

1. Introduction/ Scope

- 1.1 This document provides guidance for the administration of medicines to **adult** patients with swallowing difficulties or those who cannot take oral medication for other reasons. This guidance applies to all Registered Professionals working within UHL who prescribe and / or administer or supply medicines to adult patients.
- 1.2 There are a number of circumstances where a patient may be unable or unwilling to swallow solid forms of medicines (tablets or capsules). This could be as a result of an actual swallowing difficulty or due to the patient not being permitted to take any solid oral medicines, such as those with nasogastric tubes. This may be a short or long term issue and may include the following patients who:
- Find it difficult to swallow tablets or capsules.
 - Chew tablets and capsules before swallowing.
 - Keep tablets and capsules in their mouth for a period of time.
 - Request that their tablets or capsules are crushed/ opened or administered as liquids.
 - Wish their medication to be given in food or drink.
 - Have a clinical condition that has affected their swallowing ability (e.g. stroke).
 - Have an enteral feeding tube, such as a nasogastric (NG) tube, nasojejunal (NJ) tube, gastrostomy or jejunostomy tube as a result of a swallowing difficulty, malnutrition or compromised gut function.
- 1.3 Addressing the needs of these patients is more complex than simply crushing the tablets or opening the capsules and there are a number of issues that must be considered before any medicines are administered including:
- Legal implications of crushing tablets / opening capsules.
 - Pharmaceutical and pharmacological implications of crushing tablets / opening capsules.
 - Identifying patients with swallowing difficulties.
 - Medicines management of patients with swallowing difficulties.
 - Administering medications via an enteral feeding tube .

2. Guideline Standards and Procedures

These guidelines are supported by three flow charts in Appendices One, Two and Three:

- Administration of Medicines to Adult Patients who cannot Swallow Tablets or Capsules
- Administration of Oral Medicines to Adult Patients who are Nil by Mouth (NBM)

- Administration of Enteral Medicines to Adult Patients with Gastric/ Jejunal Feeding Tubes

2.1 Legal implications of crushing tablets/opening capsules

2.1.1 Unlicensed medicines and product liability

- a) In accordance with the Medicines Act 1968 all medicinal products marketed in the United Kingdom must have a product licence. This licence defines the indications for use, any side effects or precautions and other relevant information about the medication. When products are used outside their licence a greater liability rests with the individual prescriber and administrator of the medicine if the patient who receives the medication suffers harm as a result.
- b) It is recommended that crushing tablets or opening capsules is only carried out when there is no other clear alternative. There is no legal scope for nurses / administrators to alter the form of a medication by crushing or opening a capsule and to do so would be a breach of the Medicines Act 1968.
- c) By crushing a tablet or opening a capsule the release properties of the medication may be altered and changes seen such as increased peak medication concentrations and shortened duration of action. Advice should always be sought from a pharmacist regarding the implications of crushing tablets or opening capsules and potential medication interactions.
- d) It is accepted practice that medication may need to be opened or crushed in order to administer medicines for patients unable to swallow when a licensed liquid form is unavailable. The person administering the medicine must only do so if they are confident that it may be given in this way (please refer to the table in appendix 4 for those which must not be crushed or opened). In cases where the nurse is unsure the prescriber or pharmacist must be contacted prior to administration.

2.1.2 Patients rights and capacity to consent

The person administering the medicine must be sure that what they are doing is in the best interests of the patient and be accountable for this decision. Consent should be obtained from the patient before administering medicines in this manner. Guidance on the covert administration of medicines can be found in the Leicestershire Medicines Code (Chapter 6).

2.2 Pharmaceutical implications of crushing tablets/ opening capsules

Pharmaceutical manufacturers formulate oral medications to ensure that absorption takes place in the appropriate part of the gastro-intestinal tract and at the appropriate rate. Crushing a medication or emptying the powdered medication from a capsule might significantly alter the absorption characteristics and affect the therapeutic efficacy and side effect profile. Not all tablets require crushing before administration. Some will disperse in water without crushing first. A pharmacist will be able to advise on a suitable method. For some medications there are also considerations with regards to administration before or after food.

Details of Medicines that must not be crushed can be found in Appendix Four

Crushing a tablet or opening a capsule should be reserved as a last resort and only done once advice has been sought from the prescriber and/ or pharmacist. It is also important to consider the following:

- Stability of the medication once it has been opened or crushed

- The safety of the person preparing the medication – are they at risk of exposure to potentially harmful chemical compounds or developing a hypersensitivity?
- Whether an accurate and consistent dosage is received by the patient.
- The amount of diluent / thickening agent to be used.
- Whether the result would be unpalatable.

Recommended method for crushing tablets

1. Non – sterile gloves should be worn to protect the person administering the medication from being exposed to powdered medication and to avoid contamination of the medication itself.
2. The tablet crusher device must be washed before and after each medicine is crushed to ensure there is no cross-contamination of medicines.
3. The tablet should be placed in the tablet crusher device and crushed to form a fine powder.
4. A small amount water should then be added to the powder to form a paste, before adding more water to ensure all powder is dissolved. Sterile water should be used if administering via an enteral tube. Drinking water can be used if administering orally.
5. The correct dosage should then be immediately drawn into a suitable size oral/enteral (ENFit) syringe before administration to the patient.
6. If administering the medication via an enteral feeding tube it must be ensured that an adequate amount of sterile water is added to ensure the medication does not block the tube.
7. Any crushed or dispersed medicine which is not immediately administered to the patient should be discarded in the sharps bin as per Waste Management Policy A15/2002
8. If administering the medication via an enteral feeding tube it must be ensured that the tube is adequately flushed with 10mls of sterile water between medications and with 50mls of sterile water once administration is complete.

2.3 Identifying patients with swallowing difficulties

The causes of swallowing difficulties are numerous and can be structural or neurological.

Patients with swallowing difficulties may present with the following:

- Recurrent chest infection - a sign that food or drink is entering the lungs
- Coughing during or after swallowing – may indicate that food or drink is entering the airway
- Wet voice after swallowing - may indicate that food or liquid may have entered the airway
- Food or liquid regurgitated after swallowing
- Food or liquid coming down the nose
- Weight loss
- Excessive salivation/drooling
- Feeling of obstruction in throat / oesophagus

2.4 Medicines management of patients with swallowing difficulties

If a patient has swallowing difficulties, be aware that they may have diet/fluid consistency recommendations advised by Speech and Language Therapy (SLT)

The following action must be taken:

- The ward pharmacist should ensure that a thorough medication history has been taken, including any previous difficulties in taking medications.
- A medication review should be undertaken and medications should be rationalised. If a medication is deemed critical/ essential, consideration should be given as to whether it can be administered in another form or via an alternative route.
- Consideration should be given as to whether this is a short term or long term issue.
- Referral to SLT for assessment via ICE (if they are not already involved). The medication may need to be modified in line with SLT consistency recommendations.
- Where SLT recommendations are for thickened fluids, liquid medicines may need to be thickened before administration.
- Refer to ward pharmacist / Pharmacy department for advice.

2.5 Administering medications via an enteral feeding tube

To minimise the risk of complications associated with the administration of medications via a enteral feeding tube, please note:

1. It is imperative that the correct route of administration is determined before administration. A medication must only be administered via an enteral tube if it has been prescribed as such.
2. The person administering the medication must check:
 - Is it the **right** patient?
 - Is it the **right** medication?
 - Is it the **right** dose?
 - Is it the **right** route?
 - Is it the **right** time?
3. The person administering the medication must check that the correct tube has been selected before commencing administration. Before administering medication via an enteral feeding tube, correct placement must be confirmed.
4. The medication must be administered to the patient using an enteral (ENFit) syringe.
5. If there is any concern about the absorption of medications administered via any enteral feeding tube, consult the ward pharmacist
6. Medicines administered via jejunal feeding tubes are more likely to be associated with potential absorption problems.
7. If the person administering the medication is in any doubt about any of the above, they should not proceed with the administration.
8. Flushing the tube with sterile water before and after administration of each medication is essential to prevent enteral tube blockage.

3. Education and Training

None

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Missed doses of oral medication arising from route not available	UHL medicines safety thermometer tool	Medication Safety Pharmacist	Monthly	Medicines Optimisation Committee

5. Supporting References

UHL Insertion and Management of Nasogastric and Nasojejunal Tubes in Adults – Policy and Procedures (B39/2005)

White and Bradnam (2015). Handbook of Drug Administration via Enteral Feeding Tubes., Pharmaceutical Press, London

Newtguidelines.com. Accessed August 2018

6. Key Words

Medicines, medications, swallow, swallowing

CONTACT AND REVIEW DETAILS	
Guideline Lead: Anna Stacey, CMG Lead Pharmacist UGGS and MSS	Executive Lead: Chief Nurse
Details of Changes made during review: <ul style="list-style-type: none">• Update of title• Changes made the format of the guideline in keeping with the new UHL Policy and Guidelines format• Section 2.1.1 paragraphs d and e removed and replaced with a statement that reflects accepted practice.• References updated• Minor amendments with regards to changes in terminology and referral processes.• Some duplication of information removed from flow charts and minor reformatting• 'Administration of Oral and Enteral Medicines to Adult Patients with Malabsorption' flow chart removed as information relating to administration of medicines covered in other flowcharts.	

- Has the patient had a SLT assessment or nurse dysphagia screen resulting in modified diet/fluid recommendations?
- Can the patient still take their medication orally if mixed with thickener/food?
- Review all medication
 - Are all medications critical? Can some be held or stopped?
 - Is a formulation change required? (a change of drug may be required)
- Has the ward pharmacist been contacted to discuss alternative formulations and to advise on administration?
- Has the prescriber or pharmacist authorised the tablets to be crushed/capsules to be opened and dispersed in water?

Assemble medication and equipment. Prepare each drug separately following hand hygiene procedures. If administering via an oral/enteral (ENFit) syringe, use a fresh syringe each time (do not mix drug, unless instructed by a pharmacist).

Soluble tablets

- Dissolve in 10-15ml water.
- Add thickener if required and administer dose via a teaspoon or oral syringe.

Liquids

- Shake bottle.
- Viscous liquids may be appropriate for administration via a teaspoon.
- Add thickener to runny liquids if required for administration on a teaspoon.
- An oral syringe can be used.

Tablets

- Crush or leave tablets to dissolve in water (use a tablet crusher for crushing).
- Add thickener if required and administer dose via a teaspoon or oral syringe.
- Wash tablet crusher between each medication.

Capsules

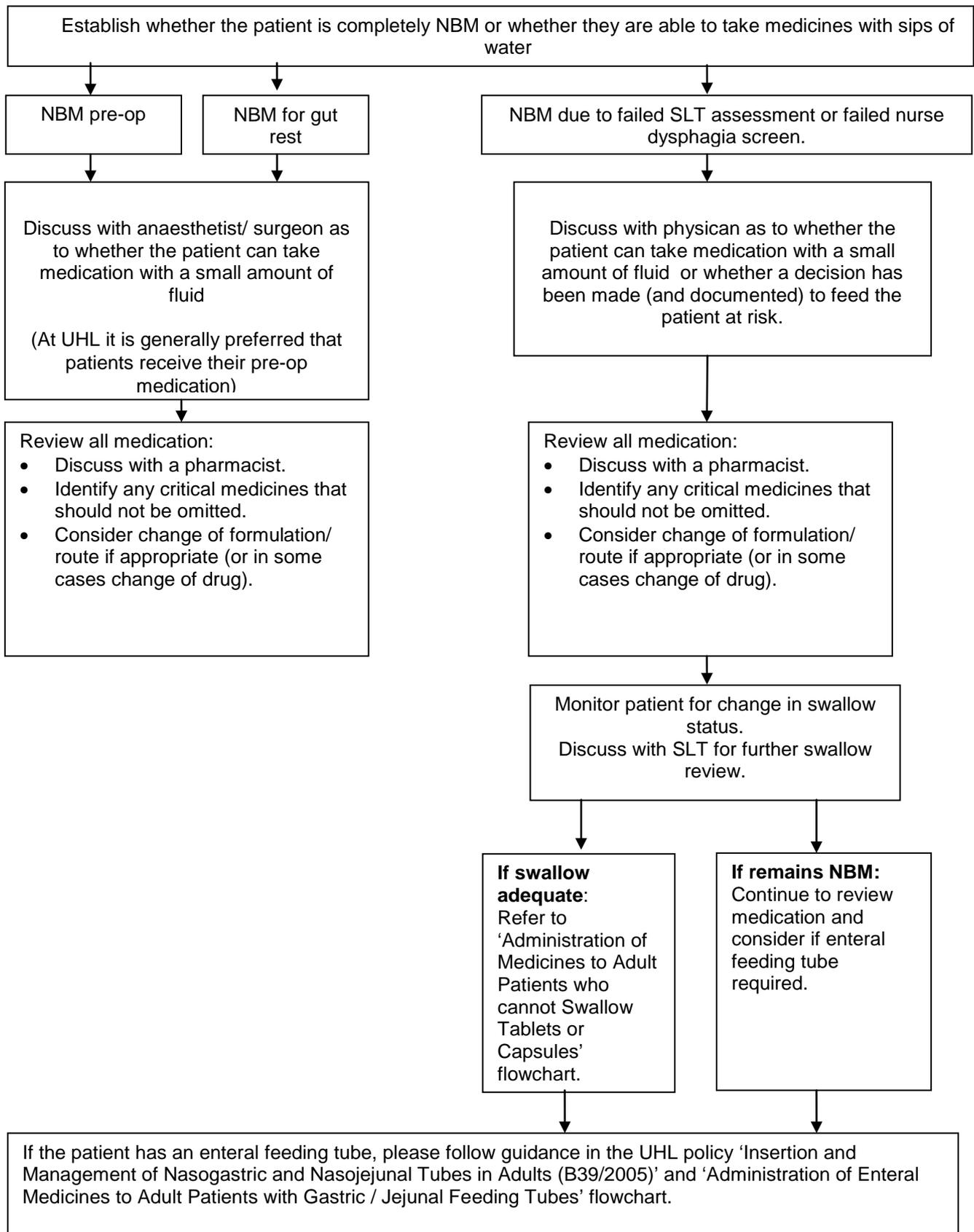
- Open capsule and tip contents into medicine pot.
- Disperse in 10-15ml water.
- Add thickener if required and administer dose via a teaspoon or oral syringe.

Do not crush or open the following tablet/capsule medications:

- Controlled or modified release
- Enteric coated
- Hormones
- Cytotoxic
- Teratogenics

Administer the medication to the patient orally. Ensure the whole dose is administered. Ensure that patients receiving thickened medications do so at the consistency recommended by SLT. Thickener must be prescribed on the in-patient drug chart.

Ensure the patient takes oral fluids or thickened fluids after administration of medication in order to flush the medication into the stomach and reduce the risk of oesophageal irritation. Note that this will not be possible for patients who SLT recommendations are 'not for oral fluids' (Alternative routes of medicine administration should be considered for such patients).



- Establish whether the patient can take medication orally.
- Establish whether there are any absorption issues – if so, consideration will need to be given to alternative routes of administration.
- Ensure that a full medication review has been undertaken and consideration has been given to stopping/holding any non-essential medication.
- Seek advice for fluid restricted patients, as enteral tube flushing volumes may need to be adjusted.
- Never add medication directly to an enteral feed.
- Seek further advice from a pharmacist.

Assemble medication and equipment. Prepare each drug separately following hand hygiene procedures. Use a fresh enteral (ENFit) syringe each time (do not mix drugs, unless instructed by a pharmacist).

- Establish whether a significant gap is required between the administration of medication and feed. (This may be necessary in order to prevent any physical drug-feed interactions).
- Stop the feed.
- Flush the tube with at least 30ml of sterile water.

Soluble Tablets

- Dissolve in 10-15ml sterile water.
- Draw up into enteral (ENFit) syringe and administer down tube.

Liquids

- Shake bottle.
- Draw up into enteral (ENFit) syringe.
- Dilute dose with an equal volume of sterile water immediately before administering down tube.

Tablets

- Crush or leave tablets to dissolve in sterile water in a medicine pot (use a tablet crusher for crushing).
- Rinse tablet crusher between each medication.

Capsules

- Open capsule and tip contents into medicine pot.

Do not crush or open the following tablet/capsule medications:

- Controlled or modified release
- Enteric coated
- Hormones
- Cytotoxic
- Teratogenics

Mix with 10-15ml of sterile water. Draw up each medicine into a separate enteral (ENFit) syringe and administer down tube.

Administer any residual medication left by further diluting with 10-15ml sterile water, drawing up into the enteral (ENFit) syringe and flushing down the tube. This process ensures that the whole dose is administered

Flush tube with 50ml of sterile water following administration of the last drug. If more than one medicine is to be administered, flush between drugs with at least 10ml sterile water to ensure that the drug has been cleared from the tube

Allow feed break if required and restart enteral feed

Tablets or Capsules that Must Not be Crushed / Opened

Appendix Four

Medication Type	Abbreviations	Considerations	Examples
Extended Release	CR – Controlled release CRT – Controlled Release Tablet LA – Long Acting SR – Sustained Release TR – Time release TD – Time Delay SA – Sustained Action XL – Extended Release MR- Modified Release	Crushing or chewing extended release medications will alter the slow-release properties and may result in increasing the risk of adverse effects and drug toxicity and unreliable clinical effectiveness. These preparations must never be crushed and an alternative medicine or formulation should be prescribed. Some capsules containing slow-release granules may be emptied providing the granules remain intact.	Isosorbide mononitrate m/r tablets Nifedipine LA tablets
Enteric Coated	EC EN	When the enteric coating is used to protect the stomach crushing or chewing these medicines may expose the stomach to potentially irritant medicines. When the enteric coated is used to delay drug release and absorption beyond the stomach, crushing or chewing these medicines may result in the medicine not reaching its target.	Naproxen (e/c) Aspirin (e/c) Sulphasalazine (e/n)
Cytotoxic medicines		Crushing, opening or breaking of cytotoxic medication may not only alter the delivery mechanism but could lead to an unwanted airborne release of toxic particles. Nurses crushing tablets could inhale these fine particles.	Methotrexate Cyclophosphamide
Hormonal preparations		Crushing, opening or breaking of these medicines could lead to an unwanted airborne release of toxic particles. Nurses crushing tablets could inhale these fine particles and be exposed to these preparations, which could be of particular risk to those who are pregnant or breastfeeding.	Finasteride Tamoxifen HRT Oral contraceptives
Teratogenic medicines		Crushing, opening or breaking of these medicines could lead to an unwanted airborne release of toxic particles. Nurses crushing tablets could inhale these fine particles and be exposed to these preparations, which could be of particular risk to those who are pregnant or breastfeeding.	Thalidomide Acitretin
Other medicines that are known to be potentially harmful if crushed		Crushing, opening or breaking antibiotic medicines could lead to an unwanted airborne release of toxic particles. Nurses crushing tablets could inhale these fine particles and be at increased risk of sensitisation.	Antibiotics (Penicillins)

