THE PHARMACIST

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QUICK GUIDE

Dysphagia: What general practice pharmacists need to know

Dysphagia, or difficulty swallowing, poses significant challenges in medication management in primary care settings. For general practice pharmacists, understanding dysphagia is critical to ensuring safe and effective medication administration, optimising therapeutic outcomes and minimising risks such as adverse drug reactions (ADRs) and hospitalisations.

This guide provides an overview of dysphagia, including its prevalence, patient groups at risk, the importance of assessing swallowing ability, the risks associated with altering solid oral dosage forms (SODFs) and the role of licensed and unlicensed oral liquid formulations.

Prevalence and patient groups at risk

Dysphagia is a relatively common condition, particularly among older adults and those with specific medical conditions. Studies estimate that 10–40% of patients experience medication dysphagia, defined as difficulty swallowing oral medications, including otherwise healthy individuals.[1] In older populations (over 65 years), the prevalence of dysphagia ranges from 9–14%, increasing with age and in those with neurological conditions such as stroke, Parkinson's disease or dementia.[2] It is estimated

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to affect up to 50% of nursing home residents and 68% of those in care homes with dementia.[3]

Key patient groups at risk include:

- **Older adults:** Age-related changes, such as reduced saliva production and muscle weakness, impair swallowing.[2]
- **Neurological conditions:** Stroke, Parkinson's, dementia, motor neurone disease and multiple sclerosis often disrupt swallowing mechanisms.[2]
- **Post-surgical patients:** Especially those with head, neck or oesophageal surgeries.
- **Patients with enteral feeding tubes:** Often require alternative medication formulations due to inability to swallow SODFs.
- **Polypharmacy patients:** Side effects such as dry mouth increase the likelihood of swallowing difficulties.[1]

Practice pharmacists should proactively identify patients with swallowing difficulties during medication reviews so they can tailor medications and support adherence. Any patient without a known relevant diagnosis who reports swallowing difficulties should be referred promptly to the GP for assessment and referral if required.

Importance of assessing swallowing ability

NICE guidelines on medicines optimisation emphasise the importance of medication reviews to ensure safe and effective use of medicines, including assessing factors that may affect adherence.[4] Failure to assess swallowing ability can lead to non-adherence, compromised therapeutic outcomes and increased healthcare utilisation, yet a study found over 70% of elderly patients were not asked about difficulty swallowing tablets or capsules before being prescribed medication.[5]

Risks of altering solid dosage forms

Patients or carers may resort to crushing tablets or opening capsules to facilitate swallowing, often without informing their pharmacist or prescriber. This practice, known as dosage form modification (DFM), is almost always unlicensed and carries significant risks, including:

- **Altered pharmacokinetics:** Crushing modified-release (MR) or controlled-release (CR) formulations can cause rapid drug release, leading to toxicity or reduced efficacy. For example, crushing morphine MR tablets results in a rapid release of the entire dose, increasing the risk of overdose.[6]
- **Loss of enteric coating:** Enteric-coated (EC) tablets, such as certain non-steroidal anti-inflammatory drugs (NSAIDs), are designed to bypass the stomach to prevent irritation or drug degradation. Crushing these exposes the drug to stomach acid, potentially causing gastrointestinal irritation and decreased effectiveness of the drug.[6,7]
- **Adverse drug reactions (ADRs):** Altering SODFs can increase the risk of ADRs. For instance, crushing digoxin tablets, which have a narrow therapeutic index, can increase bioavailability by up to 50%, leading to toxicity.[8]
- **Medication errors:** A UK hospital-based study found that patients with dysphagia were three times more likely to experience medication administration errors, such as incorrect formulation or omission, due to the complexity of managing altered dosage forms; a study in care homes found similar results.[9]

Studies indicate around 60-70% of patients with swallowing

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difficulties may modify their medications (eg, by crushing tablets) without consulting healthcare professionals, resulting in potential inefficacy or harm.[5,10]

These risks can lead to increased GP appointments, hospitalisations and poorer patient outcomes.

Legal and safety considerations

Crushing tablets or opening capsules may be considered an unlicensed use of medicines under the Human Medicines Regulations 2012; healthcare professionals could therefore be liable for any resultant harm from this practice or advising patients in their care to do this.[11] The NEWT Guidelines for administration of medications to patients with enteral feeding tubes or swallowing difficulties recommend that DFM should only be undertaken as a last resort, with prescriber authorisation and patient consent documented.[7] Practice pharmacists should consult resources like the Summary of Product Characteristics (SmPC), the NEWT Guidelines or the NHS Specialist Pharmacy Service (SPS) website to determine if DFM is safe for specific medications.

Role of oral liquid medicines

The NEWT Guidelines advocate for licensed oral liquid formulations as the preferred method for administering medications to patients with swallowing difficulties, as they maintain efficacy and safety while avoiding the risks of DFM.[7] Liquid formulations are particularly suitable for patients who can safely swallow thin liquids, as determined by a speech and language therapist (SALT) assessment.[12]

Licensed liquid formulations

Many medications commonly prescribed in primary care are available as licensed oral liquid formulations, which are evaluated by the UK Medicines and Healthcare products Regulatory Agency (MHRA) for safety, quality and efficacy.

These formulations are cost-effective and widely available, making them a practical choice for primary care pharmacists. The Swallowing Difficulties website includes a search function to quickly find alternative formulations of specific drugs,[13] while the NEWT guidelines include an A-Z of molecules giving their available formulations and suggesting the most appropriate administration for patients with enteral tubes or swallowing difficulties.[14] The British National Formulary (BNF) also lists licensed oral liquid options where available.[15] Pharmacists should consult SmPCs for specific administration guidance, such as whether the liquid can be thickened for patients with dysphagia. They must ensure that patients or carers are trained to measure doses accurately using appropriate devices (eg, oral syringes) to avoid dosing errors.[7]

Unlicensed liquid formulations ('Specials')

When licensed oral liquids are unavailable, unlicensed 'Specials' may be considered, though they are often expensive, have short expiry dates and require advance ordering.[12,16]

Unlicensed 'Specials' should only be used when licensed alternatives are unsuitable, and their cost and availability must be considered, especially for long-term therapy.

Key recommendations for practice

Based on NICE, NEWT and NHS SPS guidelines, practice pharmacists should adopt the following strategies:

1 **Routine assessment:** During medication reviews, ask patients or carers about swallowing difficulties and document findings.
2 **Prioritise licensed liquids:** Opt for licensed liquid formulations over DFM whenever possible. Consult the BNF or SmPC for availability and administration instructions.
3 **Avoid inappropriate DFM:** Never crush MR, CR or EC formulations, cytotoxic drugs, or those with narrow therapeutic indices (eg, digoxin, warfarin) without specialist advice. Refer to the NEWT Guidelines or SPS resources for crushability information.
4 **Collaborate with SALTs:** For patients requiring texture-modified diets or thickened fluids, involve a SALT to ensure safe administration of medicines with appropriate food or fluid consistency.
5 **Patient education:** Educate patients and carers about the risks of unauthorised DFM and the importance of consulting healthcare professionals before altering medications.
6 **Monitor and review:** Regularly review swallowing ability and medication regimens, especially when patients transition between care settings. Monitor for ADRs and efficacy changes after switching formulations.
7 **Document and authorise:** Ensure prescriber authorisation and patient consent for unlicensed practices like DFM or use of 'Specials' are documented to comply with legal requirements.

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