

## Supply Issues Update for Primary and Secondary Care: October 2019

This report has been produced by the Department of Health and Social Care (DHSC) Medicine Supply Team. We aim to update this report monthly to provide an update on current primary and secondary care medicine supply issues that we are working on. This information is confidential to the NHS; please do not upload to websites in the public domain. Please do share with relevant colleagues and networks.

Where it has been stated 'a clinical memo from UKMI will be published on the SPS website', this will be found at the following URL: <https://www.sps.nhs.uk/category/shortages-discontinuations-and-expiries/>

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## Information provided w/c 14<sup>th</sup> October 2019

### New Issues

#### Injectables

##### Adrenaline Auto-Injectors (AAIs)

- Recent supply issues affecting some brands of AAIs has impacted on all manufacturers.
- There are currently sufficient supplies overall to meet normal patient demand. However, patients may be required to switch to alternative brands that they are unfamiliar with.
- The different brands of AAIs are not used in exactly the same way and therefore specific training and advice is required for each of the devices. Please find links to the training videos below:

EpiPen: <http://www.epipen.co.uk/demonstrationvideo/>

Jext: <https://hcp.jext.co.uk/>

Emerade: <https://www.emerade-bausch.co.uk/patient/how-to-use-emerade>

##### *Emerade (Bausch & Lomb UK Ltd)*

- Due to short term manufacturing issues, there is currently a supply issue affecting Emerade 300microgram and 500 microgram devices with resupply expected w/c 14<sup>th</sup> October.
- Emerade 150microgram is available.
- Please refer to the Central Alerting System (CAS) alert issued 1<sup>st</sup> August 2019 for advice on clinical management until supplies are available:  
<https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAlert.aspx?AlertID=102885>
- There are sufficient supplies of EpiPen 300microgram to support the market for the expected duration of this issue.
- On 3<sup>rd</sup> October 2019, the MHRA issued a drug alert for all strengths of Emerade devices following reports from the manufacturer, Bausch & Lomb UK Limited, of Emerade devices that have failed to activate. In this situation, the needle of the pen is not released from the autoinjector when used, and a dose of adrenaline cannot be delivered.
- This issue makes it particularly important that users **carry two pens at all times**. Please see the link below for further information:  
<https://www.gov.uk/drug-device-alerts/class-4-medicines-defect-information-emerade-150-300-and-500-microgram-solution-for-injection-in-pre-filled-syringe-mdr-57-08-19>

##### *Jext (ALK-Abello Ltd)*

- Jext 150 microgram devices are currently available.
- Jext 300 microgram devices are expected to be available from w/c 14<sup>th</sup> October.
- There are sufficient supplies of EpiPen 300 microgram to support the market for the expected duration of this issue.
- To ease the supply situation, specific batches of Jext 150 micrograms and 300 micrograms have received MHRA approval for extended use by four months beyond the labelled expiry date.
- Clinicians should check with patients requesting new Jext 150 micrograms and 300 micrograms to establish if they currently hold one of the batches that can be used beyond the listed expiry. If one of the listed batches is held, further supplies should be delayed until the extended expiry date, counselling the patient on the extended expiry.
- Please see the attached HPC letters for further information. The same information can also be found on the company website: <https://jext.co.uk/>

## COMMERCIAL-SENSITIVE

### *EpiPen/EpiPen Junior (Mylan)*

- Supplies of both EpiPen and EpiPen Junior are currently available via a prescription validation process.
- Community Pharmacies can place orders for up to a maximum of two EpiPens per prescription. Trusts place orders via Mylan's customer service team.
- To ease the supply situation, specific batches of EpiPen 300 micrograms have received MHRA approval for extended use by four months beyond the labelled expiry date.
- Clinicians should check with patients requesting new EpiPen 300 micrograms to establish if they currently hold one of the batches that can be used beyond the listed expiry. If one of the listed batches is held, further supplies should be delayed until the extended expiry date, counselling the patient on the extended expiry.
- Please see the attached HPC letters for further information. The same information can also be found on the company website: <http://www.epipen.co.uk/>

### *Adrenaline 1:1000 ampoules for anaphylaxis kits*

- Adrenaline 1:1000 ampoules are currently available in sufficient quantities to meet normal demand.
- Some healthcare professionals may be holding Emerade, or other AAI, in preference to adrenaline ampoules, to treat anaphylactic reactions; this should not be necessary.
- All healthcare professionals providing services where anaphylaxis treatment may be required, including but not exclusive to flu vaccination services, should have the competency to draw up and administer intramuscular adrenaline from ampoules with a normal syringe and needle.
- During the current shortage, please use ampoules and not auto-injectors to replenish anaphylaxis kits. Remember to include the relevant dosing charts, syringes and needles.
- The [Green Book](#) and [Resuscitation Council](#) guidance provides additional advice to healthcare professionals on the use of adrenaline in response to anaphylaxis. Pharmacists providing vaccination services may also wish to refer to [PSNC FAQs](#). There is an expectation that healthcare professionals should use adrenaline ampoules in preference to Emerade or other AAIs.

### *Azzalure (botulinum toxin type A) 125unit injection*

- Ipsen as Galderma Limited, are the sole manufacturer of Azzalure 125unit injection; they will have intermittent supplies until January 2020.
- Their stock shortage is due to supply challenges and increased demand.
- When Azzalure (which is only indicated for cosmetic use) is not available, Botox 50, 100 and 200unit and Bocouture 50 and 100unit can be used and are currently in stock.
- The alternative Botulinum type A toxins are available in a variety of different strengths and are not exact equivalents.
- Clinicians should refer to the SPCs for dosing.
- Galderma have supplied their medical information email as the point of contact for pharmacists: [MedinfoUK@galderma.com](mailto:MedinfoUK@galderma.com).

### *Oily Phenol 5% (almond oil) injection*

- There is a supply issue with Oily Phenol 5% injection from Martindale, the sole manufacturers.
- This is due to manufacturing issues which are now resolved; the resupply date was scheduled for September 2019.
- Because of packing prioritisation, Martindale no longer have a confirmed resupply date.
- There is a small quantity of stock remaining in wholesalers.

COMMERCIAL-SENSITIVE

## Orals

### Ranitidine oral preparations

- There are currently supply issues affecting several manufacturers of ranitidine tablets, effervescent tablets and oral solutions.
- This is due to a regulatory investigation into possible contamination of the active substance with N-nitrosodimethylamine (NDMA), a probable carcinogen.
- Please refer to the Central Alerting System (CAS) alert issued 15<sup>th</sup> October 2019 for further information:  
<https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAlert.aspx?AlertID=102904>

### Detrusitol XL (tolterodine) 4mg capsules

- Pfizer, the sole supplier of Detrusitol XL 4mg capsules, are out of stock until w/c 11<sup>th</sup> November 2019.
- Alternative brands of tolterodine 4mg prolonged-release capsules are available.
- UKMi have advised there is no difference in the bioequivalence of all brand of tolterodine 4mg prolonged-release capsules.

### Diazepam 2mg/5ml oral solutions

- Sandoz the sole supplier of diazepam 2mg/5ml solution have reported they are out of stock until the end of November.
- Diazepam 2mg/5ml (sugar-free) oral solution is available from alternative suppliers.

### Glibenclamide 2.5mg and 5mg tablets

- Wockhardt, the sole suppliers, of glibenclamide 2.5mg and 5mg tablets are currently out of stock with no resupply date.
- Supplies of unlicensed imports of glibenclamide tablets are available from specialist importers; lead times vary.
- Amglidia, glibenclamide 6mg/ml oral suspension, is available for direct order from Amring Pharma.
- A clinical memo from UKMI will be published shortly on the SPS website.

### Indivina (estradiol/medroxyprogesterone) 1mg/2.5mg tablets

- Orion, the sole manufacturer of Indivina HRT tablets have reported that they will be out of stock of Indivina 1mg/2.5mg from mid-October until mid-November 2019, due to manufacturing issues.
- DHSC have contacted specialist importer companies who have advised that unlicensed imports can be sourced from abroad; lead times vary.
- In order for pharmacies to dispense an unlicensed drug, FP10 prescriptions must indicate that a special is required/prescribed by the GP. This could include the GP annotating the prescription with the following wording: "special order"

### Levofloxacin 250mg tablets

- DHSC has been notified by Accord of an expected supply issue with levofloxacin 250mg tablets due to a significant demand in last few months above forecast. They are the sole supplier of this item.
- UKMI have confirmed that the levofloxacin 500mg tablets (in both Accord and TEVA brand) can be divided into equal doses and taken as a replacement for the 250mg dose
- Supplies of levofloxacin 500mg tablets are currently available from Accord and TEVA

## COMMERCIAL-SENSITIVE

### Physeptone (methadone) 1mg/1ml oral solution

- Please see an overview of the current supply situation below:

| Product  | Pack Sizes | Manufacturers                          | Stock status | Further Detail                 |
|--|------------|--|--------------|--------------------------------|
| Physeptone<br>1mg/ml Oral<br>Solution: Sugar<br>Free and Sugared<br>Formulations | 100ml      | Martindale<br>Pharmaceuticals          | Out of stock | No confirmed<br>resupply dates |
|  | 500ml      | Martindale<br>Pharmaceuticals          | In stock     | Available from<br>wholesalers  |
|  | 2.5Litre   | Martindale<br>Pharmaceuticals          | In stock     | Available from<br>wholesalers  |
| Methadone<br>1mg/ml Oral<br>Solution: Sugar<br>Free and Sugared<br>Formulations  | 100ml      | Rosemont<br>Pharmaceuticals<br>Limited | In stock     | Special; Order<br>direct.      |
|  | 500ml      | Rosemont<br>Pharmaceuticals<br>Limited | In stock     | Special; Order<br>direct       |
|  | 500ml      | Thornton and Ross                      | In stock     | Available from<br>wholesalers  |

### Moclobemide 150mg and 300mg tablets

- Sandoz and Mylan are currently out of stock of moclobemide 150mg and 300mg tablets.
- Mylan are expecting moclobemide 300mg tablets back in stock w/c 14th October 2019 but are currently unable to provide a resupply date for moclobemide 150mg tablets.
- Moclobemide 150mg tablets supplied by Sandoz are expected back in stock w/c 14<sup>th</sup> October 2019, with a resupply date of January 2020 for moclobemide 300mg tablets.

### Provera (medroxyprogesterone) 100mg tablets

- Pfizer, supplier of Provera 100mg tablets, are out of stock until w/c 11<sup>th</sup> November 2019 due to manufacturing delays.
- Provera 200mg and 400mg tablets currently remain available.
- For patients who do not have sufficient supplies of Provera 100mg tablets for the duration of the expected out of stock period, clinicians should consider prescribing an unlicensed preparation of medroxyprogesterone tablets as soon as possible.
- For patients in whom unlicensed supplies are not considered appropriate a referral to secondary care cancer specialists will be required for consideration of alternative options, as included in the UKMI memo below:

<https://www.sps.nhs.uk/articles/shortage-of-provera-medroxyprogesterone-acetate-100mg-tablets/>

### Seroxat (paroxetine) 10mg/5ml oral solution

- GSK, the sole supplier of paroxetine oral solution, expect to be out of stock of Seroxat 10mg/5ml oral solution from the end of October to January 2020.
- DHSC has worked with the specialist importers and can confirm that unlicensed paroxetine oral solution is available; lead times vary.
- Paroxetine tablets remain available and UKMi have advised that tablets can be crushed and mixed with water for administration, however this would be an off-label use. The crushed tablets are bitter and have a slight local anaesthetic effect.

COMMERCIAL-SENSITIVE

Zaditen (ketotifen) 1mg tablets

- Zaditen 1mg tablets are currently out of stock from the sole supplier, Alfagma.
- Unlicensed ketotifen 1mg capsules are available via importers; lead times vary.
- Supplies of Zaditen 1mg/5ml oral solution remain available.

Others

Tostran (testosterone) 2% gel

- Kyowa Kirin, sole supplier of Tostran 2% gel, have notified DHSC of possible supply delays with their product.
- Limited supplies are available but should resume to normal levels in the next few weeks.

NuvaRing (11.7 mg etonogestrel/2.7 mg ethinylestradiol) vaginal delivery system

- Merck Sharp & Dohme Limited, the sole supplier of *NuvaRing* have advised that this product will be out of stock until mid-November due to increased demand.
- *SyreniRing*, an alternative combined hormonal contraceptive vaginal ring, marketed by Crescent Pharma, is available should clinicians deem a switch appropriate.

Prostin E2 (dinoprostone) 3mg vaginal tablets

- Pfizer, sole supplier, are out of stock until w/e 25<sup>th</sup> October 2019.
- Once stock is exhausted at Trust level, Trusts will have to switch to an alternative or use imports until the Pfizer re-supply date.

| Product (brand)                                       | MAH               | Availability   | Notes   |
|---|-------------------|--|---|
| Significant support available                         |                   |  |   |
| Dinoprostone (Prostin E2) 1mg vaginal gel             | Pfizer            | Able to support vaginal tablet shortage  | Not bioequivalent to vaginal tablet, please refer to SPC for further detail   |
| Dinoprostone (Prostin E2) 2mg vaginal gel             | Pfizer            | Able to support vaginal tablet shortage  | Not bioequivalent to vaginal tablet, please refer to SPC for further detail   |
| Imported Dinoprostone (Prostin E2) 3mg vaginal tablet | Unlicensed import | Available. Based on experience during the shortage in July/August 2019 approximately 40-60% of usage. Ordering imports may stimulate importers to source further stock from other markets. | Further information will be circulated by regional procurement leads. Please note lead times are approximately 2 weeks. |
| Limited support available                             |                   |  |   |
| COOK Cervical Ripening Balloon                        | Cook Medical      | Can make additional stock available to cover 10-25% of usage.  | Consider training requirement if Trust has no experience of using   |

COMMERCIAL-SENSITIVE

|   |         |   |   |
|---|---------|---|---|
|   |         |   | this product. Please contact Cook Medical (detail below) for further information and support with training as well as to inform them of your preference for their product and the likely quantities required. |
|   |         |   | Leisl de Lafontaine,<br>Senior Area Manager,<br>COOK Medical  |
|   |         |   | <u>+44 7766 426154</u>  |
|   |         |   | +44 207 365 4183  |
|   |         |   | <u>leisl.delafontaine@cook<br/>medical.com</u>  |
| Not able to support market – do NOT order above forecasted demand |         |   |   |
| Dinoprostone (Propess)<br>10mg vaginal delivery<br>system         | Ferring | Not able to support uplift in<br>demand | Unable to uplift volumes<br>due to long lead times<br>and storage<br>requirements. Any<br>ordering in excess of<br>forecasted demand<br>could precipitate an out<br>of stock on this line.                    |
| Misoprostol (Mysodelle)<br>200mcg vaginal delivery<br>system      | Ferring | Not able to support uplift in<br>demand | Unable to uplift volumes<br>due to long lead times<br>and storage<br>requirements. Any<br>ordering in excess of<br>forecasted demand<br>could precipitate an out<br>of stock on this line.                    |

Anusol Ointment

- Church & Dwight UK Limited, the sole manufacturers of Anusol ointment, are out of stock until January 2020.
- Anusol cream and Anusol suppositories remain available.

## Ongoing Issues

### Injectables

#### Acetylcholine Chloride (Miochol-E) 20mg powder and solvent for irrigation

- Bausch and Lomb anticipate being out of stock until early November due to manufacturing delays.
- We have been working with alternative suppliers Farmigea, who are able to supply Miphtel 20mg ampoules available from Alloga (PIP code 3957834).
- UKMI have issued the following regarding switching to ampoules:  
<https://www.sps.nhs.uk/articles/shortage-of-miochol-e-acetylcholine-20mg-powder-and-solvent-for-solution-for-intraocular-irrigation/>
- DHSC can also confirm that unlicensed Miochol-E is available from specialist importers, lead times can vary.

#### Amikacin 500mg/2ml injection

- Pfizer are out of stock of amikacin 500mg/2ml injection with a resupply around the middle of October.
- Unlicensed imports are available in sufficient quantities to support the market during this out of stock period; lead times vary.
- Please contact your regional lead for further details about unlicensed import availability.

#### Depo-Medrone with lidocaine (40mg/ml + 100mg/ml) suspension for injections 2ml vials

- Pfizer anticipate being out of stock of their Depo-Medrone with lidocaine suspension (2ml vials x10) until the end of October.
- There is currently sufficient supply of the single vial pack in addition to the Depo-Medrone with Lidocaine 1ml Vials (x1 and x10 packs).

#### Diamorphine 5mg injection

- Accord are out of stock until March 2020 due to ongoing issues at their manufacturing plant in Europe.
- Wockhardt have insufficient stock to cover full forecasted demand in both primary and secondary care.
- There are insufficient volumes of other strength diamorphine injections to cover any shortfall in diamorphine 5mg injection.
- For any concerns around patient safety, please contact your local Medication Safety Officer who will escalate to Nicola Wake (Medication Safety Lead, Specialist Pharmacy Service).

#### ***Primary care, private hospitals, hospices and substance misuse treatment centres***

Diamorphine will remain unrestricted and be available to order from usual wholesalers.

#### ***Secondary care NHS trusts in UK***

There is insufficient diamorphine 10mg injection to support secondary care use of diamorphine 5mg injection. Any overordering of the 10mg injection will lead to this presentation going out of stock.

#### COMMERCIAL-SENSITIVE

- Secondary care NHS trusts can order up to 50% of historical demand (pre-current supply issues) of diamorphine 5mg injection, further information to follow from your regional procurement lead with these volumes.
- Hameln's Morphine 10mg injection (preservative free) should be considered first line alternative and is available to order direct from Hameln.
- Continue to order morphine 10mg injection from Martindale in line with historic demand. Martindale **CANNOT** support increased orders.
- Diamorphine 5mg injection will be available from all wholesalers. No physical allocations will be put in place, but CMU will be monitoring monthly purchases and will challenge trusts who order in excess of 50% of forecasted demand.
- Other opioids are available to support this supply issue but should only be used following approval by regional procurement lead.

#### Recommended Local Action

- Order diamorphine 5mg injection up to **50% of historical demand**. Wockhardt stock is available from all wholesalers. CMU will be working with all wholesalers to monitor purchases.
- Discuss this supply issue with clinical colleagues and review and share UKMI guidance. Consider local management / prioritisation of available diamorphine 5mg stock.
- **Do not** consider using other presentations of diamorphine to cover shortfall as there are insufficient stocks to support this supply issue.
- Morphine 10mg injection (Hameln) will be available to cover the diamorphine 5mg injection shortfall and should be considered first line. There is not sufficient stock of Martindale's morphine 10mg injection to support this supply issue. Please only order to cover existing demand and shortfall. Do not stockpile as this will lead to issues with other trusts accessing stock. Please consider how you will manage having two morphine 10mg injection presentations in your departments.
- **Please let your regional procurement specialist know of any local issues or if you are considering using an alternative other than morphine.**
- Please cascade onto any relevant networks, who may find this information useful.

#### Erwinase injection

- Porton Biopharma, the manufacturer of Erwinase, have had ongoing manufacturing issues affecting this product for the past 1-2 years.
- Jazz Pharmaceuticals distributes Erwinase and have limited stock remaining.
- Further batches are currently expected to be available in November.
- There are likely to be ongoing intermittent supply issues which will continue during 2019.
- Jazz works closely with the clinical networks and supplies are prioritised on a patient need basis and in conjunction with the treating clinicians.

#### Lanoxin (digoxin) 250mcg/ml injection

- Aspen, sole supplier are out of stock with a resupply date at the end of December 2019.
- Unlicensed imports are available; lead times may vary. Trust should review local stock holding in light of the supply situation and consider placing orders with importers.
- UKMI have produced a clinical memo on alternative treatments available at the following link: <https://www.sps.nhs.uk/articles/shortgae-of-lanoxin-digoxin-250-micrograms-ml-injection/>

## COMMERCIAL-SENSITIVE

### Neurobloc (Botulinum Toxin Type B)

- Neurobloc (Botulinum Toxin Type B) will not be available until early November 2019 at the earliest due to the product being divested from Eisai to Sloan Pharma.
- DHSC has worked with the specialist importers and can confirm that unlicensed Botulinum Toxin Type B is available; lead times vary.

### Oncaspar (pegaspargase) 750 U/ml solution for injection/infusion

- Servier will be supplying Oncaspar in Irish packaging from July until November 2019 due to supply issues with the UK packaging.
- There is no difference to the product. Differences in the packaging and the PIL are detailed on the Dear Healthcare Professional letter (attached).

### Sayana Press (medroxyprogesterone acetate 104mg) injection

- Pfizer are out of stock of Sayana Press injection until w/e 25<sup>th</sup> October due to manufacturing delays.
- Depo-Provera (medroxyprogesterone acetate 150mg) is currently available and able to support the market during this time, should clinicians deem a switch appropriate.
- Please see the attached letter from Pfizer for further information.

### Tetracosactide 1mg depot injection

- Mallinckrodt have informed DHSC that tetracosactide 1mg depot injection will be unavailable until the second half of 2020.
- Specialist importers have sourced an unlicensed product.
- NHS Trusts should continue to order unlicensed stock from the specialist importers. Further information has been circulated to regional procurement specialists.

### Tobramycin 240mg/6ml injection

- Pfizer are out of stock of tobramycin 240mg/6ml injection until the end of October 2019.
- There is sufficient 80mg/2ml available from both Pfizer and Flynn (via Alloga) to cover full usage and Trusts are advised to switch to this strength during the out of stock period.
- Reserve any 240mg/6ml injection for patients who are unable to switch to the 80mg/2ml, for example, those who use via a nebuliser.

### Urokinase injection

- Syner-med are currently out of stock of urokinase strengths, 10,000unit, and 100,000 unit, with limited supplies of 25,000IU. Further detail is provided below:
  - 10,000IU – in stock; supply restrictions to remain in place until further notice to ensure stock remains available.
  - 25,000IU – in stock; supply restrictions to remain in place until further notice to ensure stock remains available.
  - 100,000IU – further stock available late October 2019.
- We are aware that unlicensed imports are not readily available or in sufficient quantities to fully meet demand during this time and therefore Trusts are asked to review their current usage of urokinase and consider using an alternative product. Details of suggested alternative products can be found in a memo produced by UKMi (see below).
- <https://www.sps.nhs.uk/articles/shortage-of-urokinase-injection-syner-kinase-10000-iu-25000-iu-and-100000-iu-powder-for-solution-for-injection-or-infusion/>
- We have been in contact with all the suppliers of the suggested alternatives and can confirm that they have sufficient supplies available to support during this time.

#### COMMERCIAL-SENSITIVE

- Additional information for the product Taurolock is also attached. If you would like to place orders for this product, please contact [customerservice@kimal.co.uk](mailto:customerservice@kimal.co.uk) and copy [louise.kelly@kimal.co.uk](mailto:louise.kelly@kimal.co.uk)

## Orals

### Accuretic (quinapril 10mg/hydrochlorothiazide 12.5mg) tablets

- Pfizer and Aurobindo Pharma are currently out of stock.
- Pfizer anticipate a resupply in December.
- There are several alternative combination preparations of ACE-Inhibitors with diuretics. UKMI have advised that patients can be safely switched, with clinical supervision.

### Adalat (nifedipine) tablets/capsules

- As previously communicated, there are ongoing supply issues with the Adalat range. We have been in contact with generic suppliers and can confirm that supplies are available with additional deliveries expected in the coming weeks.
- Supplies of nifedipine 5mg tablets are now available from Relonchem.
- Please see the attached letter from Bayer and the shortages memo from UKMI: <https://www.sps.nhs.uk/articles/shortage-of-adalat-nifedipine/>

### Carbagen (carbamazepine) various preparations

- As carbamazepine is considered a Category 1 anti-epileptic medication, patients should normally be maintained on the same brand, however Mylan (manufacturers of Carbagen) have informed DHSC that the following preparations of Carbagen will be unavailable until late 2019.
- The affected products are:
  - Carbagen 200mg and 400mg immediate release tablets – unavailable until late 2019
  - Carbagen 200mg and 400mg modified release tablets – unavailable until late 2019
- Patients currently prescribed Carbagen tablets by brand will therefore need to be switched to an alternative brand of carbamazepine tablets during this time.
- Novartis, the manufacturer of Tegretol tablets, which is the alternative brand of carbamazepine, have confirmed that all presentations are currently available that they are able to support additional demand during this time for all affected strengths and formulations.
- DHSC have worked with NHSE, NHSI and UK Medicines Information to develop a clinical memo, which has been produced to support clinicians in prioritising and switching patients. This is available on the SPS website via the following link: <https://www.sps.nhs.uk/articles/shortage-of-carbagen-carbamazepine-tablets/>

### Co-fluampicil 250mg/250mg capsules

- Crescent are currently out of stock of co-fluampicil capsules until the end of October.
- Clinicians are advised to prescribe flucloxacillin capsules and ampicillin capsules as separate preparations as a suitable alternative, however prescribers should consider patients ability to swallow increased number of capsules.
- Ampicillin capsules 250mg and 500mg capsules are available from Crescent and Chemidex.
- Ampicillin oral suspensions (125mg/5ml and 250mg/5ml), are also available from Chemidex.

### Colestid (colestipol) 5g granules

- Pfizer are out of stock of Colestid plain granules until early November and are currently unable to provide a resupply date for Colestid Orange.

#### COMMERCIAL-SENSITIVE

- Clinicians should refer to the UKMI memo for advice on alternatives: <https://www.sps.nhs.uk/articles/shortage-of-bile-acid-sequestrants/>
- DHSC has worked with the specialist importers and can confirm that unlicensed Colestid is available; lead times vary.

#### Disopyramide 150mg capsules

- Mylan, sole supplier of disopyramide 150mg tablets, are out of stock until mid-December 2019.
- A supply disruption alert has been issued via MHRA's CAS, which includes information on the issue and actions to be taken. Please see link below: <https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAlert.aspx?AlertID=102869>

#### Epanutin (phenytoin) 50mg Chewable Infatabs

- Pfizer have a temporary supply issue with Epanutin Infatabs until November 2019 due to a delay in manufacturing.
- To help mitigate the shortage Pfizer has obtained approval from the MHRA to import stock of Dilantin (phenytoin) Infatabs from Canada.
- Canadian packs of Dilantin are considered as an unlicensed product in the UK. A copy of the product information and the DHCP letter can be found attached to this update.
- Epanutin 30 mg/5 ml Oral Suspension is currently experiencing a supply issue (see above) and as such patients should not be switched to Epanutin Oral Suspension.

#### Fluoxetine 10mg/30mg/40mg capsules

- Morningside, supplier of fluoxetine 10mg capsules are out of stock until October 25<sup>th</sup>, 2019.
- Advanz, also supply fluoxetine 10mg capsules and are out of stock until early December 2019.
- Fluoxetine 10mg tablets remain available from Endo Ventures.
- Advanz, sole supplier of fluoxetine 30mg and 40mg capsules are out of stock of both strengths until early November 2019.
- Fluoxetine 20mg capsules and fluoxetine 20mg/5ml oral solution remain available from multiple suppliers.
- See below for information on fluoxetine 20mg dispersible tablets.
- A serious shortage protocol was issued on 3<sup>rd</sup> October enabling community pharmacists to dispense alternative strengths or formulations of fluoxetine until October 31<sup>st</sup>. See the below link for further information:

<https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/serious-shortage-protocols-ssps>

#### Galantamine 8mg/12mg tablets

- Teva will be out of stock of their immediate release galantamine preparations (8mg and 12mg) until 2020.
- We have been advised that galantamine modified release preparations are readily available (8mg, 16mg, 24mg).
- As per UKMi guidance for switching preparations are as follows:
  - It is recommended that the same total daily dose of galantamine is administered to patients. Patients switching to the once-daily regimen should take their last dose of galantamine tablets or oral solution in the evening and start prolonged- release capsules once daily the following morning.
- In addition, galantamine oral solution 4mg/ml and 20mg/5ml is also readily available.

COMMERCIAL-SENSITIVE

Hormone Replacement Therapy products (HRT)

Please see Table. 2 in the Appendix for a full list of currently available HRT products.

*FemSeven Products*

- Theramex, the supplier of FemSeven Conti and Sequi patches are experiencing long term supply issues affecting both products and expect to be out of stock until late 2019.
- This supply issue does not affect supplies of FemSeven Mono.
- Supplies of other HRT patches and products continue to remain available.

*Evorel Products \*\**

\*\*See table

- Janssen-Cilag, the manufacturer of the Evorel HRT transdermal patch range (Evorel; Evorel Conti; Evorel Sequi) have notified the DHSC that due to manufacturing constrictions, the whole range will be out of stock from October 2019 for most presentations and others are expected to last until early 2020. Current forecasted stock out dates for specific Evorel products are listed in Table 1 in the Appendix.
- Currently, Janssen-Cilag are unable to give an exact resupply date beyond mid-2020.
- UK Medicine Information have published guidance to advise on suitable alternatives. This provides a range of alternative options and highlights the need for prescribers to seek specialist advice for more complex patients and consider prioritising the use of transdermal HRT therapy for women at increased risk of venous thrombosis <https://www.sps.nhs.uk/articles/shortage-of-evorel-hormone-replacement-therapy-hrt-patch-range/>

*Elleste Range \**

\*See table

- Mylan have recently advised that supplies of the majority of the Elleste Range ( Elleste Duet 1mg and 2mg tablets, Elleste solo 1mg and 2mg tablets, and Elleste MX 40 and 80micrograms patches) have been replenished and are now available.
- However, Mylan have advised they are still experiencing on going manufacturing problems, therefore, currently they do not have visibility on future supplies.
- DHSC are working with Mylan and awaiting further information to understand the long-term implications of this.

Table 1. Equivalent HRT alternatives for the Elleste HRT range

| Brand              | Ingredient(s)                        | Current Availability             | Equivalent    | Ingredient(s)                        | Current Availability |
|--------------------|--------------------------------------|----------------------------------|---------------|--------------------------------------|----------------------|
| Elleste Solo 1mg   | estradiol hemihydrate                | In stock                         | Progynova 1mg | estradiol hemihydrate                | In stock             |
|                    |                                      |                                  | Zumenon 1mg   |                                      | OOS                  |
| Elleste Solo 2mg   | estradiol hemihydrate                | In stock                         | Progynova 2mg | estradiol hemihydrate                | In stock             |
|                    |                                      |                                  | Zumenon 2mg   |                                      | OOS                  |
| Elleste Duet Conti | estradiol 2mg/<br>norethisterone 1mg | Limited stock at the wholesalers | Klifem        | estradiol 2mg/<br>norethisterone 1mg | In Stock             |
| Elleste Duet 1mg   | estradiol 1mg/<br>norethisterone 1mg | In stock                         | NovoFem       | estradiol 1mg/<br>norethisterone 1mg | In Stock             |

## COMMERCIAL-SENSITIVE

### *Indivina (Estradiol/ Medroxyprogesterone) 2mg/5mg tablets*

\*See table

- Orion, the sole manufacturer of Indivina 2mg/5mg HRT tablets have reported that they will be out of stock of this strength until January 2020.
- DHSC have contacted specialist importer companies who have advised that unlicensed imports can be sourced from abroad. Lead times may vary.
- In order for pharmacies to dispense an unlicensed drug, FP10 prescriptions must indicate that a special is required/prescribed by the GP. This could include the GP annotating the prescription with the following wording: “special order”.

### *Zumenon (estradiol) 1mg and 2mg tablets*

\*See table

- Mylan have notified the DHSC that due to manufacturing capacity constraints there would be a short interruption in supply.
- Currently, Mylan are out of stock of the 1mg tablets and resupply is anticipated early October.
- Resupply of the 2mg is expected at the end of October.

### *Hypovase (prazosin) 1mg tablets*

- Pfizer the sole supplier of Hypovase 1mg tablets are out of stock until early December.
- Hypovase 0.5mg tablets are available but cannot support demand for the 1mg strength.
- UKMi have advised: Prazosin (Hypovase) is licensed for the treatment of hypertension and benign prostatic hyperplasia (BPH). If stock is depleted, there are other alpha blockers that patients can be switched to:
  - Doxazosin and terazosin are approved for both these indications
  - Tamsulosin and alfuzosin are licensed to treat BPH.
- There are no direct dose conversion data, so treatment should be titrated according to the patient's clinical response.
- Although prazosin is also licensed for treating heart failure and Raynaud's disease (RD), alpha blockers do not feature in heart failure guidelines and prazosin is not considered effective for RD.
- Until the shortage resolves, prescribers should not start new patients on prazosin and use of the 0.5mg strength should be restricted to current users to avoid depletion of that stock.

### *Metoprolol 50mg and 100mg tablets*

- There are ongoing supply issues affecting metoprolol 50mg and 100mg tablets.
- The issue has been caused by some manufacturers discontinuing the products and others having supply difficulties.
- Milpharm/Aurobindo, are currently the sole supplier of both presentations to the UK market.
- Supplies of both presentations are currently available but may be limited, supply is likely to be intermittent for several months.
- Please see the link below for a memo developed by UK Medicine Information with input from clinical experts at NHSE and NHSI, which advises on management options for patients affected by this supply issue, including the use of alternative beta blockers, dosing information for these alternative beta blockers and monitoring requirements. <https://www.sps.nhs.uk/articles/shortage-of-metoprolol-50mg-and-100mg-tablets/>
- The manufacturer of carvedilol has indicated it would be unable to meet demand if patients were switched to this product. Manufacturers of bisoprolol, atenolol and propranolol have indicated they have capacity to support any additional demand on their products.

## COMMERCIAL-SENSITIVE

### Mianserin 10mg/30mg tablets

- Mylan, sole supplier of mianserin tablets, are out of stock of both strengths until the end of 2019.
- For patients who do not have sufficient supplies of mianserin tablets for the duration of the expected out of stock period, **clinicians should consider prescribing an unlicensed preparation** of mianserin tablets as soon as possible in order to avoid abrupt withdrawal.
- DHSC have contacted specialist importer companies who have advised that unlicensed imports can be sourced from abroad. Lead times may vary.
- In order for pharmacies to dispense an unlicensed drug, FP10 prescriptions must indicate that a special is required/prescribed by the GP. This could include the GP annotating the prescription with the following wording: “special order”.
- For patients in whom unlicensed imports are not appropriate, DHSC have commissioned clinical advice which recommends:

#### Patients who have been prescribed mianserin for < 6 months

1. GP to start mirtazapine at a low dose depending on clinical judgement and the Summary of Product Characteristics (SPC)
2. Consider psychological therapies

#### Patients who have been prescribed mianserin for > 6 months

1. GP to start mirtazapine at a low dose depending on clinical judgement and the SPC
2. Seek specialist secondary care advice on management options

### Nardil (phenelzine sulfate ) 15mg tablets

- Kyowa Kirin, the sole supplier of Nardil (phenelzine sulfate) 15mg tablets in the UK, are out of stock until at least March 2020 due to manufacturing delays.
- Unlicensed imports are available from the following specialist importer companies: Clinigen, Target, Alium, Mawdsleys, Durbin, WEP Clinical and Waymade. Lead times may vary.
- Unlicensed imports can be obtained through normal wholesaler routes. If unable to obtain through wholesaler's pharmacists are advised to contact the relevant specialist importers directly.
- UK Medicine Information have also published guidance on management including the need for specialist referral to mental health teams if unlicensed supplies of phenelzine sulfate 15mg tablets are deemed unsuitable: <https://www.sps.nhs.uk/articles/shortage-of-phenelzine-15mg-tablets-nardil/>

### Olena (fluoxetine) 20mg dispersible tablets

- Advanz Pharma, the sole manufacturer of fluoxetine 20mg dispersible tablets, are currently out of stock; further supplies are expected early November 2019.
- An oral solution, fluoxetine 20mg/5ml, is available from alternative manufacturers.

### Oral Contraceptive Pill products (OCP)

#### *Brevinor (norethisterone 500 micrograms and ethinylestradiol 35 micrograms) tablets*

- Pfizer are out of stock of Brevinor tablets until the w/c 14<sup>th</sup> October 2019.
- No bioequivalent oral contraceptive tablets are currently available.
- Alternative oral contraceptive tablets remain in stock, should clinicians deem a switch appropriate.

COMMERCIAL-SENSITIVE

*Noriday (norethisterone) 350 micrograms tablet*

- Pfizer, the supplier of the oral contraceptive pill, Noriday, are out of stock with no current resupply date.
- UKMi have advised that there are no exact equivalent preparations in the UK market and clinicians should refer to CKS guidance for advice on alternative POPs:  
<https://cks.nice.org.uk/contraception-progestogen-only-methods#!scenario>

Questran Powder for Oral Suspension

- Bristol-Myers Squibb (BMS) divested the entire Questran range to Cheplapharm at the end of July 2019.
- Cheplapharm are out of stock of Questran Powder 4g sachets until mid-2020.
- Supplies of Questran Light are currently available through Alliance Healthcare.

Quinapril 5mg/10mg tablets

- Pfizer, sole suppliers of quinapril 5mg tablets (Accupro) are out of stock and are unable to provide a resupply date.
- Supplies of the 10mg are available but are limited.
- UKMi have issued the following advice regarding halving the 10mg scored tablets:
  - The 10mg quinapril tablets are scored, however manufacturers state this scored line is for facilitating breaking of tablets for ease of swallowing and may not divide in equal doses. It is unlikely that the distribution in the tablet will be significantly different in the two halves. Therefore, the majority of patients should not experience problems with splitting tablets and taking half of a 10mg tablet to equate 5mg dose.

Stemetil (prochlorperazine) 5mg in 5ml oral syrup

- Sanofi are out of stock of Stemetil oral syrup until end of November 2019.
- Other presentations of prochlorperazine remaining are:
  - Buccal (maleate) 3mg
  - Injection (mesylate) 12.5mg
  - Tablets (maleate) 5mg
- UKMI have prepared the following shortages memo, which provides potential advice on management options:  
<https://www.sps.nhs.uk/articles/shortage-of-stemetil-prochlorperazine-5mg-5ml-syrup/>

Tiagabine tablets

- Teva, sole supplier of tiagabine tablets, are out of stock of all strengths until at least the end of October 2019.
- We are aware that unlicensed supplies of tiagabine tablets are available from importers. Lead times may vary.
- In order for pharmacies to dispense an unlicensed drug, FP10 prescriptions must indicate that a special is required/prescribed by the GP. This could include the GP annotating the prescription with the following wording: "special order".
- Once licensed stock is exhausted and if unlicensed medication is not considered appropriate, patients who do not have enough supplies to last until end of October, should be encouraged to return to their clinician for specialist advice.

## COMMERCIAL-SENSITIVE

### Trifluoperazine tablets

- There have been ongoing manufacturing issues affecting trifluoperazine 1mg and 5mg tablets causing long term issues with supplies not expected before mid-2020.
- Concordia and Rosemont have trifluoperazine liquid and good supplies are available.
- We are aware that unlicensed supplies of the 1mg and 5mg tablet are available from both Ennogen and several other specialist importer companies.

### Tuberculosis medications

#### *Ethambutol 100mg tablets*

- Morningside are out stock of this product until November 2019.
- Thornton & Ross are in stock and can support all regions during this time.
- Kent can also offer limited support and will distribute the stock they have available via AAH.

#### *Ethambutol 400mg tablets*

- Thornton & Ross are out of stock until January 2020.
- Morningside can support during this time.

#### *Isoniazid 50mg tablets*

- RPH pharmaceuticals manufacture isoniazid 50mg tablets and are out of stock until December 2019
- Morningside can support with 100mg tablets and an unlicensed special manufactured liquid is available from Ennogen and Rosemont.
- Please see the attached memo for information on halving isoniazid 100mg tablets.

#### *Pyrazinamide 500mg tablets*

- Morningside are out stock of this product until sometime in October 2019.
- Thornton & Ross are in stock and can support during this time.

#### *Rifadin (rifampicin) 150mg capsules*

- Sanofi are out of stock of Rifadin 150mg capsules and are currently unable to provide a resupply date.
- Mylan can support this out of stock period.
- Review local stock holding. If stock is required, place orders with Mylan for 150mg capsules.
- Order in line with historic demand to ensure stocks are not depleted rapidly.

#### *Rifater tablets*

- Sanofi, the sole supplier of this combination anti-tuberculosis product is experiencing a delay in its manufacture with resupply not expected before December 2019.
- Supplies of a parallel imported product (considered licensed UK stock) are available from DrugRUs through Alliance Healthcare. Trusts are asked to only order according to historical demand for the duration of the out of stock period.

#### *Rifinah (rifampicin/isoniazid) 300mg/150mg tablets*

- Sanofi are out of stock with a re-supply expected end October 2019.
- DrugsRUs currently have supplies available to support during this time.

## COMMERCIAL-SENSITIVE

### Zidovudine 250mg capsules

- Aurobindo-Milpharm are out of stock of zidovudine 250mg capsules with no date for resupply.
- They currently have stock of 100mg zidovudine capsules available.
- ViiV Healthcare will be making additional stock of zidovudine 250mg capsules available which will be accessible for Trusts to purchase from early November 2019.
- Please see the below prescribing information from NHSE formulated with input from HIV clinical leads for guidance until the November resupply:

| Usual zidovudine adult dosing regimen | Utilisation of 100mg capsules                                 |
|---------------------------------------|---|
| 250mg twice daily                     | 100mg capsules  |
|                                       | (asymmetric dosing e.g. 200mg in the morning +300mg at night) |
| 300mg twice daily                     | 100mg capsules  |
|                                       | (3 x100mg twice a day)  |
| 200mg three times daily               | 100mg capsules  |
|                                       | (2 x 100mg twice a day)                                       |

## Others

### Capsaicin (Zacin) 0.025%/(Axsain) 0.075% cream

- Teva, sole supplier of capsaicin 0.025% and 0.075% creams, are out of stock until November 2019, at the earliest.
- DHSC have contacted specialist importer companies who have advised that unlicensed imports can be sourced from abroad. Lead times may vary.
- In order for pharmacies to dispense an unlicensed drug, FP10 prescriptions must indicate that a special is required/prescribed by the GP. This could include the GP annotating the prescription with the following wording: "special order".
- For patients in whom unlicensed imports are not appropriate, UKMI have produced a clinical memo on alternative treatments available at the following link:

<https://www.sps.nhs.uk/articles/shortage-of-capsaicin-cream-zacin-and-axsain/>

### Flamazine (silver sulfadiazine) 1% cream

- Smith and Nephew, supplier of Flamazine cream, are out of stock until w/c 14<sup>th</sup> October 2019.
- Unlicensed imports are available; lead times may vary.

### Indocid (indometacin) 100mg suppositories

- Aspen, sole supplier of this product are out of stock until 19<sup>th</sup> October 2019.
- Supplies of parallel imported products (considered licensed UK stock) are available.

### Instanyl (fentanyl) nasal spray

- Takeda are currently out of stock of some strengths of Instanyl nasal spray with resupply date as follows: 100mcg end-October; 200mcg end-October.
- Instanyl 50mcg nasal sprays are available.
- 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.

COMMERCIAL-SENSITIVE

- See the link below for advice from UKMI:  
<https://www.sps.nhs.uk/articles/shortage-of-actiq-lozenges-and-instanyl-nasal-spray-immediate-release-fentanyl-citrate/>

## Eye drops/treatments

### **Allergan**

#### Lacri-Lube

- Out of stock due to an ongoing manufacturing issue. Allergan are unable to provide a re-supply date at this stage.
- The Royal College of Ophthalmology is aware of the Lacri-Lube shortage and is recommending Xailin Night Ointment. <https://www.rcophth.ac.uk/standards-publications-research/quality-and-safety/medicines-safety/drugs-shortages/>.

### **Bausch and Lomb**

#### Lotemax

- Out of stock until early December

#### Phenylephrine 10% Minims eye drops solution

- Out of stock until the end of December 2019.
- Unlicensed phenylephrine 10% Minims are currently available from Clinigen and Mawdsleys; lead times vary.

### **RPH Pharmaceuticals AB**

#### Betamethasone Ointment 0.1% w/w x 3g

- RPH Pharmaceuticals AB, have advised that following the discontinuation of Betnesol Eye Ointment 0.1% w/w x 3g they have experienced manufacturing problems which have resulted in the nonviability of launching a generic Betamethasone Eye Ointment 0.1% w/w x 3g.

#### Betnesol (betamethasone 0.1%) eye/ear/nose drops

- RPH Pharmaceuticals are currently out of stock of betamethasone 0.1% eye/ear/nose drops with a resupply date of late 2019. Martindale Pharma can support the full market during this time.

## Vaccines

**For updates on other vaccine supply position, please refer to PHE's Vaccine Update Bulletin found at the following address:**

<https://www.gov.uk/government/collections/vaccine-update#2019>

### Hepatitis B Vaccines

#### Renal dose

- MSD's renal vaccine HBVAXPRO 40micrograms are still out of stock of until further notice. Please see statement: <http://www.msduk.com/products/vaccines.xhtml>.
- GSK's Hepatitis B renal vaccine, Fendrix, is currently available.

#### Adult dose

- MSD are out of stock HBVAXPRO 10mcg vaccine until further notice
- GSK are confident they can support the increased demand during this time.

COMMERCIAL-SENSITIVE

Menveo (meningitis A, C, W, Y):

- GSK have confirmed there is limited supply of Menveo.
- Pfizer have confirmed they are in stock of Nimenrix and currently able to support increased demand.

Rabipur (Rabies vaccine)

- Limited supply of GSK's Rabipur is currently available. Supply issues resulting from manufacturing constraints have now resolved, however, GSK do not expect the situation to fully normalise until late 2019.
- Sanofi Pasteur have confirmed they are able to support the full market during this time with their unlicensed Rabies vaccine, Verorab
- NATHNAC have issued further information available at the following link:  
<https://travelhealthpro.org.uk/news/389/rabies-vaccine-availability>

## Discontinuations

Loestrin 20 and Loestrin 30 tablets (ethinylestradiol, norethisterone acetate) (Galen)

- Galen Limited have discontinued Loestrin 20 and Loestrin 30 tablets with immediate effect following an earlier shortage which they have been unable to resolve.
- Galen Limited have produced the attached *Dear Health Care Professional* letter providing further details on the issue.

Isotrexin Gel (isotretinoin and erythromycin) (Stiefel)

- Stiefel plans to discontinue Isotrexin from market in December 2019
- Other topical products remain available

Modecate (fluphenazine decanoate) injection (Sanofi)

- Manufacture of Modecate (fluphenazine decanoate) injection has ceased
- Existing stock of Modecate Injection (25 mg/ml) expired in August 2019.
- Existing stock of Modecate Concentrate Injection (100 mg/ml) will expire in August 2020 – stock will not be released after 29<sup>th</sup> February 2020.
- Prescribers should complete arrangements to transfer patients on Modecate to therapeutic alternatives under medical supervision.
- Some unlicensed importer companies have confirmed that they can source supplies of unlicensed fluphenazine decanoate injection from abroad going forward.

Palladone (hydromorphone) 50mg/ml injection

- NAPP Pharmaceuticals Limited have discontinued Palladone 50mg/ml injection.
- Hydromorphone 50mg/ml injection is available to order from Martindale as special.
- Order via [order@ethypharm.com](mailto:order@ethypharm.com) or call 0800 137 627 using order code 178586

COMMERCIAL-SENSITIVE

Resolved (date resolved)

Aciclovir 500mg/1g injection (8/10/19)  
Actiq (fentanyl) lozenges (09/19)  
Adrenaline 1 in 1000, 1ml ampoules (13/9/19)  
Anusol Cream (17/10/2019)  
Bumetanide 5mg tablets (7/10/19)  
Cefuroxime 125mg/5ml suspension (Zinnat) (18/9/2019)  
Dalacin (clindamycin) 2% vaginal cream (11/10/19)  
Efudix (fluorouracil) 5% cream (18/9/19)  
Haloperidol 5mg/ml injection (9/19)  
Heminevrin (clomethiazole) 192mg capsules (15/10/19)  
Idarubicin 10mg injection (Zavedos) (16/9/19)  
Labetalol 5mg/mL injection (16/9/19)  
Megace (megestrol) 160mg tablets (20/9/19)  
Nitrous Oxide and Entonox (09/2019)  
Norimin (07/10/2019)  
Physeptone (methadone) 5mg tablets (10/19)  
Skinoren (azelaic acid) 20% cream (23/9/19)  
Sinemet 10/100mg tablets (09/2019)

| <b>Oestrogen Only</b>      |                     |                   |                         |   |   |
|----------------------------|---------------------|-------------------|-------------------------|---|---|
| Ingredient (s)             | Manufacturer        | Brand             | Strength                | Current Availability                          | Anticipated resupply date               |
|                            |                     | Oral preparations |                         |   |   |
| Estradiol hemihydrate      | Mylan               | Elleste Solo*     | 1mg                     | In stock                                      | Continued availability to be confirmed. |
|                            |                     |                   | 2mg                     | In stock                                      |   |
|                            | Mylan               | Zumenon*          | 1mg                     | OOS   | Mid October 2019                        |
|                            |                     |                   | 2mg                     | OOS   | End of October 2019                     |
| Estradiol valerate         | Bayer               | Progynova         | 1mg                     | In stock                                      |   |
|                            |                     |                   | 2mg                     | In stock                                      |   |
| Estradiol                  | Resource Medical UK | Bedol             | 2mg                     | Long term OOS                                 |   |
| Conjugated oestrogen       | Pfizer              | Premarin          | 300mcg                  | In stock                                      |   |
|                            |                     |                   | 625mcg                  | In stock                                      |   |
|                            |                     |                   | 1.25mg                  | In stock                                      |   |
| <b>Transdermal patches</b> |                     |                   |                         |   |   |
| Estradiol                  | Janssen-Cilag       | Evorel **         | 25 mcg                  | In stock until mid to end of February 2020    | Mid 2020                                |
|                            |                     |                   | 50mcg                   | In stock until beginning to mid November 2019 |   |
|                            |                     |                   | 75mcg                   | In stock until middle to end of October 2019  |   |
|                            |                     |                   | 100mcg                  | In stock until middle to end of October 2019  |   |
| Estradiol hemihydrate      | Novartis            | Estradot          | 25 mcg                  | In stock                                      |   |
|                            |                     |                   | 37.5mcg                 | In stock                                      |   |
|                            |                     |                   | 50mcg                   | In stock                                      |   |
|                            |                     |                   | 75mcg                   | In stock                                      |   |
|                            |                     |                   | 100mcg                  | In stock                                      |   |
|                            | Merus Labs/Norgine  | Estraderm         | 25 mcg                  | In stock                                      |   |
|                            |                     |                   | 50mcg                   | In stock                                      |   |
|                            |                     |                   | 75mcg                   | In stock                                      |   |
|                            | Theramex            | FemSeven Mono     | 100mcg                  | In stock                                      |   |
|                            |                     |                   | 50mcg                   | In stock in wholesalers                       |   |
| 75mcg                      |                     |                   | In stock in wholesalers |   |   |

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|   |                                  |                                     |                    |                                  |  |
|---|----------------------------------|-------------------------------------|--------------------|----------------------------------|--|
|   | Bayer                            | Progynova TS                        | 50mcg              | In stock                         |  |
|   |                                  |                                     | 100mcg             | In stock                         |  |
|   | Mylan                            | Elleste Solo MX<br>*                | 40mcg              | In stock                         |  |
|   |                                  |                                     | 80mcg              | In stock                         |  |
| <b>Topical (Transdermal gels/creams/other delivery systems)</b> |                                  |                                     |                    |                                  |  |
| Estradiol   | Besins<br>Healthcare (UK)<br>Ltd | Oestrogel                           | 0.06%              | In stock                         |  |
| Estradiol hemihydrate   | Orion                            | Sandrena                            | 0.5mg              | OOS                              | End of October<br>2019                       |
|   |                                  |                                     | 1mg (28)           | In stock                         |  |
|   |                                  |                                     | 1mg (91)           | OOS                              | End of October<br>2019                       |
|   | Pfizer                           | E-string vaginal<br>delivery system | 7.5mcg/<br>24hours | In stock                         |  |
|   | Novo Nordisk                     | Vagifem vaginal<br>tablets          | 10mcg              | In stock                         |  |
| Estriol   | Flynn Pharma                     | Blissel                             | 50mcg/g            | In stock                         |  |
|   | Marlborough<br>Pharma            | Estriol cream<br>(generic)          | 0.01%              | In stock                         |  |
|   | Aspen                            | Ovestin cream                       | 1mg                | In stock                         |  |
| <b>Progestogen only</b>   |                                  |                                     |                    |                                  |  |
| Medroxyprogesterone   | Resource<br>Medical UK           | Climanor                            | 5mg                | long term OOS                    |  |
| Levonorgestrel  | Bayer                            | Mirena<br>Intrauterine<br>device    | 20mcg/24hrs        | In stock                         |  |
| Progesterone  | Besins<br>Healthcare (UK)<br>Ltd | Utrogestan                          | 100mg              | In stock                         |  |
|   |                                  | Utrogestan                          | 200mg              | In stock                         |  |
| <b>Combined HRTs (Progestogen and oestrogen)</b>                |                                  |                                     |                    |                                  |  |
| <b>Continuous combined therapy</b>                              |                                  |                                     |                    |                                  |  |
| <b>Oral preparations</b>  |                                  |                                     |                    |                                  |  |
| Estradiol hemihydrate /<br>norethisterone acetate               | Mylan                            | Elleste Duet<br>Conti*              | 2mg / 1mg          | Limited amount in<br>wholesalers | Continued<br>availability to be<br>confirmed |
|   | Novo Nordisk                     | Kliofem                             | 2mg/ 1mg           | In stock                         |  |
|   |                                  | Kliovance                           | 1mg/ 500mcg        | In stock                         |  |
| Estradiol hemihydrate /<br>dydrogesterone                       | Mylan                            | Femoston Conti                      | 500mcg/<br>2.5mg   | In stock                         |  |
|   |                                  |                                     | 1mg/ 5mg           | In stock                         |  |
| Estradiol<br>valerate/medroxyprogesterone                       | Orion                            | Indivina                            | 1mg /2.5mg         | In stock at<br>wholesalers       | End of November<br>2019.                     |

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|   |                     |                 |                           |  |  |
|---|---------------------|-----------------|---------------------------|--|--|
|   |                     |                 | 2mg/ 5mg                  | OOS  | January 2020.                          |
|   |                     |                 | 1mg/5mg                   | OOS  | End of November 2019.                  |
| low dose conjugated oestrogen/medroxyprogesterone                             | Pfizer              | Premique        | 300mcg/1.5mg              | In stock   |  |
| <b>Transdermal patch</b>  |                     |                 |                           |  |  |
| Estradiol hemihydrate/ norethisterone acetate                                 | Janssen-Cilag       | Evorel Conti ** | 3.2mg/11.2mg              | In stock (packs of 8 patches) until beginning of November 2019 | Mid 2020 See below **                  |
| Estradiol hemihydrate/ levonorgestrel   | Theramex            | FemSeven Conti  | 1.5mg/ 0.525mg            | Long term OOS  | Q2 2020                                |
| <b>Sequential combined therapy</b>  |                     |                 |                           |  |  |
| <b>Oral preparations</b>  |                     |                 |                           |  |  |
| Estradiol [X,X] / norethisterone acetate                                      | Resource Medical UK | Clinorette      | [2mg, 2mg]/ 1mg           | Long term OOS  |  |
| Estradiol/norgestrel  | Mylan               | Cyclo-progynova | 2mg/500mcg                | Long term OOS  | Continued availability to be confirmed |
| Estradiol hemihydrate / norethisterone acetate                                |                     | Elleste Duet *  | 1mg/ 1mg                  | In stock   |  |
|   |                     |                 | 2mg/ 1mg                  | In stock at wholesalers only                                   |  |
| Estradiol hemihydrate/ dydrogesterone   |                     | Femoston        | 1mg/ 10mg                 | In stock   |  |
|   | 2mg/10mg            |                 | In stock                  |  |  |
| Estradiol hemihydrate / norethisterone acetate                                | Novo Nordisk        | Novofem         | 1mg/ 1mg                  | In stock   |  |
| Estradiol hemihydrate [X,X,X]/ norethisterone acetate                         |                     | Trisequens      | [2mg, 2mg, 1mg]/ 1mg      | In stock   |  |
| Estradiol valerate/ medroxyprogesterone acetate                               | Orion               | Tridestra       | 2mg/20mg                  | In stock   |  |
| <b>Transdermal patch</b>  |                     |                 |                           |  |  |
| a) Estradiol hemihydrate and b) estradiol hemihydrate/ norethisterone acetate | Janssen-Cilag       | Evorel Sequi**  | a)3.2mg b) 3.2 mg/11.2 mg | OOS  | Mid 2020 See below **                  |
| a) 1.5mg of estradiol hemihydrate b) Estradiol hemihydrate /levonorgestrel    | Theramex            | FemSeven Sequi  | a) 1.5mg b) 1.5mg /1.5mg  | Long term OOS  | Q2 2020                                |
| <b>Gonadomimetic (s)</b>  |                     |                 |                           |  |  |
| Tibolone 2.5mg  | Advanz Pharma       | Livial tablets  | Tibolone 2.5mg            | In stock   |  |
| <b>Selective oestrogen receptor modulator</b>                                 |                     |                 |                           |  |  |

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|---|-----------------|-----------------|--|----------|--|
| Ospemifene 60mg tablets                           | <b>Shionogi</b> | Senshio tablets | Ospemifene 60mg tablets                                    | In stock |  |
| <b>Tissue-selective oestrogen complex</b>         |                 |                 |  |          |  |
| Conjugated oestrogen 300mcg/<br>bazedoxifene 20mg | <b>Pfizer</b>   | Duavive         | conjugated<br>oestrogen<br>300mcg/<br>bazedoxifene<br>20mg | In stock |  |