

Care homes - Assisting people with swallowing difficulties

This bulletin looks at treatment strategies for adults with swallowing difficulties including people in both care homes and domiciliary care settings. It includes dietary modification by prescribing thickeners and other options such as environmental modifications, safe swallowing advice, and the application of swallowing strategies. Nationally the prescribing of thickeners costs the NHS in England and Wales almost £23.6 million annually (extrapolated from ePACT data April - June 2017).

Recommendations

- It is best practice to have a local policy to ensure all adults with dysphagia have an individual management plan.
- People who present with indicators of dysphagia should be referred to healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders.
- The person's individual management plan should contain details of all the relevant treatment strategies required (e.g. environmental modifications, safe swallowing advice, swallowing strategies and dietary modifications) and this should be regularly monitored and updated.
- Swallowing therapy should be offered at least three times a week to people who are able to participate, for as long as they continue to make functional gains. Ensure that effective mouth care is given to decrease the risk of aspiration pneumonia.
- People with dysphagia should have food and fluids in a form that can be swallowed without aspiration and they have adequate mealtime support. Thickeners can be prescribed if appropriate to modify the consistency of foods and fluids.
- The recommendation to prescribe a thickener should come from an appropriately trained healthcare professional, e.g. a Speech and Language Therapist (SLT) after a diagnosis of dysphagia has been made.
- Thickeners should be prescribed by the tin as this is the most cost effective option rather than sachets or pre-thickened drinks. (It may be appropriate to prescribe sachets for occasional use such as when going out for a day.) When thickening foods and fluids only use the scoop provided and always follow the manufacturer's instructions to enable the correct texture to be achieved.
- The person's management plan should contain clear documented details of the consistency of fluids and foods the person is able to manage.
- Add "see the latest SLT assessment for consistency required" to the directions on the prescription and the Medicines Administration Record (MAR) chart. This will allow for any changes in consistency between prescriptions.
- The person's management plan should contain clear documented details of the duration of treatment as for some people dysphagia can be a temporary condition. Review the person at the recommended time to assess whether to continue or discontinue the thickener.
- Review quantities of thickeners prescribed; too many can lead to stockpiling and waste; too little could put people at risk, lead to care homes ordering mid-cycle and borrowing from other residents. Quantities may vary due to the time of year, e.g. more drinks maybe required in the summer and stock level should allow this.

- If several residents in a care home require thickeners, and all have clear documented details of the consistency required in their management plans, consider bulk prescribing thickeners to avoid waste and reduce costs. Prescribe the most cost-effective pack size.
- If the patient is prescribed Oral Nutritional Supplements (ONS) that require thickening ensure that the thickener can be used with ONS products and if this is appropriate for the patient.
- The choice of thickener (starch or gum) should be based on the individual's preference regarding textures, the food and fluids should look appetising and taste palatable to encourage compliance and avoid dehydration.
- Review all medications to ensure they are suitable. If dysphagia is temporary consider whether medicines could be temporarily withdrawn or if dysphagia is long term they may be permanently stopped if the risks outweigh the benefits. Liquid formulations are not always appropriate as they may also require thickening to enable the person to take them. Assess if an alternative formulation or route of administration might be more appropriate. Any queries relating to compatibility of a thickener and medication should be checked with the relevant pharmacist or SLT.

Background

Dysphagia is the medical terminology used to describe eating, drinking and swallowing difficulties. It can lead to malnutrition, dehydration, reduced quality of life, choking and asphyxia.¹ It is a distressing condition for people, as eating and drinking is an essential everyday activity, which is fundamental for survival, and also generally enjoyable. However for people who develop dysphagia it can make mealtimes a challenge rather than a pleasure.² Dysphagia is usually caused by another health condition such as: ³

- A condition that affects the nervous system, e.g. stroke, head injury, or dementia.
- Cancer, e.g. mouth or oesophageal.
- Gastro-oesophageal reflux disease (GORD) where stomach acid leaks back up into the oesophagus

Symptoms include:1

- The inability to recognise food.
- Difficulty placing food in the mouth.
- Inability to control food or saliva in the mouth.
- Difficulty in initiating a swallow.
- Coughing.
- Choking.
- Frequent chest infections.
- Unexplained weight loss.
- Gurgly or wet voice after swallowing.
- Regurgitation.

As well as the feeling of food sticking in the gullet, people with oesophageal disease may have other symptoms, with the person nearly always unable to locate the obstruction accurately.⁴

During oral manipulation and swallowing, liquid flow is turbulent, resulting in eddies and vortices. Healthy people can tolerate these factors and cleanly direct liquids past the airway and into the oesophagus. Individuals with dysphagia, however, find the turbulent and fast flow of liquids difficult to control during passage through the pharynx, resulting in impaired airway protection.⁵ This can lead to complications which include chest infection and in some cases death due to choking on food or as a result of aspiration pneumonia. One of the methods of managing this challenge is to thicken liquids in order that they flow more slowly, allowing the individual time to coordinate safe swallowing.⁵ Thickeners are approved by the Advisory Committee on Borderline substances (ACBS) for the thickening of liquids and foods in dysphagia.⁶ There are many different brands of thickeners available on the market; some contain starch whilst others contain gums. The recommendation to prescribe a thickener should come from a Speech and Language Therapist (SLT) and should be based on the person's degree of dysphagia, the desired consistency or texture required, palatability and cost-effectiveness amongst other considerations.⁷ Other treatment strategies for people with swallowing difficulties include environmental modifications, safe swallowing advice, and the application of swallowing strategies.⁸

National guidance

The National Patient Safety Agency (NPSA) Dysphagia Expert Reference Group in association with Cardiff and Vale University Health Board developed descriptors to detail the types and textures of foods required by people with dysphagia. The descriptors provide standard terminology to be used by all health professionals and food providers when communicating about an individual's requirements for a texture modified diet. The food textures are.⁹

- » B = Thin Purée Dysphagia Diet.
- » C = Thick Purée Dysphagia Diet.
- » D = Pre-mashed Dysphagia Diet.
- » E = Fork Mashable Dysphagia Diet.

Fluids are not included in these descriptors; however the following is guidance for the thickening of fluids:

- » Stage 1: syrup (should pour like single cream).
- » Stage 2: custard (should easily drop off, not pour, from a teaspoon).
- » Stage 3: pudding (should stay on a spoon like whipped cream).¹⁰

Patient Safety (previously a division of the NPSA) has produced guidance which aims to ensure safer practice for adults with learning disabilities who have dysphagia. It highlights best practice and provides resource materials to give practical help.¹ Resources include information for healthcare professionals, patients and carers, care plans and mealtime information sheets. The tools can be adapted for local use and for any adult who has dysphagia.

The National Institute for Health and Care Excellence (NICE) CG68 'Diagnosis and initial management of acute stroke and transient ischaemic attack (TIA)' looks at the avoidance of aspiration pneumonia as part of the initial management. It recommends that for people with dysphagia, food and fluids should be given in a form that can be swallowed without aspiration, following specialist assessment of swallowing.¹¹

NICE CG32 'Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition', recommends:¹²

- People who present with any obvious or less obvious indicators of dysphagia should be referred to healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders.
- Healthcare professionals should recognise that people with acute and chronic neurological conditions and those who have undergone surgery or radiotherapy to the upper aero-digestive tract are at high risk of developing dysphagia.
- When managing people with dysphagia, healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders should consider:
 - » The risks and benefits of modified oral nutrition support and/or enteral tube feeding.
 - » Recurrent chest infections.
 - » Mobility.

- » Dependency on others for assistance to eat.
- » Perceived palatability and appearance of food or drink.
- » Level of alertness.
- » Compromised physiology.
- » Poor oral hygiene.
- » Compromised medical status.
- » Metabolic and nutritional requirements.
- » Vulnerability (for example, immunocompromised).
- » Comorbidities.
- People with dysphagia should have a medication review to ascertain if the current drug formulation, route and timing of administration remains appropriate and is without contraindications for the feeding regimen or swallowing process.
- Healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders should regularly monitor and reassess people with dysphagia who are having modified food and liquid until they are stable.

NICE CG 162 covers the long term rehabilitation for people who have suffered a stroke. This guideline covers swallowing as a key priority for implementation. It recommends:¹³

- Assessing swallowing in people after stroke in line with recommendations in stroke (NICE CG68).
- Offering swallowing therapy at least three times a week to people with dysphagia after stroke who are able to participate, for as long as they continue to make functional gains. Swallowing therapy could include compensatory strategies, exercises and postural advice.
- Ensuring that effective mouth care is given to people with difficulty swallowing after stroke, in order to decrease the risk of aspiration pneumonia.
- Healthcare professionals with relevant skills and training in the diagnosis, assessment and management of swallowing disorders should regularly monitor and reassess people with dysphagia after stroke who are having modified food and liquid until they are stable (see NICE CG32).
- Providing nutrition support to people with dysphagia in line with recommendations in NICE (CG32 and CG68).

The Scottish Intercollegiate Guidelines Network (SIGN) has developed a national clinical guidance (119) for the management of people with stroke: identification and management of dysphagia. The guideline states that diet modification (the alteration of the texture or viscosity of foods and fluids) and use of postures or manoeuvres have been shown to be effective and are standard management of dysphagia following stroke. However it also suggests that the nutritional content of texture modified food could be reduced in the processing and it may also look unappetising leading to poor adherence to such diets.¹⁴

The guidelines make the following recommendations:¹⁴

- Advice on diet modification and compensatory techniques (postures and manoeuvres) should be given following a full swallowing assessment.
- Texture-modified food should be attractively presented and appetising.
- People should have a choice of dishes.
- Texture-modified meals may be fortified to meet nutritional requirements.
- Food and fluid intake should be monitored and, if indicated, a referral made to the dietitian.

Treatment strategies for adults with dysphagia

Treatment for dysphagia may be managed by the multidisciplinary team (MDT).³ SLTs will often provide education and training for those responsible for providing nutrition, hydration and mealtime support for people with dysphagia (e.g. family, healthcare professionals, and relevant others) and maintain links with the MDT to ensure good communication.⁸ The management of dysphagia can be tailored to the person's needs, nature of disease, disorder (progressive versus non-progressive disease) or swallowing function (age-related swallowing problem versus swallowing problems of an aged person with stroke lesion).¹⁵

The person's individual management plan should contain details of the relevant treatment strategies required and this should be regularly monitored and updated. ¹ Management of dysphagia frequently requires environmental modifications (e.g. reduction of visual distractions and noise levels), safe swallowing advice, appropriate dietary modification, and the application of swallowing strategies, which improve the efficiency of swallow function and reduce the risk of aspiration. Frequently used interventions include:^{8,15}

- Modifying the consistency of food.
- Modifying the consistency of fluids.
- Modifying feeding strategies.
- Indirectly modifying swallowing techniques.
- Modifying the physiology of the swallow mechanism during swallowing.
- Modifying posture, e.g. head or body positioning.
- Improving oral hygiene.
- Introducing strategies to increase confidence and reduce fear of choking.
- Educating carers.
- Exercises (manoeuvres).

NICE recommends that swallowing therapy should be offered at least three times a week to people with dysphagia who are able to participate and for as long as they continue to make functional gains. Swallowing therapy could include compensatory strategies, exercises and postural advice. Additionally it is important that effective mouth care is given to people with difficulty swallowing after stroke, in order to decrease the risk of aspiration pneumonia.¹³

The Patient Safety resources 'Ensuring safer practice for adults with learning disabilities who have dysphagia' has an example dysphagia mealtime information form (see appendix 1). This contains some examples of treatment strategies to support people with dysphagia ¹.

Dietary modification of foods and fluids

Changing the consistency of food and liquids to make them safer to swallow is frequently the first line of support for people with dysphagia.^{3,15} Thickeners are an effective way to help people with dysphagia swallow fluids and eat foods safely. There are a number of commercially available thickeners on the market; some are starch-based and some are gum-based.⁶

Starch-based thickeners are commonly prescribed as they have been available longer and are cheaper. However studies have shown that starch-based thickeners have an undesirable "starchy" flavour, are grainy in texture and cause lumping when mixed with fluid, making them less likely to be tolerated. Fluids thickened with a starch-based product have also been shown to become thinner over time as the thickener is broken down by amylase, the enzyme found in saliva, posing a potential safety risk.¹⁰ However, experiments have shown that lowering the pH of the thickened fluids slowed the reduction in viscosity attributable to saliva. At pH 3.5 and below, saliva was found to have no significant effect on viscosity.¹⁶ Gum-based thickeners have been shown to be more stable and maintain their thickness due to their amylase resistant properties. They are also less grainy and are said to be more palatable when mixed in fluids.¹⁰ However the choice of thickener (starch or gum) should be based on the individual's preference regarding textures, the food and fluids should look appetising and taste palatable to encourage compliance and avoid dehydration.^{7,10}

For adult use, thickeners in the diet are generally considered benign.⁵ however it should be noted that they can contain high sodium content.¹⁷ Many elderly people tend to take medications for other conditions and dysphagia will affect the ability to swallow medication as well as foods and fluids. Additionally increasing the viscosity by thickening foods and liquids can reduce the dissolution, disintegration and therefore the bioavailability of other medications. A study has shown that a 150 mPa·s (millipascal-second is a measurement unit of dynamic viscosity) solution thickened with hydroxypropyl methylcellulose impeded the dissolution of paracetamol. At 60 minutes less than 40% of the drug had been dissolved, although drug solubility was not affected. The study also demonstrated the effect of a film coating resulted in only 30% of the paracetamol being dissolved after one hour in a viscous solution.⁵ Therefore prescribers should ensure that the minimum thickness is used so the person can swallow safely, but the effect on bioavailability of other medications is minimised.⁶

It is important that if a person requires a thickener a review of all their medications is completed to ensure they are suitable. If dysphagia is temporary consider whether unsuitable medicines could be temporarily withdrawn or if dysphagia is long-term they may be permanently stopped if the risks outweigh the benefits. Liquid formulations are not always appropriate as they may also require thickening to enable the person to take them. Assessment should be made to ascertain if an alternative formulation or route of administration might be more appropriate. Any queries relating to compatibility of a thickener and medication should be checked with the relevant pharmacist or SLT.

When thickening foods and fluids it is important that only the scoop provided with the thickener is used as these can vary between different products. Using the correct scoop will enable the correct amount of thickener to be mixed with the correct amount of foods and fluids. Always follow the manufacturer's instructions to enable the correct texture to be achieved. Consider adding "see the latest SLT assessment for consistency required" to the directions on the prescription and the MAR chart. This will allow for any changes in consistency between prescriptions.

If an ONS requires thickening ensure that the thickener can be used with the ONS product prescribed. It may not be necessary to use pre-thickened supplements which can be more expensive. The SLT can provide advice on the most appropriate treatment strategy for the individual patient.

Care homes and domiciliary care

A report by the Health Foundation found evidence suggesting a high rate of dehydration in older people, and varying studies report that 50-90% of those living in a care home have inadequate fluid intake. This may be due to a refusal to drink adequate fluids or an inability to drink without assistance. Although there is little research evidence to demonstrate a link between dysphagia and dehydration, clinical experience suggests one does exist.¹⁰ Therefore if a person in a care home or a person with domiciliary care in their own home presents with signs of dysphagia they should be referred to the relevant healthcare professionals for diagnosis, assessment and management.

An SLT can provide education and training for care home staff and domiciliary carers responsible for providing nutrition, hydration and mealtime support for people with dysphagia. It is important that the relevant training is given to prevent malnutrition, dehydration, aspiration pneumonia and choking. The training should support carers to deliver the treatment strategies (e.g. environmental modifications, safe swallowing advice, swallowing strategies and dietary modifications) detailed in the persons individual management plan. If the treatment strategies include the use of a thickener then carers and catering staff should be trained on how to mix fluids and foods to the consistency documented. Access to thickeners should be restricted to prevent untrained members of staff or the patient's relatives giving food or fluids inappropriately. Additionally the water jugs in the resident's rooms need to identify

that the resident's fluids have to be thickened in case ordinary water is given without thickener. The directions on the prescription and MAR chart should advise that the latest SLT assessment is checked for the consistency required. This will allow for any changes in consistency between prescriptions. For people in care homes teamwork is essential so that clinical and catering staff communicate and work together effectively, this is particularly important at mealtimes so residents with dysphagia can enjoy their meals safely.¹⁰

In addition to details of the treatment strategies required, the person's management plan should contain clear details of the duration of treatment as for some people dysphagia can be a temporary condition. This will highlight when the person is due to be assessed by an SLT and a decision whether to continue or discontinue the thickener is made.

It is important to review the quantities of thickeners prescribed; too many can lead to stockpiling and therefore waste. Too little could put people at risk, lead to care homes ordering mid-cycle and borrowing from other residents. It is important to remember that quantities required may vary due to the time of year, for example more drinks maybe required in the summer. If the care home residents have clear documented details of the consistency required in their management plans then consideration could be given to bulk prescribing to avoid waste and reduce costs. The most costeffective pack size should be prescribed.

Costs

The amount of thickener required by each person per month will vary, and so will the cost, depending on the quantity of fluid they drink and which consistency is required.⁷

Product	Indication	Туре	Gluten free (GF)/Lactose free (LF)	Net price/pack size	Quantity per serving	Cost per serving*
Multi- thick	Liquids and foods	Starch	GF and LF	250g/£4.83	4-6 scoops (10.8g-16.2g)	21p - 31p
Nutilis Liquids Powder and foo	Liquids	Starch	GF and LF	20 × 12g sachets/£6.80	1 sachet (12g)	33p
	and foods	and gum		300g/£5.11	3-4 scoops (12g-16g)	20p - 27p
Resource Foods ThickenUp	Foods	ods Starch	GF and LF	75 x 4.5g sachet/£18.49	3 sachets (13.5g)	71p
				227g/£4.66	3 scoops (13.5 g)	28p
Thick and Easy	Liquids and foods	Starch	GF and LF	100 x 9g sachet/£32.00	1 and 1/2 sachets (13.5g)	47p
				225g/£5.21	3 scoops (13.5g)	31p
				4.45kg/ £87.18	3 scoops (13.5g)	25p
Thicken Aid	Liquids and foods	Starch	GF and LF	100 x 9g sachet/£22.40	1.5 sachets (13.5g)	34p
				225g/£3.71	3 scoops (13.5g)	22p
Thixo-D	Foods	Starch	GF and LF	375g/£6.72	2.5 scoops (12.5g)	22p

Product	Indication	Туре	Gluten free (GF)/Lactose free (LF)	Net price/pack size	Quantity per serving	Cost per serving*
Vitaquick	Foods	Starch	No	300g/£7.27	Approx. 3 scoops (15g)	36p

* A serving is 200ml of thin fluid thickened to stage 2 custard consistency.

$abic \mathbf{Z}$, \mathbf{U}	Table 2: Gum	based thickeners	price comparison	table ^{6,26-30}
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Product	Indication	Туре	Gluten free (GF)/Lactose free (LF)	Net price/pack size	Quantity per serving	Cost per serving*
Nutilis Liquids Clear and foods		Gum	GF and LF	24 x 3g sachet/£11.04	2 sachets	92p
	and foods	Cum		175g/£8.46	2 scoops (6g)	29p
Resource ThickenUp		Gum	GF and LF	24 x 1.2g sticks/£5.28	4 sticks	88p
Clear				125g/£8.46	4 scoops (4.8g)	32p
	Liquids and foods	Gum	GF and LF	100 x 1.4g sachet/£23.00	4 sachets	92p
				126g/£8.80	4 scoops (5.6g)	40p
Swalloweze Clear	Liquids and foods	Gum	GF and LF	165g/£6.00	3 scoops (5.4g)	20p

* A serving is 200ml of thin fluid thickened to stage 2 custard consistency.

Table 3: Ready mixed starch-based drinks price comparison table^{6,28,31,32}

Product	Туре	Gluten free (GF)/ Lactose free (LF)	Net price/ pack size	Quantity per serving	Cost per serving*
Resource Thickened Drink	Ready mixed starch- based drinks	GF and LF	114ml/73p	1 x 114ml drink	73p
SLO Drinks	Ready mixed starch- based drinks	GF and LF (tea, coffee and hot chocolate GF only)	25 x 115ml/£7.50	1 x 115ml drink	30p

In England and Wales, almost £23.6 million (ePACT April to June 2017) is spent on thickeners annually. Assuming there is a 10% wastage in this figure, a 10% reduction in prescribing would equate to savings of £2.36million annually. This equates to £4,063 per 100,000 patients.

Thickeners should be prescribed by the tin (as this is the most cost effective option) rather than sachets or pre-thickened drinks. ± 6.3 million is spent on sachet thickeners or pre-thickened drinks annually in England and Wales. Tins are on average 45% cheaper, so a saving of ± 2.9 million is available by switching pre thickened drinks and sachets to tins. This equates to $\pm 4,887$ per 100,000 patients..

Summary

- Dysphagia is the medical terminology used to describe eating, drinking and swallowing difficulties. It can lead to malnutrition, dehydration, reduced quality of life, choking and asphyxia.¹
- Treatment may be managed by a MDT.³ People with dysphagia should have an individual management plan containing details of the relevant treatment strategies required and this should be regularly monitored and updated.¹ Management frequently requires environmental modifications, safe swallowing advice, appropriate dietary modification, and the application of swallowing strategies. NICE recommends that swallowing therapy (including compensatory strategies, exercises and postural advice) should be offered at least three times a week.¹³
- Thickeners are an effective way to help people with dysphagia swallow fluids and eat foods safely. There are a number available, some are starch-based and some are gum-based.⁶ The recommendation to prescribe a thickener should come from an appropriately trained healthcare professional, e.g. an SLT. Fluids thickened with a starch-based product have also been shown to become thinner over time as the thickener is broken down by amylase.¹⁰ Gum-based thickeners have been shown to be more stable and maintain their thickness due to their amylase resistant properties. They are also less grainy and are said to be more palatable when mixed in fluids.¹⁰ The choice of thickener (starch or gum) should be based on the person's degree of dysphagia, desired consistency required, the texture required, palatability and cost-effectiveness amongst other considerations.^{7,10}
- For people in care homes or with domiciliary care in their own home an SLT can give training on how to mix fluids and foods to the consistency documented in the management plan. The directions on the prescription and MAR chart should state "see the latest SLT assessment for consistency required" This will allow for any changes in consistency between prescriptions. The management plan should also include clear details of the duration of treatment as for some people dysphagia can be a temporary condition.
- Thickeners should be prescribed in appropriate quantities to avoid over-ordering, stockpiling and waste or under-ordering, putting people at risk, care homes having to order mid-cycle and borrow from other residents. If the consistencies required are clearly documented in the management plan consider bulk prescribing (the most cost effective pack size) for care homes to avoid waste and reduce costs. The most cost-effective product is tins rather than sachets or pre-thickened drinks.
- The persons other medications should be reviewed to ensure they are suitable for a person with dysphagia; discontinuation, alternative formulations or routes of administration should be considered. Liquid formulations may not appropriate as they may also require thickening to enable the person to take them.

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Additional PrescQIPP resources



Briefing

Available here: https://www.prescqipp.info/resources/category/402-care-homes-assisting-people-withswallowing-difficulties



Data pack

Available here: <u>https://pdata.uk/views/B188_Carehomes-Assistingpeoplewithswallowingdifficulties/</u> FrontPage?:iid=1&:isGuestRedirectFromVizportal=y&:embed=y

Information compiled by Sarah Clarke, PrescQIPP CIC, September 2017 and reviewed by Katie Taylor, Senior Medicines Evidence Reviewer, October 2017.

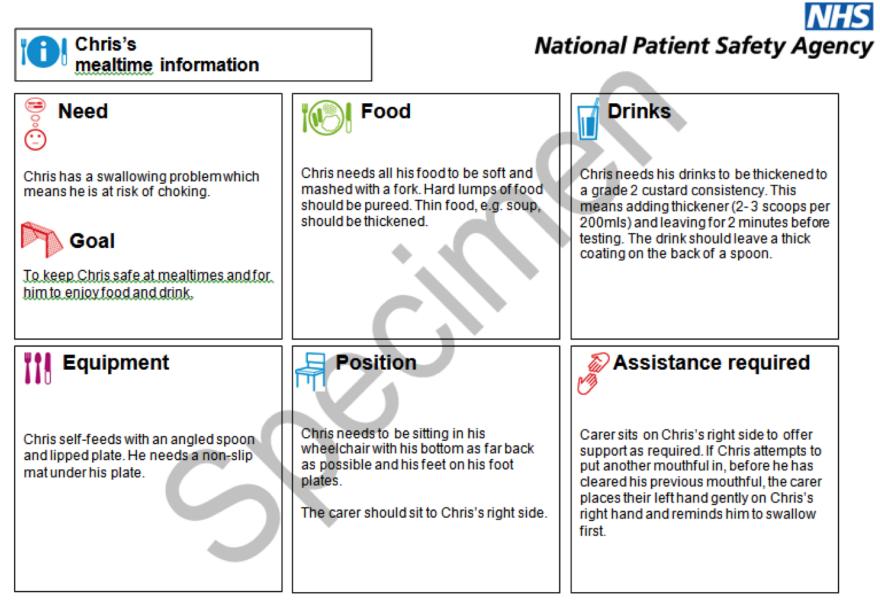
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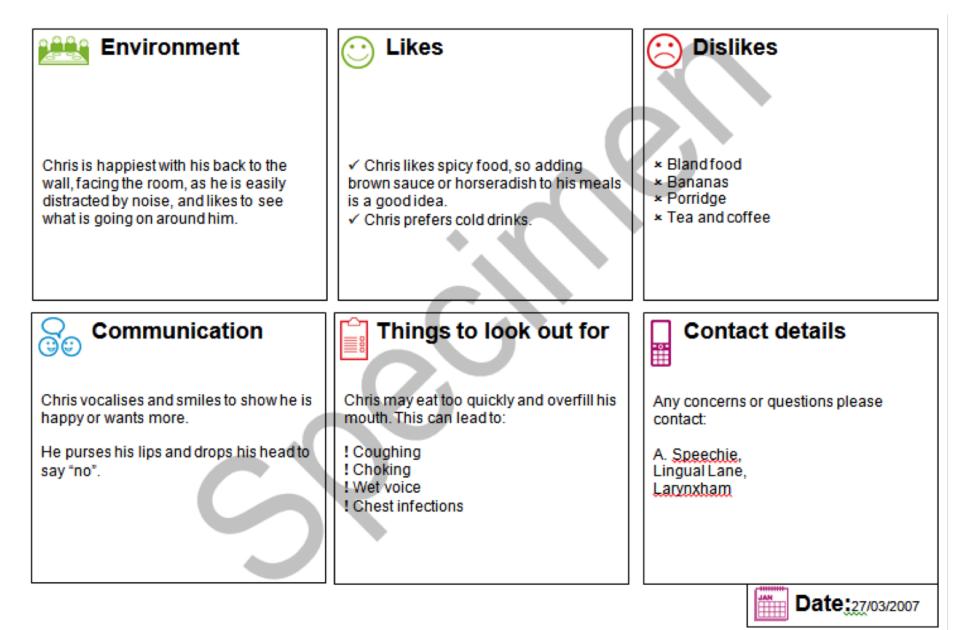
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The use and application of this guidance does not override the individual responsibility of health and social care professionals to make decisions appropriate to local need and the circumstances of individual patients (in consultation with the patient and/or guardian or carer). <u>Terms and conditions</u>

Appendix 1 - Dysphagia example mealtime information form¹⁶



NPSA\ A Kely, N Carter\ Version 1\ May 2005



NPSA\ A Kely, N Carter\ Version 1\ May 2005