This information was up to date at the time of release to the Heads of Midwifery.
The editorial board does not accept liability for any errors or omissions following its subsequent publication.
Updating arrangements for the formulary should be decided upon and implemented at a local level.

This medicine is on the Midwives Exemption list; midwives are legally entitled to use it within their professional remit. A patient group direction is therefore not legally necessary to support the arrangement for the supply and administration of this medicine to women by midwives.

The NMC, however, recognises the use of this medicine for induction and augmentation of labour is not routine midwifery practice.

Midwives should therefore use this midwives exemption medicine for this purpose only after they have secured local agreement from the maternity team, including medical staff, and only following appropriate preparation and training.

Oxytocin(Syntocinon®) for induction and augmentation of labour	
Legal status (GSL, P or POM on exemption list, or PGD)	▪ POM - midwife may administer as medicine is on midwives exemptions list
Patient group	Patients requiring induction or augmentation of labour.
Clinical indication	Induction of labour is medically indicated or if augmentation of labour is recommended in the case of hypotonic uterine inertia, only after discussion with obstetrician. Document discussion in maternity record.
Pharmacology (Onset and duration of action where appropriate)	Oxytocin is released by the posterior lobe of the pituitary gland and stimulates the smooth muscle of the uterus causing rhythmic contractions. In high doses such as used for the management of third stage or postpartum haemorrhage it causes sustained uterine contraction. Relaxation of vascular smooth muscle causing brief hypotension, flushing and reflex tachycardia can occur after rapid iv bolus injection. The plasma half-life is approximately five minutes (range 3 - 20 minutes).
Pharmaceutical form, strength, route of administration	Oxytocin 10 units in a 1ml injection (Syntocinon®). For intravenous infusion.
Dose, frequency and maximum number of doses or period of time for administration or supply	Two concentrations are suggested by RCOG. **Note**: rate will be different to give the specified dose if a different concentration is use. The minimum dose possible of oxytocin should be used and this should be titrated against uterine contractions aiming for a maximum of three to four contractions in ten minutes, in accordance with local guidelines. Should not be used within 6 hours of Prostin E2® and 30minutes of Propess®.

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Contra-indications/exclusion criteria	▪ known hypersensitivity to any component of the medicine ▪ hypertonic uterine contractions ▪ obstructed labour ▪ fetal distress Any condition in which, for fetal or maternal reasons, spontaneous labour is inadvisable and/or vaginal delivery is contra-indicated: e.g. ▪ fetal compromise ▪ known cephalopelvic disproportion ▪ placenta praevia ▪ vasa praevia ▪ grand multiparity ▪ fetal malpresentation ▪ placental abruption ▪ cord presentation or prolapse ▪ polyhydramnios ▪ overdistension or impaired resistance of the uterus to rupture as in multiple pregnancy ▪ in the presence of a uterine scar resulting from major surgery including caesarean section ▪ Syntocinon should not be used for prolonged periods in patients with oxytocin-resistant uterine inertia, severe pre-eclamptic toxaemia or severe cardiovascular disorders. ▪ If contra-indications exist, exclude woman from treatment and refer to an obstetrician.
Cautions and action that will be taken if a caution applies	▪ should not be used within 6 hours of Prostin E2® and 30 minutes of Propess® Oxytocin has a slight anti-diuretic activity so prolonged IV use at high doses in conjunction with large volumes of fluid, may cause water intoxication (see side-effects) and hyponatraemia. To avoid this rare complication, the following precautions should be considered: administer oxytocin in sodium chloride 0.9% or compound sodium lactate (not glucose); restrict fluid intake by mouth; a fluid balance chart should be kept and monitor serum electrolytes. Use with caution in patients with severe renal impairment, cardiovascular disorders and prolonged QT Syndrome. **Second Stage of Labour:** In the event of oxytocin augmentation being required in the second stage of labour, advice must be sought from senior obstetric staff. Document the recommended rate of increase in the maternity record. ▪ if a caution exists, consult a doctor before administration ▪ document consultation in maternity record ▪ check for and document any allergies ▪ check and document past medical and drug history and current medication to ascertain potential for overdose

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Medicine interactions and action that will be taken if a patient is taking a medicine that may interact	▪ prostaglandins can potentiate the effect of oxytocin; combined use is not recommended - if used in sequence, monitor uterine activity carefully ▪ inhalation anaesthetics, e.g. cyclopropane or halothane, may enhance the hypotensive effect of oxytocin and reduce its oxytocic action; concurrent use with oxytocin can cause cardiac rhythm disturbances ▪ when given during or after caudal block anaesthesia, oxytocin may enhance pressor effect of vasoconstrictor agents such as ephedrine and phenylephrine - monitor BP ▪ Oxytocin is potentially arrhythmogenic so use with caution with other medicines which may prolong the QT interval (e.g. ondansetron, erythromycin) ▪ do not infuse via the same apparatus as blood or plasma or in any solution containing sodium metabisulphate ▪ if there is a clinically significant drug interaction, consult with a doctor before administration or supply

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Potential adverse reactions and side effects including actions to be taken if adverse medicine reaction is suspected	*Women aged 35 and over, women with complications during pregnancy, such as gestational diabetes, arterial hypertension and hypothyroidism, and women at gestational age above 40 weeks have a higher post-partum risk for developing disseminated intravascular coagulation (DIC). These factors may additionally enhance the risk of disseminated intravascular coagulation in patients with pharmacologically induced labour. Therefore, dinoprostone and oxytocin should be used with caution in these women. In the immediate post-partum phase look out carefully for early signs of a developing DIC (e.g. fibrinolysis).* • *headache* ▪ *nausea and vomiting* • *cardiac arrhythmias* • *anaphylactoid reactions skin rashes* • *uterine over stimulation* • *ruptured uterus* • *water intoxication-symptoms include* o *headache* o *nausea and vomiting* o *abdominal pain* o *lethargy, drowsiness and unconsciousness* o *grand- mal type seizures* o *low blood electrolytes* • *rapid IV administration may lead to acute hypotension* • *haemorrhage* • *soft tissue damage* • *disseminated intravascular coagulation (DIC)* ▪ *on labour - increases intensity & duration of uterine contractions* ▪ *on the neonate - fetal compromise: in the event of a non-reassuring CTG, the oxytocin infusion should be discontinued and senior obstetric and midwifery advice sought* ▪ *on breast feeding - Nil* ▪ *if a serious adverse reaction is suspected please report to the MHRA Yellow Card Scheme http://yellowcard.mhra.gov.uk/*

Oxytocin(Syntocinon®) for induction and augmentation of labour	
Overdose	▪ in addition to symptoms above in the adverse reactions section, as a result of uterine hyper-stimulation, placental abruption and/or amniotic fluid embolism have occurred ▪ stop infusion immediately and deliver oxygen - manage any symptoms ▪ oral ingestion is not likely to have a toxic effect ▪ immediate assessment/treatment is essential - refer to medical staff ▪ manage in accordance with established treatment guidelines or see BNF overdose section ▪ for further advice contact National Poisons Centre 0344 892 0111
Action if patient declines	▪ refer to authorised prescriber or doctor ▪ document in maternity record
Additional advice and information	▪ supply the manufacturer's patient information leaflet if requested
Patient monitoring arrangements during and after treatment and follow-up required	Continuous fetal monitoring and maternal monitoring fluid balance, if required and serum electrolytes.
Particular storage requirements	▪ store in refrigerator 2-8^{0}C ▪ may be stored at 30^{0}C for up to 3 month (mark revised expiry on box)

References

1. Summary of Product Characteristics Oxytocin (Syntocinon®) text revision 6.6.2019 Accessed 22.12.2019 http://www.medicines.org.uk/
2. http://www.bnf.org/