

MHS MRG 02 - Safe and Cost Effective Administration for Covert Medication and in Dysphagia

Guidance for inpatient Mental Health Services NHS GG&C

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Background

Covert medication is the administration of any medical treatment in disguised form. This usually involves disguising medication by administering it in food and drink. This document concerns the choice of formulation of the medication to be given covertly only. Please refer to the documents below for detail on the best practice in making a decision about whether or not covert administration is suitable and what documentation should accompany this decision;

The Mental Welfare Commission recently reissued their good practice guidance on covert administration (Feb 2017);

https://www.mwcscot.org.uk/sites/default/files/2019-06/covert_medication.pdf

NHS GG&C's covert pathway;

<http://www.staffnet.ggc.scot.nhs.uk/Acute/Division%20Wide%20Services/Pharmacy%20and%20Prescribing%20Support%20Unit/Community%20Pharmacy/Documents/Pharmacy%20document%20for%20covert%20medication.doc>

Pharmacy specific guidance;

<http://www.staffnet.ggc.scot.nhs.uk/Acute/Division%20Wide%20Services/Pharmacy%20and%20Prescribing%20Support%20Unit/Prescribing/Documents/Document%2009%20-%20Covert%20Administration%20of%20Medication%20Provision%20of%20Pharmaceutical%20Advice.pdf>

Different formulations of medication can have vastly different purchase costs, for example, the drug tariff cost (April 20) for nitrazepam 5mg tablets is £1.03 for 28 tablets and the cost of nitrazepam suspension 2.5mg/5ml is £114.00 for 70ml. Making a 5mg dose in tablet form cost 3p and in liquid form £16.29. Monthly this equates to a cost of £1.03 for the tablets and £456 for the liquid. Once a medicine is given covertly it becomes unlicensed, therefore in most cases using the formulation with the lowest cost price is appropriate. There are some exceptions where specific medicines are licensed if given mixed with certain liquids which will be covered in this document.

General Guidance

- 1) Ensure that medication is required for continuing active treatment of an ongoing condition or to prevent deterioration of physical/mental health. For example, thyroxine treatment.
- 2) Following the principles of realistic medicines an analysis of the risk/benefit of staying on medication required to be administered covertly should be undertaken. Medication that may be increasing the side effect burden without providing immediate health benefits should where appropriate be withdrawn. The decision to do this or not will be dependent on each patients' set of circumstances and medical history.
- 3) Modified release preparations generally cannot be given covertly.
- 4) As a general rule unless otherwise stated crushed tablets or the contents of opened capsules can be mixed with soft cold foods. Ideally around a teaspoons size of food and (smooth, lump free) jams/chocolate spreads being the best medium.
- 5) Medicines that are crushed or mixed should be administered immediately.
- 6) Liquid preparations tend to be more expensive and can be strongly flavoured making them more difficult to give covertly.
- 7) Pharmacists preparing advice about the administration of medication covertly should consider cost along with safety.
- 8) *If not covered in the A-Z (starting on the next page) advice should always be sought from a pharmacy.*

Using thickening agents to thicken liquid medication;

NHSGGC's medication pages accessed 29/6/17 <http://ggcprescribing.org.uk/blog/thickening-liquid-medications/> state that the "preferred thickener for patients over the age of three years is Nutilis Clear®; a gum based thickener. Nutilis Clear is licensed to thicken food and drinks **not medicines**, so thickening of any liquid medications to the recommended viscosity may require more or less thickener than is stated in the instructions on the side of the tin. Any thickening of a liquid medicine is using the medication **unlicensed** and as such prescribing should be in line with the principles of NHSGGC Unlicensed Medicines Policy. For more information, contact the Central Prescribing Team"

There is no data about how the thickening agent impacts on the pharmacokinetics of the liquid medication. Therefore crushing a tablet/opening a capsule and mixing with a soft food is generally the best option (where available and recommended in guidance below). If the patient is aware that the medication is in the soft food, this does not require the use of the covert pathway. This approach is simply making it more palatable and/or safe for patients with swallowing difficulties.

Licensed liquids should only be used if they are of the appropriate fluid consistency without the need for thickener.

Liquid specials should only be considered if thickener is not required but the patient is unable to manage any solid dosage forms. Liquid specials should NEVER be given covertly (unlicensed medication given in an unlicensed manner) unless the medication is essential and a pharmacist has provided advice stating that this is the most appropriate formulation to give covertly, as part of a covert pathway.

Frequently seen A-Z

Drug name	Preferred choice	Alternatives/additional information
Alendronic acid	This is not considered essential and should not be given covertly. There may be a strong argument for an individual cases in which case consider the options in next column. These are considerably more expensive than tablets >£250 per annum	Use the effervescent tablets or the oral solution. Alternatively consider using once-yearly zoledronic acid. ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 7/5/2020
Amitriptyline	The tablets can be crushed and dispersed in water Crushed amitriptyline tablets have a bitter taste. ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2018. Accessed at www.newtguidelines.com on 7/5/2020	No documented food interactions Can crush and mix with food as described in general principles.
Amlodipine	Most tablet brands will disperse in water easily. They disperse in one to five minutes. Give immediately as the drug is light sensitive ¹ ² Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Feb 19. Accessed at www.newtguidelines.com on 7/5/2020	Bioavailability is not affected by food with the exception of below ² . Administration of amlodipine with grapefruit or grapefruit juice is not recommended as bioavailability may be increased in some patients resulting in increased blood pressure lowering ² ² www.medicines.org.uk/emc/medicine/31786 Last updated 5/5/16 Accessed 7/5/20 Kent pharmaceuticals
Amoxicillin	Amoxicillin suspension may be mixed with May be mixed with formula, milk, water, or other cold drinks. Drink right away after mixing. ¹ www.drugs.com/cdi/amoxicillin-suspension Last updated 28/8/19 accessed 7/5/20	
Apixaban	For patients who are unable to swallow whole tablets, Eliquis tablets may be crushed and suspended in water, or 5% dextrose in water (D5W), or apple juice or mixed with apple puree and immediately administered orally ¹ ¹ Eliquis 5 mg film-coated tablets. http://www.medicines.org.uk/emc/history/27220 Updated on eMC 1/5/2020 Bristol-Myers Squibb-Pfizer. Accessed 7/5/2020	

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Aripiprazole	<p>Normal tablets can be crushed, mixed with water and taken immediately. Some excipients are insoluble in water and may float to the surface. (<i>Bristol Myer Squibb information</i>)¹ Orodispersible tablets also available.</p> <p>¹NEEMC Guidelines for tablet crushing and administration via enteral feeding tubes. NHS North-East Essex. www.dysphagiamedicine.com/files/neemmc_guidelines_for_tablet_crushing. Accessed 7/5/2020</p>	
Aspirin	<p>Use the dispersible tablets. Give with food¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Aug 2012. Accessed at http://access.newtguidelines.com/html/A/Aspirin.html On 7/5/20</p>	<p>No documented food interaction.</p> <p>Consider need. Must be clear benefit to individual</p>
Atenolol	<p>The tablets can be crushed and mixed with water for administration.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2019. Accessed at http://access.newtguidelines.com/A/Atenolol.html on 7/5/20</p>	<p>The bioavailability of atenolol is decreased by 20% when taken with food² (not clinically relevant). Can crush and mix with food as described in general principles² eMC https://www.medicines.org.uk/emc/medicine/25739 Accord pharmaceuticals. Accessed 7/5/2020</p>
Atorvastatin	<p>The tablets can be crushed and mixed with water for administration. Atorvastatin tablets are not very soluble and a residue may be left. Give immediately as the drug is light sensitive.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2019. Accessed at www.newtguidelines.com on 7/5/20</p>	<p>Avoid grapefruit. No other documented food interactions</p> <p>Can crush and mix with food as described in general principles</p> <p>Consider need. Must be clear benefit to individual</p>
Betahistine	<p>The tablets can be crushed and mixed with water for administration. The drug is very soluble.¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2019. Accessed at www.newtguidelines.com on 7/5/2020</p>	<p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p>
Bisacodyl	<p>Consider alternatives. Use the suppositories¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2010. Accessed at www.newtguidelines.com on</p>	<p>The tablet has an enteric coating, and is designed to release the drug in the colon where it has its effect. Do not crush as it has an irritant effect on the stomach. www.newtguidelines.com last</p>

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	5/5/20	updates May 2010 accessed 5/5/20
Bisoprolol	<p>The tablets can be crushed finely and mixed with water for administration. The lower strength tablets will disperse in one to five minutes without crushing. The higher strength tablets should be crushed before mixing with water.¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2019. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Can be taken with food², therefore Can crush and mix with food as described in general principles</p> <p>²Bisoprolol 2.5mg/5mg/10mg film coated tablet. https://www.medicines.org.uk/emc/medicine/25983. Accord Healthcare Limited Last Updated on eMC 12/3/19 Accessed 5/5/20</p>
<p>Calcium TheiCal D3®</p> <p>Accrete D3®</p> <p>Cacit D3®</p> <p>Adcal D3®</p> <p>Calcichew D3 And forte®</p>	<p>Preferred brand, chewable tablet though does dissolve slowly in mouth. Tropical flavoured</p> <p>Change to alternate brand</p> <p>Change to alternate brand</p> <p>Chewable tablet or dissolving tablets available¹.</p> <p>¹https://bnf.nice.org.uk/drug/colecalciferol.html accessed 5/5/2020</p> <p>Calcichew D3® and Calcichew D3® Forte will not disperse easily but will crush for administration to patients with swallowing problems who are not able to chew the tablets themselves.²</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2012. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Oxalic acid (found in spinach and rhubarb) and phytic acid (found in whole cereals) may inhibit calcium absorption through formation of insoluble compounds with calcium ions. The patient should not take calcium products within two hours of eating foods high in oxalic acid and phytic acid².</p> <p>²eMC; Theical, Stirling Anglian Pharmaceuticals. https://www.medicines.org.uk/emc/medicine/29206 Last updated 14/01/2016. Accessed 5/5/20</p> <p>No other documented food interactions</p>
Carbamazepine	<p>Use the suppositories or liquid (contains sorbitol)¹</p> <p>Maintain brand.</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Nov 2018. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Carbamazepine is given orally in tablet form, usually in two or three divided doses. It may be taken during, after or between meals with a little liquid e.g. a glass of water.²</p> <p>²https://www.medicines.org.uk/emc/product/4384/smpc</p> <p>EMC Carbagen 100mg tablets. Mylan Pharmaceuticals. Last updated February 2020 accessed 5/5/20</p>
Cetirizine	<p>You can crush the tablet and mix it with a small amount of soft food such as yogurt, jam or mashed potato. Must be swallowed straight away, without</p>	

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	<p>chewing¹</p> <p>¹https://www.medicinesforchildren.org.uk/cetirizine-hay-fever-0 accessed 5/5/2020</p>	
Chlorphenamine	<p>Crush tablet and mix with water; tablet will disperse in 1-2 minutes¹</p> <p>¹MOC GUIDELINES FOR TABLET CRUSHING IN PATIENTS WITH SWALLOWING DIFFICULTIES https://www.stch.org.uk/wp-content/uploads/moc-guidelines-for-tablet-crushing-april-2018.pdf accessed 5/5/20</p>	<p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p>
Co-beneldopa	<p>Use the dispersible tablets.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2017. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Dispersible tablets have a faster onset of action and shorter duration of action than modified-release capsules and a direct substitution cannot occur. Contact Pharmacy for advice on dosage conversion¹.</p> <p>If changing from capsules to dispersible tablets a direct changeover is acceptable, but the patient should be monitored for any change in effect as there may be an altered bioavailability. It may be appropriate to prescribe a small "when-required" dose to cover any unexpected "on-off" effects.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2017. Accessed at www.newtguidelines.com on 5/5/20 Consider getting advice from parkinson's nurse.</p>
Co-careldopa	<p>Change to co-beneldopa dispersible tablets¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2019. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Consider getting advice from parkinson's nurse</p>
Co-codamol	<p>Use the effervescent tablets or the sachets¹. Note the high sodium content in the dispersible tablets prohibits regular long term use (Consider paracetamol suspension and codeine tablets given separately in regular use).</p> <p>¹Smyth J. The NEWT Guidelines (electronic</p>	<p>Change to paracetamol suspension with codeine tablets</p>

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	version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Oct 2014. Accessed at www.newtguidelines.com on 5/5/20	
Codeine	Use liquid ¹ ¹ http://access.newtguidelines.com/C/Codeine.html Updated Dec 2018. Accessed 5/5/20	
Diazepam	Tablets may be crushed ¹ ¹ https://www.healthline.com/health/diazepam-oral-tablet#important-considerations Accessed 13/5/20	
Digoxin	The tablets can be crushed for administration ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 13/5/20	No documented food interactions
Dihydrocodeine	Use the suspension ¹ Do not crush sustained release tablets ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Dec 2018. Accessed at www.newtguidelines.com on 13/5/20	No documented food interactions Consider changing to a transdermal opioid patch if regular long term pain relief required
Diltiazem	All tablets and capsules are labelled as modified-release, however the 60mg generic preparation is not slow-release and can be crushed ¹ Patients on once or twice-daily modified-release preparations may need to be converted onto three-times-daily doses of the generic preparation ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jul 2019. Accessed at www.newtguidelines.com on 13/5/20	Alternatively, switch to amlodipine (NB amlodipine does not offer the rate-control effects of diltiazem). ¹ No documented food interactions
Doxycycline	Do not open the capsules as the contents are irritant, instead use the dispersible tablets ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 13/5/20	The Vibramycin [®] SmPC indicates that the absorption of doxycycline is not notably influenced by simultaneous ingestion of food or milk ² ² eMC, Vibramycin-D Dispersible Tablets 100mg. Pfizer Limited. www.medicines.org.uk/emc/medicine/20879 Last Updated on eMC 31 Jan 2019. Accessed 13/5/20.
Duloxetine	The capsules can be opened and their contents	

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	<p>mixed with apple juice/sauce, capsule contain enteric coated beads which should not be chewed or crushed. Give the mixture immediately ¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2019. Accessed at www.newtguidelines.com on 13/5/20</p>	
Enalapril	<p>The tablets can be crushed and dispersed in water for administration. Without crushing some brands will disperse in around five minutes¹</p> <p>¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jan 2020. Accessed at www.newtguidelines.com on 13/5/20.</p>	Can crush and mix with food as described in general principles
Esomeprazole	<p>Change to suitable alternative OR For patients who have difficulty in swallowing, the tablets can also be dispersed in half a glass of non-carbonated water¹, or the capsules can be opened². No other liquids should be used as the enteric coating may be dissolved. Stir until the tablets disintegrate and drink the liquid with the pellets immediately or within 30 minutes. Rinse the glass with half a glass of water and drink. The pellets must not be chewed or crushed.¹</p> <p>¹ Nexium 20mg Gastro resistant tablets Last Updated on eMC 5/6/19 AstraZeneca UK www.medicines.org.uk Accessed 13/5/20</p>	Change to lansoprazole or omeprazole or esomeprazole granules for oral suspension.
Ferrous salts	<p>Use ferrous fumarate tablets; The tablets are easy to swallow but may also be crushed or chewed being almost tasteless¹</p> <p>Ferrous fumarate 210mg Tablets Last Updated on eMC 10-May-2016 Advanz Pharma Accessed on 13/5/20 www.medicines.org.uk/emc/medicine/27076</p>	<p>The absorption of iron from the gut is decreased if it is taken at the same time as coffee, tea, eggs or milk. Its absorption is enhanced if it is taken at the same time as foods or supplements containing vitamin C (ascorbic acid).¹</p> <p>Or convert to an appropriate dose of ferrous fumarate liquid².</p> <p>¹https://www.netdoctor.co.uk/medicines/dietry/a6730/ferrosamal-ferrous-fumarate/ ²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2017 . Accessed at www.newtguidelines.com on 13/5/20</p>

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Finasteride	<p>Place the tablet in the barrel of an oral or bladder-tipped syringe. Draw water up into the syringe and allow the tablet to disperse (in order to minimise contact with the medication) ¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2017. Accessed at www.newtguidelines.com on 13/5/20</p>	<p>No documented food interactions.</p> <p>Women of childbearing potential should avoid handling crushed or broken tablets</p>
Fluconazole	<p>The capsules can be opened, and the contents mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2013. Accessed at www.newtguidelines.com 12/5/2020</p>	<p>No documented food interactions</p> <p>Can open capsules and mix with food as described in general principles</p>
Fluoxetine	<p>The capsules have been opened and the contents dispersed in 120mL water. The capsule contents will dissolve in about 5 minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated August 2017. Accessed at www.newtguidelines.com 12/5/2020</p>	<p>Fluoxetine is well absorbed from the gastro-intestinal tract after oral administration. The bioavailability is not affected by food intake.²</p> <p>Can open capsule and mix with food as described in general principles</p> <p>²Fluoxetine 20mg Capsules – Summary of Product Characteristics. Accord Healthcare Ltd. Last updated on 14/8/19. Accessed online at: https://www.medicines.org.uk/emc/product/6013/smpc on 12/5/2020</p>
Folic acid	<p>The tablets have been crushed and mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated July 2015. Accessed at www.newtguidelines.com on 12/5/2020</p>	<p>Can crush and mix with food as described in general principles</p>
Furosemide	<p>Tablets will disperse in 1-2 minutes¹.</p> <p>¹NEEMMC Guidelines for Tablet Crushing and Administration via Enteral Feeding Tubes. Last updated April 2012. Accessed at:</p>	<p>Can crush and mix with food as described in general principles</p> <p>Oral solution available</p>

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	https://www.stch.org.uk/wp-content/uploads/pct-version-neemmc-guidelines-for-tablet-crushing-april-2012.pdf on 12/5/20				
Gabapentin	<p>The contents of the capsules can be sprinkled on food or given in fruit juice to mask their unpleasant taste. They should be given immediately as the drug is rapidly hydrolysed¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2019. Accessed at www.newtguideline.com on 12/5/20.</p>	<p>Do not give at the same time as aluminium/magnesium antacids¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2019. Accessed at www.newtguideline.com on 12/5/20.</p>			
Gliclazide	<p>Crush the tablets well (as the drug is practically insoluble) and mix with water or orange juice for administration¹</p> <p>Do not crush the modified-release tablets¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2020. Accessed at www.newtguidelines.com on 12/5/20</p>	<p>Switching from modified-release to standard tablets should be done with careful blood monitoring.</p> <table border="1"> <tr> <td>30mg modified- release tablet</td> <td>equiv alent to</td> <td>80mg standard tablet</td> </tr> </table> <p>It may be advisable to monitor blood glucose in any patient when altering the formulation / crushing the tablets.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2020. Accessed at www.newtguidelines.com on 12/5/20</p> <p>Gliclazide is well absorbed. Food intake does not affect the rate or degree of absorption²</p> <p>Can crush and mix with food as described in general principles</p> <p>²Gliclazide 40mg Tablets – Summary of Product Characteristics. Accord UK Ltd. Last updated on 10/5/19. Accessed online at https://www.medicines.org.uk/emc/product/2044/smpc on 12/5/2020</p>	30mg modified- release tablet	equiv alent to	80mg standard tablet
30mg modified- release tablet	equiv alent to	80mg standard tablet			
Haloperidol	<p>The capsules can be opened and the contents dispersed in water¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Oct 2018. Accessed at www.newtguidelines.com</p>	<p>Can crush and mix with food as described in general principles</p> <p>Liquid preparation (Haldol) also available. Haldol can be mixed with apple, orange, tomato or cola drinks, not tea or coffee²</p>			

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	on 12/5/2020	² Louis A. Pagliaro, Ann M. Pagliaro (2013). The Pharmacologic Basis of Psychotherapeutics. pp 103, Accessed online at https://books.google.co.uk/books?id=udLXAQAAQBAJ&pg=PA200&dq=2+The+Pharmacological+Basis+of+Psychotherapeutics+By+Louis+A.+Pagliaro,+Ann+M.+Pagliaro&hl=en&sa=X&ved=0ahUKEwix1p7Z9q3pAhXUSBUIHYKhC4wQ6AEIKDAA#v=onepage&q=haldol&f=false on 12/5/20.
Hyoscine hydrobromide	Consider using the patch ¹ The tablets can be dissolved in water but absorption may vary ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2012. Accessed at www.newtguidelines.com on 12/5/2020	Can crush and mix with food as described in general principles
Ibuprofen	Ibuprofen is safe to crush for patients in skilled nursing facilities. Also, ibuprofen may be taken with food to limit GI irritation ¹ Use the syrup ² (this may not be practical for larger doses) ¹ Richard S. Weiner (2001). Pain Management: A Practical Guide for Clinicians, Sixth Edition (2001) pp 437. Accessed online at https://books.google.co.uk/books?id=lg7slgP9D3kC&pg=PA437&lpg=PA437&dq=crush+ibuprofen&source=bl&ots=gg4zZtYx3w&sig=oOorWD4M99HGn_fuBRX-iPZvV4Q&hl=en&sa=X&ved=0ahUKEwj99eH6ypXVAhXIKcAKHVILBAw4HhDoAQqvMAE#v=onepage&q=crush%20ibuprofen&f=false on 12/5/20 ² Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2015. Accessed at www.newtguidelines.com on 12/5/2020	Can crush and mix with food as described in general principles
Isosorbide mononitrate	The standard-release tablets can be crushed and dispersed in water. They may have an increased rate of absorption and therefore increased side effects. ¹ Dispersing the tablets in water may alter their rate of absorption, and therefore their side effects. Consider reducing the dose and giving	

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	<p>doses more frequently if this occurs.¹</p> <p>Do not crush or open MR preparations.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated December 2019. Accessed at www.newtguidelines.com on 12/5/2020</p>	
Ispaghula husk	<p>Use the granules or the powder.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2013. Accessed at www.newtguidelines.com on 13/5/2020</p>	
Lactulose	<p>Use the solution¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 13/5/2020</p>	<p>Lactulose solution may be administered diluted or undiluted. Each dose may if necessary be taken with water or fruit juices, etc².</p> <p>²Duphalac. Accessed from eMC on 13/5/2020. Mylan Products Limited; https://www.medicines.org.uk/ Last updated 7 November 2018</p>
Lamotrigine	<p>Use the dispersible tablets¹</p> <p>The MHRA has issued guidance recommending that (where possible) patients on lamotrigine (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands / manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single manufacturer's product.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jan 2019. Accessed at www.newtguidelines.com on 13/5/20</p>	<p>Can crush and mix with food as described in general principles</p>
Lansoprazole	<p>Capsules may be opened and the granules mixed with a small amount of water, apple/tomato juice or sprinkled onto a small amount of soft food (e.g. yoghurt, apple puree) to ease administration. After preparing the suspension or mixture, the drug</p>	<p>Food markedly reduces the bioavailability of lansoprazole. Small amounts of foods such as apple sauce, or apple or orange juice, or yoghurt do not seem to</p>

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	<p>should be administered immediately¹</p> <p>The FasTabs® and orodispersible tablets can be placed in the mouth where they will disperse to release gastro-resistant granules which will be swallowed with the patient's saliva. They can also be dispersed in water, leaving micro-granules which should be swallowed without being crushed.²</p> <p>¹Lansoprazole 15mg Gastro-resistant Capsules Last Updated on eMC 12/3/2020 Accord UK Ltd. Accessed 13/5/20 https://www.medicines.org.uk/emc/medicine/26621</p> <p>²Zoton – FasTab 15mg. Pfizer Ltd. Last updated on 2/1/18. Accessed online at https://www.medicines.org.uk/emc/product/1714. on 13/5/20</p>	<p>significantly affect the bioavailability of lansoprazole from the contents of the capsules In crossover studies in fasting healthy subjects, the bioavailability of enteric-coated granules (removed from a capsule of lansoprazole 30 mg) mixed with either orange juice, tomato juice, or with one tablespoonful of strained pear, yoghurt, cottage cheese, or <i>Ensure</i> pudding was comparable to that of an intact capsule given with water³</p> <p>³Baxter, K. and Stockley, I. Stockley's drug interactions. London: Pharmaceutical Press. Accessed online at www.medicinescomplete.com on 13/5/20.</p>
Levothyroxine	<p>The tablets can be crushed and mixed with water for administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Jan 2020 Accessed at www.newtguidelines.com on 13/5/2020</p>	<p>Absorption of levothyroxine (thyroxine) possibly reduced by antacids, proton pump inhibitors, calcium salts, cimetidine, oral iron, sucralfate, colestipol, polystyrene sulphonate resin and cholestyramine (administration should be separated by 4-5 hours).²</p> <p>²Levothyroxine 25 micrograms Tablets Last Updated on eMC 10/2/2020 Wockhardt UK Ltd accessed EMC 13/5/2020 https://www.medicines.org.uk/emc/medicine/21395</p> <p>Can crush and mix with food (except those above) as described in general principles</p>
Lisinopril	<p>The tablets can be dispersed in water. The drug is soluble, and the tablets disperse in one to five minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 13/5/2020</p>	<p>Lisinopril absorption is not affected by the presence of food².</p> <p>Can crush and mix with food as described in general principles</p> <p>²Lisinopril 10 mg tablets Last Updated on eMC 25 July 2019 Mylan https://www.medicines.org.uk/emc/product/10114/smpc Accessed 13/5/20</p>
Lithium	<p>Use the equivalent dose of the liquid¹.</p>	<p>Lithium carbonate 200mg is approximately equivalent to lithium citrate 509mg (5mls</p>

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	¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 13/5/2020	Priadel liquid), but different preparations of lithium vary widely in their bioavailability. As most lithium tablets are modified-release, when being given as a liquid the total daily dose will need to be given in divided doses ¹ .
Loratidine	Switch to cetirizine or chlorphenamine (chlorphenamine liquid is available and is inexpensive)	
Lorazepam	The tablets can be crushed and mixed with water for administration. ¹ Without crushing they disperse in one to five minutes ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2020. Accessed at www.newtguidelines.com on 13/5/2020	Do not give with caffeine containing drinks or grapefruit ² Can crush and mix with food as described in general principles ² Lorazepam 1mg Tablets Last Updated on EMC 10 October 2019. Genus Pharmaceuticals https://www.medicines.org.uk/emc/product/6137/smpc Accessed 13/5/20
Macrogol	Use sachets	No documented food interactions. First add the right amount of water and stir until the powder has dissolved and the water is clear. The resultant liquid can be mixed with anything, to encourage them to drink it e.g. squash, juice, hot chocolate, milk. DO NOT mix the powder straight into the milk/juice/flavoured drink – it needs to 'bind' with the water first. ¹ ¹ https://www.valeofyorkccg.nhs.uk/seecmsfile/?id=3023&inline=1 Accessed 13/5/20
Metformin	You can crush standard metformin tablets using a pill crusher. You can add crushed medicine to food. You CANNOT crush modified release metformin. ¹ ¹ http://www.uclh.nhs.uk/PandV/PIL/Patient%20information%20leaflets/Metformin.pdf Accessed 1/5/20	Licensed liquid available but expensive and unlicensed if given mixed with food Can crush and mix with food as described in general principles
Metronidazole	Crush the tablets and mix with water ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2019. Accessed at www.newtguidelines.com on 12/5/20	Can crush and mix with food as described in general principles
Mirtazapine	Use the orodispersible tablets. The orodispersible tablets will disperse immediately in water. ¹ Smyth J. The NEWT Guidelines (electronic	No documented food interactions Can crush and mix with food as described in general principles

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	version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2011. Accessed at www.newtguidelines.com on 12/5/2020	
Morphine	<p>Consider switching to transdermal opiate preparations for patients with chronic pain.¹</p> <p>Use MST Continus[®] sachets or the immediate-release oral solution, according to clinical need.¹</p> <p>MXL[®] capsules can also be opened and the contents sprinkled onto cold soft food for patients with swallowing difficulties. The contents of the capsules should not be chewed or crushed, and therefore this method may not be appropriate for patients with limited understanding or impaired ability to follow instructions.¹</p> <p>Zomorph[®] capsules can be opened and the contents sprinkled on food, e.g. yogurt or jam.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2017. Accessed at www.newtguidelines.com on 12/5/2020</p>	
Nitrazepam	<p>The tablet may be crushed before swallowing¹</p> <p>¹The Australian Drug Guide: Every Person's Guide to Prescription and Over-the-counter Medicines, Street Drugs, Vaccines, Vitamins and Minerals. Jonathon Upfal, 2006 Accessed 12/5/2020 https://books.google.co.uk/books?id=7O9kiqN2q2YC&pg=PA486&lpg=PA486&dq=the+australian+drug+guide+nitrazepam&source=bl&ots=ACj6T4HJ9f&sig=jRMgniD1gfLycQe0iBYF7sMa8fU&hl=en&sa=X&ved=0ahUKEwjDvdWKtsXWAhXpLsAKHR_8A2EQ6AEINDAB#v=onepage&q=the%20australian%20drug%20guide%20nitrazepam&f=false</p>	<p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p>
Olanzapine	<p>The Velotab[®] may be dispersed in a full glass of water or other suitable beverage (orange juice, apple juice, milk, or coffee) immediately before administration¹</p> <p>¹SPC accessed on EMC 12/05/2020, Eli Lilly, Zyprexa Velotab, last updated on 10/03/2020; https://www.medicines.org.uk/emc/product/7901/smpc</p>	
Omeprazole	<p>Patients can open the capsule and swallow the contents with half a glass of water or after mixing the contents in a slightly acidic fluid e.g., fruit juice or applesauce, or in non-carbonated water. Patients should be advised that the dispersion should be taken immediately (or within 30 minutes).¹</p> <p>Disperse the MUPS[®] tablet in water, then mix this</p>	

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	<p>with orange / apple / pineapple juice, apple sauce, or yogurt²</p> <p>¹Omeprazole 10mg Capsules Last Updated on eMC 05-Jun-2019 Dr. Reddy's Laboratories (UK) Ltd. Accessed 12/5/2020 https://www.medicines.org.uk/emc/product/10339/smpc</p> <p>²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2019. Accessed at www.newtguidelines.com on 12/5/2020</p>	
Oxycodone	<p>Use the liquid. OxyNorm Concentrate liquid can be diluted with a soft drink to aid administration and improve palatability if desired¹.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2013. Accessed at www.newtguidelines.com accessed on 14/5/20</p>	<p>Consider changing to an alternate opioid</p> <p>OxyNorm concentrate may be mixed with a soft drink for ease of administration and to improve palatability.</p> <p>Grapefruit juice can increase levels of oxycodone²</p> <p>²Oxynorm concentrate 10mg/ml, Napp pharmaceuticals Last Updated on eMC 13/8/19. Accessed 14/5/2020; https://www.medicines.org.uk/emc/product/3847/smpc</p>
Paracetamol	<p>use the oral solution 250mg/5ml¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2015. Accessed at www.newtguidelines.com on 12/5/2020</p>	<p>Disperse effervescent tablets in water¹. No documented food interactions².</p> <p>Note high sodium content in effervescent tablets.</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated September 2015. Accessed at www.newtguidelines.com on 12/5/2020</p> <p>²Paracetamol Effervescent 500 mg Tablets. Last Updated on eMC 2/5/2018 Fannin (UK) Ltd. https://www.medicines.org.uk/emc/medicine/31805 Accessed on 12/5/2020</p>
Phenobarbital	<p>The tablets may be crushed and mixed with water for administration¹</p> <p>The MHRA has issued guidance recommending that (where possible) patients on phenobarbital (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands /</p>	<p>Can crush and mix with food as described in general principles</p>

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	<p>manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single manufacturer's product.^(see end references)</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated March 2014. Accessed at www.newtguidelines.com on 14/5/2020</p>	
Pirenzepine	Use hyoscine patches or trihexyphenidyl (see below)	Tablets have been observed to disperse
Prednisolone	<p>Many brands of tablets disperse easily in water, with some dispersing almost immediately and others taking two to five minutes¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated February 2016. Accessed at www.newtguidelines.com on 30/4/20</p>	<p>Its initial absorption, but not its overall bioavailability, is affected by food²</p> <p>Can crush and mix with food as described in general principles</p> <p>²Prednisolone 5mg Tablets Last Updated on eMC 9-Oct-2017 Wockhardt UK Ltd https://www.medicines.org.uk/emc/product/2427/smpc Accessed on 30/04/20 accessed on 30/4/20</p>
Pregabalin	<p>Open the capsules and dissolve the contents in water for administration. The capsule contents may have an unpleasant taste¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2013. Accessed at www.newtguidelines.com on 30/4/20</p>	Open capsule and mix with food as described in general principles
Procyclidine	<p>Tablets will disperse in > 2 minutes¹</p> <p>Colchester University Hospital NHS Trust. NEEMMC GUIDELINES FOR TABLET CRUSHING AND ADMINISTRATION VIA ENTERAL FEEDING TUBES. https://www.stch.org.uk/wp-content/uploads/pct-version-neemmc-guidelines-for-tablet-crushing-april-2012.pdf Accessed 30/4/20</p>	<p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p>
Propranolol	<p>You can cut or crush the tablet¹</p> <p>¹https://www.healthline.com/health/propranolol-oral-tablet#important-considerations Accessed 30/4/20</p>	<p>Can crush and mix with food as described in general principles.</p> <p>Do not crush / open MR preparations.</p>
Quetiapine	The crushed tablets have been added to soft food (e.g. yogurt). They taste bitter. ¹	Do not crush MR tablets

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	¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated June 2017. Accessed at www.newtguidelines.com on 30/4/20	
Ramipril	<p>The capsule contents can be placed directly into the mouth, or onto bread if the patient has swallowing difficulties. Stability studies have shown that ramipril can be mixed with apple juice or apple sauce, and this may be helpful for patients with swallowing difficulties. The capsule contents taste unpleasant.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated April 2016. Accessed at www.newtguidelines.com on 30/4/20</p>	<p>Ramipril capsules may be taken before, with or after meals, because food intake does not modify its bioavailability¹</p> <p>¹Ramipril 1.25 mg hard capsules Last Updated on eMC 3/1/19 Accord Healthcare Limited. Accessed 30/04/20 https://www.medicines.org.uk/emc/product/1906/smpc</p>
Ranitidine	<p>You can also cut or crush the tablet.¹ ¹https://www.healthline.com/health/ranitidine-oral-tablet#important-considerations Accessed on 30/04/20</p>	<p>Ranitidine syrup is available or effervescent tablets. NOTE syrup is mint flavoured.</p> <p>Effervescent tablets should be dissolved in at least 75ml of water, and may contain significant amounts of sodium.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Nov 2019. Accessed at www.newtguidelines.com on 30/4/20</p>
Risedronate	<p>Review whether the medication is still needed. Consider switching to yearly zoledronic acid.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated January 2014. Accessed at www.newtguidelines.com on 30/4/20</p>	
Risperidone	<p>Use the liquid or the orodispersible tablet¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2010. Accessed at www.newtguidelines.com on 30/4/20</p>	<p>Food does not affect the absorption of Risperidone¹ Though incompatible with most types of tea including black tea.²</p> <p>²Risperdal 1mg/ml oral solution. Last Updated on eMC 06/12/18 Janssen-Cilag Ltd. Accessed 30/4/20; https://www.medicines.org.uk/emc/product/6853/smpc</p>
Senna	<p>Use liquid¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May</p>	<p>Consider alternative laxatives.</p>

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	2017. Accessed at www.newtguidelines.com on 5/5/20	
Sertraline	<p>For enteral tubes, tablets can be dispersed in water for administration. They disperse in one to five minutes¹.</p> <p>The tablets can be crushed and mixed with food for patients with swallowing difficulties. Crushed tablets have a bitter taste, and an anaesthetic effect on the tongue, so use with caution and take care with hot foods after administration¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated November 2019. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Can crush and mix with food as described in general principles</p> <p>Use the liquid</p>
Simvastatin	<p>Consider need</p> <p>The tablets can be crushed and mixed with water for administration. Crush well as the drug is practically insoluble. Use immediately (light sensitive).</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated August 2018. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Avoid grapefruit juice when taking simvastatin². No other documented food interactions. Absorption not altered by food.</p> <p>Can crush and mix with food as described in general principles</p> <p>²https://www.medicines.org.uk/emc/product/1010/smpc</p> <p>Zocor 40mg tablets. Last Updated 9/10/19. Merck, Sharpe & Dohme Ltd. Accessed 5/5/20</p>
Sodium valproate	<p>The crushable tablets can be crushed and mixed with a small amount of soft food, e.g yogurt or jam. They have an extremely bitter taste</p> <p>Epilim Chronosphere[®] and Episenta[®] granules can be mixed with soft food or a cold drink, and should be swallowed whole without chewing. This method may not be appropriate for patients with limited understanding or impaired ability to follow instructions.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated December 2019. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>The MHRA has issued guidance recommending that (where possible) patients on sodium valproate (when used for seizures) are maintained on a specific manufacturer's product, due to variability in product characteristics which may lead to a loss of seizure control when switching between brands / manufacturers. When managing patients with enteral tubes or swallowing difficulties it may not be possible to maintain the patient on their previous preparation due to the need to change to an appropriate formulation. However all product switches should be carried out with care and close monitoring, and where possible patients should be maintained from then onwards on a single</p>

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		manufacturer's product.
Tamsulosin	<p>The capsules contain granules which should not be crushed. If no alternative is suitable, they may be mixed with cold water and swallowed whole (only suitable for patients able to follow the instruction not to chew).¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2017. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>Absorption of tamsulosin hydrochloride is reduced by a recent meal. Uniformity of absorption can be promoted by the patient always taking tamsulosin after the same meal each day²</p> <p>²Flomax Relief MR. Last Updated on eMC 4/7/2018 SANOFI. Accessed 5/5/20; https://www.medicines.org.uk/emc/medicine/22738</p>
Temazepam	<p>Review need.</p> <p>Tablet may be crushed but will take > 2 minutes to disperse in liquid.¹</p> <p>¹https://www.stch.org.uk/wp-content/uploads/pct-version-neemmc-guidelines-for-tablet-crushing-april-2012.pdf Accessed on 5/5/20</p>	Can crush and mix with food as described in general principles
Trazodone	<p>NHS GG&C guidance on trazodone can be accessed here: http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/PoliciesProcedures/GGCClinicalGuidelines/GGC%20Clinical%20Guidelines%20Electronic%20Resource%20Direct/Trazodone%20appropriate%20formulation%20choice%20and%20use%20guide.pdf</p> <p>Accessed on 5/5/20</p>	<p>Can mix with food as described in general principles</p> <p>MH wards within NHS GG&C: Trazodone lliquid will only be supplied for doses below 50mg unless exceptional circumstance pertain and the ward clinical pharmacist agrees with the need for liquid to be supplied</p>
Trihexyphenidyl	<p>The tablets can be crushed ¹ and will disperse in water for administration ²</p> <p>¹NHS GGC - A-Z of Specials. June 2017. ²Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated Sep 2018. Accessed at www.newtguidelines.com on 5/5/20</p>	<p>No documented food interactions</p> <p>Can crush and mix with food as described in general principles</p>
Valproic acid	<p>Convert to valproate. A slightly higher dose (approximately 10%) of sodium valproate is used.¹</p> <p>¹Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated November 2015. Accessed at www.newtguidelines.com on 5/5/20</p>	

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Venlafaxine	The tablets can be crushed and mixed with water for administration ¹ www.newtguidelines.com updated April 2018. Accessed 5/5/20	Can crush and mix with food as described in general principles
Warfarin	The tablets can be crushed and mixed with water for administration. Without crushing they disperse in two to five minutes ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated October 2018. Accessed at www.newtguidelines.com on 5/5/20	Consider if conversion to newer agent is possible (see haematology for advice) Avoid cranberry and grapefruit. No sudden diet changes Can crush and mix with food as described in general principles
Zolpidem	The tablets can be crushed and mixed with water for administration ¹ ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated May 2010. Accessed at www.newtguidelines.com on 5/5/20	No documented food interactions Can crush and mix with food as described in general principles
Zopiclone	Tablets are not crushable ¹ . Tablets are very hard to crush and very bitter so much so that they may be unpalatable even mixed with food. ¹ Smyth J. The NEWT Guidelines (electronic version). Wrexham. Betsi Cadwaladr University Health Board (NHS Wales). Last updated August 2018. Accessed at www.newtguidelines.com on 5/5/20	Review need. If required change to zolpidem.

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