



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# Report of the review of nutrition and hydration care in public acute hospitals

May 2016



## About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent authority established to drive high-quality and safe care for people using our health and social care services in Ireland. HIQA's role is to develop standards, inspect and review health and social care services and support informed decisions on how services are delivered. HIQA's ultimate aim is to safeguard people using services and improve the safety and quality of health and social care services across its full range of functions.

HIQA's mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, HIQA has statutory responsibility for:

- **Setting Standards for Health and Social Services** — Developing person-centred standards, based on evidence and best international practice, for health and social care services in Ireland.
- **Regulation** — Registering and inspecting designated centres.
- **Monitoring Children's Services** — Monitoring and inspecting children's social services.
- **Monitoring Healthcare Safety and Quality** — Monitoring the safety and quality of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** — Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost-effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.
- **Health Information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

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## Executive summary

Malnutrition affects more than one in four patients admitted to Irish hospitals compromising the quality of life for patients, affecting recovery and causing unnecessary illness and death. Unless organized efforts are made to identify and manage those patients at risk, malnutrition may go undetected during a patient's hospital admission. If untreated, malnutrition can cause a wide range of adverse outcomes for patients including increased risk of complications and infection.

It is common for patients to be malnourished when they are admitted to hospital as many experience unintentional weight loss of over 10% of their body weight in the six months prior to their hospital admission. Also, a patient's nutritional status often deteriorates while in hospital. It has been reported that patients already malnourished on admission to hospital are more likely to lose weight while in hospital, and their weight loss is proportionately higher. Malnutrition has a higher incidence in specific patient populations including older people, cancer, surgical and gastrointestinal patients.

In addition to clinical consequences, there are also economic consequences; annual healthcare costs associated with disease-related malnutrition for patients in Ireland were estimated to be in the region of €1.5 billion in 2012.

HIQA used the National Standards for Safer Better Healthcare to review how public acute hospitals (other than paediatric and maternity services) were ensuring that patients' nutrition and hydration needs were being adequately assessed, managed and effectively evaluated.

These standards state that healthcare should reflect national and international evidence of what is known to achieve best outcomes for services users. In 2009, the Department of Health and Children in Ireland published guidelines in this area, entitled *Food and Nutritional Care in Hospitals — Guidelines for Preventing Under-nutrition in Acute Hospitals*. The aim of these guidelines was to increase awareness of the serious problem of undernutrition in Irish hospitals by describing how healthcare professionals and hospital staff can work together to improve nutritional care and support for hospitalized patients.

Between July 2015 and April 2016, HIQA began a monitoring programme to look at nutrition and hydration care of patients in Irish hospitals. In July 2015 HIQA sent self assessment questionnaires to forty-two hospitals asking questions about nutrition and hydration care for patients, HIQA then carried out unannounced inspections in 13 of these hospitals. This report presents the findings of this monitoring programme.

In reviewing how public acute hospitals assessed, managed and evaluated how they met individual patients nutrition and hydration needs, it became evident to HIQA

that there was variation between hospitals. Some hospitals had established systems in place to drive the implementation of national guidelines, while others did not see nutrition and hydration for patients as a priority.

Best practice guidelines state that all patients should be screened for the risk of malnutrition within 24 hours of admission to hospital. Guidelines also state that all hospitals should have a nutritional steering committee in place to oversee the provision of nutrition and hydration for patients, including implementation of guidelines, screening for risk of malnutrition and audit.

Thirty of the 42 hospitals reported that they had a nutritional steering committee in place. Only half of hospitals (21 of 42) stated that they had implemented screening for risk of malnutrition in over 75% of wards with slightly more than one in five hospitals (21%) reporting that they had not implemented a system of screening for risk of malnutrition in any area of the hospital. HIQA found that overall there was an absence of regular and ongoing audit of the quality of nutrition and hydration care at in hospitals.

A key part of the on-site inspections included inspectors speaking with patients to determine their satisfaction with their of nutrition and hydration care while in hospital. Inspectors spoke with a total of 579 patients across the 13 hospitals and 86% of these patients told inspectors that they were either satisfied or very satisfied with their nutrition and hydration care and service. Notwithstanding these positive ratings, patients also highlighted areas where improvements could be made. Hospitals should strive to improve patients' experience of hospital food and drink by engaging with patients about their experience of food and the food service.

Hospitals must now ensure that arrangements in place for meeting patients' nutritional and hydration needs continue to improve. To achieve this, hospitals need effective nutrition steering committees that encourage and support improvements in screening patients for risk of malnutrition, developing evidence-based policies and audit nutrition and hydration care. A key feature of this process is the evaluation of patients' experience of nutritional and hydration care and using their views to inform and direct change or to reinforce good practices where they exist.

This review report has been designed to present the findings and share the overall learning from this programme of monitoring. In doing so, it is hoped that hospitals can learn from the identified areas of good practice and opportunities for improvement in relation to nutrition and hydration for patients in hospital.

The report identifies the following four key areas for improvement that if implemented by all hospitals could drive improvements in nutritional and hydration care for patients admitted to acute hospitals.

## Four key areas for improvements

### **1. All hospitals should have a nutrition steering committee in place.**

A well-functioning nutrition steering committee, with relevant multidisciplinary membership is necessary to provide leadership and to promote and sustain improvement in the area of nutrition and hydration. The role of the committee is to implement systems to ensure that all patients admitted to hospital receive high-quality nutrition and hydration care. This includes:

- setting and implementing hospital policies, procedures and guidelines
- oversight of food service
- implementation of nutritional screening
- audit of food service and nutrition and hydration care.

### **2. All patients admitted to hospital should be screened for the risk of malnutrition.**

Each hospital must implement a nutritional screening programme to identify patients at risk of malnutrition and to facilitate appropriate follow-up assessment and treatment for patients. The introduction of screening for risk of malnutrition for all patients admitted to hospital should be supported with appropriate staff training and access to the necessary equipment.

**3. Hospitals must audit compliance with all aspects of patients' nutritional care and share the findings with all relevant staff groups involved in food service and patient care.**

Hospitals must have a system to evaluate nutrition and hydration care for patients admitted to hospital. The system must include monitoring and reporting of the following:

- audit of nutrient content and portion size per dish
- audit of compliance with nutrition screening and nutrition assessment
- audit of compliance with recording patients' weight
- survey of patients' satisfaction with the food they receive.

**4. Hospitals should strive to improve patients' experience of hospital food and drink by engaging with patients about food variety and choice.**

The hospital catering service should provide a good choice of nutritious meals that can accommodate patients' specific dietary requirements. All patients should have a choice of food, including those on a texture-modified diet, therapeutic diet, ethical or cultural diets. This includes patients in emergency departments who are deemed to be admitted to the hospital, but who remain in the emergency department while waiting for a hospital inpatient bed to become available.

HIQA will continue to monitor public acute hospitals against the National Standards for Safer Better Healthcare to determine if they are adequately assessing, managing and evaluating how they meet individual patients nutrition and hydration needs. This monitoring programme will include unannounced inspections of hospitals with findings published in reports on HIQA's website. Guidance for this monitoring programme will be published on HIQA's website.



## 1. Introduction

This review report presents the findings of HIQA's review of nutrition and hydration in public acute hospitals. During the course of this review HIQA monitored how nutrition and hydration care was provided in hospitals against the *National Standards for Safer Better Healthcare*<sup>(1)</sup> (referred to in this report as the Standards or the National Standards) continuing HIQA's commitment to supporting ongoing quality improvement.

This review, which was designed to include all public acute hospitals other than paediatric and maternity services (a total of 42 hospitals), was conducted in two phases. Phase-one was a self-assessment process where all 42 hospitals were required to complete a self-assessment questionnaire about nutrition and hydration care of their patients. Phase-two consisted of unannounced on-site inspections in 13 hospitals. This report considers the findings of both the self-assessment and the inspections.

Good patient-experiences are a key indicator of quality and an important outcome for all healthcare services. In addition, feedback provided by patients can also assist to continually improve the patient-experience for everyone using the service.<sup>(2)</sup> During the unannounced inspection of 13 hospitals, inspectors spoke with 579 patients, and in some cases their visitors.

Speaking with patients allowed inspectors to capture the patients' experience of nutrition and hydration care in the hospital. Inspectors asked patients what they thought of the food service, the choice of food offered at mealtimes, the quality of food, availability of snacks in between meals, assistance with their meals and their access to water.

During the on-site inspection, inspectors interviewed or spoke with a total of 363 staff across 13 hospital sites. This included senior hospital managers, nurses, allied health professionals, healthcare assistants and catering staff. Inspectors also reviewed 322 healthcare records.

Some hospitals had established systems in place to promote the use of evidence-based guidelines, while others were beginning to implement changes to improve their nutrition and hydration care of patients.

This report describes areas of practice that worked well and were in line with the National Standards, and it also identifies a number of opportunities for improvement. Hospitals must assess whether their service needs to address the areas for improvement listed under each theme within this report, and take the opportunity to implement good practice as described in this report.

## The role of the Health Information and Quality Authority

HIQA was established in 2007 to promote safety and quality in health and personal social care services for the benefit of the health and welfare of the public.

Under section 8(1)(b) of the Health Act 2007, HIQA, among other roles, sets standards on safety and quality in services provided by the Health Service Executive (HSE) or a service provider in accordance with the Health Acts 1947 to 2007.<sup>(3)</sup>

In addition, under section 8(1)(c) of the Act, HIQA monitors compliance with the standards referred to in section 8(1)(b) and advises the Minister for Health and the HSE accordingly.

## Role of standards and continuous monitoring in improving quality and safety in healthcare

The *National Standards for Safer Better Healthcare*, which are available on HIQA's website [www.hiqa.ie](http://www.hiqa.ie), took effect from June 2012.<sup>(1)</sup> The aim of these National Standards is to help promote improvements in the quality and safety of healthcare services in Ireland. Their purpose is to help the public, people who use healthcare services and the people who provide them understand what a high-quality, safe healthcare service looks like.

The National Standards contains 45 Standards presented under **eight themes** as shown in Figure 1. Collectively, they describe how a service provides high-quality, safe and reliable healthcare which is centred on patients and other service users. To deliver care that promotes the individual's health and wellbeing, there needs to be certain capacity and capability factors in place to ensure the service is sustainable.

Themes one to four of the National Standards describe the dimensions of quality and safety in the delivery of a person-centred healthcare service. Themes five to eight of the Standards describe the capacity and capability factors necessary to deliver high-quality safe care.

**Figure 1. The themes in the *National Standards for Safer Better Healthcare***



The dimensions of quality and safety in the delivery of a person-centred healthcare service are:

- Theme 1: Person-centred Care and Support
- Theme 2: Effective Care and Support
- Theme 3: Safe Care and Support
- Theme 4: Better Health and Wellbeing.

Capacity and capability factors necessary to deliver high-quality safe care:

- Theme 5: Leadership, Governance and Management
- Theme 6: Workforce
- Theme 7: Use of Resources
- Theme 8: Use of Information.

International experience shows that implementing evidence-based standards in healthcare settings — together with continual monitoring of compliance against these — is a quality and safety improvement measure.<sup>(4-6)</sup> It is the role of each hospital to assure itself, its patients and the public that it is providing safe high-quality care by demonstrating that it is meeting the National Standards. HIQA, through its monitoring programmes, aims to assure the public that hospitals are implementing and meeting the National Standards, and making any necessary quality and safety improvements that are required to safeguard patients.

## **2. Methodology**

This section outlines the methodology used by HIQA to assess nutrition and hydration care in the public acute hospitals reviewed during this monitoring and quality improvement programme. It describes the Inspection Team, the expert advisory group and the phases of the review.

### **The Inspection Team**

This review was developed and carried out by members of the Healthcare Team within HIQA, who are authorised to monitor compliance with standards, in accordance with section 70(1)(a) of the Health Act 2007.

### **The Expert Advisory Group**

The Inspection Team was supported by an Expert Advisory Group made up of a diverse range of members, including service-user representatives, healthcare professionals and service providers (see Appendix 1). The primary role of the Expert Advisory Group was to advise the Inspection Team, support consultation and inform HIQA's monitoring of nutrition and hydration care in public acute hospitals in Ireland.

### **Literature review**

A review of the literature was conducted and is included in Appendix 2. The literature review focused exclusively on undernutrition in adult patients admitted for acute hospital care. Malnutrition in children, pregnant women and patients in intensive care units were excluded from this review. Although recognized as health problems, obesity and overnutrition were not included.

### **Phases of the review**

HIQA's review took place over two phases, as follows:

- Phase-one consisted of a self-assessment questionnaire (refer to [www.hiqa.ie](http://www.hiqa.ie)) that was sent to 42 public acute hospitals (excluding maternity and paediatric hospitals) in July 2015. These were received back from hospitals by HIQA in August 2015 and analysed.
- Phase-two consisted of unannounced on-site inspections by HIQA and an on-site review of systems and practices in operation in 13 acute hospitals, carried out between October 2015 and February 2016.

## Phase one: self-assessment

A nutrition and hydration self-assessment tool was developed by HIQA, in conjunction with the Expert Advisory Group, which was based on national and international evidence of best practice and aligned with the themes in the National Standards. The Expert Advisory Group provided technical expertise and advice when HIQA was developing this tool, the content of which was informed by a review of literature on national and international practice.

The aim of the self-assessment tool was to provide HIQA with baseline information on the management and delivery of nutrition and hydration care in public acute hospitals. Each acute hospital (excluding maternity and paediatric services) was invited to complete it.

A guide to the review of nutrition and hydration in public hospitals was also developed and published by HIQA to provide information to patients, the general public and service providers.<sup>(7)</sup> It is available on HIQA's website.

The self-assessment questionnaire — in the form of an interactive electronic file — along with a copy of the guide to the review was sent to all acute hospitals via email. The hospitals were asked to return the questionnaire to HIQA by email within four weeks.

A hospital's chief executive officer (CEO) or general manager was ultimately responsible for completing the self-assessment tool and ensuring that it accurately reflected nutrition and hydration arrangements in the hospital. However, the CEO or general manager was permitted to delegate responsibility for completion of the tool to other staff members as appropriate. The hospitals were also asked to submit the following documentation, where available:

- an organizational chart outlining the lines of communication between staff directly involved in nutrition and hydration care, teams, committees and management within the hospital
- a copy of the formal documented processes (such as an algorithm, pathway, standard operating procedure and guidelines) for responding to the results of nutritional screening.

All of the 42 public acute hospitals (see Appendix 3 for a full list of hospitals) that were included in this HIQA monitoring and quality improvement programme returned completed self-assessment forms to HIQA.

The self-assessment tool consisted of four sections:

- **Section A** consisted of a general background survey about each hospital and served to assist HIQA in preparing for unannounced inspections.
- **Section B** comprised the main body of the tool and contained eight elements which were grouped according to the themes in the *National Standards for Safer Better Healthcare*.
- **Section C** listed the documentation which was to be returned with the tool.
- **Section D** was a 'Declaration' which was to be digitally signed by the CEO, general manager or individual with overall executive responsibility before the completed tool was to be submitted to HIQA.

## Phase two: unannounced inspections

The second part of the programme consisted of unannounced on-site inspections in 13 hospitals. The 13 hospitals selected included a mixture of large, medium and smaller sized hospitals with a good geographical spread across the country. During the inspections, inspectors used specifically developed observation, interview and record-tracking tools to help primarily assess the quality of nutrition and hydration care given to patients in acute hospitals.

The programme of unannounced inspections set out to assess nutrition and hydration care as seen by the Inspection Team and experienced by patients on a particular day. It observed the day-to-day delivery of services and in particular patients' experiences, arrangements at mealtimes and nutrition-risk screening and assessment of patients.

Inspectors visited hospital wards during mealtimes to check first-hand that patients received a good quality meal service, had a choice of food and that they were assisted with eating when needed. These inspections were used to validate some of the self-assessment findings and promote a process of continuous improvement.

In assessing how the nutrition and hydration needs of admitted patients are considered, managed and met, inspectors visited a number of hospital areas, including general medical and surgical wards, and emergency departments. Inspectors spoke with patients about their experiences during their hospital stay in relation to nutrition and hydration. They also interviewed staff, including senior management, nurses, dietitians and catering staff about nutrition and hydration

practices in the hospital. A sample of patients' healthcare records\* relating to nutrition and hydration were also reviewed during the on-site inspections. Other documents reviewed during the on-site inspections included hospital policies and procedures, hospital management data and staff training records.

In each hospital inspected, HIQA provided initial feedback to senior hospital managers outlining the findings of the inspection. Good practices were highlighted, in addition to opportunities for improvement. Any immediate high risks identified during an inspection were brought to the attention of the senior management team at the hospital during the inspection, with a request by HIQA that immediate action be taken.

A copy of the inspection feedback findings was sent to the relevant chief executive officer (CEO), general manager or individual with overall executive responsibility for the hospital inspected. This was to allow each hospital to have an opportunity to review the findings and provide comment on them. HIQA reviewed all comments received before collating findings for inclusion in this review report.

Each service provider is accountable for the implementation of quality improvement plans to assure themselves that the findings relating to areas for improvement in their hospital are prioritized and implemented to comply with the National Standards for Safer Better Healthcare.

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\* A coded number was assigned to each patient healthcare record reviewed to ensure patient confidentiality.

## Review Report

This review report presents an analysis of the information gathered across the public acute hospital system in relation to the quality of nutrition and hydration care. The review involved an analysis of information from a variety of sources which included the following:

- review of information provided by hospitals in their returned self-assessment questionnaires
- direct observation of mealtimes by Inspection Teams during unannounced inspections of 13 hospitals
- information obtained by inspectors when talking with patients and visitors who were assisting patients with meals
- interviews conducted with hospital management and discussions with nurses, allied health professionals, healthcare assistants and catering staff
- the review of documentation such as hospital policies and procedures, healthcare records, hospital management data and staff training records.



### **3. Findings from the self-assessment and on-site inspections**

#### **Introduction to findings**

This section of the report describes the overall results from the information provided by the 42 public acute hospitals in the completed self-assessment questionnaires in August 2015. It also includes the findings from on-site inspections in 13 of these 42 hospitals between October 2015 and February 2016.

Inspectors visited 69 hospital wards and 10 emergency departments across 13 hospitals and spoke with patients, staff and hospital managers. The criteria for the selection of the 13 hospitals included, analysis of the self assessment tool data, unsolicited information received by HIQA, size of the hospital and geographical spread.

Good patient experiences are a key indicator of quality, and thereby an important outcome for all healthcare services. In addition, feedback provided by patients can also help to continually improve the patient experience for everyone using the service.<sup>(4)</sup> Mindful of this, a key component of this monitoring programme included speaking with patients in order to ensure that this review would accurately reflect what patients experienced and their satisfaction in relation to their nutrition and hydration care. Nevertheless, the inspection team acknowledge that speaking with patients who are still in hospital may result in a 'halo' effect where the patient may be more biased toward giving a positive response than if they had been asked to provide feedback a number of weeks after leaving the hospital.<sup>(8)</sup>

Inspectors spoke with a total of 579 patients, and in some cases their visitors, about their experiences of nutrition and hydration care during their hospital stay. HIQA inspectors also directly observed mealtimes during the on-site inspections, and were present in each hospital over a two-day period in order to view two to three mealtimes in each hospital. This allowed inspectors to assess the choice of food offered to patients, the variety and appearance of the food being served and whether patients received any assistance they required in a timely way.

During on-site inspections in 13 hospital sites, inspectors interviewed or spoke with a total of 363 staff. This included senior hospital managers, nurses, allied health professionals, healthcare assistants and catering staff.

Inspectors reviewed a total of 322 patient healthcare records across the 13 hospital sites. The results of the completed self-assessment questionnaires and the on-site inspections are presented under each of the eight themes of the National Standards.

## **Theme 1: Person-centred care and support**

Healthcare that is person-centred respects the values and dignity of service users and is responsive to their rights, needs and preferences. The National Standards state that in a person-centred service, providers listen to all their service users and support them to play a part in their own care and have a say in how the service is run. This includes supporting individuals from different ethnic, religious or cultural backgrounds. As such, inspectors were interested to learn how a hospital facilitated patients to receive meals and drinks that were appropriate to them and took account of their preferences.

For healthcare to be person-centred it should respect the values and dignity of its patients and other service users and be responsive to their rights and needs. In the context of person-centred care, the self-assessment sought information relating to patients' choice and preferences, respect for patients' diversity and rights and promotion of their autonomy. This information looked at how hospitals allow patients to choose, provide eating assistance when needed, review menus and consult patients on the provision of food and drink.

During the on-site inspections, the HIQA Inspection Teams looked for evidence of how hospital staff communicated with and consulted with patients about the patients' experience of the meal service and their nutrition and hydration care. This included the timing of meals, menus, meals given to patients in the emergency department, whether patients got enough to drink, received assistance with meals if it was needed, and professional advice regarding patients' nutrition and hydration.

## Meal service and timing of meals

Food should be seen as an integral part of a patient’s hospital treatment rather than a separate ‘hotel service’ provided by the hospital. <sup>(2)</sup> Hospitals were asked to provide information in the self-assessment on the catering systems in use and the manner in which food is served to patients. The vast majority prepared and cooked meals in-house (see Table 1 below), meaning that they prepared and cooked their meals in their own on-site kitchens.

**Table 1. Catering providers used in hospitals**

Catering provider	Number of hospitals
<b>In-house food preparation and cooking</b>	39
<b>External company or other source*</b>	3

\*One of the three hospitals had an arrangement with an adjacent HSE facility to provide food.

A ‘cook-fresh’ food service system was the standard method for preparing food in most hospitals, which involved cooking, plating, and serving food hot (see Table 2). ‘Cook-chill’ and ‘cook freeze’ systems were also in use in many hospitals. These involve chilling or freezing food after it is cooked and re-heating the food prior to serving.

**Table 2. Food production systems used**

Food production systems used	Number of hospitals*
<b>Cook-fresh</b>	33
<b>Cook-freeze</b>	3
<b>Cook-chill</b>	16
<b>Convenience foods</b>	1

\*Nine hospitals reported using two food production systems, while one hospital said it used three systems.

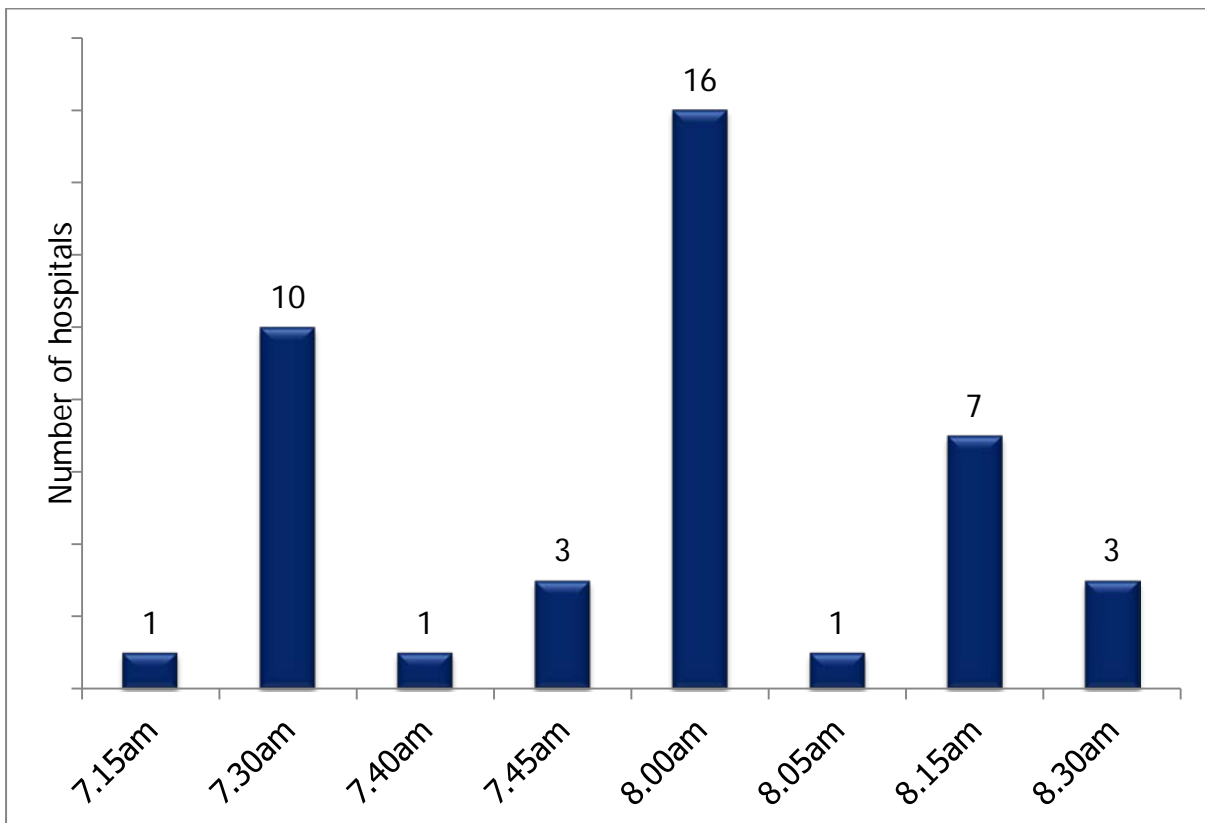
Food was generally centrally plated (where the food was placed onto plates at one central location, such as the hospital kitchen), with a smaller number of hospitals serving meals onto plates from mobile buffet trolleys at the patients' bedside. Table 3 shows the breakdown.

**Table 3. Food serving systems**

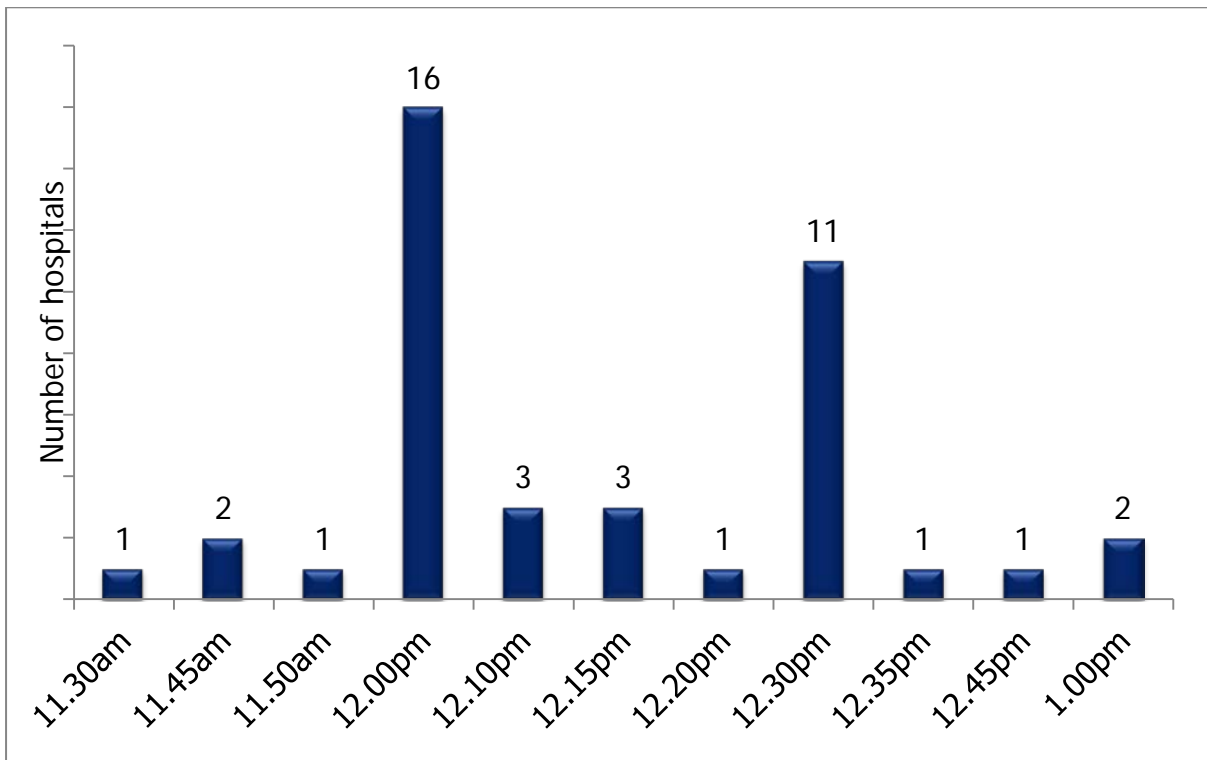
Food serving system	Number of hospitals
Centrally plated	34
Buffet-style at the patient's bedside	8

All 42 hospitals reported in the self-assessment questionnaire that they provided three main meals per day, with mealtimes varying from hospital to hospital as shown in Figures 2, 3 and 4 below. These findings, in particular, the time periods between meals, are then discussed.

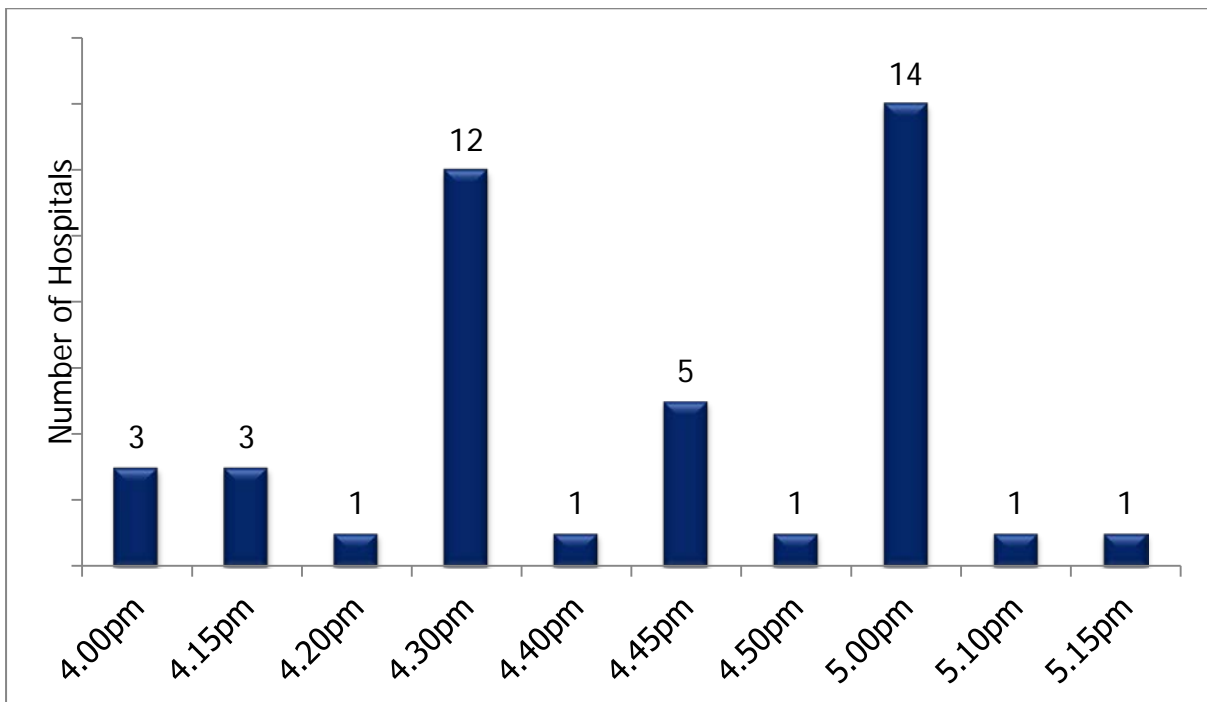
**Figure 2. Start time of breakfast**



**Figure 3. Start time of midday meal**



**Figure 4. Start time of evening meal**



Best practice guidelines suggest that there should be four hours or more between the end of each main meal and the beginning of the next. <sup>(2)</sup> However, as a consequence of the above stated meal-start times, most hospitals were not adhering to these best practice guidelines. This review found:

- 38 out of 42 hospitals did not have the recommended four or more hours between breakfast and the midday meal
- 29 out of 42 hospitals did not have the recommended four or more hours between their midday meal and their evening meal.

In some hospitals, the interval between meals was as little as two hours and 30 minutes. Some patients received all their meals within the space of eight hours and 15 minutes. Most hospitals who were achieving the four-hour target had short mealtimes, that is to say 30 minutes for breakfast.

Other hospitals allowed much longer for meals. For example, one hospital stated that breakfast was served from 8am to 10am and the midday meal serving began at 12.30pm and ended at 2pm. The interval between patients' evening meal and breakfast the following morning ranged from 14 to 16 hours across the 42 hospitals. Nonetheless, all hospitals bar one reported that they served an evening snack between the evening meal and breakfast the following morning.

During the on-site inspections, the catering systems in place and the timing of meals correlated with the information provided by each of the 13 hospitals in their self-assessment questionnaire. Inspectors found that overall, mealtimes varied from hospital to hospital and that most hospitals served the main meal of the day at midday and a lighter meal in the evening.

Inspectors found evidence of a patient-centred approach to care where a small number of wards within hospitals had chosen to have a different meal-start time, for example, a later breakfast serving time, to ensure that nursing staff and healthcare assistants were finished report handover and were available to assist patients with their meals. Such a patient-centred approach to care is to be commended and should be replicated across each hospital site.

During inspections, patients were asked by inspectors if they were satisfied with the timing of meals. Inspectors received a mixed response from patients about the spacing and timing of meals. Feedback from patients in hospitals with an earlier breakfast time (before 8am) indicated that they would prefer a later start time for breakfast. Patients who were not satisfied with the timing of meals, in general, told inspectors that meals were served too early.

Inspectors concluded that:

- meals were often served too early
- the timing of meals did not reflect the best practice four-hour gap between meals
- meals were not spaced out evenly during waking hours.

Examples of this included:

- Some patients told inspectors that breakfast was served too early. In five of the 13 hospitals inspected breakfast was served between 7.15am and 7.45am. In the other eight hospitals breakfast was served between 8.00am and 8.30am.
- One of the 13 hospitals inspected served the evening meal at 4.00pm. A number of patients told inspectors that the time between the evening meal and breakfast was quite long.
- Nine of the 13 inspected hospitals failed to allow four hours or more between patients finishing breakfast and being served their main meal, for example, in one location, breakfast was served at 8am, finished at 8.30am and then the main meal (dinner) was served three-and-a-half-hours later at midday.
- Six of the 13 hospitals inspected did not allow a gap of at least four hours between the end of the midday meal (main meal) and the start of the evening meal.

Hospital mealtimes can often be inflexible and designed solely to match hospital staffing arrangements rather than those of patients. <sup>(2)</sup> All public acute hospitals in Ireland need to review the serving times of meals, in consultation with patients, to ensure that serving times adhere to best practice guidelines, are organized around patients' needs and support a patient-centred approach to care.

## Availability and variety of snacks

Best practice guidelines suggest that high-calorie snacks should be offered between meals, mid-morning, mid-afternoon and late-evening. <sup>(2)</sup> In the self-assessment questionnaires returned to HIQA, hospitals indicated a variety of arrangements for providing an evening snack, for example:

- on the instructions of a dietitian
- at a patient's request
- providing snacks to diabetic patients and or
- patients preparing for surgery.

Late evening snacks were available in 41 out of 42 hospitals. There were fewer snacks available between other meals, with 20 out of 42 hospitals saying they provided snacks to patients between the midday and evening meals, and 33 out of 42 hospitals indicating that they provided snacks between breakfast and the midday meal.

In some countries, the time-period between patients' evening meal and their breakfast are set down in guidelines or standards. For example, in Scotland, if there is a gap of 14 or more hours, a substantial snack must be provided.<sup>(9)</sup> Twelve of the 13 hospitals inspected provided patients with a snack between the evening meal and breakfast (between 7pm and 10pm). As a quality improvement initiative, one hospital out of the 13 hospitals inspected had introduced a snack trolley in the evening, giving patients a wide choice of snacks.

During the on-site inspections, HIQA inspectors looked at the availability and variety of snacks offered to patients between meals. Inspectors found examples of where clinical staff had ordered extra snacks for patients who required them, such as patients who were identified as being at risk of malnutrition or diabetic patients. The type and range of snacks available varied from hospital to hospital with tea and biscuits being the most common snack offered.

Other snacks included fresh fruit, yogurts, rice pudding, crackers and cheese, custard, sandwiches and salads. Despite this extensive and available range of snacks, most patients reported to inspectors that they were only offered tea and biscuits as a between-meal snack. Staff told inspectors that snacks were available on request by patients, however, patients whom inspectors spoke with were not always aware of this. HIQA considers this a missed opportunity to ensure that patients have access to snacks outside regular mealtimes and that they receive a high-protein, high-calorie diet.



## Missed meals

Almost nine out of 10 (88%) of all the 42 hospitals reviewed reported that there was a system in place to provide appropriate nutrition outside of normal mealtimes to patients who missed a meal. Inspectors found, from talking with patients and staff, that the type of meal replacements varied. In eight of the 13 hospitals inspected, patients told inspectors that they always received a replacement hot meal if they were absent from the ward during mealtimes. However, in the remainder of hospitals, replacement meals were limited to sandwiches or tea and toast, rather than a more substantial hot meal.

## Choice and variety of food

In the self-assessment questionnaire hospitals were asked how patients choose what they want to eat at mealtimes. The 42 hospitals used a number of ways to do this, and some used multiple methods. For example, hospitals reported that menu cards were used (45% of hospitals), menus were outlined verbally (in 90% of hospitals), and picture menus were used (17%).

One hospital stated there was no choice available to patients. Just over one in four hospitals (26%) reported having no procedure to help patients understand and choose menu options. For patients with communication difficulties, 38 out of 42 hospitals stated that they included carers, relatives or friends in discussions regarding their nutrition and hydration preferences and needs.

Inspectors reviewed hospitals' menus and found that most menus had a variety of meals on offer for patients on a normal diet. The majority of the 13 hospitals inspected rotated menus on a two- or three-weekly basis to ensure that patients in hospital over a long period of time would have a variety of meals.

Inspectors found that patients on a normal diet or a therapeutic diet had a choice of meals for breakfast, midday meal and the evening meal. Out of over 470 comments made by patients to HIQA inspectors, only 19 comments were negative in regard to the choice of meals available.

However, inspectors found that patients who required a texture-modified diet<sup>†</sup> due to swallowing difficulties had either no choice or a very limited choice of what they could have to eat. Patients who require texture-modified diets are among those

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<sup>†</sup> Texture-modified diets may include soft diets, minced and moist diets, smooth pureed diets and liquidised diets due to swallowing difficulties.

patients at high risk of developing malnutrition. Limiting the choice of food available to them may increase this risk.

Patients should receive accurate descriptions of menu choices to allow them to make informed choices.<sup>(2)</sup> In the majority of hospitals, catering attendants or healthcare assistants told patients what was on the menu and then took the patients' meal order. Some hospitals gave patients laminated menus or menu cards to inform them of meal choices before staff took meal orders. In general, patients ordered meals one day in advance meaning, for example, that patients ordered Tuesday's meals on Monday and so on. A number of hospitals had same-day meal ordering or were planning to introduce this to enable patients to choose their meals on the day that they would be eating them.

Despite the good practices seen, in a number of hospitals inspectors saw staff who were explaining menu options to patients not always telling patients about all the meal options available on the menu. Some patients were told there was one or two options, when in fact there was three or four options available. In many cases, meals were described as 'chicken' or 'fish' with no further detail about how the meat was cooked (fried, baked or stewed) or about side dishes such as vegetables or sauces. Hospitals should review the systems that are in place to ensure that patients are fully informed about the choice of food available to them.

On reviewing menus from the 13 hospitals visited, inspectors found that in general there was less variety of food available for the evening meal. Some hospitals served the same or similar food options every day for the evening meal, for example, hospitals serving variations of a mixed grill every evening. Other examples of limited variety were patients being given the same choice of sandwiches, fruit or vegetables every day. One hospital served the same type of potato accompaniment with the main meal every day.

## **Catering for patients with ethnic, religious and cultural dietary needs**

The National Standards state that patients should experience healthcare which respects their diversity and protects their rights. Dietary practices within and between different cultural groups can be quite varied. It is important not to assume what an individual's dietary practices are just because they belong to a particular faith or culture. These practices may vary depending on practices such as fasts, festivals, food restrictions and other requirements.

Thirteen of the 42 hospitals (34%) confirmed in the self-assessment that there were no menu choices that provided options suitable for patients from different ethnic,

religious and cultural backgrounds. Findings from the completed self-assessment tool indicated that these menu options were less common in smaller and medium sized hospitals situated in rural areas.

HSE policy recognizes that the demographics of Irish society are changing. Advice and guidance on catering for cultural diversity and religious beliefs in healthcare settings is informed by the HSE's guidance document, *Healthcare Service, Intercultural Guide: Responding to the needs of diverse religious communities and cultures in healthcare settings*.<sup>(10)</sup>

The findings of the on-site inspections broadly reflected what was reported in the self-assessment questionnaire across all 42 hospitals. Inspectors found that most hospitals catered for the dietary requirements of patients from different ethnic, cultural or religious backgrounds. One hospital had a section in the nursing assessment that prompted nursing staff to ask patients if they required an ethical or religious meal.

Three hospitals out of the 13 inspected did not offer an adequate menu choice for patients from different ethnic, cultural or religious backgrounds, with a single vegetarian option the only alternative to more traditional, in an Irish context, meat- or fish-based meals available. This meant that those patients relied on family members bringing food in to them from home.

Given the ethnic and religious diversity now emerging in Ireland, this is an area that requires significant improvement. Hospital management teams must review the systems in place in their hospital to ensure that formal arrangements are in place to cater for all their patient populations, including patients with specific religious, ethnic and or ethical dietary requirements.

## **Patients' experience of meal service**

Inspectors observed meals as they were being served and found that in most hospitals inspected, the food was served in an appetising way on the days of inspection. There were a very small number of exceptions to this observation in relation to specific foods or meals, for example, congealed baked beans or a small number of meals that appeared dry.

Patients who require texture-modified diets are often patients at risk of malnutrition, so it is important that meals provided to them appear appetising. Overall, inspectors found that texture-modified meals appeared appetising with different food types separated on the plate. Many hospitals had outsourced the production of pureed foods and were purchasing pureed meals that had been moulded into the shape of the respective food in question, for example, pureed chicken was moulded into the

shape of a breast of chicken and pureed carrots were moulded into the shape of a carrot.

Other hospitals produced texture-modified meals in the hospital's kitchen and either used moulds or scoops to separate the food types.

Patients reported they got the correct meal for their specific dietary needs and were mostly complimentary about meals served (78% of the comments made to inspectors on the 13 sites were positive about the food and meals served). Patients, with a few exceptions, told inspectors that they got enough to eat and were happy with the portion sizes. Patients remarked that the food tasted well, hot food was served hot and that there was plenty of food on offer. Many patients expressed surprise to inspectors about the high quality of the food and commented that prior to coming to hospital that they had low expectations of hospital food.

Inspectors observed good social interaction between catering staff taking patients' meal orders and delivering the meal service. Patients were very complimentary about staff and gave inspectors many examples of where staff had been friendly, helpful or went out of their way to accommodate their needs. Inspectors observed many examples of hospital staff accommodating patients when they had requested food that was not on the menu.

Nonetheless, a small number of patients expressed some dissatisfaction with the meals provided. This included 15 patients who reported that they had asked their family to bring in meals and or snacks to them because they either didn't like the food, wanted extra home cooked food or they didn't get enough to eat. Negative comments about the food focused mainly on its temperature, primarily that hot food was not hot enough. Other negative comments were about specific meals that patients did not enjoy, the range or types of food available and the taste of the food in general.

## **Patient satisfaction**

Patients were asked during the on-site inspections to rate their overall satisfaction in relation to the food and drinks served while they were in the hospital. Table 4 on the following page shows a breakdown of the responses received.<sup>‡</sup>

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<sup>‡</sup> Patients were asked to rate their satisfaction with the overall meal service and given five options including: very satisfied, satisfied, neither satisfied nor dissatisfied, either dissatisfied or very dissatisfied.

**Table 4. Satisfaction levels of patients in inspected hospitals\***

Satisfaction level	Number of patients (n=556)	Percentage of patients who gave a rating
<b>Very satisfied</b>	256	46%
<b>Satisfied</b>	221	40%
<b>Neither dissatisfied nor satisfied</b>	52	9%
<b>Dissatisfied</b>	19	3%
<b>Very dissatisfied</b>	8	2%

\* A total of 579 patients were spoken with. However, 23 patients did not give a satisfaction rating, and only those 556 patients who gave a rating are included in this table.

The majority of patients who gave a rating reported that they were 'satisfied' or 'very satisfied' — 86% in total — with the meal service at the hospital. However, while welcome, such a satisfaction rating cannot be viewed in isolation as international evidence suggests that when patients are asked to provide a general rating of their care, that tends to bring out more positive responses than questions about events and occurrences.<sup>(11)</sup> This evidence goes on to suggest that general rating questions cannot take account of the complexities of modern healthcare and the diversity of patients' expectations and experiences.

Inspectors found that many patients who had expressed some dissatisfaction with aspects of the meals provided still rated their overall satisfaction rate as 'satisfied' or 'very satisfied'. Inspectors reviewed patient comments reflecting their experience of the food and drink service at the hospital, as experienced by the patients. A total of 2,055 comments<sup>§</sup> were reviewed of which 74% were deemed to be positive, 17% negative and 9% neither positive nor negative. It was clear that some hospitals received a higher percentage of positive comments than other hospitals.

The main themes emerging from these comments (both positive and negative) related to the food on offer, choice at mealtimes, snacks in between meals and fluids offered.

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<sup>§</sup> A total of 337 recorded comments were excluded as they related to residents' medical information only, or did not provide sufficient detail from which to infer a positive or negative experience.

## Emergency departments

The analysis of the information received in the completed self-assessment tool showed considerable variation in relation to the arrangements in place to provide nutrition and hydration for admitted patients in the emergency departments. These are patients who have been deemed to be admitted to an inpatient ward in a hospital, but who remain in the emergency department pending the availability of a bed on a ward.

Twenty-eight of the 42 hospitals stated in the completed self-assessment that standard hospital mealtime arrangements for inpatients were the same for those admitted patients waiting on a hospital bed to become available in the emergency department.\*\* However, some hospitals recognized that the choice of food for admitted patients in the emergency department was limited and that the timing of meals there may be different than that of ward areas. Three hospitals stated that admitted patients in the emergency department received tea and sandwiches only at mealtimes, while one of the three hospitals said it also provided texture-modified diets if required.

Inspectors visited emergency departments in 10 of the 13 hospitals visited to observe meals being distributed and to speak with patients who were admitted to the hospital and were waiting for a bed to become available on a ward. Most patients were offered meals three times per day, including at least one hot meal. However, patients had no choice of food and in some cases patients told inspectors that they were presented with a meal that was unsuitable for their dietary needs or that they did not like.

Most hospital emergency departments had individual tray tables to serve patient meals on; however, in one hospital inspectors found patients had to eat meals on a tray placed on their hospital trolley. This was brought to the attention of the hospital management team in the hospital concerned, because eating meals from trays placed on a hospital trolley means that patients may not be positioned to eat in a comfortable way or it could create a risk of spilling hot food or drinks.

Inspectors found a lack of consistency in the meals offered to patients in emergency departments. In one hospital, the patients' location in the emergency department determined the food they were offered, with some patients receiving a hot meal and others receiving sandwiches only. In another emergency department, hospital patients told inspectors that they had been informed that they weren't entitled to a meal because their name was not on a list drawn up in the morning. In both cases,

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\*\* Eleven of the 42 hospitals either did not have an emergency department or did not accommodate admitted patients in the emergency department.

inspectors brought these issues to the attention of hospital management who reported that they were unaware of these practices. Two hospital emergency departments received a set number of meals at mealtimes, which on occasion was not enough for the number of admitted patients in the department at that particular mealtime.

HIQA acknowledges that providing the same level of meal service for admitted patients waiting for a bed in emergency departments is a challenge. However, as many patients are 'boarding' in emergency departments for extended periods of time (in that they are admitted to the hospital and waiting for a ward bed to become available), hospitals must ensure that their patients' fundamental nutrition and hydration care needs are met without exception.

## Assistance

In the self-assessment, most hospitals (83%) reported they had a process to indicate if a patient required assistance at mealtimes. Table 5 below sets out the range of methods used to indicate a patient that required assistance as stated by hospitals in the completed self-assessment tool:

**Table 5. Methods used to indicate if a patient requires assistance with their meals**

Methods used*	Number of hospitals
A whiteboard on the ward	10
A symbol or sign over the bed	12
A whiteboard in the kitchen	8
Different coloured trays	11
Notes at the end of the bed	5
Other	28

\* Some hospitals used more than one method to identify patients requiring assistance and many hospitals reported other methods other than those pre-defined in the self-assessment tool. These included integrated care pathways, documented in care plans, verbal hand over, ward diet sheet and using a red tray to indicate if a patient requires assistance.

Most hospitals (90%) had a system in place to identify patients that required additional assistance to meet their nutrition and hydration needs. Hospitals were asked to indicate if staff were available to provide assistance to patients who required help with feeding. The responses are shown in Table 6 below.

**Table 6. Frequency of staff available to provide assistance with feeding**

Frequency of staff availability	Number of hospitals
<b>Always</b>	17
<b>Mostly</b>	21
<b>Sometimes</b>	4
<b>Never</b>	0

During the on-site inspections in 13 of the 42 hospitals, inspectors found that most patients requiring assistance with their meals were offered assistance in a timely manner. Hospital staff reported having systems in place to identify which patients needed assistance with eating and drinking. These systems included:

- verbally communicating information at handover
- recording this information in nursing records or diet sheets<sup>††</sup>
- recording this information on patient information whiteboards
- using different coloured trays to identify patients requiring assistance.

Inspectors observed patients being assisted with positioning prior to meals, opening food packaging, buttering bread and cutting up food. Patients that required help with eating were assisted as required. HIQA acknowledges that the presence of inspectors during meals may have meant that patients got assistance in a more timely way. However, inspectors observed good examples of person-centred care in a number of hospitals that had introduced ways to ensure that patients were consistently assisted in a timely way. These included:

- a system whereby patients that required assistance were served meals on a different coloured tray to highlight to staff that these patients needed help

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<sup>††</sup> Diet sheets were records completed by staff detailing patients' dietary needs and or specific information on the type of diet they required, such as diabetic diet, texture-modified diet and so on.



- a system whereby a healthcare attendant followed the catering attendant during meal delivery to ensure that patients were positioned correctly
- a staggered meal delivery system so that not all meals were delivered to patients who required assistance at the same time
- a 'hold back' system where the meals of patients that required assistance were held back until a member of staff was available to assist. In one hospital, the member of staff that was assisting the patient collected the tray and brought it to the patient ensuring, thereby ensuring that food was hot on delivery.

However, inspectors also observed some instances where patients who required help had to wait considerable time for that assistance. On occasion, inspectors had to approach staff to highlight that patients' meals were served and that they needed help to eat before their food became cold. This was particularly evident at breakfast time on wards where the nursing handovers coincided with breakfast.

The way in which hospitals provide assistance and support to patients in relation to nutrition and hydration is an important element of person-centred care. In order to ensure that patients receive the required assistance with eating and drinking, hospitals managers need to review daily routines, staff deployment and the timing of meals to ensure that patients get the assistance they require in a timely manner.

## Hydration

Hospitals reported, in the completed self-assessment, that fresh drinking water was available to patients 24 hours a day, including patients with mobility issues. During the on-site inspections, the majority of patients and staff reported that patients received water jugs with fresh water every morning. Most hospitals had dedicated hot drink rounds during the day and in the evening provided tea and coffee to patients.

However, contrary to the details provided in the self-assessment questionnaires — where all hospitals said that patients had access to fresh drinking water — drinking water was only replenished by staff during the day if a jug was seen to be empty or at a patient's request. Only four of the 13 hospitals inspected had a system to replenish water jugs with fresh water during the afternoon to ensure that patients always had access to fresh water.

In addition, the Inspection Team found examples of where the hydration needs of individual patients were not being met. This mainly applied to patients in emergency departments who were admitted, but who remained in the emergency department while waiting for a bed in the hospital. Most emergency departments had water

coolers that mobile patients could access and some hospitals gave patients water jugs or bottles of water. However, in 5 out of 10 emergency departments visited, patients that were not mobile and could not access the water cooler were not routinely offered drinks. Patients in these units told inspectors that if they wanted a drink they would have to ask relatives to bring in bottles of water or get drinks for them in the hospital shop.

Inspectors found that one hospital had removed water jugs from hospital wards and water coolers had been provided instead. Inspectors observed nursing staff providing plastic glasses of water to patients during medication rounds but were concerned that the hydration needs of patients who were unable to walk to the water cooler were not being adequately met. This was discussed with management during the inspection and detailed in the individual feedback given to this hospital.

Offering and providing drinking water for patients that are allowed to drink is a basic care requirement and should not depend on relatives and visitors providing this for patients. Hospitals must now review the systems in place to ensure that all patients have access to fresh drinking water as required.

## **Information and advice**

Not all patients admitted to hospital will require advice relating to their nutrition and hydration needs. During the inspection, inspectors found that patients requiring dietary advice were generally well informed by dietitians, speech and language therapists, medical and nursing staff. Over 40 patients told inspectors that they had seen a dietitian and had received nutrition and hydration advice during their stay in hospital.

Patients gave very positive feedback on the professional advice given by dietitians. Patients who had seen a dietitian were generally of the opinion that dietitians spent time with them, conveyed dietary advice and information in a clear manner and that the advice they received was very helpful. In some cases patients told inspectors that they received written information or booklets to support the advice given.

A number of patients told inspectors they had also received advice on their nutrition and hydration needs from a speech and language therapist, doctor, clinical nurse specialist or nurse. However, two inspected hospitals did not have access to inpatient dietetic services for all patients that required it. The lack of any, or timely, access to dietetic services posed a risk to patients at high risk of malnutrition. These findings are outlined separately in Theme 2 of this report.

## Patient compliments and complaints

Actively seeking feedback from service users and patients, and learning from complaints and concerns, is critical in the development and implementation of initiatives to improve the safety and quality of patient care. The self-assessment tool asked each hospital to quantify the number of compliments and complaints concerning nutrition and hydration received during 2014, and it invited hospitals to include the number of both written and verbal compliments and complaints.

Fourteen of the 42 hospitals reported receiving compliments in relation to nutrition and hydration, and the largest individual number of compliments received by one hospital was recorded at 58.

Although the completed self-assessments indicated that two out of three hospitals (28 hospitals out of 42) had a system in place to record verbal complaints relating to nutrition and hydration, this was not evident during the course of the on-site inspections. In the main, verbal complaints were managed locally in line with national guidelines, but were not recorded.

Eighteen hospitals stated in the completed self-assessment that they had not received any written complaints in relation to nutrition and hydration during 2014. This question was not answered in the self-assessment returned by three hospitals, and the remaining 21 hospitals reported receiving between 1 and 15 written complaints relating to nutrition and hydration in 2014.

Hospitals were also asked if complaints relating to nutrition and hydration were processed and addressed through the hospital's governance structures. All hospitals, except one, advised that this was the case.

The management of patient complaints was explored further with the hospital management team during the on-site inspections. Inspectors found that most of the 13 hospitals managed verbal complaints relating to nutrition and hydration locally at ward level when they occurred. For example, staff told inspectors that when a patient complained about the food, this complaint was referred to the catering manager who would then visit the patient, if the patient wished, to discuss their individual concerns with the meal service.

The governance structures for the management of complaints relating to nutrition and hydration varied among the 13 hospitals. Only a small number of hospitals reported that the nutritional steering committee had oversight of complaints received about nutrition and hydration. The management of complaints relating to nutrition and hydration should include oversight by the nutritional steering committee, as this is the committee charged with responsibility for overseeing the provision of nutrition and hydration. Such oversight is necessary to ensure that

learning from complaints will be shared across specialties and services, thereby increasing the potential to collectively improve each patient's experience of nutrition and hydration.

## What worked well

- The majority of patients (86%) expressed satisfaction with the meal services they received and confirmed that they received meals suitable to their individual dietary needs.
- Patients that received professional advice by specialist clinical staff in relation to nutrition and hydration told inspectors that the information was conveyed in a helpful and easy to understand way.
- Every patient that inspectors spoke with confirmed that they were given enough time to eat their meals.

## Opportunities for improvement

- Hospitals must ensure that the timing of meals is in line with recommended guidelines so that:
  - adequate time is given between the serving of each meal
  - meals are not served too early
  - a protracted gap between the evening meal and breakfast is avoided.<sup>(2)</sup>
- There should be a process in place to ensure that patients receive accurate descriptions of all menus and snack choices available to them.
- All patients should have a choice of meal, including those patients that require therapeutic, modified texture, ethical or religious diets.
- Hospitals should review the meal service for patients in their emergency departments who are deemed as admitted, but who are waiting for a hospital bed to become available, to ensure they receive meals that:
  - cater for their individual dietary needs
  - offer a hot meal option
  - are appropriate to the time of day they are served.
- Hospitals should have a system in place to ensure all patients who need it get assistance with meals in a timely way.
- All patients, without exception, must have access to fresh drinking water throughout the day.

## **Theme 2: Effective care and support**

Effective care and support in healthcare means consistently delivering the best achievable outcomes for people using a service. Patients' individual healthcare needs are all different and change over time, and effective care takes account of this. Services should ensure that each patient receives well-coordinated care and the right care for them at the right time and in the right place.

In the context of effective care and support for patients, the Inspection Team looked at the provision of evidence-based care that is planned, coordinated and delivered to meet individual patient's initial and ongoing needs. Care should also be delivered in a physical environment that supports care delivery. In nutrition and hydration care, this means ensuring that patients get the right meal in a timely way. It also means assessing patients' risk of malnutrition using a proven assessment tool, monitoring aspects of their nutrition and hydration care and referring patients who are at risk of malnutrition to a dietitian for further specialised input.

Inspectors reviewed healthcare records and spoke with healthcare professionals during the inspections about how they identified and monitored patients who were at risk of malnutrition and or dehydration.

### **Patient nutrition and hydration care**

During the on-site inspection in 13 hospitals, inspectors asked about how patients' nutrition and hydration care requirements were assessed by nursing, medical, dietetic and speech and language therapy staff on admission and throughout a patient's hospital stay. Some patients that required further specialist assessment in relation to their nutrition needs were referred to a dietitian. Other patients that had actual or potential difficulties with swallowing were referred to a speech and language therapist for specialist swallowing assessment.

Inspectors reviewed 322 patient healthcare records during the on-site inspection for the purpose of reviewing the documented evidence of care relating to nutrition and hydration provided to patients. The findings of the review of patient healthcare records are presented below.

### **Patient assessment and care planning for nutrition and hydration**

Recording patients' food and drink preferences can provide important information to ensure patients get the food they will eat in order to maintain adequate nutritional

intake while in hospital. This may be especially relevant for patients with communication difficulties or dementia. In relation to patients' individual preferences, inspectors found only a small number of the 13 hospitals visited had a formal system in place to ensure that patients were asked about their individual food and drink preferences. However, in practice, inspectors saw examples of catering staff accommodating individual patients' preferences. Examples of this included facilitating patients to order food that was not on the menu or talking with families of patients who had difficulty communicating their needs so that meals could be prepared according to their likes and dislikes.

Inspection teams found that all hospitals had structured nursing assessment documentation that contained sections for staff to assess patients' nutrition and hydration needs and record this information. This concentrated on patients' dietary needs and did not always ask about patients' personal preferences in relation to food and drink. The format and details required in the patient assessment varied between each hospital, with some hospitals recording more details on admission than others. Some of the key assessment information on admission included: patients' weight, height, body mass index (as part of nutritional screening), appetite, swallowing ability, special or therapeutic diets, if a patient had nausea or vomiting and if a patient required assistance with eating and drinking.

Nursing assessments of patients' nutrition and hydration needs were completed within 24 hours of admission in 81% of 301 healthcare records reviewed by inspectors with completion rates varying between 62% and 100%.<sup>††</sup>

Following the nursing assessment, patients with nutrition and hydration care needs were started on a nursing care plan. Most hospitals had standardised nutrition and hydration nursing care plans. Inspectors reviewed healthcare records to see if a nursing care plan was in place for patients that required one, and found that 93% of 286 records had a nutrition and hydration care plan in place.

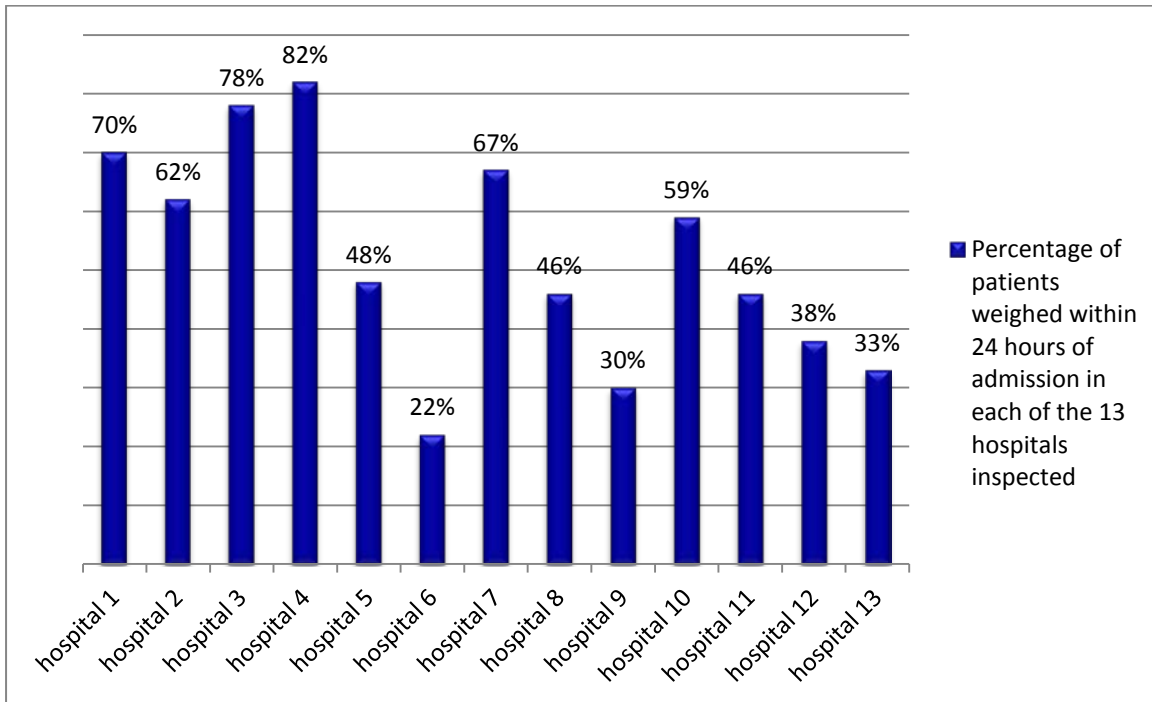
In relation to weighing patients while in hospital, all 42 hospitals stated in the completed self-assessment tool that it was hospital policy to weigh patients within 24 hours of admission to hospital. However, during the course of the on-site inspections, HIQA inspectors found that rates of compliance with the requirement to weigh patients varied significantly. Excluding patients who had a valid clinical reason for not being weighed<sup>§§</sup> on admission, inspectors found that across the 13 hospitals inspected, only 52% of patients who could have been weighed on admission were actually weighed (Figure 5 details individual hospital rates of compliance).

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<sup>††</sup> Some patients did not have a standardised ward-based nursing assessment completed within 24 hours of admission for valid reasons so were excluded from these figures. This could apply to patients that were admitted straight to the operating theatre or intensive care.

<sup>§§</sup> Examples of this included patients who were admitted directly to intensive care or theatre.

**Figure 5. Percentage of patients weighed within 24 hours of admission in each of the 13 hospitals inspected**



Patient assessment documentation is important to ensure that a patient's care needs on admission to hospital are identified. Failure to complete patient assessment documentation could result in healthcare professionals having inadequate information to ensure patients receive high-quality and effective care, and to support decision-making.

Inspectors found that overall, where patient assessment records were well structured, information was more complete, up to date and easier to find. Inspection teams found many good examples of patient care documentation that was well designed with clear prompts for staff to follow including daily evaluation of the nutrition and hydration care provided. However, some hospitals did not have comprehensive documentation for nutrition and hydration care, while in general, where the documentation structures were poor, records were often incomplete and did not contain key information. Other hospitals had specific care plans for nutrition and hydration but staff did not always use them.

## Malnutrition screening

Screening for risk of malnutrition should be carried out on every patient within 24 hours of admission to hospital.<sup>1</sup> While guidance has been available to the system since 2009, the implementation of screening for risk of malnutrition varied across hospitals (see Table 7 below). Only half of hospitals (21 of 42) stated in the self-assessment that they had implemented screening in over 75% of wards, and slightly more than one in five hospitals (21%) reported that they had not implemented a system of screening for risk of malnutrition in any area of the hospital. At the time of submission of the self-assessment tool in August 2015, at least half of the 42 hospitals were not screening all patients for risk of malnutrition on admission.<sup>\*\*\*</sup>

**Table 7. Number of hospitals where patients are screened for risk of malnutrition on admission to wards using a validated malnutrition screening tool**

Percentage of hospital wards	Number of hospitals
0% of wards	9
1–25% of wards	8
26–50% of wards	3
51–75% of wards	1
76–100% of wards	21

Of the hospitals that had reported that they were screening patients, 65% used the Malnutrition Universal Screening Tool (MUST). Other tools in use included the Malnutrition Screening Tool (MST), used in 20% of hospitals, and the Mini Nutritional Assessment (MNA), used in 5% of hospitals.

Some hospitals indicated they were using screening methods other than those available for selection on the self-assessment tool. These included 'screening in

<sup>\*\*\*</sup> The figure is at least 50%. Half of hospitals reported screening all patients within 24 hours of admission on 76–100% of wards and, as such, it is not possible to determine how many are screening 100%.



practice', 'nutrition prioritising tool' and a modified version of MUST which does not record body mass index score. Of the hospitals that reported they were carrying out screening for risk of malnutrition on patients on admission to hospital, 60% reported that there was a system in place to rescreen patients during the course of their admission. Rescreening was mainly carried out on a weekly basis.

During the course of the 13 on-site inspections, inspectors validated the information about screening provided by these hospitals in the self-assessment. Where screening was implemented, inspectors confirmed that hospitals had policies and procedures setting out the criteria for patients who required referral to a dietitian based on the screening score obtained.

Of the 13 hospitals inspected, six hospitals had implemented screening on all wards in their hospitals. Four hospitals had implemented screening on a select number of wards (this ranged from one to three wards) and three were not conducting screening for risk of malnutrition on any ward. See Table 8 below.

**Table 8. Wards in hospitals carrying out screening for risk of malnutrition**

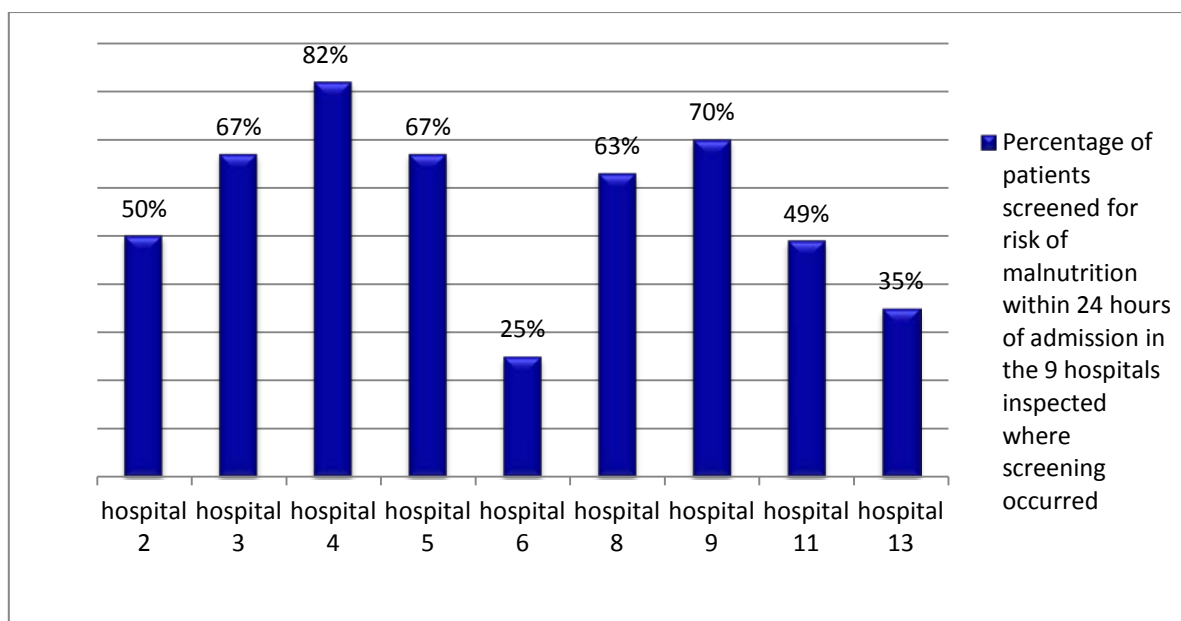
Number of wards*	Number of hospitals
All wards	6
Three wards	1
One ward	3*
No screening on any ward	3

\* One hospital was screening patients on a day ward.

In hospitals that screened patients for risk of malnutrition (some hospital-wide, some on specific wards only), inspectors reviewed healthcare records of those patients who had been screened to identify if these patients were screened within 24 hours of admission to hospital — in line with best practice guidelines.<sup>(2)</sup> Inspectors found that only 39% of patients who should have been screened were actually screened<sup>†††</sup> (Figure 6 shows compliance rates per individual hospital).

<sup>†††</sup> In some instances, a small number of patients in each hospital had a valid clinical reason for not being screened within 24 hours of admission and were excluded from the calculation on compliance with malnutrition screening.

**Figure 6. Percentage of patients screened for risk of malnutrition within 24 hours of admission in the 9 hospitals inspected where screening occurred\***



\* Three hospitals inspected did not screen for risk of malnutrition and one hospital screened patients on a day ward only. These four hospitals were not included in the above chart.

Screening for risk of malnutrition had yet to be introduced in a small number of hospitals visited during the on-site inspections and a number of hospitals did not screen every inpatient, because screening was used on some, but not all wards. The literature review (see Appendix 2) and the Department of Health's guidelines stress the importance of screening all patients for risk of malnutrition. This initial screening should take place within 24 hours of admission to hospital and should consider the patient's nutritional status and severity of disease. Patients identified as being at risk of malnutrition should be referred to a dietitian for a more comprehensive nutritional assessment.<sup>(2)</sup>

Reasons offered for the failure to implement screening for risk of malnutrition to date were varied. Explanations included the view that nutrition and hydration was not seen as a priority and a belief that there was a reluctance to introduce screening due to a recognition that screening for risk of malnutrition would lead to an increased demand for dietetic services which current resources may not be sufficient to meet.

Hospitals who have not introduced screening for risk of malnutrition to date must now proceed without delay to implement a system to ensure that all patients are screened for the risk of malnutrition on admission to hospital in line with evidence-based practice.<sup>(2)</sup> This should be done in a planned way, with the required governance structures, policies and resources to respond to patients in a timely way who are identified as being at risk of malnutrition. Good practice in relation to introducing screening for risk of malnutrition should be shared within and between hospital groups.

## **Patient referral for specialist assessment**

As part of the on-site inspection programme, inspectors asked hospital staff about the systems in place to refer patients for review by a dietitian or a speech and language therapist. The systems and methods used to refer patients differed between hospitals. Some hospitals used computer-based referral systems while others used paper forms. In most hospitals, doctors referred patients to a dietitian or a speech and language therapist. However, a number of hospitals had a system in place whereby nursing staff could refer patients to dietitians if the patient's screening score determined them to be at risk of malnutrition.

Most hospitals operated a categorization or a priority system whereby each patient referred was prioritized for review depending on his or her assessed needs. However, the categorization or prioritization systems viewed by inspectors varied between hospitals, with different descriptions used for different categories. This made it difficult to compare prioritization referral pathways across hospitals.

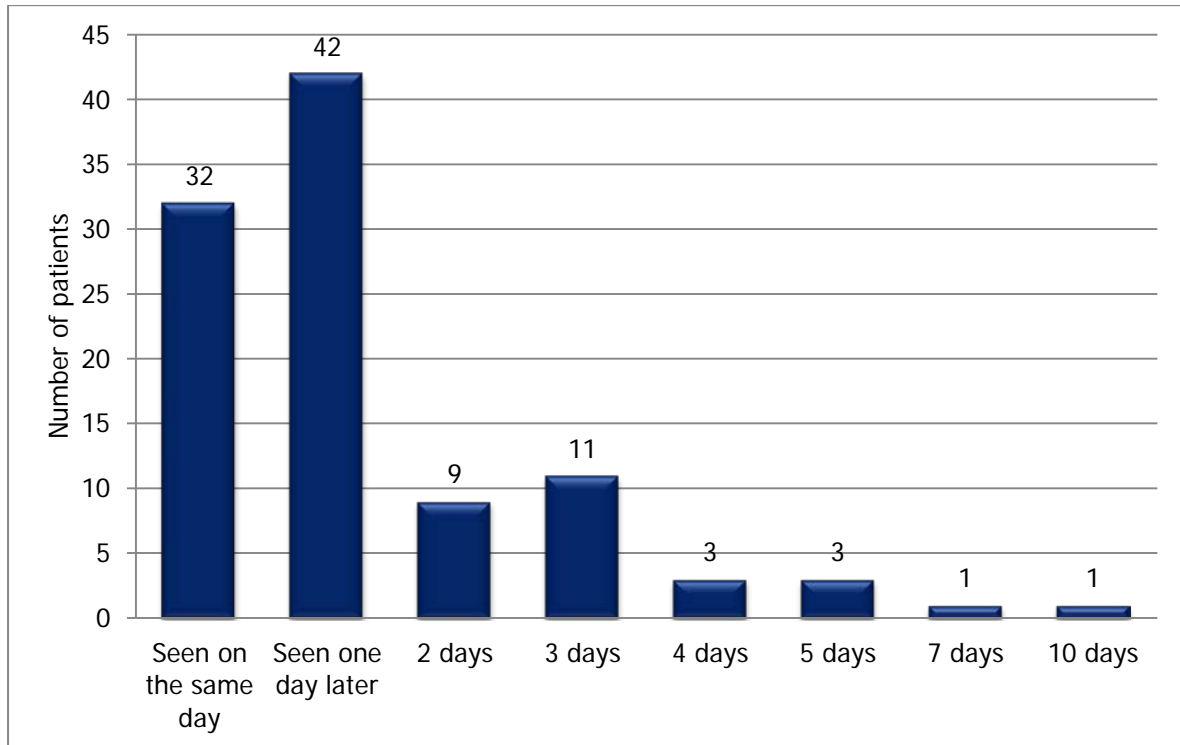
Two hospitals inspected did not have access to inpatient dietetic services for all patients that required it. One hospital had access to a dietitian for patients in a specific unit of the hospital, but not for patients outside of this unit. The second hospital had access to advice from a dietitian over the phone and could refer patients to an outpatient service in another hospital, but this involved a two-month wait. The lack of any, or timely, access to dietetic services posed a risk to patients at high risk of malnutrition as these patients could not access individual nutritional counselling and assessment from a dietitian in a timely manner. Following these inspections, HIQA wrote to the hospitals concerned seeking assurances that the risks identified during the inspections were being addressed. The hospitals concerned responded to HIQA outlining how they planned to mitigate the risk identified<sup>†††</sup>.

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<sup>†††</sup> One of the hospitals that did not have access to an inpatient dietetic service has since appointed a dietitian meaning that patients now have access to a dietitian.

Inspectors could determine the dates patients were referred to a dietitian and the date they were seen in 102 healthcare records reviewed. This data was from nine hospitals, as the other four hospitals either did not maintain a record of referral dates or did not have access to a dietitian. Seventy four of the 102 patients who were referred to a dietitian were seen by a dietitian within two days (Figure 7)

**Figure 7. Number of days from referral to assessment by a dietitian**



In all cases where a patient was seen by a dietitian, inspectors found a clearly written and comprehensive assessment and nutrition care plan in the healthcare record. Some hospitals used coloured stickers to highlight the consultation and assessment by each allied health professional which made information easier to find in the healthcare record. Patients that had been seen by a speech and language therapist likewise had a clear assessment and plan of care, including directions and advice at the patient's bedside as required.

## What worked well

- Inspectors found some examples of well-designed nursing documentation in relation to nutrition and hydration care. Where this was in place, information was clearly recorded and easy to follow.
- When patients needed referral to a dietitian or speech and language therapist, they were seen in a timely manner.

## Opportunities for improvement

- Hospitals who have not introduced screening for risk of malnutrition for all patients must now proceed without delay to implement a system to ensure that all patients are screened in line with evidence-based practice.<sup>(2)</sup>
- All patients that can be weighed should be weighed on admission as per hospital policy, to ensure that all patients have a baseline weight recorded.

### **Theme 3: Safe care and support**

Safe care and support recognises that the safety of patients and service users is of the highest importance and that everyone working within healthcare services has a role and responsibility in delivering a safe, high-quality service. In the context of safe care and support for patients, the Inspection Team looked at key areas aligned to the National Standards.

Certain areas relating to nutrition and hydration are associated with a possible increased risk of harm to patients. These include care of patients with dysphagia (swallowing difficulties) and the systems in place to ensure that patient safety incidents relating to nutrition and hydration care are reported, recorded, investigated and monitored in line with best available evidence and best practice guidelines.

#### **Care of patients with dysphagia**

Hospitals were asked in the self-assessment tool if patients identified as being at risk of malnutrition and with swallowing difficulties were referred to a speech and language therapist. Thirty-eight of the 42 hospitals stated that patients had access to a speech and language therapist. Thirty-one hospitals sought advice from a speech and language therapist with regard to the appropriate consistency of meals for patients on texture-modified menus.

Staff in most of the 13 hospitals told inspectors that patients had prompt access to speech and language therapists from Monday to Friday. This was confirmed by the Inspection Team during the review of healthcare records. Of the 322 healthcare records reviewed during the on-site inspections, 101 patients were referred to a speech and language therapist with over 70% of these patients seen by a speech and language therapist within 24 hours of referral (71 out of 101 referred patients). However, all hospitals inspected reported that speech and language therapists were not available at weekends.

Practices varied between hospitals to ensure that patients with suspected swallowing difficulties who were admitted over the weekend had swallowing screening assessments carried out, in order to avoid having to fast unnecessarily until speech and language therapists were available after the weekend. Seven of the 13 hospitals inspected had a system in place to ensure some patients had access to swallow screening when speech and language therapists were not available.

These systems varied from small numbers of nursing staff screening patients admitted through the emergency department or acute stroke unit or on-call medical staff performing this screening. However, inspectors were concerned to note that

not all staff in each hospital was aware of the arrangements that were in place to provide this service at the weekends. A consequence of this lack of awareness was that some patients fasted unnecessarily over weekends. Hospitals must ensure that arrangements which they have put in place to provide for swallow assessments outside of core working hours<sup>§§§</sup> are communicated to all staff.

Guidelines were available for patients with swallowing difficulties in most hospitals inspected and these were displayed in the vicinity of the patients' bed space, in order to reduce the risk of patients being offered food of an unsuitable consistency. These guidelines were mostly developed by speech and language therapists across the hospitals inspected.

Texture modified diets include meals that are suitable for patients with swallowing or chewing difficulties of varying severity. They should include options for patients who require soft diets, minced and moist, smooth pureed and liquidised diets. All hospitals inspected had texture-modified diets available for patients.

In eight of the 13 hospitals, food moulds were used to improve the presentation of pureed foods to make these more appetising for patients. However, inspectors observed that where foods were not moulded, different foods such as meat, vegetables and potatoes were served separately to improve appearance of texture-modified diets.

Texture-modified diets were reviewed by speech and language therapists in nine of the 13 hospitals inspected. However, as previously outlined, menu choice was limited in most hospitals, with only three hospitals offering a choice at mealtimes to patients on texture-modified diets.

Inspectors saw evidence of some examples of good practice. Speech and language therapists had developed comprehensive information booklets for patients, which included information on safe swallowing, clear descriptions of texture-modified diets and guidelines for patients on how to thicken fluids.

Overall during the on-site inspections, it was noted that staff were knowledgeable about the needs of patients with swallowing difficulties and there were safe processes observed during the on-site inspections around their care to reduce the risk of harm to these patients.

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<sup>§§§</sup> Core working hours refer to the hours when a department or area is fully functional and historically was classified as the working hours of 9.00am to 5.00pm, Monday to Friday.

## Communication

Evidence suggests that one or more persons in each ward should be designated to have primary responsibility for communicating information relating to nutrition and hydration needs of patients.<sup>(2)</sup> This is to ensure that the right meal is served to the right patient, especially those on texture-modified diets and therapeutic diets. There may be no consequences for some patients if they receive an incorrect meal, but for others, for example, a patient with difficulty swallowing, this could cause serious harm.

Most hospitals used a diet sheet to communicate patients' specific dietary needs with catering staff. This sheet was usually completed by the nursing night staff and outlined if patients had any food allergies, were on texture-modified diets or therapeutic diets. However, many hospitals identified patients by bed number only on diet sheets, and this could increase the risk of patients receiving an incorrect meal should patients move bed or a new patient be admitted.

Other methods of communication used by hospitals included the use of whiteboards in the ward kitchen or over the patients' beds. Inspectors observed that at times different systems of communication were in place in different wards within the same hospital.

Overall, there should be a safe, consistent process of communication between care staff and catering staff to ensure information regarding patients' individual nutrition and hydration needs are clearly communicated to ensure patients always receive the correct meal.

## Patient safety incidents relating to nutrition and hydration

Hospitals should have arrangements in place to identify patient safety incidents through structured incident reporting mechanisms and the surveillance of information relevant to providing safe services.

Nine of the 13 hospitals inspected had no reported patient safety incidents related to nutrition and hydration. This reflected the information provided in the self-assessments, where only 16 out of 42 hospitals stated that they had recorded such



incidents in 2014. The number of patient safety incidents reported ranged from 1 to 36.<sup>\*\*\*\*</sup>

During the course of the on-site inspection in 13 hospitals and the review of the self-assessment tools received, it became evident to the inspection teams that there was little clarity or guidance available for staff as to what constituted a patient safety incident relating to nutrition and hydration. By way of example, inspectors found that the failure to recognise and respond to patients with unexpected significant loss of body weight during a period of hospitalization was not viewed as a patient safety incident.

In the hospitals that had reported incidents, inspectors were informed that these incidents were reviewed through the quality and safety committees or management committees of the hospitals to ensure that changes were made where necessary and that learning could be shared. One hospital's nutrition steering committee had included a review of patient safety incidents and complaints in relation to nutrition and hydration within its terms of reference, which was verified when inspectors reviewed the minutes of meetings.

However, some hospitals told inspectors they were unable to obtain reports from the National Incident Management System<sup>†††</sup> to assist them to identify trends and patterns of patient safety incidents in relation to nutrition and hydration.

Reviewing patient safety incidents is essential to identify aspects of nutrition and hydration care they may require improvement. Having the capacity to run reports in relation to these specific patient safety incidents can enable hospitals to identify areas that require a change in practice. Service providers need to ensure that all staff providing care to patients are aware of what constitutes a patient safety incident relating to nutrition and hydration so that services learn from situations where things have gone wrong and make changes to the service it provides as a result.

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<sup>\*\*\*\*</sup> High levels of incidents do not necessarily denote poor care, but can indicate a good reporting culture within a hospital.

<sup>†††</sup> The National Incident Management System is a web-based database which facilitates direct reporting of adverse events by State authorities and healthcare enterprises to the State Claims Agency.

## Opportunities for improvement

- Hospitals need to have a documented process in place for managing patients who require an urgent swallowing assessment outside of core working hours.
- Hospitals need a reliable, efficient and safe system in place to ensure that patients get the correct meals.
- All staff providing care to patients are aware of what constitutes a patient safety incident relating to nutrition and hydration so that services may learn from situations where things have gone wrong and makes changes to the service it provides as a result.

## Theme 4: Better health and wellbeing

A service focused on better health and wellbeing is one which constantly looks for ways and opportunities to promote, maintain and improve the health and wellbeing of its service users. Information sought under this theme was aligned to National Standards relating to promoting and improving the health and wellbeing of patients. During inspection, inspectors looked at quality improvement initiatives introduced by the hospital to improve patients' health and wellbeing by proactively preventing, identifying and managing undernutrition of patients in hospital.

In the completed self-assessment tool, most hospitals (86%) reported that they had developed programmes or initiatives to promote good nutritional practice. The remaining six hospitals reported that they had not developed such programmes. Advice, information and support regarding nutrition and hydration was available to patients in 38 hospitals (90%).

A number of the 13 hospitals inspected (the exact number is identified in brackets below) had implemented a variety of quality improvement initiatives. These initiatives reflected the information provided by hospitals in the self-assessment tool and included the following:

- protected mealtime (nine)
- coloured trays to identify patients requiring assistance with their meals (four)
- coloured picture menus (one)
- monitoring missed meals (two)
- patient information booklets (two)
- over-bed communication boards using symbols to communicate dietary needs (one).

The most common initiatives introduced by the hospitals are discussed in more detail in this section.

### Protected mealtimes

The most common quality improvement initiative implemented in the majority of the hospitals inspected had been 'protected mealtimes'. Protected mealtimes are periods when patients are allowed to eat their meals without unnecessary interruptions, and when nursing staff and the ward team are able to provide safe nutritional care. Unnecessary interruptions can include routine medication rounds, ward rounds, non-urgent diagnostic tests and visitors.

However, HIQA recognizes that there are a small number of areas in a hospital where policies on protected mealtimes may be contrary to the daily functioning of that unit.

Ten of the 13 hospitals inspected had implemented either all or some aspects of protected mealtimes on individual wards or as a hospital-wide initiative. However, inspectors found that some hospitals focused primarily on the exclusion of visitors from wards at mealtimes and not other types of interruptions such as medication rounds. Protected mealtimes worked well in hospitals who had implemented it in full across the hospital and where it had become part of the culture of the organization.

In general, patients who were in hospitals that had a protected mealtimes policy told inspectors that their meals were not interrupted and they gave examples of healthcare professionals waiting until they had finished eating to talk with them. Patients' confirmed with the Inspection Team that visitors were not allowed on the wards during mealtimes unless they were there to provide assistance with eating.

In three of the 13 hospitals that did not have a protected mealtime policy or system, inspectors observed patients having their meals interrupted in a number of different ways including:

- doctors' rounds during meals
- cleaning during meals
- staff taking morning blood samples from patients during breakfast
- staff attending to patients' personal care needs during meals.

This supported the finding that where protected mealtimes were in place, patients' meals were less likely to be interrupted.

## **Coloured trays**

Coloured trays to identify patients who required assistance were implemented in four hospitals and were observed by inspectors. The intention of using a coloured tray system is to ensure that catering staff and care staff have a visual cue to identify patients who need additional help to eat and drink.

Inspectors found variance in how successful the use of coloured trays had been in improving patient care, with one hospital reporting that an audit of the practice showed that it was not used to the extent that it should have been. Strong nursing leadership in nutrition and hydration at ward level was identified as essential if the use of coloured trays was to have the desired effect.

Often where changes in practice or new systems were introduced to improve nutrition and hydration care, inspectors found that individual staff had become champions in driving change and improvement. While these staff members should be recognized for their individual contribution, there is a concern that if these initiatives are not audited and supported by senior hospital management then they will not be sustained.

### **What needs to be improved**

- Hospitals managers and leaders need to support and share good practice in relation to nutrition and hydration within and between hospital groups.

## Theme 5: Leadership, governance and management

The National Standards describe a well-governed service as a service that is clear about what it does and how it does it. The service also monitors its performance to ensure that the care, treatment and support that it provides is of a consistently high quality throughout the system. The Inspection Team looked at key leadership, governance and management areas aligned to the National Standards. It sought information relating to the governance arrangements in place to oversee the practice of nutrition and hydration, the development of policies and the degree to which practices relating to nutrition and hydration were audited for patients admitted to the hospital.

Best practice guidelines state that hospital managers must accept responsibility for overall nutritional care in hospitals and that hospital managers, clinical nutritionists and or dietitians, physicians, nurses, catering managers and food-service staff must work together to achieve the best nutritional care, and hospital management must give priority to such cooperation.<sup>(2)</sup>

### Nutrition steering committee

Best practice guidelines recommend that hospitals form a nutrition steering committee to oversee nutrition and hydration care in acute hospitals.<sup>(2)</sup> The role of this committee includes the following:

- help implement national guidelines
- set the standard of care in relation to nutrition for hospitalized patients
- review the food-service system, nutritional risk screening and audits.

Only 30 hospitals (71%) reported having a nutrition steering committee in place, the other 12 hospitals reported that they did not have this in place. Of those hospital committees, 39% met monthly, 39% met quarterly and 22% indicated that they met at differing intervals. Minutes of these committees were kept in 97% of cases and 100% reported having terms of reference.

The majority of hospitals inspected (11 out of 13) had a nutrition steering committee in place at the time of the inspection. However, a number of these committees had only been very recently established at the time of this review. Some hospital management teams acknowledged that the request from HIQA to complete the self-assessment tool was the catalyst for developing a nutrition steering committee or for rejuvenating an existing committee.

Each of these committees had developed terms of reference, recorded minutes for their meetings and had clear multidisciplinary membership. Best practice guidelines

recommend that a nutrition steering committee should include a minimum of two clinical nutritionists or dietitians, a representative from nursing, senior management, pharmacy, a speech and language therapist and occupational therapist where available, two senior catering managers and a physician.<sup>(2)</sup> Most committees had membership in line with these requirements.

In the two hospitals inspected that did not have such a committee in place, and in some hospitals where a committee had been newly established, inspectors found a lack of evidence of clear ownership of nutrition and hydration at a corporate level. Effective governance arrangements are required to promote and sustain improvement in the area of nutrition and hydration.

Hospitals must now review the governance arrangements for nutrition and hydration for patients in hospital. This includes putting in place a nutrition steering committee which is responsible for overseeing all aspects of nutrition and hydration within the hospital.

## **Policies**

Policies are written operational statements of intent which help staff make appropriate decisions and take actions, consistent with the aims of the service provider, and in the best interests of service users.<sup>(1)</sup> When implemented, they help to standardise practice, reduce variation and make it easier to adhere to professional practice. In the self-assessment tool, hospitals were asked to identify if they had nine specifically-listed policies in place in relation to nutrition and hydration care. Those that did are outlined in Table 9.

**Table 9. Nutrition and hydration related policies**

Policy	Number of hospitals	Percentage of hospitals
<b>Nutrition and hydration</b>	7	17%
<b>Nutrition screening</b>	16	38%
<b>Protected mealtimes</b>	13	31%
<b>The use of oral nutritional supplements</b>	12	29%
<b>Enteral feeding<sup>‡</sup></b>	29	69%
<b>Parenteral feeding<sup>±</sup></b>	24	57%
<b>Management of patients with food allergies</b>	11	26%
<b>Management of patients at risk of refeeding syndrome</b>	21	50%
<b>Management of patients fasting for surgery</b>	25	60%

During the on-site inspections, HIQA inspectors confirmed that these reported policies were in place. Nevertheless, inspectors noted that a number of hospitals had implemented or had plans to implement screening for risk of malnutrition without a supporting policy in place. While screening is to be welcomed, plans to introduce it in the absence of supporting policies points to a lack of effective planning and governance, and calls into question the sustainability of the process.

Best practice guidelines recommend that each hospital should have a policy on patients fasting prior to surgery and that this policy should reflect current evidence on fasting times before surgery or diagnostic investigations.<sup>(2)</sup> During this review, inspectors found that 7 of the 13 hospitals inspected did not have a fasting policy in place.

Such policies are important in the context of patient safety. Certain areas relating to nutrition and hydration are associated with a possible increased risk of harm to patients, such as food allergies, enteral and parenteral feeding. Clearly written, up-to-date policies and procedures can ensure that the risks associated with these areas are managed in a consistent way.

<sup>‡</sup> Enteral feeding refers to the delivery of a nutritionally complete feed, containing protein, carbohydrate, fat, water, minerals and vitamins, directly into the stomach, duodenum or jejunum.  
<sup>±</sup> Nutrients provided intravenously either into a large central vein or a peripheral vein.



Hospitals need to prioritise the development of appropriate policies for nutrition and hydration care and ensure they are implemented. This is especially important when implementing changes in practice, such as introducing screening patients for their risk of malnutrition, and other aspects of care associated with an increased risk to patient safety.

## **Evaluation and audit of care**

The term audit is used to describe a process of assessing practice against evidence-based standards of care. It can be used to confirm that current practice and systems meet expected levels of performance or to check the effect of changes in practice.

The self-assessment tool and the on-site inspections included a focus on auditing practices in relation to nutrition and hydration care. Both identified a lack of structured audit programmes to monitor the quality of nutrition and hydration care. During on-site inspections, inspectors found that a few hospitals had departmental or ward-based audits that measured aspects of nutrition and hydration care (see Appendix 4 for some examples given by hospitals). However, in most hospitals, there was neither a coherent approach to identifying what should be audited nor to sharing the findings of completed audits.

Inspectors found a lack of auditing of the nutritional content and portion size of the food served to patients. This was confirmed both in the self-assessment and during the on-site inspections. In the self-assessment, only 36% of hospitals reported that they had audited either the nutrient content or portion sizes of meals. During the on-site inspections, HIQA inspectors found only 5 of the 13 hospitals had audited some aspect of the nutrient content and portion sizes of meals. This meant that eight hospitals did not have a clear indication of the calorific and nutrient value of meals and could not be assured that patients who at risk of malnutrition were getting high-calorie, high-protein and nutrient rich meals.

Best practice guidelines suggest that the nutrient content and portion sizes of food should be audited per dish annually, or more often if the menu changes.<sup>(2)</sup> This should be prioritised by hospitals in order to ensure that meals provide sufficient nutrition for the specific requirements of hospitalised patients.

Key performance indicators (KPIs) are measures of performance that are used by organizations to measure how well they are performing against targets or expectations. KPIs measure performance by showing trends to demonstrate that improvements are being made over time. This helps organizations to improve the service they provide by identifying where performance is at the desired level and also to identify where improvements are required.<sup>(12)</sup>

At the time of the inspections, there were no nationally developed key performance indicators relating to nutrition and hydration. A number of hospitals reported during inspection that they were collecting monthly data as part of the national Nursing and Midwifery Quality Care-Metrics<sup>++++</sup> system, which had at that time included the recording of patients' weights. However, measuring weight was discontinued in October 2015 due to national changes in the way information was being collected. This national data collection system also included the completion of fluid balance charts as part of monitoring compliance with the national early warning score.<sup>(13)§§§§</sup>

Although HIQA found the use of a national data collection system, such as the Nursing and Midwifery Quality Care-Metrics system, to be a positive development, the data on patient weight and fluid balance was collected as part of other aspects of care and not as part of a system to monitor nutrition and hydration care for patients in hospital. A number of hospital managers indicated to inspectors that they would like to see specific audit metrics for nutrition and hydration included in the national Nursing and Midwifery Quality Care-Metrics, such as weight and compliance with screening for risk of malnutrition. The future inclusion of specific metrics relating to nutrition and hydration in the National Nursing and Midwifery Quality Care-Metrics would be beneficial to all hospitals.

Two of the 13 hospitals had developed their own nursing data collection systems to evaluate aspects of nutrition and hydration, which they collected on a monthly basis alongside the National Nursing and Midwifery Quality of Care-Metrics. HIQA also found that a number of hospitals had developed ward or departmental-based key performance indicators that measured aspects of nutrition and hydration care. Despite this, inspectors found that overall there was an absence of regular and ongoing monitoring of the quality of nutrition and hydration care at these hospitals.

Patient satisfaction surveys are another way of evaluating how patients experience their care while in hospital. In the self assessment hospitals were asked about how they consult with patients regarding satisfaction about food in their hospital. The results are shown in table 10 below (some hospitals used multiple methods):

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<sup>++++</sup> Process performance quality indicators which provide a framework for how fundamental nursing care can be measured. See <http://www.hse.ie/eng/about/Who/ONMSD/news/GFOCM.pdf>.

<sup>§§§§</sup> Early warning scoring systems have been developed in healthcare to allow early detection of a patient who is deteriorating. Ireland has a national early warning score system as detailed in the Department of Health's 2013 publication, *National Early Warning Score for Ireland*.

**Table 10: Methods that hospitals use to evaluate patient satisfaction in relation to food**

	Patient feedback	Patient partnership forum	Patient surveys	Other
<b>Number of hospitals</b>	35	7	35	13
<b>Percentage of hospitals</b>	83%	17%	83%	31%

The majority of hospitals reported using patient surveys. Some hospitals that answered 'other' reported using a variety of methods including:

- Informal verbal feedback on a one to one basis
- Service user panels
- Wards visited by catering supervisors
- Surveys are undertaken by the catering department
- Each patient is offered a 'Your Service Your Say - tell us about your experience' leaflet in the Discharge Lounge
- Evaluation completed as part of the Nursing and Midwifery Quality Care-Metrics system.

Eight of the 13 hospitals inspected demonstrated good practice by conducting patient satisfaction surveys which included questions relating to nutrition and hydration care and hospital food services. Notwithstanding this, practice differed across these hospitals with some of the eight hospitals reporting that the results of patient satisfaction surveys were not shared throughout the hospital. HIQA considers this a missed opportunity to gain knowledge on how patients experience their nutrition and hydration care while in hospital, in order to inform and improve hospital food services and nutrition and hydration care provided.

The National Standards state that service providers should monitor and evaluate the effectiveness of patient care to identify opportunities for improvement. This includes the use of audit, key performance indicators where relevant and patients' feedback. Evidence-based guidelines state that the nutrition steering committee has a role in ensuring this by reviewing the food-service system, nutritional risk screening and audits relating to nutrition and hydration.

Hospitals must now review the arrangements in place for auditing, monitoring and evaluation of food services and nutrition and hydration care patients in hospital. This includes putting in place structured systems of audit and monitoring that are incorporated into the hospital's clinical audit and quality monitoring programmes. This must at a minimum include auditing the nutrient content of food, screening all patients admitted to hospital for the risk of malnutrition and engaging with patients to ensure the best possible experience for patients.

## What worked well

- Most hospitals had a nutrition steering committee in place.
- Some hospitals had developed specific data collection systems to monitor and evaluate aspects of nutrition and hydration care of patients.

## Opportunities for improvement

- Hospitals should review the governance arrangements for nutrition and hydration for patients in hospital. This includes putting in place a nutrition steering committee to oversee nutrition policy and activity in the hospital, in line with evidence-based guidelines. The role of this committee includes the following:
  - help implement national guidelines on nutrition and hydration
  - set the standard of care through developing and implementing relevant policies in relation to nutrition for hospitalized patients
  - review the food-service system, implement nutritional risk screening and oversee a structured programme of auditing of nutrition and hydration care.

## Theme: 6 Workforce

It is important that the members of the workforce have the required skills and training to provide effective nutrition and hydration care to patients. Evidence suggests that there is a lack of sufficient education in nutrition among all healthcare staff due to the delay in transferring nutritional research into practice in hospitals.<sup>(2)</sup>

Best practice guidelines recommend that hospitals:

- include training on nutrition in staff induction
- have a continuing education programme on general nutrition for all staff involved in providing nutritional support to patients
- provide staff involved in the feeding of patients with updated nutritional knowledge every year.<sup>(2)</sup>

Thirty eight of 42 hospitals reported in the self-assessment that they provided training to nurses, catering staff, healthcare assistants and medical staff on nutrition and hydration using lectures and workshops, four hospitals reported that there was no training provided in relation to nutrition and hydration. However, on inspection, inspectors noted that the structure and extent of training offered to healthcare staff varied between hospitals and was often informal, limited and randomly provided at ward level.

In order to assess each hospital's performance in the area of training on nutrition and hydration, inspectors interviewed staff and management across all disciplines to find out the level of training provided which is relevant to nutrition and hydration. Inspectors also reviewed training records where these were available.

Hospitals that had implemented screening for the risk of malnutrition had provided training on the screening tool they used. This training was provided by a dietitian, nurse practice development departments or by external training companies. While all hospitals who were screening for the risk of malnutrition reported that training was provided to nurses, only two hospitals included healthcare attendants in the training.

This training was provided formally in a classroom setting away from the wards or informally on the wards. Clinical nurse managers told inspectors that releasing staff for training was at times challenging, particularly when staffing levels were reduced and this was the reason given by some hospitals to provide training on the ward as opposed to in a separate location. Examples included dietitians training staff on therapeutic diets, and speech and language therapists or external companies training staff on texture-modified diets. Catering staff also reported that they had received training on food safety.

Inspectors found that training of healthcare assistant staff on nutrition and hydration was inconsistent and informal. Some healthcare assistant staff reported that training was provided by dietitians and speech and language therapists and informally by staff working on the wards. However, other healthcare assistants reported that they relied mainly on knowledge gained from their healthcare assistant trainee programme rather than a hospital training programme.

Most hospitals inspected reported that nurses, healthcare assistants and multitask assistants had received training on caring for patients with swallowing difficulties who required texture-modified diets and thickened fluids. Training was generally provided on an informal basis by speech and language therapists in the hospital. Some hospitals had engaged external training companies. Seven of the 13 hospitals reported to inspectors that they had provided training in swallowing assessment for a number of nurses. Five hospitals out of 13 reported that they provided training to nurses and healthcare assistants at induction.

A small number of hospitals reported that doctors received training at induction on such factors as intravenous cannulation and hydration, insertion of nasal gastric tubes and caring for a patient with refeeding syndrome. Otherwise, hospitals told inspectors that doctors received on-the-job training as part of their ongoing professional development and specialist medical training programmes and not as part of a hospital training programme.

Inspectors viewed training records in hospitals where available (six hospitals). They mainly reflected training provided to nurses on the use of the screening tool used to identify patients at risk of malnutrition. Inspectors also viewed training records of catering staff on food safety and texture-modified diets. Overall, while hospitals provided informal education sessions on nutrition and hydration, the practice of recording attendance required improvement.

Hospitals should develop a standardised training programme for staff on nutrition and hydration, relevant to their role, which is in line with evidence-based guidelines.

## **Opportunities for improvement**

- Hospitals should develop a standardised training programme for staff, relevant to their role, on issues relating to nutrition and hydration that is in line with relevant national guidelines.

## Theme 7: Use of resources

The way resources are planned, managed and delivered are an important part of delivering safe and high-quality care and support. <sup>(1)</sup> In order to assess patients for their risk of malnutrition, healthcare staff need access to the right equipment such as weighing scales, chair scales (for more frail and dependent patients), stadiometers<sup>◇</sup> and measuring tapes.

In the self-assessment tool, hospitals had been requested to provide information on the equipment available for staff to screen patients for the risk of malnutrition. The other types of equipment available, as detailed in the self-assessment responses from the 42 hospitals, are set out in Table 11 below:

**Table 11. Availability of equipment**

Equipment	Percentage of hospitals (n=42)
<b>Platform scales (wheelchair, bed, trolley)</b>	48%*
<b>Hoist weighing scales</b>	83%
<b>Stand-on scales on all wards</b>	71%
<b>Chair scales</b>	93%
<b>Stadiometer</b>	91%
<b>Measuring tape **</b>	95%
<b>Callipers</b>	57%

\*Some hospitals indicated that they had access to more than one of the above listed types of equipment

\*\* In the event that a patient's height cannot be obtained, a measurement of the length of the forearm can be used to estimate height (ulna length). If a patient's height and weight cannot be obtained, a measuring tape may be also used to estimate body mass index by calculating the mid upper arm circumference.

All of the above equipment is necessary if a hospital wishes to carry out screening for risk of malnutrition of patients on admission. The most commonly used screening tools require, at a minimum, a weight and height to be recorded in order to arrive at a score for patients' nutritional status.

During inspections, HIQA inspectors reviewed equipment used to screen patients for the risk of malnutrition. In some hospitals where screening of patients for risk of malnutrition occurred, not all wards who were screening patients had access to the required equipment.

<sup>◇</sup> A device for measuring a person's height.

All wards and clinical areas visited by inspectors in the 13 hospitals had a variety of weighing scales such as standing scales and chair scales. However healthcare staff told inspectors that it was common practice to share hoist scales between wards.

Inspectors found that 4 of the 13 hospitals had stadiometers on all wards visited by inspectors. A small number of hospitals reported to inspectors that they used measuring tapes to measure the length of the patient's forearm (ulna) to estimate the patient's height. If a patient's height cannot be obtained, for example by using a stadiometer, then the length of the forearm (ulna) can be used to calculate a person's height.<sup>(14)</sup>

Weighing scales should be calibrated on an annual basis or in line with the manufacturer's guidance. On inspection, inspectors found that 9 of the 13 hospitals had all their screening equipment calibrated within the correct time frames.

Overall, inspectors found on inspection that all 13 hospitals had some equipment available to staff to screen patients for risk of malnutrition. However, equipment to help screen patients for risk of malnutrition (such as a stadiometer) should be available on all wards.

## **What worked well**

- In general, inspectors found most staff had access to the required equipment to screen patients for the risk of malnutrition, and where required that equipment was calibrated.



## Theme 8: Use of information

Healthcare professionals need access to all relevant information about the patient at the point of clinical decision-making in order to make informed decisions about the patient's clinical treatment. <sup>(1)</sup> Therefore, the effective completion and management of healthcare records is essential. High-quality, safe and reliable healthcare is informed by and uses all types of information. The National Standards under this theme focused on the manner in which hospitals process and use information in relation to patients' nutrition and hydration, for instance, care planning, documentation and data recording.

Hospitals were asked in the self-assessment whether nutritional care plans:

- identify nutrition and hydration risks
- describe how nutrition and hydration risks should be managed
- set nutritional goals
- monitor progress of the patient.

The results submitted by the 42 hospitals are summarized in Table 12 below.

**Table 12. Information contained in hospitals' nutritional care plans**

The hospital's nutritional care plan:	Percentage of hospitals (n=42)
<b>Identifies nutrition and hydration risks</b>	90%
<b>Describes how nutrition and hydration risks should be managed</b>	97%
<b>Sets nutritional goals</b>	83%
<b>Monitors progress of the patient</b>	93%

The self-assessment tool also asked if hospitals used fluid and food charts for patients determined to be at risk of malnutrition. In response, 95% of hospitals reported that food intake charts were in use for these patients. Similarly, 98% of hospitals reported that fluid intake charts were in use for patients deemed to be at risk of dehydration.

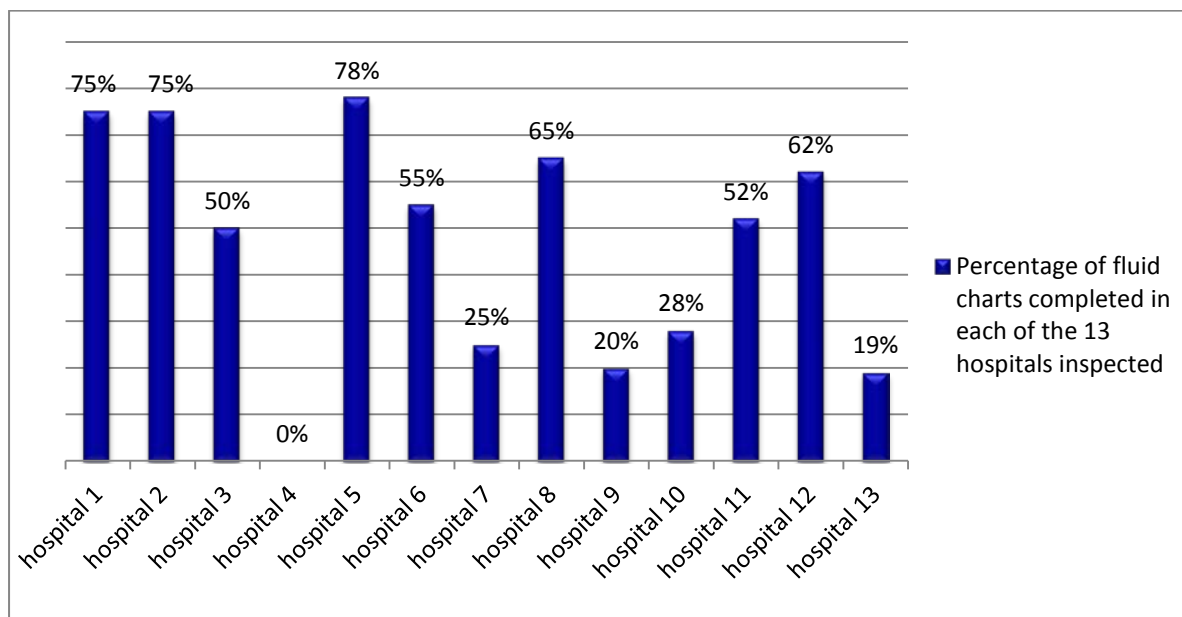
Inspectors reviewed the healthcare records of 322 patients who were inpatients in the hospitals at the time of the 13 on-site inspections. A sample of healthcare records were selected by inspectors for review in each hospital. It is acknowledged that this was not a representative sample of the records of all patients attending any particular hospital. However, reviewing these records gave inspectors further information relating to the nutrition and hydration care that patients received.

Inspectors found that the quality of the documentation in relation to nutrition and hydration varied greatly between hospitals. Overall, inspectors found that where records were well structured, the relevant information in relation to nutrition and hydration was recorded comprehensively (if staff completed all the required fields) and information was easy to find. Inspectors found when patients were referred for a nutritional assessment by a dietitian, they had a clearly written nutritional care plan in place. Likewise, patients that were seen by a speech and language therapist also had a clearly written assessment and care plan in place.

Inspectors found that patients' fluid intake and output charts were not consistently completed and up to date. In general, patients' fluid intake and output were not totalled at the end of the day, while the fluid balance was not calculated nor exact measures of fluids used. This meant that there was insufficient evidence to inform clinical decisions about treatments in order to ensure patients were protected from inadequate nutrition and hydration.

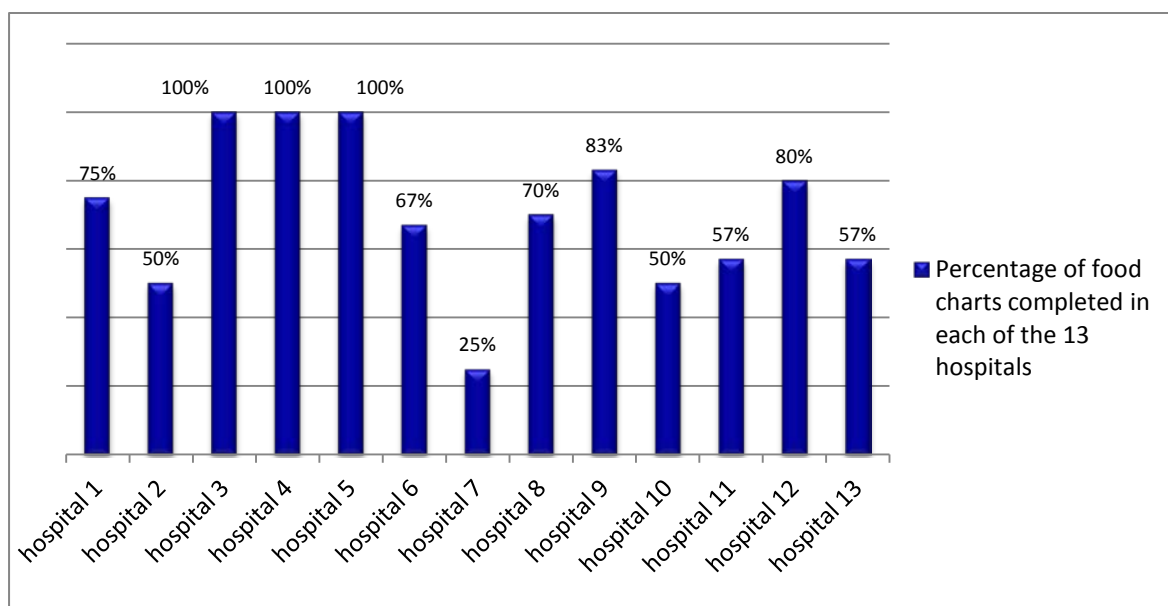
Fluid intake and output records were complete and up to date in 47% of 192 of patient healthcare records reviewed by inspectors, with hospital completion rates ranging from 0% to 78% (see Figure 8). Note that where the rating was 0%, this reflected only three healthcare records reviewed as there were few patients on fluid intake and output charts, but those that were did not have the fluid balance calculated.

**Figure 8. Percentage of fluid charts completed in each of the 13 hospitals inspected**



Food charts, where indicated, were not always complete and up to date. Inspection teams found food charts were complete in 66% of 112 patient healthcare records reviewed by inspectors, with hospital completion rates ranging from 25% to 100% (see Figure 9 below).

**Figure 9. Percentage of food charts completed in each of the 13 hospitals**



Without knowing how much fluid a patient is taking in compared to how much fluid they are losing, clinical staff may not have comprehensive information to identify

problems with a patient's fluid balance to give an early warning that a patient is deteriorating. Maintaining accurate fluid intake and output records are essential if a patient needs to have their fluid intake and output carefully monitored, for example, when patients are receiving intravenous fluids or to inform healthcare professionals of signs that a patient is deteriorating.<sup>(15)</sup>

Similarly in relation to food charts, inspectors noted that although many healthcare professionals used semi-quantitative measures when recording food intake, in other cases this was not used. Where food records are incomplete, it is difficult for healthcare professionals to make a judgment on the nutritional intake of their patients.

Inspectors found that the tool for screening patients for the risk of malnutrition was integrated into the nursing assessment records in some hospitals. This made such information easier to find and also served as a prompt for staff to ensure the screening tool was completed at initial assessment. Inspectors observed in a small number of cases that the design of the tool for screening patients for the risk of malnutrition could be improved. For example, in some hospitals, there was no dedicated space to record the height or body mass index of the patient. When asked, staff told inspectors that they verbally asked patients for their height or calculated the body mass index score, but didn't record this information in the records. As not all of the information was recorded, it would be difficult for staff to audit the accuracy of how the screening tool score was calculated. Well-structured records would support auditing and monitoring of patients' nutrition and hydration care.

Hospitals should consider sharing good practice in relation to the design of nursing assessment records in relation to nutrition and hydration within and between hospital groups. Such an approach would help promote good record-keeping and to ensure staff can easily access the information they require to meet patients' nutritional and hydration needs.

## **Opportunities for improvement**

- Patient nursing assessment records relating to nutrition and hydration should be designed to support staff and ensure that relevant information is recorded at the time of the patient's admission.
- There needs to be consistent completion and accurate monitoring and recording of patients' fluid intake and output charts and their food charts.

## 4. Other findings

During the 13 on-site inspections, HIQA inspectors made a number of supplementary findings, which although not directly connected to nutrition and hydration are relevant to the overall care of patients in some of the hospitals that were inspected over the course of this review. Included among these supplementary findings are:

- mixed-gender accommodation
- multitask attendants engaged in both cleaning and catering duties.

### Mixed-gender accommodation

Inspectors noted that a number of hospitals had rooms on wards that accommodated both male and female patients together in the one room. Patients brought this mixed-gender accommodation to the attention of HIQA inspectors and said they did not expect to be staying in a mixed-gender setting when coming into hospital. This practice does not support the dignity and privacy of patients as set out in the *National Standards for Safer Better Healthcare* and should, with a small number of stated exceptions, \*\*\*\*\* be discontinued.

### Multitask attendants had both cleaning and catering duties

In a small number of hospitals, inspectors found that multitask attendants had both cleaning and catering duties and were performing these duties interchangeably on the same shift. Inspectors found from interviewing staff and observing activities on wards that cleaning duties included the cleaning of bathrooms, toilets and sluice rooms.

HIQA has previously identified, in reports published following unannounced infection prevention and control inspections in public acute hospitals, that this is not accepted practice in the majority of Irish hospitals. There is a risk that working in both roles at the same time may increase the risk of transmitting Healthcare Associated Infections and other transmissible infections if strict hand hygiene practices and work protocols are not adhered to.

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\*\*\*\*\* Single gender accommodation may not always be possible in specific areas, such as an intensive care unit or a coronary care unit.

## 5. Conclusions

This review report has been designed to give a view of how public acute hospitals assess, manage and evaluate patients' nutritional and hydration needs. To do this, HIQA asked all public acute hospitals (excluding paediatric and maternity services) to complete a self-assessment questionnaire about nutrition and hydration care for patients. Following the submission of completed self-assessment questionnaires, HIQA conducted unannounced inspections in a selection of hospitals (13) to gain in-depth knowledge of the patient experience and the systems in place for nutritional and hydration care. These hospitals were selected based on the analysis of the self assessment tool data, unsolicited information received by HIQA, the size of the hospital and geographical spread of hospitals.

In reviewing how public acute hospitals adequately assessed, managed and evaluated how they met individual patients nutrition and hydration needs, it became evident to HIQA that there was variation between hospitals. Some hospitals inspected had established systems in place to drive the implementation of national guidelines. Other hospitals did not see nutrition and hydration for patients as a priority, with some only recently implementing guidelines which were published in 2009. Most staff whom inspectors spoke with welcomed HIQA's focus on nutrition and hydration and were enthusiastic about introducing improvements for patients.

Best practice guidelines state that all patients should be screened for the risk of malnutrition within 24 hours of admission to hospital. Such guidelines also state that all hospitals should have a nutritional steering committee in place to oversee the provision of nutrition and hydration for patients, including implementation of guidelines, screening and audit.

Thirty of the 42 hospitals reported that they had a nutritional steering committee in place and eleven of the 13 hospitals inspected had a committee in place. However, a number of these committees had only very recently been established at the time of this review. Some hospital management teams acknowledged that the request from HIQA to complete the self-assessment tool was the catalyst for developing a nutrition steering committee or for rejuvenating an existing committee.

Only half of hospitals (21 of 42) stated that they had implemented screening for risk of malnutrition in over 75% of wards with slightly more than one in five hospitals (21%) reporting that they had not implemented a system of screening for risk of malnutrition in any area of the hospital. On inspection, inspectors found that most hospitals were screening some patients for their risk of malnutrition (10 out of 13 hospitals). However, the level of screening varied across the hospitals inspected, as some were screening on one ward only and others were screening throughout the hospital.

Audits of screening for the risk of malnutrition varied across hospitals, in relation to how often audits were completed and the level of compliance with screening. HIQA found that overall there was an absence of regular and ongoing monitoring of the quality of nutrition and hydration care in hospitals.

Multi-disciplinary oversight of nutrition and hydration care, screening for the risk of malnutrition, audit and patient experience feedback are four of the key issues that if implemented by all hospitals would drive improved nutrition and hydration care for patients.

In general, patients whom inspectors spoke with were either satisfied or very satisfied with the food service in the hospital. Some patients who gave negative feedback to inspectors went on to say that they were satisfied with the food service in general. However HIQA acknowledges that evidence suggests that questions that ask patients to provide a general rating of their care tend to result in more positive responses than factual questions about events and occurrences.

Patients should be able to expect the following when in hospital:

- access to fresh drinking water at all times
- choice and flexibility from a varied menu that is suitable for patients on a texture-modified diet and suits patients' religious, cultural, ethical and specific dietary needs
- nutritious, tasty, appetizing food and drink served at the correct temperature
- to receive help in a timely way if needed to eat, drink and enjoy their meal
- assessment for risk of malnutrition with appropriate referral and management if required.

This review report has been designed to present the findings and share the overall learning from this programme of monitoring against the National Standards for Safer Better Healthcare. In doing so, it is hoped that hospitals can share identified areas of good practice and develop opportunities for improvement in relation to nutrition and hydration for patients in hospital. Many hospitals demonstrated a genuine commitment and enthusiasm to promoting and leading improvements in nutritional and hydration care for patients. Inspectors met with some individuals who demonstrated clear leadership in providing person-centred care, and these were from all disciplines of staff.

Hospitals must now ensure that quality improvement efforts and arrangements in place for meeting patients' nutritional and hydration needs continue to improve. To achieve this, hospitals need effective nutrition steering committees that encourage and support improvements in screening patients for risk of malnutrition, develop evidence-based policies and audit nutrition and hydration care. A key feature of this process is the evaluation of patients' experience of nutritional and hydration care

and using their views to inform and direct change or to reinforce good practices where they exist.

The report also identifies four key areas for improvement that if implemented by all hospitals could drive improvements in nutritional and hydration care for patients admitted to acute hospitals.

HIQA will continue to monitor public acute hospitals against the National Standard for Safer Better Healthcare to determine if they are adequately assessing, managing and evaluating how they meet individual patients nutrition and hydration needs. This monitoring programme will include unannounced inspections of hospitals with findings published in reports on HIQA's website. Guidance for this monitoring programme will be published on HIQA's website.



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## 7. Glossary of terms and abbreviations

**Accountability:** being answerable to another person or organization for decisions, behaviour and any consequences.

**Acute Hospital:** is a facility offering surgical and medical patient care for individuals facing an unexpected medical problem that needs immediate assessment and treatment.

**Advocacy:** the practice of an individual acting independently of the service provider, on behalf of, and in the interests of a patient, who may feel unable to represent themselves.

**An Bord Altranais agus cnáimhseachais na hÉireann:** the Nursing and Midwifery Board of Ireland (NMBI) which is the regulatory body for the nursing and midwifery profession in Ireland.

**Anaesthetist:** a medical specialist who administers an anaesthetic to a patient before a medical procedure or surgery.

**Analgesics:** those drugs that mainly provide pain relief.

**Anti-emetics:** those drugs used to prevent and control nausea and vomiting.

**Artificial nutritional support:** the administration of specially made liquid nutrients through a tube directly into the gut (enteral nutrition) or into a vein (parenteral nutrition).

**Artificial Feeding:** food provided in liquid form through a tube directly into the stomach.

**Aspiration:** inhalation of foreign matter which interferes with respiratory activity.

**Benchmarking:** a continuous process of measuring and comparing care and services with similar service providers.

**Best available evidence:** the consistent and systematic identification, analysis and selection of data and information to evaluate options and make decisions in relation to a specific question.

**Body Mass Index (BMI):** is weight (in kilograms) divided by height<sup>2</sup> (in metres). Body mass index is used to define underweight, normal or healthy weight, overweight and obesity in adults. Patients with a normal BMI can still be undernourished.

**Care pathway:** a multidisciplinary care plan that outlines the main clinical interventions undertaken by different healthcare professionals in the care of patients with a specific condition or set of symptoms.

**Case-mix:** the types of patients and complexity of their condition treated within a healthcare service, including diagnosis, treatments given and resources required for care.

**Clinical audit:** a quality improvement process that seeks to improve patients' care and outcomes through systematic review of care against explicit criteria and the implementation of change.

**Clinical governance:** a system through which service providers are accountable for continuously improving the quality of their clinical practice and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish. This includes mechanisms for monitoring clinical quality and safety through structured programmes, for example, clinical audit. See Clinical Audit.

**Clinical guidelines:** systematically developed statements to assist healthcare professionals and patients' decisions about appropriate healthcare for specific circumstances.

**Clinical nurse manager (CNM):** refers to nurses who undertake first-line nursing management posts with responsibility for professional leadership, staffing and staff development, resource management and facilitating communication. There are three grades of first-line nurse management: CNM 1, CNM 2 and CNM 3. A CNM 1 reports to a CNM 2; a CNM 2 is in charge of a ward or unit of care and reports to a CNM 3; a CNM 3 is in charge of a department and reports to an assistant director of nursing.

**Clinical nutrition:** the application of scientifically based nutritional methods in medical and dietetic practice. This includes nutritional disease prevention and the treatment of nutritional disorders.

**Competence:** the knowledge, skills, abilities, behaviours and expertise sufficient to be able to perform a particular task and activity.

**Complaint:** an expression of dissatisfaction with any aspect of service provision.

**Concern:** a safety or quality issue regarding any aspect of service provision raised by a patient, service provider, member of the workforce or general public.

**Consultant:** a hospital consultant is a registered medical practitioner in hospital practice who, by reason of his or her training, skill and experience in a designated specialty, is consulted by other registered medical practitioners and assumes full clinical responsibility for patients in his or her care, or that aspect of care on which he or she has been consulted, without supervision in professional matters by any

other person. Consultants include surgeons, physicians, anaesthetists, pathologists, radiologists, oncologists and others.

**Core working hours:** Core working hours refer to the hours when a department or area is fully functional and historically was classified as the working hours of 9.00am to 5.00pm, Monday to Friday.

**Corporate governance:** the system by which services direct and control their functions in order to achieve organizational objectives, manage their business processes, meet required standards of accountability, integrity and propriety and relate to external stakeholders.

**Culture:** the shared attitudes, beliefs and values that define a group or groups of people and shape and influence perceptions and behaviours.

**Day unit:** a ward in an acute hospital for day patients to stay in to recover from their treatment.

**Dehydration:** is the loss of water and salts essential for normal body function.

**Dietitian:** a health professional specialised in clinical nutrition and dietetics who is responsible for nutritional disease prevention and nutritional treatment of patients in hospitals and the community. Dietitians also prescribe and oversee the use of artificial nutritional support and are responsible for the nutritional care of patients in hospital.

**Enteral nutrition:** nutrition provided through a tube, catheter or stoma that delivers nutrients directly to the gut, bypassing the mouth.

**Energy and protein dense menu:** a menu which has high levels of protein and energy (calories) in small amounts of food due to the use of food and or food products with a high fat and protein content.

**Effective:** a measure of the extent to which a specific intervention, procedure, treatment, or service, when delivered, does what it is intended to do for a specific population.

**Evidence-based practice:** practice which incorporates the use of best available and appropriate evidence arising from research and other sources.

**Food Fortification:** the process of adding micronutrients (essential trace elements and vitamins) to food.

**Governance:** in healthcare, an integration of corporate and clinical governance; the systems, processes and behaviours by which services lead, direct and control their functions in order to achieve their objectives, including the quality and safety of

services for patients. See also '**Clinical governance**' and '**Corporate governance**' above.

**Healthcare Associated Infections:** infections that are acquired as a result of healthcare interventions.

**Healthcare professional:** a person who exercises skill or judgment in diagnosing, treating or caring for service users, preserving or improving the health of service users.

**Healthcare record:** all information in both paper and electronic formats relating to the care of a service user. This includes (but is not limited to) demographics (such as name, address, date of birth), medical history, social history, findings from physical examination, X-rays and specimens, the results of diagnostic tests, prescriptions, procedures and all communication relating to the care of patients.

**Infection control:** the discipline and practice of preventing and controlling Healthcare Associated Infections and infectious diseases in a healthcare organization.

**Key performance indicator (KPIs):** specific and measurable elements of practice that can be used to assess quality and safety of care.

**Malnutrition:** insufficient intake or uptake of nutrients which can result in weight loss and has measurable adverse effects on body composition, function and clinical outcome.

**Multidisciplinary:** an approach to the planning of treatment and the delivery of care for a service user by a team of healthcare professionals who work together to provide integrated care.

**MUST:** Malnutrition Universal Screening Tool.

**NEWS:** National Early Warning Score. This is a nationally agreed early warning score for the early recognition and management of acutely ill adult patients.

**Nil by mouth:** the restriction of food or drink by mouth.

**Nutrition:** the intake of food, considered in relation to the body's dietary needs..

**Oral nutritional supplement (ONS):** are used in addition to the normal diet, when diet alone is insufficient to meet daily nutritional requirements. They increase the total energy and protein intake and also the intake of micronutrients.

**Out of hours:** outside the core working hours of 9am to 5pm, Monday to Friday. See also '**Core working hours**' above.

**Outpatient department (OPD):** a hospital department which is primarily designed to enable consultants and members of their teams to see patients at clinics for scheduled care. Patients attending the outpatient department may be a new patient referral or patients who are attending for review following discharge from hospital or had previously attending the OPD.

**Paediatrics:** the branch of medicine concerned with the treatment of infants and children.

**Parenteral nutrition:** Nutrients provided intravenously either into a large central vein or a peripheral vein.

**Patient safety incident or event:** an event or circumstance which could have resulted, or did result, in unnecessary harm to a patient. Patient safety incidents include an incident which reached the patient and caused harm (adverse event); an incident which did not reach the patient (near miss); and an incident which reached the patient, but resulted in no discernible harm to the patient (no harm event).

**Policies, procedures, protocols and guidelines (PPPGs):** a set of statements or commitments to pursue courses of action aimed at achieving defined goals.

**Post-operative:** period after a surgical operation.

**Risk:** in healthcare, the likelihood of an adverse event or outcome.

**Service:** anywhere health or social care is provided. Examples include, but are not limited to, acute hospitals, community hospitals, district hospitals, health centres, dental clinics, general practitioner (GP) surgeries, homecare, and so on.

**Terms of reference:** a set of terms that describe the purpose and structure of a project, committee or meeting.

**Texture modified food:** nutritional food which is changed in texture to support those with difficulties eating and or swallowing.

**Therapeutic diet:** a specifically prescribed diet that will treat illness or maintain health.

**Workforce:** the people who work in, for or with the service provider. This includes individuals that are employed, self-employed, temporary, volunteers, contracted or anyone who is responsible or accountable to the organization when providing a service to the service user.

**World Health Organization (WHO):** a United Nations organization which promotes health information worldwide.

## Appendix 1 – Expert Advisory Group Membership

Member	Representing
<b>Angela McNamee</b> <sup>††††</sup>	Acute Hospitals Office (Director of Nursing, Louth Hospital)
<b>Ann Cosgrove</b>	Acute Hospitals Office (General Manager, Galway University Hospital)
<b>Anne Marie Bennett</b>	Irish Nutrition and Dietetic Institute
<b>Ann-Maria Feeney</b>	Irish Patients' Association
<b>Aoife Lane</b>	Office of the Nursing and Midwifery Services Director
<b>Charles Normand</b>	Academic (Professor of Health Policy and Management, Trinity College)
<b>Declan Byrne</b>	Acute Hospitals Office (Consultant Geriatrician and AMU Physician, St James's Hospital)
<b>Helena O'Brien</b>	Catering Management Association of Ireland
<b>Marie O'Keefe</b>	Acute Hospitals Office (Catering and Household Services Manager)
<b>Mary Dunnion (Chairperson)</b>	Health Information and Quality Authority (HIQA)
<b>Niamh Rice</b>	Irish Society for Clinical Nutrition and Metabolism
<b>Olivia Sinclair</b>	Quality Improvement Division, Health Services Executive
<b>Siobhan Lines</b> <sup>†††††</sup>	Acute Hospitals Office (Director of Nursing, Louth Hospital)
<b>Susan Cliffe (Project Lead)</b>	HIQA
<b>Susan Kent</b>	Department of Health

<sup>††††</sup> Until February 2016

<sup>†††††</sup> From February 2016



## Appendix 2 — Literature review

### Introduction

Malnutrition affects more than one in four patients admitted to Irish hospitals and compromises the quality of life for patients, affects recovery and causes unnecessary illness and death.<sup>(16-21)</sup> In addition to clinical consequences, there are also economic consequences. Annual healthcare costs associated with malnourished Irish patients were estimated to be over €1.4 billion in 2007, representing more than 10% of the healthcare budget that year.<sup>(20;22)</sup>

It is common for patients to be malnourished when they are admitted to hospital<sup>(23;24)</sup> as many experience unintentional weight loss of over 10% of their body weight in the six months prior to their hospital admission.<sup>(25;26)</sup> Also, a patient's nutritional status often deteriorates while in hospital.<sup>(25)</sup> It has been reported that patients already malnourished on admission are more likely to lose weight, and their weight loss is proportionately higher.<sup>(25;27)</sup> Malnutrition has a higher incidence in specific patient populations. These include older people, cancer, surgical and gastrointestinal patients.<sup>(25;27;28)</sup>

An in-depth review of the published literature on malnutrition and dehydration in acute healthcare settings was completed by HIQA staff to inform the monitoring and quality improvement programme.

The literature review focused exclusively on undernutrition in adult patients admitted for acute hospital care. Malnutrition in children, pregnant women and patients in intensive care units were excluded from this review. Although recognized as health problems, obesity and overnutrition were not included.

The types of research and literature reviewed included:

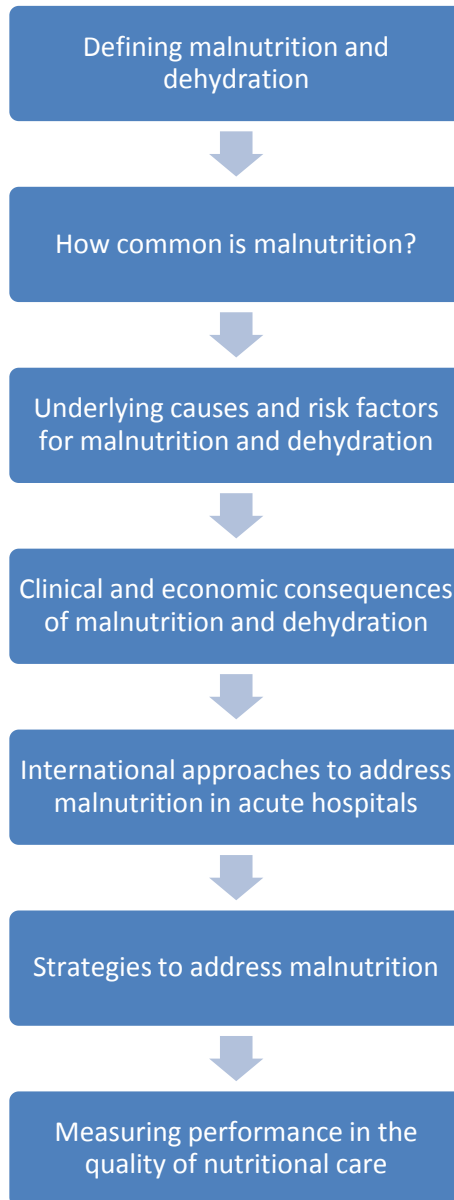
- national and international research
- clinical guidelines
- standards
- monitoring programmes
- regulations dealing with malnutrition in acute hospitals in other countries.

The aims of the literature review were to:

- help define malnutrition
- establish what international approaches are used in monitoring nutritional care
- gain knowledge on strategies that could be employed to promote learning and best practice with regard to nutritional care in acute hospitals.

The objective of this appendix is to give the reader background information on malnutrition and outline ways that acute hospitals can promote high-quality nutritional care (see Chart 2 below).

**Chart 2. Summary of information on nutrition and malnutrition, and approaches to managing and monitoring the quality of nutritional care in acute hospitals.**



## Defining malnutrition and dehydration

To define malnutrition and dehydration, one must firstly define what nutrition and hydration are. The World Health Organization (WHO) defines nutrition as:

the intake of food, considered in relation to the body's dietary needs. Good nutrition — an adequate, well-balanced diet combined with regular physical activity — is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.<sup>(29)</sup>

For the purpose of this monitoring and quality improvement programme, the following definition of malnutrition has been adopted based on this literature review and advice from an external advisory group convened by HIQA:

Malnutrition, in this case under-nutrition, can be broadly defined as a state of insufficient intake or uptake of nutrients which can result in weight loss and has measurable adverse effects on body composition, function and clinical outcome.<sup>§§§§§</sup>

Hydration is the term used to describe the level of fluid in the body; maintaining the correct balance of fluid in the body is crucial for health.<sup>(30)</sup> Dehydration occurs when body water is lost, with or without salt, at a rate greater than fluid can be replaced.<sup>(31)</sup>

Malnutrition and dehydration often occur together when the intake of food and fluid are insufficient to meet the body's needs.

## How common is malnutrition and dehydration?

European studies suggest malnutrition affects 5–15% of the EU's population<sup>(21)</sup> with an estimated 140,000 Irish adults being malnourished or at risk of malnutrition. Patients are often malnourished on admission to hospital<sup>(24;25)</sup> and it is common for patients to experience unintentional weight loss of over 10% of their normal body weight in the six months prior to hospital admission.<sup>(26)</sup>

The British Association for Parenteral and Enteral Nutrition (BAPEN) published reports in 2010 and 2011 using data collected in a number of participating Irish public hospitals during Nutrition Screening Week. The study looked at patients in 27

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<sup>§§§§§</sup> It should be noted that hydration within the context of the HIQA's review of nutrition and hydration care only refers to fluids that patients drink and does not include artificial methods of providing fluids such as an intravenous 'drip' infusion (fluids given through a small plastic tube inserted into a vein).

hospitals that were screened for their risk of malnutrition using the British Malnutrition Universal Screening Tool (MUST) in 2010. It found that of 1,602 patients, 33% were at risk of malnutrition (25% high risk, 8% medium risk).<sup>(32)</sup> A repeat survey in 2011 showed that 27% (of 1,102 patients screened) were at risk of malnutrition (20% high risk, 7% medium risk).<sup>(23)</sup>

Research shows that there are more patients at risk of malnutrition in some hospital patient populations, including older patients, patients with cancer, patients having surgery and patients with gastrointestinal disease.<sup>(24;25;27;33)</sup>

Estimating the prevalence of dehydration in the general population or in a hospital setting is difficult.<sup>(34)</sup> In addition, prevalence of dehydration in studies depends on the population being assessed, the definition of dehydration used and the methods used to determine if an individual is dehydrated.<sup>(35;36)</sup> Water loss dehydration is more common in older people due to a number of physiological factors associated with aging including lower muscle mass, decrease in kidney function and a decreased sense of thirst.<sup>(32)</sup>

## Underlying causes and risk factors for malnutrition and dehydration

There are many reasons why patients in an acute hospital setting may become malnourished and dehydrated, such as physiological reasons caused by disease, infections or surgery.<sup>(25;37-41)</sup> Often, patients have increased energy needs when in hospital which makes it more likely that they will become malnourished. Some of the main reasons patients suffer from malnutrition and dehydration are listed below.

### Malnutrition – patients with:

- impaired gastrointestinal function<sup>(42)</sup>
- poor absorption of nutrients<sup>(43)</sup>
- increased nutrient loss<sup>(44)</sup>
- increased energy needs<sup>(44)</sup>
- cancer<sup>(45)</sup>
- infection.<sup>(39;46;47)</sup>
- inflammation<sup>(27)</sup>
- stress<sup>(48)</sup>
- reduced ability to eat due to
  - impaired physical mobility
  - oral, dental or swallowing issues

- dietary restrictions during hospital treatment
- and loss of appetite.<sup>(44;45;49-52)</sup>

## Dehydration — patients with:

- age-related body composition changes depleting total body water<sup>(53)</sup>
- decreased renal function<sup>(54)</sup>
- less accurate thirst perception<sup>(54;55)</sup>
- intense vomiting and diarrhoea<sup>(44)</sup>
- inadequate nutrition intake.<sup>(43)</sup>

Patients in acute hospitals may develop malnutrition and dehydration due to risk factors including:

- increasing age<sup>(54;56-59)</sup>
- psychiatric disorders<sup>(60)</sup>
- physical disability<sup>(61)</sup>
- acute disorders and chronic conditions<sup>(27;42;46;47;62;63)</sup>
- neurological disorders<sup>(62;64-68)</sup>
- drug therapy and polypharmacy (patients who are taking a number of different medications).<sup>(69;70)</sup>

An important part of addressing malnutrition and dehydration among patients in acute hospitals is identifying these risk factors and creating a greater awareness of which patients require closer monitoring. In addition to the risk factors outlined above, this literature review found other factors associated with hospital practices contribute to patients developing malnutrition and dehydration. These included restrictive diets and patients fasting.

## Restrictive diets

Restrictive or special diets are required by patients when specific nutrients have a detrimental effect on their health, for example, a patient with kidney disease may have a diet with certain foods restricted. Caution is recommended when dealing with restrictive diets as their long-term use can result in malnutrition.<sup>(71)</sup>

## Patients fasting (no food or drink)

Patients in hospital may be required to fast prior to certain tests, procedures or surgery. In many hospitals, it is standard practice to institute an overnight fast before surgery.<sup>(72)</sup> Hospital delays or the need for multiple procedures can result in

long periods without nutrition and hydration. Some post-operative patients will also have inadequate or no oral intake for several days.<sup>(73)</sup> Some patients are put onto a liquid menu after nil by mouth,<sup>\*\*\*\*\*</sup> followed by a restricted menu before proceeding to a standard hospital menu.<sup>(40)</sup> This can contribute to long periods of insufficient nutrient intake and weight loss, increased complications and mortality.<sup>(74;75)</sup>

Preoperative fasting is recommended to reduce the risk of aspiration<sup>+++++</sup> of stomach contents during anaesthesia.<sup>(76)</sup> However, longer periods of fasting can cause chemical changes which may increase the body's response to illness and injury. Patients in hospital may be required to fast prior to certain tests, procedures or surgery. Fasting from 12 midnight has been standard practice for patients going for elective surgery to avoid the risk of pulmonary aspiration.<sup>(77)</sup>

A Cochrane review identified that fasting from 12 midnight does not reduce gastric content or lessen complications compared with patients allowed free intake of clear fluids up to two hours before anaesthesia for surgery.<sup>(77)</sup>

Other studies have shown:

- oral intake of clear fluids (without milk) up to two hours before elective surgery is safe and should be encouraged
- solid food be prohibited for six hours before elective surgery.<sup>(76;78-80)</sup>

There is considerable consensus in the national, UK and European guidelines in relation to timeframes for fasting as detailed below.

The Royal College of Nursing published a guideline on peri-operative fasting in adults and children in 2005.<sup>(81)</sup> This guideline was endorsed by the Royal College of Anaesthetists and the Association of Paediatric Anaesthetists of Great Britain and Ireland and recommended the following:

- allow water up to two hours before anaesthesia
- clear fluids including clear tea and black coffee are permitted up to two hours before anaesthesia
- food / milk / sweets / tea or coffee with milk, can be taken six hours (minimum) before anaesthesia
- chewing gum is not permitted on day of surgery.

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\*\*\*\*\* Nil by mouth means when a patient cannot eat or drink for clinical reasons, for example, before undergoing surgery.

+++++ Aspiration is when fluid or a foreign body is inhaled into the lungs, usually after vomiting.

The European Society of Anaesthesiology guidelines (which were endorsed by the Association of Anaesthetists of Great Britain and Ireland in October 2015) on peri-operative fasting in adults and children recommend the following:

- adults and children should be encouraged to drink clear fluids (including water, pulp-free juice and tea or coffee without milk) up to two hours before elective surgery (including caesarean section)
- solid food should be prohibited for six hours before elective surgery in adults and children
- patients with obesity, gastro-oesophageal reflux and diabetes and pregnant women not in labour can safely follow all of the above guidelines
- it is safe for patients (including diabetics) to drink carbohydrate-rich drinks up to two hours before elective surgery.<sup>(78)</sup>

The guidelines put an emphasis on encouraging patients not to avoid fluids for any longer than is necessary and offer advice on the postoperative resumption of oral intake.

The Royal College of Surgeons in Ireland (RCSI), the Irish College of Anaesthetists and the Health Service Executive (HSE) published fasting guidelines in 2011 for preoperative fasting for elective surgery in the *Elective Surgery Programme Implementation Support Guide*, see Table A (on the following page) for more details.<sup>(79)</sup>

## Table A. Guidelines for pre-operative fasting

**The model of care for elective surgery as set out by the RCSI, the Irish College of Anaesthetists and the HSE describes the guidelines for preoperative fasting as follows.<sup>(79)</sup>**

### **Before surgery:**

In general, fasting should be undertaken to include:

- 6 hours for solid food, milk
- 2 hours for clear fluids (clear fluids should be non-particulate and non-carbonated e.g. water)
- 4 hours for babies on breast milk.

Unless otherwise specified by the anaesthetist, the following fasting times are recommended:

Patients fasting for morning theatre list: starting at 08:00hrs should have:

- Food until midnight
- Clear fluids until 04:00hrs.

Patients fasting for afternoon theatre list: starting at 13:00hrs should have:

- Food until 07:00hrs
- Clear fluids until 11:00hrs.



## Other hospital factors

There are a number of other factors that can affect how patients experience nutrition and hydration while in hospital. The hospital food production service is the only source of nutrition for some patients, and the quality of this service can impact on the choice and variety of food available. It may offer limited choice, be poorly presented or be of low quality. This may be more relevant for patients with specific religious, cultural or dietary needs.<sup>(10)</sup>

The temperature, appearance and aroma of the food are important factors for patients' satisfaction with food services.<sup>(82)</sup> Patients may be put off their food by certain unpleasant sights, sounds or smells that exist in the hospital environment.<sup>(55;83)</sup> Issues such as wearing dentures (or missing dentures) will affect patient's nutritional status.<sup>(55;84)</sup> Some patients, such as patients with dementia, might require more than the allotted time for eating meals.<sup>(85)</sup> Other patients may also require additional help feeding or may need supervision during mealtimes as they may not be able to reach food, cutlery or open packages.<sup>(86)</sup>

## Clinical and economic consequences of malnutrition and dehydration

In 2013, the Irish Society for Clinical Nutrition and Metabolism (IrSPEN)\* estimated that in excess of 250,000 hospital bed days<sup>+++++</sup> are required annually to cope with a longer length of stay for patients in hospital due to malnutrition.<sup>(87)</sup> Annual healthcare costs associated with malnourished Irish patients was estimated in 2007 to be more than €1.4 billion. This represented more than 10% of the healthcare budget for that year, with acute hospitals and residential care settings accounting for 70% of costs.<sup>(20)</sup>

As well as significant economic costs, malnutrition and dehydration have significant clinical consequences for patients as detailed in Table B.<sup>(16-19;47;64;88-100)</sup>

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\* IrSPEN is a multi-profession society that was set up in 2010 with support from the Irish Society of Gastroenterology, Irish Nutrition and Dietetic Institute and the Nutrition Society.

+++++ A bed-day is a day during which a person is confined to a bed and in which the patient stays overnight in a hospital.

**Table B. Clinical and economic consequences of malnutrition**

Clinical consequences	Economic consequences
<ul style="list-style-type: none"> <li>■ impaired immune response</li> <li>■ increased risk of infection</li> <li>■ reduced muscle strength</li> <li>■ fatigue</li> <li>■ frailty</li> <li>■ muscle wasting</li> <li>■ weight loss</li> <li>■ impaired wound healing</li> <li>■ impaired psycho-social function</li> <li>■ impaired recovery from illness and surgery</li> <li>■ cognitive decline</li> <li>■ poorer clinical outcomes</li> <li>■ increased morbidity</li> </ul>	<ul style="list-style-type: none"> <li>■ longer length of stay in hospitals</li> <li>■ increased complications</li> <li>■ threefold greater risk of infection</li> <li>■ higher risk of hospital admission and readmission</li> <li>■ less likely to be discharged to patients' own home</li> <li>■ increased demands on community care resources</li> <li>■ increased costs</li> </ul>

## International approaches to address malnutrition in acute hospitals

This literature review identified considerable difference in approaches to addressing malnutrition and dehydration in hospital patients in healthcare systems internationally. It found a large variety of regulations, standards, guidelines and recommendations specific to nutrition and hydration in patients in acute hospitals around the world.

Some countries including Norway, New Zealand and England have chosen to introduce mandatory regulations that healthcare providers are required by law to implement. Other countries have national standards, guidelines and various monitoring programmes for nutritional care that are not enforced by law.

Some international hospital accreditation bodies require hospitals to meet certain nutrition-related standards to gain accreditation or certification. The Joint Commission International (JCI) is one such body whose requirements regarding the nutritional aspects of clinical care are expressed in three standards: Assessment of Patient, Care of Patient, and Access to Care and Continuity of Care.<sup>(101)</sup>

Within Europe, there are different approaches to monitoring standards and regulating nutritional care. Some countries publish national standards, others have regulations in place that care providers must comply with. Other countries use on-

site inspection teams with members of the public trained as patient assessors (at least half of the people on the team are patient assessors), conducting on-site visits. This ensures that local people can participate in annual inspections of their local hospitals.

In 2002, the Council of Europe forum on 'Food and Nutritional Care in Hospitals' published a report describing the main obstacles to good nutrition in hospitals, and published associated recommendations.<sup>(102)</sup> This report summarized the five main barriers to proper nutritional care in hospitals as:

- lack of clearly defined responsibilities in planning and managing nutritional care.
- lack of sufficient education with regard to nutrition among all staff groups.
- lack of influence and knowledge of the patients.
- lack of cooperation between different staff groups.
- lack of involvement from the hospital managers.

The Council of Europe followed this work by publishing Resolution ResAP (2003).<sup>(103)</sup> This document contained over 100 recommendations which were summarised by the Council of Europe Alliance into 10 key characteristics as detailed in Table C.<sup>(104)</sup>

**Table C. Key characteristics of good nutritional care in hospitals**

Council of Europe's 10 key characteristics of good nutritional care in hospitals
1. All patients should be screened on admission to hospital to identify those who are malnourished or at risk of becoming malnourished. All patients are re-screened weekly.
2. All patients should have a care plan which identifies their nutritional care needs and how they are to be met.
3. The hospital should issue specific guidance on food services and nutritional care in its clinical governance arrangements.
4. Patients should be involved in the planning and monitoring arrangements for food service provision.
5. Wards should implement 'protected mealtimes' to provide an environment conducive to patients enjoying and being able to eat their food.
6. All staff should have the appropriate skills and competencies needed to ensure that patients' nutritional needs are met; all staff should receive regular training on nutritional care and management.
7. Hospital facilities should be flexible and patient-centred with the aim of providing and delivering an excellent experience of food service and nutritional care 24 hours a day, every day.
8. Each hospital should have a policy for food service and nutritional care which is patient-centred and performance managed in line with home-country governance frameworks.
9. Food service and nutritional care should be delivered to the patient safely.
10. Hospitals should support a multidisciplinary approach to nutritional care and value the contribution of all staff groups working in partnership with patients and users.

### **The Irish context**

In 2009, the Department of Health and Children published guidelines on 'Food and Nutritional Care in Hospitals'.<sup>(2)</sup> Its publication was in response to the 2002

recommendations made by the Council of Europe and Resolution ResAP (2003) on food and nutritional care in acute hospitals.<sup>(102:103)</sup> These guidelines recognized that hospital food plays a part in the treatment and recovery of patients and that normal low-fat, healthy eating options are not suitable for most patients in acute hospitals. Instead, an emphasis was placed on menus rich in protein and energy.

Ordinary food, rather than artificial nutritional support, should be the primary feeding choice (the food first principle). Three main meals are recommended daily with at least a four-hour interval between them. Patients should be given adequate time to eat meals, while nourishing snacks should be available between meals.

Protected mealtimes (mealtimes that are protected from interruption by non-urgent procedures such as ward rounds and X-rays or scans) should be introduced. The guidelines also acknowledged that, as Ireland is a multicultural society, this should be reflected in hospital menu choice.<sup>(2)</sup>

Key points in the guidelines are summarised as follows:

- Texture modified menus, with at least 40% energy from fat, should be provided to patients with chewing or swallowing difficulties. Their eating ability and nutritional status should be continually assessed.
- Menus must contain the recommended daily allowance for protein and micronutrients (micronutrients are chemical elements or substances required in trace amounts for normal growth and development).
- The nutrient content of dishes must be sufficient to meet patients' needs.
- Patients' personal preferences must be considered.
- Patients must be fully informed as to what food choices are available.
- Menus should be developed with input from the hospital's dietitian, catering manager and nutrition steering committee.
- Only evidence-based therapeutic diets §§§§§§ should be prescribed.<sup>(105)</sup>
- Dietitians or physicians should be made aware of any alternative diets which may affect a patient's nutritional status.
- Patient feedback and their satisfaction with the food provided should be recorded.
- The nutritional content and portion sizes should be audited per dish annually or if any changes are made to menus.
- There should be ongoing on-site training for all clinical and non-clinical staff involved in nutritional care, including care assistants and catering assistants, on a yearly basis.<sup>(2)</sup>

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§§§§§§ A therapeutic diet is defined as a diet intervention ordered by a healthcare practitioner as part of the treatment for a disease or clinical condition manifesting an altered nutritional status, to eliminate, decrease, or increase certain substances in the diet (such as sodium, potassium).

The Department's guidelines recommend:

- That every patient should be assessed using the Malnutrition Universal Screening Tool (MUST) within 24 hours of being admitted to hospital. This initial screening should consider the patient's nutritional status and severity of disease. Patients identified as being at risk of malnutrition should be referred to a dietitian for a more comprehensive nutritional assessment.<sup>Ψ</sup>
- A treatment or care plan should be drawn up that sets out dietary goals, goals for the use of nutritional support and scope for adjustment. A semi-quantitative system was recommended in the guidelines to monitor food intake, while dietary records should be kept for patients at risk of malnutrition. Nutritional risk screening should be redone for all patients one week after admission and at weekly intervals after that.
- Nutritional care plans should also be reviewed at weekly intervals, the guidelines outline. Records of a patient's nutritional status are mandatory in healthcare records at admission, discharge and outpatient follow-up. It must also be included in patient discharge and transfer communication.
- Hospitals should have a policy on fasting, 'nil by mouth' regimes, while overnight fasting and other dietary restrictions should not be used routinely. Artificial nutritional support — which is the administration of specially formulated liquid nutrients through a tube directly into the gut (enteral nutrition) or into a vein (parenteral nutrition) — should only be considered when ordinary food and oral nutritional supplements cannot meet a patient's nutritional requirements. When it is required, it should be administered for a minimum of seven days.

The guidelines also identified the requirement for effective governance of nutrition and hydration. Specifically, it recommends the establishment of a nutritional steering committee consisting of:

- a senior manager
- two dietitians (also known as clinical dietitians or clinical nutritionists)
- a nurse
- a pharmacist
- a speech and language therapist
- an occupational therapist
- two senior catering managers
- a physician.<sup>(2)</sup>

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<sup>Ψ</sup> A comprehensive evaluation of nutritional status, including one or more of these: medical history, dietary history, physical examination, anthropometrical measurements and laboratory data.

The purpose of such a committee is to oversee implementation of the guidelines for nutritional care and support of patients, including contract specifications, nutritional risk screening and audits. Nutritional risk screening is used to detect patients at risk of malnutrition who may experience an improved clinical outcome when given nutritional support.<sup>(2)</sup>

## **Strategies to address malnutrition**

This section of the literature review identifies ways in which hospitals can promote good nutritional and hydration care. These include involving the patient, multidisciplinary working, enhancing the eating environment, nutritional screening to determine those at risk of malnutrition, education and training, and hospital policy.

### **Involve the patient**

The treatment for malnutrition should involve patients and take account of their needs and preferences including favourite foods, portion sizes, textures, flavours and preferences arising from different religious and ethnic backgrounds. When patients are unable to make informed decisions with regard to meals, healthcare professionals should discuss patient preferences with relatives, before following best-practice guidelines.

Time should also be taken to explain to patients the positive role that nutrition plays in their hospital treatment. They should be given information about the nutritional content of foods and should be involved in planning their meals and food selection. At discharge they should be given advice about eating at home.<sup>(102)</sup>

### **Multidisciplinary working – nutrition steering committee and hospital policies**

Irish guidelines require hospitals to have multidisciplinary nutritional steering committees. The patient's nutritional care pathway requires staff from different disciplines (nurses, physicians, dietitians, pharmacists, physiotherapists, occupational therapists, speech therapist and catering staff) to communicate and refer patients to each other.

Dietitians should be available to support, restore and maintain the best possible nutrition for patients' health. Pharmacists should examine drug-nutrient interactions, while occupational therapists might organize aids and postural supports to support

eating. Healthcare records, including food intake and weight charts, should be accurately maintained and accessible to members of the multidisciplinary team to inform clinical judgment.

Hospitals should support good nutritional practice through governance, leadership, management initiatives and the use of multidisciplinary teams. All hospitals should have a nutritional policy and a nutritional steering committee.<sup>(2)</sup>

Hospital nutritional steering committees should develop policies, explicit protocols and guidelines in relation to nutritional management. The hospital should include specific guidance on food-service management and nutritional care in its clinical governance arrangements. There should be procedures in place around procuring, producing and distributing food and fluids.<sup>(106;107)</sup>

## **Hospital environment**

The hospital environment should be conducive to eating. Lighting, seating, dining surfaces should be appropriate and accessible with hand-washing facilities available.<sup>(108;109)</sup> The eating environment in hospitals should also have minimal distractions. Pain killers and anti-sickness medication should be administered on a schedule that minimises the likelihood of pain and nausea during mealtimes. Patients should be given the option to eat sitting-up next to the bed. The national food and nutritional care guidelines states that all patients, if able, should be able where possible to sit at a table to eat their main meals and that this should be considered at the planning level for new hospitals and when upgrading existing facilities.<sup>(2)</sup>

Food should be presented in a visually appealing manner, in order to stimulate appetite. It should be separated on the plate to distinguish flavours. Different foods in texture-modified menus should also be separated on the plate, and not mixed together as mixing some food types, for example peas and carrots, can result in an unappetising colour.<sup>(110)</sup> Accompaniments such as butter, gravy, garnishes, dressings or sauces should be offered with meals, and food should always be served at the correct temperature.

Cutlery and utensils should be kept simple, while modified cutlery should also be available on request. Food trays should have minimum clutter and be within reach. Care should be taken to ensure that patients with dentures have their dentures in place prior to mealtimes. Food wrappers and lids should be removed for the patient where appropriate. Some patients will require assistance with cutting and buttering and patients with disabilities may require more skilled assistance. Patients should be given enough time to eat.



Age UK, the UK charity for older people, launched a 'Hungry to be Heard' campaign in 2006 which specifically addressed malnutrition in older patients in hospital.<sup>(111)</sup> Four years later, Age UK ran a second campaign called 'Still Hungry to be Heard' and devised seven steps to end malnutrition in older patients in hospital.<sup>(112)</sup> These measures include hospital staff:

- listening to patients' food preferences
- becoming food aware
- following their own professional codes and guidance from other bodies
- assessing patients for malnourishment on admission to hospital and at regular intervals during their stay
- introducing protected mealtimes and a 'red tray' system.

The 'red tray' system can be used to flag patients that need assistance with their meals. It is a simple way of alerting healthcare staff to the fact that a person requires help with eating. A red-dot sticker on their menu sheet (or some other agreed system) signals to the catering department that the meal is to be served on a red tray. When the meals arrive on the ward, staff can easily identify people who require help by looking out for a red tray and assisting quickly. This means the dignity of the patient or the quality of the meal is not compromised.<sup>(112)</sup>

Protected mealtimes mean that mealtimes are protected from interruption by non-urgent clinical or administrative procedures such as ward rounds and X-rays and or scans, as disturbances during mealtimes have a negative effect on the amount of food eaten. Protected mealtimes also enable staff to focus on providing assistance to those patients unable to eat independently.<sup>(108)</sup> Visiting during protected mealtimes should be restricted to relatives and friends of the patient who are there specifically to provide assistance to the patient with their meal.<sup>(112)</sup>

## Staff and training

The Department of Health Guidelines state that all staff involved in the nutritional care of patients must have nutrition and undernutrition included in their training. These guidelines go on to state that hospital policy should include the development of staff training and induction programmes about the role that good nutrition has in the management of the patient.

As referenced earlier, screening patients for the risk of malnutrition is employed by hospitals to determine whether a patient is malnourished or at risk of malnourishment.<sup>(2)</sup> It is generally accepted that screening patients for the risk of malnutrition is a nurse-led practice.<sup>(113)</sup> Providing clinical staff with training in the use of the MUST tool has been shown to increase the use of this screening tool.<sup>(113;114)</sup>

Increased collaboration, particularly between nurses and dietitians, is regarded as important in terms of reducing the barriers to universal screening.<sup>(113)</sup> Inadequate skills and training have also been suggested as reasons for poor referral rates of at-risk patients to dietitians.<sup>(37;115)</sup>

Nutrition should be a requirement of all basic and ongoing education and training of healthcare professionals.<sup>(44;116)</sup>

## **Nutritional risk-screening**

The goal of nutritional risk-screening and assessment is to:

- identify patients who are malnourished or at risk of being malnourished
- quantify the patient's risk of developing complications as a result of malnutrition
- monitor the adequacy of nutritional support.

Nutritional screening is used to identify people who may be malnourished or at risk of malnutrition, and to determine if they need a more detailed nutritional assessment. Screening considers recent weight loss, intake of nutrients, appetite and disease state. Patients are screened for nutritional risk within 24 hours of hospital admission by appropriately trained staff.

Each hospital unit should have access to suitable calibrated weighing scales, including sitting scales and hoist scales for patients who are not mobile, measuring tape and callipers. A nutritional assessment is a comprehensive check of the nutritional status of a patient.

## **Malnutrition Universal Screening Tool (MUST)**

The Malnutrition Universal Screening Tool (MUST) is an example of a screening tool that hospitals can use to identify patients at risk of malnutrition. It is the tool recommended in the Irish Department of Health's guidelines on food and nutritional care in hospitals.<sup>(2)</sup>

MUST was launched by a UK-based organization, BAPEN,<sup>\*\*\*\*\*</sup> in 2003 and is the most commonly used screening tool in the UK.<sup>(117)</sup> MUST has been validated across

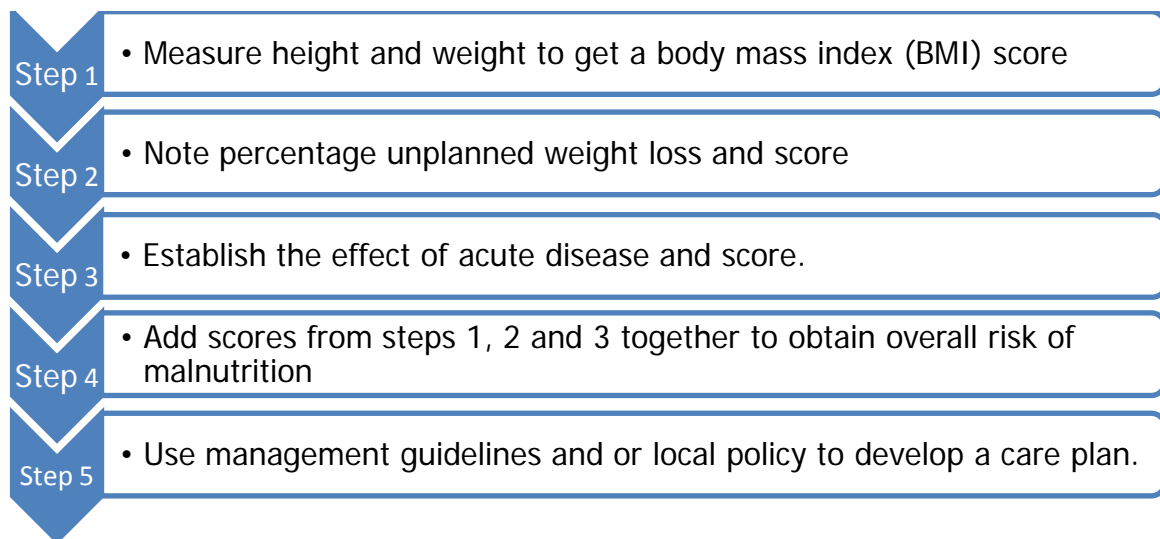
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\*\*\*\*\* BAPEN — formerly the British Association of Parenteral and Enteral Nutrition — is a charitable association in the UK that raises awareness of malnutrition and works to advance the nutritional care of patients and those at risk from malnutrition in the wider community.

all healthcare settings and has comparable predictive value to other validated screening tools.<sup>(16;118)</sup>

The MUST approach comprises a five-step screening process (see Chart 2 below) that gives an overall risk score (low risk=0, medium risk=1 and high risk=2 or greater on the basis of recent unplanned weight loss and the presence of an acute disease).

### Chart 2. Malnutrition Universal Screening Tool Process



BAPEN published guidance on the interpretation of MUST results and the use of appropriate care plans.<sup>(119)</sup>

Other nutritional risk screening tools include (but are not limited to) the following:

- Nutritional risk screening (NRS-2002)
- Malnutrition Screening Tool (MST)
- Short nutritional assessment questionnaire (SNAQ)
- Mini Nutritional Assessment (MNA)
- Subjective Global Assessment (SGA).

## Care pathways for patients who are malnourished

Hospitals should have a documented pathway for patients found to be malnourished or at risk following screening.<sup>(40;43)</sup> This should include monitoring food and fluid intake and the use of oral nutritional supplements (these are nutritious drinks that patients can take in addition to food).<sup>(27)</sup>

A nutritional care plan should outline the most appropriate food-intake method, such as regular food, texture-modified food, oral nutritional supplements or artificial nutritional support. The nutritional care plan should include the monitoring approach taken, such as logging the frequency of food intake and the patient's weight.

Oral nutritional supplements should be prescribed if required.<sup>(120)</sup> Artificial feeding is started if required, but a 'food first' approach should take priority.<sup>(75)</sup>

Ward nurses should monitor patients at risk of malnutrition and record food and liquid intake in food and fluid charts. Furthermore, patients requiring assistance with feeding at mealtimes should be identified.

Patients' nutritional status is reassessed each week and their nutritional care plan is reviewed. This is carried out more frequently if required. All patient assessments and measurements should be recorded in the patient's healthcare records.

The following are specific interventions that have been shown to reduce the risk of malnutrition in hospitalized patients.

## Food fortification

Food fortification is the practice of adding essential vitamins and minerals (for instance iron, vitamin A, folic acid, iodine) to processed foods to improve their nutritional content.<sup>(55)</sup> A 2009 Cochrane review involving 62 studies of older patients confirmed that nutritional supplementation resulted in a small but consistent increase in weight.<sup>(121)</sup>

## Menus high in energy and protein

These are menus which have high levels of protein and energy (calories) in small amounts of food due to the foods and or food products used, which are high in fat and protein. Such menus have been shown in nutritional support studies to increase nutritional intake. Fortified meals and snacks combine increased energy and nutrient density with smaller or normal food portion sizes.<sup>(55;122;123)</sup>

## Oral nutritional supplements

Oral nutritional supplements are a type of nutritional supplement which can be offered as a drink to supplement a person's diet. They include yogurt-, milk- and juice-based drinks. Others include dessert-type supplements or powders that are made up into a drink.

They can be used between meals but not to replace them. They are available in a range of flavours and some can be mixed through foods. Some supplements can be enhanced with fibre or be aimed at assisting with recovery from specific diseases.

Trials have shown that oral nutritional supplements improve health outcomes and can reduce hospital costs when used by patients following their surgery.<sup>(40;55;89)</sup> Best practice suggests that they should not replace meals, but should be consumed between meals and not within the hour preceding a meal or sleep. Oral nutritional supplements should be stored and provided to patients at an appropriate temperature.<sup>(124)</sup> Reviews have indicated that oral nutritional supplements significantly reduce hospital readmissions, particularly in older patient groups.<sup>(125)</sup>

## Specialised nutritional support and or artificial nutrition

While the principle of 'food first' is emphasised in guidelines and in the medical literature, artificial nutrition is sometimes needed in those who cannot eat or absorb enough to maintain an adequate nutritional state, and in cases of critical illness.

According to guidelines issued by the American Society of Enteral and Parenteral Nutrition (ASPEN), patients who are either unable or expected to be unable to take sufficient oral nutrition for 7–14 days are candidates for artificial nutrition.<sup>(126)</sup> It is important to weigh up whether the benefits are greater than the associated risks for the patient. The two forms of artificial nutrition are enteral nutrition<sup>††††††</sup> (used if the gastrointestinal tract is functional) and parenteral nutrition<sup>†††††††</sup> (used if the gastrointestinal tract is not functional or cannot be accessed).

## Hydration

Water is essential for the body's metabolism and the production of energy. Good hydration is essential for the prevention and treatment of a number of conditions.

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<sup>††††††</sup> Enteral feeding refers to the delivery of a nutritionally complete feed, containing protein, carbohydrate, fat, water, minerals and vitamins, directly into the stomach, duodenum or jejunum.  
<sup>†††††††</sup> Nutrients provided intravenously either into a large central vein or a peripheral vein.

Fresh water should be available to ward patients throughout the day. Water should be within reach and drinks should be offered to patients (who are not on a fluid-restriction regime) with or after meals. There should also be regular prompting to drink the water. However, too much water during mealtimes could potentially reduce food intake.<sup>(99;127)</sup>

## **Consistency and or texture-modified menus**

Texture-modified menus have foods with a softer and more palatable texture, or fluids with varying degrees of thickness. They can be offered to patients with chewing or swallowing difficulties. The texture and thickness of foods and fluids will be tailored to meet the needs of the patients. The Irish Nutrition and Dietetic Institute and the Irish Association of Speech and Language Therapists developed a national consensus document describing 'Irish Consistency Descriptors for Modified Foods and Fluids'. Research indicates that liquid and texture-modified menus can be nutritionally inadequate and should not be used over a prolonged period of time.<sup>(128)</sup>

## **Novel hospital food services**

Patients with dementia or parkinsonism can have difficulty with fine motor skills and the use of cutlery. Parkinsonism refers to any condition that involves the types of movement problems seen in Parkinson's disease. These problems include tremors, slow movement, and stiffness of the arms and legs.<sup>(129)</sup> Novel food service ideas such as finger foods (foods that can be eaten easily by hand) are ideal for patients who have problems grasping cutlery or for patients with dementia. Finger-food menus can make food intake easier as it requires less coordination and promotes independent eating.<sup>(130)</sup>

Picture menus are also beneficial for patients with communication issues including language barriers, literacy difficulties and cognitive disorders. Such patients, who might not be able to read or interpret words, could use images to understand menu choice.

## **Discharge and follow-up monitoring**

Follow-up monitoring of nutritional status is an important part of the hospital recovery process. Depending on the degree of nutritional risk, food and drink intake should be recorded, while nutritional risk score and weight should also be monitored. More than 5% loss of body weight — or an energy intake of less than three out of

four of what a person needs — is indicative of nutritional treatment failure.<sup>(131)</sup> Even patients who were not originally considered nutritionally at risk should be evaluated following hospital treatment, to help measure their level of recovery. A record of each patient's nutritional status should be included in patients' discharge or transfer notes or letters in order to help with the patient's continued recovery in the community.<sup>(2)</sup>

## **Measuring performance and the quality of nutritional care**

One way of promoting improvement in health is the use of key performance indicators (KPIs) to enable healthcare providers to have reliable information on current and desired standards in healthcare services. KPIs are used to identify good performance which is meeting desired standards, and where performance needs to improve.<sup>(12)</sup>

KPIs support accountability by helping to compare the performance of different organizations. KPIs are specific and measurable elements of healthcare and can be used to assess the quality of care. They are measures of performance, based on standards determined through evidence-based academic literature or through the expert consensus, when evidence is unavailable.

These indicators involve collecting data to see if a service is meeting desired targets and depend on good quality information. Such information can only be achieved by having a systematic process to ensure that data is collected consistently, both within, and across organizations.

BAPEN included Irish hospitals in part of its four-year UK survey in 2010 and 2011.<sup>(23:32)</sup> This allowed for direct comparisons to be made between Irish and British hospitals in relation to standards of nutritional care and the prevalence of malnutrition. Having such data is very important for hospitals as it enables them to gauge their performance and benchmark themselves against international performance.

More precise data on the frequency of malnutrition in Irish acute hospitals will allow researchers and economists to more accurately determine the cost to the Irish economy arising from malnutrition. Current estimates are based on British data.<sup>(22)</sup> Inclusion of comparable nutrition and hydration indicators within local and national performance monitoring can be used to measure and track performance of the hospital system in delivering nutritional and hydration care.

Care should be taken to ensure that recorded incidents of malnutrition are classified correctly to allow service providers to track incidents and observe for any developing trends.

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## **Appendix 3 — List of 42 hospitals that received a self-assessment tool**

1. Bantry General Hospital
2. Beaumont Hospital
3. Cappagh National Orthopaedic Hospital
4. Cavan General Hospital
5. Connolly Hospital
6. Croom Hospital
7. Cork University Hospital
8. Ennis Hospital
9. Kerry General Hospital
10. Kilcreene Regional Orthopaedic Hospital, Kilkenny
11. Letterkenny General Hospital
12. Louth County Hospital
13. Mallow General Hospital
14. Mater Misericordiae University Hospital
15. Mayo General Hospital
16. Mercy University Hospital
17. Monaghan General Hospital
18. Midland Regional Hospital Mullingar
19. Midland Regional Hospital, Portlaoise
20. Midland Regional Hospital Tullamore
21. Naas General Hospital
22. Nenagh Hospital
23. Our Lady of Lourdes Hospital Drogheda
24. Our Lady's Hospital Navan
25. Portiuncula Hospital
26. Royal Victoria Eye and Ear Hospital
27. Roscommon County Hospital
28. South Infirmary Victoria University Hospital
29. Sligo Regional Hospital
30. South Tipperary General Hospital
31. St Columcille's Hospital
32. St James's Hospital
33. St John's Hospital
34. St Luke's Hospital Kilkenny
35. St Luke's Radiation Oncology Network
36. St Michael's Hospital
37. St Vincent's University Hospital
38. Tallaght Hospital
39. University Hospital Galway
40. University Hospital Limerick, Dooradoyle
41. University Hospital Waterford
42. Wexford General Hospital

## Appendix 4 — Examples of nutrition and hydration care audits and or key performance indicators

- Whether patients' heights, weights and malnutrition risk screening score (MUST) score were completed and recorded on admission.
- The patient's diet information is recorded on the nursing assessment admission document, dated and signed by the staff member.
- Is there written documentation by a nurse regarding nutritional support?
- Where the patient required nutritional support and intervention, is there documented evidence of weekly weight recordings?
- Is there documented evidence of liaison or referral with nutritional specialists (dietitians) on the patient information system in a patient requiring specialized nutritional support?
- If a patient is unable to swallow safely, is there documented evidence to communicate this to staff involved in the patient's care?
- Where dietary monitoring is recommended, is there documented evidence of monitoring for past 48 hours?
- For patients unable to intake oral food or fluids, is there documented evidence of mouth care for past 48 hours?
- Is there evidence of a recorded weight in kilograms (or estimated weight in kilos) within 24 hours of hospital admission?
- The outpatient waiting time for dietitians to see newly diagnosed patients with chronic kidney disease.
- The number of patients on parenteral feeding seen on the same day of referral to the dietitian.
- The number of inpatients referred for dietetic assessment and advice but discharged without being seen.
- The outpatient waiting time for new nutritional support patients.





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For further information please contact:

Health Information and Quality Authority  
Dublin Regional Office  
George's Court  
George's Lane  
Smithfield  
Dublin 7

Phone: +353 (0) 1 814 7400

URL: [www.hiqa.ie](http://www.hiqa.ie)

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