Accountability Mechanism for Maternal Health Service: Case of Primary Health Care Centers of Nepal

By

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MPPG 6th Batch

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Public Policy & Governance Program
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Dedicated To

"My most patient reader and

My Better half Ranju Ray with my love"

Declaration

I declare that the dissertation entitled "Accountability Mechanism for Maternal Health Service: Case of Primary Health Care Centers of Nepal " submitted to the PPG Program of North South University, Bangladesh for the Degree of Master in Public Policy and Governance (MPPG) is an original work of mine. No part of it, in any form, has been copied from other sources without acknowledgement or submitted to any other university or institute for any degree or diploma. Views and expressions of the thesis bear the responsibility of mine with the exclusion of PPG for any errors and omissions to it.

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Abstract

The accountability mechanism is the process that includes delivering the service on commitments, dissemination of information, oversight mechanism and having the enforceability through the complaints handling and people hearing for service delivery. The main objective of this study is to analyze the maternal health service delivery at local level and explore the effects of accountability mechanism for maternal health service at Primary Health Care Center level. To show the relationship multivariate regression analysis had been done having the dependent variable i.e. satisfaction of mothers that have taken the service during pregnancy and at the time of child birth and independent variable is accountability mechanism. The effects of accountability mechanism for maternal health service are more precise for health service delivery point of view because it affects all the indicators of maternal health services. Accountability mechanism couldn't remark as internal and external aspect indistinctly in the Primary Health Care Center for service delivery. Mainly, Primary Health Care Centers are being accountable through committed toward service delivery, through the review of conduct by Health facility operation commette, people hearing mechanism and complaints handling mechanism have significant relation with maternal health service. Furthermore, the answerability mechanism for misbehavior, timely dissemination of information for service provision and financial activities, review of performance are insignificant relation with service delivery. The role of accountability plays in the effort of analysts and commentator for to make the sense of accountable service. It involves the mechanism that can illustrate where the gap is eroding the practice of account giving process. Accountability mechanism discusses how to deal with that cause through the responsive services and as cure through the reestablishment and rebuilding the moral on basis of community effective standards and norms. However, to diversify the role of accountability mechanism, there should be enhancement of information sharing and oversight mechanism which are the most important steps at Primary health care center level for being accountable for service delivery.

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List of Abbreviation

ANC	Antenatal Care
CRC	Citizen Reporting Card
CS	Cesarean Section
DOHS	Department of Health System
DPHO	District Public Health Office
FCHV	Female Community Health Volunteers
HFOMCs	Health Facilities Operation Management Committee
MDR	Maternal Death Rate
MMR	Maternal Mortality Rate
MOHP	Ministry of Health and Population
NDHS	Nepal Demographic Health Survey
PHCC	Primary Health Care Center
PNC	Post-natal care
SBA	Safe Birth Attendance

CHAPTER: 1

INTRODUCTION

1.1 Introduction

Maternal health is a national health priority of government of Nepal. There is several maternal health services/interventions have been implemented under the national safe motherhood program. Such as free institutional delivery, Antenatal visits, Post natal care, Integrated Maternal Child Health etc. These initiatives have achieved significant impact on the maternal mortality rate and neonatal mortality rate. The trend of declining rate of maternal mortality rate from 536 per lakh birth to 258 is tremendous achievement shows by the improving accesses to health service. However, the target to achieve is far too enough these days. In order to achieve Nepal's Millennium Development Goals 5 target of 134 by 2015, there was compressive approach but it couldn't make it successful (MOHP, 2012). To overcome this issue government need to strengthened the health system, as it affects guidance, processes, consistent management, cohesive policies, accountability mechanisms and the right to decide on particular areas of responsibility. Salam (2014) mentions that systematic approach is most relevant way to ensure that the services are effective for delivering quality health service. The essential variables needed for district level inputs include training, supervision and monitoring of health workers in the peripheral health centers and managing health information systems for strategic planning and monitoring of the district health system, effective governance and accountability mechanism. From these inputs, district health system process their policy and program as a service provider to give their better outputs. This study makes the attempt to focus on the accountability mechanism that foster the accountable services, generate act of account giving to improve the service delivery. Introducing the accountability mechanism in health service, gives some efforts to stimulate beneficiary control alongside provision of information about staff performance, information about interventions that reduces stillbirths, in doing so patients or community lack the information about service resulted

without measurable impact on the quality or uptake of medical care (George, 2003). There is concern that increasing accountability to patients can enhance assistance to improve health service delivery and health outcomes through taking account community participation, enhancing the quality of health information for receivers. Most importantly information, dialogue and negotiation creates platform and basis to enable accountability mechanisms to address problems and to foster better service provision, most significantly in the area of reproductive health services (Murthy & Klugman, 2004).

Particularly, accountability has definitely become a topic of concern throughout governance literature because it is entry point of good governance. Respectively, the question of accountability can be seen as one of the reasons that governance has become so debated in recent years (Pierre & Peters 2000: 67). Improving accountability is often resulted as constituent in improving health system performance and output. There is more conceptual and analytical clarity is required because it fosters the mechanism and serves as an organizing principle for health sectors reform. An accountability recognizes associations among health actors and patients particularly the relation between doctor patients for account giving and measures dimensions to demand and supply information for interventions. An accountability tools support to generate a system-wide perception on health reform and clear the connections for improvement of interventions. These can lead to collective outcomes, improve system performance, and contribute to sustainability (Brinkerhoff, 2003).

According to Mulgan (2000), the concept of accountability has extended value on the term responsibility. In his view, accountability deals with responsibility, but later gained ground as an individual concept, even to the extent of overweighting responsibility in both importance and scope. He draws attention to what he calls the "core sense" accountability, derived from previous study on the topic. In this sense accountability is defined as a 'process of being called to account to some authority for one's actions', or a

process of 'giving an account'. According to this core definition of accountability is characterized by 'externality, social interaction and exchange and rights of authority'. Externality refers to an external 'account-holder' to whom an account is given by an 'accouter'. The account-holder also has rights of authority over the accountant implying rights to demand answers and enforce sanctions. It can also be seen as answerability (Mulgan, 2000: 555). Accountability mechanisms involve three things: the identification of responsibility, the provision of information, and the availability of sanctions. Those who would hold a given set of actors to account must know to hold accountable for what, must have information about their actions, and must have the means to reward or punish accordingly (Rosen, 2012).

In rural areas of Nepal, government health services struggle to deliver care due to presence of corruption, overwhelming staff vacancies and poor infrastructure. To improve this scenario, health policy makers may miss important opportunities to improve services in disadvantaged areas due to isolation from community structure and development efforts. On the other hand, they missed the mobilizing the public resources for sexual and reproductive rights without concurrently engaging health employees, community-based organizations, mother groups that may contribute for access to health services. In these contexts, accountability mechanisms can support interactions between communities and services provider to the benefit for synergistic effects (DOHS, 2015)

1.2 Health System in Nepal

The health care system of Nepal has a multi-tier structure: central, regional, zonal, district and grassroots level. At present, the Ministry has a central section and departments and six divisions which are mainly responsible for administration, policy making, planning and financing. Mainly, the Department of Health Services is responsible for the provision of all curative, preventive, and promotive health services. Similarly there is a regional health directorate in each of the development regions

providing technical support to the districts. At the district level there is the district hospital and District Public Health Office. In the grassroots level, there is a PHC center in each electoral constituency, a health post in the *Ilaka* level, there is out-reach clinics, immunization clinics, Female Community Health Volunteers at the ward level (DOHS, 2015).

The primary care health facilities are the backbone of Nepal's health system because they deliver essential health care packages to most of the Nepalese population, especially rural people, which is the present focus of health policy and programs (Bentley, 1995; Karkee & Jha, 2010). In terms of the types of services, these health facilities mostly provide preventive and promotive health services and a few curative services as an integrated health service. A health post is the first institutional contact point for basic health services. The community-based service is provided by Female Community Health Volunteers, the expanded program of immunization, and PHC outreach clinics supervised and managed by PHC centers, health posts, and sub-health posts (DOHS, 2015). The government's commitment to improving equity through implementation of safe motherhood program and the provision of free health care services in most of the PHC structures is strength of Nepal's PHC system. As result, the integrated health service for maternal health has been improved but not achieved as much as targeted MDG goals and Nepal health sector planning and programs implementation 2010-2015. Despite these positive aspects, the health system is spoiled by lack of good governance. In the following section, the issue of accountability mechanism in Nepal's health system pertaining to the PHCC system of Nepal will be discussed. (MOHP, 2009)

1.3 Statement of the Problem

Reducing high maternal mortality is a priority agenda of the national and international community, as demonstrated by the Millennium Development Goal (MDG) 5. Nevertheless attaining Millennium Development Goal-5 remained a challenge in case of

Nepal. However, there are different approaches to achieve healthcare governance as outcome for achievement of MDGs previously for universal access for health. There are different National health sector planning implementation phase I and II conducted to achieve "Health for all" (NHSP-ii, 2010). Nowadays, Department of Health Service of Nepal proposed the development agenda as SDGs for 2030 which is most concern agenda to achieve good health and wellbeing and their sustainability. It seems that it is less likely to be achieved MMR by 70 per 100 000 live births in case of Nepal by 2030 because the indictors shown in below table, the given target is very far from the existing situation i.e. 258 per 100 000 live births in 2014.

Table 1: Trends of Maternal Health Status in Nepal 1990 to 2015

Indicators of millennium development goal 5	NFHS* 1991	NFHS 1996	NDHS† 2001	NDHS 2006	NDHS 2011	DOHS annual 2014	MDGs Target 2015
ANC coverage at least one (%)	NA	NA	NA	43.7	58.3	54	NA
Delivery by SBAs (%)	7	9	11	10	36	55.6	60
Institutional delivery (%)	NA	NA	NA	17.7	35.3	57	NA
MMR per 1,00,000 live Births	830	539	415	281	229	258@	134
Teenage pregnancy per thousand	NA	NA	84	106.3	81	NA	NA
Contraceptive prevalence rate (%)	24	28.8	39.3	48	47.7	43	67

Note; *Nepal Family Health Survey, † Nepal Demographic and Health Survey, @ CBS report, 2014

Health institution should be accountable for failing to comply with their national and legal obligations with regard to maternal mortality. A failure by health institution to effectively deliver appropriate maternal health services results in the failure of health system accountability. Simply, the maternal death of a young woman due to lack of adequate maternal health services is a violation of her right to health, right to life and

her right to non-discriminatory treatment. It is the duty of government of Nepal to ensure women´s rights and give emergency obstetric services. Also, allocation to those services with the maximum extent of available resources for better intervening maternal health problems. The concern has been increasingly appreciated that having a well-established system with sufficient resources for health may not accomplish their expected results without giving proper attentions to the health governance and accountability issues. Health governance systems contain three basic elements: state, providers, and citizens, often called beneficiaries, the proper collaboration give the well-established structure for service delivery. It determines the roles and responsibilities of each of actors, and the interactions among them with clear line of accountability mechanisms; by whom, for what and to whom accountable which is totally neglected in health system of Nepal (NHSP-ii, 2010).

It is widely recognized in the decentralized health management system helps to improve health service delivery which emphasized with increased level of downward accountability. It facilitates community ownership and wider coverage giving better access to local people, especially the poor and excluded groups. There is a clear recognition for the weakness to accomplishing better health outcomes among target populations. There is a need of initiating bottom-up planning because it seems that all the health system functioning is done in a very ad hoc manner without much preparation. The existing upward accountability remained as usual therefore; the health system is not able to hear the voice of the people in a significant manner. Particularly, efficient accountability mechanisms lacking in the health sector of Nepal. Few mechanisms of accountability are prevalent such as citizen charter, social audit are famous, which is not active without community participation in health planning and service delivery at local level. So that, attentions should be given toward downward accountability which is seems as problematic. Even the WHO governance indicator i.e. voice and accountability is 33.3 percent of public institutions of Nepal which made one of relevant issue to foster the central, sub-national and local governments able to hear

the voice of common citizens, and make these institutions accountable to them (WHO Governance Indicator, 2015)

1.4 Rationale

It is important to note that accountability is major principal of healthcare governance. Accountability issues are concerns within various health institutions: for example, national, district, and local health councils; hospital boards; medical review boards and professional certification bodies; decentralization; and so on. In the health economics literature, accountability implications illustrated health services delivery, issues arising from information asymmetries for different interventions, disclosure of financial information, need based services and user fees and priority-setting. Improving accountability can lead to an increased understanding of health system reform, better functioning of institution performance, as well as increased integration of fairness and delivery on commitment at health center. A systemic assessment of accountability mechanism acknowledges the consistency and interdependencies among health actors that facilitates blameworthiness, remove negligence for account giving (Brinkerhoff, 2003). In case of improving maternal health status, interventions should target for utilization through facility-based childbirth and skilled midwifes or doctor. There is not possible for safe delivery of complex cases than it need refer in time for emergency obstetric care. However, skilled providers, appropriate equipment and services are important but these are not sufficient for making sure for responsive services. Health service utilization can be made more responsive by changing the behavior of healthcare providers towards their patients and by taking account of their expectations of patients. One of the best indeed methods for assessing and improving the behavior of providers towards patients is through the use of public accountability mechanisms (Mafuta et al., 2015)**.** In doing so, the study of accountability will influence the service delivery and improve the performance of health provider holding accountable for maternal health care.

Particularly, most of the literature on health service has focused on different elements of governance that foster a degree of government effectiveness, degree of corruption prevention. Although significantly in doing so they can provide evidence of a relationship, this study focus on accountability mechanism for improvement performance of a health system as potential governance elements. It is the entry point of governance in health system for performance improvement because it acts as discrete element of governance as shown in given Table 2 (Mikkelsen-Lopez et al., 2011).

Table 2: Governance Elements addressed in the Health Literatures

Governance Elements	**References (Mikkelsen-Lopez et al., 2011)**			
	WHO 2007	Islam 2007	Siddiqi et al. 2009	Lewis & Pettersson 2009
√ **Accountability**	●	●	●	●
Effectiveness/efficiency			●	
Equity			●	
Ethics			●	
Existence of standards		○		●
Incentives	○			●
√ **Information/Intelligence**	●	●	●	●
Participation/collaboration	●	●	●	
Policy/System Design	●	●		
Regulation	●	●		
Responsiveness		●	●	
Rule of Law			●	
Transparency	○	○	●	○
Vision/Direction	○		●	

Key: ● indicates the discrete element of governance in health literature
○ indicates the elements of governance in the other context

Health system that foster an evidence with increasing the access to and utilization of facility-based maternal care alone does not necessarily transform into better maternal outcomes, so that it is necessary to study the accountability for maternal health care to fulfill the gap for better performance of health system and increase the effectiveness of safe motherhood program in Nepal (Austin et al., 2014). The overall aim of this study is

to find out the influence of accountability in maternal health service to reduce maternal mortality rate at Primary Health Care Center.

1.5 Objective

- To analyze the maternal health service delivery at local level of Nepal
- To explain the role of accountability mechanism for maternal health service at Primary Health Care Center level

1.6 Research Question

How the accountability mechanism affects maternal health service to reduce maternal mortality rate at primary health care center?

CHAPTER: 2

LITERATURE REVIEW

2.1 Maternal Health Service

The Family Health Division is accountable for providing reproductive health program, maternal and newborn health program. The district public health office is responsible for implementation of maternal health service at the district level through primary health care centers and health posts. The basic service includes for maternal health through Safe-motherhood program that includes given interventions as given below

Promotive Health Service

Promotive intervention includes the service targeting the healthy people such as promotion of service seeking behavior and antenatal care checkup during pregnancy, counseling for adequate nutrition and iron folic supplements during pregnancy, advice for exclusive breastfeeding and promotion of skilled care for safe delivery and childbirth in hospitals.

Preventive Health Service

Preventive health service includes the service that reduces the risk of being discomfort and minimizes the risk of future. This type of service includes provision of contraceptives utilization for birth spacing, availability of Cord care and clean delivery kits, supplementation of Iron folate or multiple micronutrients during pregnancy, anti-retroviral therapy in HIV-infected individuals, antibiotics for preterm rupture of membranes, provision of antenatal steroids in preterm labor, expanded Program for Immunization (BCG, Polio and Hib), Vitamin A and albendazole supplementation in children etc.

Curative Health Service

It is the service given after the onset of sign and symptoms of any diseases. This will help to recover the discomfort and minimize those sign and symptoms. This type of service

include promotion and use of skilled birth attendants in Birthing center and PHC level, availability and use of Comprehensive Essential Obstetric and Newborn Care, Use of magnesium sulphate (MgSO4) for management of post-partum hemorrhage (PPH) or preterm labor, Interventions for prevention of post-partum hemorrhage and use of oxytocic agents, basic newborn resuscitation with self-inflatable bag and mask and management of serious infections of newborns child and mother after delivery.

2.2 Safe Delivery Service: Policy, Practice and Gap in Nepal

Delivery service is regarded as safe when it is conducted by safe birth attendee in any primary health care center or in birthing center. Child birth practice differed according to place and ethnic group. There are different program and policy to strengthen the service delivery such as free health care service, trained SBA, expanded program on immunization and Ama Surksha Program, Safe Motherhood and Neonatal Health Long Term Plan, 2006–2017 etc. In spite of numerous program and efforts the utilization of safe delivery service seems very low on the basis of ecological region, area of residence and ethnic group so forth. This different indicates that there existing policy and practice are not enough to provide better maternal health service delivery throughout the Nepal (Bhandari et. al., 2013).

Free health service delivery Policy in Nepal (2009)

A national free delivery policy was initiated in January 2009 in Nepal. This is the priority program of Nepal for Maternal Health service to provide access and cost effectiveness for poor and marginalized group. This policy is supported by the UK Department for International Development (DFID) (Ensor et al. 2008). This was preserved by the interim Constitution of Nepal in 2007, which is the most appreciated time for health service as a basic human right. Previously in 2006, emergency and inpatient care was made free for on the basis of poor, elderly and handicapped at district hospital and primary health care center (PHCC) levels. Next, in 2007, free service delivery was delivered by the all at health posts and PHCCs. Finally, in 2009, district hospitals were added to the facilities

delivering the free service to all the people throughout the Nepal. Free health service has a fixed volume of essential drugs and funds to cover the costs of treating patients. In doing so health facilities receive Nepalese Rupees (NRs) 5 and district hospitals receive NRs 25 per outpatient (Witter et. al., 2011). Till the date, this policy is not evaluated however the monitoring studies revealed that the policy is functioning very well throughout the country but with continuing restrictions to staffing and drug availability at health facilities (CARE et al. 2009).

Safe Birth Attendee Policy (2006)

The main drive of Ministry of Health and Population towards reducing maternal and neonatal mortality in Nepal is through the Safe Motherhood Program by enlightening maternal and neonatal health services through the skilled birth attendee. Definition of SBA for Nepal according to SBA Policy is as follows

Those Physicians, gynecologists and obstetricians and other health personnel with at least 18 months training in maternal and child health will be considered as skilled birth attendants." (MOHP, 2006).

The main objective of this policy is to reduce maternal and neonatal morbidity and mortality by ensuring the safe delivery service available, accessible and utilization of skilled care at every birth. To achieve this objective rapid expansion of SBA training sites and capacity development trainer were assign. The best strategy to provide the integrated service at primary health care center is facilitated by SBA to accomplish the quality of care to the mother. If any complications occur, than referral mechanism is established at referral levels such as BEOC and CEOC sites (MOHP, 2006).

Aama Suraksha Program

Department of Health service revised the program in 2013 and works as guideline to specify the incentives for given services to consider pay of performance. It includes the

charges for compensation and the system for demanding the reporting on free deliveries each month. It has four elements (i) the Safe Delivery Incentive Program (SDIP), (ii) free institutional delivery care, (iii) incentive to health worker for home delivery and (iv) incentive to pregnant women for 4th ANC visits. The Aama program provisions are: A payment is given to the mother immediately after having institutional delivery: NRs. 1,500 in mountain, NRs. 1,000 in hill and NRs. 500 in Terai (Plane) districts. There is payment provision to the health staffs of free delivery care. For a normal delivery, health worker get NRs. 1,000 and for complicated NRs. 3,000; for C-Sections (surgery) NRs. 7,000. There is NRs. 400 for the completion of 4th ANC visits to the woman at the 4, 6, 8 and 9 months of pregnancy (DOHS, 2014).

Although, maternal health service delivery is doesn't give significant changes in safe delivery by SBA and institutional delivery in spite of the availability of free delivery care and other maternal incentives (Bhandari et. al., 2013). The reason behind this persisted low proportion of skilled care at birth, unequally access of emergency obstetric care facilities, unfriendly provider's attitude, poor service delivery systems and physical infrastructure, low perceived attitude towards safer pregnancy and delivery care, rural residence, traditional socio-cultural practices and faiths towards delivery care etc. (Subedi et. al., 2009). Hence, to fill full this gap, this study tries to focus on accountability mechanism at primary health care center for maternal health service delivery in Nepal.

2.3 Concept about Accountability

Accountability is defined by the World Bank as "a set of relationships among service delivery actors in such way that it contains delegation for services having the level of resources for actual service with adequate information as a being able to force the sanction for appropriate performance. It has become common terms in daily life. The core meaning is the exercise of the daily activities with delegated power. This meaning is extended nowadays, we used to say that responsibility of officers for the public service

or the responsibility of minister to the parliament, but it has been changed as the type of accountability. It had come to a value that makes institution more responsive to the people. In that sense, it relates the word such as 'responsibility', 'control' and 'responsiveness'.

'Accountability' and 'Responsibility'

The core sense of accountability denotes the relationship between two parties in which the person is accountable (agents) in order to external inspection from other person (principle). However, responsibility is in sense that it is the capacity to perform from free choice with their concern to accomplish the designated roles and duties. Mark Boven (1998), pointed out in his analysis that the active responsibility is the capacity to act morally for fulfillment of professional standard value i.e. more internal, whereas the passive responsibility is the external which duties denotes the capacity to account in the interest of other, that is the accountability in the core sense. Because, accountability has become such a strong value like democracy in itself, if people wish to claim that they are accountable that they have to work responsibly in the interest of others.

'Accountability' and 'Control'

Mostly, accountability refers to the retrospective in operation. It involves diagnosis of the action after they have occurred and regulates the remedies whether it follows rules or regulation or not. In this respect, it's like enforcement to the influence the future from the judgment of past actions. If accountability performs as the ongoing process, it doesn't have the dead end by closing the further investigation without the leading improvements (Day and Klein, 1987). It provides the retributive justice by backward looking. Therefore, accountability is differing from the forward looking control including law and regulations. However, it's more related to the everyday sense of external investigation i.e. the mechanism of controlling institutions that made some answer for activities of agents and forced to accept consent (Normanton, 1996).

'Accountability' and 'Responsiveness'

It's the third aspect that broadens the scope of accountability in the term with responsiveness. A responsive service is one that care to act in such a way that citizen prefers. Responsiveness is the main objective of accountability mechanism that holds the agents accountable in the interest of the citizen. Therefore, responsiveness is the end to which accountability means. In recent year, the health service delivery has been given on the client focus. Some of the improvement came into existence that improve accountability mechanism such as citizen charter that provide obligations of public institutions that includes more manageable complaints procedures. Similarly, many changes have been done on the cultural and management to become customer friendly without any increased analysis. Taking account these increase in responsiveness is not the increase in accountability. It is not about the making client friendly or making exit it's about the taking account of real voice of citizen in which agents have rights to leave or showing the customer friendly but also to voice their complaints and seek the settlement (OECD, 1987; Considine, 2002).

Dimension of Accountability

It is must necessary to know that the level of organization, actors involved and various activities performed by them to be accountable. These things help to understand the structure of accountability mechanism or their dimension. From the outline of the dimension of accountability gives the transcending boundaries to know its phenomenon. There are four dimension of accountability discussed below that illustrate four question: who are accountable? , To whom they are accountable? , For what they accountable? and How are they accountable?

(i) Who are accountable, that is the service provider. Who can perform the duties or deliver the services. Individual officers or group of people, committee or as institution can be accountable for service delivery. In case of collective accountability perform by organization, the organization as whole should be accountable including the members

of organization are also individually accountable for service delivery. In case of primary health care center, organization as whole and also all the officers should be accountable individually.

(ii) To whom the agent is accountable, that is service users. There may be single or group of account holder to receive the service and hold the agent accountable. In broad sense all the stakeholders that are related with the service can be the account holder such as the government, service users and sometimes providers also, related organizations, professionals' bodies, and public. In case of organization, individual staffs are accountable to their superiors at each level in the hierarchy. Thus, chain of accountability goes through the upward, downward and horizontally. Especially, horizontal direction includes the notion of equal of status that seems important driver of performance in decentralized governance. Public institution such as quality council and professional bodies has considerable rights to negotiate concern and hold accountable for service delivery in health sectors.

(iii) For what the agent is accountable, that is for service delivery. Accountability mainly focused on the performance or the duties for which the provider is needed to fulfill and responsible. In case of organization, the concern may be particular decision, planning, reporting, general performance, wide range of the rules and regulation, standard procedure, and professional ethics etc.

(iv)How the agent is accountable, that is the mechanism of the accountability in ordered to assess the whole process. There are different procedure and process such as financial reporting, public hearing, social audit, citizen charter, monitoring and evaluation etc. The mechanism of accountability covers the process in three stages such as **information phase;** it includes all the important information, initial reporting and investigation. In this phase, receives all required information possibly to hear the employer and managers. Organizations account for their service delivery, conduct and behavior in regular basis in meetings or reports. Secondly, **debating phase** is the justification where discussion is made on the issues taken from information. In case of institution, the issue

is raised by collecting information from service delivery and engages in dialogue to balance the conflicting demand and expectation from service provider. The primary focus of this phase is to find out the fault from findings but due to complex nature of network and service delivery the officer may blame each other to be accountable for that fault. This phase focus to clarify the roles and responsibility rather than blaming each other's which unclear the responsibility with positive development to the use of sanction appropriately. Finally, **rectification** or consequences phase is the process to pass the judgment on the conduct. It has some consequence that provides eligible for the sanction or not for instances 'naming and shaming'. In this phase institution seek where the employer abusing their sanction or not. The document was scanned for the appropriate use of their authorities. In a big institution, provider can get more autonomy because the varieties of accountability privileges leave them more room to operation. If provider accountable to different associates they have likely to chance make the opportunities and choices to fake treaties with institution toward most concerned to their causes. In that sense there may be loss of control or symbolic accountability mechanism just to show up. In order to minimize these issues and prevent eroded practice of accountability, it will be more feasible and easy to multiply the numbers of users to whom one is responsible –and principles on the which fact one is responsible (Mulgan, 2003).

Types of Accountability

Analyzing the literature, there are five components of accountability relevant for instituting of the integrated health service delivery.

Legal accountability

Legal accountability provides the framework to enable the planning, budgeting that can enforce the organization to meet their medical ethics in health services. For this accountability, there may set out of objectives professionals and institutional standards for medical malpractice.

Financial accountability

Financial accountability is most crucial component in service delivery that gives framework for budgeting and reporting for fund allocation, distribution and check ethical use of the funds (Berinkerhoff, 2003). The tools of financial accountability investigate the activity based funding and result based funding for health programs.

Professional accountability

Professional accountability enhances the service delivery through the ethical, professional and legal apparatus that provide framework and roles and responsibility to the agents. Organization provides such an arrangement to perform loyally and deliver services to local people. In doing so, there may be the revision of roles and responsibilities to accommodate the well define care in health. As such, they need to revise guidelines trainings and collaboration according to demand of service needed by health care users. Some tools for professional accountability are code of conduct, ombudsman, professional standards and regulating bodies etc. (Deber, 2014).

Political accountability

Benkerhoff (2003) pointed out that democratic governance and decentralization policy demanded the increase of political accountability to public through administrative process and political which should be responsive and fair. From this accountability, people get ensure of government service delivery that is public representative in nature that ultimately leads to more informed, and accountable for decision making. Typical example of political accountability tools are citizen council, advisory bodies, government role and responsibilities.

Public accountability

Public accountability can be divided into two categories such as public reporting and public involvement. Public reporting is the mechanism from the user perspective that

they inform on the performance and decision making process on the service use. This mechanism shows that the action taken by provider is beneficial or needed in the interest of local people. This mechanism needs complaints system and feedback collection mechanism from users. Morris and Zelmer (2005) mention that the public work seen from a public report card. They informed the valuable information for performance measurement in the health system. The performance system of health workforce can be analyze by the public reporting and provide the tools for quality improvements. Secondly, Public involvement is the mechanism that ensures the need and interest of people and the ideas taken too decision making in service delivery. An increase in importance on the integrated health system, literature reflects more ideas toward public involvement rather than participation in order to establish the strong relationship (Foooks and maslove, 2004). George (2003) argue that the accountability mechanism more over dependent on the public involvement that leads to participatory process that facilitates the more informed and transparent for engagement. He pointed out the four major function of public involvement such as to improve quality of information, need based services for health, to encourage people debate on the future structure for the health service delivery, to provide responsive service and notify public interest and deliberative methods for public involve are public panels, workshops, conferences, public hearing etc.

2.4 Accountability Tools for Integrated Health Service Delivery

The most essential consideration in accountability mechanism is identification of the tools for accountability in integrated health service to support the good governance mechanism, the oversight roles should be investigated with proper tools such as instrument, mechanism, and measures that enable steering mechanism for desired goals in service delivery (Barbazza and Tello, 2014). The approach and tools are given according to the types of accountability in given table 3.

Table 3: Tools for Accountability for Integrated Health Service

	Legal approaches	**Financial approaches**	**Professional standards**	**Political Accountability**	**Public Accountability**	
					Public reporting	**Public involvement**
Definition	Legislation, statues and regulations, contracts and agreements to set standards and to guarantee the public rights and complaints mechanism	Financial mechanism that enable appropriate resource spending	Mechanisms to ensure professional standards are uphold	The public acts in the role of governor of institutions and agencies to provide oversight for accountability purposes.	Public provision of information on decisions and actions related to health services delivery, funding and policy directions	Involvement of the public in setting policy direction and making decisions on health care
Accountability Tools Example	Health Acts, Rules, procedures, Medical malpractice law, Charters of rights and responsibilities, Care guarantees	Pay for performance agreements , Financial incentives, Activity-based funding, Service agreements, Results-based accountability, Integrated budgets and accounting, Resource pooling, Rewards and sanctions, Audits	Professional standards, Regulatory bodies, Continuing education requirements, Codes of conduct, Public complaints mechanisms, Ombudsman, Licensing/certification, Accreditation, Common workforce training curricula	Advisory and appeal boards, bodies established under statues, regulations or ministerial orders , Citizen advisory committees, citizen juries, Watchdog committees (facility boards, health authority, ombudsman, parliamentary committees)	Publically available information on performance of health system, Publically available budgetary and financial information, Quality health councils, Dashboards, Citizen report cards , Benchmarking	Deliberative methods (deliberative poll, scenario workshops, consensus conferences) , Open meetings, public workshops, National health forums, Satisfaction surveys, Personal budgets , Electoral process

Source; Fooks and Maslove 2004, Barbazza and Tello 2014

2.5 Accountable Governance

The concept of accountable governance is very high order view of accountability that regard for governance mechanism that gives susceptibility of individual/institution to act in accordance what they perceived to be authentic in the interest of others or the interest of others whose privileges are regarded as the authentic. Braithwaite and Drahos (2000, 15-17) revealed that it's about the concrete mechanism that incorporates the accountability in policy and program design as account giving relationship through taking different institutions under the categories of "speech acts". The speech act is the account giving process focused on excuse making, face saving or the giving statement as justification or rationalization that involves one party's capacity to be accountable in any social relationship for the their action to the other parties. In general, accountable governance states that the mechanism or procedure by which citizens and groups define their interests, incorporate together with institutions of authority and that legitimate service in return. It is more focused on how people relate with their leaders in determining their expectation and the way leaders became accountable to their stakeholders for fulfillment of that expectation. This concept of the policy mechanism is the process where the instrument/tools are implies with the presence of resources and strategies that can be implemented and changed for the intension of having some impact on some condition of targeted population. However, accountable governance is the distinct with that concept with use of resources and strategies to produce the act of account giving or to make clear expectations regarding the requisite of giving accounts. Dubnick and Frederickson (2011) figure out the framework of accountability mechanism from two perspectives to hold accountable governance. This framework states the promises of accountability that can assure the policy maker and account giving mechanism that can enhance certain objectives from the governance perspective whether its public or private organization. The promises of accountability are discussed in below table as means and virtue.

Table 4: Promises of Accountability as Means and Ends for Accountable Governance

Focus on: (Time)	**Accountability Valued as:**	
	Means (Mechanisms)	Ends (Virtues)
Inputs	1A. The Promise of Control: Assumes that hierarchy, standardized procedures will result in greater accountability (Instrumentally)	1B. The Promise of Integrity: Assumes that individuals and even groups wish to be accountable or can be part of an accountable culture (Intrinsically)
Processes	2A. The Promise of Ethical Behavior/ Good Choices: Assumes that corruption and inappropriate behavior can be prevented, or corrected through procedural accountability mechanisms	2B. The Promise of Democracy: Assumes the creation of vertical and horizontal procedures of accountability will result in democratic outcomes.
Outcomes	3A. The Promise of Performance Assumes that individuals or groups held to account for their behavior through performance measurements will perform better.	3B. The Promise of Justice/Equity Assumes the opportunity to seek justice in light of some claimed act or possible act will result in justice or fairness.

Source: Dubnick and Frederickson, 2011

From above table, we can observe that the accountability valued from two perspectives intrinsically and instrumentally. From intrinsic point of view, it illustrates about the political or administrative culture, norms that provide preferences for the service delivery to become authentic. Next, instrumentally value implies that the mechanism, procedure, tools that foster them to be accountable and define the characteristic of promised condition to be accountable for service delivery.

Inputs

The cells reflected in the inputs row for both perspective estimates that what could be the available resources for the accountability mechanism in both the cases. For the means of accountability denotes the control mechanism such as record keeping procedure, auditing standard, protocols for medical checkup, immunization card, growth monitoring card, ANC visit report card etc. However, from the next perspective the available inputs can be the working culture, medical ethics, patient-doctor relationship that accommodate the account giving cultures to the providers.

Process

Through giving the proper inputs from both perspective it can be assumed that the given instruments and moral value have implemented such way that give sense of procedural mechanism to represent the interest of others. In this phase assumption is made that misbehavior of agents is controlled due to that procedure in implementation process. On the other hand the, accountability mechanism taken as variety of forms such as doing correct things with correct procedure in the clear expectation of others so that the democratic value can be established. Over all, these two perspectives should assume that the implementation processes implies that doing correct things that established the democratic value in of citizen intrinsically by being accountable to the interest of others.

Outcomes

In this phase mechanisms holds the positive impact for the performance. In sense that, the service is given in a value that it consider accountable service i.e. improved instrumentally. Next perspective, give the more focus to output the "bringing to justice" as form of justice in setting the expectation in order to view accountability as the promise of justice culturally in service delivery.

2.6 Literature Review

The impact of accountability mechanism on service delivery has always been an essential theme in the literature on service delivery. World Development Report (2004) identified failures in service delivery determines the failures of accountability relationships. For effective service delivery, central level of planning commission has must have a set of objectives, goals and programs in order to implementation by lower levels of government. The overall process required the well-defined chain of accountability at all level to obtain the desired level of performance. The lines of accountability directly influence the effectiveness of performance incentives, service providers, and local government that are assigned by ministries of health to be

accountable to the defined service delivery or action. In doing so, the health care provider should be accountable for the entire stakeholder for being an accountable. It means, it has a long chain of accountability that results weak accountability so that its needs adequate resources and information and consultant to hold providers accountable together criticize the provider performance also (Lewis and Pettersson, 2009).

Rights-based approach in health is the core meaning of accountability, in terms of courts, states and others actors' obligations that encompasses mechanisms that engaged to promote accountability, and enlightened understanding relating to health and development goals. Through enhancing access to maternal health service is not simply about scaling up interventions or preventing maternal death, it's about right to health. It is also take consideration of social, cultural, political and legal factors which influence women's decisions to seek maternal or other reproductive health care services. Accountability mechanism is rights-based approach to health because this may entail improving unfair laws, policies, practices and gender inequalities that prevent women risk behavior for health. Also, it makes the governments and other actors more responsive to women's health need to improve their status (Yamin, 2008).

There is lack of clarity in causality links between accountability and their impact in the service delivery. For example, some studies look at the strengthening in the strategies, how to achieve accountability mechanism from improved responsiveness only, also they often look at the impact of a range of governance interventions. In doing so, strongest set of assumption in relation to service delivery, is that accountability mechanism initiatives expose corruption. Generating more formal accountability mechanisms such as audits and investigations find out corruption through emphasizing inconsistencies in public accounts. Even more, citizen complaint against the miss-conduct, those make more pressure to the public authorities to respond and being responsible. When there is no information disclosure that most of the officer seems as they are accountable that also increase

the health seeking behavior of patients. The second, assumption is that accountability leads to increased improved access and quality of services and that leads to better performance outcomes. Accountability mechanism create the commitment toward the conducting service, ensure code of conduct that change he number of intermediate levels including, improved policy, practice, behavior and power relations. One more, assumption is that accountability initiatives lead to greater empowerment of poor people and patients because accountability mechanism includes complaints and public hearing mechanism that take care of their need and preferences, out of that leads to more satisfaction and empowerment. As we know, better information about rights and processes is circulated; awareness about privileges is likely to increase (Joshi, 2010).

Accountability problems in Nepal's Primary Health Care (PHC) system is a prolong issue as intense and neglected. This concern has resulted in the requirement of engagement of citizens on health service delivery to extract accountability from health service providers. Overall, this study illustrates the contribution of social accountability mechanisms in enlarging citizens' voice, keep accountable service providers in the Dang District PHC system of Nepal. This study contributed new information by providing insight into the effectiveness of collective and individual accountability mechanisms in a community health care system, and by highlighting the potentials of voice mechanism to generate service providers accountable in a PHC system (Gurung, 2017).

There is evidence that Maternal health programs can be accelerated with the introduction of evidence-based accountability mechanisms means that evidence based procedure, information about time cost of service etc. that results into reductions in maternal and newborn mortality. The main argument of his article is that service should be evidence based to initiative action and accountability to improve maternal health status. This is resultant from survival in six African countries: Ethiopia, Ghana, Malawi, Nigeria, Sierra Leone, and Tanzania that introduces the evidence for accountability (E4A) program and illustrate the how

information and data are important for accountability mechanism (Hulton et al, 2014).

There are different approaches of accountability used in advocacy at these different levels highlights the different assumptions at play as to how change happens. There is a case that revitalized approach to accountability that begins with the service delivery at the frontlines, where people encounter health providers and institutions. Conventional approaches such as just for formal show up , to introduce only we are accountable having a tools of complain box is not the core value of account giving , it's about taking action and decision upon them to be accountable. From this approach as a result, many accountability efforts do not lead to transformative change (Lynn & Schaaf, 2013).

Even more, there are different factors that influence the functioning of accountability mechanisms and relationships within the district health system such as internal control, subordinate relationship and fairness morally influenced which have more implications for responsiveness to the patients and communities. Accountability mechanisms could be elementary strategies for ensuring the answerability of public primary health care facilities through the district health system, while at the same time providing the involvement place could be more patient centric for the responsiveness mechanism. In this review study make ground reality on the design of accountability mechanisms giving the attention to the attitudes and perceptions of service provider, resources values for systematic actions, and different combinations of mechanisms would be needed for according to their different contexts (Cleary et al., 2013).

The mechanism of identifying practices and strong point that can contribute for accomplishment through accountability initiatives are in fragile contexts in Nepal. The most relevant argument is that public meetings and Public Audit Practice are the working as Trail Bridge for user committee, and that needs engagement of patients and villagers to enhance accountability. The most interesting fact is that accountability, and service provision information-sharing process should be in formal

ways. These approaches give the ground for the user committee that represents an accountability tool (Cima, 2013). Similarly, the concept of social accountability is more function to strengthen the capacity of service users and providers through using different strategies such as Citizen Report Card (CRC). This leads to more satisfaction level of receiver, because it makes more interact with service users and service provider (Prasai, 2013).

The success of Nepal's community-based health programs has major efforts for maternal and child health. The Government of Nepal introduces three key components: an improved health logistics management, facility-based maternal and neonatal health services, and decentralized health facility management to improve the maternal health status. The findings suggest that more involvement of Health Facilities of Management Committees in supervision, making aware patients about services through citizen charters, and involving them in social auditing processes have tremendous outputs in transparency and accountability (Shakya et. al., 2012).

Voice mechanism from patient's point of view regarded as best mechanism for holding health care providers accountable. The study conducted by DANIDA in Nepal shown that citizen voice mechanism is too scattered from target groups to give strong outputs of accountability. However, the concept of voice mechanism suggests that there is need of a balance needs to be parallel way of accomplishment between poor and decision makers in order to meet the objectives of a mature voice mechanism. It incorporates the preferences of patients and community to address and the required actions of health provider should be made accountable (DANIDA, 2008).

The review study from low-, middle- and high-income countries having the focus of identifying factors that figure out health provider accountability to patients draws the concern that it needs concern about health system and social influencing factors. The health systems factors include oversight mechanisms, revenue sources, and the nature of competition in the health sector that may lead providers to be accountable from internally. On the other hand social factors are consumer power, especially

satisfaction levels, and provider beliefs surrounds the accountability externally (Berlan1 and Shiffman, 2011). Similarly, the giving the focus on accountability mechanisms in health care for improving sexual and reproductive health service delivery we need information, dialogue and negotiation. Which are important elements that enable accountability mechanisms to address problems by supporting change and engagement between different stakeholders (George, 2003). Furthermore, to demonstrate accountability mechanism the doctor-patient relationship has been emphasized the main focus of principal-agent theory in health care. Also, giving the focus on communication between doctors and patients maximize the services utilization. This study results illustrate that being able to provide the history of discomfort to the doctor is the most important attribute, and that should be followed by doctors for patients' understanding (Scott and Vick, 1999).

Over all, Most of the international literature pointed out that accountability mechanism is potential for responsive and effective arrangement for service delivery such as Hulton et al., (2014), Lynn P. & Marta S., (2013), Cleary et. al., (2013). However, the concern is being taken on different literature is, how to achieve accountability mechanism from different strategies in case of Nepal such as Gurung, (2017), Prasai, (2013), Cima, (2013). This study focused to fulfill the gap through showing the contribution of accountability mechanism for effective health service to reduce maternal mortality rate.

2.7 Theoretical Review

The literatures are remarkably light on theoretical review for assessing accountability mechanism by authors such as Scott Anthony and Vick Sandra. (1999), Behn (2001), Halachmi (2002b) and Mulgan (2003). They discussed on the glimpse of the design problems in the accountability arrangements. However, they tend to focus only on the purpose and principles of accountability mechanism. However, Bovens (2008) tried to find and assess the accountability in two level; first of all, the emphasis given more internal or procedural evaluation for internal accountability. Specifically it consider internal adequacy for concrete accountability process. Secondly, it is the

evaluation of accountability arrangement from giving the focus on the external effects. In this case, the evaluation is based on the tenets of accountability mechanism that fulfill the satisfaction level of third parties such as consumer, civil society, political and administrative systems.

Assessment of internal accountability

The internal evaluative perspective finds outs the system of accountability arrangement i.e. process itself. For the procedure oriented evaluation consist of organizational commitment for the fulfillment of the accountable service. It seek proper information provision from service provider in terms of time, cost to enable well functional of his/her conduct. Actor should aware of their code of conduct and responsibility to give their maximum outputs. Organization should give sufficient enabling environment for their officer to conduct more fairly, utilize resource and strengthen their competencies to be accountable. One more concern is the sound judgment upon their conduct. It includes oversight mechanism, monitoring and supervision to pass the judgments according to the given standard/ethics in which his/her conduct generate the act of account giving or not.

Assessment of external accountability

External adequacy evaluated in three perspectives. One: the accountability arrangement is important to provide a democratic means to monitor and control government conduct. Two: accountability helps to prevent executive abuses. Three: it should enhance the learning capacity and effectiveness of organization.

The democratic perspective: popular control

Accountability mechanism is most essential from a democratic perspective, because its need to be accountable in a democratic way for service delivery (March and Olsen 1995, 141-181; Mulgan 2003). This is an approach try to enrich the focus of the views of Rousseau and Weber, its government responsibility to be accountable for giving health services. It sought to defend the concept of politics enhanced by the individual liberty through more accountable government. Public officer should follow

the chain of delegation that is examined by the rules law enforcement and policy for the democratic value and control and calling officer accountable. There are legal bodies, regulating bodies and at the end citizens at the chain of accountability to hold the accountability mechanism. If the government or executive are accountable publically that generate democratic process through rules and acts for judging the good manners and effectiveness of the conduct of the government and public organizations.

The constitutional perspective: prevention of abuse of authority and corruption

This perspective mainly focuses on the prevention of the abuse of the authority and resources. To evaluate from this perspective, the organization conduct social audits that determines the investigation power to control of misuse of authority. Mass media civil society is actively involved to hold accountable for the prevention of abuse and authority to generate act of account giving. Other public institutions, such as an independent judicial power or a Chamber of Audit are put in place next to them to hold accountable.

The Learning Perspective: Enhancing Government Effectiveness

In the third, learning perspective accountability mechanism is a tool keeps the organization effective in delivering on their promises. It includes the feedback mechanism, complain system to change their action and learn from it to make corrective actions. Accountability mechanism foster the sense of connections between past, present and future so that to account with the policy failure to make aware of it and render the account. From this perspective, it provides the setting for interaction routines to reflect upon policies, procedure and guideline to improve upon them. This mechanism provides assurance and more satisfaction to the people through the public hearing mechanism to place their preferences and needs based services to be accountable.

From the theoretical analysis, it can be assume that the better commitment for service delivery, having fair information system increase the organizational performance so that the number of health delivery will increase as an outputs.

Similarly, having the information about cost, time of services patients get more aware of it and then the health seeking behavior will increase with having 4th ANC visits. Moreover, the external accountability enhances effectiveness of service delivery through feedbacks and complaints mechanism also increased the satisfaction level of mother because having action on their complaints will increase their preferences. Assuming these three causality link this study try to find out the contribution of accountability mechanism for maternal health status.

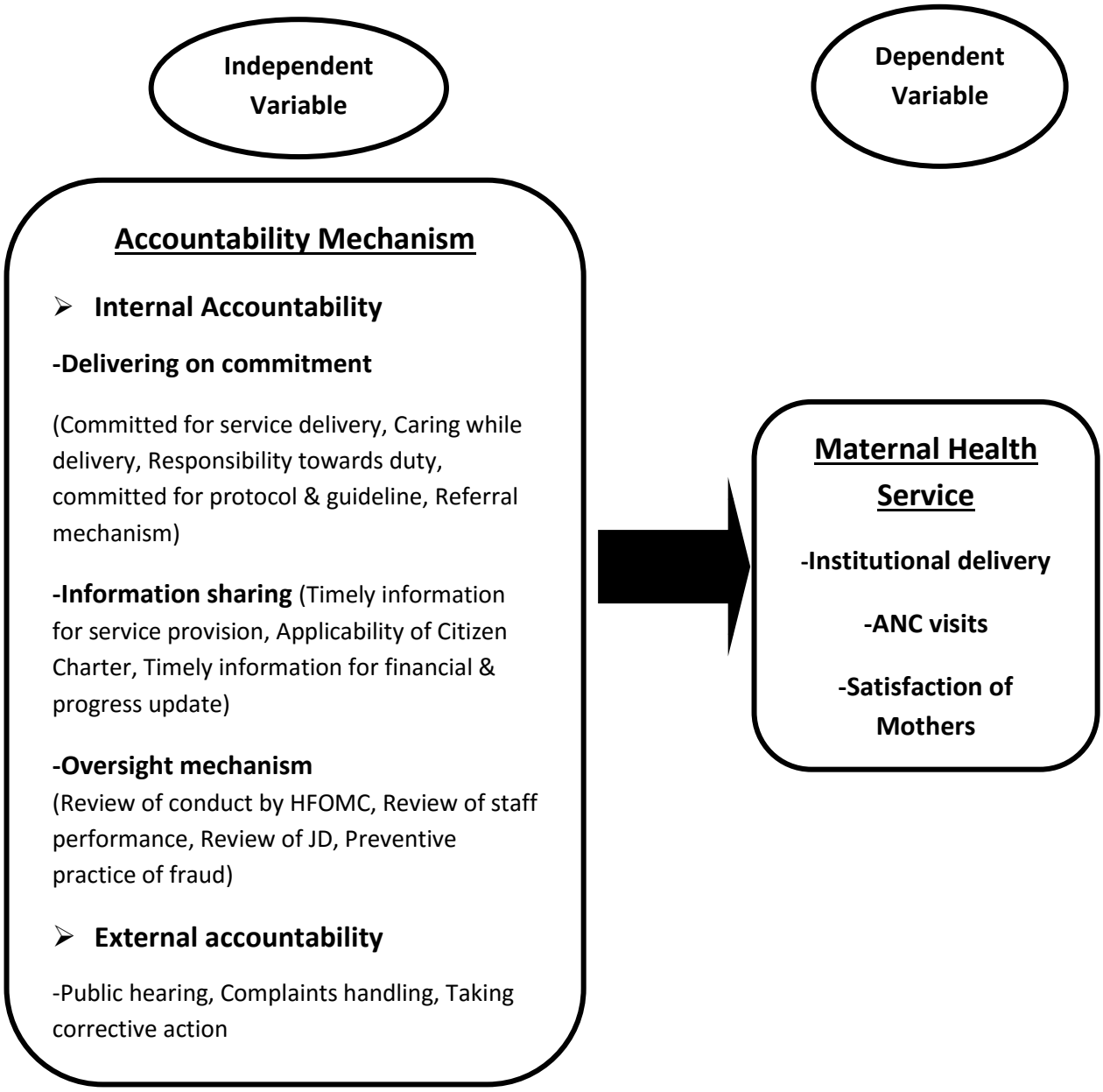
2.8 Conceptual Framework

From overall, concepts, literature, and theories it can be concluded that accountability is process that need some input to process and some conditions to give desired output and outcome. In doing so most of the international literature pointed out that accountability mechanism is potential for responsive service delivery. However, the concern is being taken on different literature is, how to achieve accountability mechanism from different strategies in case of Nepal. This study focused to fulfill the gap through showing the contribution of accountability mechanism for effective health service to reduce maternal mortality rate. The below figure represent the analytical framework for illustration of the contribution of accountability mechanism for maternal health service to reduce maternal mortality rate.

Dependent Variable

Maternal health Service is all about the health service for women at the time of pregnancy, childbirth and post natal period. It's about the having safe delivery with no risk. It is determined by safe hospital delivery with skilled doctors and nurses, having 4th ANC visits and the satisfaction level of the mother toward the health intervention and treatments.

Figure 1: Conceptual Framework



Independent Variable

Accountability Mechanism is the commitment of the primary health care center or the all health professionals as whole to provide effective health intervention for better health status and responsive services. It can be measured in two level internal assessments and external assessments. Internal includes the health provider commit and responsibility for the quality of health care by information sharing and fair

financial activities having the well-established oversight mechanism. External accountability includes the people hearing for their feedback and complaints handling to improve their service delivery for higher level of satisfaction of mothers.

2.9 Hypothesis

HP1 Null: An assumption of this study is that there is no role of the accountability mechanism for the contribution of delivering maternal health care in order to reduce maternal mortality rate.

HP2: Alternative assumption of this study is that the better-functioning the accountability mechanism, the greater contribution it makes to increase in health seeking behavior and outputs for reducing maternal mortality rate.

2.10 Operational Definitions

Accountability in primary care is collective responsibility and commitment for the quality of care provided by all primary care practitioners with reasonable standards, accessible and responsive to their service user.

Four antenatal care check-ups (ANC): Percentage of women aged 15–49 who had a live birth that received 4 or more antenatal check-ups in the given years of the survey.

Institutional delivery: Percentage of live births delivered in a health facility (private or public) in the given years of the survey.

Satisfaction of Mother: Percentage of women aged 15–49 who satisfied with received service for a live birth in the given years of the survey.

Maternal Mortality Rate: Maternal mortality rate is the total death of woman due to pregnancy related cause as per lakh live birth in the given years of the survey.

R-squared (R2): It is a statistic that deals with the extent of variance accounted in the dependent variable through explained by independent variable to show relationship between two (or more) variables. Smaller the value of R-square shows that variables are independent in nature i.e. no variance, higher the value of R-square shows that variables are more predictable for causal relationship.

Durbin Watson: It is a statistic tests for first-order autocorrelation in regression residuals. The statistic value lies between 0 and 4; the lower values show positive autocorrelation and higher values show negative autocorrelation. For completely independent between each other and symmetric, the value accounted around 2.

Autocorrelation: In statistics, the autocorrelation of a random process describes the correlation between values of the process at different points in time, as a function of the two times or of the time difference.

Degree of Freedom (F): The value of F denotes that the number of variables whose values may be independently specified for statistical analysis.

CHAPTER: 3

METHODOLOGY

This chapter covers the study design, unit of analysis, study sites, sampling method, methods for data collection and analysis, scope and limitation of study and validity and reliability of this study.

3.1 Research Design

The design of this research was analytical cross-sectional and exploratory. This design facilitates to determine the relationship between accountability mechanism and maternal health service. The choice of this assessment methods was identified on the fact that the effects of accountability mechanism in the maternal health service delivery is a very complex research issue, lacking a standard definition, and different types of cross cutting issues on health services such as preventive, promotive, curative and rehabilitative interventions. It was therefore imperative for this study to employ innovative ways to overcome this weakness and to contribute to the development of research in this area. Thus, the study took the position that accountability in any setting is context specific and that its processes influence and are in turn influenced by the everyday ideas, opinions, practices, and cultures of the population including issues of ethnic groups, level of living and different settlement and stakeholder positions. As such, they must be understood in context and as relational to structure and outcome issues. Hence, the design was taken into account through the variations in primary health care center of Terai region and Hills to show different strata on the basis of ethnic group and performance Profile for maternal health Service delivery. This study is based on mainly quantitative questions with Likert scale followed by checklist for qualitative questions.

3.2 Unit of Analysis

The unit of the analysis is health professionals of two Primary health centers from Kaski and Sarlahi District, and also pregnant mothers and mothers who have given their child birth (Married woman with reproductive age).

3.3 Research Site

There were two study sites i.e. Primary Health Care Center of Terai, and Hills were selected i.e. from Sarlahi and Kaski respectively. Armala Primary Health Care Center and Gaurishankar Primary Health Care Center are selected on the basis of district health profile where Kaski is good health profile and Sarlahi is low on basis of NDHS report for maternal health service. Even, the mother groups are taken as strata on the basis of ethnic group and settlement area in Terai and Hills. All the Stakeholders of Primary Health Care Center of Armala PHC and Gaurishankar are present except in Kaski district there is Regional Directorate Health Office.

3.4 Sampling Method

To select the sample from the study area, population was selected from Gaurishankar Primary health care center and Armala Primary health care center catchment area. Where expected pregnant mother of Jarbire, ward 28 of Bagar municipality of Kaski district is 49 and Gaurishankar ward 14 of Ishworpur municipality of Sarlahi district is 54 i.e. 103 in total (Target population of DPHO, 2016/17). By using method of Sample size determination, sample size was determined n_0=384 at 95% confident level with e=0.05 degree of error.

$n_0= (Z)^2 * p\ q\ /e^2$

Where Z=abscissa of normal curve (1.96), Z was found in statistical tables which contain the area under the normal curve,

p= the estimated proportion of an attribute that is present in the population i.e. 0.50 from, and q is 1-p=0.50

N=population size (103)

n_0=384

$n=n_0*N/n_0+N$ (Formula 384*103/384+103)

n=82

Out of 103 expected pregnant mothers of study areas, 82 sample sizes were selected. Mothers were selected by using proportionate stratified sampling method. To select the sample from the study area, samples were selected in 80 percent proportionate at each Gaurishankar Primary health care center and Armala Primary health care center catchment area.

Table 5: Sample framing from both Strata

Sample size	**Armala PHC** (High Health performance Profile for maternal health Service)	**Gaurishankar PHC** (Low Health Performance Profile for Maternal health service)
Key Informants Interview with staffs and midwife	3	3
Semi structure questionnaire survey with mothers	39	43
Observation of PHC center	1	1

3.5 Nature of Data and Data Collection Procedure

The study was based mainly on quantitative data with qualitative data. Each question was given a code, to aid tabulation and analysis. Multiple tools of research were used in this regards such as semi structured questionnaire for interview, Key informants interview 6 form both PHCC and 2 Observation tools for each PHCC etc. Hence, primary data will produced by an intensive field work from each district. The respondents were selected in that period at Armala PHCC. I have collected the data with mothers who came into Armala PHC and Gaurishankar PHCC within 45 days. In this way, 82 respondents had taken from total 103 population sizes from Kaski and Sarlahi district. The secondary data were collected from respective DPHO of Kaski and Sarlahi district.

3.6 Method of Data Analysis

Information was entered in SPSS (Statistical Package for Social Science) software and used for data processing and analysis. Data were analyzed by using statistical tools such multiple regression analysis in quantitative study comparison and triangulation

was made for explanation and discussion from Key informant interview and also from observation.

3.7 Scope and Limitation of this Study

On the basis of objectives and research question and keeping things simple and clear, this study had only try to manage the issue of maternal health service delivery from accountability mechanism at primary health care center. In case of management of maternal deaths, there different interventions and strategies had been adopted by health system of Nepal. It provide different inputs such as information system, medical product and technology, monitoring, supervision and one of the crucial factor is accountability mechanism in service delivery. This study focused on the accountability mechanism from two levels such as internal accountability and external accountability for giving maternal health services from PHCC in Nepal. Also, this study is not following the true survey method, propionate stratified sampling is taken to collect the data. In some cases secondary data also will be taken from official records for maternal deaths.

3.8 Validity and Reliability

To validate this study, appropriate sampling mechanism is followed i.e. proportionate stratified sampling to minimize the design effect. Direct observation and key informant interviews were taken to support the quantitative analysis. Triangulation is made after data analysis with key informants and secondary source data. To make reliable, the findings of this study compare with different literatures. Semi structures questionnaire survey methods provided statistically representative data on the study population.

CHAPTER: 4

RESULT AND FIDINGS

4.1 Maternal Health Service in Nepal

The government of Nepal had been initiated safe motherhood policy in 1990 where maternal death having uppermost maternal mortality ratio (MMR) 539 per lakh live births. However, after the introduction of the Safe Motherhood Program it declined abruptly by almost half to 281 per 100,000 live births between 1996 and 2006. Behind this reason, most essential donating factors are increase in the utilization of antenatal care (ANC) and postnatal care (PNC), decrease home deliveries and deliveries by skilled birth attendants for overall improvements in maternal health status. There are following strategies for reduction of risks during pregnancy and childbirth and address mortality and morbidity:

- Raising awareness for birth preparedness and complication readiness and improving the availability of essential drugs, resources, and transport and blood supplies.
- To promote antenatal checkups and institutional delivery trough Aama Suraksha Program
- Availability of 24-hour emergency obstetric care services (basic and comprehensive) at health facilities in every district.

A significant increase in institutional delivery and ANC visits has been observed in the number of facilities providing delivery service after the launch of Aama Suraksha program. There were gradual increments in the maternal health services such as ANC visit and institutional delivery every year as given in the Table 6. However, the number of maternal death still prevalent in case of Sarlahi district although there was increase in maternal health service. The health service delivery status comparing to Kaski and Sarlahi is seems as 2:1 in ratio in case of 4th ANC Visit and Institutional delivery in 2016/17 as shown in Table 6.

Table 6: Maternal Health Status of Kaski and Sarlahi

Maternal Health Status		Kaski	Sarlahi	National (NDHS,2016)
ANC 4th Visit in percent	2014/15	109	35.8	-
	2015/16	105	35.3	-
	2016/17	91	45.6	84
Institutional Delivery in percent	2014/15	102	35.52	-
	2015/16	95	42.76	-
	2016/17	97	48.26	57
Maternal Death in Number	2014/15	11	3	-
	2015/16	6	4	-
	2016/17	2	4	259 for every 100,000 live births

Source: Annual Report of DPHO of Kaski and Sarlahi

In case of satisfaction, mothers are more satisfied those who received the safe delivery services from Armala Primary Health Care Center in comparing to Gaurishankar Primary Health Care Center. There is 92.3 percent of total satisfied mother from Armala PHC's health service. However, 16.3 percent mothers are only satisfied from Gaurishankar PHC's health service. The mothers were taking less ANC visit from Gaurishankar i.e. 30.4 percent but 87.2 percent of mothers were taking 4th ANC visit from Armala PHC as shown in Table 7.

Table 7: Cross-tabulation of According to place and Times of ANC visit and Satisfaction of Mothers

	Satisfaction of Mother for given health services for safe delivery				
Name of Place	Satisfied		Neutral	Unsatisfied	Total
Gaurishankar PHCC	7 (16.3)		3(6.9)	33(76.8)	43(100)
Armala PHCC	36(92.3)		2(5.2)	1(2.5)	39(100)
Total in percent	43(52.4)		5(6.1)	34(41.5)	82(100)
	Times of ANC visit				
	1st Visit	2nd Visit	3rd Visit	4th Visit	Total
Gaurishankar PHCC	4(9.3)	7(16.3)	19(44)	13(30.4)	43(100)
Armala PHCC	0	0	5(12.8)	34(87.2)	39(100)
Total in percent	4(4.9)	7(8.5)	24(29.3)	47(57.3)	82(100)

Note; Figure in parenthesis shows percentage
Source: Survey of 2017

There are different strategies and program supporting for safe motherhood in both districts to decrease maternal death such as ANC visit, safe delivery service by SBA, Comprehensive Emergency Obstetric & Newborn Care (CEONC), PNC services etc. In case of Kaski DPHO, it mobilizes the trained SBA in all the birthing center, resources (medicine), Monitoring and monthly reporting system is good. District Public Health Office has a commanding role due to regional directorate. However, in case of Sarlahi district the weakest point is to mobilize Safe Birth Attendee, maintain supply chain of medicine, lack of monitoring and evaluation, less emphasis of taking statistical notes for Maternal Death Rate, lack of coordination of District Public Health Office among Primary Health Care Center and Health Post. Some more valuable points are given below that help to control Maternal Death Rate in case of Kaski district in compare to Sarlahi district (KII Report).

Table 8: Compare of Health service of Kaski and Sarlahi District.

Strong Points of Kaski District to control MDR	**Key issues shown by 2072/73 report for Safe motherhood Program by Sarlahi District**
· Institutional delivery is 97 percent · 26 Birthing centers in Kaski · Accessibility of 18 private hospitals is in Pokhara Metro-politician. · 82.2 percent educated people · 80 percent population are in Metro-politician city of Kaski · Air-lifting services · Availability of man, money, materials · Specialized doctors are available	· Lack of nursing staff (146 out of 203 is present) · Lack of SBA (20 out of 24 institution have SBA) · Insufficiency of iron tablet · Unavailability of HMIS logbook 3.5 and 3.6 in many health institutions · Insufficient supply of autoclave · Insufficient supply of gloves for birthing center

Source: KII report of 2017& Annual Health Report of Sarlahi

4.2 Accountability Mechanism

The concept of Accountability is fragile condition from the health provider's point of view (KII report). They defined the term accountability as *"fulfillment of responsibility towards their duty. It is most necessary for satisfaction of patients/service seekers."*

"Accountability is about answerability of respective person toward giving services. It includes the answers of the given post as per organizational structure"

"Accountability is the information giving what we done for providing better health service"

"Accountability is the sincerely fulfillment of job of assign post".

The accountability mechanism can't be observed as internal and external aspect in the Armala PHCC and Gaurishankar PHCC. Mainly, Primary Health Care Centers are accountable through giving the service as per citizen charter, information officer is established, responsibility is conducted through job description and there is facilities of suggestion box to give response for their work and services. Mostly, District Public Health Office arranges the monthly meeting and monthly reporting to show their performance. There is social audit is carried out from district level to find out the methodology for easy service delivery. The auditing process is carried out by third party to decrease biasness (KII report).

4.3 Accountability Mechanism for Maternal Health Service

The roles of accountability mechanism for maternal health service are more precise for health service delivery point of view because it affects all the indicators of maternal health services. To show the relationship between accountability mechanism and maternal health service multiple regression analysis had been done. The dependent variable is satisfaction of mothers that have taken the service during pregnancy and at the time of safe delivery. Institutional delivery is constant in this study because data is collected at both primary health care centers. An ANC visit has been taken before delivery only so that in case of dependent variable mother satisfaction had been taken as a maternal health service. The independent variable is

accountability mechanism i.e. determined by delivery on commitment, information sharing, oversight mechanism, people hearing and complaints handling.

A. Internal Accountability Mechanism

Internal accountability mechanism includes service delivery on commitment, information sharing, oversight mechanism etc.

4.2.1 Delivery on Commitment

The numbers of question were asked on Delivery on commitment to find out the statement of mother for it. These question included on service delivery on commitment, answerability for misbehavior, service delivery on responsible manner, caring while providing child delivery service, commitment with professional point of view, commitment to follow well established protocols and guidelines for safe delivery of baby and commitment for referring the complex cases. The findings from study shows that one variable i.e. commitment for referring the complex cases is constant because for all cases the corresponding primary health center refer them. The function like Service Delivery on Commitment, Caring while providing child delivery service, Service Delivery on, Commitment with professional point of view have significant relation between the mother satisfactions for maternal health service. However, the functions like Service delivery on responsible manner, Service Delivery on Commitment to follow well established protocols and guidelines for safe delivery of baby haven't significant relation with mother satisfactions for maternal health service. The respondent stated that there is no proper following of the protocol and guidelines of safe delivery while providing the services.

In local level PHCC just check simply time of delivery and the opening of cervix. No any mother have experienced the proper guideline for safe delivery because most of the time they referred the cases (Mother).

The function of Answerability for Misbehavior is found as negative because the health provider didn't provide any answers to the health service seeker at primary health care center.

The staffs of Primary Health care center pretend that we don't have commodity and infrastructure for providing better service. Even, the birthing place doesn't have the minimum quality benchmarks such as lack of SBA and autoclaves, medicine etc. Also, there is no proper checking at the time of ANC visit rather than Blood Pressure and Weight (Mother).

It is found that District Public health Office is less accountable of supply of medicine iron, and others essential drugs and also in managing the staffs. Since, Primary Health Care Center faced lack of commodity many times so that health worker refers the cases to Janakpur and Birgunj. The situation of these referring cases, Sarlahi is resulted as most Caesarian Section conducted district in Nepal by private hospital of Janakpur and Birgunj (KII report). One of the staff reported that

"In any complex cases, "our first response is referring". We don't take risk for the child and mother both because Primary Health Care Center (PHCC) doesn't have blood storage, technology and instrument to assist the complex cases. The scenario represented by Sarlahi district data is 3 delays, which shows that Primary Health Care Center is not providing service as commitment. However, we are trying our best with ANM and HA staff to minimize the maternal deaths" (Staff of PHCC).

The value of R-square of this model fits in this study because it revealed 61.1 percent of the variance in the dependent variable. The value of F shows that 19.62 which is also greater than 10 therefore the model of delivery on commitment fits as shown in Table 9.

Table 9: Delivery on Commitment as an Internal Accountability Mechanism for Mother Satisfaction for Health Service

Delivery on Commitment	**B**	**T**	**P value**
Constant	.270	.482	.631
Service Delivery on Commitment	.529	2.183	.032*
Answerability for Misbehavior	.000	-.001	.999
Service delivery on responsible manner	.257	1.182	.241
Caring while providing child delivery service	.414	2.613	.011*
Service Delivery on Commitment with professional point of view	.545	2.034	.045*

Service Delivery on Commitment to follow well established protocols and guidelines for safe delivery of baby	.082	.491	.625
R Square	0.611		
F	19.62		
Durbin Watson	1.703		

Question: Satisfaction of mothers with given health services for maternal health at the time of pregnancy/delivery? In the given statement 1 refers to strongly disagree, 2 refers to disagree, 3 refers to Neutral 4 refers to Satisfied, 5 refers to strongly satisfied and 9 refers to don't know. In this scale, 1 is lowest of the scale and 5 is highest of the scale.
*** Level of significance at 1 percent, * Level of significance at 5 percent,*
Source: Survey of 2017, n=82, N=103

The role of accountability plays in the effort of analysts and commentator for to make the sense of accountable service. It involves the mechanism that can illustrate where the gap is eroding the practice of account giving process. Accountability mechanism discusses how to deal with that cause through the responsive services through the reestablishment and rebuilding the protocols and effective standards and norms. Being accountable for service delivery, means subjective to that work that generate integrity, trustworthiness, blameworthiness as setting. Furthermore, interpretation focused on the internal control as being responsible for active roles and responsibility so that make sense of well establishment of administrative culture. In another dimension of accountability as means protect the misuse of the standard, resources, strategies to improve the performance and actions that can generate the account giving process. It involves the external control mechanism from instrumentally that are focus to improve the outputs and outcomes. For example, ANC visiting card can improve the performance of service delivery to control the risk related pregnancy.

From this study, it is clear that delivery on commitment has relatively more variance 61.1 percent in satisfaction of mother for satisfaction for safe delivery, suggesting that, with more caring and commitment enhanced service provider responsiveness and satisfaction. Accountability mechanism can be a useful platform for enhancing performance and user engagement in health facilities. Because committed for better service delivery for 24 hour makes more institutional delivery also as referring the

complex cases to make assure about the providing the better services (KII report). Similar findings had been shown by Dubnick M. and O'Brien Justine (2011) describing the discursive roles of accountability. Accountability mechanism works as cause and cure to ensure the performance of primary health care center as tabulated below

Table 10: The Roles of Accountability mechanism for maternal health service

Perspective	**Focus on**	
	Cause	**Cure**
Accountability Mechanism as delivery on commitment	Bound to refer the case in the absence of instruments for Resuscitation and Caesarian section	Reform, replace, repair the instrument
	Absence or ruining of the protocol for commitment service delivery	Re-establishing, rebuilding moral i.e. community based on effective norms/standards/protocol

Accountability mechanism always needs 100 percent efforts for the work to be done with respect to the commitment because accountability achieved being committed toward duties and roles not only through the transformation of responsibility. Health provider can transfer the responsibility; they can blame the central level organization for not having the resources and instrument. However, accountability also considers the repair or replaces the instrument to deliver the service as per the committed roles. If there is no any well-established protocol to deliver the service than it's their commitment to provide or rebuild the norms or protocol that can enhance the overall performance of primary health care center. In this way, accountability mechanism works as cause and cure for better maternal health service.

4.2.2 Information Sharing

The numbers of question were asked on information sharing such as timely information sharing for service provision, timely information sharing for financial activities, timely information sharing for evaluations and progress report and responsible according to citizen charter for safe delivery. The finding from this study shows that none of the functions are at significant level. The function like timely information sharing for service provision found to be negative because there is gap

between the information sharing about service seeking and delivery. There is no timely information sharing for service provision. However, the function like timely information sharing for financial activities, timely information sharing for evaluations and progress report and responsible according to citizen charter for safe delivery are in position but insignificant at 5 percent. Statistically, it is found there is no relation between information sharing and satisfaction level of mother for maternal health service. However, the best method of being accountable is information sharing and transparency also.

Information sharing is the one of the best approach to be accountable in the primary health care centers because it makes transparent services. Yes, they provide timely information sharing regarding the ANC checkup and incentive given by primary health centers. Every mother got NRs 400 for ANC visit and NRs 1000 for delivering the baby here with ANC visiting card. One doctor stayed here for 24 hour for emergency service. However, they did not provide the better counseling for Post natal care and service of lab test and video x-ray, they should provide these service also at Primary Health Care Center (Mother of Armala PHCC).

One of the primary health care center staff stated that;

"Without commodity there will be no service, without giving the service, it doesn't suits us to say about accountability. In this society, there is lack of awareness about taking institutional delivery. Mainly, due to lack of 4th ANC visit, most of the cases have home delivery. This is the gap that we can't provide our effort to make them aware about risk of pregnancy and sign and symptoms of normal delivery. Actually, pregnant mother suffered with long labor pain in that case we can't provide better service except referring, in this way we seems unaccountable" (Staff of PHCC).

This study revealed that there is gap on the information sharing. Primary health care center doesn't show the information about financial activities and progress update to the mothers group; they only provide the progress update and all financial activities information to the District Health Office only.

There is no any information sharing regarding financial activities is done by the PHCC and also for progress report (Mother).

I don't know about citizen charter, they provide only paracetamol and medicine for gastric most of the time they pretend there is no iron tablet. It was finished. They charge 5 rupees for service each time (Mother).

Findings from observation shows that there is no any citizen charter board and pamphlet of maternal danger sign & neonatal danger sign used to aware and provide the service as committed according to citizen charter at primary health care center. Also, during ANC visit, only blood pressure and weight have been checked up. There is no any lab test or video x-ray is available to make sure of existing risks for safe delivery. This consequence into the scenario of "half of the mother only takes 4th ANC visit who have taken 1st ANC visit at Gaurishankar Primary health care center". Since, the practice of being unaccountable degraded the quality of maternal health service. In case of Kaski district, mothers are more educated, they have more access on specialized health service in Pokhara Valley. They consult only for simple checkup for maternal health service. They don't care whether they share on information on service provision, financial activities or progress report or not (KII report).

Statistically, the findings show that the value of R-square is 56.7 percent which show more variation in the dependent variable. Even, the test value of Durbin Watson testified that the positive autocorrelation between information sharing and satisfaction of mothers for maternal health service. Hence, the given function of this model fits as shown in Table 11.

Table 11: Information Sharing as an Internal Accountability Mechanism for Mother Satisfaction for Health Service.

Information sharing	B	T	P value
(Constant)	2.309	4.621	.000 **
Timely information sharing for service provision	-.082	-.463	.645
Timely information sharing for financial activities	.060	.551	.583
Timely information sharing for evaluations and progress report	.367	.893	.375
Responsible according to citizen charter for safe delivery	.660	1.524	.132
R Square	0.567		

F	25.16		
Durbin Watson	1.75		

Question: Satisfaction of mothers with given health services for maternal health at the time of pregnancy/delivery? In the given statement 1 refers to strongly disagree, 2 refers to disagree, 3 refers to Neutral 4 refers to Satisfied, 5 refers to strongly satisfied and 9 refers to don't know. In this scale, 1 is lowest of the scale and 5 is highest of the scale.
*** Level of significance at 1 percent, * Level of significance at 5 percent,*
Source: Survey of 2017, n=82, N=103

The findings from this study shows that the function of information sharing such as timely information for service provision, timely information about financial activities and progress update, and service delivery as per citizen charter are none of them have significant related with satisfaction of mothers for maternal health service. However, contrast findings showed by the other studies such as must of the issue of health facilities can be minimized by disseminating comprehensive financial information that would lead to satisfy client expectations, since majority of respondents expected this to be the practice, and were disappointed that the facilities did not provide information on how they spent the money they have collected. Even, they didn't show any progress report that what is going through in case of service delivery (Opwora A et al., 2009). Displaying such information and providing the service as per the citizen charter provide the sense of transparency of primary health care centers and as information sharing point of view makes aware about ANC checkup and makes assure to prevent from danger sign of maternal death. Opwora et al. (2009) have revealed that health facilities were alert about displaying financial information openly because it may result into potential risk. Hence, primary health care center provide all the information about programs, activities, service delivered and financial settlement in district health office for the transparency.

The applicability of citizen charter considers the accountable service because it served as means for accountability mechanism. There were various ways to hold accountability mechanism by citizen charter such as it provides the ability to speak to restrict the overcharging. Secondly, it provides useful information about the service

provision offered and their costs by primary health care center. Finally, it helps users to plan their medical expenses before coming to the facility for service. However, several challenges experienced by the mothers that most of them did not perceive the citizen charters as being useful for them. Because there is citizen charter but no any health provider follows that one, there is no record of expenditure and collection of charged money, lack of time to read and understand charter provisions mainly due to uneducated mothers. Similar challenges explained in the study of Atela, et. al. (2015), which leads to the lack of confidence in the citizen charters as an accountability mechanism for being transparent health service delivery.

4.2.3 Oversight Mechanism

To provide oversight mechanism for accountability mechanism of Primary Health Care Center, there are four monitoring bodies such as Regional Health Directorate, DPHO, Metro-political bodies and Health Facility Operation Management Commette for regular check. To determine the oversight mechanism, there were multiple of question asked from mothers about review of conduct by health management commette, review of job description, review of performance through outputs, learning, experience and behavior and preventing practices for fraud and corruption. The findings show that the function of review of conduct by health management commette has highly significant relation with satisfaction of mother for maternal health service. However, the functions like review of job description and review of performance through outputs, learning, experience and behavior show the negative relation between the satisfactions of mother for maternal health service because the mothers are totally unaware of this oversight mechanism as shown Table 12.

Health Facility Operation Management Commette is only in the register, if Health in charge needs any work than they went in chairperson home for signature. All the members are inactive. No one knows that there is shortage of iron tablet or they sell it (Mother).

We don't know about the job description of health worker. Whatever medicine gives us we take. We never heard about District Health Office comes for monitoring and evaluation (Mother).

There is no any preventive mechanism for corruption and fraud. We don't know about any financial expenditure. I can't say about it (Mother).

In case of the function of the preventing practices for fraud and corruption it is found that insignificant at 5 percent because all the monitoring bodies of Armala PHCC are present there as per the schedule since it is in Kaski district where all are present. Also, HFOMC is more active here to check all the staff's punctuality and performance. Here by, all the staff maintain timetable, performance and deliver the service sincerely in case of Armala PHCC. No one knows about the performance review of staffs of PHCC of Sarlahi. In case of Gaurishankar PHCC, the oversight mechanism is weak because DPHO is itself unaccountable to provide commodity and staffs so that they come once or twice a year to visit. HFOMC are mainly involved in the financial activities only so that preventing practices of fraud and corruption is weak (KII report).

Table 12: Oversight Mechanism as an Internal Accountability Mechanism for Mother Satisfaction for Health Service.

Oversight Mechanism	B	T	P value
Constant	2.639	3.461	.001 **
Review of conduct by Health Facility Operation Management Commette (HFOMC)	.815	3.718	.000 **
Review of job description	-.111	-1.500	.138
Review of performance through outputs, learning, experience and behavior	-.172	-1.825	.072 #
Preventing practices for fraud and corruption	.461	1.700	.093 #
R Square	.503		
F	19.48		
Durbin Watson	1.67		

Question: Satisfaction of mothers with given health services for maternal health at the time of pregnancy/delivery? In the given statement 1 refers to strongly disagree, 2 refers to disagree, 3 refers to Neutral 4 refers to Satisfied, 5 refers to strongly satisfied and 9 refers to don't know. In this scale, 1 is lowest of the scale and 5 is highest of the scale.

*** Level of significance at 1 percent, * Level of significance at 5 percent, # Level of significance at 10 percent*

Source: Survey of 2017, n=82, N=103

The findings show that the value of R-square have 50.3 percent variance for the satisfaction level that means this model fits. However, oversight mechanism is strong point for normative setting to hold accountable service delivery. In this study, there were two sites selected where both have Maternal Perinatal Death Response program but the implementation is weak that shows that due to lack of oversight mechanism degraded the quality of maternal health service.

Maternal Perinatal Death Response Program (MPDR)

MPDSR is the process for the quality improvement to connect community to central level in the information system. This program deals with the information, notification, counts of death of mother and neonatal death for the immediate response to control it. MDRP program is more related to death of mother only which is directly related with community. MDSR form filled by FCHV and informed to health facilities through verbal autopsy, in this way case is notify and inform to DPHO and to take appropriate response. For that, there is response commette organized by DPHO. The immediate response is to inform the pregnant mother about risk and to take institutional delivery. The hospital based responses are to take corrective actions to minimize those limitations that cause the pregnancy related death. Central level response is to provide some refreshment training to control those issues. The main objective of this program is to identification death and their cause that to inform the district health office although this program devoted to hold accountability mechanism through notifying the gap for maternal health service to control maternal death. This program is implemented by both Sarlahi and Kaski district however there is no any cases are reviewed by Sarlahi DPHO as shown in Table 14. All the cases were reviewed by DPHO Kaski. To response the causes of maternal death, there were training had been provided to the 32 VDC health Posts regarding the post-partum hemorrhage (PPH). In case of Sarlahi district there is no any better response to minimize those limitation for maternal death. The culture of refer is most famous in Sarlahi district, because health provider don't response properly, any how they want to refer the case. There saying that *"how the condition is arrived the same way condition is applied"* (KII report).

Table 13: Maternal and Neonatal Deaths in 2015/16 BY MPDR

Indicators	Sarlahi		Kaski		Major causes of deaths
	Facility death	Community Death	Facility death	Community Death	
Total maternal deaths	4	0	3	3	(PPH: 3 delay), delay in decision making & coming in hospital
Total neonatal death	4	10	0	0	Infection, low birth weight, asphyxia
Total still birth	Fresh-51 Macerated- 23	0	0	0	Not aware of ANC visit, malnutrition
Number of maternal death reviewed MPDR	0	0	3	3	3 cases were maternal death with pregnancy cause PPH, 2 were committed suicide, 1 was on the way to come hospital.
Number of neonatal death reviewed MPDR(in hospital)	0	0	0	0	

Source: KII report of 2017 & Annual Health Report of Sarlahi

The functions of oversight mechanism have significant relation with the satisfaction of mothers for service delivery. Only the function of review of conduct by health facility operation management commette has highly significant with mother satisfaction. However, others functions such as review of job description of health provider and review of performance are negative variance for mother satisfaction. Whether, the function of preventing practices is not significant with mother satisfaction. This finding suggests that oversight mechanism is necessary for delivering the better health service. Health facility operation management commette check the punctuality, absenteeism of staffs and monitor the performance of the staffs as being accountable for their roles. The weak monitoring system generates the practice of fraud and corruption. HFOMC should take involvement in all the activities not only in financial to be benefitted that degraded the accountability mechanism that leads to loose in controllability of service delivery at primary health care center. The monitoring system is just finding which types of limitation are practicing in the service delivery at the primary health care center level rather it should be the assessment of which types of mechanism will control this situation. In overall monitoring mechanism is not giving the responsive mechanism for health service delivery. The MPDR program at community level finds the reason and cause

but the response is given in only few primary health care centers which shows that less responsive oversight mechanism couldn't output the accountable health service from Primary health care center (PHCC). However, Improving the guidelines and protocol of health service delivery at primary health care center with regard to the delivery of the services as per commitment, with disseminating information sharing and having oversight mechanism are critical for accountability and community satisfaction with service delivery. Establishing official guidelines on safe delivery without providing the necessary support to ensure that, in practice, they offer the level of ambitious plan i.e. unlikely to achieve much. Attention therefore needs to be equally focused on mechanisms to improve oversight mechanism for official guidelines, addressing capacity gaps in personnel and resources at the facilities for better controllability for maternal health service delivery.

B. External Accountability Mechanism

4.2.4 People Hearing Mechanism

People hearing mechanism is mostly practiced mechanism to be accountable for service delivery point of view. The findings show that the function of people hearing mechanism have highly significant related with satisfaction of mothers for maternal health service at 1 percent P-value as shown in Table 15.

Social Audit

The concept of people hearing mechanism and social audit are the conjointly understood in the mothers groups. So that targeted outcome of both mechanisms seems couldn't achieve at the primary health center. Social audit is the process of the assessing the effectiveness, transparent, regularities, well resource mobilization according to established policy and guidelines of organization by third parties through different stakeholders. The main objective of social audit is to being accountable and sensitive for service delivery. This program is initiated by Primary Health Center Revitalization Department. The whole process is carried out as legalized with given guideline of social audit act 2015 at every health facilities. This

program is initiated in 2014 and continues as recommended program. The government target is that social audit should be conducted by 500 health facilities of 70 districts by 2017. The whole process is carried out with third parties such as NGO to ensure biasness. There 28 health facilities conducted social audit in Kaski district. Similarly 15 health facilities conducted social audit in Sarlahi district. There is no social audit has been carried out by Gaurishankar PHCC. However, Armala PHCC conducted Social audit last year. Most of the mothers remembered as last year review meeting, however it was social audit.

The Last review meeting shows that the health management commette is no so active so that they formed new member to check and balance for the service delivery (Mother of Jarbire).

They showed the overall performance indicators which is conducted by NGO and local people of Jarbire. There were fighting for each other for some issues that shown by the report. Even, though they justify it and made action plan for improvement in front of mothers group for giving better services. They just promised, no one is following that action plan. They appoint one staff for night duty (Mother of Jarbire).

4.2.5 Complaints Handling

To state the complaints handling question were asked about the complaint system for corrective action and taking action for the given feedbacks. The findings show that the functions of complaint system for corrective action and taking action for the given feedbacks have significant relation with the satisfaction of mothers for the maternal health service.

People hearing mechanism is done informally with health management commette. I have complaint to them for Ambulance service at primary health center. However they didn't bought but they arranged one private ambulance to transport the patients at Gandaki Hospital as a contact basis (Mother)

The practice of complaints handling is no more in Gaurishankar PHCC of being accountable at primary health care center because the complaint box is modified as

suggestion box. Hence, nobodies were taking sensitive action about complaints and feedback mechanism in Primary health care centers (KII report).

They never listen to our complaints. We complaints for every time that; when will you give iron tablet?. They just replied "we will provide if we have". District health office didn't give us at the right time (Mother of Gaurishankar).

Table 14: External Accountability Mechanism for Mother Satisfaction for Health Service.

External Accountability	B	T	P value
Constant	1.417	2.215	.030 *
Complaint system for corrective action	.907	2.446	.017 *
People hearing mechanism	.561	6.717	.000 **
Taking action for the given feedbacks	.192	2.377	.020 *
R Square	0.522		
F	28.34		
Durbin Watson	1.72		

Question: Satisfaction of mothers with given health services for maternal health at the time of pregnancy/delivery? In the given statement 1 refers to strongly disagree, 2 refers to disagree, 3 refers to Neutral 4 refers to Satisfied, 5 refers to strongly satisfied and 9 refers to don't know. In this scale, 1 is lowest of the scale and 5 is highest of the scale.
*** Level of significance at 1 percent, * Level of significance at 5 percent,*
Source: Survey of 2017, n=82, N=103

The findings show that the value of R-square stated that there is 52.2 percent variation in the dependent variable. Even, the test value of Durbin Watson testified that the positive autocorrelation which is less than 2 i.e. 1.72 between information sharing and satisfaction of mothers for maternal health service. Hence, the given function of this model fits. In sum, external accountability is even most essential mechanism for the responsive service as resulted above. This external aspect of accountability mechanism ensure enforceability for the health service delivery such as people hearing mechanism aware and strengthen the system of externally accountable to their work. Even, complaints handling and taking corrective action made culture of account giving and responsive service and improve maternal health status.

CHAPTER: 5

CONCLUSION

This study has examined the mothers experience and perceptions of primary health care center service for safe delivery and satisfaction for it. Maternal health service delivery is inconstantly is delivered throughout the region level and Primary Health Care Center level also.

Key Findings

The institutional delivery at Kaski district is 97 percent whereas institutional delivery at Sarlahi district is 48.26 percent.

The 4^{th} ANC visit at Kaski district is 91 percent whereas 4^{th} ANC visit at Sarlahi district is 46.6 percent, which is half in nature respecting to the Kaski district.

The satisfaction level of mothers at Armala Primary health care center is 92.3 percent whereas the Gaurishankar Primary health care center is 16.3 percent.

The 4^{th} ANC visit at Armala Primary health care center is 87.2 percent whereas the Gaurishankar Primary health care center is 30.4 percent.

All the models of multivariate regression analysis are fitted with the model. However, some functions of accountability mechanism have significant, insignificant and negative significant relation with the satisfaction of pregnant mothers for maternal health service delivery.

The functions of accountability mechanism have significant relations with satisfaction of mother are service delivery on commitment, Caring while providing child delivery service, Service Delivery on Commitment with professional point of view, Review of conduct by Health Facility Operation Management Commette (HFOMC), Complaint system for corrective action, People hearing mechanism, Taking action for the given feedbacks.

The functions of accountability mechanism have insignificant relations with satisfaction of mother are Service delivery on responsible manner, Timely

information sharing for financial activities, Timely information sharing for evaluations and progress report, Responsible according to citizen charter for safe delivery, Service Delivery on Commitment to follow well established rules regulation

The functions of accountability mechanism have negative relations with satisfaction of mother are Answerability for Misbehavior, Timely information sharing for service provision, Review of job description, Review of performance through outputs, learning, experience and behavior.

Conclusion

Finally, finding revealed that the accountability mechanism is most for satisfaction of mothers for maternal health service. Inconsistencies in the information sharing and weak oversight mechanism observed in this study whereas commitment for service delivery and people hearing mechanism function is more variance in the satisfaction of mother for safe delivery service. This study explores existing mechanisms in Primary health care center of Kaski and Sarlahi district of Nepal. Findings show that accountability mechanisms such as information sharing oversight mechanism, people hearing and taking responsive actions are absent in maternal health services at the PHCC level. Some building blocks which are likely to create accountable service delivery are present such as delivery on commitment and review of conduct by HFOMC. It is necessary to ensure accountability mechanism because it works as cause and cure for better service delivery for antenatal care, post natal care and child birth to save the lives of child and mothers.

In sum, this study has added important knowledge about the effects of accountability mechanism for service delivery at primary health care center level. However, to diversify the role of accountability mechanism, there should be enhancement of information sharing and oversight mechanisms which are the most important mechanism, further study is most necessary to full fill this gap for satisfactory maternal health service. Most importantly, the reviews of MPDR program and Social audit program should be conducted because it has more responsive and satisfactory mechanism for maternal health service delivery.

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ANNEX I: Core skills and responsibility of Skilled Birth Attendant (SBA) from National Policy on Skilled Birth Attendants 2006 in Nepal

All skilled birth attendants (SBA) must have the core midwifery skills. All SBAs at all levels of the health system must have skills and abilities to perform all the core functions listed below:

1. Communicate effectively, to provide holistic "women-centered" care.

2. Take history, perform physical examination and specific screening tests as required, including voluntary counselling and testing for HIV, and provide appropriate advice/guidance.

3. Educate women and their families about the importance of making a birth plan (where the delivery will take place, how they will get there, who will attend the birth and, in case of a complication, how timely referral will be arranged).

4. Assist pregnant women and their families to make a plan for birth.

5. Identify complications in mothers and newborns, perform first line management (including performance of life saving procedures and administration of life saving drugs according to the national protocol when needed) and make arrangements for effective referral.

6. Perform vaginal examination and interpret the findings.

7. Identify the onset of labor.

8. Monitor maternal and foetal well-being during labor and provide supportive care.

9. Record maternal and foetal well-being on a pantograph, identify maternal and foetal distress and take appropriate action, including referral where required.

10. Identify delayed progress in labor and take appropriate action including referral where appropriate.

11. Manage normal vaginal delivery.

12. Manage the third stage of labor actively13.

13. Assess the newborn at birth and give immediate care

14. Identify any life threatening conditions in the newborn and take essential life-saving measures including, where necessary, active resuscitation as a component of the management of birth asphyxia, and referral as appropriate.

15. Identify hemorrhage and hypertension in labor, provide first line management (including lifesaving skills in emergency obstetric care where needed), and if required make effective referral.

16. Provide postnatal care to women and their newborns and post abortion care where necessary.

17. Assist women and their newborns in initiating and establishing early and exclusive breastfeeding, including educating women and their families and other helpers in maintaining successful breastfeeding.

18. Identify complications (illnesses and conditions) detrimental to the health of mothers and their newborns in the postnatal period and provide first-line management according to the national clinical protocol, and if required make arrangements for effective referral.

19. Supervise non-skilled and semi-skilled attendants, including TBAs, MCHWs and paramedics, in order to ensure that the care they provide during pregnancy, childbirth and early postpartum is of good quality.

20. Provide advice, counselling and services on postpartum family planning and refer if needed.

21. Educate women (and their families) on how to prevent sexually transmitted infections including HIV

22. Collect and report relevant data, collaborate in data analysis and case audits

23. Promote a sense of shared responsibility/partnership with individual women, their family members/supporters and the community for the care of women and newborns throughout pregnancy, childbirth and the postnatal period SBAs working at the primary health facilities in remote areas with limited access to BEOC/CEOC facilities should also be able to do the following:

- Use vacuum extraction in vaginal deliveries
- Perform manual vacuum aspiration for the management of incomplete abortion.
- Repair vaginal tears
- Perform manual removal of placenta

ANNEX II: Semi-Structured Questionnaire for Accountability Mechanism for maternal Health Service

Dear Sir/Madam,

I am a student of North South University of Master in Public Policy and Governance Program; I have to conduct a survey on "**Accountability Mechanism for Maternal Health Status at Primary health center in Nepal**" for the partial fulfillment of the program. I request you to participate and provide us the information needed for the successful completion of the work. We assure you the information provided by you will keep confidential and will be used only for academic purpose. Thanking You.

Name of PHCC: Place:

1. Respondents categories (उतरदाताका किसिम)
   a. Health Service Provider b. Service Seeker (Mother) c. FCHV
2. Age of respondents:

SN	General Information (समान्य जानकारी(	SA पुर्ण सहमत	Agree सहमत	Neutral तटस्थ	Disagree असहमत	SD पुर्ण असहमत	DK थाहा नभएको
a.1	Health service delivery on their commitments? (यस प्राथमिक उपचार केन्द्रमा केहि सेवा प्रदायक सँग सेवा दिने क्रममा आफु कतिको प्रतिवद्ध रुपले सेवा दिने गर्दछ? (						
a.	Answerability for misbehavior in health service delivery on their commitments? (यस प्राथमिक उपचार केन्द्रमा केहि सेवा प्रदायक सँग सेवा दिने क्रममा गल्ति गरेको बेला आफु प्रतिवद्ध रुपले कतिको जवाफदेहिता प्रकट गर्दछ? (						
b.	Provide services with responsible manner?)यस प्राथमिक उपचार केन्द्रले कतिकोआफ्नो जिम्मेवारी पुर्वक काम गर्दछ?)						
c.	Officer care for child delivery from professional point of view? (यस प्राथमिक उपचार केन्द्रका सेवा प्रदायकले बच्चा जन्मिने बेलामा दिने सेवाका क्रममा एउटा कुशल डाक्टरको रुपमा कतिको सेवामुखी भएको प्रकट गर्दछ(?						
B. Delivery on Commitments)सेवा प्रदान गर्नेको प्रतिवद्धता							
d	Officers involved in service delivery to mothers, are committed to high standards for professional conduct or ethical principles?सेवा) अचार संहिता ,प्रदायकले आमा र बच्चालाइ दिइने सेवामा कतिको गुणस्तर (? एवम इमानदारिता झल्किन्छ						
e	Officers involved in service delivery to mothers, are committed to follow well established law, rules and regulation (safe motherhood						

	protocol)? सेवा प्रदायकले आमा र बच्चालाइ दिइने सेवामा कतिको)lgod sfg[g sf] kfnfgf u/]sf] b]vLG5 (?						
f.	How much they responsible from your point of view in case of giving service for safe delivery, rate the given scale? कतिको)आफ्नो जिम्मेवारी पुर्वक काम गर्दछ भन्नेकुरालाइ कुन स्तरमा राख्नु हुन्छ , (स्केलिङ्ग गर्नुहस।	1 अतिअ सन्तुष्ट	2 असन्तुष्ट	3 तटस्थ	4 सन्तुष्ट	5 अति सन्तुष्ट	9 DK
g	Commits for referring the complex cases of delivery (CS) to advanced hospital?) यस संस्थाले संवेदनशिल केशहरू लाई कतिको माथिको निकायमा रिफर गर्ने प्रतिवद्धता पुरा गर्दछ (?	SA	A	N	D	SDA	DK
h	Commitment to working in partnership with DHO based on mutual accountability, respect, and continual improvement? यस संस्थाले माथिल्लो निकाय जिल्ला स्वास्थ्य कार्यालय संग प्रतिवद्ध रुपले जवाफदेहिताको कार्यशैलीमा कतिको भुमिका निर्वाह गर्दछ ?	SA	A	N	DA	SDA	DK
i.	Delivery on commitment improves maternal health service (Hospital delivery)? यस संस्थाको सेवा प्रवाह गर्ने प्रतिवद्धताले मातृ स्वास्थ्य सेवा मा कतिको सुधार आउछ के हस्पिटल डेलिभरी ब ,ढन सक्छन?						
j.	Does delivery on commitment reduce maternal mortality rate? यस संस्थाको सेवा प्रवाह गर्ने प्रतिवद्धताले मातृ मृत्युदरमा कतिको सुधार आउछ ?						
C. Information Sharing) जानकारी बाड्नेको सुनिशचीतता							
k.	Timely information sharing for service provision based on time and cost? समय र खर्चको हिसाबले सेवा प्रदायक) (?कतिको सेवा सुविधाको बारेमा जानकारी गराउदछ						
l.	Timely information sharing for financial activities (includes incentives, kits after delivery, and payments? (सेवा प्रदायकले जिम्मेवारीपुर्वक कतिको समयमै आर्थिक सेवा सुबिधाको व्यवस्थाको बारेमा जानकारी पारदर्शक रुपले जानकारी गराउदछ ?)						
m	Timely information sharing for evaluations and progress reports? सेवा प्रदायकले जिम्मेवारीपुर्वक कतिको समयमै) सेवा दिइको मुल्याङकन र अनुगमनको बारेमा जानकारी पारदर्शक रुपले जानकारीगराउदछ (?						
n	Responsible according to given by citizen charter at practice level as you observe for safe delivery? सेवा) प्रदायकले प्रतिवद्ध रुपले नागरिक वडापत्र अनुसार सुरक्षित मातृत्वको (?सेवा सुविधा कतिको दिइको पाउनुभएको छ						
o	Information sharing of maternal health service increases ANC visit? यस संस्थाको मातृ स्वास्थ्य सेवाको						

	जानकारीले मातृ स्वास्थ्यमा कतिको सुधार आउछ के सुत्केरी भ्रमन , बढन सक्छन?						
D.Oversight Mechanism (निरीक्षण को पद्धती)							
p	Review of the conducts by the management of the primary health care center? (सुरक्षित मातृत्वको सेवा सुविधाको बारेमा स्वास्थ्य व्यवस्थापन समितिले कतिको मुल्याङकन र अनुगमन गर्ने गरेको पाउनुभएको छ(?	SA	A	N	DA	SDA	D K
q	Review of job descriptions यस संस्थाले कार्य विबरणलाई कतिको मान्यता दिएर कर्मचारी जिम्मेवारीपुर्वक काम गर्छ भनेर मुल्याङकन गर्ने गरेको पाउनुभएको छ(?						
r.	Review of staff performance यस संस्थाले कर्मचारीको कामको मुल्याङकन गर्दा उनीहरुको उपलब्धीअनुभव र व्यवहार ,सिकाई , ? अनुसार कतिको मुल्याङकन गर्दछ						
s.	Prevent fraud and corruption on the part of the procurement officers and financial activities जालसाज र) भ्रष्टाचारी/f]Sg] कुशल कदमहरु को नियमित रुपमा परिचालन भएको कतिको पाउनु भइएको छ(?						
Complaints Handling) गुणासो सुनवाई र व्यवस्थापन							
t.	Complaint system for corrective actions? गुणासो kf]VgnfO केहि सरसुविधा छ कि छैन?						
u	People hearing mechanism मातृ स्वास्थ्य सेवा सम्बन्धि नया रणनिति ,कमि कमजोरीसल्लाह र सुझावको लागि जनता माझ , सार्वजानिक सुनवाई कार्यक्रम राख्छन कि राख्दैनन?						
v.	If Yes , what types of and for which purpose explain (कार्यक्रम राख्छनभने कस्ता कार्यक्रमके का लागि र किन बिस्तार , (गर्नुहोस ।						
w	Taking action for the given feedbacks? दिइएको सल्लाह सुझाव मा के कतिको परिर्वतन ल्याउने प्रयास हुन्छ?	SA	A	N	DA	SDA	D K
Maternal Health Status) सुरक्षित मातृत्व							
x.	How many times did you visit (facilitates to visit) hospital for antennal checkup during pregnancy? गर्भवतिको बेला कति पटक चेकजाच गराउनु हुन्छ ?						
y.	Satisfied with given health services for maternal health at time of pregnancy? स्वास्थ्य चौकिले दिइएको सेवा	1 अतिअ	2 असन्तु	3 Neut	4 Satis	5 अति	9 D

	सुबिधाबाट सुरक्षित मातृत्वको सेवा सुविधाले कतिको सन्तुष्ट हुनुहुन्छ ?	सन्तुष्ट	ष्ट	ral तटस्थ	fied सन्तुष्ट	सन्तुष्ट	K
z.	Satisfied with given health worker for providing safe delivery and postnatal care? तालिम प्राप्त स्वास्थ्य प्रदायकले दिइएको सुरक्षित सुत्केरी सेवा सुबिधाबाट कतिको सन्तुष्ट हुनुहुन्छ?	1 अतिअ सन्तुष्ट	2 असन्तुष्ट	3 Neutral तटस्थ	4 सन्तुष्ट	5 अति सन्तुष्ट	9 DK
a.	Do you think that the absence of their accountability make responsible for maternal death at the time of safe delivery? जवाफदेहिता को कमिले गर्दा स्वास्थ्य चौकी मातृ मृत्युदर प्रति कतिको जिम्मेवार छ(?	SA	A	N	DA	SDA	DK

I. Do you think that the absence of Accountability; how many maternal deaths are occurring at the time of safe delivery tell me out of 100 ?)जवाफदेहिता को कमिले गर्दा स्वास्थ्य चौकीबाट १०० मध्ये कतिजना सुत्केरी महिलाको ज्यान जाने गर्दछ (?
II. Do you think that they are responsible for giving better health service for safe delivery? सेवा प्रदायकले दिने सेवा सुबिधाले तिनिहरु एकदम जिम्मेवार छ भन्नसकिन्छ? के छ तपाइको विचार ?
III. Collect the data regarding Number of Hospital Delivery, ANC visits and Number of Maternal Death from official records up to three year from given PHCC.

ANNEX III: Checklist for KII

KII report of Kaski

Q.1 What is your strongest point of DPHO to decrease the Maternal Death Rate in overall Kaski District on the basis of NDHS report?

- There are different strategies and program supporting for safe motherhood to decrease maternal death such as ANC visit, safe delivery service by SBA, Comprehensive Emergency Obstetric & Newborn Care (BEONC), PNC services etc. DPHO mobilizes the trained SBA in all the birthing center, resources (medicine), Monitoring and monthly reporting system is good. DPHO commanding role has been seen due to regional directorate.
  Some more valuable points are given below that help to control MDR
  - Institutional delivery
  - Birthing center
  - Accessibility of private hospital
  - Educated people
  - 80 percent population are in Metro-politician city
  - Air-lifting services
  - Availability of man, money, materials
  - Specialized doctors are available

Q.2 What is your understanding about Accountability?

Accountability refers to fulfillment of responsibility towards their duty. It is most necessary for satisfaction of patients/service seekers.

Accountability is about answerability of respective person toward giving services. It includes the answers of the given post as per organizational structure.

Q.3 In which way this PHC is accountable to local people?

PHC (Health institutions) are accountable through giving the service as per citizen charter, information officer is established, responsibility is conducted through job description and there is facilities of suggestion box to give answers for their work and services. Mostly, DPHO arrange the monthly meeting and monthly reporting to show our performance. There is social audit is carried out from district level to find out the methodology for easy service delivery. The auditing process is carried out by third party to decrease biasness.

Q.4 How accountability functions in your PHC?

There are different aspects of accountability of PHC to be accountable for delivering maternal health service

- By Information sharing
  We provide the timely information for ANC visit and well checkup as per the procedure. Women are much more aware about 4th ANC visit for the service and incentive both point of view. In the ANC visit, we share any risk is there or not, maintain the balance diet etc. Nowadays, there is technology i.e. video x-ray; we prefer to use it because it gives clear vision of the baby. In most of the cases we don't need to say about the risk of maternal danger sign and new born care although we have that pamphlet. People are educated; they know very well what to do before delivery such as proper 4th ANC visit, regular check, maintain diets, select institutional delivery.
- By giving better services (Citizen charter)
  There is a 24 hour service by 2 trained SBA. They complete their duty sincerely. We make rotation and take help with ANM, and AHW also. We are available on call in rotation period too. There are labs outside, ambulance almost all things accessible to minimize the risk of pregnancy related death.
- By referring the complex cases
  We refer the cases as per the situation of patients; we don't delay because there is Gandaki regional hospital within 15 minute travel distance by Taxi. We don't take any risk for the safe delivery. It's all about accessibility, any one get the good service for safe delivery. There are some cases out of Kaski district that makes delay to arrive here in regional hospital that results in death. We couldn't help them in any ways because the long labor pain, baby is totally went in macerated condition. However, in some case we referred to Bir hospital or Manipal Hopital through Air lifting (Helicopter).
- By monitoring and evaluation
  In case of PHC, there are four monitoring bodies such as Regional Health Directorate, DPHO, Metro-political bodies and HFOMC for regular check. These bodies monitor as per the schedule but HFOMC is more active here to check all the staff's punctuality and performance. Here by, all the staff maintain timetable, performance and deliver the service sincerely.
- By Social audit
  There is social audit program carried out by third party to minimize the biasness annually. It deals with transparency, rules regulation to provide the service, regularity and effectiveness toward service for service seeker.
- MPDSR Program
  MPDSR is the process for the quality improvement to connect community to central level in the information system. This program deals with the

information, notification, counts of death of mother and neonatal death for the immediate response to control it. MDRP program is more related to death of mother only which is directly related with community. MDSR form filled by FCHV and informed to health facilities, in this way case is notify and inform to DPHO and we take appropriate response. The immediate response is to inform the pregnant mother about risk and to take institutional delivery. The hospital based responses are to take corrective actions to minimize those limitations that cause the pregnancy related death.

Q.5 In which level DPHO/PHC/HP, the accountability is not functioning well?

There are different roles and responsibility of the DPHO, PHC and HP respectively. They must be accountable towards their duties. The accountability of PHC level is most sensitive because every PHC have birthing center facilities. In this way, the absence of accountability causes tremendous affect in maternal health services to representative death of mothers. All the levels are accountable because DPHO also manages the trained SBA, Monitoring and evaluation, supply chain management and overall administrative functions. In overall PHC and HP is mutual accountable to DPHO; also by monthly reporting. DPHO is also accountable for coordinating with administrative management and logistic supply.

Q.6 How the accountability mechanism is affecting maternal Health service?

For maternal death, there are different crosscutting issues. Even, accountability is must crucial factor because it affects all the indicators of maternal health services.

- Accountable as information sharing point of view makes aware about ANC checkup and makes assure to prevent from danger sign of maternal death.
- Accountable as notifying cases and providing statistics about cause and death count makes better information system for central level.
- Accountable as taking response for the given death counts helps to take corrective action and enhancement in quality of service for maternal health.
- Accountable as conducting social audit for transparency and client satisfaction.

Q.7 How can we ensure accountable maternal health service?

The first initiative for making accountable maternal health service we have to strengthen MEAL system. Monitoring, Evaluation, Accountability and Learning for all the health institution. Monitoring is weak in overall health system of Nepal. There

should be provision of prize and punishment, sincerity toward work, no political bias and limitation of threats of chief and directors.

KII Report Sarlahi

(Satyanarayan Yadav, Laxmi Shrestha, Kalyani Shah)

Q.1 What is the weakest point of DPHO to decrease the MDR in overall Sarlahi District on the basis of NDHS report?

The weakest point is to mobilize SBA, maintain supply chain of medicine, lack of monitoring and evaluation, less emphasis of taking statistical notes for MDR, lack of coordination of DPHO among PHC and HP.

Key issues shown by 2072/73 report for Safe motherhood Program by Sarlahi District

- Lack of nursing staff (146 out of 203)
- Lack of SBA (20 out of 24 institution have SBA)
- Insufficiency of iron tablet
- Unavailability of HMIS logbook 3.5 and 3.6 in many health institutions
- Insufficient supply of autoclave
- Insufficient supply of gloves for birthing center

Maternal and Neonatal Mortality 2072/73

Indicators	Facility death	Community death	Major causes of deaths	Remarks
Total maternal deaths	4	0	(PPH: 3 delay), delay in decision making & coming in hospital	The culture of refer is most famous in Sarlahi district, because health provider don't response properly, any how they want to refer the case. There saying that "how the condition is arrived the same way condition is applied"
Total neonatal death	4	10	Infection, low birth weight, asphyxia	
Total still birth	Fresh-51 Macerated-23	0	Not aware of ANC visit, malnutrition	
Number of maternal death reviewed MPDR	0	0		
Number of neonatal death reviewed MPDR(in hospital)	0	0		

Q.2 What is your understanding about Accountability?

Accountability is the answerability of the designed roles and responsibility.

Accountability is the information giving what we done for providing better health service.

Accountability is the sincerely fulfillment of job of assign post.

Q.3 In which way this PHC is accountable to local people?

By providing better services

We provide ANC checkup in time.

Provide the service what resource we have

Counseling for institutional delivery

By referring the cases

24 hour delivery service with one staff

Q.4 How accountability functions in your PHC?

By information sharing

By giving 24 hour service

By referring complex cases etc

There is no social audit and MPDR program implemented by PHC level to provide better services and take response. Even we don't conduct people hearing program to take their response for safe motherhood program.

Q.5 In which level DPHO/PHC/HP, the accountability is not functioning well?

It is found that Sarlahi DPHO is less accountable of supply of medicine iron, and others essential drugs and also in managing the staffs. Gaurishankar PHCC faced lack of commodity many times so that health worker refers the cases to Janakpur and Birgunj. The situation of this referring cases resulted most Caesarian Section conducted district in Nepal by private hospital of Janakpur and Birgunj. The scenario represented by district data is 3 delays, which shows that Gaurishankar PHC is not providing service as commitment. However, they we are trying our best with ANM

and HA staff to minimize the maternal deaths. In case of Gaurishankar PHCC, the oversight mechanism is weak because DPHO is itself unaccountable to provide commodity and staffs so that they come once or twice a year to visit. HFOMC are mainly involved in the financial activities, which is inactive in condition.

Q.6 How the accountability mechanism is affecting maternal Health status?

We are accountable through providing information of ANC visit and for institutional delivery. Our best effort is to provide better emergency obstructive care to minimize pregnancy related risk. In any complex cases, "our first response is referring". We don't take risk for the child and mother both because this PHC doesn't have blood storage, technology and instrument to assist the complex cases.

Without commodity there will be no service, without giving the service, it doesn't suits us to say about accountability. The most of the cases represent the 3rd delay for taking service delivery that causes risk of mother and child death. In this society, there is lack of awareness about taking institutional delivery. Mainly, due to lack of 4th ANC visit, most of the cases have home delivery. This is the gap that we can't provide our effort to make them aware about risk of pregnancy and sign and symptoms of normal delivery. Actually, pregnant mother suffered with long labor pain in that case we can't provide better service except referring, in this way we seems unaccountable.

There are no people hearing or any interaction program with pregnant mother group that creates the gap to utilization of service.

Q.7 How can we ensure accountable maternal health service?

There should be SBA staff, commodity for safe delivery, health seeking behavior should be enhanced, and there should be monitoring and supervision to provide sincere services.

ANNEX IV: Case Studies

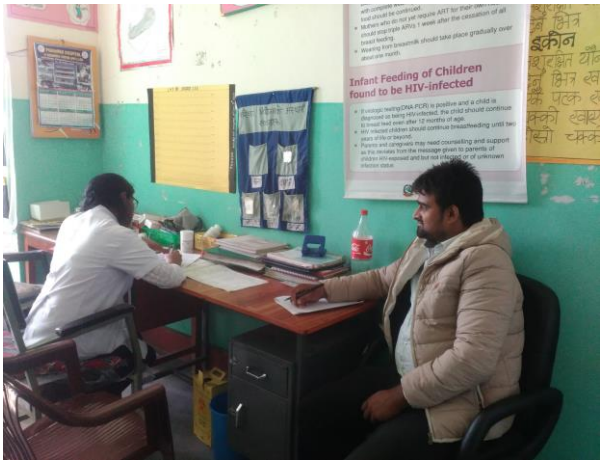
My name is Usman Khatun. My wife name was Hasina Khatun. We have 6 children. All she have normal delivery but this time, it was Opposite. We had checked it twice. Primary Health Center referred us, in any difficult condition they just refer. They are pretending with having no infrastructure, we can't provide better service. We under estimated it that it will be normal delivery. She suffered long labor pain, nurse sister try to pullout with hand. She was so tired and problem in breathing and gone with heavy bleeding. There is no control of bleeding, than we went Bardibas District Hospital from Laxmipur PHC (Kodraha) Sarlahi. It was too late to handle it. I lost my wife and child both.

I am Shankar Mahato, my wife (Pawan Devi Mahato) was 20 year old and it was first pregnancy and twins. I have checked the pregnancy outside (No ANC visit in PHC). It was normal delivery at 8:24 and one at 8:30 am. They referred after 1 and half hour. After, reaching home bleeding started and we came again in Barahathwa PHC. There is no better service to prevent the bleeding and there is no blood storage in Sarlahi district. In the way, there is difficult in breathing and then I lost her.

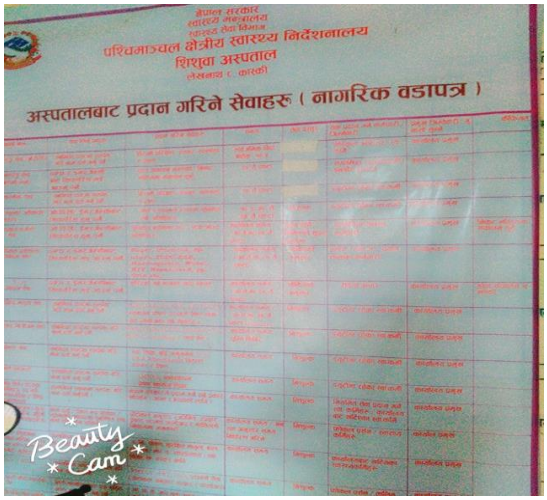
I am Sukhiya devi Majhi. My daughter in law have 2 children, all were normal delivery in home. This time also the condition is same; there is no long labor pain, however she went in heavy bleeding. We went Gaurishankar PHC, there first response is referring. I can't understand which type of birthing center is that. When people went there, they always pretend with having the check of Blood pressure. Nothing more than that we get from there. We never know, when there is medicine in a whole year. Service is zero totally they don't care for anything else.

Photos


Beauty Cam


Infant Feeding of Children found to be HIV-infected


नेपाल सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य सेवा विभाग
पश्चिमाञ्चल क्षेत्रीय स्वास्थ्य निर्देशनालय
जिल्ला जन स्वास्थ्य कार्यालय
अर्मला प्राथमिक स्वास्थ्य केन्द्र
पोखरा-१८, कास्की


पश्चिमाञ्चल क्षेत्रीय स्वास्थ्य निर्देशनालय
शिशुवा अस्पताल
अस्पतालबाट प्रदान गरिने सेवाहरू (नागरिक वडापत्र)
Beauty Cam


स्वास्थ्य चौकी

ANNEX V: Observation Tool for MNCH Armala PHC Center

Section 1: Cover Page						
FIND THE DIRECTOR OR STAFF IN-CHARGE. IF THIS IS A NEW RESPONDENT, OBTAIN ORAL INFORMED CONSENT.						
Facility Name and type (Health center, district hospital, zonal hospital)	Armala PHC Center (Birthing Center)					
Today's Date/interview date	27-06-2074					
Health facility location District/ Rural Municipality/Municipality	Jarbire, Kaski					
Section 2: General Inventory & Service Statistics						
Question						
Does this facility have a working phone to call outside that is available at all times client services are offered?	Yes, onsite or within 5 mins walk			1		
	Yes, within 5 min, not onsite			2		
	Only pay phone or personal cell phone			3		
	No			4		
Does this facility have a functional ambulance or other vehicle on-site for emergency transportation of clients? IF yes, ask if the vehicle is functioning and if there is fuel available. Accept reported response.	Yes, functioning with fuel			1		
	Yes, not functioning or no fuel			2		
	No			3		
Which service records are available for review? (Choose all those which applies)	ANC	√				
	PNC	√				
	Labor & Delivery	√				
	FP	√				
	Newborn	√				
	Preterm	√				
Section 3: Labor & Delivery Inventory						
FIND THE LABOR & DELIVERY INVENTORY MANAGER AND CONTINUE WITH THE L&D INVENTORY (Nursing staff)						
	YES	NO				
Does this facility provide delivery services	1 √	2				
Does the facility has 24 hour delivery services?	1 √	2				
Does the HF has Skilled birth attendance or on call for 24 hour including weekends to provide delivery services?	Yes, present, schedule observed			1		
	Yes, present, schedule reported, not seen			2		
	Yes, on-call schedule observed			3		
	Yes, on-call, schedule reported, not seen			4		
	No			5		
ASK TO SEE THE ROOM WHERE NORMAL DELIVERIES ARE CONDUCTED - filled the information with your own Observation						
DESCRIBE THE SETTING OF THE	private separate room for delivery with maintaining privacy visual and auditory privacy					1

DELIVERY ROOM	non-private room No separate room for delivery to maintain the adequate privacy during delivery with visual and auditory privacy (several beds in one room with a curtain separating the beds)	2
	visual privacy only	3
	no privacy	4

NOTE THE AVAILABILITY AND CONDITION OF SUPPLIES AND EQUIPMENT REQUIRED FOR DELIVERY SERVICES. EQUIPMENT MAY BE IN DELIVERY ROOM OR AN ADJACENT ROOM.

Question

EQUIPMENT REQUIRED FOR infection prevention for DELIVERY SERVICES	Observed	Reported, not seen	Not available	DK	
01) Clean or sterile gloves (every time new gloves)	1	2	3		
02) Sharps disposal container	1	2	3		
03) availability of Already mixed decontaminating solution	1	2	3		
04) Hand disinfectant	1	2	3		
05) Waste receptacle/dustbin with lid and plastic liner	1	2	3		
06) Soap for hand washing	1	2	3		
07) Water for hand washing	1	2	3		
How is water being made available for use in the delivery service area today?	PIPED (1)	BUCKET (2)	TAP (3)	From well	

NOTE THE AVAILABILITY AND CONDITION OF OTHER SUPPLIES AND EQUIPMENT

OTHER SUPPLIES AND EQUIPMENT	Observed	Reported, not seen	Not available
04) Syringes and Needles	1	2	3
06) Sterile scissors or blade	1	2	3
3A) Incubator	1	2	3
4A) Other source of heat for premature newborn	1	2	3
9) Disposable cord ties or clamps	1	2	3
10) Towel or blanket to wrap baby (4 blankets - one to put on the abdomen of mother, one to put as pillow for baby, one to dry and the rest one to wrap the baby)	1	2	3

MEDICATIONS FOR NEWBORN CONDITIONS (if medications are in a combined pack, tick yes for each medication in the pack)

1) Intravenous solutions: either Ringers lactate, D5NS, or NS infusion	1	2	3	
2) Injectable ampicillins	1	2	3	
3) Injectable gentamicin	1	2	3	
5) Injectable diazepam	1	2	3	
13) amoxicillin (tab or suspension)	1	2	3	
14) 40% glucose	1	2	3	
17) NGT size 5-8	1	2	3	

18) IV cannula gauge 24 or 26 gauge	1	2	3	
19) Vit K mg/ml	1	2	3	
20) 1 % TTC eye ointment	1	2	3	
21) Infant weighing scale	1	2	3	
22) Vaccine (BCG, polio)	1	2	3	

Emergency Obstetric & Newborn Care (EmONC)

Question	YES	No
F210A: Does this facility perform newborn resuscitation?	1	2
F210B: Has this facility performed newborn resuscitation in the last 3 months with bag and mask?	1	2
F210C: Does this facility provide care for premature/LBW (KMC)?	1	2

EQUIPMENT AND SUPPLIES FOR RESUSCITATION	Observed	Reported, not seen	Not available
1A) Bag and mask (infant size) for resuscitation	1	2	3
2A) penguin suction for mucus extraction	1	2	3
3A) Suction apparatus for use with catheter	1	2	3
4A) Resuscitation table for baby with clean warm sheet	1	2	3
GUIDELINES/ PROTOCOL			
Guidelines for care/managing normal labor and birth	1	2	3
Guidelines for emergency obstetric care	1	2	3
Newborn Register	1	2	3
Maternal register	1	2	3
Resuscitation flow chart	1	2	3
Hand washing poster	1	2	3
Maternal danger sign poster	1	2	
Newborn danger sign poster	1	2	

F216: Does this facility handle assisted deliveries—that is, use forceps or ventouse (vacuum extractor)?	YES	1	No	2	
F218: Has an assisted delivery been conducted in this facility within the past 3 months?	YES	1	No	2	

CHECK WHETHER THE EQUIPMENT IS IN THE DELIVERY ROOM OR AN ADJACENT ROOM.

EQUIPMENT	Observed	Reported, not seen	Not available
1A) Forceps	1	2	3
2A) Ventouse (vacuum extractor - manual or electrical)	1	2	3

Infection Prevention

After completing a delivery, what procedures does this service follow for initial handling of contaminated equipment (such as speculums,	Disinfectant, then soap & water scrub	
	Soap & water scrub, then disinfectant soak	√

scalpel handles, etc.) that will be reused another time?	Soap & water brush scrub only				
	Disinfectant soak, not scrubbed				
	Soap & water, not brush scrubbed				
	Other				
Besides decontaminating and cleaning, what is the final process most commonly used for disinfecting or sterilizing medical equipment (such as surgical instruments) before they are reused? If different methods are used for different types of equipment, indicate the method(s) used for metal equipment such as speculums or forceps	Dry-heat sterilization				
	Autoclaving				√
	Steam sterilization				
	Boiling				
	Chemical method				
	Other				
CHECK FOR THE FOLLOWING PIECES OF EQUIPMENT USED FOR STERILIZATION	Observed	Reported, not seen	Not available		
1) Electric autoclave (Pressure and Wet Heat)	1	2	3		
2) Non-electric autoclave (Pressure and Wet Heat)	1	2	3		
3) Electric dry heat sterilizer	1	2	3		
4)Electric boiler or steamer (no pressure)	1	2	3		
5) Non-electric pot with cover (for steam/boil)	1	2	3		
6) Heat source for non-electric equipment	1	2	3		
7) Automatic Timer (May be on equipment)	1	2	3		
8) TST Indicator strips or other item that indicates when sterilization is complete.	1	2	3		
9) chlorine-based or glutaraldehyde solution (for chemical method)	1	2	3		
10) Written protocols or guidelines for sterilization of disinfection	1	2	3		

Section 4: Antenatal Care Inventory

FIND THE ANTENTAL CARE INVENTORY MANAGER AND CONTINUE WITH THE ANTENTAL CARE INVENTORY

Question	YES	NO
Does this facility offer routine antenatal services?	1	2
Does this facility offer referral antenatal services?	1	2
Does this facility have a system whereby measurements or procedures for ANC clients are routinely carried out before the consultation?	1	2

OBSERVE IF THE BELOW ACTIVITIES ARE BEING CONDUCTED ROUTINELY. IF NOT SEEN ASK: Is [READ ACTIVITY YOU DO NOT SEE] routinely conducted for all antenatal care clients?

Question	Observed	Reported, not seen	Not available		
Measuring weights of pregnant	1	2	3		

Taking blood pressure	1	2	3		
Urine test for protein	1	2	3		
Blood test for anemia	1	2	3		
Conducting group health education sessions	1	2	3		

Which of the following activities are performed as part of routine services, that is, each client has this test at least once.

Question	Yes	NO			
Blood test for anemia	1	2			
Blood test for syphilis	1	2			
Blood grouping	1	2			
Urine test for protein	1	2			
Urine test for glucose	1	2			

The lab facility is outside of PHCC

Which of the following types of treatment and services are routinely offered to antenatal clients?

Question	Yes	NO			
Standard Protocol for Intermittent Preventive Therapy for malaria	1	2			
Counseling about family planning	1	2			
Counseling about HIV/AIDS	1	2			
Testing for HIV/AIDS	1	2			
Counseling about maternal danger signs	1	2			
Counseling about newborn danger signs	1	2			
Question					
Is tetanus diphtheria (TD) vaccination available all days antenatal care services are offered?	Yes			1	
	Not all days			2	
	Never offered			3	

How many days each week are tetanus diphtheria (TD) vaccinations offered at this facility? (Tap arrows for number of days. If never offered, enter 0, don't know enter 8)				At immunization day
Is tetanus diphtheria (TD) immunization available today?	Yes	1	No	2

ASK TO SEE THE ROOM WHERE EXAMINATIONS FOR ANTENATAL CLIENTS ARE CONDUCTED.

DESCRIBE THE SETTING OF THE EXAMINATION ROOM.	private room with visual & auditory privacy			1	
	non-private room with visual & auditory privacy			2	
	visual privacy only			3	
	no privacy			4	
EQUIPMENT,DRUGS AND VACCINES REQUIRED FOR ANTENATAL CARE SERVICES	Observed	Reported, not seen	Not available		
13) Iron and/or folic acid	1	2	3		
14) Tetanus diphtheria (TD)	1	2	3		

NOTE THE AVAILABILITY AND CONDITION OF OTHER EQUIPMENT. EQUIPMENT MAY BE IN EXAMINATION ROOM, AN ADJACENT ROOM, OR ROOM WHERE MEASURE IS TAKEN.					
AVAILABILITY OF OTHER EQUIPMENT	Observed	Reported, not seen	Not available		
1A) Blood pressure apparatus	1	2	3		
2B) Stethoscope	1	2	3		
3A) Fetal stethoscope (Fetoscope)	1	2	3		
6A) Adult weighing scale	1	2	3		
8) Urine Test Strip for Protein	1	2	3		
10) RPR Kit (Syphilis Test)	1	2	3		
11) HIV rapid test	1	2	3		

FIND THE POSTNATAL CARE INVENTORY MANAGER AND CONTINUE WITH THE POSTNATAL CARE INVENTORY		
Question	YES	NO
Does this facility offer postnatal care services?	1	2
Does health worker uses neonatal danger signs to pick infection?	1	2
Does health worker refer sick newborns to higher health facility after the first dose of inj. AMP and GENT?	1	2
Does health worker uses inject able Ampicilin and Gentamicin to treat suspected neonatal infection at the facility if referral was not possible?	1	
Referral is possible because there is Gandaki medical hospital and Manipal Hospital		

ANNEX VI: Observation Tool for MNCH of Gaurishankar PHC Center

Section 1: Cover Page		
FIND THE DIRECTOR OR STAFF IN-CHARGE. IF THIS IS A NEW RESPONDENT, OBTAIN ORAL INFORMED CONSENT.		
Facility Name and type (Health center, district hospital, zonal hospital)	**Gaurishankar PHC Center (Birthing Center)**	
Today's Date/interview date	**17-06-2074**	
Health facility location District/ Rural Municipality/Municipality	**Ishworpur, Sarlahi**	
Section 2: General Inventory & Service Statistics		
Question		
Does this facility have a working phone to call outside that is available at all times client services are offered?	Yes, onsite or within 5 min walk	1
	Yes, within 5 min, not onsite	2
	Only pay phone or personal cell phone	**3**
	No	4

Does this facility have a functional ambulance or other vehicle on-site for emergency transportation of clients? IF yes, ask if the vehicle is functioning and if there is fuel available. Accept reported response.	Yes, functioning with fuel		1
	Yes, not functioning or no fuel		2
	No		**3**
Which service records are available for review? (Choose all those which applies)	ANC	√	
	PNC	√	
	Labor & Delivery	√	
	FP	√	
	Newborn	√	
	Preterm	√	

Section 3: Labor & Delivery Inventory

FIND THE LABOR & DELIVERY INVENTORY MANAGER AND CONTINUE WITH THE L&D INVENTORY (Nursing staff)

Question	**YES**	**NO**
Does this facility provide delivery services	1 √	2
Does the facility have 24 hour delivery services?	1 √	2

Does the HF has Skilled birth attendance or on call for 24 hour including weekends to provide delivery services?	Yes, present, schedule observed	1
	Yes, present, schedule reported, not seen	2
	Yes, on-call schedule observed	3
	Yes, on-call, schedule reported, not seen	4
	No	**5**

ASK TO SEE THE ROOM WHERE NORMAL DELIVERIES ARE CONDUCTED - filled the information with your own Observation

Question		
DESCRIBE THE SETTING OF THE DELIVERY ROOM	private separate room for delivery with maintaining privacy visual and auditory privacy	**1**
	non-private room No separate room for delivery to maintain the adequate privacy during delivery with visual and auditory privacy	2
	visual privacy only	3
	no privacy	4

NOTE THE AVAILABILITY AND CONDITION OF SUPPLIES AND EQUIPMENT REQUIRED FOR DELIVERY SERVICES. EQUIPMENT MAY BE IN DELIVERY ROOM OR AN ADJACENT ROOM.

EQUIPMENT REQUIRED FOR infection prevention for DELIVERY SERVICES

	Observed	**Reported, not seen**	**Not available**	**DK**
01) Clean or sterile gloves	**1**	2	3	
02) Sharps disposal container	**1**	2	3	
03) availability of Already mixed decontaminating solution	1	**2**	3	

04) Hand disinfectant	1	**2**	3	
05) Waste receptacle/dustbin with lid and plastic liner	1	**2**	3	
06) Soap for hand washing	**1**	2	3	
07) Water for hand washing	**1**	2	3	
How is water being made available for use in the delivery service area today?	**PIPED (1)**	BUCKET (2)	TAP (3)	From well
NOTE THE AVAILABILITY AND CONDITION OF OTHER SUPPLIES AND EQUIPMENT				
Question	**AVAILABILITY**			
OTHER SUPPLIES AND EQUIPMENT	**Observed**	**Reported, not seen**	**Not available**	
08) Syringes and Needles	**1**	2	3	
09) Sterile scissors or blade	1	**2**	3	
10) Incubator	1	**2**	3	
11) Other source of heat for premature newborn	1	**2**	3	
12) Disposable cord ties or clamps	1	**2**	3	
13) Towel or blanket to wrap baby (4 blankets - one to put on the abdomen of mother, one to put as pillow for baby, one to dry and the rest one to wrap the baby)	1	**2**	3	
MEDICATIONS FOR NEWBORN CONDITIONS				
	Observed, at least 1 valid	**Reported, not seen**	**Not available**	
1) Intravenous solutions: either Ringers lactate, D5NS, or NS infusion	1	2	3	
2) Injectable ampicillins	1	2	3	
3) Injectable gentamicin	1	2	3	
5) Injectable diazepam	1	2	3	
6) amoxicillin (tab or suspension)	1	2	3	
7) 40% glucose	1	2	3	
8) NGT size 5-8	1	2	3	
9) IV cannula gauge 24 or 26 gauge	1	2	3	
10) Vit K mg/ml	1	2	3	
11) 1 % TTC eye ointment	1	2	3	
12) Infant weighing scale	1	2	3	
13) Vaccine (BCG, polio)	1	2	3	
Emergency Obstetric & Newborn Care (EmONC)				
Question		YES	NO	
Does this facility perform newborn resuscitation?		1	2	
Has this facility performed newborn resuscitation in the last 3 months with bag and mask?		1	2	

Does this facility provide care for premature/LBW (KMC)?		1	2	
Counseling for KMC		1	2	
Question	**AVAILABILITY (a)**			
EQUIPMENT AND SUPPLIES FOR RESUSCITATION	**Observed**	**Reported, not seen**	**Not available**	
1) Bag and mask (infant size) for resuscitation	1	2	3	
2) penguin suction for mucus extraction	1	2	3	
3) Suction apparatus for use with catheter	1	2	3	
4) Resuscitation table for baby with clean warm sheet	1	2	3	
GUIDELINES/ PROTOCOLS	**Observed**	**Reported, not seen**	**Not available**	
Guidelines for care/managing normal labor and birth	1	2	3	
Guidelines for emergency obstetric care	1	2	3	
Newborn Register	1	2	3	
Maternal register	1	2	3	
Resuscitation flow chart	1	2	3	
Hand washing poster	1	2	3	
Maternal danger sign poster	1	2		
Newborn danger sign poster	1	2		
Does this facility handle assisted deliveries—that is, use forceps or ventouse (vacuum extractor)?			YES	1
			NO	2
Has an assisted delivery been conducted in this facility within the past 3 months?			YES	1
			NO	2
			DK	8
CHECK WHETHER THE EQUIPMENT IS IN THE DELIVERY ROOM OR AN ADJACENT ROOM.				
Question	**AVAILABILITY**			
EQUIPMENT		**Observed**	**Reported, not seen**	**Not available**
1A) Forceps		1	2	3
2A) Ventouse (vacuum extractor - manual or electrical)		1	2	3
Infection Prevention				
After completing a delivery, what procedures does this service follow for initial handling of contaminated equipment (such as speculums, scalpel handles, etc.) that will be reused another time?	Disinfectant, then soap & water scrub			
	Soap & water scrub, then disinfectant soak			√
	Soap & water brush scrub only			
	Disinfectant soak, not scrubbed			
	Soap & water, not brush scrubbed			
	Other			

	None	
Besides decontaminating and cleaning, what is the final process most commonly used for disinfecting or sterilizing medical equipment (such as surgical instruments) before they are reused?	Dry-heat sterilization	
	Autoclaving	√
	Steam sterilization	
	Boiling	√
	Chemical method	
	Other	
	None	

Question	**AVAILABILITY**			
CHECK FOR THE FOLLOWING PIECES OF EQUIPMENT USED FOR STERILIZATION	**Observed**	**Reported, not seen**	**Not available**	
1A) Electric autoclave (Pressure and Wet Heat)	1	2	3	
2A) Non-electric autoclave (Pressure and Wet Heat)	1	2	3	
3A) Electric dry heat sterilizer	1	2	3	
4A)Electric boiler or steamer (no pressure)	1	2	3	
5) Non-electric pot with cover (for steam/boil)	1	2	3	
6A) Heat source for non-electric equipment	1	2	3	
7A) Automatic Timer (May be on equipment)	1	2	3	
8) TST Indicator strips or other item that indicates when sterilization is complete.	1	2	3	
9) chlorine-based or glutaraldehyde solution (for chemical method)	1	2	3	
10) Written protocols or guidelines for sterilization of disinfection	1	2	3	

Section 4: Antenatal Care Inventory

FIND THE ANTENTAL CARE INVENTORY MANAGER AND CONTINUE WITH THE ANTENTAL CARE INVENTORY

Question	**YES**	**NO**
Does this facility offer routine antenatal services?	1	2
Does this facility offer referral antenatal services?	1	2
Does this facility have a system whereby measurements or procedures for ANC clients are routinely carried out before the consultation?	1	2

OBSERVE IF THE BELOW ACTIVITIES ARE BEING CONDUCTED ROUTINELY.

Question	**Observed**	**Reported, not seen**	**Not available**	
Measuring weights of pregnant	1	2	3	
Taking blood pressure	1	2	3	
Urine test for protein	1	2	3	
Blood test for anemia	1	2	3	
Conducting group health education sessions	1	2	3	

Which of the following activities are performed as part of routine services, that is, each client has this test at least once.	**Yes**	**NO**
Blood test for anemia	1	2
Blood test for syphilis	1	2
Blood grouping	1	2
Test for Rh factor	1	2
Urine test for protein	1	2
Urine test for glucose	1	2

The lab facility is not available outside or inside of PHCC

Which of the following types of treatment and services are routinely offered to antenatal clients?	**Yes**	**NO**	
1A) Spotlight, flashlight/torch or exam light for pelvic exam	1	2	
1) Functioning?	1	2	
2) Table or bed for gynecological exam	1	2	
Standard Protocol for Intermittent Preventive Therapy for malaria	1	2	
Counseling about family planning	1	2	
Counseling about HIV/AIDS	1	2	
Testing for HIV/AIDS	1	2	
Counseling about maternal danger signs	1	2	
Counseling about newborn danger signs	1	2	
Is tetanus diphtheria (TD) vaccination available all days antenatal care services are offered?		Yes	1
		Not all days	2
		Never offered	3
How many days each week are tetanus diphtheria (TD) vaccinations offered at this facility? (Tap arrows for number of days. If never offered, enter 0, don't know enter 8)			At immunization day
Is tetanus diphtheria (TD) immunization available today?		Yes	1
		No	2

ASK TO SEE THE ROOM WHERE EXAMINATIONS FOR ANTENATAL CLIENTS ARE CONDUCTED.

DESCRIBE THE SETTING OF THE EXAMINATION ROOM.	private room with visual & auditory privacy	1
	non-private room with visual & auditory privacy	2
	visual privacy only	3
	no privacy	4

EQUIPMENT,DRUGS AND VACCINES REQUIRED FOR ANTENATAL CARE SERVICES	**Observed, at least 1 valid**	**Reported, not seen**	**Not available**	
13) Iron and/or folic acid	1	2	3	
14) Tetanus diphtheria (TD)	1	2	3	
There is shortage of medicine usually				

NOTE THE AVAILABILITY AND CONDITION OF OTHER EQUIPMENT				
AVAILABILITY OF OTHER EQUIPMENT	**Observed**	**Reported, not seen**	**Not available**	
1A) Blood pressure apparatus	1	2	3	
2B) Stethoscope	1	2	3	
3A) Fetal stethoscope (Fetoscope)	1	2	3	
6A) Adult weighing scale	1	2	3	
8) Urine Test Strip for Protein	1	2	3	
10) RPR Kit (Syphilis Test)	1	2	3	
11) HIV rapid test	1	2	3	

Section 5: Postnatal Care Inventory		
Question	**YES**	**NO**
Does this facility offer postnatal care services?	1	2
Does health worker uses neonatal danger signs to pick infection?	1	2
Does health worker refer sick newborns to higher health facility after the first dose of inj. AMP and GENT?	1	2
Does health worker uses inject able Ampicillin and Gentamicin to treat suspected neonatal infection at the facility if referral was not possible?	1	2