People with swallowing difficulties are at risk of choking, dehydration and aspiration. A care home company developed training and compared the use of thickeners.

Use of fluid thickener to reduce dysphagia risk

In this article...

- Risks associated with swallowing difficulties
- Use of fluid thickeners to improve dysphagia care
- A training programme to improve staff dysphagia awareness

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Swallowing difficulties are common among care home residents, and increase their risks of a range of conditions. A care home provider evaluated the use of fluid thickeners to reduce these risks, and implemented an initiative to improve understanding of dysphagia among both care and catering staff. This included changing the thickeners used and ensuring there was some consistency with regard to the terminology used related to food textures, as well as undertaking staff training.

In addition to the physical effects of dysphagia, the condition also has a negative effect on quality of life. Fluid thickeners

A key element in reducing the risk of choking and aspiration when drinking is to modify the texture of the fluid consumed by people with dysphagia. Thickened fluids are easier to swallow as they enter the pharynx slowly, allowing time for the pathway to the lungs to be closed off to avoid aspiration and choking. Commercially available powdered thickeners are prescribed to help make fluids safer to drink; many are made with starch but newer gum-based products are emerging.

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 (Lotong et al, 2003). 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.

In contrast, 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 (Mills, 2008).

Observation of the use of prescribed thickeners has highlighted variations in how they are used and in the terminology used to record individual required consistencies (McCormick et al, 2008). Phrases such as “just add enough until it looks right” or “add some more if it looks too thin” have been heard. Box 1 outlines correct use of fluid thickeners.

5 key points

1. Dysphagia puts people at risk of malnutrition, dehydration, choking and aspiration
2. The use of prescribed thickeners in food and fluid promotes safety and can enhance quality of life
3. Training for clinical and catering staff is key to understand modified diets and fluids
4. Communication between key staff is vital to make sure modified fluids and diet are appropriate and consistent
5. Involving all health professionals ensures a consistent approach to safety regarding people with dysphagia

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Improving dysphagia care

Barchester Healthcare provides care for people living in more than 200 care homes, many of whom have a diagnosed swallowing difficulty. We recognised the importance of ensuring they can drink safely and that we needed to introduce staff training and education on the issue.

We incorporated the Dysphagia Diet Food Texture Descriptors (National Patient Safety Agency et al, 2012) into our nutrition strategy to standardise terminology used by staff, but recognised that we needed to take a structured approach to education to ensure consistently high-quality care for people with dysphagia in all our homes. This would include information about dysphagia generally, followed by the correct use of thickening products.

Aims of the project

The main aims of the project were to:

- Reduce the risk of dehydration for people requiring thickened fluids;
- Train staff in the correct use of thickeners;
- Ensure that residents with dysphagia were receiving palatable fluids;
- Find out whether starch-based or gum-based products were preferred.

Preparation

Forty Barchester Healthcare homes were asked to provide information about the number of people currently prescribed a thickener and what product this was. The majority had been prescribed a starch-based product by their GP and had been using this for some time. The need for modified food and fluids was discussed with our central hospitality operations manager, who confirmed that catering and hospitality staff were not always aware of the correct use of thickeners, which may increase risk for residents with dysphagia.

We decided to meet representatives from two key companies, one producing a starch-based thickener and one manufacturing a gum-based product. They were asked to outline their product, how it was used and the support their company could offer Barchester Healthcare and its homes.

Use of fluid thickeners

Fluid thickened to a custard consistency should easily drop off a teaspoon

- Follow manufacturer’s instructions
- Make sure you know how much fluid different containers hold
- Know your consistencies:
  - 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)

Training

Teamwork is essential at mealtimes so residents with dysphagia can enjoy their meals safely. The training brought together clinical and catering staff from the homes who have key responsibility for nutrition and hydration. We hoped this would promote effective communication between the two areas and a clearer understanding of their roles and problem-solving skills.

A series of three-hour training sessions were attended by key staff from each home - these were mainly head chefs, senior nurses and care staff with a keen interest in nutritional issues. Each session was divided into an informative and lively overview of dysphagia, a comparison of starch-based and gum-based products with a practical demonstration, and tasting session. This was followed by a hands-on practical cooking and tasting workshop to discover how thickeners can be used in food to enhance the palatability of modified diets. The workshops were all well received.

Feedback suggested the training would result in:

- Effective communication within the homes;
- Correct use of the thickeners;
- Examination of the variety of meals and drinks that can be produced using a thickener.

Evaluation

The training sessions were followed by an evaluation of starch-based and gum-based thickeners with regard to mixing and ease of use. Nine homes were asked to participate in the evaluation and were assisted by Nutricia to gather data on use of both types of products. Although this was a small and non-scientific evaluation, the input from staff teams was consistent and professional. All home managers were asked to discuss the evaluation with local GPs and given a pro-forma letter to send to them. We felt that GP support for the evaluation was important to ensure continued use of the most suitable product after the evaluation; most GPs were happy to support the evaluation.

Individuals with dysphagia and their relatives were informed of the evaluation and had the opportunity to decline to participate.
Nursing Practice

Innovation

<table>
<thead>
<tr>
<th>TABLE 1. STAFF QUESTIONNAIRE RESULTS</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>When mixing thickener with a</td>
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<tr>
<td>transparent fluid (for example</td>
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<tr>
<td>water) how clear/transparent was it?</td>
</tr>
<tr>
<td>- Completely/almost clear</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>- Very easy</td>
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<tr>
<td>11.5</td>
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<tr>
<td>- No problems</td>
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<tr>
<td>16</td>
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<td>- Lumping</td>
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<tr>
<td>84</td>
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<td></td>
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<tr>
<td>How easy was it to mix the drinks?</td>
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<tr>
<td>- Very easy</td>
</tr>
<tr>
<td>11.5</td>
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<tr>
<td>- No problems</td>
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<tr>
<td>16</td>
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<tr>
<td>- Lumping</td>
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<td>84</td>
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<td></td>
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<tr>
<td>Did you notice any changes to the</td>
</tr>
<tr>
<td>drinks over time?</td>
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<tr>
<td>- Yes</td>
</tr>
<tr>
<td>84</td>
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<tr>
<td>- No</td>
</tr>
<tr>
<td>16.6</td>
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<td></td>
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<tr>
<td>Which thickener did you prefer?</td>
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<td>(No preference: 24%)</td>
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<tr>
<td>8</td>
</tr>
<tr>
<td>68</td>
</tr>
<tr>
<td>Comments regarding changes using the</td>
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<tr>
<td>starch-based thickener: “continues to</td>
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<tr>
<td>thicken”, “thins over time”,</td>
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<tr>
<td>“separates”, “issues with thickening</td>
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<tr>
<td>and thinning”</td>
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</tbody>
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Results

Results from the staff questionnaires showed that a gum-based thickener was clearer when mixed and easier to mix with fewer problems, and no “lumping” was reported (Table 1). The gum-based thickener also demonstrated a low incidence of drinks changing over time (for example, continuing to thicken).

Staff also reported being happy with the gum-based product and said residents preferred the texture, taste and appearance of that over the starch-based alternative. Staff felt it was easy and quick to mix and instructions were easy to follow.

As a result of the evaluation we decided to extend the training nationally across all our homes. A further evaluation of starch-based and gum-based thickeners is being explored to confirm our findings. This will help us to influence the prescribing of gum rather than starch-based products.

Implications for practice

We have continued to provide staff training with the support of Nutricia, and to invite GPs to visit at mealtimes to demonstrate the use of thickeners and discuss the benefits of choosing a suitable gum-based product against the costs of hospitalisation and trauma of a person who has episodes of choking and aspiration. The focus on safety and palatability are two key areas that staff discuss with stakeholders in an attempt to maintain the quality of life of our residents.

Dysphagia is poorly understood by many frontline health professionals and this exposes people to avoidable discomfort, pain or even death. Practical education will help increase staff awareness and ensure thickeners are used consistently, thereby helping to improve safety.

Dysphagia Game

The NHS is currently developing The Dysphagia Game, a new game-based learning programme to help improve dysphagia care. Barchester Healthcare has actively worked in partnership with the following organisations to develop this unique game-based training tool:

- NHS England;
- Royal College of Speech and Language Therapists;
- British Dietetic Association;
- British Association of Parenteral and Enteral Nutrition;
- National Nurses Nutrition Group;
- National Association of Care Catering;
- Focus Active Learning; and
- Nutricia.

The Dysphagia Game (www.dysphagia game.com) is a board game for face-to-face engagement in healthcare. An online app version is also available and can be played anywhere on any device.

References

Barnett E (2014) Compliance with NPSA Dysphagia Diet Texture Descriptors. The Dietitians’ Magazine; 4, 01. tinyurl.com/NPSACompliance


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