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Hospital Catering and Nutrition

Powys Teaching Health Board

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Summary

1. Hospital catering services are an essential part of patient care given that good quality, nutritious meals, plays a vital part in patients' rehabilitation and recovery. Effective catering services are dependent on sound planning and co-ordination of a range of processes involving menu planning, procurement, food production, distribution of meals to wards and assisting patients at mealtimes. Good communication is required across the range of staff groups involved, including managers, catering staff, dieticians, nurses, support staff and porters.
2. The outcome should be a flexible, cost-effective catering service that provides a good choice of nutritious meals that can accommodate patients' specific dietary requirements. Patients' nutritional status needs to be properly assessed and monitored, and arrangements put in place to help patients eat and enjoy their meals in an environment conducive to eating.
3. There is recognition of the importance of hospital food in supporting patients' recovery in a number of Assembly Government initiatives. The most recent of these takes the form of a Hospital Nutritional Care Pathway and the development of all-Wales charts to record food and fluid intake. There has also been an *Improving Nutritional Care* training programme for all ward managers. These approaches support the *Free to Lead, Free to Care* initiative, which is designed to empower ward sisters to take greater control of events on their ward. Best practice in nutritional care is embedded through specific healthcare standards and the *Fundamentals of Care* ward level audit tool.
4. Work by the Audit Commission in Wales in 2001-02 showed that there were some encouraging examples of good practice in relation to hospital catering, but these needed to be replicated more widely and practices strengthened in a number of areas. Since then, annual data on facilities performance collected by Welsh Health Estates has highlighted significant variations between hospitals in the daily costs of feeding a patient, and continued problems with food wastage; some 880,000 meals were left untouched in 2008-09. Welsh Health Estates data also suggested that the roll-out of recognised good practice such as protected meal times and nutritional analysis of menus is patchy.
5. The Wales Audit Office has therefore decided that it would be timely to undertake further audit work on hospital catering to review progress in order to examine the extent to which practices set out in the Hospital Nutritional Care Pathway are embedded.
6. Our review sought to determine whether hospitals in Wales were providing efficient catering services that met recognised good practice. Our audit work looked at the hospital catering 'food chain' from planning and procurement through to the delivery of food to the ward and the management of meal times.

7. Our work in Powys Teaching Health Board (the THB) has included fieldwork at Brecon, Llanidloes, Llandrindod Wells, Ystradgynlais, Bronllys and Welshpool. Included in this, has been visits to wards at the following sites:
    - Llanidloes
    - Llandrindod Wells
    - Ystradgynlais
    - Welshpool
8. To support our audit findings, we have completed an analysis of financial data relating to patient and non-patient elements of the catering service, and by patient surveys to capture their experience of hospital food and dining experience. We have provided further details of the audit approach in Appendix 1.
9. Our overall conclusion is that the THB demonstrates several aspects of recognised good practice although there are some areas including ward-based patient support, seeking patient feedback and the catering service's cost management that could be improved. We have come to this conclusion because:
    - the strategic catering approach has been effective in ensuring a consistent quality service, however, there are complex future challenges and a new broader nutrition and catering framework is now required;
    - procurement and production arrangements are effectively designed to meet the needs of both the patient and the THB, but the associated cost control arrangements are insufficient;
    - the THB provides patients with good quality food, although changing some existing practices could improve the patient experience;
    - the quality of nutritional assessment process is generally consistent and identifies patients at risk but the effectiveness of arrangements for mealtime nutrition and assistance in the ward varies significantly; and
    - while there are good mechanisms to obtain feedback from stakeholder groups and staff, the approach to patient feedback could be improved.
10. In coming to these conclusions, we identified a number of key strengths within the catering service and the way the THB delivers its services. These included:
    - The existing strategic approach for catering has met past and current needs. Nevertheless, there is no strategic framework to prepare for future issues and opportunities such as improving nutritional services, responding to financial pressures and associated value for money, or the integration with Powys County Council.
    - There are effective and safe food procurement arrangements.
    - The food production environment is safe, clean, fit for current purpose, and in the main, appropriately staffed.
    - The THB has made headway in improving consistent quality process, since the introduction of the hybrid system, and these approaches are normally but not always consistently followed.
    - Food is generally of a good quality, with a menu designed to provide operational efficiency and to meet the nutritional needs of the THB's patients.

11. There are number of key areas which could be improved and these included:
    - There are a number of issues identified during the course of review at Victoria Memorial Hospital Welshpool Hospital, which the THB had already recognised. Although an improvement plan was in place, only limited progress has been made addressing these issues.
    - Catering Service Financial Information is not good enough to support effective day-to-day management of the service. This may particularly link to issues around cost of staff meal subsidy, corporate catering costs and cost of food waste.
    - There are inconsistent arrangements for protected mealtimes. While Llandrindod Wells operated protected mealtimes very effectively, other sites were not as good and particularly in Welshpool; this resulted in some patients receiving inadequate support during the mealtime.
    - The arrangements to support mealtime patient preparation, serving, and assistance vary from ward to ward. This may lead to poor patient nutrition in some areas and an increased use of supplements. Our observation of Llandrindod Wells found very good, joined-up, and well coordinated patient-centred care during mealtimes.
    - The range of food/snacks available between meals and overnight could be improved. Some patients may prefer or need to eat smaller amounts, frequently. This may be a particular issue considering the time between the evening meal and breakfast and also for any evening admissions.
12. The detailed report, which follows, provides more information on the audit findings which have led the conclusions set out above. Each section of the detailed report identifies the good practice that auditors looked for when undertaking their fieldwork, and what they found in practice. Information is also presented on the practices observed on the individual wards that were visited during the audit.

Recommendations

13. A number of recommendations have arisen from this review. These are listed below:

Strategic planning and management arrangements	
R1	By March 2011, develop a new nutrition and catering plan to meet the THB's future strategic requirements. This plan should: • respond to current and future financial pressures; • identify opportunities for integrated working with Powys County Council, both in regard of catering provision, but also in nutritional assessment and support in the wider health and social care community; and • increase focus on meeting nutritional needs of patients, particularly longer-term inpatients and Powys THB patients transferred in from district general hospitals out of county.

R2	By October 2010, commence implementation of the Catering Improvement Plan in Welshpool. Review catering staff demand versus supply to determine if efficiencies can be achieved.
Procurement production and cost control	
R3	By January 2011, develop performance and financial management arrangements for catering and nutrition. The arrangements should: • include fit-for-purpose and efficient mechanisms to report on quality of the catering and mealtime service that includes direct patient views and internal peer reviews; and • include basic financial costing and financial management processes to enable monitoring, reporting and management of inventory, actual cost of provisions used, staff demand based on activity versus supply.
R4	By November 2010, make a decision on the approach to staff meal subsidy and staff meal pricing.
R5	Ensure that the catering IT system implementation is delivered as a formal project and that appropriate multi-disciplinary representatives are involved so that the system: • supports effective and efficient operational service delivery; • provides improved patient ordering to meet patients nutritional needs; and • improves management intelligence/information and reporting.
Meeting patients' nutritional needs and supporting recovery	
R6	By January 2011, ensure protected mealtimes and effective mealtime patient support is provided at all sites.
R7	By January 2011, improve the range of food available out-of-hours and ensure that there is stock rotation of the food between ward and main kitchen stock to limit food waste.

Strategic planning and management arrangements

14. The strategic catering approach has been effective in ensuring a consistent quality service; however, there are complex future challenges and a new broader nutrition and catering framework is now required. We have come to this conclusion because:
    - The THB's arrangements for planning its catering service are based on a business case that was taken to the Board in 2007. This resulted in adoption of a hybrid model of freeze and conventional cook designed to formalise processes and quality of food across the THB.
    - The hybrid approach was largely catering-focused, although it has involved a range of differing medical disciplines in its implementation. While these arrangements meet the current needs of Powys THB, it faces many complex future challenges. These challenges include financial pressures, opportunities to make improvements in patient nutrition, efficiencies and more joined-up working with Powys County Council and other stakeholders.
    - Catering has historically experienced limited ongoing senior management and board scrutiny. There is scope to improve the information that the Board receives on the performance of catering services.
15. The following table summarises the findings supporting the conclusion.

Table 1: Strategic planning and management arrangements

Expected practice	In place?	Further information
Service planning		
The THB has clear strategies and policies for catering and nutrition	**In Part**	There is no overarching framework for nutrition and catering, although establishing one is a priority of the Executive Director of Nursing. The approach to service delivery is based on the 2007 catering service business case which is underpinned by policies and procedures.

Expected practice	In place?	Further information
Service planning (continued)		
Menu design reflects the strategy and policy	✓	The current menu runs on a 21-day cycle and provides a limited but daily varying choice. This is a deliberate catering department decision to reduce potential food wastage. Main dishes are supplied by Apetito and are nutritionally assessed. Other menu items including soups and sweet options are provided by the THB's catering services. Whilst the soup content has been nutritionally assessed, the other components prepared by catering staff have not been assessed.
Dieticians and clinicians are fully involved in strategy and policy development and menu planning	✓	The current catering model, based on the 2007 business plan, which included consultation and engagement of a range of stakeholders in the development of catering and menu planning. The dietetic and catering services have worked together over the last three years to help ensure the menu design reflects patients' needs and preferences. More recently, speech and language therapists have been involved in further refinement to the menu.
Strategy identifies the most efficient and cost-effective means of food production	✓	The THB's approach is a hybrid model based on freeze cook main meal items supplied by Apetito and fresh cook for side dishes, soups, and some deserts. This model and the menu are standard across the THB. This approach requires less staff time and improves the quality of consistency of production. The THB identified that the hybrid approach reduces the production wastage associated with providing a range of meals for small numbers of patients. Anecdotal evidence also suggests that the approach enables staff to maintain their culinary skills by having some food freshly prepared.
Evidence of workforce planning to match catering staff to demand	✓	There is no dynamic workforce planning, and arrangements are based on the original 2007 business case. Because of the low volume of patients, there are limits to the economy of scale that can be achieved. Staff meals are not costed to cover the catering cost of labour; there is potential to reduce labour costs or recover them within the pricing policy.

Expected practice	In place?	Further information
Management arrangements		
Executive accountability for catering and nutrition is clearly identified	✓	The Executive Director of Nursing Services (EDNS) is clearly identified as the Board member responsible for both nutrition and the catering service. The Executive Director of Nursing is keen to develop a more whole-system nutrition and catering framework, which reaches out beyond current organisational boundaries.
The Board receives sufficient information on performance and practice in relation to catering and nutrition	✗	The Board receives only very limited ongoing catering performance or financial information.
A multidisciplinary group is in place to oversee the delivery of the catering service	✓	There is a quarterly catering and nutrition group meeting which covers the whole of the THB. There are also monthly catering team meetings at each site to refine ways of working and improve quality. These are partially effective.
Lead nurse identified to help implement strategy and embed good nutritional practices	✓	The Executive Director of Nursing is keen to drive the development of a broader nutrition and catering strategy, as well as looking at implementation of national standards. This responsibility is delegated to the Assistant Director of Nursing.
Job descriptions and salary ranges for catering staff are harmonised across the THB	✓	Jobs descriptions have been harmonised as part of the agenda for change and the implementation of the hybrid catering model. There remain some slight differences in some roles, for example where the THB operated a plated system. The Catering and Facilities Manager is in the process of standardising and harmonising the approaches.
Sickness absence is within acceptable levels and is well-managed	✓	Catering managers reported that sickness is not an issue and current policies support its effective management.

Procurement, production and cost control

16. Procurement and production arrangements are effectively designed to meet the needs of both the patient and the THB, but the associated cost control arrangements are insufficient. We have come to this conclusion because:

- The THB's procurement arrangements support the catering supply chain, although catering staff at a number of sites commented about the quality of service provided by Welsh Health Supplies. This, at times, led them to source provisions from more expensive suppliers to maintain the supply chain to deliver meals.
- The THB has entered into joint procurement arrangements with Powys County Council for fresh fruit, vegetables, milk and bread. This includes a range of regional suppliers that vary depending on the geographic location of the site ordering.
- Kitchens stocked an appropriate level of frozen and fresh food and dry goods, although one site had overstocked Apetito meals. Most sites demonstrated an appropriate balance between the eight and two portion packs, and ensured the most economic and efficient product mix is used.
- Stock control for ordering purposes is currently based on a manual paper system and the use of control inventory is not a common practice at any site. Consequently, cost control is limited to what has been ordered rather than what has been used.
- The THB is currently installing the Menumark IT system which should improve cost control, support catering service delivery and provide management information. However, the effectiveness of the system will be dependent upon appropriate project resources and support.
- Food production is designed as a safe and consistent quality process. The kitchen environments are clean, well-maintained and generally well-designed.
- Our analysis of Estates and Facilities Performance Management System financial data has shown that there is a £73,000 staff meal subsidy. There is also substantially higher cost of provisions at Bronllys than equivalent peer sites in the THB.

17. The following table summarises the findings supporting the conclusion.

Table 2: Procurement, production and cost control

Expected practice	In place?	Further information
Procurement		
Food is procured from approved suppliers, in line with arrangements set out in the all Wales NHS Procurement Strategy	✓	Catering services use Welsh Health Supplies' all Wales contracts for most goods, although the THB has recently entered into a joint contract with Powys County Council for some fresh supplies. Suppliers' services are generally fit for purpose, although staff raised concerns about the quality of service of WHS.
Sustainable procurement arrangements are in place	**In part**	The THB has not established its own sustainable procurement policy, and does not yet meet level 3 of the Welsh Public Sector Sustainable Procurement Assessment Framework. The joint procurement with Powys County Council has selected a range of regional suppliers that vary depending on location of the site. The foiled packing for the Apetito meals is recycled though arrangements made with Powys County Council.
Procurement arrangements support the delivery of planned menus	✓	The THB has introduced effective procurement arrangements to support the delivery of planned 21-day cycle menu. As intended, there is some local variation to allow individual sites to tailor the mix between fresh and frozen and dry goods, particularly around staff meals. Ordering takes place at appropriate frequency to provide a constant quality and quantity of food, enable stock rotation and limit waste due to food perishing.
Production		
The THB operates a computerised catering system to facilitate production planning and control	✗	There is currently no computerised system in use. The absence of a catering system significantly affects the quality of management information and the ability to accurately control inventory, sales and expenditure. However, Powys THB has ordered and started implementing Menumark systems. Brecon will be the first of seven sites to receive the system.

Expected practice	In place?	Further information
Production (continued)		
Patients order meals less than 24 hours in advance	**In part**	Normal practice is for patients to order meals 24 hours in advance. This is a manual process using paper-based menu forms provided to the patients, with nursing assistance to help patients place the order, where is it is required. Ystradgynlais operated 48-hour ordering, which, when observed, caused operational difficulties and resulted in a patient admitted the day before, receiving the wrong meal. Ystradgynlais adopted this approach because ward staff did not have the capacity to take orders at a time that would provide the kitchen sufficient notice to prepare. All sites can receive ad-hoc orders for patients and can produce food with two hours' notice. The kitchens can produce food with shorter notice but choice is limited. Some provisions such as bread and jam are available at night.
Standard costed menus are in use to ensure consistency of quality and cost	✓	Apetito produce food to their industry standards using standard costed recipes and portion sizing. Apetito batch test their products and undertake regular product evaluations and tastings. Other menu items, such as soups, have standard recipes but there is some local variation on production. Beyond the main Apetito meal, different kitchens use differing mixes of frozen and fresh food. Overreliance on frozen vegetables may affect the overall appearance, taste and texture of food.
A production plan is in place to guide kitchen's tasks	✓	The THB has developed a range of documents that together form part of the production plan. The HACCP identifies a four-line system for differing food items. There are summary production sheets used operationally to determine quantity and cooking requirements for products.

Expected practice	In place?	Further information
Production (continued)		
Portion controls in place and supported by training	✓	Portion control is variable at different sites; in some sites, portion control approaches were not effective. Llandrindod Wells demonstrated very good portion control which was linked to both patients' nutritional needs and appetites.
Quality of food is monitored at key stages in production	✓	Quality of food is monitored and tested: • by Apetito on production; • by THB catering staff on regeneration; and • in most instances, by ward staff on serving, but this is not a formal arrangement. There is evidence that the plated meal service in Welshpool had a negative impact on the quality of food. We reach this view because: • Food was not freshly served. There was a greater time between plating in the kitchen to serving out patients. • Patient feedback obtained as part of this review indicated less satisfaction with the quality of food. • Our tasting exercise found food quality was not as good as the other sites in the THB. Some specific comments and concerns were made by staff who received feedback from patients about the quality of the scrambled egg in Llandrindod Wells and also the mushroom soup.

Expected practice	In place?	Further information
Food safety		
Robust arrangements in place to ensure food safety (eg, food temperature checks)	✓	Robust arrangements in place to ensure food safety. Food was correctly received, batched and temperatures recorded on delivery. Food is stored in appropriately temperature controlled fridges and freezers. Monitoring of fridge and freezer temperatures takes place twice daily. All kitchens observed checked the temperature of all food immediately after regeneration. Kitchen staff check the temperature probe weekly and ensure they are calibrated at appropriate intervals. Appropriate dating and stock rotation is applied. Kitchen staff do not normally take hot trolley temperatures, and the trolleys were not always plugged in on wards. This is not best practice. When we measured food temperatures some had fallen below 63°c. The time from post-production to consumption is less than two hours and within accepted safe limits. This will affect quality of the food and patients made comments about food which was too cold at some sites.
A Hazard Analysis Critical Control Points (HACCP) policy is in place	✓	The HACCP policy is in place and last updated in March 2010.
Catering facilities regularly inspected by local environmental health officers	✓	There are regular scheduled environmental health officer inspections. The reports have indicated some minor areas that required attention at Llandrindod Wells and Llanidloes.
Action taken in response to EHO recommendations	✓	The THB has taken action to address the issues identified in the Environmental Health Office reports. The Environmental Health Officer for Llanidloes followed up progress after a month and confirmed that satisfactory progress had been made.

Expected practice	In place?	Further information
Cost control		
Computerised catering system in place to support service management and monitoring	✘	At the time of the review, there was no computerised system for service operational delivery, service management and monitoring. The THB has invested in Menumark, system by Datasym. The system will be deployed at seven of the 10 sites. The system should, if effectively implemented, provide operation delivery support such as electronic menu ordering, point of sale facilities and also stock management and reporting. The first site to deploy the system will be Brecon, which was planned to go live in July 2010.
Cost of catering service known and monitored	**In part**	For normal reporting purposes, the EFPMS return indicates estimated and apportioned costs across the 10 sites. However, the data is not currently robust enough either for day-to-day management at each site or accurate comparative analysis across the THB or nationally. There is no accurate figure for the cost of goods used. Instead, costs of the service, which are obtained, based on the provisions procured in a period. This approach is likely to be less accurate for monthly reporting, because of variations in stock held, but annual figures will be more accurate. Staff costs are based on actual figures. While the new computerised system should remedy the situation, currently, cost of provision figures for patient and non-patient costs are calculated based on apportionment. If the apportionment is correct, then the THB is currently subsidising staff meals by £73,000 for provisions alone. At present, catering staff costs are not factored into the cost of providing a staff meal nor are they reflected into the sale price. Costs of corporate catering are not known, or recharged, instead they are absorbed into the global catering staff and provision costs.

Expected practice	In place?	Further information
Cost control (continued)		
Ward wastage is monitored: • Unserved meals • Uneaten food	✓	There is some monitoring of waste, and the most recent completed in June 2010, was a more thorough 21-day wastage survey. This survey recorded unserved meals but not plate waste or post-production waste. The THB's own survey was completed across all sites. This found total (unweighted) average wastage across all sites is 9.9%. Financially, this equates to £37,465 in unserved meals. If the THB can reduce wastage to its best performing site, which achieved 2.6%, it would save in the order of £27,000. Since the original fieldwork in June 2010, the provisions cost and wastage has been better controlled resulting in savings. While the THB waste survey recorded unserved meals, the Wales Audit Office survey included post-production waste, unserved meals and plate waste. These wastage figures are substantially higher, as identified in Exhibit 2, which suggest the THB's current approach may need strengthening. Increasing the number of choices per day significantly increases the wastage as Apetito portions come in a minimum two-portion pack. This can lead to more meals being prepared than needed. This was observed in Llanidloes where more choices were provided than were on the menu, and this resulted in significantly increased wastage, which on the day we recorded at 72%.
There is an agreed approach to subsidy/contribution from non-patient services	✘	If the current EFPMS apportionment is correct, then the THB is subsidising staff meals by £73,000. Staff costs are not recovered in the sale of non-patient food. If these were taken into account in the total costs of staff meals, this could substantially increase the subsidy. There is no current Board agreed policy on staff meal subsidy.
A pricing policy for non-patient meals is in place	✓	There is a common non-patient (staff) price list for food. It is not common practice to sell food to patients' visitors, although this does take place infrequently. There may be opportunity to recover some costs through increasing commercial sales to visitors.

Expected practice	In place?	Further information
Cost control (continued)		
Dining room wastage is monitored	✘	Wastage is not recorded.

Service cost comparisons

18. We undertook a financial analysis of the catering service. These figures are presented in Exhibit 1. The total cost per inpatient day is high. We have found particularly high total costs per inpatient day at Bronllys and Knighton hospitals.

19. The figures indicate higher cost per inpatient day than are submitted in the EFPMS returns. This may be because we have used number of inpatients as a denominator, and Powys LHB used the number of patient meals requested divided by three. Different mix of inpatients and other patients requiring meals will limit the extent to which we can draw national comparisons. We have included national averages in Exhibits 2 and 3. Total cost per patient day figures include staff costs and these vary significantly. This may be because:
    - There is a minimum staff base required, irrespective of volume. Staff costs in lower volume sites will appear comparatively high.
    - Some sites may be over or understaffed.
    - Sites may experience substantial sick or maternity leave which, with a small staff base, will disproportionately affect costs.

20. The cost of patient provisions per inpatient day varies between sites and this is likely to be owing to a range of factors, including:
    - Some sites will be serving meals to non-inpatients, but the cost remains accounted for. This will make some sites costs look artificially high.
    - Different levels of wastage;
    - Different volumes and cost of food ordered by patients;
    - Corporate catering costs not recharged (note Bronllys within Exhibit 2); and
    - The approach to apportionment for patient and non-patient provision costs, which may not be an accurate reflection of actual split.

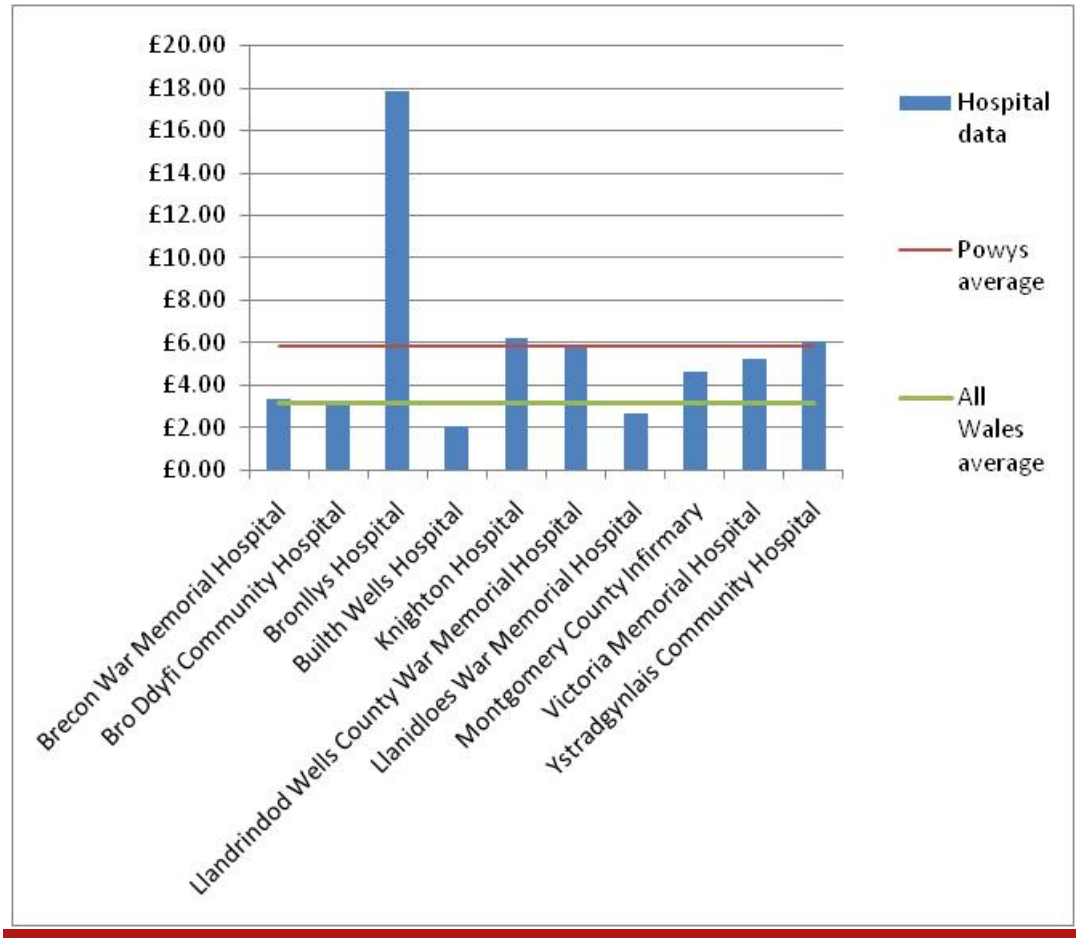
Exhibit 1: Service cost analysis

Site	Total cost per inpatient day (£)	Patient provision cost per inpatient day (£)
Ystradgynlais	18.42	6.03
Brecon	11.34	3.32
Bronllys	35.35	17.78
Builth	12.98	2.01
Llandrindod Wells	17.70	5.91
Knighton	26.64	6.17
Newtown	17.39	4.57

Site	Total cost per inpatient day (£)	Patient provision cost per inpatient day (£)
Llanidloes	11.64	2.67
Machynlleth	12.38	3.00
Welshpool	18.30	5.20
All sites	**18.00**	**5.84**

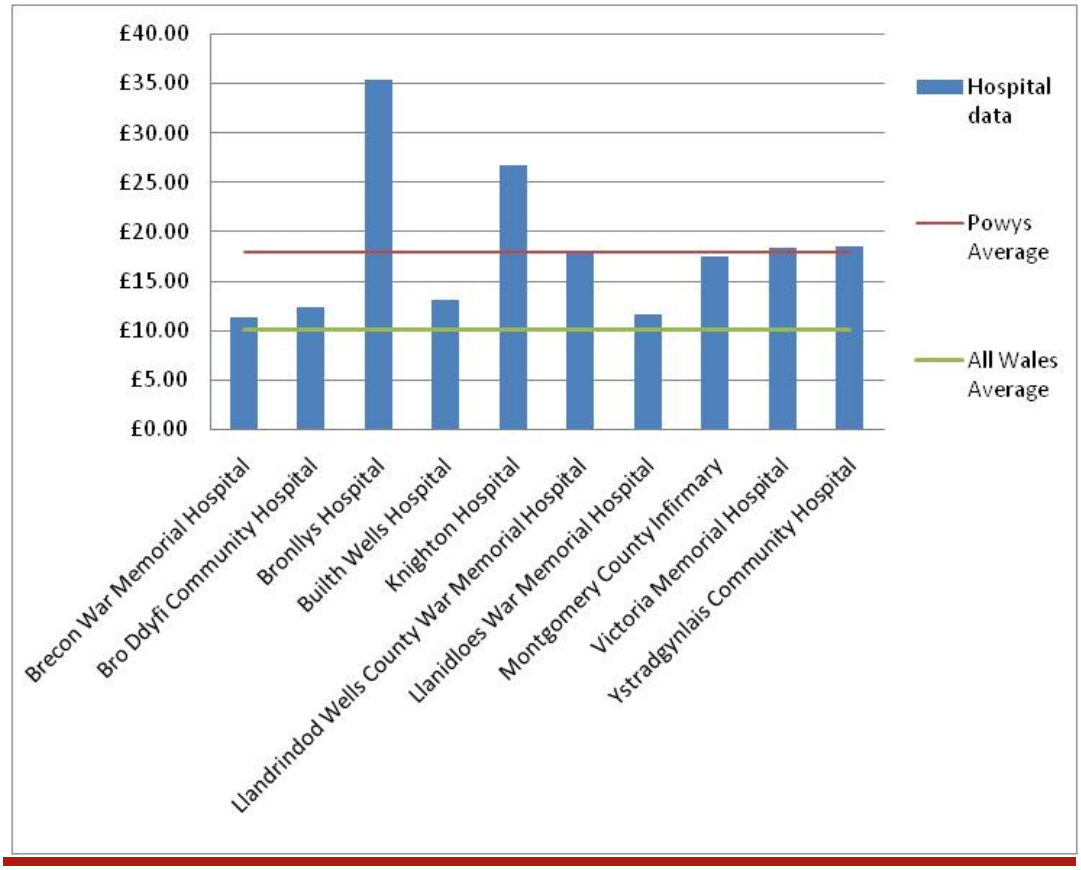
Source: Powys THB financial return to the Wales Audit Office for 2008-09 financial year

Exhibit 2: Cost of patient provisions per inpatient day



Source: Wales Audit Office

Exhibit 3: Total cost of patient catering per inpatient day 2008-09 (£s)



Source: Wales Audit Office

21. In reviewing the Estates and Facilities Performance Management System financial data return information, we undertook analysis to determine the financial position of non-patient trading activity. This analysis presented in Exhibit 4 indicates that, based on the current approach to apportionment, all sites are currently trading at a deficit and therefore these sales are being subsidised by the THB.

Exhibit 4: Service cost analysis (based on EFPMS data returns)

Site	Non-patient service trading position (£)
Ystradgynlais	-4,171.45
Brecon	-11,005.27
Bronllys	-11,174.67
Builth	-4,282.82
Llandrindod Wells	-17,954.62
Knighton	-1,724.30
Newtown	-6,896.87

Site	Non-patient service trading position (£)
Llanidloes	-7,723.79
Machynlleth	-4,506.48
Welshpool	-3,956.62
All sites	**-73,396.89**

Source: Powys THB EFPMS for 2009-10 financial year

Food wastage

22. Our review included an observational audit of food wastage from unserved meals and plate waste. The percentage of unserved meals was high in Llanidloes because the menu was not explicitly followed and a broader range of food was ordered than was on the menu. The impact of this is that there were a number of two portion Apetito meals with only one portion used. This creates 50 per cent waste before plate waste is factored in. If systems and menus are followed explicitly and good processes for portion control are applied, wastage could be significantly reduced.

23. Factors that affect unserved meal wastage include:

- adhering to the menu as designed;
- appropriately using portion sizing when ordering on the ward; and
- overproduction, for example, producing standard sized meals when number of small meals have been requested and the total order could be reduced.

24. Factors that affect plate wastage include:

- assistance and support provided to the before and during mealtimes;
- ensuring food is visually appealing;
- effective implementation of protected mealtimes; and
- good portion control on serving.

Exhibit 5: Meal wastage and predicted savings

Ward	Unserved meals	Plate waste	Total wastage	Cost of patient provisions (£)	Example savings by reducing wastage to 30%
Llanidloes	39.29%	33.00%	72.29%	15,414	6,519
Llandrindod Wells	27.03%	13.31%	40.34%	45,176	4,671
Ystradgynlais	18.92%	19.46%	38.38%	51,474	4,314
Welshpool	32.93%	35.00%	67.93%	40,499	15,361
Overall	**28.38%**	**24.03%**	**52.41%**	**152,563**	**30,865**

Source: Powys THB and the Wales Audit Office observation

Delivery to the ward

25. The THB provides food which normally arrives in the ward in a good state, although changing some existing practices could improve the patient experience. We have come to this conclusion because:

- Wards generally receive food in a very good state and normally remained in a good condition until the end of the mealtime. Although the plated meal service, which continues to operate in Welshpool, incurs a longer timeframe between cooking and final serving. This appears to be affecting the quality of the food.
- Quality and efficiency of food serving processes varied across sites, but was very good in Llandrindod Wells which resulted in well-supported patients.
- One hospital, Llandrindod Wells, demonstrated very good mealtime patient support processes and culture; two sites adequately meet patients' needs; but Victoria Memorial Hospital in Welshpool could do far more to support patients at mealtimes.
- The extent to which sites prepared their patients for mealtime varied, and in some instances, resulted in patients who did not have the opportunity to freshen up, wash their hands or go to the toilet.
- Food was presented in some sites in a satisfactory manner, but in other sites, presentation could be improved further to improve the patient experience.

26. The following table summarises the findings supporting the conclusion.

Table 3: Delivery of food to the ward and patient

Expected practice	In place?	Further information
Food arrives at the ward at the right time	✓	The meal service consistently started at the scheduled time. The time from cooking to the ward was generally very short, with the exception of Welshpool, which has an additional plating process in the kitchen. Ward managers confirmed there were no concerns about kitchens meeting the schedule.

Expected practice	In place?	Further information
Food arrives at the ward in a good state (eg, right temperature)	**In part**	The ward observation exercise found that most ward trolleys when used properly keep food at appropriate and recommended temperatures. Staff did not always plug the trolley in on the ward. Because serving is generally very fast, this did not lead to issues with the temperature of food on the day of the ward observation although patient feedback did occasionally mention meals that were too cold. The trolleys in Welshpool were operating above 80ºc and food was in the trolley longer than in other sites. This may be a contributing factor why patients' perceptions of the quality of food and our food tasting exercise identified that it was not as good as in other sites reviewed.
Arrangements are in place to ensure that patient receives the right meal	✓	The ward observation exercise found, staff use hard copy menus as a basis to serve the meals whether plated in the kitchen or in the ward. These have the patients' names on them.
Dedicated staff (housekeepers or ward-based caterers) are present to help serve the meals	**In part**	Dedicated staff were present at each site to serve meals. However, the quality of this process varied significantly. The process was very good in Llandrindod Wells, where there was a very good multi-skilled team approach to serving the meals. The patients with red trays requiring assistance were served first and assisted. Consecutively, the serving continued while remaining staff distributed the meals to the more able patients. This process was repeated for deserts, which were served after main meals to ensure they stayed warm. The process was poor in Victoria Memorial Hospital Welshpool.

Expected practice	In place?	Further information
Staff involved in serving food have been trained in food presentation	**In part**	Most ward staff have received food presentation training, although our observation identified a range of quality of practice. Improvements could be made to the final presentation of texture-modified meals. Staff served the meal below in Llanidloes. When this picture was taken. The member of staff commented that 'if they had known a picture was going to being taken, then they would have made it look nicer'. This suggests a possible training issue.  Below, full meal in Ystradgynlais  Below, quiche salad in Llandrindod Wells 

Expected practice	In place?	Further information
Staff involved in serving food have been trained in food hygiene	✓	Relevant staff have been trained in food hygiene.
The patient environment is prepared to receive the meals	**In part**	The observation found that the patient environment was generally prepared adequately. No clinical items were located on the patient tables although some tables were cluttered. In some instances, the day rooms were not always the most appealing place to dine and staff had trouble encouraging patients to eat in them. Patients were not always assisted to sit in the right position for eating, particularly those who needed to eat while in bed.
Patients have opportunity to wash their hands before eating	**In part**	The observation found mixed practice. In some areas, patients were well-prepared for mealtime, and this forms part of the morning patient washing and dressing process. In some sites, the patients are able to refresh and go to the toilet before eating if they request it. In one ward, in Welshpool, because of the limited number of staff supporting mealtimes the meal service had to stop while the healthcare assistant who was serving the food took a patient to the toilet.
Food is delivered to the patient quickly and efficiently	✓	In general, the food is delivered to the patient quickly. At Welshpool, the service stopped while the staff serving took a patient to the toilet.

27. The good practice and issues arising from each of the four wards reviewed in this audit are summarised in the following table.

Food wastage

28. Catering departments should be producing high-quality meals which maintain quality until they are presented to a patient. This means providing sufficient choice on the menu and serving attractive and tasty meals at appropriate temperatures. Monitoring the service in terms of the quality of dishes provided should take place continually to ensure that high standards are maintained and improved.

29. Our review included a food-tasting panel involving auditors, catering, ward and dietetic staff. Using a simple 1-5 score the panel assessed the food for:

- temperature and appearance;
- smell, taste and texture;
- the correct item ordered by the patient from the menu; and
- the correct portion size requested by the patient.

30. Although such an approach will always have a degree of subjectivity to it, it was applied consistently at all the NHS organisations visited. This therefore provides an opportunity to draw some comparisons between different sites visited.

31. A maximum score of 100 per cent is possible if all the criteria tested received a '5 rating'. The total average score of food quality was 80 per cent, which is average when compared to other hospitals (Exhibits 6 and 7). The portion control was excellent in Llandrindod Wells. The plated meal service in Welshpool scored lower for appearance, smell, taste and texture. The catering manager has recognised a number of issues in Welshpool and has developed an action plan to rectify the issues.

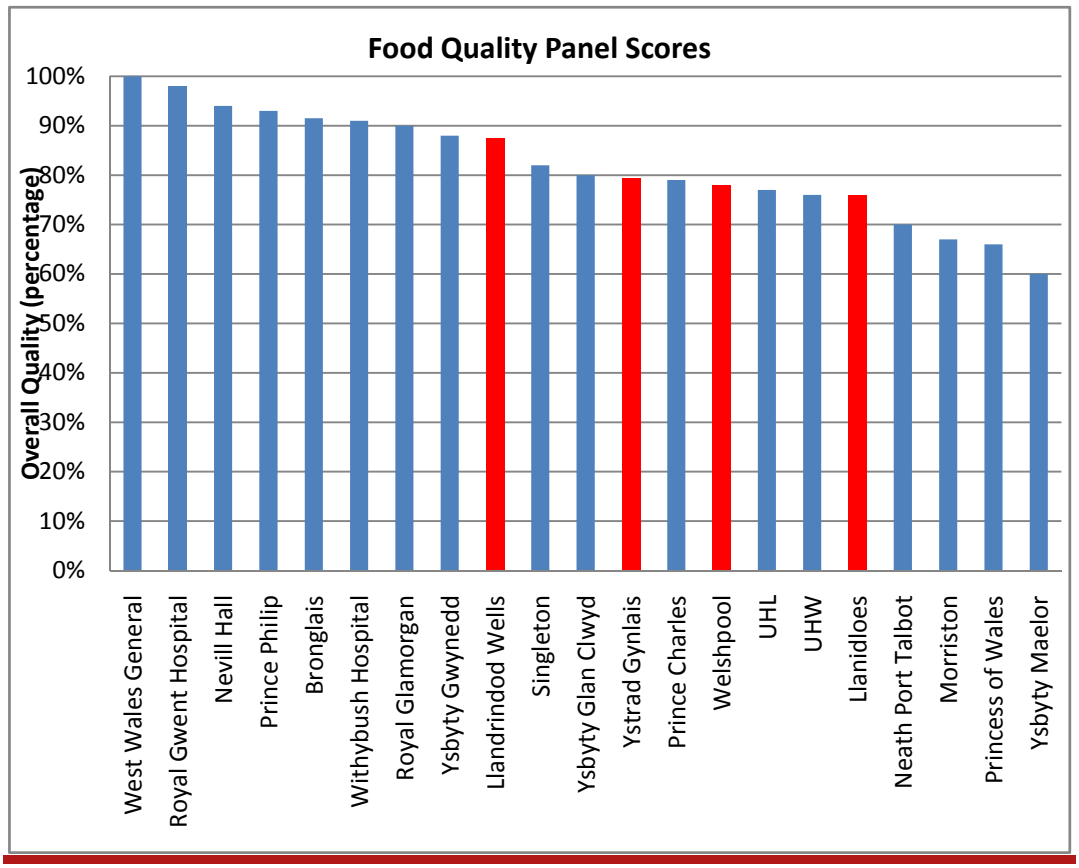
Exhibit 6: Hospital food quality overall scores (1=low 5=high)

	Llanidloes	Llandrindod Wells	Ystradgynlais	Welshpool
Temperature	4.6	4	3.6	4.4
Appearance	4	4.2	3.6	3.4
Smell	4.2	4	4	3.5
Taste	4	4.2	4	3.4
Texture	4.2	4.2	3.6	3.4
Correct item	2.6*	5	5	4.8
Portion size	3	5	4	4.6
Total score (out of 35)	**26.6**	**30.6**	**27.8**	**27.5**
Total score as %	**76%**	**87.4%**	**79.4%**	**78.5%**

Source: Wales Audit Office

*Note: *marked down because a number of items produced were not on the menu of the day*

Exhibit 7: Hospital food quality panels' overall scores



Source: Wales Audit Office

Meeting patients' nutritional needs and supporting recovery

32. The quality of nutritional assessment process is generally consistent and identifies patients at risk but the effectiveness of arrangements for mealtime nutrition and assistance in the ward varies significantly.

33. We have come to this conclusion because:

- Patients receive nutritional screening on admission, and the MUST tool is used in all sites reviewed most of the time.
- Protected mealtimes are not consistently applied across the THB hospitals.
- Although the red tray system has been widely adopted, the way it is used can vary between wards.
- Ward staff are available to help patients eat but it is a much more effective process in some sites.
- The THB's catering arrangements provide choice and respond effectively to meeting individual need. Kitchens are, in the main, appropriately flexible to specific nutritional needs and requests.
- Patients' food and fluid intake is routinely recorded where patients are identified as nutritionally at risk.
- Nutritional supplements sometimes appear to be an easy option where patient assistance during mealtimes is inadequate.

34. The following table summarises the findings supporting the conclusion.

Table 4: Meeting patient's nutritional needs and supporting recovery

Expected practice	In place?	Further information
Patients are weighed and undergo nutritional screening within 24 hours of admission, supported by a validated nutritional screening tool	**In part**	The record check identified that most patients are weighed and undergo nutritional screening within 24 hours of admission. In Welshpool, the record check identified that height and BMI was not always recorded. In other sites, the nutritional assessment approaches meet patient need.
Where appropriate, patients are referred to a dietician and/or to a speech and language therapist	✓	Patients identified at risk are referred to a dietician and/or a speech and language therapist. One dietician interviewed indicated that the referral process may be oversensitive, resulting in a large number of referrals.
A nutritional care plan is prepared and implemented, informed by a patient's nutritional risk score	✓	In the majority of cases, where a patient has been scored as nutritionally at risk, they had a care plan in place. From the records check, only one patient did not have a nutritional care plan in place, but this patient was referred to speech and language therapists and placed on nutritional supplements.

Expected practice	In place?	Further information
Protected mealtime arrangements are in place	**In part**	Differing practices for protected mealtimes were in place at the sites observed. In some sites, the signage for protective mealtimes was poor, but protected mealtimes were in operation. Llandrindod Wells have excellent signage, and operate very effective protected mealtime arrangements. The only practicing member of staff was the speech and language therapist who was presents specifically during mealtimes to try different modified textured meals with patients. Protected mealtimes were not in place in Welshpool. During mealtimes, staff had to manage ward rounds, visitors, full medicine trolley rounds and new admissions. At the same time, staff were also on breaks and others were undertaking paperwork.
Arrangements are in place to make sure that those serving meals are aware of patients' specific nutritional requirements	**In part**	In most sites, our observation and interviews indicated that staff were nutritionally aware and able to assist patients when ordering. Staff aim to balance what patients want versus what patients need. Nevertheless, the effectiveness of this process varies from site to site. Some patients may require high protein/high calorie diet but want a salad, soup or vegetarian dish which may lack calorific value or essential amino acids. Assistance with the menu to help support the nutritional aspects of the ordering process was available, but could be improved further at all sites, for example by having a ward-based nutritional lead. Some staff have had basic nutritional training and more recently some very well-received focused training, which was provided by speech and language therapists.
Menu provides patients with a good choice of food	✓	The menu is conventional and the latest version has been designed with the THB's patient demographic in mind. There has been good, ongoing contribution of dietetics and speech and language therapists in the support of menu design. Nutritional analysis of all menu items is difficult because of constrained resources.
Menu contains options for vegetarians	✓	There are fewer options for vegetarians over a 21-day cycle so patients admitted for a long duration may find the choice repetitive.

Expected practice	In place?	Further information
Menu contains options for patients from specific religious/ethnic backgrounds	**In part**	There are fewer options for those patients requiring specific types of meals over a 21-day cycle so patients admitted for a long duration may find the choice repetitive. The menu does not explicitly define whether food is suitable for patients with specific religious/ethnic backgrounds.
Arrangements are in place to identify patients who may need specific help eating their food	✓	The observation audit identified that in most sites a red tray or mat is used to identify patients requiring assistance. In one site, the red tray was used to identify patients nutritionally at risk and on a food and fluid diary. In this site, staff knew which patients required assistance.
Patients are given assistance to eat if required	**In part**	The effectiveness of the mealtime assistance is variable. Our observation found that Llandrindod Wells had a very good ward team-based culture, which gave mealtime and patients assistance priority.
Patients are able to get snacks outside of mealtimes	✓	At all sites, patients are able to get snacks outside of mealtimes, but the options are quite limited. The time between dinner and breakfast is long and patients may require opportunities to eat smaller amounts of food but more regularly. To avoid wastage, sandwiches or provisions could be prepared daily for the ward, and if not used overnight, be rotated for use as staff and patient meals the following day.
Patients' food intake is regularly monitored using the All Wales Food Record Chart	✗	The all Wales Food and Fluid Chart is in the early stages of being adopted. There are food and fluid diaries for all patients who are nutritionally at risk.
Daily and weekly fluid input and output charts are in use	✓	There are food and fluid diaries for all patients who are nutritionally at risk.

Use of food supplements

35. As part of the patient record review, we looked at supplement use. This review indicated reliance on nutritional supplement in some sites. To determine the financial impact of regular use of nutritional supplements we undertook additional work. This indicated that the normal prescription cost for inpatient nutritional supplement was very low.

36. Nutritional supplements in NHS acute services and in the community are managed and contracted differently, and therefore experience cost differential:

- The acute healthcare contract is negotiated and managed by Welsh Health Supplies. The main community contract experiences favourable discounting for commonly prescribed supplements.
- Community prescribing financial processing is managed through the Prescription Services Unit and the cost per unit (which is reimbursed to community pharmacies) is significantly higher.

37. Exhibit 8 provides a list of a sample of commonly used nutritional supplements for the THB. The risk to the THB is that some patients are prescribed supplements in the acute setting at low cost which are then unnecessarily continued in the community setting at a disproportionately higher cost.

Exhibit 8: Cost of nutritional supplements (acute and community)

Item description	Unit of issue	Current inpatient cost per unit*	All Wales current community pharmacy cost per unit**	Units prescribed in community all Wales 2009-10
PRO-CAL Supplement	1 X 250ml bottle	4.46	4.46	3,885
Ensure plus Oral Liquid	1 X 220ml bottle	0.01	1.85	36,553
Fortisip Liquid feeds	1 X 200ml bottle	0.01	1.85	42,769
Fortijuice Oral Liquid	1 X 200ml bottle	0.01	1.85	15,027
Forticreme complete	1 X 125g pot	0.01	1.80	5,762

* cost per unit provided by Welsh Health Supplies

**cost per unit provided by the Prescribing services unit (part of NHS Wales Informatics Service)

Gathering views from patients and sharing information

38. While there are good mechanisms to obtain feedback from stakeholder groups and staff, the approach to patient feedback could be improved to support performance monitoring and menu decision making.

39. We have come to this conclusion because:

- there are monthly catering meetings at the sites reviewed to enable feedback from the ward, although there is some evidence to suggest that effectiveness of this type of forum could be more focused and improved;
- there is a broader nutrition and catering group forum which involves a number of different stakeholders;
- a range of specialties that act on behalf of the patients such as nurses, dietetics and speech and language therapists are involved in providing feedback on menu design;
- community health councils provide a range of patient feedback and observation;
- patients views of food and catering services are collected, but not regularly;
- the patient survey undertaken as part of this audit has highlighted a range of views which need to be considered as part of the routine service planning and monitoring; and
- patients' views on hospital food and the catering services are collected more often than not through informal or indirect feedback to ward staff, although patient surveys have been undertaken in the past.

40. The following table summarises the findings supporting the conclusion.

Table 5: Gathering views from patients on catering services

Expected practice	In place?	Further information
There are regular activities to capture patients' views and experiences of catering services	**In part**	The Catering department does not undertake regular patient satisfaction surveys. Most of the recent patient opinion is provided indirectly by other agents or via informal feedback. For example, when ward staff contact the kitchen over specific issues. The fundamental of care audit tool provides only limited useful information to help performance management and decision making.
Service users are represented on catering planning groups	✘	Although the strategic group includes the involvement of Community Health Councils, there are no arrangements in place to directly involve patient groups in planning.
Service users participate in quality reviews of the service	✘	Patient involvement in menu testing and quality reviews of the service is very limited.
There are effective and co-ordinated arrangements in place to use patients' views and all staff group experiences to support service improvement	**In part**	A range of specialties that act on behalf of the patients such as nurses, dietetics and speech and language therapists, are involved in providing feedback on menu design and the service. The feedback arrangements that are in place are used to resolve issues, but overall performance management arrangements could be improved.

Results of the patient survey indicated many areas where the quality of service provided by Powys THB meets or exceeds the Wales average

41. An analysis of the views of patients collected during the audit highlighted that, in many instances, the quality of catering and mealtime support arrangements were stronger than compared to all Wales. While overall responses are good, there is inconsistency in results between sites that should inform any improvement action across all Powys THB sites.

42. In particular, we identify the following:
    - The number of patients staying for more than two weeks was greater in the THB than compared to the all-Wales results.
    - Most but not all patients were weighed during their stay.
    - Most patients discussed their dietary needs with staff, and most patients were given suitable food. These results are more positive for the THB in comparison to all Wales.
    - Most patients were provided assistance during the meal if they required it.
    - A small percentage of patients at some sites felt that their mealtimes were disturbed by medical assessment or treatment.
    - More patients in the THB rated their food as good or excellent than in comparison with all Wales.
43. A fuller analysis of survey responses is provided in Appendix 2.

Appendix 1

Audit approach

The audit sought to answer the overall question:

'Are hospitals in Wales providing efficient catering services that meet recognised good practice?'

The following sub-questions underpin the overall question:

- Are strategic planning arrangements relating to catering effective?
- Are procurement arrangements effective and is food sourced from safe suppliers?
- Is food production well-controlled?
- Are there efficient arrangements to deliver the food to the ward and to the patient?
- Do the arrangements at ward level help meet patients' nutritional needs and support their recovery?
- Are there effective arrangements in place to consult patients about the catering service they receive?

An audit module was developed around each of the sub-questions set out above.

Exhibit 9: Audit modules

Module	Audit tools
Module 1: Strategic planning arrangements	• Cost tree analysis • Patient experience survey • Management arrangements checklist • Interviews
Module 2: Procurement arrangements	• Cost tree analysis • Management arrangements checklist • Process walkthrough • Interviews
Module 3: Production control	• Cost tree analysis • Patient experience survey • Management arrangements checklist • Process walkthrough • Food quality survey • Interviews
Module 4: Ward delivery arrangements	• Patient experience survey • Ward observation tool • Food quality survey • Interviews

Module	Audit tools
Module 5: Supporting recovery	• Patient experience survey • Ward observation tool • Observational wastage tool • Food quality survey • Nutritional assessment tool • Interviews
Module 6: Patient engagement	• Patient experience survey • Interviews

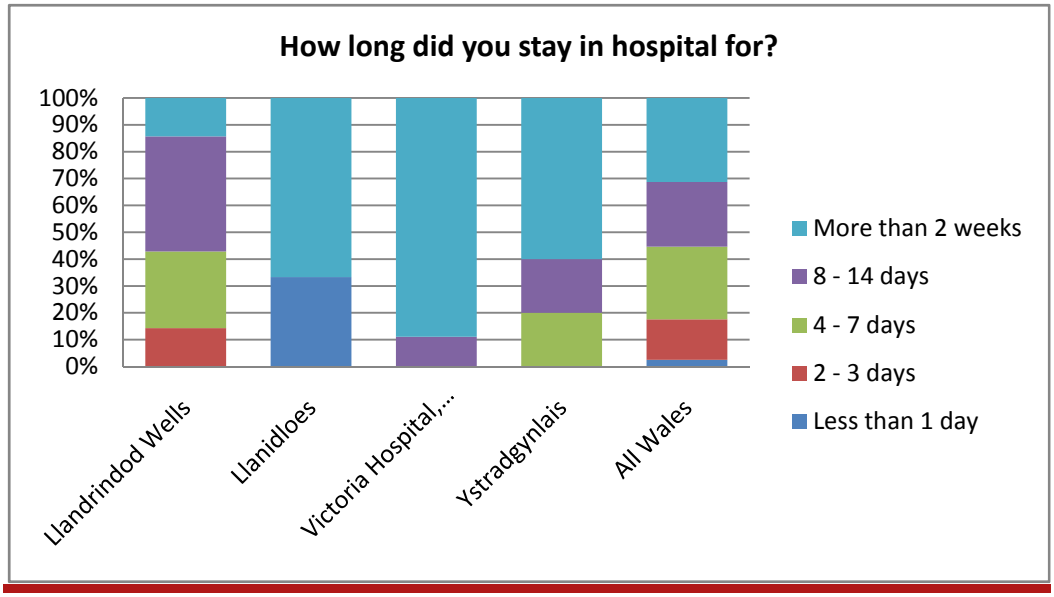
Patient views

The following charts present a picture of patients' views of the catering, nutrition and mealtime support process in the four sites that were reviewed. These are set against an all-Wales response. The charts have been selected for inclusion in this report because they:

- present differing results across the four Powys THB sites reviewed;
- contrast against the all-Wales survey results; or
- are areas which merit specific attention.

There is additional patient survey data that can be provided to the THB upon request.

Exhibit 10



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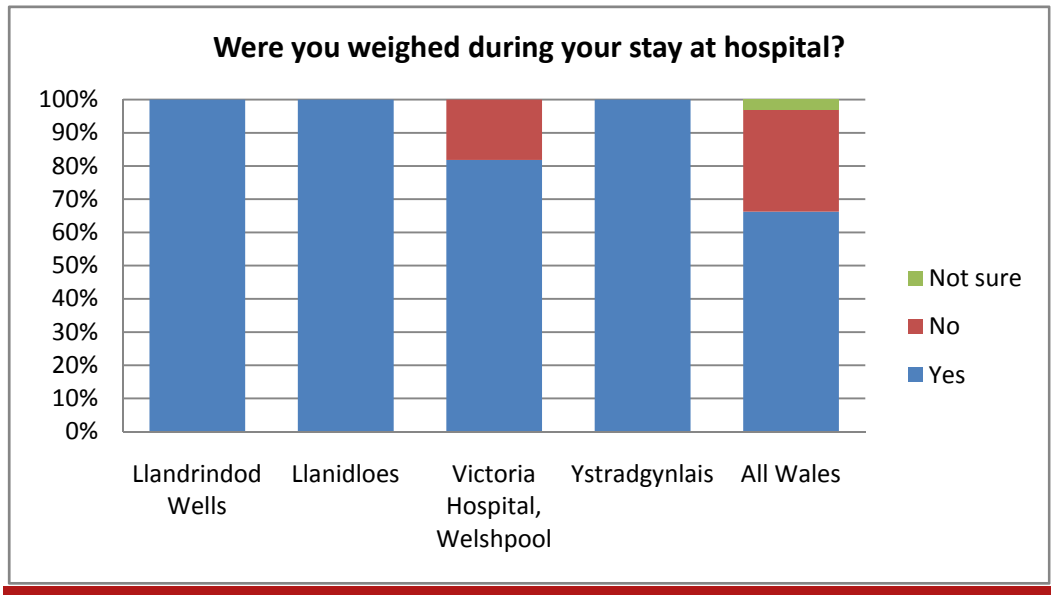

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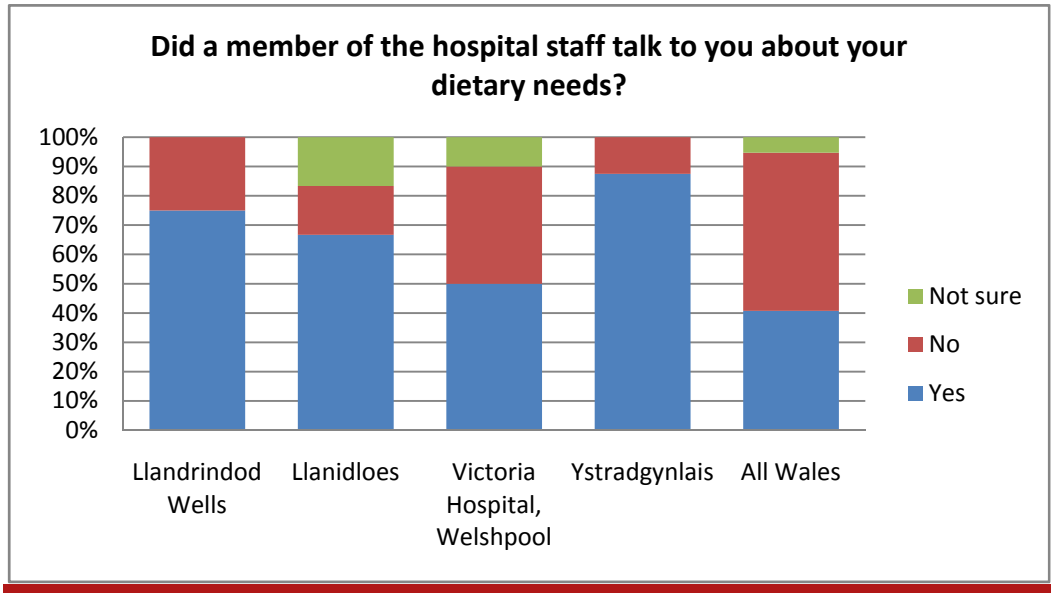

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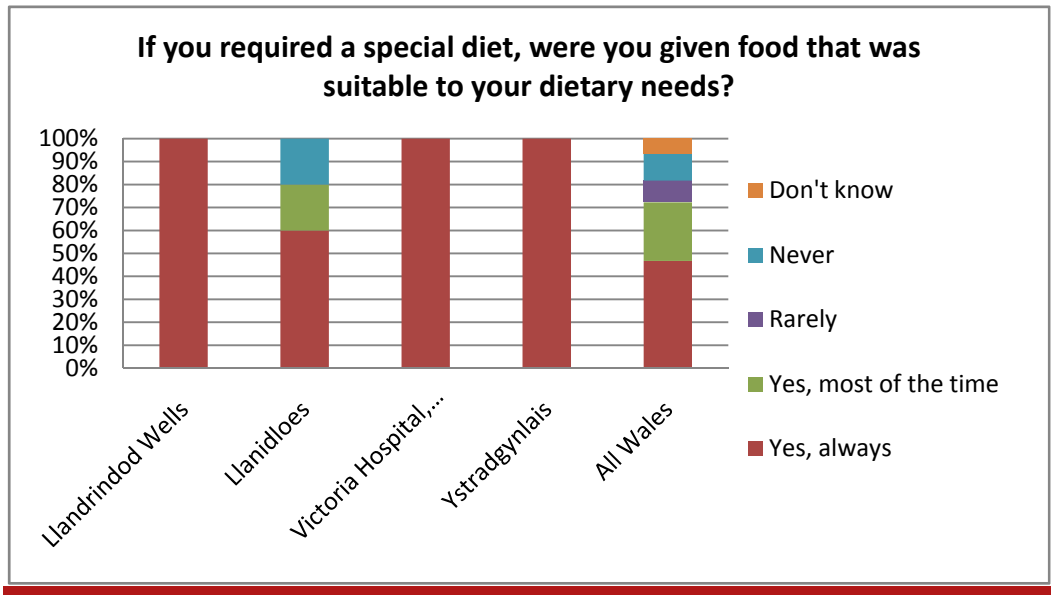

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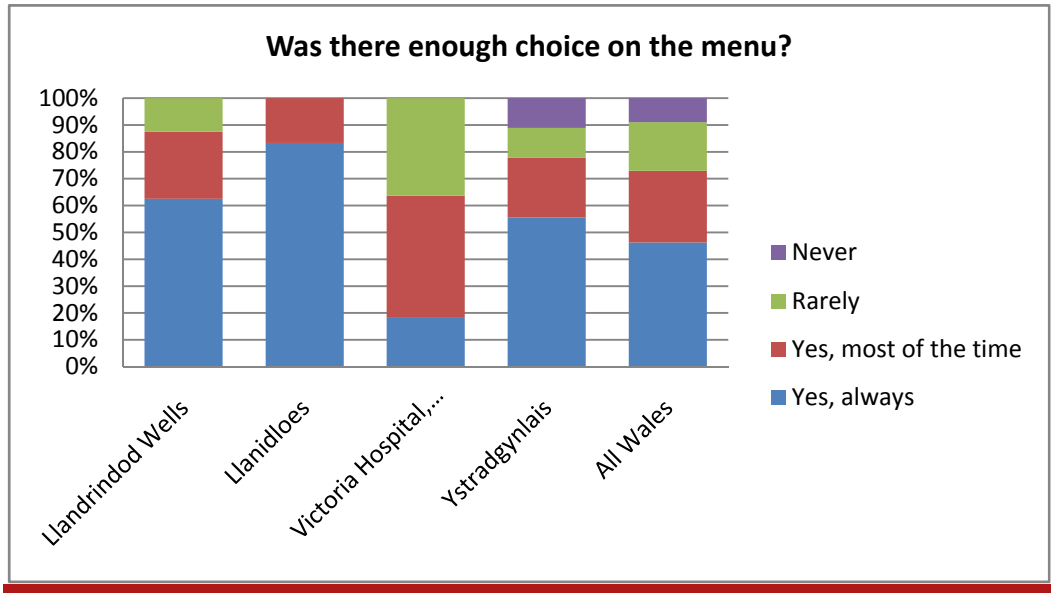

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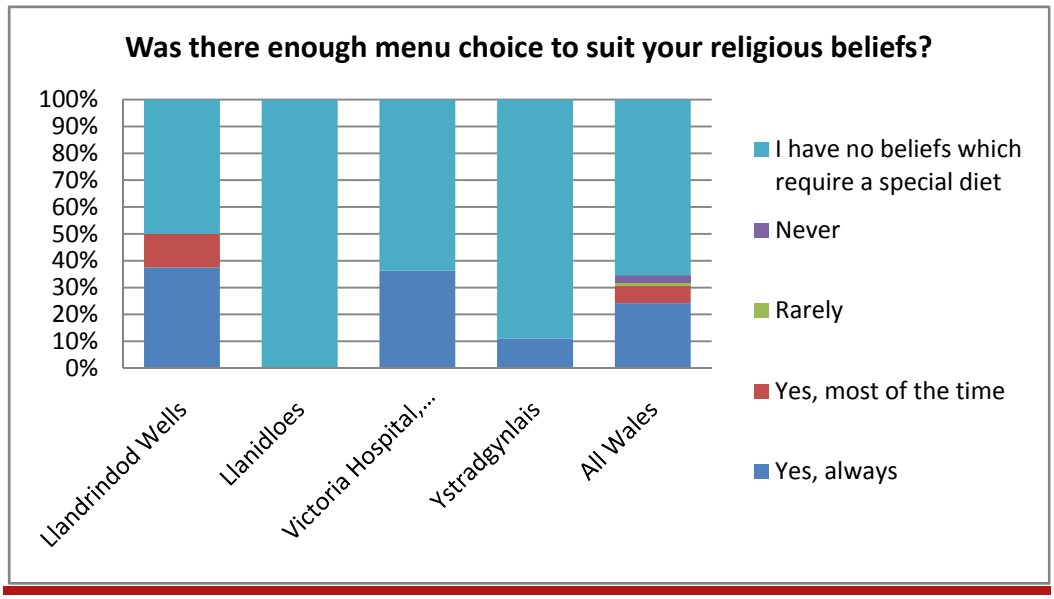

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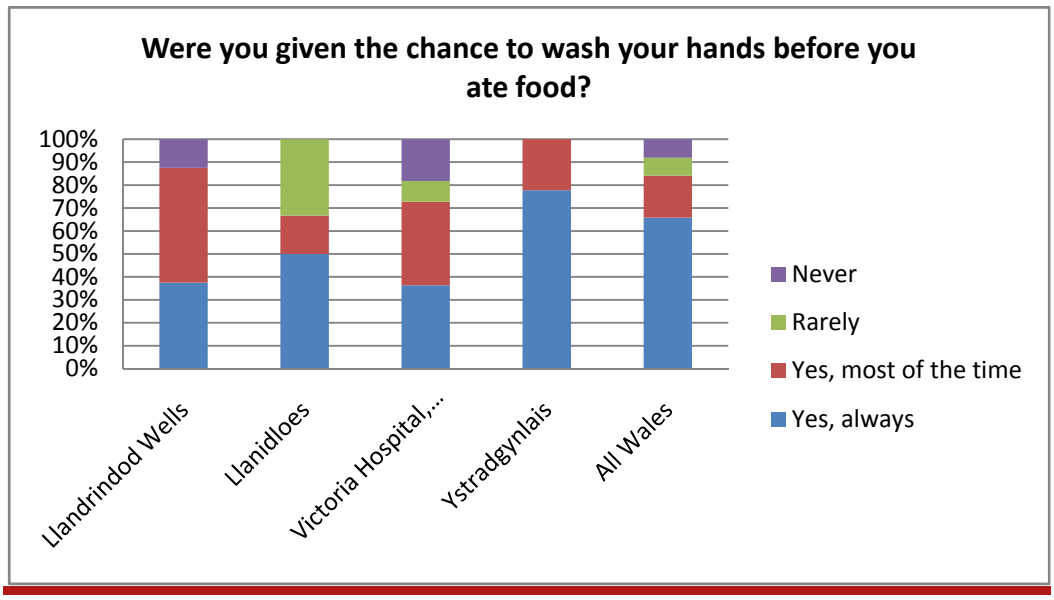

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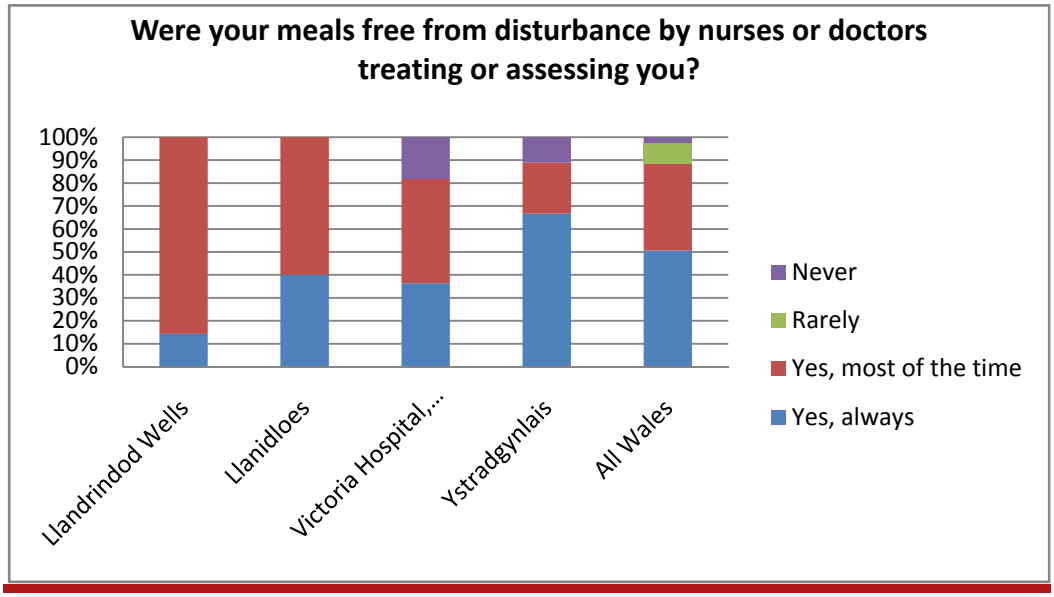
Exhibit 18



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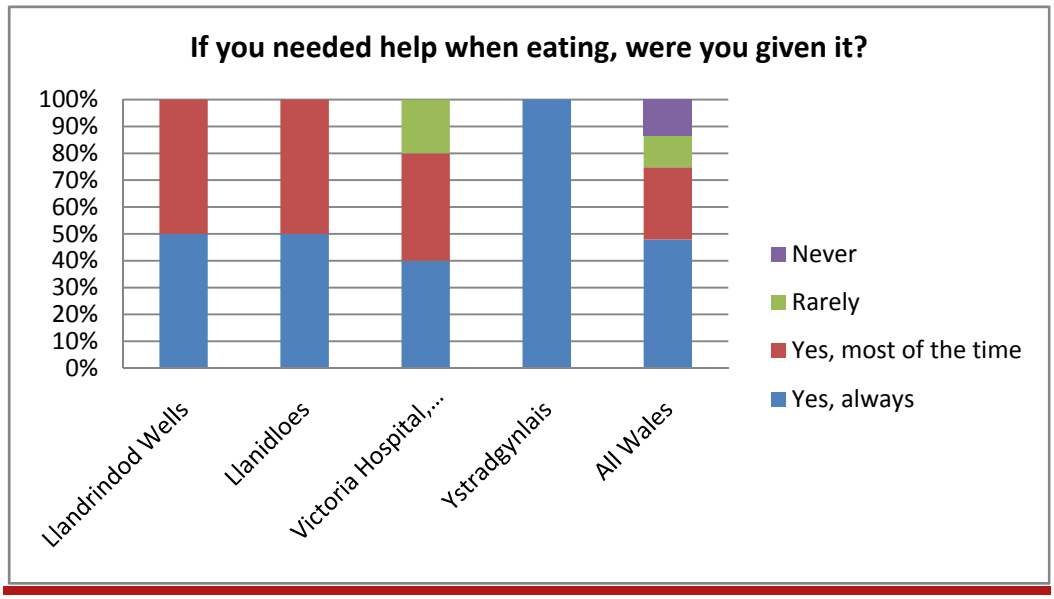

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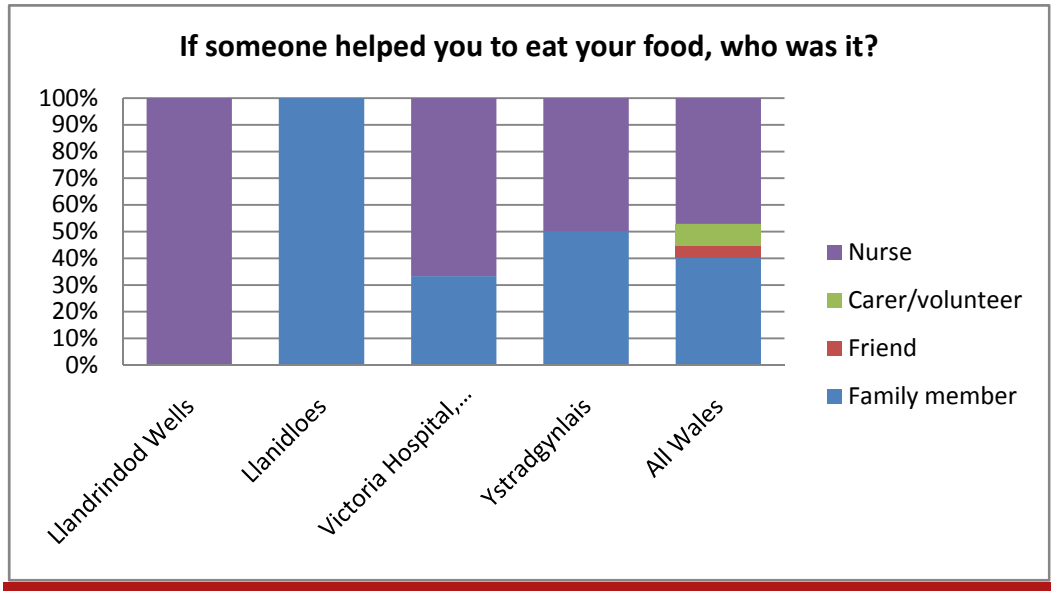

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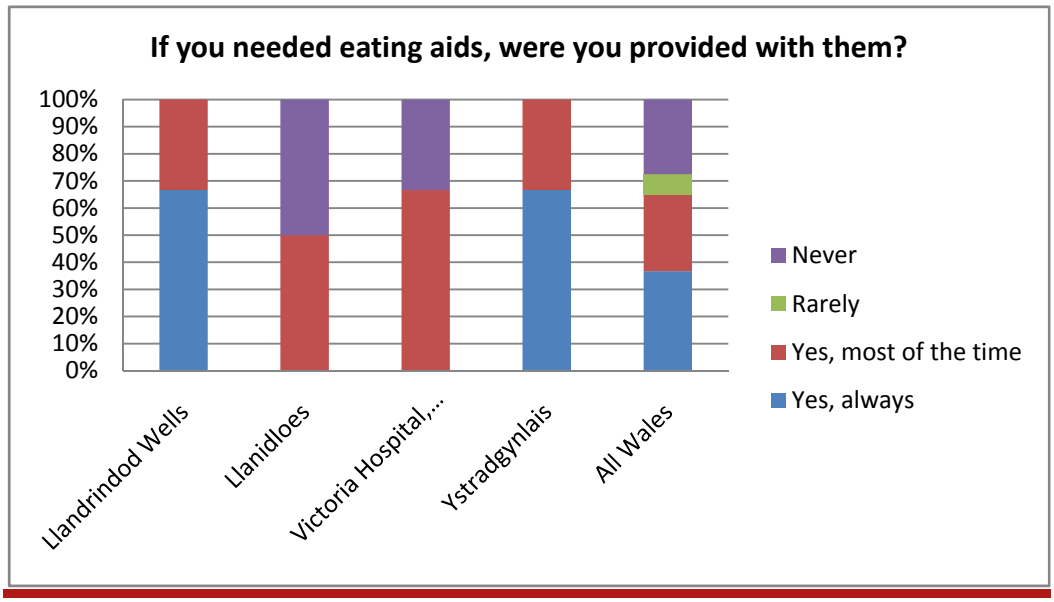

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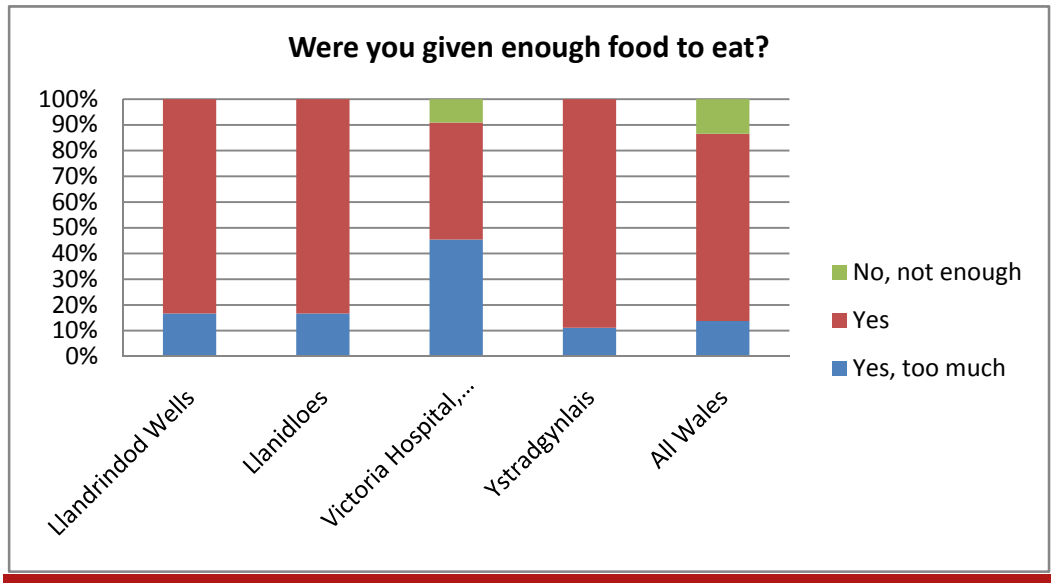

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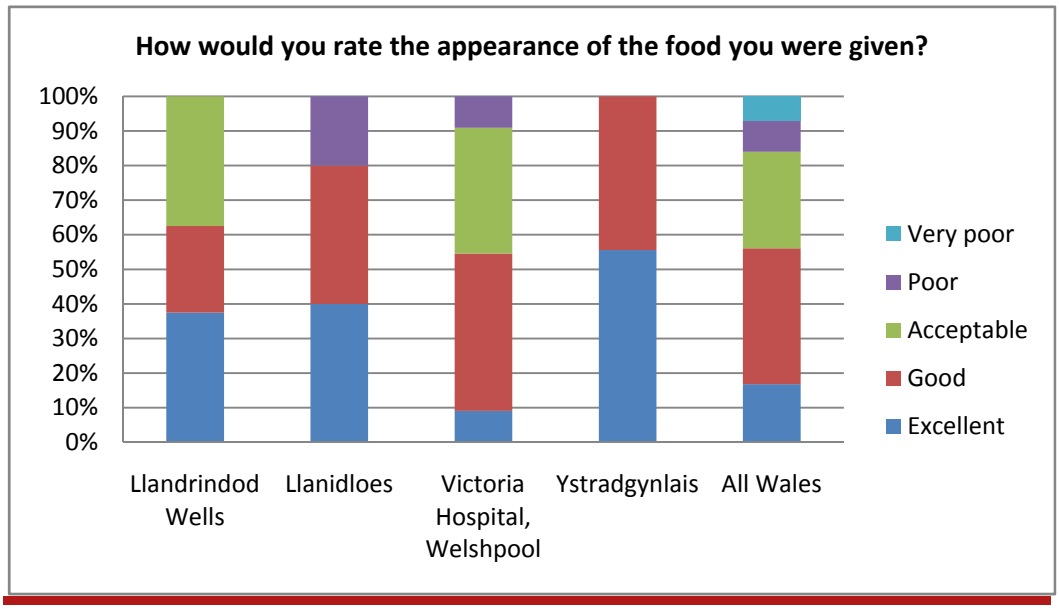

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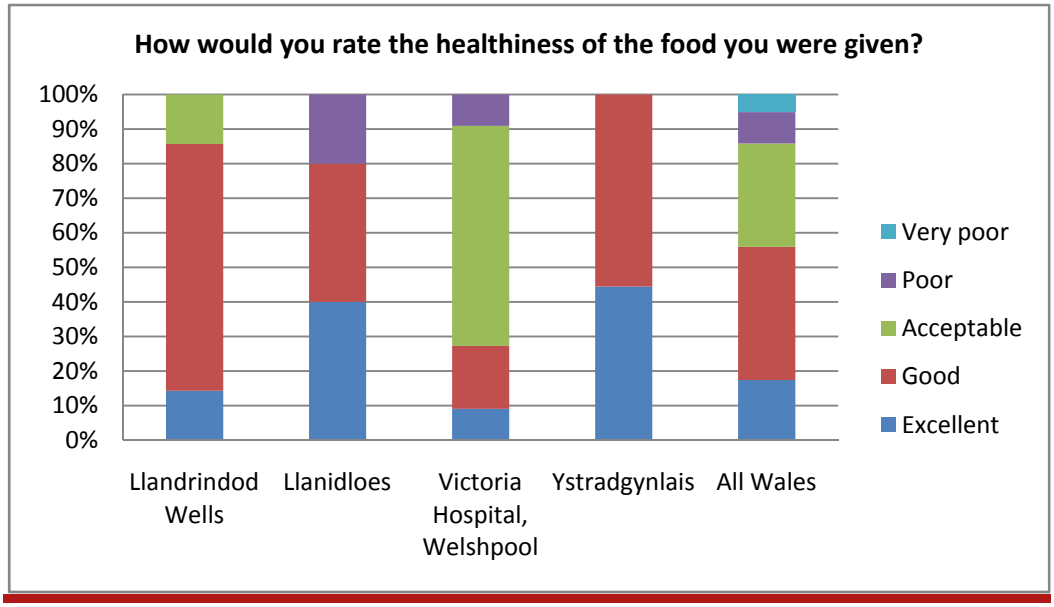

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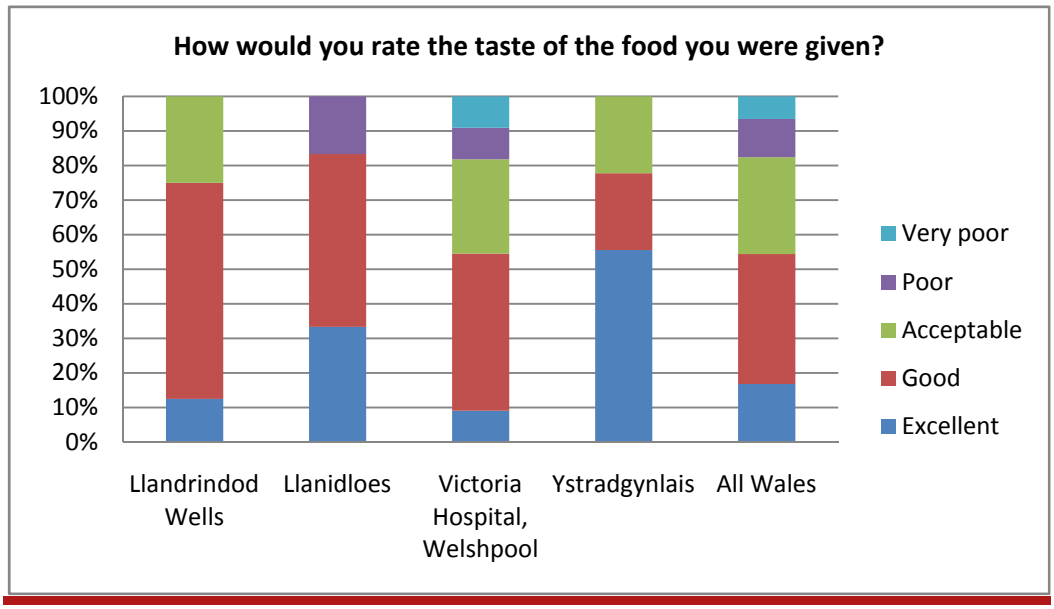

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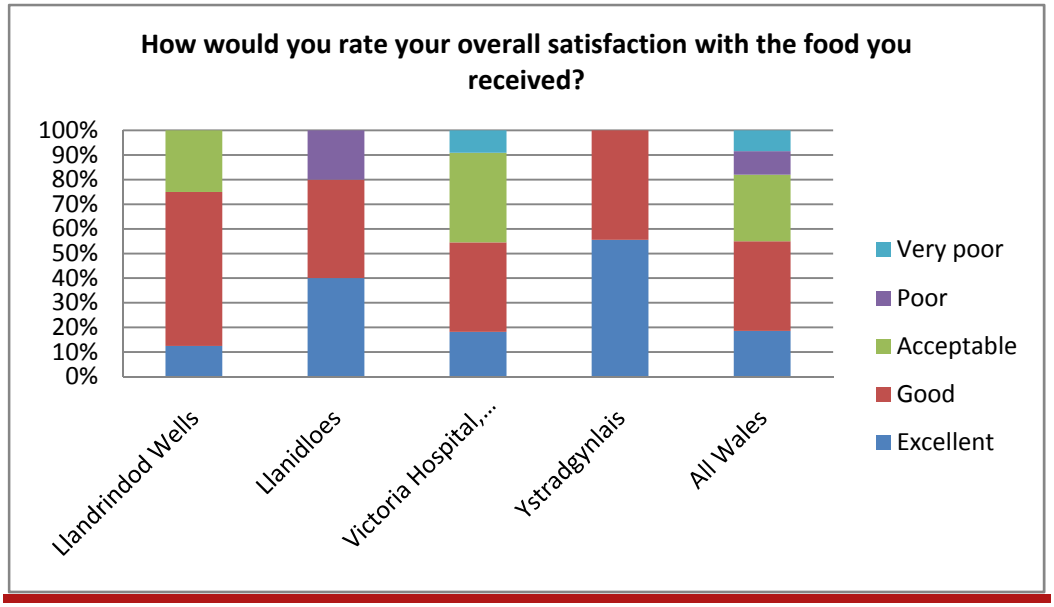

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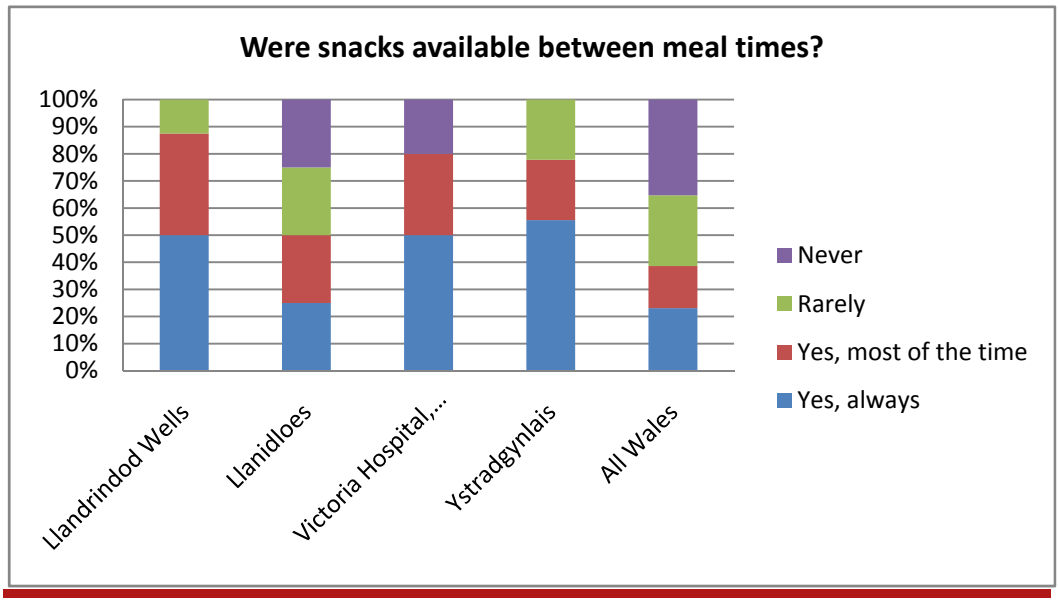

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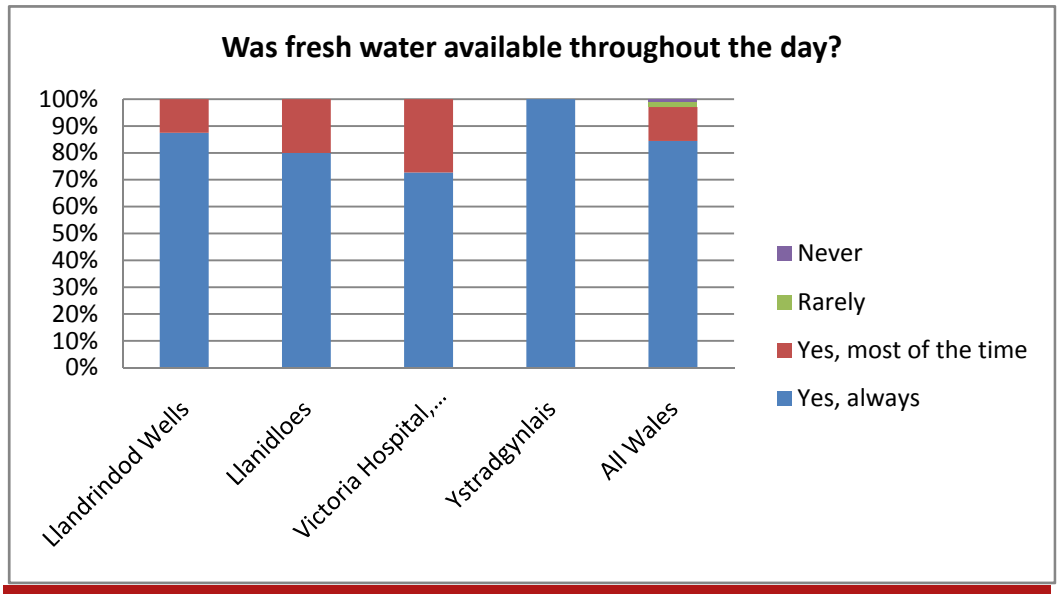

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