## London Ambulance Service NHS Trust Medicaiton Formulary for Emergency Services

	Abbreviations:		Version Control	
		Version	Date	Notes
		V3.0	19/12/2024	
ER	Emergency Responder			
NETS	Non-Emergency Transport Services			
AAP	Associate Ambulance Practitioner			
TEMT	Trainee Emergency Medical Technician			
EMT	Emergency Medical Technician			
APP CC	Advanced Paramedic Practitioner - Critical Care /			
APP UC	Advanced Paramedic Practitioner - Urgent Care			
CPG	Clinical Practice Guideline			
PGD	Patient Group Direction			
IM	Intramuscular			
IV	Intravenous			
HMR	Human Medicines Regulations 2012			

Medication Name	<u>Indication</u>	VOP Y/N	VOP Extra Notes & Possible additional indications [At the Prescriber's descretion]	Formulation(s)	<u>Strength</u>	<u>NETS</u>	<u>ER</u>	<u> AAP</u>	Student Paramedic [under supervision of NQP1 or above only]	TEMT (under supervision of EMT or above only)	<u>EMT</u>	<u>Nurse</u>	<u>Midwife</u>	<u>Paramedic</u>	APP-CC	APP-UC	<u>Doctor</u>
Oxygen	Significant lilness/injury in children Critical lilness - Hypoxaemia - COPD and other conditions requiring controlled/low dose oxygen therapy - Cardiac arrest - Major trauma - Sepsis - Shock - Carbon monoxide poisoning - Seizures - Hypothermia	YES	No extra indications	Gas	N/A	*	¥	4	<b>~</b>	<b>*</b>	<b>4</b>	4	4	<b>*</b>	*	<b>*</b>	<b>*</b>
Adenosine	Conversion of paroxysmal regular supraventricular tachycardias	YES	No extra indications	Ampoule-Solution for Injection	3mg/1ml				х						¥	х	<b>V</b>
Adrenaline 1 in 1,000	Life Threatening Asthma	YES	No extra indications	Ampoule-Solution for Injection	1mg/1ml	х			x	✓	✓	✓	✓	✓	✓	✓	<b>✓</b>
Adrenaline 1 in 1,000	Anaphylaxis	YES	No extra indications	Ampoule-Solution for Injection	1mg/1ml	х			х	✓	✓	✓	<b>✓</b>	✓	<b>V</b>	✓	<b>✓</b>
Adrenaline 1 in 10,000	Cardiac Arrest	YES	May adjust dosing regime	Pre-filled syringe	1mg/10ml	x	x	х	x	x	x	х	х	✓	✓	✓	✓
Alteplase	Patient in cardiac arrest from suspected massive Pulmonary Embolism	YES	No extra indications	Vial- Powder for Reconstituion	50mg				x						¥	x	<b>~</b>
Amiodarone	Cardiac arrest (single dose only) in pulseless VT or VF	YES	APP-CC INDICATIONS LISTED IN PGD	Pre-filled syringe	300mg/10ml	x			х			х	х	<b>V</b>	<b>*</b>	<b>~</b>	~
Amiodarone	Pulsed VT	YES	As per APP Arythmmia ACOP	Ampoule-Solution for Injection	150mg/3ml				x						✓	х	<b>✓</b>
Amoxicillin	Low severity Community Acquired Pneumonia OR Infective Acute Exacerbation of Chronic Obstructive Pulmonary Disease (COPD)	YES	See BNF	Tablet	500mg	x	x	x	x	x	x	x	x	x	x	<b>*</b>	<b>~</b>

	Clinical or ECG evidence of myocardial infarction																
Aspirin	or ischaemia Suspected TIA and patient on TIA pathway (EMT, Paramedic, APP, Doctor only)	YES	No extra indications	Tablet	300mg		<b>√</b>			<b>~</b>	<b>√</b>			<b>*</b>	~	<b>*</b>	<b>✓</b>
Atropine Sulfate	Symptomatic bradycardia in the presence of any of the following:  • Pulse <40 beats per min  • Systolic blood pressure below expected for age  • Paroxysmal ventricular arrhythmias requiring suppression  • Inadequate perfusion causing confusion  Bradycardia following  ROSC	YES	Symptomatic bradycardia secondary to beta- blocker overdose,	Ampoule-Solution for Injection	600micgrograms/1ml									,	·	<b>*</b>	<b>~</b>
BenzylPenkillin Sodium	Suspected meningococcal disease in the presence of a non- blanching rash and signs/symptoms suggestive of meningococcal septicaemia	YES	No extra indications	Vial- Powder for Reconstituion	600mg	x	х	x	x	x	×	x	x	4	<b>V</b>	<b>~</b>	<b>~</b>
Calcium Chloride	Hyperkalaemia or Calcium Channel Blocker Toxicity	YES	No extra indications	Pre-filled syringe	100mg/1ml										<b>✓</b>		<b>✓</b>
Chlorphenamine	Symptomatic allergic reaction falling short of anaphylaxis but causing the patient distress and/or alleviating distressing cutaneeous symtpoms only after emergency treatment with adrenaline and the patient is stable	YES	No extra indications	Ampoule-Solution for Injection	10mg/1ml									4	4	<b>*</b>	<b>~</b>
Clindamycin	Antibacterial prophylaxis for patients who have sustained an open fracture/s of either long bones, hind foot and/or midfoot AND who have a penicillin allergy	YES	See BNF - in cases of life threatening sepsis	Solution for Infusion	150mg/1ml										*		*
Co-Amoxiclav	Antibacterial prophylaxis for patients who have sustained an open fracture/s of either long bones, hind foot and/or midfoot	YES	See BNF - in cases of life threatening sepsis	Vial- Powder for Reconstituion	1200mg	x	x	x	x	x	x	x	x		*	x	<b>~</b>
Codeine	Mild to sever to acute pain	No	Changes may be performed by way of written prescription only	Tablet	15mg and 30mg										x	<b>~</b>	~
Dexamethasone	Mild to Severe Croup	YES	See BNF	Ampoule-Solution for Injection	3.3mg/1ml	х	х	х	х	х	х	x	х	✓	¥	✓	1

Diazepam (currently not held by LAS)	Seizures lasting longer than 5 minutes that are still fitting. Repeated seizures not secondary to hypoxia or hypoxig caemia. Status epilepticus Eclamptic seizures if initial seizure lasts 2-3 minutes, or if recurrent and cocaine toxicity with cardiac presentation	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	5mg/1ml									<b>,</b>	*	•	·
Diazepam Stesolid (currently not held by LAS)	Seizures lasting longer than 5 minutes that are still fitting Repeated seizures not secondary to hypoxia or hypoglycaemia Status epilepiticus Eclamptic seizures if initial seizure lasts 2-3 minutes, or if recurrent	No	Changes may be performed by way of written prescription only	Enema	2.5mg/1.25ml	x	ж	×	x	x	×	×	х	<b>v</b>	<b>V</b>	*	*
Diazepam Stesolid (currently not hled by LAS)	Seizures lasting longer than 5 minutes that are still fitting Repeated seizures not secondary to hypoxia or hypoglycaemia Status epilepiticus Eclamptic seizures if initial seizure lasts 2-3 minutes, or if recurrent	No	Changes may be performed by way of written prescription only	Enema	5mg/2.5ml	x								<b>*</b>	×	<b>*</b>	*
Diazepam	Adults only - Acute or chronic pain para-spinal muscle spasm where the symptoms are not considered to be relieved by other analgesics	No	Changes may be performed by way of written prescription only	Tablet	2mg	x	x	х	x	x	х	х	x	х	x	*	<b>*</b>
Diclofenac Sodium	Adults with acute or chronic musculoskeletal disorders and adults with suspected unilateral renal cacluli	YES	Acute pain/inflammatior in Rhuematic disorders e.g. Arthritis. Acute exacerbations of pain	Suppoository	50mg	x	х	х	x		х	х			x	*	*
Doxycycline	Low severity Community Acquired Pneumonia OR Infective Acute Exacerbation of Chronic Obstructive Pulmonary Disease (COPD)	YES	Leg Ulcer infection, Cellulitis, Acute Sinusitis,	Capsule	100mg	x				x	x	x	x	x	x	*	~
Duodote (Atropine + Pralidoxime)	Reversal of Muscarinic agonism due to toxicity frrom nerve agents	YES	No extra indications	Solution for Infusion	2.1mg Atropine & 600mg Pralidoxime /3ml	х			x	<b>~</b>	✓	<b>~</b>	<b>~</b>	<b>~</b>	~	<b>*</b>	<b>~</b>
Fentanyl	Analagesia. Enhancement of anaesthesia during assisted ventilation	No	N/A	Ampoule-Solution for Injection	50micrograms/1ml		x	x	x	x	x	x		x	x	x	<b>~</b>

Glucagon	Hypoglycaemia (blood glucose level below 4.0 millimoles per litre)     Clinically suspected hypoglycaemia where oral glucose administration not possible     Unconscious patients where hypoglycaemia is the suspected cause	YES	Severe Hypotension, Cardiogenic shock or heart failure secondary to beta blocker overdose	Vial- Powder for Reconstitution	img	x	×	x	х	Ý	<b>*</b>	<b>v</b>	<b>~</b>	*	*	<b>*</b>	~
Glucose 10% infusion	Hypoglycaemia (blood glucose level below 4.0 millimoles per litre)     Clinically suspected hypoglycaemia where oral glucose administration not possible     Unconscious patients where hypoglycaemia is the suspected cause	YES	May exceed 30g max dose stated in JRCALC	Solution for Infusion	50g/500ml	х								¥	·	*	<b>*</b>
Glucose 5% Infusion	Diluent for listed compatable medicines for infusion	YES	No extra indications	Solution for Infusion	5g/100ml	х	x	x	x	x	x	x	x	<b>V</b>	~	<b>*</b>	<b>~</b>
Glucose Gel	Hypoglycaemia (blood glucose level below 4.0 millimoles per litre)	YES	No extra indications	Oral Gel	40% w/v	x	*			¥	1	1	4	<b>*</b>	<b>*</b>	<b>V</b>	<b>*</b>
Glycerin Trinitrate	Cardiac chest pain due to angina or myocardial infarction, acute cariogenic pulmonary oedema Patients with suspected Cocaine toxicity presenting with chest pain	YES	No extra indications	MDS - Metered Dose Spray	400micgrams/spray	x	<b>*</b>			<b>*</b>	<b>*</b>			<b>V</b>	<b>V</b>	<b>4</b>	<b>*</b>
Glycopyrronium Bromide	Excessive respiratory secretions in End of Life Care settings	YES	Bowel colic in palliative care	Ampoule-Solution for Injection	200micrograms/1ml	х									<b>~</b>	<b>&gt;</b>	<b>V</b>
Haloperidol	Acute Behavioural Disturbance symptom management	YES	Nausea & Vomiting in Palliative Care, max 2.5mg SC every 2 hours if required	Ampoule-Solution for Injection	5mg/1ml	x	x	x	x	x	x	x	x	x	<b>*</b>	*	<b>~</b>
Hydrocortisone Sodium Phosphate IM	Adrenal Crisis / Pregnant women with known Addison's disease and established labour Acute exacerbation of COPD Prevention of adrenal crisis in trauma patients and on long term steroid therapy	YES	No extra indications	Vial - Powder for Reconstitution / Ampoule-Solution for Injection	100mg powder and 100mg/1ml	x				•	<b>*</b>	<b>v</b>	¥	4	4	<b>*</b>	<b>*</b>

Hydrocortisone Sodium Phosphate IV	Adrenal Crisis / Pregnant women with known Addison's disease and established labour / Acute Exacerbation COPD, Severe or Life Threatening Asthma Acute exacerbation of COPD Prevention of adrenal crisis in trauma patients and on long term steroid therapy	YES	No extra indications	Vial - Powder for Reconstitution / Ampoule-Solution for Injection	100mg powder and 100mg/1ml	х	x		x	x	x	x	x	,	*	*	<b>~</b>
Ibuprofen	Mild to moderate pain, high temperature, soft tissue injury	YES	No extra indications	Tablet	400mg	x				4	1			4	1	<b>V</b>	<b>*</b>
Ipratropium Bromide	Acute severe or life threatening asthma, acute asthma unresponsive to salbutamol, exacerbation of chronic obstructive pulmonary disease unresponsive to salbutamol Expiratory wheezing	YES	Up to 250micrograms extra than JRCALC guideline	Nebuliser Liquid	250micrograms/1ml	x				<b>*</b>	<b>*</b>			<b>*</b>	<b>*</b>	<b>4</b>	<b>*</b>
Ketamine	Severe traumatic pain and light sedation in the following situations only: Fracture reduction and splinting, multiple or significant fractures, ongoing pain despite Morphine administration, severe burns Management of Acute Behavioural Disturbance Management of agitation and awarness in post arrest patients with evidence of bronchoconstriction	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	10mg/1ml	х									•		·
Ketamine	Severe traumatic pain and light sedation in the following situations only: Fracture reduction and splinting, multiple or significant fractures, ongoing pain despite Morphine administration, severe burns Management of Acute Behavioural Disturbance Management of agitation and awarness in post arrest patients with evidence of bronchoconstriction	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	50mg/1ml	х	×	×	×	x	x	×	x	x	*	×	*

Lansoprazole	Concurrent use with NSAIDs when all the following criteria - in patients 14 years and over at moderate to high risk of developing adverse GI effects from NSAID use	YES	H.pylori if additional supply required for patient already under treatment Oesophagitis Duodenal ulcer	Tablet	15mg	x	x	x	x	x	x	x	x	x	x	<b>*</b>	<b>~</b>
Lidocaine Hydrochloride	Local anaesthesia	YES	No extra	Ampoule-Solution for	1% w/v 10ml	х	X	х	x	x	x	х	x	х	✓	✓	
Lidocaine Hydrochloride	Local anaesthesia	YES	Indications No extra Indications	Injection Ampoule-Solution for Injection	2% w/v 20ml	х	х	х	x	х	х	х	х	х	<b>√</b>	<b>V</b>	<b>✓</b>
Magnesium Sulfate	Life threatening Asthma unresponsive to initial emergency drug therapy and management of active seizures or prevention of furture sezirues associated with Eclampsia	YES	TDP VF	Ampoule-Solution for Injection	500mg/1ml	x							x	x	<b>√</b>	x	<b>*</b>
Methoxyflurane (Penthrox) (Temporary addition for pilot period only)	Moderate to severe pain associated with trauma	No	N/A	Inhaled Vapour	99.9% 3ml	х							x	✓(Designate d Paramedics only)	<b>~</b>	<b>~</b>	~
Metoclopramide	Nausea and vomiting in adults 20 and over, prevention of nausea/vomiting after opiate administration, management of nausea and vomiting in end of life care settings	YES	Migraine	Ampoule-Solution for Injection	10mg/2ml	x							x	x	<b>*</b>	<b>*</b>	<b>*</b>
Midazolam	APP-CC Only or Doctor Only: Management of prolonged seizures, agitation in end of life care, sedative management of awareness during return of spontaneous circulation, adjunctive therapy for analegsia, and management of agitation in neurosurgical conditions and acute confusional states APP-UC indications as defined in Smg/1ml formulation.	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	5mg/5ml	х								х	<b>*</b>	<b>*</b>	*
Midazolam	Management of prolonged seizures, agitation in end of life care, Cocaine toxicity. (For APP-CC only): seadtive management of awareness during return of spontaneous circulation, adjunctive therapy for analegsia, and management of agitation in neurosurgical conditions and acute confusional states	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	5mg/1ml	х	х	x	x	×	×	x	х	х	<b>V</b>	×	·

	_			1													
Midazolam	Management of prolonged seizures, Cocaine toxicity.	No	Changes may be performed by way of written prescription only	Ampoule-Solution for Injection	5mg/1ml	х			x					<b>~</b>	~	<b>*</b>	<b>~</b>
Misoprostol	For the treatment of primary postpartum haemorrhage (PPH), defined as bleeding of >500ml (of symptomatic of this blood loss) within the first 24hours after birth. For the treatment of life threatening bleeding following a confirmed diagnosis of miscarriage. Misoprostol can be administered as a second-line drug treatment affer Syntometrine® or as an alternative first-line drug treatment affer syntometrine some some some some some some some som	YES	No extra indications	Tablet	200micrograms	х			x				<b>*</b>	*	×	<b>*</b>	*
Morphine Sulfate (Injection)	Pain associated with suspected myocardial infarction, severe pain, Breathlessness in end of life care	No	Changes may be performed by way of written prescription only. May be prescribed for breathlessness in palliative care	Ampoule-Solution for Injection	10mg/1ml	х	x		x		×		x	<b>V</b>	<b>~</b>	*	<b>V</b>
Morphine Sulfate (Oral)	Pain associated with suspected myocardial infarction, severe pain	No	Changes may be performed by way of written prescription only	Oral Solution	10mg/5ml	x	x		х		x			<b>√</b>	~	4	1
Naloxone Hydrochloride IM	Opioid overdose producing respiratory/cardiovascul ar/central nervous system depression     Loss of consciousness with respiratory depression     Respiratory/central nervous system depression in a neonate following maternal opioid use during labour	YES	May prescribe dose regime different to that in JRCALC	Solution for Infusion	400micrograms/1ml	х			х	×	*	*	*	*	×	*	<b>V</b>
Naloxone Hydrochloride IV	Opioid overdose producing respiratory/cardiovascul ar/central nervous system depression     Loss of consciousness with respiratory depression     Respiratory/central nervous system depression in a neonate following maternal opioid use during labour	YES	May prescribe dose regime different to that in JRCALC	Ampoule-Solution for Injection	400micrograms/1ml	x	×	x	×	x	x	x	x	*	*	Ý	<b>*</b>

Naloxone Hydrochloride IV	Opioid overdose producing respiratory/cardiovascul ar/central nervous system depression Loss of consciousness with respiratory depression Respiratory/central nervous system depression in a neonate following maternal opioid use during labour	YES	May prescribe dose regime different to that in JRCALC	Pre-filled Syringe	2mg/2ml	х						<b>,</b>	*	<b>*</b>	<b>*</b>	*	<b>*</b>
	Opioid overdose producing respiratory/cardiovascul ar/central nervous system depression     Loss of consciousness with respiratory depression     Respiratory/central nervous system depression in a neonate following maternal opioid use during labour	YES	May prescribe dose regime different to that in JRCALC	Pre-filled Syringe	2mg/2ml	x	x	x	×	×	¥	¥	×	<b>*</b>	~	*	*
Naproxen	Acute and chronic pain from musculoskeltal disorders	YES	May prescribe dose different to that listed in the APP PGD.	Tablet	250mg	х	x	x	x	x	x	x	x	x	x	<b>*</b>	<b>*</b>
Nitrofuantoin	Acute lower urinary tract infection	YES	May prescribe dose different to that listed in the APP PGD. Additional indications include Catheter associated Urinary Tract infection		100mg	x									х	<b>*</b>	·
	Moderate to severe pain, labour pains	YES	No extra indications	Gas	50:50 mixture	<b>V</b>	<b>✓</b>	<b>✓</b>	х	<b>V</b>	<b>V</b>	<b>✓</b>	1	✓	· /	¥	<b>V</b>
	Treatment of nausea/vomiting, prevention/treatment of nausea/vomiting after opiate administration	YES	May prescribe dose regime different to that in JRCALC	Ampoule-Solution for Injection	2mg/1ml	х				x				<b>V</b>	<b>~</b>	<b>*</b>	<b>*</b>
Paracetamol	Mild to moderate pain, high temperature	YES	No extra indications	Tablet	500mg	х				<b>*</b>	<b>✓</b>			¥	~	~	<b>*</b>
Paracetamol Suspension	Mild to moderate pain, high temperature	YES	No extra indications	Suspension	250mg/5ml	х		x	х	<b>V</b>	<b>~</b>	х		<b>V</b>	<b>*</b>	<b>~</b>	<b>V</b>
Paracetamol Infusion (not currently held by LAS)	Mild to moderate pain, high temperature	YES	No extra indications	Infusion	500mg/50ml	x	х	х	х	х	х	х	x	<b>✓</b>	<b>✓</b>	<b>*</b>	<b>~</b>
Paracetamol Infusion	Mild to moderate pain, high temperature	YES	No extra indications	Infusion	1000mg/100ml	x		х	x	х	х			<b>V</b>	~	<b>~</b>	<b>~</b>
Paracetamol Suspension	Mild to moderate pain, high temperature	YES	No extra indications	Suspension	120mg/5ml	x				<b>V</b>	<b>~</b>			<b>*</b>	~	<b>*</b>	<b>*</b>
Pivmecillinam	Acute lower urinary tract infection	YES	May prescribe dose different to that listed in the APP PGD	Tablet	100mg	х	х	х	x	x	x	x	x	x	x	<b>V</b>	<b>*</b>

	Moderate to sever acute		May prescribe														
Prednisolone	Asthma and acute exacerbation of Chronic Obstructuve Pulmonary Disease	YES	dose different to that listed in the APP PGD	Tablet	5mg										x	<b>&gt;</b>	<b>&gt;</b>
Prochlorperazine Maleate	Nausea and vomiting and or Vertigo to due larbryinthitis, Méniére's disease or benign paraoxysmal positional vertigo	YES	May prescribe dose different to that listed in the APP PGD.	Buccal Tablet	3mg										х	<b>*</b>	*
Rocuronium Bromide	For Doctor only - Neuomuscular blockade for use in anaesthesia For APPCC - ROSC patients who are intubated with poor tolerance of an ET tube which is unresponsive to sedation	YES	No extra indications	Ampoule-Solution for Injection	10mg/1ml	x	x	x	x	x	x	x	x		×	x	<b>~</b>
Salbutamol Infusion / Injection	Life Threatening Asthma	YES	As per BNF	Ampoule-Solution for Injection	500micrograms/1ml										✓		✓
Salbutamol Inhaler	Moderate to sever acute Asthma and acute exacerbation of Chronic Obstructuve Pulmonary Disease	YES	No extra indications	MDI-Metered Dose Inhaler	100micrograms/spray	x	x	x	×	x	x	x	x	х	x	¥	<b>V</b>
Salbutamol Nebuliser	Acute asthma attack     Expiratory wheeze     associated with allergy,     anaphylaxis, smoke     inhalation or lower     airway causes     Exacerbation of     chronic obstructive     pulmonary disease	YES	As per BNF, Hyperkalaemia	Nebuliser Liquid	2.5mg/2.5ml		<b>*</b>			<b>√</b>	<b>*</b>	<b>*</b>		✓	*	*	<b>√</b>
Sodium Chloride 0.9% w/v	Medical conditions with or without haemorrhage     Trauma related haemorrhage     Burns     Limb crush injury     Sepsis     Flushing cannulas	YES	AS per BNF	Solution for Infusion	50g/500ml		x			x	x	x		<b>V</b>	~	<b>*</b>	<b>*</b>
Sodium Chloride 0.9% w/v	Diluent for listed compatable medicines for infusion	YES	N/A	Solution for Infusion	100ml									<b>~</b>	~	<b>*</b>	<b>*</b>
Sodium Chloride 0.9% w/v	Diluent for listed compatable medicines for infusion and flushing cannulas	YES	N/A	Ampoule-Solution for Injection	10ml									<b>4</b>	~	<b>*</b>	1
Syntometrine	Postpartum haemorrhage within 24 hours of delivery of infant where bleeding of the uterus is uncontrolled by uterine massage, miscarriage with life threatening bleeding and confirmed diagnosis	YES	No extra indications	Ampoule-Solution for Injection	500micrograms (Ergometrine and 5 units(Oxytocin) per 1ml								<b>*</b>	V	<b>*</b>	<b>*</b>	*

Tranexamic Acid	Patients with time critical injuries where significant internal/external haemorrhage is suspected, patients fulfilling step 1 or 2 of the trauma triage protocol, patients with a primary and secondary post-partum haemorrage and adults with head injuries Midwives PPH only	YES	See BNF	Ampoule-Solution for Injection	100mg/1ml	х	x	x	x	х	х		¥	<i>*</i>	*	~	*
Water for Injection	Diluent for listed compatable medicines for infusion and flushing cannulas	YES	N/A	Solution for Infusion	10ml	x	x	x	x	x	x	<b>✓</b>	<b>*</b>	<b>~</b>	~	~	~