type: none"> <li>• In the Terai districts the majority of incentives disbursed are handed to husbands or other relatives rather than the women directly. (Rapid Assessment, round 6 and 7)</li> </ul>	Incentives are disbursed directly to women in line with guidance.	<ul style="list-style-type: none"> <li>• Work with health workers in Terai districts to explore culturally appropriate ways to ensure that Aama incentives are given directly to women, rather than to husbands or other relatives.</li> </ul>
<p><b>Poor quality implementation of Aama by private institutions:</b></p> <ul style="list-style-type: none"> <li>• Poor orientation on the Aama Programme has limited the quality of implementation within the private sector. Private medical colleges are operating the Aama programme at a loss. (Rapid Assessment, round 6)</li> </ul>	The Aama Programme is widely implemented by private facilities to a high quality in line with guidance.	<ul style="list-style-type: none"> <li>• Conduct a proper review of the Aama and 4ANC programmes within the private sector before considering scale-up.</li> </ul>
<p><b>Mixed compliance with Aama policies by facilities and widespread confusion about what procedures to follow for registering clients (STS 2011).</b></p>	Up to date Aama guidelines are widely available and regularly referred to by facility staff.	<ul style="list-style-type: none"> <li>• Disseminate guidelines to all institutions that have a role in implementing the Aama Programme.</li> </ul>
<p><b>Implementing facilities frequently lack Aama guidelines (Rapid Assessment, round 6 and 7)</b></p>		

<sup>1</sup> Note that NDHS is a population based survey and women respondents may have received services from non-listed private facilities.

Challenges identified	Desired outcome	Recommendation
<p><b>Lack of orientation on guidelines:</b></p> <ul style="list-style-type: none"> <li>District offices and health facilities rarely receive orientation on Aama or 4ANC. (Rapid Assessment, round 6 and 7)</li> </ul>	Orientation on Aama and 4ANC programme provided regularly to facility staff.	<ul style="list-style-type: none"> <li>Provide orientation on guidelines for all involved in implementing Aama Programme. Explore feasibility of a cascade approach.</li> </ul>
<p><b>Reporting systems show mismatch of information about Aama fund distribution:</b></p> <ul style="list-style-type: none"> <li>There is a discrepancy of around 10% between health facility and district office records:</li> <li>There was a discrepancy of around 5% between health facility records and reports from women. (Rapid Assessment, round 6 and 7)</li> </ul> <p>Although the guidelines say that planning and budgeting for the Aama programme should be done centrally, the Rapid Assessment found that districts involved in developing their own plans and budgets were more likely to manage their budget well and have less fund deficits throughout the year.</p>	<ul style="list-style-type: none"> <li>All reporting systems provide matching data about fund disbursement.</li> <li>Clients' reports match facility records.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen the reporting systems between health facilities and districts and provide regular monitoring with cross-verification in order to deter misuse of funds</li> <li>The FHD should engage DHOs and DPHOs to develop locally appropriate and owned plans and budgets for the Aama and 4 ANC programmes.</li> </ul>
<p><b>Poor public accountability over distribution of Aama incentives:</b></p> <p>Only 54% in round 6 and 57% of in round 7 facilities publically displayed Aama beneficiaries. (Rapid Assessment, round 6 and 7)</p>	All facilities publically display information from Annex 10 of Aama guidelines on a routine basis.	<ul style="list-style-type: none"> <li>Routine monitoring and supervision visits are needed to ensure that the display of Aama beneficiaries in facilities becomes routine. The full engagement of HFOMCs in this is also required to ensure annex 10 is displayed as per the Guidelines.</li> </ul>
<b>Future rapid assessments</b>		
Different methodologies used in different assessments make it difficult to assess progress		<ul style="list-style-type: none"> <li>Use same methodology and same matching and cross verification processes as in this RA to facilitate comparison between RA results.</li> <li>Focus next RA on recommendations made in latest RA to identify progress in overcoming challenges.</li> </ul>

### 3.4 Adolescent Friendly Health Services

Number of facilities providing adolescent friendly services		
<p><b>Low CPR (modern method) and high unmet need for contraceptives among adolescent and youth:</b></p> <ul style="list-style-type: none"> <li>CPR – modern method among 15-19 years =14%</li> <li>CPR – modern method among 20-24 years =24%</li> <li>Unmet need of contraceptives among 15-19 years =42%</li> <li>Unmet need of contraceptives among 20-24 years =37%. (NDHS 2011).</li> </ul>		<ul style="list-style-type: none"> <li>Scale up adolescent-friendly services which offer confidential services and develop and use IEC materials targeted at adolescents.</li> </ul>

## 4 CHILD HEALTH

### 4.1 Immunization

Issue identified	Desired outcome	Recommended actions	
<b>Immunization</b>			
<p><b>Vaccination coverage among children aged 12 – 23 months:</b></p> <p>Large differences between population subgroups:</p> <ul style="list-style-type: none"> <li>Urban children less likely to be vaccinated than children in rural areas (NDHS, 2011). Urban coverage better than rural coverage (90% versus 86.6% in NDHS 2011).</li> </ul>		<ul style="list-style-type: none"> <li>Strengthen and review implantation of 'Reaching Every District' programme.</li> <li>Micro-planning in poor performing districts.</li> <li>Note: The intensification of immunisation (started in January 2012).</li> </ul>	
<p><b>Measles immunization of one year old children:</b></p> <p>National targets met but large differences by population subgroups:</p> <ul style="list-style-type: none"> <li>Caste/ethnicity: Muslim children (57%) least likely to be immunized against measles at 1 year (NDHS, 2011)</li> </ul>	<p>LF P3: % of one year old children immunized against measles</p> <p><b>2013 target= 85%</b> <b>2015 target = 85%</b></p>		
<p><b>Falling rates of child DPT-HepB-Hib3 immunization:</b></p> <ul style="list-style-type: none"> <li>90% of children under one year immunized with DPT-HepB-Hib3 in 2011/12 compared with 96% in 2010/11 (HMIS Bulletin, 2013)</li> </ul>			
<p><b>Rates of child Japanese encephalitis (JE) immunization:</b></p> <ul style="list-style-type: none"> <li>47% of children aged 12-23 months immunized with JE in 2012/13 compared with 31% in 2010/11 (HMIS Bulletin, 2013).</li> </ul>			
Lack of information related to cold chain system for effective vaccine management.	WHO recommends at least 80% score in vaccine supply chain management criteria.		<ul style="list-style-type: none"> <li>Information related to cold chain system needs to be generated</li> </ul>
<b>Treatment of childhood illnesses</b>			
<p><b>Treatment of children under 5 who have diarrhoea with zinc and oral rehydration solution (ORS):</b></p> <p>Significant differences between population subgroups:</p> <ul style="list-style-type: none"> <li>Caste/ethnicity: Janajatis and Brahmin/Chhetris most likely to be treated with zinc/ORS (HHS 2012; NDHS, 2011)</li> <li>Ecological zone: Terai residents (12%) twice as likely to be treated with zinc/ORS as mountain residents (6%) (HHS, 2012)</li> </ul>	<p>LF OC2.1: % of children under 5 with diarrhoea treated with zinc and ORS</p> <p><b>2013 target = 25%</b> <b>2015 target = 40%</b></p>	<ul style="list-style-type: none"> <li>Consider revising target.</li> <li>A point-of-use water disinfection and zinc treatment (POUZN) report found that zinc coverage was 15% following intensive piloting in 28 districts; so 40% may be unrealistic. (Wang 2011)</li> </ul>	

Issue identified	Desired outcome	Recommended actions
<p><b>Treatment of pneumonia by antibiotics amongst under-fives.</b></p> <p>On track to meet national targets, but large differences between population sub-groups:</p> <ul style="list-style-type: none"> <li>• Caste/ethnicity: Muslim children least likely to be treated for pneumonia with antibiotics (HHS 2012; NDHS 2011).</li> </ul>	<p>LF OC2.2: % of children under 5 with pneumonia receive antibiotics:</p> <p><b>2013 target = 40%</b> <b>2015 target = 50%</b></p>	<ul style="list-style-type: none"> <li>• Design and pilot work to identify how to overcome barriers against for seeking treatment for pneumonia.</li> </ul>
<p>Receipt of vitamin A amongst children aged 6-59 months: on track to meet national targets, but large differences between population subgroups</p> <ul style="list-style-type: none"> <li>• Caste / ethnicity: Terai/Madhese have lowest uptake (86%)</li> <li>• Ecological zone: Mountain residents have greatest uptake (95%) and Hill residents have the lowest (89%).</li> <li>• Residence: Rural residents (91%) have better uptake than urban residents (87%).</li> </ul>	<p>LF P4: % of children aged 6-59 months have received vitamin A supplements</p> <p><b>2013 target ≥ 90%</b> <b>2015 target ≥ 90%</b></p>	

## 4.2 Nutrition

Issue identified through research	Desired outcome	Recommended actions
<p><b>Eleven per cent of children under-five are wasted (NDHS, 2011)</b></p>	<p>LF G11: % of children under five are wasted</p> <p><b>2013 target = 7%</b> <b>2015 target = 5%</b></p>	<ul style="list-style-type: none"> <li>• Roll out multi-sectoral nutrition plan supported by Suahara and other USAID projects</li> </ul>
<p><b>Widespread anaemia amongst children:</b></p> <ul style="list-style-type: none"> <li>• 45% of children aged 6 -59 months are anaemic (NDHS 2011)</li> </ul>		
<p><b>The proportion of women who are overweight or obese has increased substantially in recent years</b></p> <ul style="list-style-type: none"> <li>• From 9% in 2006 to 14% in 2011 (NHDS 2011)</li> </ul>		

## 5 HIV/AIDS

Issue identified	Desired outcome	Recommended actions
<b>Knowledge</b>		
<p><b>Poor knowledge of HIV/AIDs and large differences in awareness between population sub-groups:</b></p> <ul style="list-style-type: none"> <li>In 2011, 34% of males and 26% of females aged 15-24) had comprehensive correct knowledge of HIV/AIDS (NDHS 2011)</li> </ul>	<p>LF OP5.4: % of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS by sex:</p> <p><b>2013 target = 40% males and female</b></p> <p><b>2015 target = 50% males and female</b></p>	
<b>HIV testing</b>		
<p><b>Low levels of HIV testing and poor knowledge of where to get tested:</b></p> <ul style="list-style-type: none"> <li>38% of women and 57% of men know where to get an HIV test</li> <li>Only 3% of women and 8% of men had been tested for HIV in the year before the NDHS was conducted.</li> </ul> <p>(NDHS 2011)</p>		

## 6 EPIDEMIOLOGY AND DISEASE CONTROL

Issue identified	Desired outcome	Recommended actions
<b>Malaria and mosquito borne diseases</b>		
<p><b>Many children do not sleep under a long lasting insecticide treated bed net (LLIBN):</b></p> <ul style="list-style-type: none"> <li>In 2011 68% of children under 5 in high risk areas did not sleep under a LLIBN (NHSP-2 Logframe monitoring review, 2012)</li> </ul>	<p>LF OC3.1: % of children under 5 years sleeping under a long lasting insecticide treated bed net the previous night in high-risk areas:</p> <p><b>2013 target = 80%</b> <b>2015 target = 80%</b></p>	
<p><b>Nepal has high receptivity and vulnerability to malaria transmission.</b></p> <ul style="list-style-type: none"> <li>Of total malaria cases reported in the country in 2013, 30–40% were categorized as imported cases.<sup>2</sup></li> </ul>	<p><b>2018 target = ↓ incidence of indigenous malaria cases by 90% &amp; number of VDCs having indigenous malaria cases by 70% of current levels</b></p>	<ul style="list-style-type: none"> <li>Fill up key staff positions at Epidemiology and Disease Control Division (EDCD), Vector Borne Disease Research and Training Centre (VBDRTC) and in districts.</li> <li>Perform a comprehensive human resources and training needs assessment to finalize a comprehensive (short and long-term) HR plan with clear ToRs and appropriate structures at all levels. Include post-training follow-up mechanisms.</li> <li>Develop training packages for each category of key staff to be trained.</li> <li>Need the mass distribution of long lasting insecticide nets (LLINs) every 3 or more years in high risk VDCs according to attrition rate of specific brands. And if resources permit, also in moderate risk areas at a ratio of 1 LLIN per 1.6 persons.</li> </ul>
<b>Tuberculosis (TB)</b>		
<p><b>Low TB case detection rate /100,000 population:</b></p> <ul style="list-style-type: none"> <li>73% TB case detection rate in 2011 (HMIS)</li> <li>73% TB case detection rate in 2012 (HMIS)</li> <li>78% TB case detection rate in 2013 (HMIS)</li> </ul>	<p>LF OC2.7: TB case detection rate (%)</p> <p><b>2013 target = 80%</b> <b>2015 target = 85%</b></p>	

<sup>2</sup> Information received from secondary source. Original source not available.

Issue identified	Desired outcome	Recommended actions
<b>Leprosy</b>		
<p><b>Prevalence of leprosy (per 10,000 population) is increasing:</b></p> <ul style="list-style-type: none"> <li>• 2011 = 0.79 (HMIS)</li> <li>• 2012 = 0.90 (HMIS)</li> <li>• 2013 = 0.84 (HMIS)</li> </ul>	<p>LF P13: Prevalence rate of leprosy (%)</p> <p><b>2013 target = halt and reverse</b></p> <p><b>2015 target = halt and reverse</b></p>	
<b>Kala-azar</b>		
<p><b>Falling proportion of kala-azar cases treated by Fungizone:</b></p> <ul style="list-style-type: none"> <li>• In 2012/13, 25% of cases treated by Fungizone compared with 32% in 2010/11 (HMIS Bulletin, 2013)</li> </ul>		
<b>Non-communicable diseases (NCDs)</b>		
<p><b>High prevalence of NCDs risk factors:</b></p> <ul style="list-style-type: none"> <li>• % currently smoke tobacco = 37% (male = 27%, female = 10.3%).</li> <li>• % currently drinking alcohol (past 30 days) = 17% (male = 28%, female = 7%).</li> <li>• % who ate less than 5 servings of fruit and/or vegetables on average per day = 99% (male &amp; female = 99%).</li> <li>• % not engaging in vigorous activity = 54% (male = 44%, female = 63%).</li> <li>• % with raised blood pressure (BP) (SBP ≥ 140 and/or DBP ≥ 90 mmHg) who are not currently on medication for raised BP = 88% (male = 89%, female = 87%)</li> </ul> <p>(NCD risk factors survey 2013)</p>	<p>To reduce avoidable mortality from non-communicable diseases (NCDs) by 25% from 2015 to 2025 (the 25 by 25 goal).</p>	

## 7 HEALTH INFRASTRUCTURE

Challenges identified	Desired outcome	Recommended actions
<p><b>A lack of continuous electricity supply affects functionality of health facilities:</b></p> <ul style="list-style-type: none"> <li>71% of PHCCs, 62% of health posts and 49% of SHPs had electric power supply; but only 38% of hospitals had electricity available 24 hours a day</li> <li>Fuel shortages in facilities in the mountains make generators an unreliable power supply.</li> </ul> <p>(STS, 2011)</p> <ul style="list-style-type: none"> <li>Two-third of hospitals (63%), over one third of PHCCs (36%), and nearly a quarter of HPs (23%) had power available 24 hours for 7 days/week. Nearly one fifth of PHCCs (19%), over one third of HPs (39%) and 61% of SHPs had no power supply at all (STS, 2012)</li> <li>Only 47% of hospitals had round-the-clock power supply. Situation was even worse in PHCCs (23%), HPs (18%) and SHPs (9%) (STS 2013)</li> </ul>	<p>All facilities have a reliable source of electricity available 24/7</p>	<ul style="list-style-type: none"> <li>Where there is no electricity, require all new HPs and PHCCs to install solar power system, and where there is electricity require facilities to install solar power backup systems. (As specified in standard design guidelines).</li> <li>Assess sites (HPs, PHCCs), that do not have solar power/backup system using the Health Infrastructure Information System (HIIS) and Management Division to allocate budget for such sites to install solar back up system (phase-wise). Management Division (MD)/MoHP also should coordinate with Alternative Energy Promotion Centre (APEC).</li> <li>For district hospitals and above MoHP to provide budget for connecting to electrical supply through feeder line (no load shedding). This has been already done by some of hospitals.</li> </ul>
<p><b>There is no source of clean running water in many facilities:</b></p> <ul style="list-style-type: none"> <li>18% of HPs did not have running water with soap, and 7% of PHCCs, 11% each of HPs and SHPs reported not having any source of water.</li> <li>27% of maternity clients reported that drinking water was not available at facilities.</li> </ul> <p>(STS 2011)</p> <ul style="list-style-type: none"> <li>Availability of drinking water for outpatients was less common at SHPs (63%) in comparison to HPs (72%) or higher level facilities (76% of PHCCs, 71% of hospitals)</li> <li>Piped water and water from a tubewell were most commonly reported sources of water in health facilities.</li> <li>15% HPs and 22% SHPs reported having no water source.</li> <li>Only three quarters of hospitals with maternity wards (75%) had a sink with running water, and 69% had soap.</li> </ul>	<p>All facilities have a reliable source of clean running water.</p>	<ul style="list-style-type: none"> <li>Assess all facilities without running water and identify cause for lack (all new sites developed since 2005/06 have had running water pipes laid during construction). DHO must send request to Management Division with approved estimates from local office of DUDBC or DTO. Management Division must allocate budget for these sites for getting connected to water source, and if no internal pipes laid, budget for that as well.</li> <li>If sites are unsuitable and water cannot be accessed through any means including rainwater collection, the site must be nominated for relocation in dialogue with local communities. Management Division should take initiation for dialogue based on</li> </ul>

Challenges identified	Desired outcome	Recommended actions
<ul style="list-style-type: none"> <li>The presence of a sink with running water in the labour room was less common in lower-level facilities (94% in hospitals and 30% in SHPs). (STS 2012)</li> </ul>		request from local facilities and communities and put new budget for new construction.
<p>The proportion of facilities having sinks with running water substantially decreased with level of facility; indicating poor infrastructure at peripheral level. Similar situation observed in case of availability of sink with running water and availability of soap/alcohol rub for hand washing.</p> <ul style="list-style-type: none"> <li>Unlike peripheral level facilities, considerably lower proportion of maternity (58%) and outpatient departments (OPD) clients in hospitals (60%) reported having availability of drinking water at the facility.</li> <li>Piped water and water from a tubewell remain most commonly reported sources of water at health facilities. (STS 2013)</li> </ul>		<ul style="list-style-type: none"> <li>Local facilities need to buy soap locally from their own source or DHO must provide it to these facilities. Addresses lack of awareness about need for local procurement of soap and other commodities through guidelines sent to the districts by Management Division each year for spending annual budget.</li> </ul>
<p><b>There is often no functional telephone at lower level facilities meaning that emergency communication between facilities cannot take place:</b></p> <ul style="list-style-type: none"> <li>In 2011, nearly half (46%) of PHCCs, 87% of health posts and 96% of SHPs had no access to a landline telephone (STS 2011).</li> <li>In 2012, 45% of PHCCs, 84% of HPs and none of the SHPs had access to a landline telephone (STS 2012).</li> <li>In 2013, 56% of PHCCs, 73% of SHPs, 93% of HPs had no access to landline telephone (STS 2013).</li> </ul>	All facilities have a functioning telephone	<ul style="list-style-type: none"> <li>CDMA technology to be adopted, which is based on radio frequency.</li> <li>MoHP to adopt this strategy with proper guidelines for usage.</li> </ul>
<p><b>Limited access to HPs/SHPs:</b></p> <ul style="list-style-type: none"> <li>62% of the population live within 30 mins travel time to a HP or SHP (HIIS)</li> </ul>	<p>OC1.1: % of population living within 30 mins travel time to a health post or sub-health post</p> <p><b>2013 target = 70%</b> <b>2015 target = 80%</b></p>	<ul style="list-style-type: none"> <li>Verify data on travel time to HP/SHPs using web-based HIIS. Government has not planned any new additional sites since 2005/06. It is just upgrading existing HPs and SHPs. There is no spatial data available to exactly say for locating new sites. By end of 2013 HIIS will be able identify locations and recommend new sites.</li> </ul>
<p><b>Existing higher level facilities frequently lack space:</b></p> <ul style="list-style-type: none"> <li>In 2011, 45% of outpatients thought their facility was overcrowded (STS 2011). In 2012 and 2013, 33% and 30% reported overcrowding (STS 2012 and 2013).</li> <li>The number of district hospital beds per 5,000 population fell from 1.06 in 2011 to 0.8 in 2012, indicating increase in usage (Log frame review 2012)</li> </ul>	<ul style="list-style-type: none"> <li>All facilities have sufficient space for patient and family needs.</li> </ul>	<ul style="list-style-type: none"> <li>The new standard designs accommodate up to 50 beds up to district hospital level, with possibility for further expansion. OPD capacity is based on maximum volume of visits.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
		<ul style="list-style-type: none"> <li>Plan for and expand budget expansion for district hospitals that require expansion, based on HIIS information and HMIS data on occupancy and OPD visits. All expansions should be demand and need based (DHOs to be proactive on this). Constructions to be implemented through DUDBC and budget allocated by MoHP.</li> <li>For higher level facilities, zonal and above, which have more autonomous control over spending and budgeting, decision making takes place at MoHP level. Budgets should be included in hospital block grants based on rationale demand from facilities for expansion or upgrading with master plans, technical designs and estimates prepared by appropriate government entity as per existing norms. High priority must be given to this by MoHP.</li> </ul>
<p><b>Overcrowding is a particular issue for maternity care, and higher level facilities are increasingly unable to cope with growing patient numbers:</b></p> <ul style="list-style-type: none"> <li>Total number of deliveries conducted in six sampled hospitals increased from 34,000 per year to 49,000 per year over last 4 years.</li> <li>No new hospital construction in last 15 years; all study zonal hospitals over 30 years old (Responding to increased demand 2012)</li> </ul>	<p><b>At least 50% of Terai district hospitals to be upgraded (completed or under construction) to 50 beds and hills and mountain hospitals to 35 beds with enough OPD area and required support services by 2015/16.</b></p>	<ul style="list-style-type: none"> <li>As above</li> <li>As above</li> </ul>
<p><b>Targets to increase the number of birthing centres (BCs) are being met. However this is having an impact on technical and allocative efficiency:</b></p> <ul style="list-style-type: none"> <li>Almost 800 new BCs built since 2007/08.</li> <li>Only 11.5% of all births in selected districts took place in BCs in 2011/12.</li> <li>Average utilization in study BCs was 33%. Needs to be raised to 50-80% to be cost-effective.</li> </ul> <p>(Responding to increased demand, 2011)</p>		<ul style="list-style-type: none"> <li>Implement criteria for all health infrastructure planning as set out in building guidelines</li> </ul>

Challenges identified	Desired outcome	Recommended actions
<p><b>Poor medical waste management:</b></p> <ul style="list-style-type: none"> <li>35% of hospitals followed the health care waste management guidelines, 2008/09, 45% of institutions followed self-developed protocol, whereas 5% of healthcare institutions followed Nepal Health Care Waste Management Guidelines 2002 and 15% of health care institutions didn't followed guidelines.</li> <li>40% of hospitals spent 1-5% of total budget, 18% of the institutions spent less than 1% of total budget, whereas only 2% of hospitals spent more than 20% of total annual budgets on waste management.</li> </ul> <p>(MoHP 2013b)</p> <ul style="list-style-type: none"> <li>Only 7% of facilities had comprehensive biomedical waste management in place (STS 2013)</li> </ul>	<p>Health Care Waste Management Guidelines fully implemented.</p>	<ul style="list-style-type: none"> <li>Standard design building construction guidelines to address provision of required health care infrastructures.</li> <li>MoHP to monitor operation and maintenance including O&amp;M budget.</li> </ul>
<p><b>No standard equipment lists exist to guide procurement during construction of new facilities:</b></p> <ul style="list-style-type: none"> <li>Existing (non-formalized lists) are outdated and may no longer be appropriate (STS 2011).</li> </ul>	<p>Up to date equipment lists available to guide resourcing of new facilities</p>	<ul style="list-style-type: none"> <li>Develop standard equipment lists for each room specified in standard designs in HIIS.</li> </ul>
<p><b>Poor coordination in decision making:</b></p> <ul style="list-style-type: none"> <li>Multiple divisions and sections inside MoHP make decisions on infrastructure and planning independently without inter-divisional coordination. Communication gap is leading to duplication in many areas (JAR Infrastructure report, 2012).</li> </ul>	<p>All infrastructure development, and repair and maintenance work under Physical Asset management Unit at MD.</p>	<ul style="list-style-type: none"> <li>Bring all these functions under single management in order to avoid duplication, ensure proper reporting and documentation and improve efficiency of planning procedures.</li> </ul>
<p><b>Poor oversight of construction processes at higher level facilities:</b></p> <ul style="list-style-type: none"> <li>At present there are no procurement plans, no progress reporting and limited central control over flow of finances for construction at zonal and higher level facilities. Direct grant budgets to zonal and higher level facilities for construction works and constructions directly implemented through DHOs/DPHOs. (JAR Infrastructure report 2012)</li> </ul>	<p>All facilities, including those under DHOs/DPHOs included in regular reporting system as prescribed in Joint Financing Arrangement.</p>	<ul style="list-style-type: none"> <li>MoHP to get all construction work under reporting system as prescribed by JFA, and set it as precondition for release of budget.</li> </ul>

## 8 M&E AND HEALTH INFORMATION SYSTEMS

Challenges identified	Desired outcome	Recommended actions
<p><b>Management information systems:</b></p> <ul style="list-style-type: none"> <li>• Lack of clear policies and protocols to guide M&amp;E and information management activities has resulted in a fragmented system with patchy accountability.</li> <li>• The nine MISS vary significantly in their ability to provide useful data for decision-making. The data that is available is not currently coded to facilitate cross-system analysis. Functionality varies greatly across different MISs, as does the extent to which they interlink with one another.</li> <li>• The Health Sector Information Systems Strategy was written in 2005. Since then, the technological and M&amp;E landscapes have changed significantly. The HSIS approach has been piloted for a number of years and the learning from these pilots needs to be incorporated into a revised 2005 document.</li> </ul> <p>(NHSP 2, NHSP-2 MTR 2013)</p>		<ul style="list-style-type: none"> <li>• Develop M&amp;E implementation plan as a priority action to be undertaken by MoHP</li> <li>• Strengthen links between M&amp;E and planning. Review in MoHP setup.</li> <li>• Work towards establishing a semi -autonomous National Health Information Centre (NHIC).</li> <li>• Develop costed national M&amp;E plan aligning with health research priorities identified by National Health Research Council.</li> <li>• Review 2005 Health Sector Information System Strategy .</li> <li>• Develop e-health policy.</li> <li>• Develop unified coding system linking all nine MISs with stakeholder engagement for buy-in from users and to dispel fears around potential damage of well-functioning systems.</li> <li>• Prioritise disaggregation of HMIS indicators.</li> <li>• Train HMIS staff on use of revised tools and reporting with emphasis on importance of data they collect and reasons for disaggregation.</li> </ul>
<p><b>Disaggregation of data/GESI related M&amp;E:</b></p> <p>Despite progress in disaggregation of population survey data, the process has been less straightforward with HMIS data. A process of HMIS revision is underway, including review of indicators, recording and reporting tools, HMIS procedures, validation mechanisms, data analysis, and data use. These revisions will hopefully go some way to providing data to better monitor GESI-related access issues; but the poor use of GESI data at central level provides little incentive to drive the process forward.</p> <p>(NHSP 2, MTR 2013)</p>		<ul style="list-style-type: none"> <li>• Scale-up revised HMIS from FY 2013/14. The current revision process will enable NHSP-2 to be effectively monitored for its last two years; and the availability of disaggregated data will help to plan NHSP-3.</li> <li>• Disaggregation by 2015 of selected logical framework outcome and output indicators and annual reporting by HMIS.</li> <li>• Share the results of 17 district pilots on disaggregation and implications</li> <li>• Ensure GESI technical support, skilled human resources and a non-cash incentive package for disaggregated reporting from districts to HMIS.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
		<ul style="list-style-type: none"> <li>Mechanisms are needed for integrating GESI-focussed analysis into planning and decision making, particularly at central level.</li> </ul>
<p><b>Data quality:</b></p> <ul style="list-style-type: none"> <li>A lack of guidance and protocols on data verification has resulted in patchy coverage and poor capacity at lower levels.</li> <li>The lack of private sector reporting remains an important issue impacting on data quality.</li> </ul> <p>(NHSP 2 MTR 2013)</p>		<ul style="list-style-type: none"> <li>Develop HMIS guidelines including a comprehensive section on data validation protocols.</li> <li>Need for the greater stewardship of the private sector, including review of regulatory mechanisms to ensure compliance with government reporting requirements.</li> <li>Address human resource issues around recruitment and retention of key staff including regional statistical officers and hospital medical recorders.</li> <li>Need capacity building for district and ilaka level staff involved in data verification.</li> </ul>
<p><b>Data use:</b></p> <ul style="list-style-type: none"> <li>Although mechanisms for bottom-up planning and review exist and are to some extent functional, the scope for localised evidence-based planning is limited by the heavily centralised systems of planning, budgeting and target-setting.</li> <li>Data use at central level for planning and budgeting purposes is not comprehensive</li> <li>The centralised system has also led to a poor data-use culture at the sub-national level.</li> <li>The interventions implemented at the local/VDC level are responding to top-down target and strategy setting, which effectively limits the scope of data utilisation to implementation planning.</li> </ul> <p>(NHSP2 MTR 2013)</p>		<ul style="list-style-type: none"> <li>Develop data use plan and ensure that it is accompanied by measures for its proper implementation.</li> <li>Decentralise planning, budgeting and M&amp;E functions to enable reporting against district level M&amp;E plans with locally relevant targets and budgets.</li> <li>Complement this with a programme of capacity building at district level on planning, budgeting and M&amp;E.</li> <li>Enhance the role of regional health directorates in ensuring better data use.</li> <li>Until NHIC is established, strengthen the capacity of PPICD on effective data analysis and use for evidence based planning.</li> <li>Establish functional links between the nine MISs to facilitate easier analysis of data for decision making.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
<p><b>Review process:</b></p> <ul style="list-style-type: none"> <li>The government's annual review and the JAR are two distinct processes with limited connectivity (NHSP 2 MTR 2013)</li> </ul>		<ul style="list-style-type: none"> <li>Keep national annual reviews and joint annual reviews separate, but revise review formats to include more space for analytical discussions of findings.</li> <li>Decentralize planning, budgeting and M&amp;E.</li> <li>Strengthen links with Social Welfare Council to access NGO reporting on service statistics.</li> <li>Develop mechanisms for reviewing commitments and holding actors to account for commitments not achieved.</li> <li>Ensure adequate time and space is given to investigate data irregularities at district and ilaka review meetings, resulting in agreed actions for follow-up</li> </ul>

## 9 HEALTH FINANCING

Challenges identified	Desired outcome	Recommended actions
<b>Free care</b>		
<p><b>Patient awareness of free care differs between caste/ethnic groups:</b></p> <ul style="list-style-type: none"> <li>• Terai-Madhesi other castes least likely to know about free care (STS 2011).</li> <li>• Terai-Madhesi other castes least likely to know about free care (STS 2012).</li> <li>• Awareness of free care before arrival at health facility was only 80% and was least among Janajatis (76%) (STS 2013).</li> </ul>		
<p><b>Uneven rate of increase in provision of free care by ecological zone:</b></p> <ul style="list-style-type: none"> <li>• Large increase in free care between 2008/09–2010/11 in Terai districts, but modest increase the hill districts and a reduction in mountain districts 2009/10 to 2010/11 (STS 2011)</li> </ul>		
<p><b>Many outpatients pay for services that should have been free:</b></p> <ul style="list-style-type: none"> <li>• 31% of clients reported having paid for ‘free’ services in 2011 (STS 2011). In 2011, outpatients in mountain districts were most likely to have paid for care (48%).</li> <li>• 17% of clients paid for ‘free’ services in 2011 (STS 2012). This reduced by level of facility with 25% of outpatients from PHCCs, 11% from HPs and 5% from SHPs paying for such services.</li> </ul>		
<p><b>Not all patients are receiving free health care:</b></p> <ul style="list-style-type: none"> <li>• Outpatients from mountain districts (15%), were more likely to pay for service than outpatients from hill (21%) and Terai districts (21%). Among these 45% were forced to pay and only 7% paid voluntarily.</li> </ul>		
<b>Out of pocket expenditure on health care</b>		
<p><b>Out of pocket expenditure on health care is a substantial drain on household resources:</b></p> <ul style="list-style-type: none"> <li>• The average Nepali person who used health services in the past month spent NPR 1,153 on fees, medicines, transport and other expenses. This represents 40% of average monthly household income in Nepal (BIA 2012).</li> </ul>		

Challenges identified	Desired outcome	Recommended actions
<p><b>Out of pocket expenditure varies significantly between population sub-groups:</b></p> <ul style="list-style-type: none"> <li>Regionally the highest expenditure was in the Far-Western region.</li> <li>Caste/ethnicity: Disadvantaged Janajatis spent the highest proportion of household income on health care in public health facilities.</li> <li>Wealth quintile: households in the lowest quintile spent the highest proportion of household income on health care.</li> </ul> <p>(BIA 2012)</p>		
<p>More than half of out-of-pocket expenditure was related to the purchase of medicines (BIA 2012)</p>		
<p><b>Subsidies</b></p>		
<p>Higher level care (provided in hospitals and PHCCs) is less progressive than care at lower level facilities.</p> <ul style="list-style-type: none"> <li>Care at PHCCs and hospitals has a smaller redistributive effect in favour of the poor than care in HPs and SHPs (when differences between transfers and fees are taken into account) (BIA 2012).</li> </ul>		
<p>The largest recipients of public health subsidies (in net terms) are Dalits, whereas disadvantaged Janajatis incur a negative subsidy (i.e. they pay more than they receive) for using hospital services (BIA 2012).</p>		
<p>By region, the largest net subsidies go to the Mid-Western and Far-Western regions (BIA 2012).</p>		
<p><b>Release of funds</b></p>		
<p><b>Many facilities do not receive their allocated budgets in full</b></p> <ul style="list-style-type: none"> <li>22% of facilities reported not having received all their allocated funds from MoHP (STS 2011).</li> <li>Most facilities (93%) reported they had received all their allocated funds and reimbursement, including 100% of hospitals. (STS, 2012)</li> <li>40% of hospitals, 15% of PHCCs, 11% of HPs and 12% of SHPs did not receive their full budgets in last fiscal year (STS 2013).</li> </ul>		
<p><b>Delays in the release of fiscal year budgets</b> frequently results in staffing gaps and discontinuity of CEONC services (CEONC Readiness Study, 2011)</p>		<ul style="list-style-type: none"> <li>Where necessary, cover budget gaps for key services (such as CEONC) with ring-fenced funds.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
		<ul style="list-style-type: none"> <li>Put multi-year contracts in place for staff to minimize disruption.</li> </ul>
<b>Income sources</b>		
<p><b>Facilities receive much funding from sources other than MoHP's AWPB.</b></p> <ul style="list-style-type: none"> <li>35-40% of PHCC and HP funding and 50% of SHP funds come from non-MoHP sources (STS 2011)</li> <li>'Non-MoHP funds' are not captured in reporting systems and the government is not kept informed about extent to which their allocation contributes to achieving health sector goals</li> <li>VDCs and municipalities were a source of income for 70% of health facilities in 2012. Higher level facilities were more likely to have internal sources of income — 100% of hospitals, 43% of district hospitals, and 43% of PHCCs, compared to just 20% of HPs and 10% of SHPs (STS 2012).</li> <li>Higher level hospitals received support from district development committees (43%). PHCCs (64%), HPs (76%) and SHPs (59%) were more likely to receive funds from municipalities/VDCs.</li> <li>A higher proportion (44%) of district hospitals received funds from donor agencies than higher level hospitals (28%), PHCCs (10%), HPs (6%) and SHPs (4.4%).</li> </ul>		
<p><b>Most facilities do not routinely carry out internal audit or final audits:</b></p> <ul style="list-style-type: none"> <li>STS 2011 = 80% of facilities did not have internal audit and 76% did not have final audit.</li> <li>30% of health facilities had received a final audit for the FY 2010/11. Completion of final audit was less common for lower level facilities (15% SHPs, 23% HPs) than higher level facilities (100% hospitals, 45% PHCCs) (STS 2012).</li> <li>The STS 2012 found that DTCOs had performed internal audits for 44% of hospitals in the first trimester, just 25% in the second trimester and 69% in the third trimester of previous fiscal year.</li> <li>85% of facilities had not conducted a final audit in last fiscal year (STS 2013).</li> <li>Only 58% HPs, 56% hospitals, 54% PHCCs and 41% SHPs had submitted their financial reports of FY 2011/12 (STS 2013).</li> <li>On average 16% of health facilities had not done an internal audit even once (STS 2013).</li> </ul>		

Challenges identified	Desired outcome	Recommended actions
<b>Health expenditure and budget allocation</b>		
<p><b>MoHP budget unspent each financial year:</b></p> <ul style="list-style-type: none"> <li>• 2011 = 76.3% of MoHP budget from the previous financial year was spent.</li> <li>• 2012 = 80.1% of MoHP budget from previous financial year was spent.</li> <li>• 2013 = 94.0% of MoHP budget from previous financial year was spent.</li> </ul> <p>(NHSP-2 logical framework, 2012) (FCGO, FMIS, 2013)</p>	<p>LF OP8.2: % of MoHP budget spent</p> <p><b>2013 target = 84.5%</b> <b>2015 target = 86%</b></p>	<ul style="list-style-type: none"> <li>• MoHP has formed the PFM and audit committees. Both committees are actively engaged in improving fund flow, absorption and reducing audit queries.</li> </ul>
<p><b>Allocation of health budget to district level and below facilities:</b></p> <ul style="list-style-type: none"> <li>• 2011 = 57% of budget allocated to district and below level.</li> <li>• 2012 = 59% of budget allocated to districts and below level.</li> <li>• 2012 = 58% of budget allocated to districts and below level.</li> </ul> <p>(Budget Analysis, 2013)</p>	<p>LF OP8.3: % of budget allocated to district and below facilities:</p> <p><b>2013 target = 65%</b> <b>2015 target = 70%</b></p>	<ul style="list-style-type: none"> <li>• PFM committee to provide inputs during planning process.</li> <li>• Support MoHP to reduce proportion of unallocated budget which ultimately go to the district level. The use of business plans would be best approach to increase % allocations to district level.</li> </ul>
<p><b>Proportion of total national budget allocated to health:</b></p> <ul style="list-style-type: none"> <li>• 2011 = 7.3% of national budget allocated to health sector.</li> <li>• 2012 = 7.1% of national budget allocated to health sector.</li> <li>• 2013 = 6.5% of national budget allocated to health sector.</li> </ul> <p>(Budget Analysis 2013)</p>	<p>LF OP9.2: % of health sector budget as % of total national budget:</p> <p><b>2013 NHSP-2 target = 8.5%</b> <b>2015 NHSP-2 target = 10%</b></p>	<ul style="list-style-type: none"> <li>• Conduct a fiscal space analysis.</li> <li>• The critical engagement of MoHP leadership while finalising the Medium Term Expenditure Framework (MTEF) and more programmatic discussion in joint consultative meetings (JCMs) would help achieve higher case scenario of NHSP-2.</li> </ul>
<p><b>Government share of total MoHP budget target met for 2013:</b></p> <ul style="list-style-type: none"> <li>• 2011 = 59%</li> <li>• 2012 = 61%</li> <li>• 2013 = 66%</li> </ul> <p>(Budget Analysis 2012)</p>	<p>LF OP9.3: % of government allocation in total MoHP budget:</p> <p><b>2013 target = 65%</b> <b>2015 target = 70%</b></p>	

## 10 PROCUREMENT

Challenges identified	Desired outcome	Recommended actions
<p><b>No internal procurement audit system in place</b> to detect system failings. (USAID report)<sup>3</sup></p>	<p>Internal procurement audit system in place and effectively integrated with current and future management information systems (drugs and equipment databases, Logistics Management Information System (LMIS), contract management database.</p>	<ul style="list-style-type: none"> <li>Develop internal procurement audit procedures, systems and guidelines and build staff capacity on internal audit. Will be compatible with overall internal control system being developed by MoHP.</li> </ul>
<p><b>Stock outs of essential drugs:</b></p> <ul style="list-style-type: none"> <li>2011 = 79% of facilities experienced no stock outs of 9 listed free essential drugs (LMIS 2011)</li> <li>2012 = PHCCs (13%), followed by SHPs (21%), HPs (25%) and hospitals (37%) experienced no stock outs (STS 2012).</li> <li>Widespread lack of adherence to agreed minimum stock levels (Mid Term Review of NHSP-2)</li> <li>2013 = hospitals (63%), followed by HPs (34%), SHPs (31%) and PHCCs (31%) experienced no stock outs (STS, 2013).</li> </ul>	<p>LF OP7.1: % of public health facilities with no stock out of listed free essential drugs in all four quarters:</p> <p><b>STS 2013 target = 30%</b> of all facilities experience no stock out of listed free tracer essential drugs.</p> <p><b>STS 2015 target = 40%</b> of all facilities experience no stock out of listed free tracer essential drugs.</p>	<ul style="list-style-type: none"> <li>Define or revise minimum stock for essential drugs.</li> <li>Investigate reasons for stock outs and which drugs are most stocked out.</li> <li>Provide staff training in timely ordering of drugs.</li> <li>Introduce an alternative system for obtaining drugs if drugs in question cannot be provided from an MoHP warehouse.</li> <li>Consider introduction of text message or smart phone -ordering system for key drugs.</li> <li>Statistically, there should be agreement between LMIS and STS on which drugs are traced and the methodology used. LMIS measures once a quarter, and so this will support to STS, which measures once a year.</li> </ul>
<p><b>Infrequent reviews of drug supplies:</b></p> <ul style="list-style-type: none"> <li>Annual reviews of drug supplies are not routinely undertaken in all facilities. Reviews less likely in lower level facilities with just 40% of SHPs undertaking reviews in 2011. Same figure was 22% in 2012 and 34% in 2013. (STS, 2011, 2012 and 2013).</li> </ul>	<ul style="list-style-type: none"> <li>Facilities regularly monitor and proactively manage drug supplies.</li> </ul>	<ul style="list-style-type: none"> <li>Introduce system and guidelines for how to monitor and manage the drugs supply.</li> <li>Introduce a feedback system with ad-hoc inspections from LMD contract managers and central warehouse managers visiting the facility.</li> </ul>

<sup>3</sup> Full reference not available.

Challenges identified	Desired outcome	Recommended actions
<p><b>Inappropriate storage of drugs:</b></p> <ul style="list-style-type: none"> <li>In 2012 (STS 2012) 13% of facilities were found not to be storing drugs in a cool and dry place, while the same figure for 2013 (STS 2013) had decreased to 63%.</li> </ul>	<ul style="list-style-type: none"> <li>Facilities store drugs securely and in line with manufacturers' storage recommendations.</li> </ul> <p>Note: All facilities should store drugs in cool and dry places.</p>	<ul style="list-style-type: none"> <li>Introduce simple guidelines on how to run a store facility, perhaps partly with a cartoon illustration approach.</li> <li>Test out colour coding for categorising drugs.</li> <li>Create an awareness of the importance of keeping drugs in cool and dry places. Introduce the use of shelves for drugs.</li> </ul>
<ul style="list-style-type: none"> <li>In 2011 (STS 2011), over half of facilities (56%) did not have a refrigerator for drug storage and 22% did not have method of cooling 24/7.</li> <li>In 2012 (STS, 2012), all hospitals, 71% PHCCs, 51% HPs and 14% SHPs had at least one functional refrigerator but all had a method of cooling on a 24/7 basis.</li> <li>In 2011, 12% of facilities did not use a 'first expired-first out' storage system, while in 2012, 16% of facilities did not.</li> <li>In 2013, 23% of facilities with drugs did not store it as per first expired, first out (FEFO) principles</li> <li>In 2013, all the hospitals had at least one functional refrigerator while 96% of SHPs, 59% of HPs and 23% of PHCCs did not have a functional refrigerator to maintain the cold-chain. (STS, 2011, 2012, 2013)</li> </ul>	<ul style="list-style-type: none"> <li>All facilities that store temperature-sensitive drugs have constant access to at least 1 refrigerator. Where power supply is unreliable, ice-boxes (and solar power) should be used.</li> <li>All facilities use a 'first in-first out' storage system</li> </ul>	<ul style="list-style-type: none"> <li>Together with the relevant DoHS divisions/centres, LMD's contract management unit should track which facilities receive refrigerators and make a priority list for where to supply new refrigerators, as well as ensure that all facilities are aware of where to procure spare parts. A preventive maintenance manual on refrigerators could be distributed to all facilities.</li> </ul>
<p><b>LMIS</b> is used alone by DoHS divisions and centres in a limited way for annual forecasting and planning of procurement in consolidated annual procurement plans (CAPP). LMIS'S full potential as a tool for development and adjusting the CAPP is yet to be exploited.</p>	<ul style="list-style-type: none"> <li>Increased use of data from LMIS for developing CAPPs should make procurement more precise.</li> </ul>	<ul style="list-style-type: none"> <li>Develop a strategy and plan on how DoHS Divisions and centres should use LMIS data in procurement planning, supported by LMD's analytic staff.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
<p><b>Gaps in equipment:</b></p> <ul style="list-style-type: none"> <li>• Many items of equipment required for provision of core services are unavailable/ insufficiently available (STS 2011).</li> <li>• Lack of essential equipment is limiting service availability in CEONC facilities (CEONC readiness study).</li> </ul>	<ul style="list-style-type: none"> <li>• Facilities have enough equipment available to provide quality care.</li> <li>• The introduction of the use of mobile phones (SMS/smart phone apps) in the pull system for ordering and monitoring.</li> </ul>	<p>Investigate reasons for shortages of equipment:</p> <ul style="list-style-type: none"> <li>• If due to poor understanding by store keepers of ‘minimum levels’, provide training.</li> <li>• If due to lacking possibility to obtain equipment from LMD (or other source), LMD (with NHSSP support) should investigate reasons for it happening and find solutions and implement solution.</li> <li>• If due to problems in ordering system (pull/push), revise system (e.g. improve LMIS), introducing better warehouse management systems, strengthen IT capacity in facilities and/or introduce text message system for ordering (if pull system is used).</li> <li>• Analyse how different types of modern technology (such as text messaging and barcodes) can improve present LMIS system, especially for more precise ordering (pulling) and monitoring of inventory level from distance.</li> </ul> <p>It is also recommended to assess supply of medical equipment supplied from the local markets, often funded by HFMOs or local government, to estimate whether these resources can be harnessed in a strategic way..</p>
<p><b>Non-functioning equipment found in all facilities (STS, 2011), and no system for repairing and maintaining equipment in place (CEONC readiness study)</b></p>	<ul style="list-style-type: none"> <li>• Sub-standard equipment should not be received into the system in the first place. Preventive management system for acceptance check should be in place and procedures followed.</li> <li>• Faulty equipment is checked and repaired regularly, or replaced.</li> <li>• Budget is available to cover equipment repair and maintenance costs.</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate reasons for broken equipment.</li> <li>• Establish earmarked budgets for regular repair and maintenance, available to districts for local management. Include in AWPBs according to GAAP requirement.</li> <li>• Update Implementation Guidelines to include reference to preventive maintenance manual, and repair and maintenance budgets.</li> <li>• Regional staff to facilitate contact between CEONC sites and regional technicians.</li> </ul>

Challenges identified	Desired outcome	Recommended actions
		<ul style="list-style-type: none"> <li>Update guidelines to include advice on use of preventive maintenance and of technicians for repair and maintenance.</li> </ul>
<p><b>A substantial proportion of facilities do not undertake equipment reviews</b> annually as recommended (STS 2011).</p>	<p>Facilities regularly monitoring the availability and functionality of equipment to inform central procurement plans as part of an effective 'pull' system.</p>	<ul style="list-style-type: none"> <li>LMD to develop a system for regularly monitoring equipment and a system for being informed of needs of facilities. This should include checklists for how to undertake equipment reviews.</li> </ul>
<p><b>LMD equipment lists</b> may be out of sync with facility caseloads (STS 2011).</p>	<p>Where a 'push' system is appropriate to ensure the (re)supply of equipment levels, minimum recommended equipment quantities are based on current caseloads.</p>	<ul style="list-style-type: none"> <li>Adhere to standardised equipment list for health facilities. This is currently under development.</li> </ul>

## 11 HUMAN RESOURCES

Challenges identified	Desired outcome	Recommended action
<p><b>A small (and falling) proportion of sanctioned doctor posts filled across the health system:</b></p> <ul style="list-style-type: none"> <li>In 2011 50%, in 2012 23% and in 2013 23% of sanctioned doctor posts at PHCCs filled.</li> <li>In 2011, 69% of sanctioned doctor posts were filled at district hospitals, in 2012, 63% of sanctioned posts were filled; in 2013, 47% of sanctioned posts filled (STS 2011, 2012 and 2013)</li> </ul>	<p>LF OP3.1.1: % of sanctioned posts filled – doctors at PHCCs <b>2013 target = 88%</b> <b>2015 target = 90%</b></p> <p>OP3.1.2: % of sanctioned posts filled – doctors at district hospitals <b>2013 target = 88%</b> <b>2015 target = 90%</b></p>	
<p><b>Small (and falling) proportion of sanctioned nurse posts filled across health system:</b></p> <ul style="list-style-type: none"> <li>In 2011, 74%, in 2012, 59%, and in 2013 39% of sanctioned nurses' posts at PHCCs.</li> <li>In 2011 and 2012, 83% of sanctioned nurses' posts at district hospitals filled; in 2013 55% filled. (STS 2011, 2012 and 2013)</li> </ul>	<p>OP3.1.3: % of sanctioned posts that are filled – nurses at PHCC <b>2013 target = 88%</b> <b>2015 target = 90%</b></p> <p>OP3.1.4: % of sanctioned posts that are filled – nurses at district hospitals <b>2013 target = 88%</b> <b>2015 target = 90%</b></p>	
<p><b>Too few staff at district hospitals to provide CEONC services:</b></p> <ul style="list-style-type: none"> <li>In 2011, 13% of district hospitals had at least 1 MDGP or obstetrician/ gynaecologist; 5 nurses and 1 anaesthetist or anaesthetist assistants (AAs); in 2012 and 2013 no hospitals had these staff in post (STS 2011, 2012 and 2013).</li> <li>Lack of staff affects health service provision. Hospitals are widely unable to provide caesarean sections because only single CS provider and inadequate support team are in post (CEONC study).</li> </ul>	<p>LF OP3.3: % of district hospitals that have at least 1 MDGP or Obstetrician/ Gynaecologist; 5 nurses (SBA), and 1 Anaesthetist or Anaesthetist Assistant: <b>2013 target = 60%</b> <b>2015 target = 80%</b></p>	<ul style="list-style-type: none"> <li>Encourage medical college to place resident postgraduates in district CEONC hospitals.</li> <li>Develop and implement plan to increase number of trainee ASBAs and AAs as part of wider HRH planning.</li> <li>Continue to use Diploma in Gynaecology and Obstetrics (DGO) training programme to increase number of trained Obs/Gyn staff as short term measure.</li> <li>Create MDGP/Obs-Gyn/ AA posts at district level</li> </ul>

Challenges identified	Desired outcome	Recommended action
<p><b>Too few sanctioned posts:</b></p> <ul style="list-style-type: none"> <li>In 2011, staff at HPs were most likely to report the number of sanctioned staff as being inadequate (91%) and hospital staff were least likely to do this (81%) (STS 2011).</li> <li>No MDGP/obstetrician/ gynaecologist or anaesthetic assistant posts are sanctioned in district hospitals meaning that these roles often remain unfilled and CEONC services cannot be provided (CEONC Readiness study)</li> </ul>	<p>Sanctioned post numbers reflect staffing needs in health facilities.</p>	<ul style="list-style-type: none"> <li>Continue to use CEONC fund as transitional strategy until recommended staffing is available through government-sanctioned posting.</li> <li>Clarity on guidance for using multi-year contracts to enable effective recruitment and retention.</li> </ul>
<p><b>Too few SBAs trained:</b></p> <ul style="list-style-type: none"> <li>In 2011, targets for SBA training and deployment were missed by 36%: 2,562 SBAs were trained against target of 6,000.</li> </ul>	<p>LF OP3.3: Number of production and deployment of SBAs:  <b>2013 target = 6,000</b>  <b>2015 target = 7,000</b></p>	
<p><b>Poor gender and ethnic mix of health providers:</b></p> <ul style="list-style-type: none"> <li>The sex of health providers is closely related to the type of staff position, with women most likely to occupy nursing positions and MCHW roles and men more likely to be doctors, medical officers, health assistants, AHWs and VHWs. (STS, 2013)</li> <li>Positions in health facilities are dominated by Brahmins, Chhetris and Madhesi-Tarai. This is especially true for higher level facilities and more senior positions. (STS 2013).</li> <li>A lack of same-sex health professionals inhibits discussion about and use of family planning by clients (PEER report 2012)</li> </ul>		
<p><b>HR management and development constraints:</b></p> <ul style="list-style-type: none"> <li>Overlapping human resource functions for HR information, postings and transfers and the management of personnel training.</li> <li>Gaps in terms of the lack of separate entities, i) for the overall coordination of HR activities, ii) to</li> </ul>		<ul style="list-style-type: none"> <li><b>Improve coordination</b> — As interim step, explore mechanisms for improving coordination across all government entities that carry out HRH functions and between HRH departments and departments as they develop the new health strategy.</li> </ul>

Challenges identified	Desired outcome	Recommended action
<p>oversee HR development, and iii) to oversee HR employee relations.</p> <ul style="list-style-type: none"> <li>• Bottlenecks: i) long multi-step processes for carrying out activities such as forming new posts, and ii) required involvement of multiple entities within and outside MoHP for approving and implementing changes.</li> <li>• Critical shortage of human resource professionals within MoHP and DoHS with no professional staff with specific human resource qualifications.</li> <li>• Rapid staff turnover, with this being especially critical for leadership roles (HR Mapping 2013)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Improve the organisation structure</b> — in the short term, reduce the turnover of senior HRH resource leaders. In the longer term, identify a more suitable and unified structure for managing all HRH functions in a more coordinated way noting best practices in other countries.</li> </ul>
<p><b>Absorbing qualified health workers:</b></p> <ul style="list-style-type: none"> <li>• The production of the main health professionals that are already in the health system is sufficient with high futures very likely. The requirement scenarios emphasise the need to ensure that there are effective strategies in place, such as those contained in the HRH Strategic Plan, to absorb qualified health workers produced and available for work into the public and private health sectors (HRH country profile 2013).</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Build capacity</b> — In the short term, develop ways of building capacity of human resources leaders. In the longer term MoHP should consider creating posts for professional human resource leaders who remain within MoHP.</li> </ul>

## 12 LOCAL HEALTH GOVERNANCE

Challenges identified	Desired outcomes	Recommended actions
<b>Local Health Governance</b>		
<p><b>National Level:</b></p> <ul style="list-style-type: none"> <li>• Continuation of centralised annual work plan and budgeting.</li> <li>• Absence of a defined institutional home within MoHP for the local governance of health services.</li> <li>• Current grant provision is grossly insufficient with delays in fund flows.</li> <li>• Synergy with other community development initiatives under MoFALD i.e. LGCDP and other community based programs (on-budget and off-budget) is insufficient.</li> <li>• Suboptimal coordination (inter-sector and intra-ministerial) in particular MoHP–MoFALD. (RA of LHGSP 2013)</li> </ul> <p><b>District Level:</b></p> <ul style="list-style-type: none"> <li>• Need to revisit composition of district technical teams (DTTs) to ensure participation of community representatives at district level.</li> <li>• Clearly defined division of labour between DPHOs/DHOs and district development committees (DCCs) is urgently required.</li> <li>• Standard process of district health planning and approval system less intact. Also, resource management and financial governance mechanism required improvements. (RA of LHGSP, 2013)</li> </ul> <p><b>Health Facility Level:</b></p> <ul style="list-style-type: none"> <li>• Local planning process needs further standardisation.</li> <li>• Single year contracting is an issue in local hiring of human resources.</li> <li>• Although local bodies (HFOMC) have been strengthened; they lack full capacity to 'operate, lead and manage' policy, and deal with overall health service delivery functions and health facility management.</li> <li>• Great need to integrate planning process at local level with greater participation of community people.</li> </ul>	<p>Improved health governance</p>	<ul style="list-style-type: none"> <li>• Expand Local Health Governance Strengthening Programme (LHGSP) to cover all VDCs in pilot districts.</li> <li>• Align the profile analysis, planning, programming and budgeting process with DDCs' and VDCs' standard planning processes.</li> <li>• Promote transparency and formal checks and balances.</li> <li>• Increase grant and expand of DTTs.</li> <li>• Find alternative for HR issues.</li> <li>• Clarify roles and responsibilities of key stakeholders.</li> <li>• Revisit LHGSP's institutional setup for its management functions.</li> <li>• Strengthen M&amp;E and local accountability.</li> <li>• Enable and promote research.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<ul style="list-style-type: none"> <li>• There are several sub-sector and programme specific committees at local level, but they are not linked: i.e. health, agriculture, education, water supply, forestry.</li> <li>• Reporting mechanism and financial management capacity remain weak. Translating issues from social audits and community hearings into actions is weak due to weak local capacity, inactive local bodies and resource gaps.</li> <li>• No authority delegated to local bodies for local hiring of vacant positions.</li> </ul> <p>(RA of LHGSP 2013)</p>		
<p><b>Local level</b></p> <ul style="list-style-type: none"> <li>• Continuation of locally hired staff has remained a challenge for HFOMC because of lack of regular sources for salary and other benefits.</li> <li>• Practice of developing action plan by HFOMC is still very low.</li> <li>• Less than half HFOMCs develop annual plan. The practice of bottom-up planning process was hardly observed while formulating the annual plan.</li> <li>• Community people of all facilities were unaware of the HFOMC formation process. None of them informed of being invited to attend such meeting. Representation of public in such mass meeting was often accidental. Similarly, most of them were found unaware of the activities of HFOMC.</li> <li>• Practice of annual financial audit was found very low but it was increasing over years after the program. Only LHGSP facilities were found to have 100% financial audit over the years. Practice of social audit was found in one facility only. None of the facilities did public hearing.</li> <li>• Lack of provision for follow-up and refresher training and training for new members, weak implementation of action plan and weak monitoring from district.</li> <li>• Institutional development processes of HFOMC were found weak. Most HFOMC had no practice of keeping bank account, stamp and letter pad of committee. Limited number of trained technical persons at district level for monitoring and providing technical</li> </ul>	<p>Improved health governance</p>	<p><b>Local level:</b></p> <ul style="list-style-type: none"> <li>• Conduct regular refresher and basic trainings for new and old HFOMC members.</li> <li>• Provide opportunities to HFOMC members for training, exposure visits and workshops.</li> <li>• Develop and implement human resource recruitment and mobilization policies at local level.</li> <li>• Train HFOMCs for developing long term plans, codes of conduct, institutionalisation, and formation and reformation process.</li> <li>• Build additional capacity of HFOMCs for regular coordination with local communities, CBOs and private sector for awareness raising, fund raising and service use.</li> <li>• Emphasize participation of Dalit and women in HFOMC meetings and implementation of action plans.</li> <li>• Orient VDC secretaries on plans, policies and national priority programmes related to health. Similarly, orient health facility-in-charges on provision of Local Self-Governance Act (LSGA), VDC grant mobilization guidelines and local bodies' planning process.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<p>backstopping of HFOMCs. Decentralization focused units were also not observed. Practices of joint monitoring and sharing of issues among district level stakeholders were also very limited. (HFMS 2012)</p>		<p><b>District level:</b></p> <ul style="list-style-type: none"> <li>• Develop district specific guidelines addressing issues of staff management, fund transformation, and resource generation for handed over districts.</li> <li>• Establish sectoral health sections at DDCs and decentralization units at DPHOs/DHOs according to provisions of LSGA.</li> <li>• DPHOs/DHOs should streamline planning calendars with DDCs to avoid duplication and contribute to develop ownership over district health programmes by local bodies.</li> <li>• Government should provide regular budget for training and post training support activities focusing on inactive HFOMCs.</li> <li>• DPHOs/DHOs should conduct regular monitoring, backstopping, review, sharing and maintain database of HOFMC activities at district level.</li> </ul> <p><b>Central level:</b></p> <ul style="list-style-type: none"> <li>• Establish mechanism at central level to coordinate with sectoral agencies and ministry.</li> <li>• Continue technical backstopping of district planning and governance with strengthened monitoring from regional level.</li> <li>• Define role of DDCs and DHOs/DPHOs as overall managerial and regulatory bodies to enhance health sector decentralization.</li> <li>• Place lead role of health sector decentralization in one programme division of DoHS, to make it responsible for institutional development.</li> <li>• Enhance capacity of district level staff for facilitating bottom-up planning process.</li> </ul>
<p><b>2013 targets for social auditing met, however differences noted by type of facilities:</b></p> <ul style="list-style-type: none"> <li>• health facilities that undertook social audits as per MoHP guidelines in the last fiscal year -15%</li> </ul>	<p>% of health facilities undertaking social audits as per MoHP guidelines: <b>2013 Target =15%</b></p>	

Challenges identified	Desired outcomes	Recommended actions
<ul style="list-style-type: none"> <li>Facilities that conducted a social audit in last fiscal year made findings public and incorporated recommendations in AWPB -11%:</li> <li>Facilities with a HFOMCs /HDC meeting on a monthly basis -31%</li> <li>Facilities with at least three females and at least two Dalit and Janajati members in HFOMCs/ hospital development committee (HDCs) = 70% (STS 2013)</li> </ul>	<p><b>2015 Target =25%</b></p> <p>% of facilities with at least three females and at least two Dalit and Janajati members in HFOMCs/HDCs:</p> <p><b>2013 Target =70%</b>  <b>2015 Target =100%</b></p>	
<b>Access and Equity</b>		
<p><b>Gender-based decision making</b> in the home, and the need for women to seek permission from guardians to leave the home, were common to all geographical areas and social groups in the PEER study (2012), and are a major constraining factor to women’s and children’s access to health services.</p> <p><b>Women’s work burdens and economic dependence on men:</b></p> <ul style="list-style-type: none"> <li>Women in hill and Terai regions have limited time to seek health care, making it difficult for them to access time-sensitive services or those that require repeat visits, such as antenatal care (ANC) and immunization.</li> <li>Heavy and arduous labour places women at risk, particularly of miscarriage and uterine prolapse.</li> </ul> <p><b>Distance to services:</b></p> <p><b>Social, cultural, and religious beliefs:</b> Acceptance of FP is affected by strong son preference across social groups:</p> <ul style="list-style-type: none"> <li>The social framing of abortion as immoral inhibits access to and use of safe abortion.</li> </ul> <p><b>Supply-side barriers:</b> The main barriers reported to impact access to services were staff attendance and related opening hours, and direct and indirect costs of services.</p> <ul style="list-style-type: none"> <li>Indirect costs, including transportation, often greater than direct costs charged at facilities, especially in hills, where transport access is limited. Clients were charged for some free services.</li> </ul> <p>(PEER study 2012)</p>		<ul style="list-style-type: none"> <li>Improve quality of care and delivery of peripheral health services.</li> <li>Introduce new initiative to improve access to services in remote areas.</li> <li>Work in partnership with other agencies to address social and cultural factors.</li> <li>Strengthen local-level planning at district and facility levels.</li> <li>Introduce flexible district-level funds targeted to reaching unreached groups.</li> <li>Strengthen Health Facility Operation and Management Committees and the leveraging of local stakeholders.</li> <li>Strengthen accountability and transparency of local health services.</li> <li>There are policy implications for addressing gender issues.</li> <li>Improve inter-sectoral coordination to address socioeconomic barriers.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<ul style="list-style-type: none"> <li>• 28% of women reported having experienced spousal physical and/or sexual violence at least once. Women's empowerment was inversely associated with greater odds of experiencing spousal violence.</li> <li>• Use of four or more antenatal care visits significantly greater for highly empowered women. Less empowered women and women who had experienced spousal violence more likely to have anaemic children with lower immunization.</li> </ul> <p>(Tuladhar et al. 2013)</p>		<ul style="list-style-type: none"> <li>• Women's empowerment and spousal violence appear to have important implications for health of women and their children. It is recommended that a holistic approach for improving the health of women and children is needed incorporating multi-sectoral programming to promote women's empowerment and reduce gender-based violence.</li> </ul>
<p>Following four strategic management conditions need to be met to enable EAP to deliver results and provide value-for-money: (Strategic Review of EAP 2012)</p> <ul style="list-style-type: none"> <li>• The multi-year contracting of NGO partners with annual incremental budgets.</li> <li>• Increased central level involvement in district NGO selection process.</li> <li>• The strengthened supervision and monitoring of programme implementation.</li> <li>• Better coordination with MoFALD/LGCDP and other social mobilization programmes.</li> <li>• Strengthen the targeting of the unreached.</li> <li>• Extend the focus of the EAP package.</li> <li>• Ensure quality.</li> </ul>		<p>It is recommended that PHCRD takes the lead implementing the following:</p> <ul style="list-style-type: none"> <li>• Agree with major stakeholders on how to shape EAP for the future.</li> <li>• Undertake necessary administrative procedures for securing multi-year contracting of NGOs to implement EAP.</li> <li>• Undertake a comprehensive costing exercise and develop performance criteria for the multiyear contracting of implementing NGOs.</li> <li>• Develop a workplan to reshape EAP in line with recommendations of the review.</li> <li>• Develop a five year strategy for EAP implementation in consultation with stakeholders in MoHP and MoFALD and among external development partners.</li> <li>• Develop ToRs for hiring third party technical support-cum-programme monitoring agency.</li> </ul>
<p><b>GESI:</b></p> <ul style="list-style-type: none"> <li>• The term GESI was generally familiar to all. But was less understood and mainstreamed at the periphery. The GESI concept and terminology was still a novelty to most DPHOs and DHOs, even ones who had received orientation.</li> <li>• GESI institutionalization has not reached the districts and health facilities fast enough. This was a major shortcoming.</li> </ul> <p>(NHSP 2 mid-term review, 2013)</p>		<ul style="list-style-type: none"> <li>• Formulation and funding of a three year GESI sub-strategy for mainstreaming in health at the district and facility level.</li> <li>• Strengthen GESI leadership: The GESI Steering Committee should be active in convening its meetings regularly with appropriate administrative documentation.</li> <li>• Integrate GESI into key training programmes: Add value to National Health Training Centre's curriculum reviews for GESI.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
		<ul style="list-style-type: none"> <li>• Develop GESI-relevant health communication: Add value and make effective the new operational guidelines of NHEICC.</li> <li>• Consider phased introduction of GESI institutional mainstreaming: Integrate GESI responsibilities into existing committees and structures. Since GESI is cross-cutting, a better fit might have be for GESI Steering Committee (GSC) to be a sub-committee of NHSP-2 Steering Committee (if functional).</li> </ul>
<b>Representation of females and Janajati and Dalits</b>		
<p><b>Target for 2013 met:</b></p> <ul style="list-style-type: none"> <li>• 72% of health facilities had at least three females and at least two Dalit and Janajati members on HFOMCs and hospital development committee (HDCs) (STS, 2013)</li> </ul>	<p>OP 1.3: % of HFOMCS with at least 3 female members and at least 2 Janajati and Dalit members.</p> <p><b>2013 target = 70%</b> <b>2015 target = 100%</b></p>	
<b>Quality of Services</b>		
<p><b>Physical facilities, equipment and supplies:</b></p> <p>The availability of basic infrastructure is not satisfactory (HIS):</p> <ul style="list-style-type: none"> <li>• Only 77% of sanctioned posts were fulfilled in surveyed health facilities. Among fulfilled post, about 10% human resources not available at time of survey.</li> <li>• Essential equipment and drugs lacking in most of the health facilities.</li> <li>• Most health facilities unable to provide full range of contraceptive methods.</li> <li>• Very few health facilities were offering the caesarean sections, blood transfusions; second trimester induced abortion and assisted vaginal forceps delivery.</li> <li>• Mechanism for receiving client opinion on health facilities was not well established.</li> <li>• Use of HMIS 8 was very limited.</li> </ul> <p><b>Service provider's perspectives:</b></p> <ul style="list-style-type: none"> <li>• Health personnel not confident to perform complicated surgical procedures.</li> </ul>		<ul style="list-style-type: none"> <li>• Maternal health services should be available throughout the week.</li> <li>• Immediate action is needed to improve the social and health infrastructure.</li> <li>• Need of standard equipment supply and drugs for particular types of facilities should be defined and availability of equipment, drugs and other supplies in health facilities should be ensured.</li> <li>• To make referral systems practical and functional, health facility referral plans should be developed and a scientific referral system with necessary links and provision of service should be ensured</li> <li>• Regularize routine meetings of managers of different levels of health facilities and focus on improving service delivery. System of collecting client opinions and feedback should be strengthened by developing guidelines to make it systematic by defining standard process and tools to collect client opinions.</li> </ul>

Challenges identified	Desired outcomes	Recommended actions
<p><b>FP client's perspectives:</b></p> <ul style="list-style-type: none"> <li>• Clients didn't get information about how to use methods, and their possible side effects, about ways to overcome problems they could have due to adoption of methods and on breast self-examination.</li> <li>• About 16% clients reported that privacy and behaviour of health service providers were big problematic issue at facilities.</li> <li>• Majority of FP clients were either very satisfied or satisfied with services received. However, one in ten PHCC clients and one in twenty hospital clients were not satisfied with the current provision of health service delivery.</li> </ul> <p><b>ANC clients' perspectives:</b></p> <ul style="list-style-type: none"> <li>• Almost a tenth of clients who had visited for ANC reported that they did not receive any supply or prescription of iron tablets.</li> <li>• Considerable proportion of ANC clients reported that service producers did not ask about TT vaccination at any visit.</li> <li>• Almost half of service providers did not inform at all about danger signs during pregnancy.</li> <li>• Only about half of clients reported that service providers discussed plan for delivery.</li> <li>• About three-fourths of clients mentioned that service providers did not discuss about preparation for delivery.</li> <li>• About a quarter clients reported that service providers advised for exclusive breastfeeding and use of FP methods after deliver.</li> <li>• Majority of respondents reported waiting time, privacy and availability of medicines were problematic at health facilities.</li> <li>• One out of six clients was not satisfied.</li> </ul> <p>(HIS 2011)</p>		<ul style="list-style-type: none"> <li>• Counselling for family planning and other maternal health services should be strengthened.</li> <li>• Existing quality assurance mechanisms should be reviewed and quality assurance framework with broader framework implemented.</li> <li>• Develop infection prevention guidelines and implement an M&amp;E system to ensure good quality infection prevention in reproductive health service delivery.</li> </ul>

## 13 CONCLUSIONS

Credible measures of the effects of health policy are powerful instruments for focusing the attention of policy makers on improving health services and promoting equity in health services. Evidence produced using rigorous methodology and systematic research serves as a very useful instrument to measure, describe, monitor, evaluate and analyse the implementation of existing health policies.

In Nepal, components of essential health care services such as, reproductive, maternal and child health services, have sufficient evidence for clear and systematic planning and action to improve the health indicators. However, other areas, including nutrition, mental health, oral health, non-communicable diseases, and other areas still need researching to generate further information.