

Health Sector Transition and Recovery Programme

FHD Supported to Monitor Functionality of all CEONC Sites
(All Public And Ngo CEONC Sites)
across 69 Districts, and
Mentoring of Service Providers

January 2017



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ABBREVIATIONS

Advanced Skilled Birth Attendant	ASBA
Anaesthesia Assistant	AA
Annual Work Planning and Budget	AWPB
Antenatal Care	ANC
Basic emergency obstetric and newborn care	BEONC
Birthing Centre	BC
Caesarean Section	C-Section
Chief District Officer	CDO
Comprehensive Emergency Obstetric and Newborn Care	CEONC
Department of Health Services	DoHS
Diploma in Gynaecology and Obstetrics	DGO
Director General	DG
District Health Information Software	DHIS-2
Doctor of Medicine–General Practice	MDGP
Essential Health Care Services	EHCS
Family Health Division	FHD
Government of Nepal	GoN
Health Assistants	HA
Health Management Information System	HMIS
Health Sector Transition and Recovery Programme	HSTRP
Human Resource	HR
Manual Vacuum Aspiration	MVA
Ministry of Health	MoH
National Health Training Centre	NHTC
National Public Health Laboratory	NPHL
Non-Governmental Organisation	NGO
Nepal Demography and Health Survey	NDHS
Nepal Health Sector Programme - 2	NHSP - 2
Nepal Health Sector Strategy	NHSS
Nepal Health Sector Support Programme	NHSSP
Nepal Multiple Indicators Cluster Survey	NMICS
Nick Simon Institute	NSI
Obstetrician and Gynaecologist	OBGYN
Operation Theatre	OT
Postnatal Care	PNC
Primary Health Care Centre	PHCC
Safe Motherhood and Newborn Sub-Committee	SMNSC
Safe Motherhood Network Federation	SMNF
Staff Nurses	SN

1. INTRODUCTION

This is a report on the activities supported by the NHSSP and HSTRP to improve delivery of Comprehensive Obstetric and Newborn Care (CEONC) services in 73 facilities across 66 districts. This report includes the work undertaken by the DoHS, supported by NHSSP-HSTRP during mid-July 2016 to mid-January 2017.

1.1 Background

The Government of Nepal (GoN) has made substantial gains over the years, in terms of improving the health status of its citizens, despite conflict, natural disasters and other challenges. The second Nepal Health Sector Programme (NHSP-2, 2010-2015) which is now followed by the Nepal Health Sector Strategy (NHSS 2016-2021) show the government's efforts towards strengthening the health system. There were setbacks to this progress due to the considerable damage suffered by the health system due to the April 2015 earthquake.

MOH and DoHS are committed to expanding maternal and newborn health services and ensuring safe institutional deliveries through a network of primary health care level facilities that provide normal delivery (birthing centres- BC) and basic emergency obstetric and newborn care (BEONC) and secondary and tertiary facilities that provide comprehensive emergency obstetric and newborn care (CEONC). To date the Family Health Division (FHD) has established CEONC services across 69 districts in 82 government and NGO operated hospitals (see annex 1a). The focus on service expansion and strengthening of CEONC services has also been partly in response to the increase in C-section rates that have been seen in Nepal, and the realisation that CEONC service sites are skewed towards urban communities. Surveys have shown that C-section rates have increased from less than 1% in 2001 (NDHS 2001) to 4.6% in 2011 (NDHS 2011) to 8.6% in 2014 (NMISC 2014), but also that the rates are higher among urban women (19%), women in Kathmandu valley (24%), women with higher education (21%) and women of higher income quintile groups (25%) (NMICS, 2014). C-section rates among other communities are low; for example, 1.4% among women from mountain districts and < 1% among women with lowest wealth quintile (NDHS, 2011). In order to ensure that the health system is capable of meeting any CEONC needs among these populations, the NHSS (2016-2021) aims to provide CEONC services in all 75 districts of Nepal and also seeks to provide good quality services at all levels.

1.2 NHSSP and HSTRP

Following the earthquake in Nepal in 2015, DFID's Health Sector Transition and Recovery Programme (HSTRP, 2015 -2017) focused on supporting government to rebuild a functioning health system. The main aim of HSTRP has been to restore essential health care services, including obstetric care, family planning, physical rehabilitation and psychosocial care, across the 14 earthquake-affected districts with a particular focus on Ramechhap, Dolakha, and Sindupalchowk districts.

A major thrust of work under the Essential Health Care Services (EHCS) component of NHSSP and HSTRP, has been to support the FHD to strengthen EmOC services and make them accessible to communities, both in terms of service expansion as well as quality, especially in focusing on remote districts. Technical assistance provided through these programmes has supported FHD in planning, assessment, implementation and monitoring of service expansion and continuity of services at

CEONC and quality improvements for both CEONC and BEONC/BC levels. Special focus was given to 14 districts severely affected by Nepal earth quake. In particular CEONC services were established anew in two PHCC (Charikot PHCC, Dolakha district and Manthali PHCC, Ramechhap district – already described in PD 8 of HSTRP).

The support provided to FHD to improve the functionality of CEONC sites has included regular monitoring of CEONC service sites (district hospitals/PHCC level) and providing technical support as needed at the FHD level. The emphasis was given to newly established sites, those sites with problems in continuity of services and remote districts/sites.

1.3 Approach to improving the functionality and quality of CEONC services

The MoH's strategy to improving CEONC services has largely rested on two approaches:

- a. Strengthening human resources for health
- b. Improving infrastructure and equipment at facilities.

One of the first concerns has been to increase the availability of C-section service providers, and MoH has aimed to do this through skill training and task-shifting as well as recruitment. MoH has encouraged higher uptake of programmes such as the Doctor of Medicine–General Practice (MDGP) and Diploma in Gynaecology and Obstetrics (DGO)¹ training by providing scholarships and bonds to doctors to provide services at district level hospitals. Task-shifting has included Advanced Skilled Birth Attendant (ASBA) training for MBBS doctors and anaesthesia assistant (AA) training for Health Assistants (HA) and Staff Nurses (SN). FHD also provides CEONC funds to CEONC sites to recruit staff locally at district hospitals for improving integration of short-term staff with existing service providers at the hospitals. The FHD also provides funds for equipment to new CEONC sites to equip the operation theatre and post-operation room. The National Public Health Laboratory (NPHL) provides training on blood transfusion for laboratory technicians/laboratory assistants to start blood transfusion services at newly established CEONC sites and also for continuity of blood transfusion services in all hospitals.

NHSSP and HSTRP have supported FHD in the expansion of CEONC sites and in monitoring all district level and sub-district CEONC sites (district hospitals and PHCC level). District level support was also provided for the recruitment of staff, for management support and for capacity enhancement of service providers, especially to newly established and remote districts/sites where the capacity of service providers has been weaker in comparison to urban and referral hospitals and to sites experiencing management problems.

2. KEY ACTIVITIES TO IMPROVE FUNCTIONALITY OF CEONC SERVICES (INPUTS)

¹ GON stopped DGO training from 2016/17 fiscal year

As mentioned above, FHD has established CEONC services in 69 districts, but the functionality of these service sites has varied. The following key activities were implemented to support the FHD, DOHS and MOH to improve functionality at 73 sites across 66 districts²:

- a. Mapping all CEONC sites across the country
- b. Monitoring of CEONC sites and reporting to FHD, DoHS divisions/centres and MOH
- c. Conducting site assessments for establishing CEONC services in new districts
- d. Supporting to MOH/DOHS activities such as facilitating and coordinating production of DGO and AA and in-service training of service providers including ASBA, Operation Theatre (OT) management and Blood transfusion training
- e. Coordination and advocacy with other supporting partners to fill gaps identified at service sites.

In addition to the above, key activities that were undertaken for and at 73 CEONC service sites (hospitals and PHCC) across 66 districts include:

- Supporting the recruitment of service providers through the CEONC fund
- Facilitating and managing use of locum doctors and AA
- On-site visits to CEONC sites
- Regular off-site communication with service sites
- Responding to support requests from service sites
- Financial support to bridge CEONC fund for six district hospitals (as a part of the earthquake response)

SUPPORT PROVIDED AT MOH/DOHS/FHD LEVEL

2.1 Mapping of CEONC sites

A mapping of all CEONC service sites across the country was undertaken by FHD and NHSSP. This included all government sites as well as those being operated by supporting partners and recorded details on geographical/locational information and type of service sites (referral hospitals, district hospitals and PHCCs) of 82 CEONC sites from across the 69 districts.

2.2 Monitoring and reporting:

The FHD and NHSSP decided to regularly monitor 73 facilities (see Annex 1) out of the 82 CEONC sites that were established. These included 53 district level hospitals, 16 regional, sub-regional and zonal level hospitals and 4 PHCCs. District level hospitals that are operated/supported by NGOs were also included. FHD decided to include at least one CEONC site from each district however excluded central level and teaching hospitals.

NHSSP developed templates for monitoring CEONC sites so that the FHD has regular information from each of the sites. Information such as that on the availability of human resources, equipment, drugs and supplies, status of physical facilities, and service provision on C-section, blood transfusion services and institutional delivery, was to be collected through the template in a quarterly basis. In addition, a simpler template that include only HR status and provision of C-section was also

² Among 69 districts with CEONC hospitals/PHCC, four districts (Sunsari, Kathmandu, Lalitpur and Kavre) are not included in the monitored district being Teaching Hospital sites and well established. Sindhupalchowk district as a focus district is included in the 66 monitored districts although yet fully established as a CEONC site.

developed for monthly monitoring and reporting to the FHD director, which required information only some selected key indicators (see annex 2a and 2b).

The template was sent to all CEONC sites at the beginning of the fiscal year (2014/15). However, as data reported from many of these facilities was either incomplete or not submitted as required, NHSSP and FHD staff collected this information via telephone. The monitoring data through the comprehensive monitoring format was collected on a quarterly basis (August 2016, November 2016, and January 2017). Human resource and provision of C-section services data was collected on monthly basis through the simpler format, from all the service sites mainly via telephone by the NHSSP/FHD staff and also through site visits and visits of the staff from CEONC to FHD/NHSSP.

Regular reports based on the monitoring data collected were sent to the FHD Director by the team (made up of CEONC mentor of NHSSP and Senior OBGYN of FHD). These included printed reports, email communication, and verbal updates especially on sites with problems in functionality and management³. This helped the FHD Director to provide feedback and guidance, and plan site visits. The team also communicated with various officials within DOHS and MOH including DG, the Health Secretary, Human Resource section for their support related to human resource issues. The regular feedback helped to make immediate improvements at the facility level. For example, when the FHD director, DG and Human Resource Division of MoH had information about un-matched transfers of C-section service providers (i.e. transferring trained C-section service providers to non-CEONC sites), it facilitated such staff transfers to be made to appropriate facilities. This led to two DGO doctors transferred from zonal hospitals to district hospitals and two AA to be transferred from non-CEONC sites to CEONC sites (Sindhuli and Achham district hospitals) in the current fiscal year.⁴

The monitoring formats were designed to extract and use HMIS data for regular monitoring of the signal functions of CEONC services. However, due to lack of timely reporting and other irregularities of HMIS data, this information could not be collected regularly. Reporting on obstetric complications and newborn asphyxia are mostly incomplete.

2.3 Site assessment to establish new CEONC services:

FHD proposed the establishment of new CEONC services in three districts – Parbat, Jajarkot and Rasuwa district hospitals, and this was also budgeted in the Annual Work Planning and Budget (AWPB). The team (NHSSP CEONC mentor and FHD staff) visited all three districts to undertake site assessments and make recommendations for establishing CEONC services.

Parbat district hospital: The site assessment was conducted in 2014/15 fiscal year. The hospital has adequate infrastructure to start CEONC services but lacks equipment and a C-section service provider. FHD provided funds for equipment during 2015/16 and CEONC fund was provided for fiscal year 2015/16 and 2016/17. The CEONC mentor supported planning for starting C-Section and blood transfusion. C-Section services were established in early 2016/17 fiscal year. The hospital continues to provide the service without interruption.

³ Please see annex 3a on status of 73 sites based on monitoring template, 3c for districts experience problems in continuing C-Section services

⁴ Please see Annex 4c on communication with DG and MOH officials

Rasuwa district hospital: The site assessment was done in May 2016, which identified the need for a new building. With the financial support from Nepal Red Cross, the building is currently being constructed and the CEONC services will be established on its completion. Following the site assessment the team also recommended that a comprehensive district surgical unit should be established rather than focusing just on CEONC services. The team felt that due to very small size of catchment population for this district hospital (less than 15,000 people) the estimated C-Sections per year were not expected to go over 20 in number and that an expanded surgical services unit at this facility could be of greater use.

Jajarkot district hospital: The site assessment was done in September 2016 and the team recommended that CEONC services should be started in a rented building, as the construction of the new hospital building would take time. The MoH has now recommended that CEONC services should be started by establishing a pre-fabricated building. FHD has provided equipment fund and CEONC fund for 2016/17.

Please see annex 6a (Rasuwa district hospital), 6b (Jajarkot district hospital), on site assessment visit report.

2.4 Facilitating in-service training:

NHSSP, in coordination with the National Health Training Centre (NHTC), facilitated the training of C-section service providers including ASBA training for 5 doctors, AA training for 21 health assistant and staff nurses, and OT management training for staff nurses. This training was prioritised for districts which had human resource gaps for C-section service provision identified from the monitoring. A report on the staff gaps and training needs, based on monitoring findings and communication from CEONC sites, along with a report on number of trained C-section providers (including DGO and OT trained staff) was submitted to the Directors including DG (See annex 4c – HR related information sent to DG and NHTC – DGO, OT management, and AA).

2.5 Advocacy with other supporting partners and centres/divisions

NHSSP also advocated and liaised with other partners to garner support for CEONC site improvements. This was done through presentations of CEONC status to Safe Motherhood and Newborn Sub-Committee (SMNSC) meeting particularly highlighting the human resource challenges, and the need for coordinated support to these sites. This was also presented at national level fora such as the conference organised by Nepal Safe Motherhood Network Federation. These advocacy efforts led to an agreement between Nick Simon Institute (NSI) and FHD to provide financial support to 'locum' doctors and AA in order to compensate their travel and daily allowances. NSI also provided salary support for one AA to continue providing CEONC services at Manthali PHCC for six months (see Annex 7a. presentation at SMNSC, 7b. at SMNF international conference).

SUPPORT PROVIDED AT DISTRICT LEVEL

2.6 On-site support and mentoring visit to CEONC sites:

Between August and December 2016, the team visited 16 hospitals/PHCCs to provide technical support, problem-solve and mentor clinical service providers. These 16 sites were selected for such support, based on the need of the sites. Although the plan was to visit a greater number of remote and newly established sites, more visits were done to hospitals in the Terai regions as generally many problems were reported from these districts and also as per the request from the FHD

director. The 18 districts supported by NSI and sites operated by other partners were not included for on-site visits. The following activities were undertaken during site visits:

- Meeting with District stakeholders including Chief District Officer (CDO) for supporting CEONC staff and service sites
- Facilitating meetings between service providers and DHO for problem-solving and planning for service improvement
- On-site coaching and mentoring on clinical skills of C-section service providers and clinical instruction and demonstration for service providers including doctors, AA and nurses
- Assessment of knowledge and skills of newly recruited staff
- Supervision and planning for improvement based on sites visit finding and discussion, and identification of needs including staff training, equipment and HR needs.

Please Annex 6a on Summary of site visit report, 6b on examples of field visit reports sent to FHD director.

Day to day communication and support to CEONC sites also was provided via phone or via staff from these service sites visiting FHD/NHSSP requesting supports for gaps they identified. This includes supporting the recruitment of service providers through the CEONC fund, training needs discussion, and planning for site visits if problems could not be solved through these discussions.

3. KEY ACHIEVEMENTS AND DISCUSSION

3.1 Key changes achieved for expansion and availability of CEONC services

The availability of HR skill-mix and the provision of C-sections at CEONC sites were monitored on a monthly basis and the status of functionality, especially data on sites not providing C-sections were collected. Monthly reports based on this along with any reasons for non-functioning sites and potential solutions were sent to the FHD director, and to the MOH official as appropriate. Table 1 below shows results on availability of C-section services from the 73 CEONC service sites monitored, and reasons for non-functioning where applicable.

Details about the availability of infrastructure and status of other enabling environment for CEONC service provision are presented in annex 3a. The monitoring data showed that most service sites have equipment and supplies needed for CEONC, except for newborn incubators. Blood transfusion services such as blood bank or emergency blood transfusion units are available at all service sites.

As Table 1 shows the main reasons for non-functioning service sites are absence of providers and problems with staff management or delays in construction work. The overall status of non-functionality has changed each month due to the irregular presence of the providers at the site due to transfer or staff leaving the site for a better job somewhere (see annex 3c for sites not providing C-Section during monitored months and reasons).

Table 1: Availability of C-section services in 73 CEONC service sites monitored in 2016/17 fiscal year

SN	Month	Number of sites with C-section available (N=73)	% sites with C-section services available	Reasons for non-functioning (not providing C-Section service)
	Ashar 2073, (June-July 2016) (End of fiscal year 2015/16)	65	89%	Absence of providers (both doctor and AA): 2 site Absence of providers (doctor): 2 sites Absence of providers (AA): 2 sites Staff not willing to conduct C-Section due to private practice: 1 sites Building delay: 1 site
	Shrawan 2073 (Jul-Aug 2016)	62	85%	Absence of providers (both doctor and AA): 5 site Absence of providers (doctor): 3 sites Management problem: 2 sites Building delay: 1 site
	Badra 2073 (Aug-Sept 2016)	63	86%	Absence of providers (both doctor and AA): 5site Absence of providers (doctor): 2 sites Management problem: 2 sites Building delay: 1 site
	Ashwin 2073 (Sept-Oct 2016)	63	86%	Absence of providers (both doctor and AA): 5 site Absence of providers (doctor): 2 sites Management problem: 1 sites Maternal death: 1 site Building delay: 1 site
	Kartik 2073 (Oct-Nov 2016)	62	85%	Absence of providers (both doctor and AA): 6 site Absence of providers (doctor): 3 sites Maternal death: 1 site Building delay: 1 site
	Mangsir 2073 (Nov-Dec 2016)	65	89%	Absence of providers (both doctor and AA): 4 site Absence of providers (doctor): 2 sites Management problem: 1 sites Building delay: 1 site
	Poush 2073 (Dec-Jan 2017)	64	88%	Absence of providers (both doctor and AA): 5 site Absence of providers (doctor): 2 sites Management problem: 1 sites Building delay: 1 site

3.2 Establishment and functionality of CEONC services

During 2016/17 fiscal year dealyed HMIS reporting was observed from monitored sites - only 21% of CEONC sites (15) reported the first three months' HMIS data, 12% (9 sites) reported two months' data, 11% (8 sites) reported one month data and 56% (41 sites) did not report (HMIS data was accessed on 21st November 2017 one month after three months reporting period). Therefore, CEONC functionality was not analysed for the first quarter. Instead, CEONC service sites were contacted and were asked to report back on the number of C-sections and institutional deliveries

provided during these months. Moreover, HMIS was being migrated to DHIS2 over this period and the data were not available to download on facility based data.

By January 2017 (end of second quarters reporting period), only 38% (28 sites) of 73 CEONC sites monitored reported data for more than five months, 51% (37 sites) reported for more than four months, 58% (42 sites) for more than three months, and 30% (22 sites) did not report HMIS data for 2016/17 fiscal year. Functionality of CEONC signal functions were calculated using HMIS data for CEONC sites (hospitals/PHCC – 37 sites) reporting at least four months in 2016/17 fiscal year by January 2017. For C-section and institutional deliveries data from the hospitals/PHCC (6 months data) reported by the service sites were used for analysis (see annex 3b for monthly service utilisation data).

During 2015/16 fiscal year, only 67 hospitals/PHCC reported data on obstetric complications and obstetric procedures which is necessary for signal functions analysis. C-section and institutional delivery was calculated from all 73 monitored sites as these data were directly collected from these service sites. For the functionality monitoring HMIS/DHIS2 data (where available) on indicators given in Table 2 below, were used as proxy indicators for the functionality status of CEONC signal functions. Frequency of monitoring was quarterly, but the analysis of functionality status was done once in the second quarter.

Table 2: List of proxy indicators for CEONC signal functions

	Provide 24/7 delivery services and the following signal functions	Indicators or proxy indicators	Frequency of monitoring
1	Administer uterotonic drugs	Not available	-
2	Administer Anti-convulsants for pre-eclampsia and Eclampsia	Number of pre-eclampsia and Eclampsia treated	Quarterly
3	Administer parenteral Antibiotics	Number of puerperal sepsis treated	Quarterly
4	New born resuscitation	Number of newborn with asphyxia	Quarterly
5	Manual removal of retained placenta	Number of retained placenta treated	Quarterly
6	Removal of retained product of conception (MVA)	Number of abortion complication treated	Quarterly
7	Assisted vaginal delivery	Number of vacuum or forceps deliveries	Quarterly
8	Surgery - Caesarean section	Number of C section	Monthly
9	Blood transfusion	Number of women who received blood transfusion (pregnant or all women)	Monthly

Data for both years 2015/16 and 2016/17 on the signal functions, is presented below for the purposes of comparison. The following Table 3 shows percentage functionality of CEONC sites on all nine signal functions.

Table 3: Reporting and functionality status on nine signal functions at 73 CEONC sites

SN	Signal functions	2015/16		2016/17 (4 months data)	
		Reported sites* (N)	Functional sites % ⁵ (n)	Reported sites* (N)	Functional sites % (n)
1	Surgical (C-section)	73	75% (55)	69	86% (59)
2	Blood transfusion reported	67	72% (48)	37	55% (21)
3	Assisted vaginal delivery (vacuum / forceps deliveries)	67	63% (42)	37	77% (27)
4	Manual removal of retained placenta (Number of retained placenta treated)	67	52% (35)	37	65% (24)
5	Administer Anti-convulsants for pre-eclampsia and Eclampsia (Number of Eclampsia and severe Eclampsia treated)	67	13.4% (9)	37	27% (10)
6	Administer parenteral Antibiotics (Number of puerperal sepsis treated)	67	10.4% (7)	37	8% (3)
7	Removal of retained product of conception (MVA) (Number of abortion complication treated)	47	49% (23)	24	51% (19)**
8	New born resuscitation (Number of newborn with asphyxia reported)	43	26% (11)	19	46% (17)**
9	Administer uterotonic drugs	NA	NA	NA	NA

*If HMIS data shows "0" in all 12 months, these facilities are considered non-reporting for the indicators above and excluded from the analysis.

**Calculation done using 37 sites as data only for 6 months

During fiscal year 2015/16, 60% (44 sites) continuously provided C-section without interruption, 15% (11 sites) provided C-section with a few interruptions but were still functional based on WHO functionality criteria⁶, this makes 75% of service sites functional for the year 2015/16. Five CEONC sites – three new (Parbat district hospital, Rampur PHCC and Sindhupalchowk district hospital) and two old sites (Mugu and Agarkhanchi district hospitals) did not provide C-section services during the fiscal year 2015/16. 18% (13 sites) provided interrupted services ranging from three to eleven months. Six sites provided C-section during more than six months of the year and seven sites provided less than 6 months during the year.

During the 2016/17 fiscal year, 58% (40 sites) CEONC sites provided C-section services without interruption, 33% (23 sites) provided C-section with a few interruption but still functional, total 91% (63 sites) were functional. Six sites including two new CEONC sites - Rampur PHCC and

⁵ In this report if service utilization is report as "0" in consecutive three months during the monitored period, considered the service site as non-function.

⁶ WHO signal function criteria – the signal function service (for none signal functions) need to be provided (service use) at least once during the last three months from the point of assessment. In this report if service utilization is report as "0" in consecutive three months during the monitored period, considered the service site as non-function.

Sindhupalchowk district hospital did not provide C-section services during the fiscal year 2016/17. 5.5% (4 sites) provided interrupted services ranging from 1 to 3 months.

For other eight signal functions, analysis was done using HMIS/DHIS2 data of 2015/16 from individual service sites. Six service sites did not report data on obstetric complications and management in 2015/16. Among 67 services sites reporting obstetric complications and management, most of them have “0” reporting on newborn asphyxia and abortion complications, and we cannot verify whether it was due to poor reporting or absence of newborn asphyxia or abortion complications during reporting period.⁷ However, use of assisted vaginal delivery, 3.6% of institutional deliveries, is less compared to United Kingdom (10-13% in 2011)⁸ and India (5.8%)⁹ at tertiary hospitals.

For 2016/17 fiscal year, only 37 CEONC sites reported for the first four months data by late January 2017, eight referral and 26 district level hospitals and 3 PHCC. Table 3 show the reporting and functionality of surgical signal function (C-section) from 69 sites based on direct reporting from the service sites and other eight signal functions at these 37 sites based on four months DHIS2 data. Comparison of two year (2015/16 and 2016/17) shows improved functionality in C-section, newborn resuscitation, assisted vaginal delivery, management of retained placenta, management of Eclampsia and management of post-abortion complications. Number of blood transfusion reported has declined. However, no CEONC sites are performing C-Section unless blood transfusion is readily available and thus blood transfusion service functionality could be considered as improved.

3.3 Service utilisation

The following Table 4 shows comparison of the first four months data from 2015/16 and 2016/17 on selected indicators from 37 CEONC sites where HMIS data available for the first four months. Although general experience shows that institutional deliveries and complication management increases in sites where C-section is available, we did not find this here and have been unable to assign a reason for this. There was increased service users of ANC four visits and women who received C-section, but number of institutional deliveries and vacuum deliveries declined. Increased number of C-Section may be due to better continuity of service provisions in these CEONC sites compare to 2015/16 fiscal year during the same period as reported in the functionality analysis. Reported number of newborn asphyxia and still births also increased during 2016/17 fiscal year. However, total number of fresh stillbirths which is one of the quality of care indicators declined during the first four months of 2016/17.

Table 4: Service utilisation status in the first four months of 2015/16 and 2016/17 in 37 sites and Availability C-Section service during the same month in 73 sites

	Number of service users	2015/16 (First Four Months)					2016/17 (First Four Months)				
		1	2	3	4	Total	1	2	3	4	Total
1	Number of pregnant women	1,257	1,340	1,058	877	4,532	1,784	1,193	1,108	1,519	5,604

⁷ Although the analysis uses WHO criteria on signal functions functionality, it may underestimate the status as “0” reporting may not necessarily indicated the absence of a service, and rather could be not having the complications at that particular month. WHO uses 500,000 catchment population for a CEONC services. However amongst the sites monitored here 30% (2) sites caters to a population between 250,000 - 500,000 and 34% (25) site to a population between 100,000 - 250,000 and 3% (2) sites to less than 100,000 population.

⁸ Operative Vaginal Delivery, Green-top Guideline No. 26. Royal Collage of Obstetricians and Gynecology (2011)

⁹ M Hafeez, Nazia Badar, Asma Yasin Indications and Risks of Vacuum Assisted Deliveries. JIMSA October-December 2013 Vol. 26 No. 4

	who receive four ANC according to protocol										
2	Number of institutional deliveries	5,311	5,181	4,789	4,389	19,670	5,271	4,915	4,452	4,279	18,917
3	Number of C-section	620	615	540	435	2,210	749	674	617	534	2,574
4	Number of deliveries by Vacuum	166	164	169	144	643	160	143	143	129	575
5	Reported newborn asphyxia	79	64	53	32	228	72	68	58	82	280
6	Total still births	69	80	68	73	290	82	70	72	87	311
7	Fresh Still Births	20	36	32	33	121	28	26	29	23	106
8	Number of post-partum women who received PNC 3 times according to protocol	509	471	475	386	1,841	602	420	461	405	1,888
9	Number of CEONC sites where C-Section available (Total 73 sites)	59	58	58	57		62	63	63	62	
10	Number of CEONC sites where C-Section available (Total 37 sites)	31	31	31	32		32	32	32	31	

3.4 Challenges, Lessons learned and Way forward

- The number of functional CEONC sites fluctuates. However, the main reason for non-functioning services is availability of service providers. This is in part the result of frequent transfers and in part the shortage across the sector of trained personnel. Long term improvement will require collaboration between FHD and HRD to take forward human resource planning, development and management. Particular policy attention needs to focus on the needs of remote areas and incentives to retain staff in these areas. **HR should be a focus in the next phase of health system support and will require a long term engagement, together with other EDPs, to bring about improvement in health facility staffing.**

In the immediate term:

- The TA programme should support FHD for on-going monitoring of service sites as well as appropriate staff placement for the next few years in order to increase the functionality of CEONC services. This will enable reporting from CEONC service sites on availability of staff, equipment, supplies, and their functionality status. **FHD should update monitoring templates annually for inclusion in the planning and budgeting processes of AWPB**
- In addition, the TA programme should support FHD to prioritise regular monthly follow-up of selected services sites prone to service disruption to improve functionality of these service sites recognising that .the majority of services sites report to HMIS/DHIS 2 with about two months delay. Monitoring and supporting these service sites for improving functionality may not be feasible if one relies solely on the HMIS/DHIS report.

FHD and programme section should also be encouraged to monitor functionality of CEONC sites from the FHD dashboard to be developed under DHIS2.

- HMIS/DHIS reporting does not include all the signal functions such as administering Magnesium Sulphate for Eclampsia and pre-eclampsia. Using number of Eclampsia and pre-eclampsia treated as proxy only gives us the case load but not the quality of care. Similarly for other signal functions. **The nine signal functions or selected functions should be displayed in the dashboard for all CEONC sites. This issue is being discussed with FHD director, HMIS section chief and NHSSP M&E advisor and should be pursued further in the next phase of health system support.**

3.5 Conclusion

Strengthening the monitoring function of FHD not only on service availability but focusing on quality of care indicators will be an important component for the TA of the next phase of support to the Ministry of Health. This will mean addressing human resource issues and supporting collaboration between FHD and HRD and also Management Division since the means for monitoring service quality are being discussed under the establishment of a quality management Information system developed within Management Division.

4. ANNEXES

- 4.1 Annex 1: list of CEONC sites – total and monitored
- 4.2 Annex 2a and 2b: Quarterly and Monthly monitoring template
- 4.3 Annex 3a: Status of 73 CEONC sites in the monitoring template – quarterly data
- 4.4 Annex 3b Six months service utilisation data from CEONC sites
- 4.5 Annex 3c: Service sites experiences problems in providing C-Section
- 4.6 Annex 4a and 4b: Monthly reporting to FHD director (and MoH officials)
- 4.7 Annex 4c: HR related information provided to FHD, NHTC and DG
- 4.8 Annex 5a and 5b: CEONC new sites assessment reports for Rasuwa and Jajarkot
- 4.9 Annex 6a and 6b: Summary of sites visits report and On-site visit reports
- 4.10 Annex 7a and 7b: presentation at SMNSC meeting and SMNF conference