

IMPROVING MATERNITY CARE IN KERALA

Quality Standards



NICE International



First Edition 2013

Preface

The Government of Kerala has made quality care improvement one of its key health priorities. To achieve this goal it is leading an initiative on developing quality measures to help institutions and professionals improve their practice and deliver better care for their patients. Quality standards that are derived from evidence-based clinical guidelines and that are agreed by relevant stakeholders provide powerful levers to drive and measure quality improvement in health care institutions.

This document contains the first Quality Standard developed in Kerala. It focuses on improving the care mothers receive in hospitals (public and private) to help reduce maternal mortality, one of the main health priorities in Kerala. Drawing from a range of published local and international clinical guidelines the standard contains a set of ten concise statements and measurable indicators covering the management of post partum haemorrhage and also hypertensive disorders of pregnancy. These ailments have been highlighted as the leading causes of maternal mortality in the Confidential Review of Maternal Deaths published by the Kerala Federation of Obstetrics and Gynaecology (2012). Better management of these two conditions would lead to improved outcomes and to potential decrease in maternal deaths.

The quality standard is the product of a multi-stakeholder partnership between the Government of Kerala, the National Rural Health Mission, the Kerala Federation of Obstetricians and Gynaecologists, the Departments of Health Services and Medical education and the National Institute for Health & Clinical Excellence (NICE) International with support from the UK Department for International Development (DFID) Multi Country Partnership grant (HPS) and the Joint Learning network (JLN).

We are indebted to the many colleagues from maternity hospitals and other services throughout Kerala who contributed to the workshops and discussions that informed the content of this document and who made the development of this Quality Standard possible. Their efforts and valuable input are much appreciated.

This standard will be implemented in eight maternity hospitals on a pilot basis in 2013. This will be followed by a full roll out to all maternity hospitals thereafter.

7th January 2013

Rajeev Sadanandan
Principal Secretary (Health)
Government of Kerala

1. Active Management of Third Stage of Labour

Clinical care

Management of the third stage of labour

Quality statement

Women who have given birth either vaginally or by caesarean are offered a bolus dose of Oxytocin, Ergometrine or Prostaglandin F2 Alfa at the time of delivery of the shoulder or within 1 minute of the delivery of foetus to prevent post-partum haemorrhage and to assist delivery of the placenta.

Definitions

Third stage of labour: from the time of delivery of the foetus to the complete delivery of the placenta.

Active management of the third stage of labour: Steps to reduce post-partum haemorrhage:

1. Use of uterotonic drugs
2. Early delivery of placenta by controlled cord traction, after ensuring uterine contraction and giving counter pressure to prevent inversion of uterus

Oxytocin, Ergometrine are Uterotonic Drugs

Dose:

- Oxytocin 5U IV or 10U IM; (prefer the 5 units slow iv bolus injection)
- Ergometrine 0.2 mg IM (*contra indicated in women with hypertension and heart disease*)
- PGF2 Alfa 125 micro gram IM (contraindicated in women with H/O asthma)

Quality Measure

Structure:

- a) Evidence of agreed guidelines or protocols in the hospital for the active management of the third stage of labour
- b) Display of flow charts based on agreed guidelines, protocols or clinical pathways in the labour room
- c) Evidence of availability of Oxytocin, Ergometrine and PG F2 Alfa at the place of delivery
- d) Evidence of suitable storage facilities (refrigerator) for the drugs
- e) Evidence of equipment for measuring blood loss

Process measure:

VAGINAL DELIVERIES

- Proportion of women giving birth vaginally who receive the Oxytocin, Ergometrine or PGF2 Alfa during third stage management of labour during the month

Numerator– the number of women giving birth vaginally receiving Oxytocin, Ergometrine or PGF2 Alfa during the third stage of labour in the hospital during the month

Denominator– all women giving birth vaginally in the hospital during the month.

CAESAREAN DELIVERIES

- Proportion of women giving birth by caesarean section who receive Oxytocin, Ergometrine or PGF2 Alfa as part of active management of third stage of labour during the month

Numerator– the number of women delivering by caesarean section receiving the Oxytocin, Ergometrine PGF2 Alfa as part of active management of third stage of labour

Denominator– all women giving birth by caesarean section

Outcomes:

VAGINAL DELIVERIES

- Proportion of women who experience an estimated blood loss equal to or more than 500 ml during and or following a vaginal delivery

Numerator– the number of women giving birth vaginally receiving the AMTSL who experience an estimated blood loss equal to or more than 500 ml during and or following a vaginal delivery in the hospital.

Denominator– all women giving birth vaginally, who receive AMTSL in the hospital.

CAESAREAN DELIVERIES

- Proportion of women who experience an estimated blood loss equal to or more than 1000 ml during and after caesarean section, except in women with placenta praeviaaccreta.

Numerator– the number of women delivering by caesarean section and experiencing an estimated blood loss equal to or more than 1000 ml during and after caesarean section in the hospital except the ones with placenta praeviaaccreta

Denominator – all women giving birth by caesarean section in the hospital except those with placenta praeviaaccreta.

What the quality Statement means for each audience

Service Providers: Ensure adequate human resources, equipment, drugs and supplies to provide 24 X 7 services and to measure blood loss.

Healthcare Professionals: Training and adherence to standard protocols.

Payers: (government, health insurers, women giving birth who pay for service): Ensure a quality standard is in place and is being followed before they pay for services.

Data sources

- Local data collection in the standard labour room register
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology. P 109-111
- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 80
- National Institute for Health and Clinical Excellence. Intrapartum Care, Care of healthy women and their babies during childbirth; 2007
- World Health Organisation. WHO guidelines for the management of postpartum haemorrhage and retained placenta; 2012
- Royal College of Obstetricians and Gynaecologists. Green-top guideline No 52, Prevention and management of post-partum haemorrhage; 2009

2. PPH Prevention – 4th Stage Management

Clinical care

Post-partum haemorrhage during 4th stage of labour

Quality statement

All women, who have given birth vaginally or by caesarean section are monitored for a minimum period of two hours for evidence of excessive vaginal bleeding.

Definitions

Excessive vaginal bleeding:

1. Blood loss more than 500 ml following vaginal delivery
2. Blood loss of 1000 ml or more during or following caesarean section

Monitoring: Blood Pressure, Pulse rate, look for pallor, abdominal palpation for the consistency of uterus and express the blood loss per vaginum and fundal position every 30 minutes.

Quality Measure

Structure:

- a) Evidence of agreed guidelines or protocols in the hospital and place of delivery for estimating blood loss during delivery and caesarean section
- b) Display of flow charts based on the agreed guidelines, protocols or clinical pathways in the labour room
- c) Evidence of manpower and physical facilities to keep the patient under observation for two hours after delivery

Process measure:

VAGINAL DELIVERIES

Numerator - Number of women giving birth vaginally who were monitored for blood pressure, pulse rate, pallor, abdominal palpation for the consistency of uterus and expressed blood loss per vaginum and fundal position every 30 minutes for a period of 2 hours.

Denominator - Number of women giving birth vaginally

CAESAREAN DELIVERIES

Numerator- Number of women giving birth by caesarean section who were monitored for blood pressure, pulse rate, pallor, abdominal palpation for the consistency of uterus and checked for blood loss per vaginum and fundal position every 30 minutes for a period of 2 hours.

Denominator - Number of women giving birth by caesarean delivery

Outcomes:

- VAGINAL DELIVERIES

Proportion of women who develop significant blood loss (arbitrarily 500 ml) during the two hour observation period (4th stage) after completion of delivery.

Numerator– Number of women who experience an estimated blood loss of 500 ml or more during the observation period of two hours (4th stage) after completion of labour

Denominator –Number of women who are observed after vaginal delivery for a period of two hours for abnormal blood loss.

- CAESAREAN DELIVERIES

Proportion of women who develop significant blood loss (arbitrarily 500ml) during the two hour observation period (4th stage) after the completion of the surgery.

Numerator – Number of women who experience an estimated blood loss of 500 ml or more during the observation period of two hours (4th stage) after completion of surgery.

Denominator –Number of women who are observed after caesarean delivery for a period of two hours for abnormal blood loss.

What the quality Statement means for each audience

Service Providers: Ensure adequate human resources, equipment, and supplies to provide 24 X 7 services

Healthcare Professionals: Training and adherence to standard protocols

Payers: (Government, health insurers, women giving birth who pay for service): Ensure a quality standard is in place and is being followed before they pay for services

Data sources

- Local data collection. Register with a separate column for 4th stage observations
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology. P 111.
- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 67
- Christopher R W E, Ian A D B. Davidson's Principles and Practice of Medicine. ELBS. Sixteenth Edition; 1991 : 281-282
- National Institute for Health and Clinical Excellence. Intrapartum Care, Care of healthy women and their babies during childbirth; 2007
- World Health Organisation. WHO guidelines for the management of postpartum haemorrhage and retained placenta; 2012

3. Management of Post-Partum Haemorrhage with Blood and Blood Products

Clinical care

Management of postpartum haemorrhage with blood and blood products

Quality statement

Women with evidence of estimated blood loss of over 1000 ml as a result of postpartum haemorrhage, whose condition has not responded to the infusion of other fluids, are offered transfusion with blood and blood products

Definitions

Blood products: packed red blood cells and clotting factors such as fresh frozen plasma or cryoprecipitate and platelets.

Quality Measure

Structure:

- a) Evidence of a system for the documentation of postpartum maternal observations, to include as a minimum maternal pulse rate, blood pressure and vaginal loss of blood and contracted state of uterus during the fourth stage of labour (two hours after delivery or caesarean).
- b) Evidence of locally agreed guidelines, protocols or clinical pathways for the management of major obstetric haemorrhage, to include guidance on the use of red blood cells and clotting factors such as fresh frozen plasma or cryoprecipitate, during resuscitation.
- c) Evidence of the local availability of blood products, to include red blood cells and clotting factors such as fresh frozen plasma or cryoprecipitate and platelets

Process:

Proportion of women who received blood transfusion or blood products out of those who lost more than 1000 ml of blood.

Numerator – Number of women who received blood transfusion out of those who lost 1000 ml or more of blood

Denominator– All women with evidence of blood loss of 1000 ml or more.

Outcome:

Proportion of women who require transfer to an intensive care facility as a result of postpartum haemorrhage.

Numerator – Number of women transferred to an intensive care facility as a result of postpartum haemorrhage.

Denominator – Women with evidence of estimated blood loss of 1000 ml or more as a result of postpartum haemorrhage

What the quality Statement means for each audience

Service Providers: Ensure adequate human resources, equipment, supplies, drugs and blood transfusion facilities to provide 24 X 7 services

Healthcare Professionals: Training and adherence to standard protocols

Payers: (Government, health insurers, women giving birth who pay for service): Ensure a quality standard is in place and is being followed before they pay for services

Women giving birth: May ensure the availability of these facilities at the centre before deciding on the place of delivery

Data sources

- Local data collection. Register with a separate column
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology: P15-21
- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 253-263
- Christopher R W E, Ian A D B. Davidson's Principles and Practice of Medicine. ELBS. Sixteenth Edition; 1991 : 281-282
- National Institute for Health and Clinical Excellence. Intrapartum Care, Care of healthy women and their babies during childbirth; 2007.
- World Health Organisation. WHO guidelines for the management of postpartum haemorrhage and retained placenta; 2012
- Royal College of Obstetricians and Gynaecologists. Green-top guideline No 52, Prevention and management of post-partum haemorrhage; 2009

4. Obstetric Intensive Care

Clinical care/Services

Intensive Care

Quality statement

Women suffering postpartum haemorrhage of sufficient severity to cause acute circulatory compromise and who required transfusion of blood products during their resuscitation and show evidence of organ failure are provided with Intensive Care for 24 hours after arrest of initial bleeding. If Intensive Care facilities are not available in the same institute/hospital, she may be transferred to a higher centre following referral protocol and in an ambulance with facilities and personnel to monitor her condition and resuscitate if necessary.

Definitions

Acute circulatory compromise: Acute circulatory failure (or compromise) is the term used to describe a clinical syndrome of hypotension, peripheral vasoconstriction, oliguria and often impairment of consciousness

Intensive Care facility: a specialised department or wing in the hospital which provides diagnosis and management of life threatening conditions requiring sophisticated organ support and invasive monitoring

Means of transport includes monitoring equipment, basic resuscitation equipment, trained personnel and Acute Life Support (ALS) ambulance

Referral protocol includes informing the higher centre about the details of the case and ensuring that Intensive Care facilities will be available there

Quality Measure

Structure:

- a) Evidence of availability of an Intensive Care facility within same hospital /campus or tie up with a higher centre with ICU facility to which the patient may be referred
- b) Evidence of a means of transport with ALS for women to be taken to the Intensive Care facility referred to above
- c) Evidence of locally agreed guidelines for the transfer of women suffering a major obstetric haemorrhage, to the Intensive Care facility

Process:

- a) Proportion of women suffering postpartum haemorrhage of sufficient severity to

cause acute circulatory compromise and or organ failure and who require transfusion of blood products during their resuscitation, who receive Intensive Care for 24 hours after the arrest of the initial bleeding

Numerator – the number of women in the denominator receiving Intensive Care for 24 hours.

Denominator– all women suffering postpartum haemorrhage of sufficient severity to cause acute circulatory compromise and or organ failure who required transfusion of blood products during their resuscitation

b) Proportion of women suffering postpartum haemorrhage of sufficient severity to cause acute circulatory compromise and or organ failure who required transfusion of blood products during their resuscitation, who arrived in the Intensive Care facility in ALS ambulance with continued support in transit.

Numerator– the number of women in the denominator arriving in the Intensive Care facility in ALS ambulance with continued support in transit.

Denominator– all women suffering postpartum haemorrhage of sufficient severity to cause acute circulatory compromise and or organ failure who required transfusion of blood products during their resuscitation and who needed transport for ICU care in another hospital.

Outcomes:

a) Proportion of women who die as a result of complications of their postpartum haemorrhage, before leaving their original care setting.

Numerator – the number of women who died as a result of complications of their postpartum haemorrhage, before leaving their original care setting.

Denominator – all Women who developed complications of their postpartum haemorrhage, before leaving their original care setting.

b) Proportion of women who die as a result of complications of their postpartum haemorrhage, en route to the Intensive Care facility.

Numerator – the number of women died as a result complications of their postpartum haemorrhage, en route to the Intensive Care facility.

Denominator– all Women who show / developed complications of their postpartum haemorrhage and referred to the Intensive Care facility.

What the quality Statement means for each audience

Service Providers: have a line of communication and agreement from a higher centre for transfer of patient requiring ICU care and ensuring proper transport facility.

Health professionals: training and adherence to quality standards and maintain a rapport with the higher centres to which the patients may have to be referred. Have a pre rehearsed plan in place to refer such patients and the equipment and personnel required during transport

Payers: (government, health insurers, women giving birth who pay for service): ensure a quality standard is in place and is being followed before they pay for services

Data sources

- Local data collection. Register with a separate column.
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology. P 115
- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 50,62,243
- Christopher R W E, Ian A D B. Davidson's Principals and Practice of Medicine. ELBS. Sixteenth Edition; 1991 : 281-282
- National Institute for Health and Clinical Excellence. Intrapartum Care, Care of healthy women and their babies during childbirth; 2007
- World Health Organisation. WHO guidelines for the management of postpartum haemorrhage and retained placenta; 2012.
- Royal College of Obstetricians and Gynaecologists. Green-top guideline No 52, Prevention and management of post-partum haemorrhage; 2009

5. Placenta Praevia Accreta

Clinical care/Services

Placenta Praevia (post caesarean or myomectomy)

Quality statement

Women with a previous scar on the lower segment (eg: caesarean or myomectomy) confirmed to have placenta praevia with a repeat scan at 32 weeks are referred to a centre where multidisciplinary care, facilities for massive blood transfusion and intensive care are available.

Definitions

Placenta praevia accreta: Placenta located wholly or partially in the lower segment with evidence of morbid adhesions which includes all three types of morbidly adherent placenta, namely accreta, increta and percreta

Multidisciplinary team: Availability of an experienced obstetrician, anaesthesiologist, urologist and a critical care specialist to tackle the acute emergencies and complications that can arise during the management of patients with placenta praevia accreta

Blood transfusion facilities: Availability of blood transfusion service under the supervision of a trained blood bank officer, and a minimum of at least five units each of blood, plasma, and platelets which may be needed to tackle the massive bleeding that may occur during the surgery

Intensive Care facility –A specialised department or wing in the hospital which provides diagnosis and management of life threatening conditions requiring sophisticated organ support and invasive monitoring

Quality Measure

Structure:

Evidence of locally agreed guidelines, protocol or clinical pathways for referring women with scar on the lower segment confirmed with placenta praevia on a repeat scan at 32 weeks to a centre where multidisciplinary care, facilities for massive blood transfusion and intensive care are available

Process

Proportion of women with scar on the lower segment confirmed with placenta praevia on a repeat scan at 32 weeks who are referred to a centre where multidisciplinary care, facilities for massive blood transfusion and intensive care are available

Numerator -Number of women with scar on the lower segment confirmed with

placenta praevia on a repeat scan at 32 weeks are referred to a centre where multidisciplinary care, facilities for massive blood transfusion and intensive care are available

Denominator -All women with scar on the lower segment confirmed with placenta praevia on a repeat scan at 32 weeks

Outcome

Proportion of women with scar on the lower segment confirmed with placenta praevia on a repeat scan at 32 weeks who are not referred to a centre where multidisciplinary care, facilities for massive blood transfusion and intensive care are available and end up in any of the following peripartum complications:

- Death
- Severe PPH
- Urinary tract injuries

Numerator- Number of women who had placenta praevia in a scarred lower segment confirmed at 32 weeks scan and were not referred to a higher centre with appropriate facilities and finally developed any of the peripartum complications like death, severe pph or urinary tract injuries.

Denominator –All women with placenta praevia in a scarred lower segment confirmed at 32 weeks scan and not referred to an appropriate higher centre.

What the quality Statement means for each audience

Service providers- Display information outside the antenatal clinic and incorporate this in the antenatal booklet to be given to the patients, including avoiding anaemia during pregnancy

Higher centres – have a well-planned strategy to manage cases of placenta praevia accreta as an emergency as well as an elective procedure

Health care professionals -have this information in the antenatal card and disseminate this to the colleagues and trainees

Payers – prepared for the additional expenses involved in scanning and if necessary for transferring care to higher centres or submit the details of health Insurance if any

Women giving birth- Are aware of the risk involved in pregnancies following caesareans if the placenta is under the scar. Should take extra care to avoid anaemia during pregnancy

Data sources

- Local data collection. Register with a separate column

- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 77-79, 84-85
- Royal College of Obstetricians and Gynaecologists. Green-top guideline No 52, Prevention and management of post-partum haemorrhage; 2009
- Placenta praevia,placentapraeviaaccreta and vasa praevia-diagnosis and management-Green top27.The Royal College of Obstetricians and Gynaecologists
- Placenta praevia after caesarean section care bundles: back ground information for health care professionals. RCOG,National Patient Safety Agency.Feb 2010. www.nrls.npsa.nhs.uk
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists Statement c-obs-20,Nov.2011
- The American College of Obstetricians and Gynecologists Committee opinion Number 529; July 2012

6. Pre eclampsia

Clinical care

Pre eclampsia

Quality statement

Preeclampsia is diagnosed by regular antenatal care, by measuring blood pressure and checking urine for albumin using reagent strip or other tests during each antenatal visit.

Definitions

Preeclampsia is development of hypertension after 20 weeks of gestation with evidence of significant proteinuria

Regular antenatal care: Early antenatal registration of pregnant mother in the hospital, first followed by monthly visits till 32 weeks fortnightly visits till 36 weeks and weekly till delivery

Reagent strip or other tests; Standard test to detect proteinuria

Quality Measure

Structure

- Evidence of availability of calibrated standardised B.P apparatus in the facility
- Evidence of availability of local guidelines, protocols or clinical pathways for Antenatal Care of pregnant woman and detection of Preeclampsia
- Evidence of availability of reagent strip to detect proteinuria or other standard tests to detect proteinuria

Process

- Proportion of women who attended the antenatal clinic in the hospital, checked for Blood Pressure at each visit

Numerator - The number of women diagnosed as having hypertension among those receiving antenatal care in the hospital / setting

Denominator - All women attending the antenatal clinic in the hospital/setting

- Proportion of women who attended the antenatal clinic in the hospital/setting, checked for urine albumin during each antenatal visit

Numerator - The number of women who attended the antenatal clinic in the hospital/setting, checked for urine albumin during each antenatal visit

Denominator - All women who attended the antenatal clinic in the hospital/setting

c) Proportion of women who receive antenatal care in the hospital/setting detected to have Preeclampsia

Numerator - The number of women in the denominator receiving antenatal care in the hospital/setting diagnosed with preeclampsia

Denominator -All women receiving antenatal care in the hospital/setting

Outcome

Proportion of women having preeclampsia

What the quality Statement means for each audience

Service providers: Provide service facilities to check blood pressure and proteinuria

Healthcare professionals—train personnel

Payers (Government -provide infrastructure; health insurance, women giving birth who pay for service- make sure these facilities are available)

Women giving birth—Attend for regular antenatal care

Data sources

- Local data collection, antenatal register of women, columns for BP, weight and urine findings
- Consider developing appropriate checklist audit form as part of this quality standard for use by local facilities inclusions in DHS survey in NRHM Accreditation Criteria for provider and in CRMD

Source guidance

- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 87-96.
- National Institute of Health and Clinical Excellence (NICE), UK, Clinical Guideline 107. Hypertension in pregnancy. January 2011.

7. Anti-hypertensive Treatment

Clinical care

Anti hypertensive treatment

Quality statement

Pregnant women with persistent hypertension with systolic blood pressure at or above 140 mm of Hg or Diastolic blood pressure at or above 90 are offered antihypertensive therapy

Definitions

Antihypertensive therapy : Initiation of therapy with Alpha methyl dopa , 250mg x 8thhrly or higher doses depending on the level of blood pressure.

- Labetalol 100mg two or three times a day can be a second selection
- Combinations of Alphadopa and Labetalol can be used if necessary
- Nifedipine tabs may be used if Labetalol is not available (10-20mg Qid)
- For hypertensive crisis follow specific recommendations in Quality Standard 8

Quality Measure

Structure

- a) Evidence for the availability of all the above mentioned antihypertensives
- b) Evidence of Protocol for the management of hypertension in pregnancy for both outpatient and inpatient management

Process

Proportion of antenatal women diagnosed with hypertension on antihypertensive therapy

Numerator - The number of antenatal women with diagnosed hyper tension receiving antihypertensive therapy.

Denominator - The number of antenatal women diagnosed with hypertension

Outcome

Proportion of antenatal women whose blood pressure is controlled by antihypertensive therapy

Numerator - Number of antenatal women whose blood pressure is controlled by antihypertensive therapy

Denominator - Number of antenatal women diagnosed with hypertension.

What the quality Statement means for each audience

Service providers: provide service facilities for identifying and treating Hypertension

Healthcare professionals—train personnel, make available guidelines on the management of hypertension

Payers (Government, health insurance, women giving birth who pay for service). Ensure that facilities are available to provide the treatment

Women – Attend regular antenatal care services (in the hospital)

Data sources

- Antenatal register in the hospital
- Inpatient data analysed from case records: Columns to the labour register – whether hypertension present and treated

Source guidance

- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 87-96
- National Institute of Health and Clinical Excellence (NICE), UK, Clinical Guideline 107. Hypertension in pregnancy. January 2011

8. Severe Hypertension in Pregnancy and in Immediate Postpartum Period

Clinical care

Severe hypertension in pregnancy and in the immediate postpartum period

Quality statement

Pregnant women or women in the immediate postpartum period with features of severe hypertension are administered parenteral antihypertensives

Definitions

Severe Hypertension: Symptomatic patients with headache, blurring of vision, oedema and or Blood pressures above 160/100

Parenteral antihypertensives:

- Labetalol 20 mg I.V, followed by 40 mg at ten minutes, upto a maximum dose of 300mg
- Hydralazine 5mg I.V, repeated every 20 mts

If neither of these agents are available, 10mg Nifedipine orally may be given. 5mg sublingually may also be given carefully observing the blood pressure avoiding a precipitous BP fall.

All these patients are candidates for seizure prophylaxis and a standard regime may be followed along with the above antihypertensives (as mentioned in Quality Statement 10)

Quality Measure

Structure:

- a) Evidence of agreed guidelines or protocols in the hospital for the management of hypertensive crisis in pregnancy and in immediate postpartum period
- b) Display of flow charts based on the agreed guidelines or protocols in the labor room, antenatal ward, post natal ward, Operation Theatre and ICU
- c) Evidence of the availability of all the parenteral antihypertensive drugs at the places mentioned above

Process

Proportion of women with acute hypertension in pregnancy or in the immediate postpartum period who receive the above drug/drugs within a short time (10 mts) after blood pressure measurement

Numerator: The number of women pregnant or women in the immediate postpartum period with features of severe hypertension who receive the above drug/drugs

within a short time (10mts) after Blood Pressure measurement.

Denominator: Pregnant women or women in the immediate postpartum period with features of severe hypertension

Outcome:

Proportion of women developing cerebrovascular accidents / ocular or neurological complications (including eclampsia) after initiating antihypertensive therapy as per the above guidelines

Numerator- The number of women pregnant or women in the immediate postpartum period with features of severe hypertension developing cerebrovascular accidents or ocular or neurological complications, including eclampsia, after initiating antihypertensive therapy as per the above guidelines.

Denominator- Pregnant women or women in the immediate postpartum period with features of severe hypertension.

What the quality Statement means for each audience

Service Providers: Ensure adequate human resources, equipment, drugs and supplies to provide 24 X 7 services

Healthcare Professionals: Training and adherence to standard protocols

Payers: (government, health insurers, women giving birth who pay for service): Assurance of a standard quality of care

Data sources

- Local data collection in the standard labour room register
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

- KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology. P 63-70
- Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 87-96
- National Institute of Health and Clinical Excellence, UK, Clinical Guideline 107. Hypertension in pregnancy. January 2011

9. HELLP

Clinical care

HELLP Syndrome

Quality statement

Pregnant women with hypertension are monitored for signs of HELLP syndrome (Haemolysis Elevated Liver Enzyme and Low Platelet count)

Definitions

HELLP syndrome: Multiorgan dysfunction seen in a subset of women with pregnancy induced hypertension

Haemolysis: diagnosed by identifying schistocytes on peripheral blood smear

Thrombocytopenia : Platelet count less than 100,000/cmm

Hepatic dysfunction:

- Serum bilirubin > 1.2mg/dl
- LDH > 600 units
- AST and ALT > 70 IU /dl

Quality Measure

Structure:

- a) Evidence of agreed guidelines or protocols in the hospital for diagnosis and management of severe preeclampsia including HELLP
- b) Display of flow charts based on the agreed guidelines or protocols in the labor room.
- c) Evidence of the availability of the investigation facility in the hospital

Process:

Proportion of pregnant women who develop features of HELLP syndrome.

Numerator– the number of women who develop HELLP syndrome

Denominator– Total number of pregnant women beyond 20 weeks

Outcome:

Proportion of women who require blood/ blood products, or induction of labour or intensive care treatment due to HELLP syndrome related multiorgan dysfunction.

Numerator– The number of women who require blood/ blood products, or induction

of labour or intensive care treatment due to HELLP syndrome related multiorgan dysfunction.

Denominator – All pregnant women beyond 20 weeks

What the quality Statement means for each audience

Service Providers: Ensure adequate human resources, equipment, drugs and supplies to provide 24 X 7 services

Healthcare Professionals: Training and adherence to standard protocols

Payers: (government, health insurers, women giving birth who pay for service): Assurance of a standard quality of care

Data sources

- Local data collection in the standard labour room register
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
- Monthly reporting forms for National Rural Health Mission

Source guidance

KFOG obstetric management protocols, second edition 2012; published by Kerala Federation of Obstetrics and Gynaecology. P 63-70

Second Report of Confidential Review of Maternal Deaths, Kerala. Why mothers die, Kerala – 2006-2009; published by Kerala Federation of Obstetrics and Gynaecology, 2012. P 87-96

National Institute of Health and Clinical Excellence, (NICE) UK, Clinical Guideline 107. Hypertension in pregnancy. January 2011

10. ECLAMPSIA

Clinical care

Use of Magnesium sulphate for the treatment of severe preeclampsia and eclampsia

Quality statement

Women diagnosed with severe preeclampsia and/or eclampsia are administered Magnesium sulphate as the first line anticonvulsant. Parenteral antihypertensives are to be used as stated in Quality Statement no. 8

Definitions

Severe preeclampsia – clinical condition in pregnant women characterized by severe hypertension, proteinuria and features of neuromuscular irritability and liver dysfunction and or HELLP syndrome.

Eclampsia– Onset of convulsions during pregnancy, intra partum or post partum with hypertension and proteinuria.

Magnesium sulphate- 50% solution for parenteral use.

Dose for magnesium sulphate for severe pre eclampsia and eclampsia – Loading dose of 4 gm slow IV (diluted as 20% solution) and 4 gms IM. Follow this with IV infusion of 1 gm per hour till 24 hours after delivery or the last convulsion whichever is later.

Antihypertensive therapy in severe hypertension – Follow Quality Statement Number. 8

Quality Measure

Structure

- Availability of parenteral anti hypertensives in Quality Standard Number 8 and magnesium sulphate 50%
- Availability of railed cot, suction apparatus, oxygen and high dependency care
- Availability of in house obstetrician and nursing personnel to attend to an acutely ill parturient
- Evidence of protocol for the management of pre eclampsia and eclampsia and for treatment of severe hypertension in pregnancy
- Display of flowcharts showing eclampsia regime, treatment of hypertensive crisis
- Availability of clearly laid down referral protocols for eclampsia and severe pre eclampsia

Process

Proportion of women receiving magnesium sulphate as anticonvulsant out of all women diagnosed with severe pre eclampsia/eclampsia

Numerator - Number of women diagnosed with severe pre eclampsia/eclampsia receiving magnesium sulphate

Denominator- Number of women diagnosed with severe pre eclampsia/eclampsia

Outcome: Proportion of women developing eclampsia and/or cerebrovascular accidents/death among those diagnosed to have severe pre eclampsia

Numerator- Number of women developing Eclampsia,cerebro vascular lesions ordying due to hypertensive disorders out of the women having severe preeclampsia in the hospital

Denominator- Number of women having severe hypertension/severe preeclampsia in the hospital

What the quality Statement means for each audience

Service provider: Make human resources, infrastructure, drugs and supplies available for the treatment of women diagnosed with severe pre eclampsia/eclampsia

Health professionals:Administer Magnesium sulphate as the first line anticonvulsant to women diagnosed with severe pre eclampsia/eclampsia. Use parenteral antihypertensives as stated in quality statement no.8

Payers: (Government, health insurers, women giving birth who pay for service): expect to be treated with Magnesium sulphate as the first line anticonvulsant if diagnosed with severe pre eclampsia/eclampsia and use of parenteral antihypertensivesas stated in Quality Statement number.8

Data sources

- Local data collection in the standard labour room register
- Consider developing appropriate checklists/audit forms as part of this Quality Standard for use by local facilities, inclusion in DHS survey, in Kerala Accreditation Standards Criteria for providers and in Confidential Maternal Death Review
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