Pre-Hospital Emergency Care Council

PHECC Standard for Medication use during pregnancy

Mission Statement

"The Pre-Hospital Emergency Care Council protects the public by independently specifying,reviewing, maintaining and monitoring standards of excellence for the safe provision of quality pre-hospital emergency care"

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Version History
(Please visit the PHECC website to confirm current version.)

STN029_PHECC Standard for Medication use during pregnancy		
Version	**Date**	**Details**
1	May 2018	New Standard
2	November 2020	Addition & Removal of medicines
3	February 2022	Collaborative Review by Clinical Pharmacists in the National Maternity Hospital Maternal Medicines Clinic and the Irish Medicines in Pregnancy Service (IMPS) at the Rotunda Hospital

PHECC Medication use during pregnancy

Approved by Council February 2022

	Contraindicated
	Consider with caution
	No clinical issue identified
	Not for administration

Medication Name	Indications for use as per PHECC CPG and comment	Safe use during Pregnancy			Suggested action
Activated Charcoal	Emergency treatment of acute oral poisoning or drug overdose.				May administer
Adenosine	Paroxysmal supraventricular tachycardia's (> 180) with signs of poor perfusion.				May administer
Adrenaline (1:1,000)	Severe anaphylaxis. When anaphylaxis occurs in pregnancy, the foetus/neonate is at risk of neurologic damage and/or death, even when the maternal outcome is favourable. Prompt administration of IM epinephrine is recommended in nonpregnant and pregnant patients. There are some risks e.g., may reduce placental perfusion and cause tachycardia, cardiac irregularities, and extra systoles in foetus. Can delay second stage of labour. These risks are likely to be outweighed by the benefits of using IM epinephrine in anaphylaxis.				May administer
Adrenaline (1:10,000)	Cardiac Arrest / Paediatric bradycardia unresponsive to other measures.				May administer
Amiodarone	VF and Pulseless VT /Symptomatic Tachycardia (> 150) **Safe to administer in Cardiac arrest**. In view of its effect on the foetal thyroid gland, Amiodarone is contraindicated during pregnancy, except in exceptional circumstances, should be administered in Tachyarrhythmia's where the benefit clearly outweighs the risk.		VT	OHCA	1.OHCA - may administer 2. Stable VT - caution consider risk benefit. May be used if other treatments are not effective or contraindicated
Aspirin	Cardiac chest pain or suspected Myocardial Infarction. A start dose of 300mg may be administered. Aspirin 75mg may be used from 12 weeks gestation onwards to prevent pre-eclampsia, foetal growth restriction, stillbirth, and preterm birth.				May administer start dose of 300mg
Atropine	Symptomatic bradycardia / Cholinergic poison with bradycardia and salivation. Atropine use during pregnancy has not been associated with an increased risk of birth defects. Atropine should not be withheld in a pregnant patient if there is a compelling clinical indication for use.				May administer
Ceftriaxone	Severe sepsis - Adult / Suspected or confirmed meningococcal sepsis – Paediatric. No increased risk of miscarriage or congenital malformation.				May administer
Chlorphenamine	Antihistamine. Available data does not show an increase in overall rate of congenital malformation during pregnancy.				May administer
Clopidogrel	ST Elevation Myocardial Infarction (STEMI). Clopidogrel is not expected to increase congenital malformations.				May administer
Cyclizine	Management, prevention, and treatment of nausea & vomiting. Available does not suggest an increase in congenital malformation.				May administer
Dexamethasone	Corticosteroid currently only indicated for paediatric stridor. Administered in third trimester to accelerate foetal lung maturity if there is a risk of preterm labour.				Depending on indication. Benefit may outweigh risk

Medication Name	Indications for use as per PHECC CPG and comment	Safe use during Pregnancy			Suggested action
Diazepam Injection	Seizures. Prolonged use near term, especially in high doses, is associated with a risk of neonatal withdrawal syndrome and/or neonatal flaccidity, respiratory/feeding difficulties, and hypothermia. Potential benefits may warrant the use of diazepam despite potential risks. (Magnesium Sulphate 1st line for seizures in eclampsia). Lorazepam is an alternative benzodiazepine that is less likely to accumulate in the foetus.				May administer if no other anti-seizure medication available. Inform Neonatology if used close to delivery.
Diazepam Rectal Solution	Seizures. Prolonged use near term, especially in high doses, is associated with a risk of neonatal withdrawal syndrome and/or neonatal flaccidity, respiratory/feeding difficulties, and hypothermia. Potential benefits may warrant the use of diazepam despite potential risks. (Magnesium Sulphate 1st line for seizures in eclampsia). Lorazepam is an alternative benzodiazepine that is less likely to accumulate in the foetus.				May administer if no other anti-seizure medication available. Inform Neonatology if used close to delivery.
Fentanyl	Acute severe pain. Safe to administer prior to commencement of labour but do not use during labour. Respiratory depression and withdrawal symptoms can occur in the neonate if opioid analgesics are used during delivery.	Labour			May administer, but not if labour has commenced
Furosemide Injection	Pulmonary oedema. Furosemide should not be routinely used during pregnancy due to risk of diuretic-induced hypovolemia leading to impaired placental perfusion with subsequent adverse effects on the foetus. Diuretics may be considered in exceptional circumstances but use with caution.				Diuretics may be considered in exceptional circumstances but use with caution.
Glucagon	Hypoglycaemia in patients unable to take oral glucose or unable to gain IV access.				May administer
Glucose 10% Solution	Hypoglycaemic emergency Blood glucose level < 4 mmol/L.				May administer
Glucose 5% Solution	Use as a diluent for Amiodarone infusion.				May administer
Glucose gel	Hypoglycaemic emergency Blood glucose level < 4 mmol/L.				May administer
Glyceryl Trinitrate (GTN)	Angina / Cardiac chest pain or suspected Myocardial Infarction. May inhibit pre-term labour.				May administer
Glycopyrronium Bromide	Palliative care with excessive oropharyngeal secretions. Although the data are very limited, there is no evidence that drugs in this class cause developmental toxicity				May administer with caution
Haloperidol	Palliative care with nausea and vomiting or agitation/ delirium. Limited data does not suggest increased risk of congenital anomalies. Exposure during later pregnancy can cause extrapyramidal side effects in the neonate. Where use of haloperidol is clinically indicated in an emergency situation, it should not be withheld on account of pregnancy.				May administer with caution. Inform Neonatology if used close to delivery.
Hartmann's Solution	IV/IO fluid for pre-hospital emergency care.				May administer
Hydrocortisone	Severe or recurrent anaphylactic reactions/ Asthma / Exacerbation of COPD/ Adrenal insufficiency.				May administer
Hyoscine Butylbromide	Palliative care with excessive oropharyngeal secretions. Palliative care; not relevant to pregnancy.				Not relevant to pregnancy, however, may administer if clinically indicated
Ibuprofen	Mild to moderate pain. Use alternative agents where available, especially in 3rd trimester. Possible association with increased risk of miscarriage/congenital anomalies in early pregnancy. 3rd trimester risk of closure of foetal ductus arteriosus in utero and possibly persistent pulmonary hypertension of the new-born.				Do not administer
Ipratropium Bromide	Acute moderate asthma or exacerbation of COPD not responding to initial Salbutamol dose.				May administer
Ketamine	Acute severe pain. Safe to administer prior to commencement of labour but do not use during labour. Higher doses have been associated with neonatal effects, including respiratory depression.	Labour			May administer, but not if labour has commenced

Medication Name	Indications for use as per PHECC CPG and comment	Safe use during pregnancy			Suggested action
Lidocaine	When Amiodarone is unavailable it may be substituted with Lidocaine for VF/VT arrests.				May administer
Lorazepam	Seizures. May be associated with neonatal flaccidity, respiratory/ feeding difficulties and hypothermia if given close to term. Potential benefits may warrant the use.				May administer. Inform neonatology if used close to delivery.
Magnesium Sulphate injection	Torsade's de pointes / Persistent bronchospasm / Seizure associated with eclampsia. Not known to be harmful for short-term intravenous administration in eclampsia. Excessive or long-term infusions may have neonatal implications. If used close to delivery, monitor foetal heart rate, and communicate use of magnesium sulphate to neonatology.				May administer. Inform Neonatology if used close to delivery. Avoid in Myasthenia Gravis
Methoxyflurane	Moderate pain. Can be used if limited to low concentrations or short duration. Do not use during labour or after delivery. CNS or respiratory depression have been reported if used during labour or delivery.	Labour			May administer in low concentrations or short duration. Do not use if labour has commenced
Midazolam Solution	Seizures / Combative with hallucinations or paranoia and risk to self or others. May be associated with neonatal flaccidity, respiratory/ feeding difficulties and hypothermia if given close to term. Potential benefits may warrant the use. (Magnesium Sulphate 1st line for seizures in eclampsia).				May administer. Inform Neonatology if used close to delivery.
Morphine Sulphate	Acute severe pain. Safe to administer if indicated, however consider alternatives if labour has commenced. Respiratory depression and withdrawal symptoms can occur in the neonate if opioid analgesics are used during delivery.		Labour		May administer. Consider alternative analgesic options if close to delivery or in labour. Inform Neonatology if used close to delivery.
Naloxone	Inadequate respiration and/or ALoC following known or suspected narcotic overdose. Do not withhold when needed in cases of maternal opioid overdose. May cause acute withdrawals of neonate and mother.				May administer if known or suspected opiate withdrawal
NO2 50% and O2 50% (Entonox®)	Mild to moderate pain.				May administer
Ondansetron	Management, prevention, and treatment of nausea & vomiting. Retrospective studies suggest there may be an association between ondansetron use during 1st trimester and increased risk of orofacial clefts. Potential risk of dose-dependent QT prolongation. Caution and ECG monitoring may be necessary in patients with risk factors for QT prolongation or arrhythmia; this may include patients with electrolyte abnormalities which may be associated with nausea and vomiting in pregnancy.		1st Trimester		May administer in 2nd and 3rd trimesters. Consider alternative antiemetic as first line agent in the 1st trimester. Use with caution in 1st trimester if alternative agents are not effective or not appropriate.
Oxygen	Absent/inadequate ventilation/ SpO_2 < 94% adults / SpO_2 < 92% for acute exacerbation of COPD.				May administer
Oxytocin	Control of post-partum haemorrhage. Ensure that a second foetus is not in the uterus prior to administration.				May administer

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Paracetamol	Mild to moderate pain.				May administer
Salbutamol	Bronchospasm / Exacerbation of COPD / Respiratory distress following submersion incident. Inhaled high doses can lead to tachycardias with cardiac arrhythmias in mother and foetus and hypoglycaemia in the infant. A labour-inhibiting effect is also described.				May administer. Inform Neonatology if used close to delivery.
Sodium Bicarbonate	OHCA or Wide QRS arrhythmias or seizures following TCA OD OHCA or harness induced suspension trauma. Avoid in hypertension or eclampsia.				May administer where clinically indicated
Sodium Chloride 0.9% (NaCl)	IV/IO fluid for pre-hospital emergency care.				May administer
Ticagrelor	Identification of ST Elevation Myocardial Infarction (STEMI) if transporting to PPCI centre. No information on its use in pregnancy. However, if indicated, the benefits to the mother might be greater than the risks to the embryo-foetus and must be evaluated on a case-by-case basis.				Discuss with receiving Cardiologist
Tranexamic Acid	Suspected significant internal or external haemorrhage associated with trauma.				May administer

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