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INTRODUCTION PART TO THE ESPEN GUIDELINES ON ENTERAL NUTRITION

Managing the Patient Journey through Enteral Nutritional Care

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Summary Nutritional support provision does not happen by accident. Clinical dimensions include screening and assessment, estimation of requirements, identification of a feeding route and the subsequent need for monitoring.

Patients may need different forms of nutritional intervention during the course of their illness. Furthermore, these may need to be provided in different locations as their clinical status changes. If this is not properly managed there is potential for inappropriate treatment to be given. Clinical processes can only be effectively implemented if there is a robust infrastructure. The clinical team need to understand the different elements involved in effective service provision and this depends on bringing together disciplines which do not feature overtly on the clinical agenda including catering, finance and senior management.

Excellent communication skills at all levels, financial awareness and insight into how other departments function are fundamental to success. Practice needs to be reviewed constantly and creativity about all aspects of service delivery is essential. Finally, it is important that key stakeholders are identified and involved so that they can support any successes and developments. This will raise awareness of the benefits of nutritional intervention and help to ensure that the right resources are available when they are needed.

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Introduction

Nutritional care is a concept which includes several different aspects and these must be managed in a seamless way to ensure that the right patients receive the right nutritional support at the right time and in the right place. This does not happen by accident, and success depends on careful management supported by an effective infrastructure. The key elements contributing to this are:

- Implementing basic routines for nutritional care.
- Identifying patients' nutritional needs.
- Providing individualised nutritional care when appropriate.
- Making the most of hospital food.
- Choosing the right products.
- Multi-professional working.
- Communication and documentation.
- Organisation and logistics.
- Financial management.
- Education.
- Training.

Implementing basic routines for nutritional care

Guidelines for nutritional screening, support, care and documentation should be implemented in every department and ward. Continuous training programmes must be in place to support this and a regular audit programme will identify any shortfalls which should be addressed.

Identifying patients' nutritional needs

Nutritional depletion and the risk of further deterioration are frequently either unrecognised or ascribed to the disease state and this is not a new situation.[1–3] Nutritional screening is the first step in the more complex nutritional assessment process and to avoid unnecessary depletion all patients should be screened to identify potential nutritional risk. Ideally, this should be started in the community setting[4] and then repeated on admission to hospital. A variety of simple screening tools are available which, with minimal training, can be effectively used by any healthcare staff, the NRS (2002) and MUST tools being two widely used examples.[5–13]

The methodology underpinning many of these has been evaluated.[14] There are some fundamental requirements when nutritionally screening patients which include:

- The result of the screening must be clearly recorded in the patient's casenotes.
- In the case of existing or pending nutritional risk, an action plan must be identified which must include clear direction about individual professional responsibilities, e.g. refer on to the dietitian for full nutritional assessment.
- The screening process should be repeated every 1–2 weeks to monitor the benefits of nutritional intervention/prevent any deterioration.
- Information provision for the patient and/or relatives.
- Nutritional information should form an integral part of any discharge arrangements when the patient is transferred back into the community. The potential need for re-assessment should be highlighted when appropriate.

Providing individualised nutritional care when appropriate

It is fundamental that nutritional care is based on each patient's individual nutritional requirements and preferences. Any patient who is undernourished or at risk of undernutrition should have a nutritional care plan. Each proposed action or intervention should be planned and documented in the nutritional care plan, in the same way as any other part of the medical and nursing treatment is documented.

Making the most of hospital food

There is widespread evidence of undernutrition among hospital patients[3,15–19] and many attempts have been made to redress this.[20–26] In some cases, national governments are supporting initiatives to ensure that proactive nutritional management is embedded within the clinical care agenda.[27–30] The Council of Europe has also passed a resolution in this context.[31] This paper covers all aspects of nutritional care provision and makes important recommendations about nutritional screening, food service and nutritional support provision, staff roles in nutritional care, communication and health economics. It emphasises the need for patient involvement at all times as well as the importance of education for healthcare professionals and the general public. Furthermore the resolution states that:

- Access to a safe and healthy variety of food is a fundamental human right.

- Proper food service and nutritional care in hospitals can have beneficial effects on patients' recovery and quality of life.
- There are an unacceptable number of undernourished patients in hospitals throughout Europe.
- Undernutrition among hospital patients leads to extended hospital stays, prolonged rehabilitation, diminished quality of life and unnecessary healthcare costs.

Despite all this, progress is slow and, because of the ethical and resource implications as well as the necessarily long timescales, there is limited evidence of the direct and immediate benefits of proactively feeding patients in hospital. However, common sense dictates that food is fundamental to life. Conversely, lack of food/nutrition predisposes to unfavourable clinical outcomes including increased dependency and morbidity, higher drug costs, greater use of high technological interventions and prolonged lengths of stay in hospital.[32–35]

There are many ways in which patients can be fed using the gut (Fig. 1) but normal food should always be the first option, provided that individual nutritional requirements can be met in this way. The Council of Europe Resolution on Food and Nutritional Care in Hospitals states, "*Ordinary food by the oral route should be the first choice to correct or prevent undernutrition in patients. Sip feedings should not be used as a substitute for the adequate provision of ordinary food, and should only be used where there are clear clinical indications*".[31] Hospital catering services are an essential component of nutritional care and should be flexible and responsive to patient needs. Many disciplines are involved and everyone needs to be clear about their role in the complex chain of food provision (Fig. 2). Close liaison between clinical and catering staff is vital if patients are to receive what they need, when they need it and in a form in which they can eat it.[36–38] This needs to be closely monitored and appropriately funded.[39–41] Furthermore, if external catering contractors are used, expert advice is needed to ensure that the nutritional status of all hospital patients is protected.

Arrangements at ward level will vary according to local circumstances and there is some evidence supporting the benefits of nutrition assistants/coordinators[22,42] and dedicated nutrition units with an attached kitchen[22] as well as simpler approaches including protected mealtimes (when wards are closed to all staff with the exception of those involved in meals provision), 24 h availability of food and the introduction of between-meal snack trolleys.[27,29] Additionally, the eating environment and the way in which meals are served have shown to be important in stimulating appetite and food intake.[43–45]

Choosing the right products

There will be occasions when food alone is insufficient to meet individual nutritional requirements

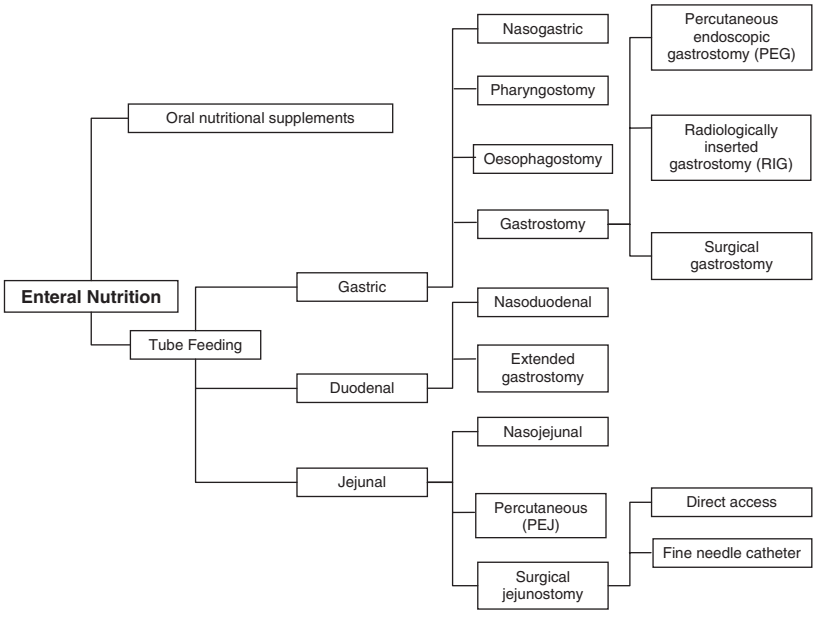

Figure 1 Enteral feeding routes.

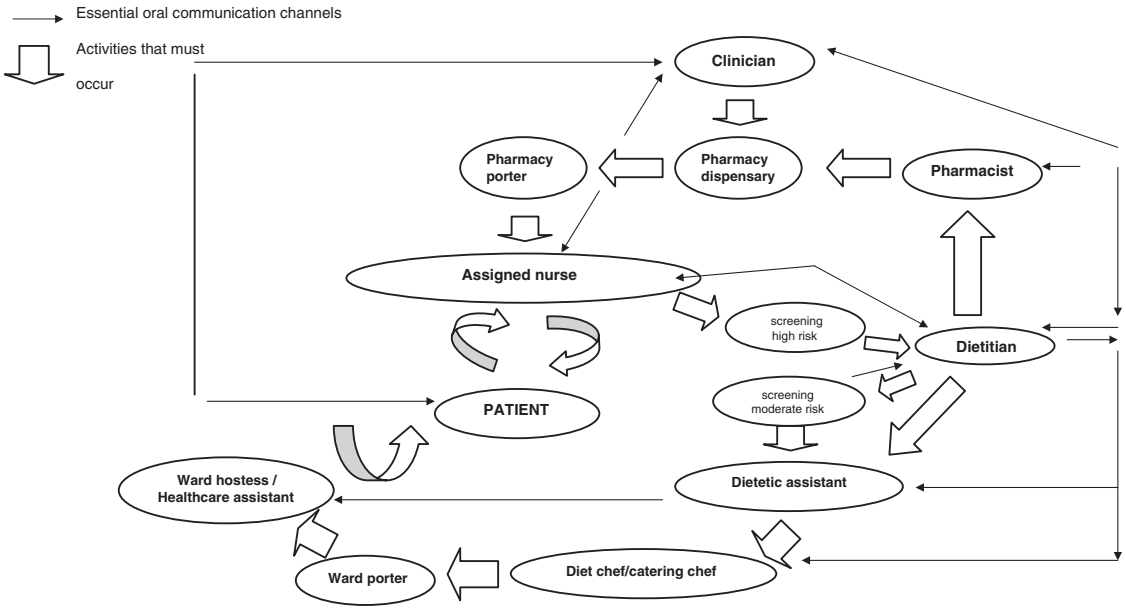

Figure 2 The nutrition chain. The authors wish to acknowledge M. Page (Concept Nutrition).

and alternative feeding methods must be considered. A range of access routes is available and, similarly, there are many different products which can be used.

Product selection

Oral nutritional supplements (ONS) and tube feeding (TF)-formulae are being constantly developed and these need to be carefully evaluated in respect of individual patient needs and preferences. It is important to recognise that neither the cheapest nor the most expensive formulae are necessarily the best. Multi-professional involvement is mandatory and should be as inclusive as possible and practicable and it may be prudent to involve community as well as hospital staff particularly if home enteral TF is anticipated.[46] Additionally, the benefits of appropriate patient/carer representation are increasingly being recognised.[47] In all instances, on-going (re-) assessment and evaluation of products is essential in response to changing clinical situations.

Product efficacy

Product efficacy is the nutritional response of a specific nutrient/product in a dose-dependent manner. It is central to the selection of appropriate ONS and TF-formulae:

- The need/justification for selective nutritional profiles, e.g., peptide-based and disease specific formulae.[48]
- The incorporation of fibre in 'standard' feeds.
- The ideal energy/nitrogen ratios—and for which patients?

All these need to be carefully reviewed in the context of published clinical trials and reports, local clinical experience and an understanding of current patient needs as well as any anticipated service developments.

Product effectiveness

Product effectiveness is the provision of clinically relevant products in a way that will optimise intake and compliance and therefore outcome. Effectiveness is a measure of outcome which might be correlated with an economic input in the context of pharmaco-economic investigations. Considerations should include formula range (pack sizes, flavours, concentrations, etc.), taste, associated equipment requirements and safety. It is also important to identify individual nutritional goals so that essential ad hoc purchases from different contractors can be justified.

Product efficiency

Product efficiency relates to the availability and quality of the product during use. It can be linked to contractual arrangements and quality assurance. The procurement and supply of TF-formulae and equipment is a complex and time-consuming undertaking which is managed in different ways throughout

Europe. Some guidance is available which may be helpful in identifying many of the issues which should be considered.[49] In particular, these include the key people who should be involved in specifying the contract as well as identification of the component items which should be considered for inclusion in the contract specification.

Multi-professional working

This is fundamental, and team working is equally important at all stages throughout the patient journey (Fig. 3). Although the concept of a clinical nutritional support team (NST) is now well recognised, these do not always exist in practice. In essence the key roles are:

- *Physician/surgeon*: Diagnosis and clinical management of the underlying condition including the responsibility for integrating appropriate nutritional support.
- *Nurse*: Care of the patient relating to the intended administration of nutritional support.
- *Dietitian*: Assessment of nutritional requirements and identification of appropriate nutritional options.
- *Pharmacist*: Provision of and information about appropriate nutritional formulations and their correct handling including the co-administration of medication.

The need for on-going monitoring and evaluation is inherent to each to these roles.

Furthermore, the successful organisation of nutritional care depends heavily on other key professionals who may not be members of the NST. These may include the catering manager as well as representatives from the hospital management team, supplies and finance (Fig. 4). The way in which each discipline is involved will vary at each stage according to specific expertise, and local policies and procedures. Failure to consult or include these key players could result in unnecessary difficulties. Further avoidable complications can arise if roles, responsibilities and individual agendas are not clearly identified.

Translating concepts into reality does not happen by accident and effective team working takes time and effort to develop.[50–52] A successful team can be characterised by its

- Patient-centred approach.
- Commitment to nutritional support using evidence based practice.
- Consistency of practice based on well-researched procedures and protocols.
- Attention to recording and monitoring progress and outcomes.
- Communication that is consistent, clear and unambiguous, recorded on a timely basis, complete and constructive (see below).
- Ability to maximise the individual attributes of each team member thereby enabling team goals to be achieved.
- Collaborative approach at all levels ranging from between individual ward staff to liaising with other clinical teams.
- Creativity in providing a service which is flexible and responsive to both clinical and organisational change. This is achieved by continually monitoring and reviewing the way in which the service is provided in the context of the demands placed upon it.

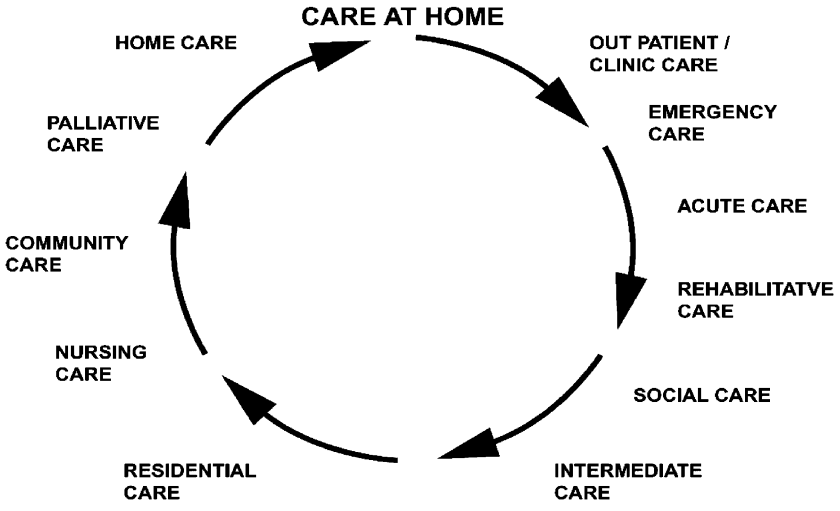

Figure 3 Managing the patient journey through enteral nutrition.

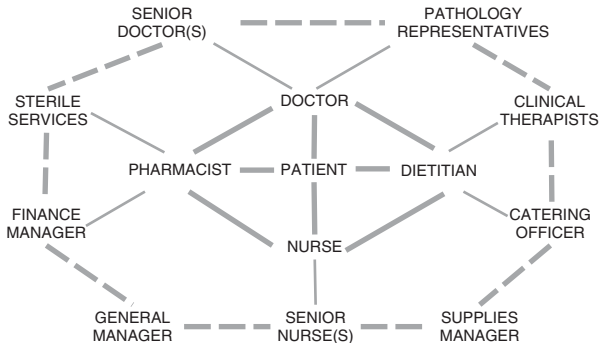

Figure 4 Who manages the patient journey through enteral nutrition?

- A corporate and mutually accepted/agreed culture for adverse incident/error reporting to optimise the safety and effectiveness of nutritional support.

Communication

This has to be at the centre of care delivery simply because so many people are involved in what can be a very complex process. Patients (together with their relatives/carers) may move through a range of nutritional interventions provided in a variety of ward settings which are managed by different clinical teams before being discharged back into the community. Assumptions can be made, verbal messages can be misinterpreted or forgotten and mistakes can result at any stage during the patient journey. Prescribed nutritional support is an integral part of clinical care and any intervention should be documented and monitored as carefully as instructions about medications or clinical procedures. This is particularly important when more than one healthcare professional is able to prescribe nutritional support for an individual patient. At every point of interchange between different care providers, a check back to the initial intention/prescription and subsequent understanding of the prescribed nutritional support must be undertaken.

Managing these risks is very simple but is often overlooked:

- Make sure you know what your responsibilities are in respect of written and verbal communication.
- Never rely just on a verbal message when:
  - a change in nutritional treatment or care is proposed,
  - important nutritional information about the patient has to be shared, e.g., nutrient/energy intake,
  - other departments/agencies are involved.
- Write any instructions in an agreed and appropriate place where they will be read by the person for whom they are intended.
- Involve the patient in the management of their nutritional care whenever possible by providing adequate information and explanation.
- Make sure your contact details are known in the event of any queries and that your signature is legible.
- Ensure that no unnecessary information is collected and that everyone knows how to record the data which has been agreed to be essential.
- Remember that the clinical record is a legal document and "If it is not written down, it did not happen."

Clinical communication about enteral nutrition (EN) can often be simplified by using a few well-designed forms. However, these must be monitored to ensure that nutrition care plans are put into action and followed up.

Communication between individuals, too, needs to be clear and consistent. This can be helped by following some agreed ground rules.[53]

Organisation and logistics

Patients rarely seem to stay in one place, for a variety of very good reasons. Continuity of care is often taken for granted but this can be extremely difficult to ensure. Another aspect of nutritional support provision that is often overlooked (until it is too late) is the need to have the right supplies in the right place at the right time. This involves a lot of organisation which has to be in place on a timely basis and includes aspects such as appropriate ordering mechanisms, stock rotation and arrangements for obtaining help and support should there be a problem. If a patient is to be discharged back

into the community on home enteral nutrition (HEN), then the planning process must be started as soon as this is known and a written protocol or checklist is very helpful. Again, the importance of effective two-way communication cannot be over-emphasised as the patient moves between different care providers. Experience has shown that the identification of a co-ordinator is invaluable in facilitating these complex arrangements. Another important point to remember is that patients should be regularly re-assessed to establish whether EN continues to be necessary and robust organisational arrangements need to be in place to ensure a smooth transition to the new arrangements for nutritional provision and monitoring. Regular audit of these processes is extremely helpful in making sure that any problem areas are highlighted and addressed on a timely basis.

Financial management

Nutritional support, includes the provision of:

- Essential nutrients to meet the fundamental requirements of the body.
- Nutritional components with biochemical and pharmacological properties which modify body disturbances and/or functions.

Nutritional support, therefore constitutes an important part of clinical care and treatment.

EN covers a spectrum of interventions and generates many different costs which may be charged in a number of ways and arrangements between countries vary significantly. Regular hospital food, e.g., may be costed against a catering budget while ONS and TF-formulae may be ascribed to the pharmacy budget or the catering budget. TF equipment (including feeding pumps) are sometimes charged to individual wards or clinical departments—but may be also paid for by support service departments such as Sterile Services or Medical Engineering. In some instances, the entire nutritional service may be provided by one or more external agencies/contractors. The more steps there are in the process, the greater is the likelihood that something can (and probably will) go wrong. Furthermore, if there are complex financial arrangements, economies of scale leading to cheaper purchasing agreements may not be realised. Therefore, a successful nutrition service will have a transparent and simple financial system which is easily monitored and which is flexible in response to changing needs. In addition, the input costs have to be counterbalanced with the outcome data available throughout the world on nutritional processes and treatments, i.e., cost benefits. The support of an informed accountant can be invaluable, particularly if patients are going to be transferred on to home feeding regimens. European contracting arrangements can complicate the situation further if the total value of the contract exceeds an identified amount and expert advice is essential if the identified needs of the patients are to be met in the best way.

Information about activity as well as about costs (and access to good information management systems) is fundamental to prudent financial management and this is often forgotten. Any service ought to be able to identify key expenditure under a number of headings, i.e., equipment (separating pumps from both delivery equipment such as feeding tubes and ancillary devices such as syringes) and formulae. Many centres will also be interested to know the relative spends on children and adults and/or the comparative costs of different specialities. There are many other such variables. Additionally, being able to "track" patients is a useful facility so that complications and readmissions can be included within the longer term costing processes as well providing an insight into current trends which could predict future changes in service provision. This monitoring would be facilitated if the logistics of nutritional support provision could be patient-individualised and formally recorded/registered by an identified member of the NST, usually the pharmacist or the dietitian.

A final point about documentation that should not be overlooked is the need to feed into any national databases. Several exist already e.g. The British Artificial Nutrition Survey[54] has already proved its worth in determining trends in EN which, in turn, are informing future service developments and the potential need for funding to be allocated. If such developments can be agreed nationally then management at local level will be greatly simplified although duplication of data input should always be avoided. A bench-marking process will also enable the quality and cost-effectiveness of a local service to be assessed.

Education

Physicians and nurses as well as other staff should receive education in clinical nutrition on a continuing basis. The Council of Europe Resolution[31] makes several recommendations in this respect including the need for undergraduate as well as post graduate

programmes. Furthermore, the importance of educating non-clinical staff, e.g., catering managers, dietetic/nutrition assistants and ward staff involved in food service is emphasised.

Training

Consistent and safe practice is fundamental if patients are to have confidence in the system that is supporting them. This means that, not only must all hospital staff be familiar with the local range of enteral feeding practices, but so also must any community based staff who are involved in looking after the patient once they have been discharged from hospital. Training protocols for TF need to include the following aspects as a minimum:

- Use of equipment including feeding pumps and the feeding process safely.
- Handling equipment safely.
- How to obtain supplies and manage them safely.
- How to recognise and deal with the complications of TF.
- Who to contact in the event of a problem (with the provision of a contact telephone number).
- Basic nursing care, e.g., change of dressing if the patient has a gastrostomy.
- Checklists to enable a home-based nutritional programme to be organised, managed and delivered safely and successfully.

A final point to bear in mind is that, although patients may be clinically stable when they are discharged, the practicalities of HEN/HPN regimens are such that hospital generated prescriptions often have to be changed to fit into a patient's lifestyle and to ensure compliance.

Summary

Nutritional care is a fundamental component of clinical treatment and care. Optimising quality of life while concurrently meeting individual nutritional needs has to be the endpoint for patients receiving any form of nutritional care. This can only be achieved by following best practice[55] and adopting an integrated and multi-professional approach to enteral nutritional throughout the patient journey.[56] This in turn will be more successful if hospital/healthcare management is involved in the development and can share the ownership of such a strategy.

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Glossary

Nutritional care: is used, for this chapter only, to cover normal and fortified food, oral nutritional supplements (ONS) and tube feeding (TF) in its entirety
Enteral nutrition (EN): ONS and TF
Nutritional support: EN, parenteral nutrition and food fortification
Normal food: normal diet as offered by the catering system of a hospital including special diets, e.g. gluten-free, lactose-free
Fortified food: normal food enriched with specific nutrients
Formula: any feed/ formulation that is used for EN