NATIONAL AMBULANCE SERVICE & DUBLIN FIRE BRIGADE

CLINICAL DIRECTIVE

NAS Clinical Directive 03/2016
DFB Memo EMS 15/16

To: All NAS and DFB clinical staff
From: NAS and DFB Medical Directors
Date: September 20th 2016

Subject: **Medication Use in Pregnancy**

PHECC issued a Patient Safety Notice on 16/02/2016 regarding safe use of medications in pregnancy (attached). Feedback from DFB and NAS practitioners has suggested that this may have led to reluctance amongst practitioners to administer any medications to pregnant women or women of reproductive age.

In order to provide greater clarity to practitioners on this matter, we now provide detailed guidance on use in pregnancy for all medications on the PHECC Formulary. This directive does not supersede the PHECC Safety Notice, rather it provides information to support decision making in these situations.

The colour coding is as follows:
Red – do not administer under any circumstances
Amber – may be appropriate to administer – clinical judgement required
Green - safe to administer

Dr Cathal O'Donnell
Medical Director
National Ambulance Service.

Dr Peter O'Connor
Medical Director
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Medication Name	Indications for use as per PHECC CPG - with additional information regarding use in pregnancy	Safe use during pregnancy			Guidance for practitioners
Amiodarone	VF and Pulseless VT /Symptomatic Tachycardia (> 150) In view of its effect on the foetal thyroid gland, amiodarone is contraindicated during pregnancy, except in exceptional circumstances such as OHCA, due consideration should be given to the patient with a Tachyarrythmia.		VT	OHCA	1.OHCA - may administer 2.Stable VT - do not administer
Aspirin	Cardiac chest pain or suspected Myocardial Infarction Inhibition of prostaglandin synthesis may adversely affect the pregnancy and/or the embryo/fœtal development. During the first and second trimester of pregnancy, acetyl salicylic acid containing drugs should not be given unless clearly necessary.				1.Chest pain and normal ECG - do not administer 2. STEMI - discuss with receiving cardiologist
Atropine	Symptomatic bradycardia / Cholinergic poison with bradycardia and salivation Atropine crosses the placenta. Studies in humans have not been done and only limited information is available from animal studies. Intravenous administration of atropine during pregnancy or at term may cause tachycardia in the foetus. Atropine should only be administered to pregnant women if the benefits outweigh the risks to the foetus.				May administer
Benzylpenicillin	Severe sepsis - Adult / Suspected or confirmed meningococcal sepsis - Paediatric				May administer
Clopidogrel	ST Elevation Myocardial Infarction (STEMI) if the patient is not suitable for PPCI As no clinical data on exposure to clopidogrel during pregnancy are available, it is preferable not to use clopidogrel during pregnancy as a precautionary measure.				Do not administer
Cyclizine	Management, prevention and treatment of nausea & vomiting. In the absence of any definitive human data, the use of cyclizine in pregnancy is not advised				Do not administer
Dextrose 10% Solution	Hypoglycaemic emergency Blood glucose level < 4 mmol/L				May administer
Dextrose 5% Solution	Use as a dilutant for Amiodarone infusion				May administer
Diazepam Injection	Seizures (NO longer in use by NAS/DFB)				N/A
Diazepam Rectal Solution	Seizures (NO longer in use by NAS/DFB)				N/A
Enoxaparin Sodium Solution	Acute STEMI following the administration of a thrombolytic agent. (NO longer in use by NAS/DFB)				N/A
Epinephrine (1:10,000)	Cardiac Arrest / Paediatric bradycardia unresponsive to other measures				May administer
Epinephrine (1:1,000)	Severe anaphylaxis May reduce placental perfusion and cause tachycardia, cardiac irregularities, and extrasystoles in fetus. Can delay second stage of labour. use only if benefit outweighs risk.				May administer
Fentanyl	Acute severe pain in patients greater than and equal to 1 year old Respiratory depression and withdrawal symptoms can occur in the neonate if opioid analgesics are used during delivery				May administer
Furosemide Injection	Pulmonary oedema Furosemide should not be used because of the maternal hypovolaemia associated with this condition.				Do not administer
Glucagon	Hypoglycaemia in patients unable to take oral glucose or unable to gain IV access				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 administer
Hartmann's Solution	IV/IO fluid for pre-hospital emergency care (NOT in use by NAS)				May administer
Hydrocortisone	Severe or recurrent anaphylactic reactions/ Asthma / Exacerbation of COPD/ Adrenal insufficiency				May administer
Ibuprofen	Mild to moderate pain Avoid during the third trimester (risk of closure of fetal ductus arteriosus in utero and possibly persistent pulmonary hypertension of the newborn); onset of labour may be delayed and duration may be increased.				Do not administer
Ipratropium Bromide	Acute moderate asthma or exacerbation of COPD not responding to initial Salbutamol dose				May administer
Lidocaine	When Amiodarone is unavailable it may be substituted with Lidocaine for VF/VT arrests				May administer
Lorazepam	Seizures (NO longer in use by NAS/DFB) Risk of neonatal withdrawal symptoms when used during pregnancy				May administer
Magnesium Sulphate injection	Torsades de pointes / Persistent bronchospasm / Seizure associated with eclampsia Not known to be harmful for short-term intravenous administration in eclampsia, but excessive doses in third trimester cause neonatal respiratory depression.				May administer
Midazolam Solution	Seizures / Combative with hallucinations or paranoia and risk to self or others Risk of neonatal withdrawal symptoms when used during pregnancy		Combative	Seizure	May administer for active seizures. Seek medical oversight for use in combative patients
Morphine Sulphate	Severe Pain Respiratory depression and withdrawal symptoms can occur in the neonate if opioid analgesics are used during delivery				May administer
Naloxone	Inadequate respiration and/or ALoC following known or suspected narcotic overdose Use only if potential benefit outweighs risk.May cause acute withdrawls of neonate if administered immediately pre delivery				May administer
Nifedipine	Prolapsed cord May inhibit labour; manufacturer advises avoid before week 20, but risk to fetus should be balanced against risk of uncontrolled maternal hypertension.				May administer - avoid before week 20/40
NO2 50% and O2 50% (Entonox®)	Mild to moderate pain				May administer
Ondansetron	Management, prevention and treatment of nausea & vomiting No information available; avoid unless potential benefit outweighs risk.				Do not administer
Oxygen	Absent/inadequate ventilation/ SpO2 < 94% adults / SpO2 < 92% for acute exacerbation of COPD				May administer
Paracetamol	Mild to moderate pain				May administer
Salbutamol	Bronchospasm / Exacerbation of COPD / Respiratory distress following submersion incident				May administer
Sodium Bicarbonate injection BP	OHCA or Wide QRS arrhythmias OR seizures following TCA OD OHCA harness induced suspension trauma Use with caution in urinary conditions.				May administer
Sodium Chloride 0.9% (NaCl)	IV/IO fluid for pre-hospital emergency care				May administer
Syntometrine	Control of post-partum haemorrhage Ensure that a second foetus is not in the uterus prior to administration				May administer
Tenecteplase Powder for injection	Confirmed STEMI / Patient not suitable for PPCI from a time or clinical perspective (NO longer in use by NAS/DFB)				N/A
Ticagrelor	Identification of ST Elevation Myocardial Infarction (STEMI) if transporting to PPCI centre Manufacturer advises avoid—toxicity in animal studies.				Do not administer
Tranexamic Acid	Suspected significant internal or external haemorrhage associated with trauma No evidence of teratogenicity in animal studies; manufacturer advises use only if potential benefit outweighs risk—crosses the placenta.				May administer

Pre-Hospital Emergency Care Council

Patient Safety Notice

16/02/2016

Re: Medication administration during pregnancy

A potential patient safety issue was brought to PHECC's attention in relation to the administration of medications to pregnant patients.

Following discussion with Dr Mick Molloy, Chair of the Medical Advisory Committee and Mr Mark Doyle, Medical Advisor to the Director it was agreed to issue a safety notice to all licenced CPG providers and RIs involved with practitioner training.

Medications should be prescribed in pregnancy only if the expected benefit to the mother is thought to be greater than the risk to the foetus, and all medications should be avoided if possible during the first trimester. PHECC practitioners therefore should avoid using medications in early pregnancy unless absolutely essential and where possible medical oversight should be sought prior to administration.

Yours sincerely,

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