Study to assess the maternal and new born services in Primary health centres of Kurnool district.

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ABSTRACT

Background: There is no reliable way to predict which woman will develop pregnancy-related complications, it is essential that all pregnant women have access to high quality obstetric care throughout their pregnancies. The objective of this study to assess the maternal and new born services in Primary health centres of Kurnool district. Methods: This study is a facility based cross sectional study carried out from November 2014 - May 2015 in administrative limits of Kurnool district. Questionnaire is attempted to assess the Maternal and new born services available-Antenatal care, Intranatal care, Post natal care, Newborn care and BEmONC services etc. Results: all PHCs health personnel were practicing administration of parenteral antibiotics, uterotonic drugs, performing manual removal of placenta, in 16/21(76.19%) PHCs health personnel were performing neonatal resuscitation, in 4/21(19.04%) PHCs health personnel were practicing administration anticonvulsants and in 1/21 (4.76%) PHCs health personnel were performing removal of retained products and performing assisted deliveries. Most of PHCs (85.71%) were providing birth preparedness services. 9/21(42.58%) PHCs health personnel were noting time of rupture of membranes.In 16/21(76.19%) PHCs, health personnel were providing resuscitation services. Conclusions: Antenatal, intranatal, postnatal and newborn services were adequate in most of the PHCs.

Key Words: BEmONC services, Maternal and newborn services, Primary health centres.

INTRODUCTION

The World Health Organization (WHO) estimates that, of 536,000 maternal deaths occurring globally each year, 136,000 take place in India. Estimates of the global burden of disease for 1990 also showed that India contributed 25% to disability-adjusted life-years lost due to maternal conditions alone. Unfortunately, there is little evidence that maternity has become significantly safer in India over the last 20 years despite the safe motherhood policies and programmatic initiatives at the national level.1

Because there is no reliable way to predict which woman will develop pregnancy-related complications, it is essential that all pregnant women have access to high quality obstetric care throughout their pregnancies. Maternal complications and poor perinatal outcome are highly associated with non-utilization of antenatal and delivery care services and poor socioeconomic conditions of the patient. Poorer outcomes are seen in un-booked than booked patients.2 In low- and middle-income countries, less than half of all pregnant women have a minimum of four antenatal care visits.3

Since an estimated 90% of maternal deaths can be prevented with timely medical intervention, ensuring quick access to appropriate services when obstetric emergencies arise is one of the most important aspects of safe motherhood in developing countries.4

Maternal and child healthcare is one of the eight basic components of primary healthcare (PHC) in the Declaration of Alma-Ata. The Child Survival and Safe Motherhood, now a component of Reproductive and Child Health Programme, is initiated to achieve a substantial improvement in the health status of women and children in India.5 Understanding of the knowledge and practices of the community regarding maternity care during pregnancy, delivery and postnatal period is required for program implementation.6 The following essential services should be provided by PHCs - a) Antenatal care, b) Intra-natal care: (24-hour delivery services both normal and assisted) c) Proficient in identification and basic first aid treatment for PPH, eclampsia, sepsis and prompt referral, d) Postnatal Care, e) New Born care

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**BEmONC:** Components of Basic Emergency Obstetric Neonatal Care include:
- Intravenous (IV) / Intramuscular (IM) antibiotics, IV/IM ute	onotics, IM/IM anticonvulsants,
- Manual removal of placenta, Assisted vaginal delivery,
- Removal of retained products

The objective of this study to assess the maternal and new
born services in Primary health centres of Kurnool district.

**RESULTS**

There were 21, 24x7 PHCs included in the study (7 PHCs from each revenue division). It was observed from the table 1 that, in all PHCs health personnel were practicing administration of parenteral antibiotics, uterotonic drugs, performing manual removal of placenta, in 16/21(76.19%) PHCs health personnel were performing neonatal resuscitation, in 4/21(19.04%) PHCs health personnel were practicing administration anticonvulsants and in 1/21 (4.76%) PHCs health personnel were performing removal of retained products and performing assisted deliveries.

| No. | Services                                      | PHCs | Percentage |
|-----|-----------------------------------------------|------|------------|
| 1   | Administration of parenteral antibiotics      | 21   | 100        |
| 2   | Administration of uterotonic drugs*           | 21   | 100        |
| 3   | Administration of anticonvulsants†            | 4    | 19.04      |
| 4   | Manual removal of placenta                    | 21   | 100        |
| 5   | Removal of retained products‡                 | 1    | 4.76       |
| 6   | Performing assisted delivery*                  | 1    | 4.76       |
| 7   | Perform neonatal resuscitation                | 16   | 76.19      |

*Uterotonic drugs- IV Oxytocin
†Anticonvulsants- Magnesium sulphate
‡Manual Vacuum Extraction, Dilatation and Curettage
*Vacuum extraction, forceps delivery

| No. | Services                                      | PHCs | Percentage |
|-----|-----------------------------------------------|------|------------|
| 1   | Early registration                            | 21   | 100        |
| 2   | MCP card                                      | 21   | 100        |
| 3   | Blood pressure, weight, height measurement    | 21   | 100        |
| 4   | Fundal examination                            | 21   | 100        |
| 5   | Foetal lie & FHS identification               | 21   | 100        |
| 6   | Laboratory services                           | 21   | 100        |
| 7   | Birth preparedness                            | 18   | 85.71      |
| 8   | Identification of FRU                         | 21   | 100        |
| 9   | Advice on diet & rest                         | 21   | 100        |
| 10  | Referral of high risk pregnancies             | 21   | 100        |

It was observed from the table 2 that, all PHCs were providing antenatal services i.e. early registration, provision of MCP card, Blood Pressure, weight and height measurement, fundal height examination, FHS and fetal lie identification, laboratory services, identification of FRU, advice on diet and rest, referral of high risk pregnancies. Most of PHCs (85.71%) were providing birth preparedness services.

| No. | Services                                      | PHCs | Percentage |
|-----|-----------------------------------------------|------|------------|
| 1   | Supportive care                               | 11   | 52.38      |
| 2   | Monitoring uterine contractions, FHR          | 15   | 71.42      |
| 3   | Monitoring cervical dilatation & vitals       | 15   | 71.42      |
| 4   | Noting time of rupture of membranes           | 9    | 42.58      |
| 5   | Noting colour of amniotic fluid               | 15   | 71.42      |
It was observed from the table 3 that, in 15/21(71.42%) PHCs, health personnel were practicing monitoring uterine contractions, FHR, cervical dilatation, noting colour of amniotic fluid. In 11/21(52.38%) PHCs, health personnel were providing supportive care and in 9/21(42.58%) PHCs health personnel were noting time of rupture of membranes.

Table 4: Intrapartum services provided in PHC during 2nd stage of labour

| S. No | Services                      | No. of PHCs | Percentage |
|-------|-------------------------------|-------------|------------|
| 1     | Asepsis                       | 21          | 100        |
| 2     | Episiotomy                    | 21          | 100        |
| 3     | Support to the perineum       | 21          | 100        |
| 4     | Delivery of head              | 21          | 100        |
| 5     | Checking Position of umbilical cord | 21      | 100        |
| 6     | Delivery of shoulders & other body parts | 21 | 100 |
| 7     | Noting time of delivery       | 21          | 100        |

It was observed from the table 4 that, in all PHCs health personnel were providing intra natal services i.e. episiotomy service, support to the perineum, delivery of head, checking position of umbilical cord, delivery of shoulders & other body parts, noting the time of delivery and maintaining asepsis during the delivery.

Table 5: Intrapartum services provided in PHC during 3rd stage of labour

| S. No | Services                              | No. of PHCs | Percentage |
|-------|---------------------------------------|-------------|------------|
| 1     | Administration of uterotonic drug     | 21          | 100        |
| 2     | Controlled Cord Traction              | 21          | 100        |
| 3     | Uterine Massage                       | 21          | 100        |
| 4     | Examination of perineum & vagina for tears | 21       | 100        |

From the table 5 it was observed that, in all PHCs, health personnel were providing following intra natal services during 3rd stage of labour i.e. administration of uterotonic drugs, Controlled Cord Traction, Uterine massage and examination of perineum and vagina for tears.

Table 6: Intrapartum services provided in PHC during 4th stage of labour

| S. No | Services                        | No. of PHCs | Percentage |
|-------|---------------------------------|-------------|------------|
| 1     | Check for vaginal bleeding      | 21          | 100        |
| 2     | Check for uterine behavior      | 21          | 100        |
| 3     | Check vitals of mother          | 21          | 100        |
| 4     | Providing warmth                | 21          | 100        |
| 5     | Initiation of breast feeding    | 21          | 100        |

From the table 6 it was observed that, in all PHCs, health personnel were providing intra natal services during 4th stage of labour i.e. checking for vaginal bleeding, uterine behaviour, vitals of mother, providing warmth and initiation of breast feeding.

Table 7: Essential newborn care services provided in PHC

| S. No | Services                                      | No. of PHCs | Percentage |
|-------|-----------------------------------------------|-------------|------------|
| 1     | Maintenance of body temperature               | 21          | 100        |
| 2     | Initiation of breast feeding                  | 21          | 100        |
| 3     | Care to skin and eyes                         | 21          | 100        |
| 4     | Care of cord                                  | 21          | 100        |
| 5     | Resuscitation services                        | 16          | 76.19      |
| 6     | Danger signs identification & Referral services | 21      | 100        |
| 7     | Immunization at birth                         | 21          | 100        |

It was observed from the table 7 that, in all PHCs, health personnel were providing newborn care services i.e. maintenance of body temperature, initiation of breast feeding, care of cord, Danger signs identification & Referral services and Immunization at birth. In 16/21(76.19%) PHCs, health personnel were providing resuscitation services. Other PHCs were referring the newborns to FRUs after following initial steps of resuscitation i.e. up to stimulating, because of non-availability of oxygen cylinders.

Table 8: Postnatal services provided in PHC to mother

| S. No | Services                                      | No. of PHCs | Percentage |
|-------|-----------------------------------------------|-------------|------------|
| 1     | Advice regarding hygiene                      | 21          | 100        |
| 2     | Advice regarding nutrition                    | 21          | 100        |
| 3     | Advice regarding contraception                | 18          | 85.71      |
| 4     | Registration of birth                         | 21          | 100        |
| 5     | Danger signs identification & Referral services to mother | 21     | 100        |
| 6     | Advice regarding postnatal visits             | 21          | 100        |

From the table 8 it was observed that, in all PHCs, health personnel were providing postnatal services to mother i.e. advice regarding hygiene, nutrition, registration of birth, identification of danger signs & referral services and advice regarding post natal visits by peripheral health workers. In 18/21(85.71%) PHCs, health personnel were practicing advice regarding contraception.

It was observed from the table 9 that, in all PHCs, health personnel were providing postnatal services to newborn i.e. asepsis, advice to mother regarding KMC & thermal comfort, examination of umbilicus, eyes, skin, and identification of danger signs & Referral services. In 16/21(76.19%) PHCs health personnel were ensuring good suckling practices.
It was observed from this study that, in 21/21 (100%) PHCs, health personnel were providing antenatal services i.e early registration, provision of MCP card, Blood Pressure monitoring, weight and height measurement, fundal height examination, FHS and fetal lie identification, laboratory services, identification of FRU, advice on diet and rest, referral of high risk pregnancies. 18/21(85.71%) PHCs were providing maternal and newborn services i.e. maintenance of body temperature, initiation of breast feeding, uterine contractions, FHR, cervical dilatation, noting colour of amniotic fluid. In a study conducted by Devika Biswas et al it was observed that, in 21/21(100%) PHCs, health personnel were providing supportive care and in 9/21(42.58%) PHCs health personnel were noting time of rupture of membranes.

According to DLHS 4 report of Andhra Pradesh, 88.5% deliveries were institutional deliveries. Delivery attended by skilled health personnel were 93.8%. Out of pocket expenditure per delivery in public health facility were 4.0%.

According to DLHS 4 report of Andhra Pradesh, 75.7% deliveries were institutional deliveries. Delivery attended by skilled health personnel were 89.5%. Out of pocket expenditure per delivery in public health facility were 4.0%.

Newborn care services:

It was observed from current study that, in 21/21(100%) PHCs, health personnel were providing newborn care services i.e. maintenance of body temperature, initiation of breast feeding within 1hour after birth, care of cord, Danger signs identification & referral services and immunization at birth. In 16/21(76.19%) PHCs, health personnel were providing intranatal services for 1st stage of labour i.e. monitoring uterine contractions, FHR, cervical dilatation, noting colour of amniotic fluid. In 15/21(71.42%) PHCs, health personnel were practicing intra natal services for 1st stage of labour i.e. monitoring uterine contractions, FHR, cervical dilatation, noting colour of amniotic fluid. From the current study it was observed that, in 21/21(100%) PHCs, health personnel were providing following intranatal services during 3rd stage of labour i.e. administration of uteronic drugs, Controlled Cord Traction, Uterine massage and examination of perineum and vagina for tears.

From the present study it was observed that, in 21/21(100%) PHCs, health personnel were providing maternal and newborn services i.e. maintenance of body temperature, initiation of breast feeding, uterine contractions, FHR, cervical dilatation, noting colour of amniotic fluid. From the current study it was observed that, in 21/21(100%) PHCs, health personnel were providing following intranatal services during 3rd stage of labour i.e. administration of uteronic drugs, Controlled Cord Traction, Uterine massage and examination of perineum and vagina for tears.

According to DLHS 4 report of Kurnool district, 75.7% deliveries were institutional deliveries. Delivery attended by skilled health personnel were 89.5%. Out of pocket expenditure per delivery in public health facility were 4.0%.

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PHCs, health personnel were providing resuscitation services. Other PHCs were referring the newborns to FRUs after following initial steps of resuscitation i.e. up to stimulating, because of non availability of oxygen cylinders. In a study conducted by Devika Biswas et al it was observed that, 5/5 PHCs were providing newborn care.\(^7\)

In a study conducted by N.Khanam et al it was observed that, in 16.57% PHCs there was recording of pulse and temperature in newborns, 45.35% PHCs there was recording of weight in newborns, 16.08%, 14.63%, 6.34% and 91.17% PHCs there was provision of examination of eyes, examination of skin, examination of umbilicus and provision of zero dose immunization respectively to newborns.\(^9\)

According to DLHS 4 report of Kurnool district PHC, and Andhrapradeshes having new born care services on 24 X 7 hours basis were 86.7% and 92.6% respectively.\(^9\)

### Post natal services to mother:

From the present study it was observed that, in 21/21(100%) PHCs, health personnel were providing post natal services to mother i.e. advice regarding hygiene, nutrition, registration of birth, identification of danger signs & referral services and advice regarding post natal visits by peripheral health workers. In 18/21(87.1%) PHCs, health personnel were practicing advice regarding contraception.

Similar findings were observed in a study conducted by Devika Biswas et al which shows that, 5/5 PHCs were providing postnatal care. \(^7\) Similar findings were observed in a study conducted by S.K.Ray et al which shows that, there was 100% availability of post natal services and 5.78% PHCs health personnel were advising regarding hygiene.\(^8\)

According to DLHS 4 report of Kurnool district, PHCs having referral services for pregnancies/delivery on 24 X 7 hours basis were 85.7%. Percentage of Women who had any delivery complication were 16.1% and Percentage of Women who had any post delivery complication were 9.9%.\(^9\)

According to DLHS 4 report of Andhra Pradesh, PHCs having referral services for pregnancies/delivery on 24 X 7 hours basis were 76.7%. Percentage of Women who had any delivery complication were 19.9% and Percentage of Women who had any post delivery complication were 15.8%.\(^9\)

### Post natal services to newborn:

It was observed from this study that, in 21/21(100%) PHCs, health personnel were providing post natal services to newborn i.e. asepsis, advice to mother regarding KMC & thermal comfort, examination of umbilicus, eyes, skin, and identification of danger signs & Referral services. In 16/21(76.19%) PHCs health personnel were ensuring good suckling practices. In a study conducted by N.Khanam et al it was observed that, in 27.8% PHCs there was provision for keeping the baby warm.\(^10\)

### Conclusions:

Antenatal, intranatal, postnatal and newborn services were adequate in most of the PHCs.

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