NHS
Kent and Medway

Medicines Optimisation Shortages Update for GP Update -16th August 2022

Shortage update taken from SPS Medicines Supply Toolkit on 16th August 2022. Information provided by DHSC and NHSEI Medicines Supply Teams and published on Specialist Pharmacy Services Medicines Supply Tool. Not formally reviewed by NHS Kent and Medway Medicines Optimisation.

SHORTAGE: **Relpax (Eletriptan) 20mg tablets (Viatris UK Healthcare Ltd)**	**Anticipated re-supply date: 20th August 2022** **Actions**: Where patients have insufficient supplies to last until the re-supply date, clinicians should: • refer to local formularies and consider prescribing an alternative triptan, taking into consideration medications the patient has previously tried; • counsel patients on any changes to their medication (see supporting information); and • seek advice from specialists on management options if the above is not considered appropriate **Alternatives** Alternative triptans remain available and can support the increased demand. Links • Migraine treatment summary - BNF • British Association for the Study of Headache - National Headache Management Systems for Adults 2019 • Eletriptan tablets - BNF • Eletriptan - SmPC • Almotriptan - BNF • Almotriptan - SmPC • Frovatriptan - BNF • Frovatriptan - SmPC • Naratriptan - BNF • NICE - CKS: Drugs for acute migraine • Naratriptan - SmPC • Rizatriptan - BNF • Rizatriptan - SmPC • Sumatriptan - BNF • Sumatriptan - SmPC • Zolmitriptan - BNF • Zolmitriptan - SmPC

SHORTAGE:
Varilrix vaccine powder and solvent for solution for injection 0.5ml vials (GlaxoSmithKline UK Ltd)
 	
Varivax vaccine powder and solvent for suspension for injection 0.5ml vials (Merck Sharp & Dohme (UK) Ltd)
	Anticipated re-supply date: 22nd October 2022
	Actions:
	Clinicians in primary care should:
	
	• only order Varivax® and Varilrix® injection based on an urgent need basis as set out in the guidance below;
	• ensure that Varivax® and Varilrix® injection are only being prescribed for the most vulnerable patients outlined in the advice below; and
	• be aware that prescription validation will be in place for Varivax® and Varilrix® (see Supporting Information)
	
	Alternatives: See supporting information
	
	Considerations and Background:
	Summary:
	Limited supplies of Varivax® and Varilrix® injection are available. Resupply of Varilrix® is expected in Jan 2023. Resupply of Varivax® is expected in mid-October 2022 after which point it will be able to support the entire market.
	
	A clinical prioritisation guideline produced by the UK Health Security Agency (UKHSA) has been included below, to support practitioners during this time. (See Supporting Information)
	
	Ordering quotas are in place alongside prescription validation for primary care, to ensure equitable and appropriate distribution during this period. (See Supporting Information).
	
	Supporting Information:
	
	Supply of Varilrix®
	AAH have put quotas in place for GPs to limit the ordering of Varilrix® and safeguard supplies during this shortage. To override this quota or obtain stock in any other primary care setting (including community pharmacy) a prescription will be required. The process to obtain stock through the prescription validation system is as follows:
	
	• Customer to contact AAH Quota Management Customer Care team:
	  ○ Online https://www.aah.co.uk/s/quotarequest or by logging into AAH Point https://www.aah.co.uk/s/signin then choose Additional Services and select Quotas
	  ○ Customer should follow the steps and fill in required information including their email

address

- Customer can also call: 0344 561 8899 and select option 3 (quota)
- Customer will need to have the prescription details available
- The AAH team will review the request and follow the guidance provided below to validate the prescription and approve the order

Supply of Varivax®

A prescription validation system is in place for all primary care settings. A prescription will need to be generated for any patient requiring Varivax® in line with the prioritisation below, including those who would previously have received the vaccine under a Patient Group Direction (PGD).

Orders can be submitted through the portal at www.myahportal.co.uk

This functionality will be available at all times for orders to be placed and checked.

To help assist with this new service, customers can view this short video on how to use the new portal functionality: https://vimeo.com/674525262/ddc1625bc2

If customers experience any difficulties and require support, they can contact the Customer Portal Team on 0330 100 0448 – option 8 or email CustomerPortal@alliance-healthcare.co.uk with 'PVS' in the title of the email.

Clinical Information

- Varicella – Green book

Prioritisation of varicella vaccine during supply shortage (August and September 2022)

In the UK varicella vaccination is not routinely offered as part of the UK childhood schedule but is recommended for specific groups as a selective pre-exposure vaccination strategy. This includes:

- Close susceptible contacts of immunocompromised individuals
- Non-immune healthcare workers who have regular patient contact and susceptible laboratory workers in virology laboratories at risk of exposure to varicella virus

Since varicella infection is so common in childhood, 90% adults raised in the UK are immune. Varicella is seasonal with annual incidence peaking in spring months between March to May. Specific groups are at higher risk of complications from varicella. This includes immunocompromised individuals, neonates and pregnant women. The current UK

	selective programme aims to protect those at highest risk of severe disease from exposure. In addition to the recommended uses above, vaccination has also been used in outbreak settings and offered through the private market for susceptible individuals including children. In light of the current supply shortages of varicella vaccines, the UKHSA recommends prioritising available stock for those at greatest risk from severe disease. In the current situation, varicella vaccine should be restricted to the following groups 1. Susceptible child household contacts of immunocompromised individuals 2. Susceptible adult household contacts of immunocompromised individuals 3. Non-immune health care workers working with severely immunosuppressed patients (as defined in the Green book) Susceptibility to varicella in adults should be confirmed by quantitative antibody testing as defined in the Green Book (<100 IU/ml) During the current shortage, vaccination of other healthcare workers and laboratory workers should be deferred.
SHORTAGE: **Indivina 2mg/5mg tablets (Orion Pharma (UK) Ltd**	**Anticipated re-supply date: 31st August 2022** **Actions:** For patients with insufficient supplies, clinicians should consider: • Prescribing estradiol valerate 1mg / Medroxyprogesterone 2.5mg (Indivina) tablets to make up the required dose (off-label); • Or consider alternative HRT products **Alternatives:** Estradiol valerate 1mg / Medroxyprogesterone 2.5mg (Indivina) tablets remain available and can support an uplift in demand. Use other available HRT products where appropriate. Please see links for further advice on alternative hormone replacement therapies: • CKS Hormone replacement therapy • British Menopause Society – HRT preparations and equivalent alternatives **Considerations and Background:** **Summary** • Indivina 2 mg/5 mg tablets tablets are out of stock until mid-August 2022 • Indivina 1mg /2.5mg tablets remain available and can support a full uplift in demand.

SHORTAGE: **Aripiprazole 10mg tablets.**	**Anticipated re-supply date: 31st August 2022** **Actions:** Clinicians should: • not initiate any new patients on aripiprazole 10mg tablets; and • not prescribe alternative aripiprazole preparations unless the patient does not have sufficient supplies of aripiprazole 10mg tablets. Where patients do not have sufficient stock of aripiprazole 10mg tablets to last until the resupply date, clinicians should: • consider prescribing higher strength aripiprazole tablets to deliver the same dose if appropriate; or • consider prescribing aripiprazole 5mg tablets, working with local pharmacy teams to understand availability, to deliver the same dose if appropriate, until the resupply date; • ensure that the patient is not intolerant to any of the excipients and is counselled on any changes to their dosing regimen; or • consider prescribing unlicensed products only where licensed alternatives are not appropriate. Prescribers should work with local pharmacy teams to ensure orders are placed within appropriate time frames as lead times may vary (see Supporting Information); or • if the above options are not considered appropriate or available, advice should be sought from specialists on management options. **Alternatives:** <u>Licensed preparations</u> Alternative strengths and formulations of aripiprazole remain available, but no individual product can support a full uplift in demand. <u>Unlicensed preparations</u> The following specialist importers have confirmed they can source unlicensed aripiprazole 10mg tablets (please note there may be other companies that can also source supplies): • Alium Medical • Orifarm • Target Healthcare • Mawdsley's Unlicensed **Considerations and Background:** **Summary** Aripiprazole 10mg tablets are in limited supply until late August 2022. **Supporting Information:** Guidance on ordering and prescribing unlicensed imports

	Any decision to prescribe an unlicensed medicine must consider the relevant guidance and NHS Trust or local governance procedures. Please see the links below for further information: • The supply of unlicensed medicinal products, Medicines and Healthcare products Regulatory Agency • Professional Guidance for the Procurement and Supply of Specials, Royal Pharmaceutical Society • Prescribing unlicensed medicines, General Medical Council (GMC) • When prescribing a product that is not licensed in the UK due to a supply issue with the licensed alternative prescribers must indicate on the FP10 prescription that an unlicensed product is required. This can be done in one of the following two ways: • Electronic prescriptions – if the required unlicensed product is shown on electronic prescribing systems, GPs should select: ○ Aripiprazole 10mg tablets (imported) • Paper prescriptions – where the unlicensed product is not shown on electronic prescribing systems, GPs should use a paper prescription and annotate with the following wording
SHORTAGE: **Paracetamol 120mg suppositories** **https://www.medwayswaleformulary.co.uk/media/1479/issue-34-paracetamol-suppositories-shortage-protocol.pdf**	**Anticipated re-supply date: 29th July 2022** **Actions:** • Clinicians in secondary care should consider prescribing 125mg suppositories during this time and counsel patients regarding the change in strength where the patient may have been expecting 120mg suppositories. • For patients with insufficient supplies, community pharmacists may supply paracetamol 125mg suppositories in accordance with the SSP for eligible patients. If the patient is deemed ineligible or does not consent to receive an alternative product via the SSP, clinicians can consider prescribing: • paracetamol 125mg suppositories, counselling patients regarding the switch at the point of prescribing; or • a suitable alternative medicine. **Alternatives:** Paracetamol 125mg suppositories remain available and can support a full uplift in demand (see Clinical Information for further details). **Considerations and Background:** **Clinical Information**

	The dose difference between paracetamol 120mg and 125mg suppositories is negligible in context of the overall dosing schedule. Based on the BNFC dosing instructions for paracetamol, a switch from paracetamol 120mg suppositories to 125mg suppositories has no clinical or licensing concerns.
SHORTAGE: **Diamorphine 10mg powder for solution for injection ampoules** https://www.medwayswaleformulary.co.uk/media/1480/issue-34-diamorphine-supply-disruption-alert-update-issue-34.pdf	**Anticipated re-supply date**: **20th August 2022** **Actions:** All healthcare professionals in primary and secondary care including hospices, who prescribe, dispense or administer diamorphine should continue to work with their local Medication Safety Officer (MSO), pharmacy procurement teams or local lead within their organisation to: • implement the permanent actions set out in the Supply Disruption Alert for diamorphine injection issued in March 2020, which advises that morphine sulfate solution for injection 10mg/ml is the most likely first-line alternative. • if diamorphine injection is required, mitigating actions need to be implemented to reduce the potential risk of overdose if using a diamorphine 10mg ampoule. Additionally, those in secondary care should ensure that: • where patients cannot be treated with alternative opioid agents, contact their Regional Pharmacy Procurement Specialist, who in exceptional circumstances, may be able to facilitate the sharing of stock in cases of urgent clinical need. **Alternatives:** Clinicians in both primary and secondary care are reminded of permanent actions they were recommended to take in the Supply Disruption Alert for diamorphine ampoules issued in March 2020. All morphine preparations remain available and can support an increase in demand during this time. **Considerations and background** **Summary:** • Diamorphine 5mg ampoules are now back in stock. • Diamorphine 30mg ampoules are now back in stock. • Diamorphine 10mg ampoules are out of stock until Mid-Aug 2022. • Please click to see an update on the supply of diamorphine 100mg and 500mg powder for solution

	for injection ampoules.
SHORTAGE: **Diamorphine 100mg powder for solution for injection vials** **Diamorphine 500mg powder for solution for injection vials**	**Anticipated re-supply date: 20th August 2022** **Diamorphine 100mg powder for solution for injection vials- 20th August 2022** **Diamorphine 500mg powder for solution for injection vials – 2nd December 2024** **Actions for prescribers:** All healthcare professionals in primary and secondary care including hospices, (excluding specialist substance misuse treatment), who prescribe, dispense, or administer diamorphine, should continue to work with their local Medication Safety Officer (MSO), pharmacy procurement teams or local lead within their organisation to: • review patients to determine if they can be switched to morphine sulfate solution for injection or another opioid; • ensure that existing stock is reserved for patients unable to switch to an alternative opioid; • monitor patients for symptom control or signs of overdose after switching agents; and • review worksheets for those units producing prefilled syringes of diamorphine (for intrathecal administration) from high strength ampoules. Those in specialist substance misuse treatment who prescribe, dispense, or administer diamorphine for the treatment of opioid dependence should work with their pharmacy or clinical leads to: • ensure that patients are treated with an alternative opioid substitute, such as long-acting oral morphine, and monitor patients for sign of overdose and symptom control, adjusting the dose where necessary. **Alternatives:** All morphine preparations remain available and can support an increase in demand during this time. Please refer to supply information on alternative strengths of diamorphine powder for solution for injection ampoules **Considerations and background** **Supporting Clinical Information** The UK is the only country that uses diamorphine for medicinal analgesic purposes. Diamorphine is metabolised to morphine and in terms of analgesic efficacy and effect on mood, it has no clinical advantages over morphine by oral or subcutaneous/intramuscular routes. In addition, morphine

	injection is less costly than diamorphine and does not have to be reconstituted. Information has previously been provided in a Supply Disruption Alert advising that morphine should be considered a first line treatment option. Should stock of these high strength diamorphine ampoules run out, clinicians will need to review patients to determine whether morphine or another opioid is an appropriate agent to switch to. Point to consider when switching to alternatives • Diamorphine is much more water soluble than morphine and may be preferred to morphine in the very few patients where high dose injections are needed, as smaller volumes can be used. As the maximum concentration of morphine available is 30mg/mL, this may be an issue for patients requiring high doses of subcutaneous morphine, particularly bolus doses for breakthrough pain where the volume given should not exceed 2mL. If volume is an issue, advice should be sought from the palliative care team. • Care is needed when switching from one opioid analgesic to another to ensure equipotent dosage. Diamorphine 100mg injection is **approximately** equivalent to morphine 150mg (SC/IV/IM) injection. • As mentioned in the actions, patients should be carefully monitored after any drug switch and dose titration may be required. • When converting from diamorphine to other subcutaneous opioids, consideration will also need to be given to drug compatibility in the syringe driver and the total volume of infused drugs. • When converting to alternatives in regional anaesthesia, consideration will need to be given to use of preservative-free opioids. • Opioid dependent patients in drug treatment programmes who are receiving high dose injectable diamorphine treatment may experience difficulties switching to alternatives; the local drug treatment service should be contacted for advice on managing this group. Please refer to local guidance, the BNF or the Palliative Care Formulary for information on dose conversion to other opioids; and contact relevant specialist teams for advice on management of individual cases. Please also refer to SmPC's, specialist guidance and previous Supply Disruption Alert issued in 2020 for further information.

	• Diamorphine hydrochloride injection SmPC • Morphine sulfate SmPC • BNF (prescribing in palliative care) • Obstetric Anaesthetists' Association: alternatives to intrathecal and epidural diamorphine for caesarean section analgesia • Supply Disruption Alert Diamorphine 5mg and 10mg injection March 2020
SHORTAGE: **Losec MUPS 10mg gastro-resistant tablets** **Losec MUPS 20mg gastro-resistant tablets (Neon Healthcare Ltd)** **(Neon Healthcare Ltd)**	**Anticipated re-supply date: 23rd September 2022** **Actions for prescribers:** For patients with insufficient supplies, clinicians should consider: • reviewing all patients and switching patients to oral capsules or tablets if possible; • in instances where dispersible tablets are required, please refer to the alternatives below **Alternatives:** The following alternatives remain available and can support a full uplift in demand: • Omeprazole (Mezzopram) 10mg dispersible tablets • Omeprazole (Mezzopram) 20mg dispersible tablets • **Considerations and background** **Summary** • Omeprazole (Losec MUPS) 10mg and 20mg dispersible tablets are out of stock until 23rd September 2022. • Omeprazole (Mezzopram) 10mg and 20mg dispersible tablets remain available and can support a full uplift in demand during this time.
SHORTAGE: Instanyl (Fentanyl)50micrograms/dose nasal spray Instanyl 100micrograms/dose nasal spray Instanyl 200micrograms/dose nasal spray (Takeda UK Ltd)	**Anticipated re-supply date: 50 micrograms – 30th September 2022** **100 &200micrograms: 3rd March 2023** **Alternatives:** Immediate release fentanyl products are not interchangeable and when considering switching patients from one product to another, patients should not be converted on a microgram per microgram basis from one to another; it is necessary to titrate the new formulation with advice from a specialist. **SPS advice** Please refer to the SPS owned page: Clinical management of Fentanyl nasal sprays shortage for further advice on alternatives.

	Considerations and Background: Refer to the UK recall notice for Instanyl 100microgram if necessary.

SHORTAGE:
Kentera (Oxybutynin) 3.9mg/24hours patches (Accord Healthcare Ltd)
	Anticipated re-supply date: **19th August 2022**
	
	Actions for Prescribers:
	Clinicians prescribing treatment in primary and secondary care should:
	
	• defer initiating new patients on oxybutynin (Kentera®) 3.9mg/24hours transdermal patches until the supply issue resolves;
	• review patients currently on treatment to determine if this is still the most suitable therapy and where appropriate, consider switching to oxybutynin tablets or oral solution in those not previously on these treatments; or assess risk of a re-trial of these formulations in patients previously treated with them, titrating dose as needed, based on symptoms and tolerability (see clinical advice); or
	• consider use of another anticholinergic agent, which may be better tolerated;
	• assess suitability of patients who are unable to tolerate the side-effects of oral oxybutynin or other anticholinergic preparations for mirabegron prolonged-release tablets (see supporting information); and
	• if above options not suitable, obtain specialist advice.
	
	Alternatives:
	Alternative medicines for urinary disorders remain available and can support an uplift in demand.
	Oxybutynin (Lyrinel XL®) 5mg and 10mg modified-release tablets are available but cannot support an increase in demand during this time.
	
	Anticholinergic agents
	
	• Oxybutynin 2.5mg and 5mg standard release tablets
	  ○ Dose: 5mg BD to TDS (2.5mg BD elderly)
	• Oxybutynin 2.5mg/5ml and 5mg/5ml oral solution
	  ○ Dose: 5mg BD to TDS (2.5mg BD elderly)
	• Solifenacin 5mg and 10mg standard release tablets
	  ○ Dose: 5mg to 10mg OD
	• Solifenacin 1mg/1ml oral suspension
	  ○ Dose: 5mg to 10mg OD
	• Tolterodine1mg and 2mg standard release tablets
	  ○ Dose: 1mg to 2mg BD
	• Tolterodine 2mg Modified release and 4mg Modified release capsules

- Dose: 2mg to 4mg OD

Non-anticholinergic agent

- Mirabegron (Betmiga®) 25mg and 50mg prolonged release tablets
  - Dose: 25mg to 50mg OD

Considerations and Background:

Clinical Advice

Dry mouth is the most common and troublesome adverse effect of anticholinergic medicines and is the main reason for discontinuing oxybutynin. As many of the adverse effects of anticholinergic medicines are dose-related, it is recommended to start at a low dose and titrate according to efficacy and side-effects; older people require lower doses.

For patients experiencing side-effects or with inadequate response at maximum dose, changing to a different anticholinergic may be beneficial as side-effect profiles differ. Solifenacin and tolterodine are considered to cause dry mouth to a lesser extent than oxybutynin. Extended-release preparations are also expected to reduce the risk of dry mouth.

Oxybutynin (Kentera®) transdermal patches are licensed for the symptomatic treatment of urge incontinence and/or increased urinary frequency and urgency as may occur in adult patients with unstable bladder. They are prescribed to patients who experience intolerable anticholinergic side-effects from oral oxybutynin.

Mirabegron (Betmiga®) is a non-anticholinergic agent, which is NICE approved for treating the symptoms of overactive bladder, only for people in whom anticholinergic drugs are contraindicated or clinically ineffective or have unacceptable side-effects. Appropriateness of this treatment will need to take into account co-morbidities such as hypertension, liver, and renal impairment, as well as interacting medicines. As mirabegron is a prolonged-release tablet, it cannot be crushed.

Please refer to the SmPC's for further information:

- Oxybutynin (Kentera®) 3.9mg/24hours transdermal patches
- Oxybutynin tablets and oral solution
- Tolterodine preparations

	• Solifenacin preparations Mirabegron (Betmiga®) 25mg and 50mg prolonged-release tablets

SHORTAGE:
Phenergan 25mg/1ml solution for injection ampoules (Sanofi)
	Anticipated re-supply date:15th August 2022
	Actions for prescribers:
	NHS Provider Trust pharmacy procurement teams should:
	• review local stock holding of promethazine 25mg/ml injection, including stock being held at ward locations; and
	• estimate if they hold sufficient stock to meet anticipated demand until the re-supply date.
	
	Where there are insufficient stocks, the organisation should:
	
	• request mutual aid, facilitated by their Regional Pharmacy Procurement Specialist; or
	• take immediate action and work with appropriate clinical leads and the local Medication Safety Officer (MSO) to review use of promethazine injection and switch to an alternative agent ensuring:
	  ○ impacted clinical areas are made aware of this shortage and local mitigation; and
	  ○ prescribing systems, aide memoires or guidance documents are reviewed and updated as required.
	
	See Supporting Information section for further information on therapeutic alternatives.
	
	Alternatives:
	See considerations and background for guidance on alternatives.
	
	Considerations and background
	Supporting Information
	
	Although promethazine injection is licensed for use as a symptomatic treatment for allergic conditions, as a sedative in adults and children and as an adjunct to sedation in surgery, it is little used in these conditions as there are better treatments available.
	However, promethazine injection is commonly used off-label in rapid tranquillisation in patients who are not considered suitable for oral treatment. NICE guidance for the management of violence and aggression supports the use of intramuscular promethazine (with haloperidol intramuscular injection). In practice, promethazine is also used without haloperidol particularly if there are concerns of

	cardiovascular disease. **Therapeutic alternatives in rapid tranquillisation** Promethazine is regarded as a second-line treatment in patients who do not respond to intramuscularly administered lorazepam or midazolam injections, or a first-line treatment in patients where benzodiazepines are not felt to be clinically appropriate. Potential alternatives to using promethazine in this setting are to administer: • lorazepam plus haloperidol; • a short-acting antipsychotic agent such as olanzapine or aripiprazole by intramuscular injection; or • diazepam. Treatment may need to be individualised to take account of complicating factors such as cardiovascular disease, any history of benzodiazepine misuse, any concerns about illicit drug use, current medications and allergies/intolerances
SHORTAGE: **Methylphenidate (Xaggitin XL) 18mg, 27mg, 36mg, and 54mg prolonged release tablets**	**Anticipated re-supply date:** Xaggitin XL 18mg tablets (Ethypharm UK Ltd) – **16th September 2022** Xaggitin XL 54mg tablets (Ethypharm UK Ltd) – **26th August 2022** **Actions for prescribers:** Where patients have insufficient supplies to last until the re-supply date, clinicians should: • consider prescribing Concerta XL, Delmosart or Xenidate XL brands which can support the market during this time, ensuring that the patient is not intolerant to any of the excipients; • counsel patients to reassure them that Xaggitin XL, as well as the above mentioned brands, have a similar release profile to Concerta XL (see clinical information); and • reassure patients that any changes to their prescription will be short-term and for the duration of the supply issue only, and they have the option to switch back to Xaggitin XL once the supply issue is resolved or continue the brand they have been switched to. Where a patient is due to start methylphenidate treatment, clinicians should: • defer starting any new patients on methylphenidate (Xaggitin XL) prolonged-release tablets until the supply issue is resolved; and • consider prescribing one of the brands named above that can support an uplift in demand.

Alternatives:
The following alternative brands of methylphenidate prolonged-release tablets remain available and can support an uplift in demand:

- Concerta XL,
- Delmosart
- Xenidate XL

Considerations and background
Summary

- **Methylphenidate (Xaggitin XL) 27mg and 36mg prolonged-release tablets are back in stock.**
- **Methylphenidate (Xaggitin XL) 18mg and 54mg prolonged-release tablets are out of stock until late September 2022 and late-August 2022, respectively.**
- **Matoride XL prolonged-release tablets remain available but are unable to support an uplift in demand.**

Clinical Information
Methylphenidate is a central nervous stimulant available in the UK in various licensed immediate, modified-release, oral, and solid dosage forms. It is a schedule 2 controlled drug, licensed for the treatment of attention deficit hyperactivity disorder (ADHD) in children aged over 6 years and adolescents and is the usual first line treatment for this condition for both children and adults.
All the modified-release methylphenidate preparations include an immediate-release component as well as an extended-release component. This allows for rapid onset of action while avoiding the need to take further doses during the day to maintain effect.
The biphasic release profiles of these products, however, are not all equivalent and contain different proportions of the immediate-release and modified-release component. The BNF states that different versions of modified-release preparations may not have the same clinical effect. To avoid confusion between these different formulations of methylphenidate, prescribers should specify the brand to be dispensed.
Of the modified-release preparations, Delmosart, Xaggitin XL and Xenidate XL tablets have been approved based on bioequivalence data compared to Concerta XL tablets. Thus, these generic brands have been granted replicate marketing authorisation to Concerta XL on the basis that they have satisfied the criteria for equivalent release profile for the reference Concerta XL product.
Links to further information
Concerta XL prolonged-release tablets SmPC
Delmosart prolonged-release tablets SmPC
Xaggitin XL prolonged-release tablets SmPC
Xenidate XL prolonged-release tablets SmPC

	NICE guideline for attention deficit hyperactivity disorder Extended-release methylphenidate: A review of the pharmacokinetic profiles of available products
SHORTAGE: Lipitor (Atorvastatin)10mg chewable tablets (Viatris UK Healthcare Ltd) https://www.medwayswaleformulary.co.uk/media/1481/issue-34-atorvastatin-lipitor-10mg-chewable-tablets-shortage-protocol.pdf	**Anticipated re-supply date: 8th August 2022** **Actions for Prescribers:** For patients with insufficient supplies, community pharmacists may supply atorvastatin 10mg film-coated tablets or atorvastatin 20mg/5ml oral suspension for patients who cannot swallow tablets, counselling patients on the dose required at the point of dispensing in accordance with the SSP for eligible patients. If the patient is deemed ineligible or does not consent to receive an alternative product via the SSP, clinicians can consider prescribing: • Atorvastatin 10mg film-coated tablets; • Atorvastatin 20mg/5ml oral suspension for patients who cannot swallow tablets, counselling patients on the dose required at the point of dispensing; or • a suitable alternative medicine. **Alternatives:** Atorvastatin 10mg film-coated tablets and atorvastatin 20mg/5ml oral suspension remain available and can support a full uplift in demand. **Considerations and Background:** Supporting information Please refer to the BNF and SPCs for further information on alternative preparations: • Atorvastatin (Lipitor) 10mg chewable tablets SmPC • Atorvastatin 20mg/5ml oral suspension SmPC • Atorvastatin 10mg Film Coated Tablets SmPC Atorvastatin BNF
SHORTAGE: **Loniten 5mg tablets (Pfizer Ltd)**	**Anticipated re-supply date: 26th August 2022** **Alternatives:** Minoxidil (Loniten) 2.5mg and 10mg tablets remain available and can support a full uplift in demand. **Considerations and Background:** **Summary** • Minoxidil (Loniten) 5mg will be out of stock until late August 2022 • Minoxidil (Loniten) 2.5mg and 10mg tablets remain available and can support a full uplift in demand.

	Supporting Information: • Summary of Product Characteristics (SmPC) – Loniten Tablets 2.5 mg • Summary of Product Characteristics (SmPC) – Loniten Tablets 5mg • Summary of Product Characteristics (SmPC) – Loniten Tablets 10mg
SHORTAGE: **Syner-KINASE 10,000unit powder for solution for injection vials (Syner-Med (Pharmaceutical Products) Ltd)** **Syner-KINASE 25,000unit powder for solution for injection vials (Syner-Med (Pharmaceutical Products) Ltd)**	**Anticipated re-supply date: 31st January 2023** **Actions:** • Following local risk assessment consider switching to an alternative treatment option most appropriate to meet patient requirements (see below) • Nursing staff will require education and training on the administration of an alternative agent or dilution of Syner-KINASE 100,000IU • If Syner-KINASE 100,000IU injection is used, put measures in place to reduce the risk of a dose error when diluting the product, for example, ensure clear advice on dilution is available in all clinical areas using Syner-KINASE and consider additional warning labels on the 100,000IU product regarding the potential need to dilute • Consult a specialist pharmacist or nurse for advice when required. **Alternatives:** *TauroLock™-U25.000* TauroLock™-U25.000 lock solution containing urokinase 25,000IU *Actilyse Cathflo (alteplase) 2mg powder for solution for injection and infusion* Actilyse Cathflo [alteplase] 2mg is currently out of stock. *Syner-KINASE (urokinase) 100,000IU injection* The manufacturer has issued a Dear HCP Letter regarding dilution of their high strength product to desired concentration (as substitute for Syner-KINASE 25,000IU). **Considerations and Background:** **SPS advice** Please refer to the SPS owned page Clinical management of Urokinase injection shortage for further advice on this issue. **Links to further Information:** Please refer to the SmPC's for further information: • Syner-KINASE (urokinase) 100,000IU injection

SHORTAGE: **Aspirin 300mg suppositories (Martindale Pharmaceuticals Ltd)** **Aspirin 150mg suppositories (Martindale Pharmaceuticals Ltd)**	**Anticipated re-supply date: 11th November 2022** **Actions:** Clinicians should • review all patients on aspirin suppositories and switch patients to oral therapy if possible; • consider using an alternative licensed medication(s) where a switch to oral therapy is not possible; • prescribe appropriate Specials or unlicensed imports where the above actions are not considered appropriate (see information below). **Alternatives:** • Use oral therapy if possible. • Consider an alternative licensed medication where oral therapy is not possible. • Use specials or unlicensed imports where licensed alternatives are not considered appropriate (see information below) **Considerations and Background:** **Clinical Information** Aspirin suppositories are licensed for the treatment of mild to moderate pain, pyrexia due to colds and influenza, and musculoskeletal pain and inflammation. They are also used off-label for their antiplatelet effect (e.g., after a stroke or MI) in patients who cannot swallow oral medicines, including those who do not have an enteral feeding tube in situ. **Specials** The following companies have indicated they can supply specials of aspirin suppositories (please note, there may be other companies that can manufacture supplies): • Mandeville Medicines • PCCA **Unlicensed imports** The following importer companies have indicated they can source supplies of aspirin suppositories (please note, there may be other companies that can also source supplies): • Alium Medical Pharma • Smartway Pharma • UL Global • Target • Mawdsleys Any decision to prescribe an unlicensed medicine must consider the relevant guidance and NHS Trust or local governance procedures. Please see the links below for further information: The supply of unlicensed medicinal products, Medicines and

	Healthcare products Regulatory Agency (MHRA); Professional guidance for the procurement and supply of specials, Royal Pharmaceutical Society (RPS); and Prescribing unlicensed medicines, General Medical Council (GMC). Please see the following links for further information: SmPC aspirin 150mg suppositories SmPC aspirin 300mg suppositories

All Serious Shortage Protocols (SPP's) can be found:
https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/serious-shortage-protocols-ssps
Shortage update taken from SPS Medicines Supply Toolkit on 16th August 2022. Information provided by DHSC and NHSEI Medicines Supply Teams and published on Specialist Pharmacy Services Medicines Supply Tool. Not formally reviewed by NHS Kent and Medway Medicines Optimisation. Practices are encouraged to register for access to the SPS website https://www.sps.nhs.uk/ and access this tool directly in real time.