Emergency Maternal Referrals

The Royal Children's Hospital Melbourne

1. Overview / Description

Referrals to PIPER Perinatal are for 3 main purposes:

- To access specialist advice regarding decisions for transfer
- For a second opinion from another specialist where the referrer feels the clinical/logistic issue is outside their scope
- To facilitate transfer in a clinical scenario where the woman requires transfer i.e. the clinical assessment and decision making is within the referrer's scope

2. Related Documents

PIPER Perinatal-CTG Review

3. Definition of Terms

PIPER Paediatric Infant Perinatal Emergency Retrieval

ARV Adult Retrieval Victoria

AV Ambulance Victoria

AAV Air Ambulance Victoria

ICU Intensive Care Unit

4. Responsibility

All PIPER staff.

5. Procedure

5.1 Background

PIPER Perinatal coordinates more than 1200 referrals per year resulting in approximately 800 transfers. Most transfers are for maternal conditions that increase the risk of preterm birth before 32 weeks. Threatened preterm labour with or without ruptured membranes, antepartum haemorrhage and moderate to severe preeclampsia are common precipitating morbidities.

Extremely preterm babies born outside ("outborns") a maternity service with a neonatal ICU have increased risk of dying compared to their "inborn" peers. This makes balancing the risk of harm versus benefit from transfer critical.

The possibility of a birth of an extremely premature baby occurring in an ambulance or aircraft inevitably generates anxiety in the clinical staff involved, especially paramedics whose core clinical work rarely involves such situations. In Victoria birth in transit following referral to and triage by PIPER Perinatal Consultant Obstetricians is extremely rare.

Most emergency interhospital maternal transfers referred to PIPER Perinatal are undertaken by AV ALS paramedics.

The interhospital transfer of high-risk pregnant women must be supported by robust processes that consider and evaluate the risks associated with a decision to transfer. PIPER supports a collaborative referral and triage process that involves experienced referring clinicians, PIPER Consultant Obstetricians and senior Ambulance personnel.

5.2 Referral, triage, and decision making

The PIPER Perinatal referral and triage process is as follows:

The referring clinician and PIPER Obstetric Consultant assess the clinical and logistic circumstances and determine the need for transfer, and the safety of transfer. If it is clear advice rather than transfer is requested, it is helpful if this is stated by the referring clinician at the commencement of the call. PIPER encourages the most senior clinician available to make these referrals. Triage may involve CTG review - see PIPER Perinatal-CTG Review guideline.

If transfer is required, and a safe window for transfer exists, stabilising treatment is discussed e.g. antenatal steroid, antibiotics, tocolysis, analgesia and magnesium sulphate loading.

If transfer is not required, the consultation should include a discussion of the ongoing plan for care, and triggers for re-referral. For some women, an urgent outpatient MFM appointment is the most appropriate pathway for care. PIPER will assist referring clinicians to contact the relevant MFM service.

If birth appears imminent, or the fetal or maternal condition is not safe for transfer, then delivery at the referring hospital with subsequent neonatal retrieval may be the preferred action after consultation. PIPER neonatologists and paediatric providers at the referring hospital will usually be involved in the consultation.

A small number of transfers involve a physiologically unstable woman requiring transfer to an adult ICU collocated with a level 6 maternity service. These cases are referred to Adult Retrieval Victoria (ARV) for consideration of the place of transfer and need for a medical escort with ongoing PIPER input into obstetric decision making.

Non obstetric problems in pregnant women in hospitals which do not have capability for either the primary problem, or for a potential preterm birth associated with that problem will not usually be managed primarily by PIPER. Examples include appendicitis at preterm gestations, or non-obstetric diagnoses such as cardiac disease in a pregnant woman. Care will usually be better coordinated at a general adult hospital with a combined or collocated obstetric service e.g. RMH, Austin Hospital, MMC, Sunshine Hospital, rather than a hospital without these services e.g., St Vincent's Hospital, Alfred Hospital. PIPER do not coordinate transfers to the medical or surgical services at these hospitals but provide support in terms of communication with the associated obstetric services and advice around obstetric issues.

5.3 Activating Ambulance Victoria to undertake the transfer

In Victoria, Health services do not have a single process to activate AV for PIPER Perinatal transfers.

Following PIPER referral where a decision to transfer is agreed some Health services prefer to contact AV directly using established internal processes to arrange ambulance transfer, just as they would for any patient from their health service requiring an ambulance.

Other Health services expect/prefer PIPER to activate AV for the transfer.

It is not PIPER's role to direct the use of one process or the other.

To ensure there is a clear delineation of roles and tasks it is proposed that where a transfer is agreed following referral to PIPER Perinatal, the PIPER coordinator specifically asks the referrer if they wish to take responsibility for contacting AV to arrange ambulance transfer or if they prefer PIPER to do this.

The referral to AV should include a level of clinical handover commensurate with the risk and complexity of the patient.

If AV is activated by the referring Health service, the AV Clinicians can contact PIPER for additional information if desired. In such cases the PIPER coordinator will place the AV Clinician in a conference call with the PIPER Perinatal Obstetrician.

5.4 Ongoing Management of the Referral and Transfer Process

If a decision is made for transfer, PIPER locate a receiving unit and inform the referring hospital and/or AV once this is confirmed. PIPER notifies the clinician at the referring hospital of the destination and provides contact details of the receiving hospital. The clinician at the referring hospital must provide a clinical handover to the clinician at the receiving hospital.

If the woman is deemed not safe to transfer at the time of the referral, then stabilising treatments are initiated/continued and review of the decision made within 30-60 mins.

The clinical scenario may change between the time of decision regarding suitability for transfer and actual departure. In particular, it is usually necessary to reassess cervical dilation in the setting of preterm labour, and fetal wellbeing before departure. Reconsideration of the current plan of action may be required for patient safety.

5.5 Care in Transit and accompanying Clinical staff considerations

Accountability for the care of patients in transit rests with Ambulance Victoria (AV) with clinical support from the PIPER Perinatal Consultant Obstetrician. This includes the monitoring and recording of clinical assessments and interventions.

In most cases, clinical care of the pregnant woman in transit is within the skill set of the attending paramedics.

The referring clinician, AV or PIPER may propose that a midwife escort is appropriate. In rare circumstances an Obstetrician or GP Obstetrician accompanies the woman

These discussions should take place at senior medical and AV Clinician/Duty Manager level.

The primary determinants should be the wellbeing of both the patient and staff, noting that it may be entirely appropriate to send a midwife or doctor to support the paramedics in high-risk situations.

It must be stressed that PIPER supports continual assessment and reassessment of the decision to transfer (or not to transfer) and does not support commencing if birth en route is likely.

If agreement cannot be reached on the level of patient escort required the discussion should be escalated to the PIPER Perinatal Medical Director, the referring hospital Nursing/Midwifery Manager and the AV Regional Duty Manager.

Health services should develop polices and processes that provide authorisation and guidance for staff who might be asked to accompany a patient for an interhospital ambulance transfer. The health service is responsible for the return costs of the accompanying staff member.

Cardiotography (CTG) is not continued during transfer as there is no option to action any perceived abnormalities before arrival at the destination hospital.

All patients must be adequately prepared and stabilised prior to transport. This should be completed in parallel with requesting ambulance transfer.

Documentation is required by the transport team and by the receiving facility in order to provide appropriate ongoing care. The chain of responsibility must be clear throughout transfer with formal handover from referring team to the AV paramedics, and the paramedics to the receiving team. AV paramedics should communicate with the PIPER Perinatal Consultant if the clinical condition of the patient changes en route.

Lateral tilt for supine pregnant women is recommended in transit.

All patients in whom intravenous access is likely to be required during transfer should have one or two (depending on the clinical situation) venous cannulae inserted and secured prior to transfer. Any required infusions should be prepared prior to transport and labelled accurately. Air Ambulance Victoria currently utilise syringe pumps for infusions with additives and any preparations should be drawn up into 50 ml syringes and labelled accordingly.

All patients should be asked to empty their bladder prior to transfer; consideration should be given to inserting an indwelling catheter in the event of air transfer of patients with a significant anticipated intravenous fluid intake.

Parenteral administration of an antiemetic should be considered if there is a history of motion sickness, or if the current condition of the patient is associated with significant risk of vomiting.

6. References

N/A

7. Disclaimer

The Paediatric, Infant Perinatal Emergency Retrieval (PIPER) Neonatal and Paediatric guidelines were developed by PIPER clinicians for the sole use within the PIPER service at The Royal Children's Hospital Melbourne.

The authors of these guidelines have made considerable effort to ensure the information upon which they are based is accurate and up to date. Users of these guidelines are strongly recommended to confirm that the information contained within them especially drug doses is correct by way of independent resources. The authors accept no responsibility for any inaccuracies or information perceived as misleading.

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