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# Identification and Management of High Risk Complications during Postnatal Period by Ground Level Workers

*Jasneet Kaur and Suresh Ray*

## Abstract

What to expect after the child birth. A healthy newborn is considered as priority, but postnatal care counts too. It is not always that story ended up with safe child birth; mother is still at high risk if not taken care after birth. Antenatal and intra natal period are the hardest part of a life span of a pregnant women. Mandatory Antenatal visits and maternal and child health services provided by the government with hand holding national programs and schemes have converted this tough path into smooth platform. Similarly postnatal period is equally important in the life of a new mother. The transition has already been set up by creating fourth stage of pregnancy instead of traditional three stages. Several studies have observed complications in postnatal period especially Primary PPH but very minimal studies had concentrated on Secondary PPH. Over and above there are no significant and standardized guidelines made available for the health workers to define the set limits of blood loss and management of secondary PPH. The condition becomes more critical when severe secondary PPH came for the hospitalization when the exact cause and associated factors remains often unknown. Also many postpartum infections emerge 24 hours after the delivery and discharge from hospital. Consequently, in the lack of proper knowledge and skills regarding identification of postnatal complications like secondary PPH and Puerperal infection, many cases go undiagnosed and unreported. This chapter will deals with the skills of the ground level workers required to identify and manage selected high risk complications in postnatal period.

**Keywords:** PPH, Puerperal Infections, Knowledge, Skills, Ground level workers

## 1. Introduction

High Risk mothers in the postnatal period are those mothers who are at the risk of their lives because of the complication occurs in the postnatal periods. These complications are usually life threatening if not treated at the earliest [1].

Antenatal and intra natal period are the hardest part of a life span of a pregnant women. Mandatory Antenatal visits and Maternal and Child Health services provided by the government with hand holding national programs and schemes have converted this tough path into safe and smooth platform [1].

Similarly postnatal period is equally important in the life of a new mother. The transition has already been set up by creating fourth stage of pregnancy instead of traditional three stages.

It's not always over subsequent to delivery. Still a successful delivery can put the mother into High risk Situations. Mother has to face many challenges in Postnatal Period. The major cause of Maternal Mortality Rate are the Postnatal conditions of which lays the mothers into high risk conditions like Postpartum Haemorrhage, Postpartum Eclampsia, Puerperal Infections etc. Major Maternal health challenges in the postpartum period [2]. There are many factors associated with that especially the cases which are unidentified. The lack of knowledge as well as skill to identify and manage is the prime concern. As soon as mother discharge from the hospital after two days one should not presume that things are over. Therefore Post-natal visits are planned by the government to follow up the mothers as they are still at the risk of getting complications which can be life threatening [2].

The postnatal period is defined as the first six weeks after birth and is considered as one of the critical periods for the health as well as survival of the mother and her neonate. It is the most critical time for both mother and child during labour and moments after delivery up till puerperium. Negligence in detecting crucial symptoms and care during this period can result into death and disability [2].

The World Health Organization (WHO) described that the postnatal period is one of the most dangerous and still most neglected period during the life of the mother. Maximum number of the maternal and neonatal deaths happens to be in this period especially in first 24 hours [1] and 66% occur during the first week [3].

Reports of maternal mortality across the globe indicate the maximum number of deaths of women is from complications which are all the most supplementary to postnatal problems, and not merely antenatal problems and problems ascending throughout the birthing process [3]. That is why Government is making mandatory protocol of postnatal visits. A complete assessment is in post-partum period suggested in 12 weeks for assurance. The suggestive care should primarily emphasis on immediate requirements and high risks for morbidity and mortality. After that the process of care should be shifted for chronic conditions, maintenance and rehabilitation. Initial Postnatal visits should assess problems from pregnancy as well as common high risk postpartum complications. Following care should focus a full bio psychosocial assessment and other needs for further problems [3].

These indicators are more than enough to suggest the importance and significance of postnatal time period.

A Substantial growth strategy has been tried and implemented globally to improve maternal health. 72% of women delivered with the help of skilled personnel around the world, and the maternal mortality ratio also has decreased considerably 210 per 1 lakh live births. The condition is not same across. South East Asia and in the sub Saharan part of Africa only 67% of women go for skilled assistance deliveries [3]. Postnatal care has reached across the world but hardly a smaller amount women usually receive standard postnatal care visit within 2 days after postpartum period [4]. The same has been justified by the investigation of Demographic and Health Survey data which was obtained from 23 sub-Saharan African countries which stated that barely 13 percent of the women had received care within 2 days of postnatal period [4].

The guidelines on postnatal care released globally for mothers and new-borns has recently been updated by World Health Organisation through a technical consultation process. These guidelines addressed and emphasised upon the time and activities to be done for the postnatal care for mothers and new-borns and focused on settings which has limited resources especially in the low and the middle income group of countries [4]. They emphasised the additional references

which are meant for on maternal, perinatal and new-born health [5]. They also elaborated the recommendations which are exclusively meant for type of health care worker who can practice safety measures for delivery and new-born health care interventions [6].

It is not always over after delivery. Even a successful delivery can put the mother into High risk Situations. Mother may have to face many challenges in Postnatal Period. The major cause of Maternal Mortality Rate are the Postnatal conditions of which lays the mothers into high risk conditions like Postpartum Haemorrhage, Postpartum Eclampsia, Puerperal Infections etc. are health challenges in the postpartum period.

## **2. High risk postpartum complications**

Postpartum period is usually bifurcated in three phases; the initial or acute phase, which is the period between 6 to 12 hours after delivery; sub acute phase, which lasts for about 2 to 6 weeks after delivery, and the delayed phase, which can last up to six months [19]. Near about 87–94% of women report at least one major health issue in sub-acute phase [20]. Almost 31% of women reported problems in late Phase [7].

### **2.1 Acute phase**

The common complications in the acute phase are Post partum hemorrhage, Perineal pain. Post partum hemorrhage is one of the high risk complication.

Postpartum haemorrhage is a condition which involves loss of blood which usually takes place within the 24 hours after the childbirth. The hours are considered to be the most critical in assessing the abnormal bleeding [7].

### **2.2 Subacute phase**

The common complication Puerperal genital infection, Post partum Eclamsia, HELLP syndrome, Post partum urinary incontinence, Fouls smelling lochia, Post partum depression and stress. In this phase the infection may leads to sepsis also.

Puperal genital infection is one of the post-natal complication in displayed with symptoms of fever accompanied by chills and foul smelling vaginal discharge. It involves an inclusive range of postpartum infections which are caused by bacteria and involves interior of the uterus or the genital tract as common sites. There are few other also like Post-natal depression, Breast engorgement etc. Out of these Postpartum Haemorrhage and Puerperal Infection are leading the board.

Postpartum Eclampsia is a condition where mother have high blood pressure and Proteinuria along with the additional symptoms which includes headache, pain in the upper abdomen and visual disturbances [8].

### **2.3 Delayed phase**

The complications in delayed phase are Fecal incontinence, Pelvic Prolapse Post partum thyroiditis etc.

Postpartum Haemorrhage (PPH) is the extreme abnormal bleeding which happens after the childbirth. Bleeding within the limits is normal after the childbirth but the major worry and distress arises when the loss of blood is more than 500 ml after normal vaginal delivery and 1000 ml in caesarean after the expulsion of the placenta [7].



Primary Post-Partum Haemorrhage is when the bleeding happens to be within first 24 hours after the delivery whereas any excessive and abnormal bleeding which happens after 24 hours and up till 6 weeks after the delivery is called secondary Post-Partum Haemorrhage [9].

Across the globe about 1.2 per cent of the deliveries are some or other way correlated to the Post-Partum Haemorrhage especially in the developing countries. Out of those almost 3% of the women die because of this cause. This complication has taken the score board to 30% deaths of women in India [10].

Post-Partum haemorrhage (PPH) occurs quite frequently after delivery. The incidence of PPH after the vaginal delivery has been reported between 2 to 4 and same after caesarean section accounts to 6 percent [8]. Overall Post-Partum haemorrhage accounts 28% for the maternal mortality in developing countries and 13% maternal deaths in high income countries and if counted worldwide it is 35% [10].

Secondary postpartum haemorrhage is classically defined as haemorrhage in excess of lochia occurring after the 24 hours of the delivery up till six weeks of the post-partum. The rationale behind differentiating these two types of PPH lies in the fact that the predominant causes leading to these are different. Uterine atony is the most common cause of primary postpartum haemorrhage, retained products of conception cause secondary PPH most of the time [10].

Secondary postpartum haemorrhage (PPH) is a condition wherein excessive abnormal vaginal bleeding happens after twenty four hours of the delivery up to 6 weeks of the postpartum period. Primary postpartum haemorrhage has clear cut defining limits of the blood loss whereas on the other side, Secondary PPH doesn't have a clear idea and standard defined limits for quantity of the blood loss. The clinical language of Secondary PPH varies from increased lochia to immense bleeding. Therefore diagnosis is sometimes subjective in nature which leads to frequent variations in recorded incidence. Some times for the mothers also it is very difficult to decide whether they are having secondary PPH or not [11].

Secondary PPH can be caused by numerous other etiological factors, the significant among which are, primary sub involution of placental bed, endometritis, pseudoaneurysm of the uterine artery, non-union of uterine incision etc. [10–13] Other rare causes of PPH have also been reported [12, 13]. There is ample data exists in the available literature exploring the primary PPH but secondary PPH has not been considered and explored with similar enthusiasm. The reason is simply because secondary PPH is not perceived to contribute much to the maternal mortality and morbidity. Data from Indian subcontinent is sparse [14].

Another one of the important postnatal complication which put the mother into high risk is Puerperal Infection. A puerperal infection happens when bacteria contaminate the uterus and its surrounding areas after a woman gives birth.

Puerperal Infection is counted as the third most critical reason for the deaths of the mothers of across worldwide after haemorrhage and abortion. World Health Organization (WHO) has estimated that this complication accounts for 15% of the all maternal deaths annually. It is the 6th leading cause of the global burden of the diseases in women in reproductive age groups especially in low and middle income countries. This complication leads to enduring health problems in later life of women like pelvic inflammatory disease, and infertility. It usually happens as infection of the genital tract during postpartum period along with the symptoms of Fever more than 101°F, pain in the pelvic region, foul smelling vaginal discharge may or may not include pus, and slow or delayed involution of the uterus. It is a more generic than puerperal sepsis as it comprises all extra-genital infections and other incidental infections along with puerperal sepsis [15].

Sample Registration System in India estimated that almost 11% maternal deaths happened in the year 2011–2013 were due to puerperal sepsis [16]. As per

population based study in rural areas of Maharashtra state puerperal sepsis was leading on the second number as major cause of maternal mortality with the figures of 13.2% followed by postpartum haemorrhage and same has been found 12% in Pune [16].

Puerperal infection is very much preventable. An effective provision of sufficient antenatal care, a quick and effective referral system and on dot time availability of the early management and treatment are mandate for the prevention.

Similarly a very rarest complication can emerged called Postpartum Eclampsia. This is the condition which usually emerged with 48 hours of post-partum period and sometimes after 48 hours which is often called late onset of Postpartum Eclampsia [8]. The warning sign includes stomach pain, headache, vision changes and shortness of breath. It's significant to identify that delivery is not the end point for preeclampsia rather woman can develop preeclampsia the delivery also, despite the status of high blood pressure during her pregnancy [8].

The immense role of community health workers in the health care system is considered as one of the crucial component to comply with the targeted goals of the health care sector.

Nursing training in India starts with the certificate and diploma courses and went up to graduate, Postgraduate and Doctorate levels. The most common levels found in the first Health Visitors.

### **3. Role of ground level health workers**

The Rural sector in India is mostly taken care by First level of Health care delivery system which are Sub centres, Primary Health centres and Rural Health Centres. The major Nursing health task force working in the field are Auxiliary Nurse Midwives (ANMs) and Local Health Visitors (LHVs). These are mostly responsible for the postnatal visits at home and will do the follow up. They assess the mothers and deliver need base care [17].

Post-natal care has transformed unexpectedly over the past many years. The time period in the Maternity areas has been reduced progressively from one week to two days. After that either the mother has to come up to the health centres for the follow up or the Ground level health task force i.e. ANMs or LHVs has to extend the doorstep health service for them those who aren't/can't come to the centre [18].

The ANMs and LHVs are the first baseline and front workers who develops the bond and interact with the mother when she go back home after the delivery, even after the one week of the childbirth [19]. This period is a very much susceptible time to relook the things with new challenges with baby. Women need someone with whom she can contact for required information and adequate support. The body, mind and social changes may signify certain hurdles and challenges for the women concerned after the delivery. Lack of proper knowledge, information and support may be very dangerous as it may lead to endanger mother's life. The abnormal sign and symptoms may appear normal to the mother and she may not able to identify those as serious complications. This lead to increase the risk of morbidly and mortality [19].

Immediate complications after the delivery are usually taken care by the Hospital/ Health centre staff as mother stays at the health care facilities up till 48 hours. Many times mothers don't come for the Postnatal Follow up at the health centre. At this point of time ANMs and LHVs do visit their homes and do the assessment.

The ground level nursing cadre plays an imperative part in the identification and management of complications arises when mothers leave hospital and goes to their homes but they are still in the postnatal period. Therefore the complete onus lies on their shoulders to bring the high risk mothers into the picture [20].

Though government has taken the initiatives and Skill birth attendant programs but still gaps are available. Many studies had been piloted to recognize the level of knowledge and skills in the past for health care workers especially ANMs LHVs, and even skill birth attendants. According to study conducted by WHO [15] stating the level and knowledge of skilled workers in maternity areas and extended the ways forwards too. The study results explained that professional nurses have 57% and auxiliary nurses have 51% knowledge asked as per the knowledge questionnaire. As far as skill is concerned the scores for these groups falls at the level of 64% and results were statistically significant at 0.001. The way forward recommended by WHO is to bridge the identified gaps in competency levels and enhance the training levels for better results [15].

#### **4. Knowledge and skills of ground level workers regarding identification and management of high risk complications**

In case of India, every five women die every hour, and nearly 45,000 mothers die due to causes related to Postpartum and Postnatal period every year in India which accounts for 17 per cent of such deaths globally” [21].

National Family Health Survey-4, recommended the strategy for the quality facility and service that is confirming the mandatory postnatal care to be imparted within first twenty four hours of delivery followed by the on 3rd, 7th, 14th and 42nd day home visit subsequently to identify and manage the emergent complications which occurs in the occurring postnatal period. Therefore Auxiliary nurse midwives, Lady Health Visitors, and other cadre of nurses working in the first referral units and PHCs are meant to be focused on and proficient for handling these conditions in the respective home visits [22].

Women's death with Post-Partum Haemorrhage is an important indicator for the maternal health which helps anyone to reflect upon the kind of care been imparted to the mothers during the intrapartum and postpartum period. Many of this kind of negligence are preventable. In many situations, deaths due to high rates of postpartum haemorrhage complications are associated with the gap in the health care system, along with the factors like inadequate information and skills of health care workers in the prevention of PPH and its quick management, lack of decision making ability of health workers at appropriate time and which leads to delays in further referral system [23].

Another problem is that be that many postpartum infections emerges 24 after the delivery and the discharge from the hospital. Consequently, in the lack proper knowledge and skills regarding identification of postnatal complications like secondary PPH and Puerperal Infection during postnatal follow-up, many cases of identification of High risk mothers can go undiagnosed and unreported. This will add on to the burden of increased maternal Mortality rate, where on the other side these can be easily detectable and managed if appropriate knowledge and skills are used.

A study conducted at in North-East district of Delhi among 55 ASHA workers on their Knowledge and practice for maternal healthcare delivery in Delhi. The results showed that ASHAs workers possess substantially good knowledge but the practices are not up to the level. The reason identified as various problems challenged by them which require immediate addressing by skill based trainings including decent communication and ability to solve the problems. Over and above vigilant supervision should be considered a primary fragment of work practice during the practice to safeguard that imparted knowledge is appropriately giving the required results in the form of good practices [24].

The identification and initial management of High risk mother during the post-natal period is totally depends upon the knowledge and skills of these ground level workers, otherwise they will remain un-notified and unreported. The question arise is how far the health task force is skilled and possess accurate information. Government is nowhere less than any other by providing extreme measures and resources to train them. Still the gaps in the knowledge and skills are there. It also depends on the mode of learning and training they got which is one of the biggest reasons for inadequate training. The hands on live demonstration training sessions in these cases are highly recommended.

## 5. Mandatory skills to be performed by ground level workers

### 5.1 Post natal visits and examination

There should be minimum 4 Postnatal Visits as follows. **Table 1** depicts the crux of the postnatal visits.

#### 5.1.1 First visit: 1st day (within 24 hours)

The first 48 hours are the most crucial hours in the whole life span of Post partum period. Major Post partum complications like PPH and eclampsia, occur during this period. These complications cannot be ignored as considered to be the most fatal one and are leading causes of maternal mortality rate [25].

Therefore a mother who just delivered must be closely watched uptill at least 48 hours. It is the duty of ground level workers to inform the woman about the criticality of the complications, and rationale for the stay in the health care facility for at least 48 hours. During this time period required care should be provided to her. Ground level worker must put emphasis on that this is very much important for her well being and baby too [25].

If the delivery is conducted at Sub center/at home, ANM should visit to the newly delivered mother with in the first 24 hours of the delivery [25].

She should ask the mother for the discharge or delivery card. This card contains the data and information pertaining to the antenatal visits and delivery details [26].

- After this first she should ask her history.
- Do physical assessment and examination.
- If the delivery has been conducted at home, then ask the details from the support services at the time of delivery or the person present during the delivery.

Visits	After Delivery at Sub Centre	After Delivery at Primary health centre/First Referral Unit
1st Visit	1st Day (within 24 Hours)	Not Required as women discharged after 48 hours*
2nd Visit	3rd day after delivery	3rd day after delivery
3rd Visit	7th day after delivery	7th day after delivery
4th Visit	6 weeks after delivery	6 weeks after delivery

\*Why First 48 Hours are important after delivery?

**Table 1.**  
*Details of the Postnatal Visits.*



- If the delivery is not conducted by the skilled birth attendant, but a person of close relative or the one who accompanied her during the postpartum period, then inform her regarding the complications in future which may arise.
- She should explain about all signs and symptoms so that earlier can be informed to the health care facility and relevant actions can be taken earliest to prevent the further complications [25].

*Things to do at First Visit:*

1. History Taking: Ask the mother

- The place and location of the delivery.
- The individual who conducted the delivery?
- Ask about any complications happens during the delivery,
- Any bleeding Per vagina
- The number of pads soaked with blood),
- Any convulsions or loss of consciousness
- Leg pain or abdominal pain
- Fever
- Retention of urine or dribbling,
- Any breast tenderness, etc. [27]

Other than that ask the mother

- Whether breast feeding has been started?
- Whether mother has resumed her normal or regular diet?

*Examination*

Assess the following

- Assess the pulse, blood pressure, temperature and respiratory rate.
- Pallor skin.
- Abdominal examination for the uterus assessment. Usually, the uterus will be contracted, round and hard.
- If the uterus is soft that states its tenderness and in this case refer her to the First Referral Unit.
- Look for any tear in Vulva and perineum

- Swelling or discharge or Pus.
- Check the count of pads for assessment of blood loss.
- Check the color and smell of Lochia. If it is foul smelling, it can be the signs of puerperal sepsis. If this be the case then, refer the woman to the First Referral Unit.
- Check the breasts for any tenderness or presence of lumps,
- Assess the nipples and pattern of breastfeeding. If the woman has any complaint regarding this, refer her to the First Referral Unit [27].

#### Counselling:

##### *Hygiene*

- Washing of Perineum
- Changing Pads every 4 – 6hrly
- Hand Washing before handling the baby
- Bathe Daily
- Rooming In with baby

##### *Nutrition*

- Good intake of fluid and food intake
- Nutritious diet with more calories
- Avoid Heavy work

##### *Contraception*

- Birth Spacing methods
- Avoid sexual contact till 6 week of puerperium

##### *Breast feeding*

- Breast feeding within one hour of birth
- Feed Colostrum
- Exclusive breast feeding
- Feed on both breast
- Warm compress on Breast if engorged.

### *IFA supplement*

- If Hb level is <11 g/dl, then mother should take two Iron and Folic Acid tablets once in a day for 3 months.
- After 1 month if the Hemoglobin level doesn't increase refer her to Primary Health Centre
- If Hemoglobin level is less than 7 g/dl refer to First Referral Unit [27].

### *5.1.2 Second and third post natal visit: 3rd day after delivery and 7th day after delivery*

#### *Assessment and examination*

- Assess the Temperature, pulse, and blood pressure.
- Assess for the pallor.
- Assess the uterus, for the contracted wall. If it is not hard and round then refer the women to First Referral Unit.
- Assess any kind of tear at vulva and perineum. Check the swelling and pus at the site. If yes, then refer the mother to First Referral Unit.
- Check the pad for bleeding.
- Examine the colour and smell of Lochia. If it is more and foul smelling then refer her to the First Referral Unit.
- Breast examination should be done for any lump or tenderness. If that be the case, it may be the sign of Infection, then refer the mother to First Referral Unit [26].

#### *Care*

##### *Diet and rest*

- Ground level workers should check for the diet of the mother during postnatal period. Mother should be advised to take the diet which is rich in calories, iron, proteins, and vitamins as required by the lactating mother. Micro-nutrients and milk products should be added.
- Green vegetables, pulses, meat, eggs, fish and poultry must be added in the diet.
- Groundnuts, and *ragi*, jiggery need to be considered in the plate as rich in iron.
- Fruits need to be added to add on fiber in the diet [26].

#### *Contraception*

- Family planning is the important component in Postnatal period. Ground level workers while visit at home should ask mother about her resuming the periods, so that contraception can be planned.

- Mother should be explained with the various methods of family planning available [27].

### *5.1.3 Fourth post natal visit: 6 weeks after delivery*

#### *Assessment and examination*

- Vaginal bleeding should be stopped by this time.
- Assess the vital signs especially blood pressure.
- Check for the sign of pallor.
- Assess for vulva or perineal tear
- Assess for any swelling or signs of pus.
- Breast examination for tenderness or lumps.
- If presence of above signs, refer her to the Primary health centre/First Referral unit [27].

#### *Care*

Emphasize the importance of using contraceptive methods for spacing or limiting the size of the family [27].

## **6. Management of high risk areas by ground level workers**

### **6.1 Retained placenta and placental fragments**

The placenta is said to be retained if it is not delivered within half an hour of the birth of the baby. Bleeding may or may not occur in cases of retained placenta.

Retained placental fragments or pieces of membrane will cause PPH. This can be suspected if a portion of the maternal surface of the placenta is missing or the membranes with their vessels are torn. If placenta is partially separated or retained then it will cause continuous vaginal bleeding which further leads to PPH. Manage such cases as in the case of PPH [27].

- If the placenta is already separated and is lying at the tip of the birth canal, then gently remove it.
- If it is not separated, then DONOT ATTEMPT THIS PROCEDURE. Refer the mother to First Referral Unit [27].

### **6.2 Puerperal sepsis**

It is the infection of the genital tract from the time rupture of membranes or labor and till 42 days after delivery. Any two or more of the following signs and symptoms are present.

- Presence of Fever  $>38^{\circ}\text{C}$



- Abdominal pain at the lower end with tenderness
- Foul-smelling lochia
- Burning urination
- Uterus not contracted
- Weakness
- Continuous Vaginal bleeding

Fever in the Postnatal period can occur because of the causes other than puerperal sepsis like mastitis, non obstetric causes or may be Urinary tract infection (UTI) etc. [27]

In this case, combination of antibiotics is given for at least 48 hours with following regime.

- Inj. Ampicillin 2 g IV every 6 hours,
- Inj Gentamicin 5 mg/kg body weight (IV) every 24 hours,
- Metronidazole 500 mg IV every 8 hours.
- If fever still persists 72 hours after starting the antibiotic then refer to the Medical officer for further treatment [28].

Oral antibiotics are not necessary after stopping IV antibiotics.

### **6.3 Vaginal and perineal tears**

There are four degrees of tears:

- First-degree tear: This type of tear happens in the vaginal mucosa and connective tissues.
- Second-degree tear: This tear involves the vaginal mucosa, connective tissues and underlying muscles.
- Third-degree tear: It involves complete coverage of the anal sphincter.
- Fourth degree tear: This tear encroaches the rectal mucosa [26].

Ground level workers must distinguish the superficial (first-degree) and deep tears [26].

### **6.4 They are only permitted to manage first-degree tears**

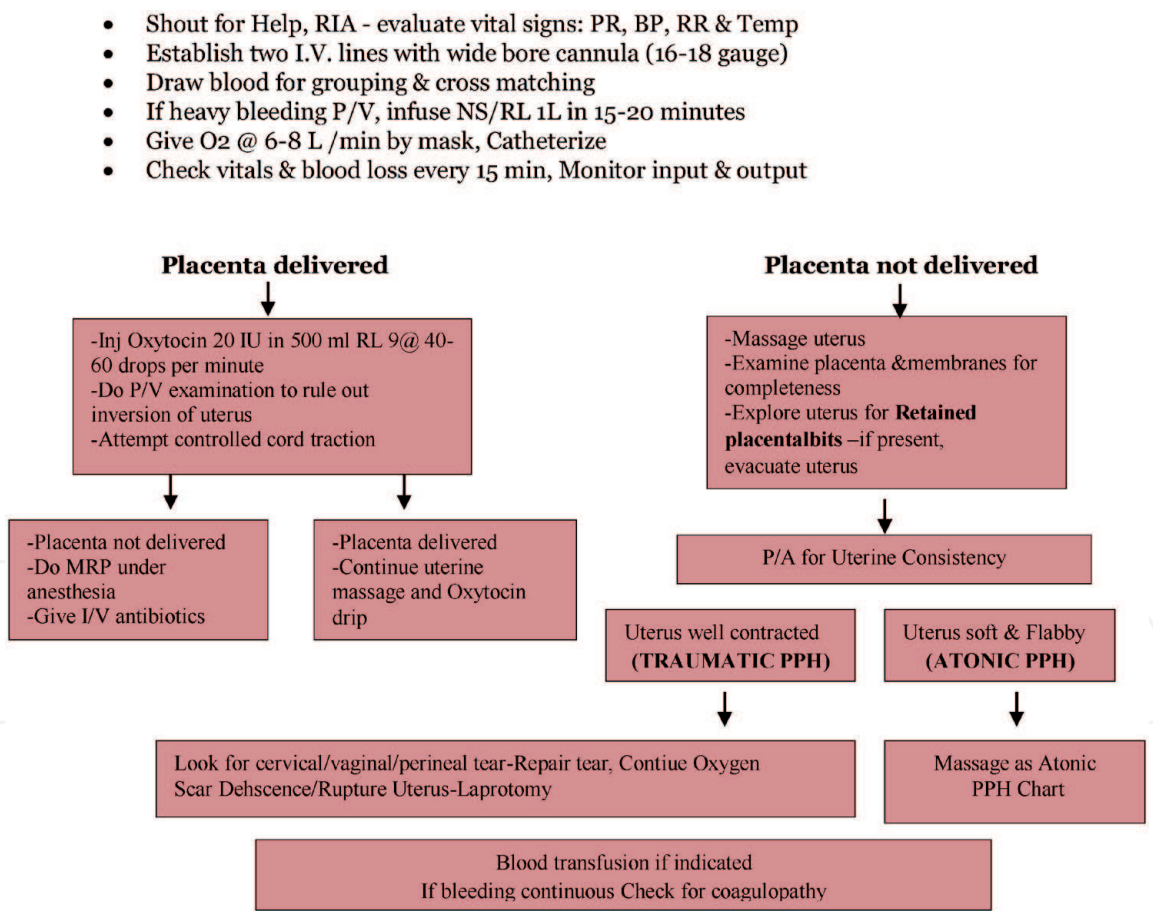
- Superficial tear which is not bleeding requires no suturing. As a measure the area needs to be cleaned and cover with a clean pad.
- Superficial tear which is bleeding, requires pressure on the site for some time, at least for 10–15 minutes. It will control the bleeding.

- Deep perineal tears (2nd, 3rd and 4th degree): Refer the mother to a 24 hour First Referral Unit.
- Before referring the mother, cover the tear with a sterile pad or gauze. Positioned the legs together. Do not cross the ankles.
- In case of heavy bleeding and degree of tear can be diagnosed and decide upon, put a pad into the vaginal cavity and refer the woman to the First Referral Unit.
- Immediately establish an IV line and infuse fluids rapidly. To prevent the Shock, raise the foot end. Keep the woman warm during transportation [26].

6.5 Post Partum Hemorrhage (PPH)

The ground level worker should react immediately once it has been realized that the amount of blood flow is exceeding the limits, She should immediately do the following.

**Figure 1** depict the protocols to be followed by the ground level health workers in management of Primary and secondary PPH.



**Figure 1.**  
*Protocol to be followed for management of PPH.*

7. Conclusion

This chapter concludes that the health task force though assumed to be well trained as per the qualification mandates still requires an updates and practice on hands on skill trainings rather than the traditional lecture cum discussion

methods. Health task force must be abreast with the knowledge and skills. Though Government is taking every effort to train the workers and hand hold them but there is a strong need to modify the strategies and implementation process where the skill enhancement should be given a huge importance especially in the complicated situation where the onus totally lies on the ground level workers to identify and manage the complications before getting critical. The training received by the ground level workers needs to be streamlined and the skills needs to be enhanced time to time with updated practices. The strategic reforms are quite necessary to shed off the traditional classroom lectures.

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## References

- [1] Every New-born, An Executive Summary for The Lancet's Series. May 2014.
- [2] Nour NM. An introduction to maternal mortality. *Rev Obstetrics and Gynaecology*. 2008 spring; 1(2):77-81. PMID: 18769668; PMCID: PMC2505173
- [3] WHO. 2014. World Health Statistics 2014. Geneva: WHO
- [4] Warren C, Daly P, Toure L, and Mongi P. Postnatal Care. Opportunities for Africa's New-borns: Practical Data Policy and Programmatic Support for New-born Care in Africa. 2006; 79-90
- [5] WHO. 2013. Recommendations on Maternal and Perinatal Health. Geneva: WHO. Guidelines on maternal, new-born, child and adolescent health approved by the WHO guidelines review committee.
- [6] WHO recommends optimizing health worker roles to improve access to key maternal and new-born health interventions through task shifting; WHO, 2012.
- [7] Borders N. After the afterbirth: a critical review of postpartum health relative to method of delivery. *Journal of Midwifery & Women's Health*. 2006; 51(4): 242-248
- [8] Minnerup J, Kleffner I, Wersching H, Zimmermann J, Schäbitz WR, Niederstadt T, Dziewas R. Late Onset Postpartum Eclampsia: It is Really Never Too Late-A Case of Eclampsia 8 Weeks after Delivery. *Stroke Res Treat*. 2010; 2010:798616. doi: 10.4061/2010/798616. Epub 2009 Sep 1. PMID: 20798839; PMCID: PMC2925215
- [9] Amy JJ. Severe Postpartum Haemorrhage: A Rational Approach. *National Medical Journal Indian*. 1998; 11:86-8.
- [10] Khan KS. WHO Analysis of Causes of Maternal Death: A Systematic Review. *The Lancet*. 2006; 367:1066-74.
- [11] Dossou M, Debost-Legrand A, Déchelotte P, Lémery D, Vendittelli F. Severe secondary postpartum haemorrhage: a historical cohort. *Birth*. 2015; 42(2):149-55.
- [12] Nanda S, Singhal S, Sharma D, Sood M, Singhal SK. Nonunion of uterine incision: a rare cause of secondary postpartum haemorrhage: a report of 2 cases. *Aust N Z J Obstet-Gynaecol*. 1997; 37(4):475-6.
- [13] Larsen JV, Janowski K, Krolilowski A. Secondary post-partum haemorrhage due to uterine wound dehiscence. *Cent African Journal of Med*. 1995; 41(9):294-6
- [14] Kelly SM, Belli AM, Campbell S, Hoveyda F. Arteriovenous malformation of the uterus associated with secondary postpartum haemorrhage. *Ultrasound Obstet. Gynecol*. 2003; 21(6):602-5
- [15] [www.who.int/healthinfo/statistics/bod\\_maternalsepsis.pdf](http://www.who.int/healthinfo/statistics/bod_maternalsepsis.pdf). 2020.
- [16] [planningcommission.nic.in/aboutus/committee/strgrp/stgp\\_fmlywel/sgfw](http://planningcommission.nic.in/aboutus/committee/strgrp/stgp_fmlywel/sgfw). 2020
- [17] Pyone T, Karvande S, Gopalakrishnan S, Purohit V, Nelson S, Balakrishnan SS, Mistry N, Mathai M. Factors governing the performance of Auxiliary Nurse Midwives in India: A study in Pune district. *PLoS One*. 2019 Dec 27; 14(12):e0226831. doi: 10.1371/journal.pone.0226831. PMID: 31881071; PMCID: PMC6934276.
- [18] Counselling for Maternal and Newborn Health Care: A Handbook for Building Skills. Geneva: World Health Organization; 2013. 11, POSTNATAL CARE OF THE MOTHER AND NEWBORN. Available from: <https://>



www.ncbi.nlm.nih.gov/books/  
NBK304191/

4863.161317. PMID: 26288774; PMCID:  
PMC4535095

[19] Finlayson K, Crossland N, Bonet M, Downe S. What matters to women in the postnatal period: A meta-synthesis of qualitative studies. *PLoS One*. 2020 Apr 22; 15(4):e0231415. doi: 10.1371/journal.pone.0231415. PMID: 32320424; PMCID: PMC7176084.

[25] Rchiips.org. 2020. Available from: <http://rchiips.org/pdf/state/Maharashtra.pdf>

[26] <http://nrhmorissa.gov.in/>

[27] <http://www.sihfw.nrhmharyana.gov.in/>

[20] Jauniaux E, Chantraine F, Silver RM, Langhoff-Roos J; FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO consensus guidelines on placenta accreta spectrum disorders: Epidemiology. *Int J Gynaecol Obstet*. 2018 Mar; 140(3): 265-273.

[28] [https://www.who.int/reproductivehealth/publications/maternal\\_perinatal\\_health/peripartum-infections-guidelines/en/](https://www.who.int/reproductivehealth/publications/maternal_perinatal_health/peripartum-infections-guidelines/en/)

[21] Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels J, Gülmezoglu AM, Temmerman M, Alkema L. Global causes of maternal death: a WHO systematic analysis. *Lancet Glob Health*. 2014 Jun;2(6):e323-33. doi: 10.1016/S2214-109X(14)70227-X. Epub 2014 May 5. PMID: 25103301

[22] Dehury RK, Samal J. Maternal Health Situation in Bihar and Madhya Pradesh: A Comparative Analysis of State Fact Sheets of National Family Health Survey (NFHS)-3 and 4. *J Clin Diagn Res*. 2016 Sep; 10(9):IE01-IE04. doi: 10.7860/JCDR/2016/19079.8404. Epub 2016 Sep 1. PMID: 27790466; PMCID: PMC5071966.

[23] Institute of Medicine (US) Committee on Improving Birth Outcomes. *Improving Birth Outcomes: Meeting the Challenge in the Developing World*. Bale JR, Stoll BJ, Lucas AO, editors. Washington (DC): National Academies Press (US); 2003. PMID: 25057689

[24] Kohli C, Kishore J, Sharma S, Nayak H. Knowledge and practice of Accredited Social Health Activists for maternal healthcare delivery in Delhi. *J Family Med Prim Care*. 2015 Jul-Sep;4(3):359-63. doi: 10.4103/2249-