Department of Health

Hospital Food Standards Panel – Summary Cost Benefit Analysis

Background

In August 2014, The Hospital Food Standards Panel published a series of recommendations to be included in the 2015/16 NHS Standard Contract. This mandates the requirement for all NHS hospitals to develop and maintain a food and drink strategy. As part of this, compliance with the following 5 sets of guidelines is required:

-The 10 key characteristics of good nutritional care [Nutrition Alliance]

-Nutrition and Hydration Digest [British Dietetic Association]

-Malnutrition Universal Screening Tool (MUST) [British Association of Parenteral and Enteral Nutrition (BAPEN)] or equivalent validated nutrition screening tool

-Healthier and More Sustainable Catering – Nutrition Principles [Public Health England]

-Government Buying Standards for Food and Catering Services [Department of Environment, Food and Rural Affairs (Defra)]

This document sets out the estimated overall costs and benefits to the NHS of implementing the above guidelines. These calculations present the best estimate of what could occur on a national level - circumstances in individual hospitals will likely differ from those used here. As many hospitals currently satisfy some of these guidelines, not all sections may be applicable to every organisation. The figures presented below show the estimated annual costs and benefits once the guidelines have been fully adopted. It is recognised that some aspects of these guidelines will not be achievable immediately, and that there will be additional costs faced by organisations during the transitional period. The calculations presented here have assumed that full compliance is achieved after 1-2 years, with the specific costs of familiarisation identified separately.

Analysis

A wide degree of consensus on what represents 'good practice' means that there is considerable overlap between the 5 guidelines. As such, rather than presenting an assessment for each of the recommended guidelines, we individually analyse key actions. The guidelines that these actions relate to are identified in the relevant sections.

Nutritional standards for staff food [Government Buying Standards for Food and Catering Services]

The Government Buying Standards for Food and Catering Services contain a series of requirements for food nutritional content, sustainability and animal welfare. We have focused on the nutritional aspects of these guidelines, which when implemented can help reduce staff consumption of salt and saturated fats.

A Defra assessment of Food GBS[1] found that the nutritional guidelines could be achieved at no or minimal cost. The experience of care homes in implementing Government Buying Standards provided a plausible estimate of what reduction in salt and saturated fat may be achievable in hospitals. This was then combined with the numbers of staff using hospital canteens and academic studies of the health implications of reduced salt and saturated fat consumption to estimate an overall health benefit. The figures below represent the societal value of these gains to staff health.

	Value
Ongoing annual cost	£0m
Ongoing annual saving	Not identified
Additional monetised benefit	£1.3m (£0.6m-£2.2m)
One-off compliance cost	£0m

Use of menu planning software [Healthier and more sustainable catering guidance]

Nutrient analysis software enhances menu planning by ensuring that menus are designed to provide appropriate levels of macronutrients. A variety of spreadsheet tools and software packages are available, some for free (as provided on the Hospital Caterers Association website) and others at cost (a list of examples is provided in the BDA guidance). Evidence from the HCA suggests that the majority of hospitals, over 70%, currently use menu planning software, but that some may not.

The one-off cost of complying with this action has been identified as the staff time required to familiarise with any new software tools, alongside the cost of purchasing nutritional software (the central estimate assumes free software is used, the higher estimate is based on an online price quote). It is not expected that use of these tools will increase long-term running costs, and it is possible that they may streamline any planning process.

The benefits associated with using menu planning software have not been directly assessed, but are assumed to assist in achieving compliance with the Food GBS.

	Value
Ongoing annual cost	£0m
Ongoing annual saving	Not identified
Additional monetised benefit	Not identified
One-off compliance cost	£0.01m (£0.01m-£0.03m)

Multi-disciplinary menu planning [BDA guidance, 10 key characteristics]

The importance of multi-disciplinary input into the menu planning process is stressed by many dietetic professionals. We have modelled the costs associated with biannual reviews from a group of doctors, nurses, dietitians, pharmacists and catering managers. No direct benefits have been identified from this action, but it is believed to contribute to improving patient outcomes. Whilst it is recognised that many hospitals may already undertake such meetings, with no data on uptake we estimate the cost of providing multi-disciplinary team reviews at every hospital.

[1] DEFRA Impact Assessment on Government Buying Standards for Food and Catering Services

	Value
Ongoing annual cost	£0.3m
Ongoing annual saving	£0m
Additional monetised benefit	Not identified
One-off compliance cost	£0

Dedicated catering liaisons [BDA guidance]

A problem often highlighted in the provision of hospital food is a lack of communication between clinical and catering staff. Dedicated catering liaisons help to bridge this gap and ensure that meals are sufficiently adjusted to patients' needs.

It is not possible to precisely calculate the current provision of dietitians acting in a liaison role. However, it is possible to assess overall levels of dietetic cover at trust level, and get an illustrative picture of whether this allows for sufficient collaboration. We identify the additional costs required to ensure a full FTE dietetic manager [2]is available at each trust as an example of the level of staffing required to provide a dedicated catering liaison.

It has not been possible to attribute specific cost savings or benefits to patients as a result of complying with this standard, but it is expected to contribute to improving both patient experience and safety.

	Value
Ongoing annual cost	£1.6m
Ongoing annual saving	Not identified
Additional monetised benefit	Not identified
One-off compliance cost	£0

Weekly malnutrition screening [10 key characteristics, BDA Guidance, BAPEN MUST]

It is estimated that at least 25% of hospital inpatients are malnourished or at risk of malnutrition. However, not all patients are assessed for this risk on admission. Likewise, there are patients spending long periods of time in hospital who are at risk of becoming malnourished during their stay.

Surveys performed by BAPEN indicate that approximately 90% of patients are currently screened for malnutrition on admission. This is not distributed evenly across hospitals – there are some sites where screening levels are low or unknown.

Screening for malnutrition in itself does not deliver benefits to patients. As such, we assess the need for patient assessments and nutritional supplementation where necessary.

The total cost estimated for implementing weekly screening considers the time taken to perform the screening, subsequent assessment where required and nutritional support of those patients found vulnerable.

Proper treatment of malnutrition can substantially lower lengths of stay. Using both peer reviewed academic literature and studies of hospital data, we have estimated the number of people who

[2] Salary taken from PSSRU 2012/13 Unit costs and include overheads

could realistically benefit from increased screening. The benefits calculated only reflect the savings to hospitals through reduced bed days. The benefits to patients of avoiding malnourishment have not been quantified, although we would expect there to be an improvement in patient welfare.

	Value
Ongoing annual cost	£1.5m (£0.8m-£2.2m)
Ongoing annual saving	£2.5m (£1.7m-£2.5m)
Additional monetised benefit	Not identified
One-off compliance cost	£0.01m

Snack provision [BDA Guidance]

Nutrient provision is aided by the availability of between-meal snacks. These are an important part of most patients' diets, but can especially help vulnerable patients who are less able to eat larger meals and are as such at risk of becoming malnourished.

The majority of hospital sites currently provide snacks at least twice a day. However, around 10% only provide snacks once per day or not at all. The BDA suggest that an ideal snack should contain 150 kcal and 2 g of protein. Using these criteria, a selection of snacks available through NHS Supply Chain were identified, and were generally found to cost between 10p and 30p per serving. The cost of making these snacks available to all patients at least twice daily is presented below.

It has not been possible to quantify the specific benefit to patients caused by this additional snack provision.

	Value
Ongoing annual cost	£0.7m (£0.4m - £1.1m)
Ongoing annual saving	£0m
Additional monetised benefit	Not identified
One-off compliance cost	£0m

Improved patient safety [BDA guidance, 10 key characteristics]

Many of the actions that will be undertaken as part of implementing these guidelines have not had specific benefits assigned to them. However, there is expected to be a general improvement in patient safety, specifically in terms of the number of nutrition related patient safety incidents avoided.

Analysis of a 2006/07 survey of National Patient Safety Agency data found that nearly 7600 nutrition related patient safety incidents occur each year. Based on the descriptions of these cases, we estimate that 30%[3] may be avoided through the implementation of these recommendations. Fully capturing the benefit of avoiding these incidents is difficult due to the wide range in potential

[3] This is based on the avoidance of the majority of incidents classified as "Nutritional assessment or support", "Consequences of malnutrition", "Provision of nutrition via oral feeding", "Fluid management" and "Food hygiene and safety" and a small (<10%) proportion of otherwise categorised incidents.

severity. As such, only a minimal baseline has been calculated – in terms of the expected improvement in patient wellbeing due to not experiencing an incident. The monetised value of this improvement in quality of life is presented below.

	Value
Ongoing annual cost	£0m
Ongoing annual saving	Not identified
Additional monetised benefit	£0.2m
One-off compliance cost	£0.03m

Waste policy and audit [BDA guidance]

Food waste represents an important economic and clinical issue – food not eaten does not only represent an unnecessary cost, but may also imply that patients are not receiving sufficient nutritional support. Most hospitals already have waste policies and record bulk waste as part of the Estates Return Information Collection dataset. However, the use of plate waste audits appears to be far more ad hoc. With no systematic data on the prevalence of plate waste audits, we have looked at the case where all hospitals are required to implement a new audit system.

It is recognised that the specific implementation of any audit will need to be determined at a local level. However, an example is required to calculate a plausible estimate of total costs. We consider a monthly audit, examining 5% of meals served on each audit day, with the results subsequently analysed by a dietitian. The total staff costs of performing these audits are presented below.

Evidence on current levels of hospital plate waste is limited, but studies suggest that it may be upwards of 14% on average. 'Managing food waste in the NHS' states a target level of 10% plate waste. Our central estimate deems a 4% reduction could be achievable through iterative adjustments to menus in response to the results of plate waste audits. This could result in significant cost savings by reducing purchases of ingredients – given the £541m annual expenditure on providing catering services for patients, only small changes are required to achieve these savings. These potential savings have been reduced to account for the fact that a reduction in waste may not necessarily translate into a reduction in food purchases.

	Value
Ongoing annual cost	£0.5m
Ongoing annual saving	£4.6m (£1.6m - £6.8m)
Additional monetised benefit	£0m
One-off compliance cost	£0m

Summary

When fully implemented, these guidelines are expected to cost the NHS approximately £7m (£4.9m - £9.1m) each year. However, through reducing length of stay and improving catering efficiency, savings of £9.6m (£5.0m - £11.9m) may be realised. This results in an overall annual saving to the

NHS of approximately £2.55m. In addition to this a further £1.5m (£0.8m - £2.4m) is expected in terms of health benefits to staff and patients.