



BRITISH PHARMACEUTICAL
NUTRITION GROUP



BPNG

Competency Framework for
Specialist Nutrition Pharmacists

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INTRODUCTION

The BPNG was established in 1988 as a pharmaceutical specialist interest group in clinical and technical aspects of pharmaceutical nutrition. This group has provided peer support and educational activities for pharmacy staff with an interest in nutrition for over 20 years. The BPNG was a founder group of BAPEN (The British Association for Parenteral and Enteral Nutrition).

PURPOSE OF THIS DOCUMENT

The purpose of this framework is to promote enhanced delivery of safe and effective care in clinical nutrition through:

- Formal recognition of those pharmacists who have demonstrated knowledge and competence at the required standards
- Encouragement of continuing professional development in the area of clinical nutrition support
- Continued efforts to establish, review and measure the level of knowledge and competence required for specialist practice, advanced level practice and consultant level practice.
- Provide a standard for the minimum knowledge deemed appropriate for pharmacists practicing nutrition support; thereby assisting the employer, public, and health care professionals in the assessment of nutrition support pharmacists.

In summary, this document aims to:

- Ensure the quality of care of NHS patients
- Support professional development
- Clarify expectations of level of practice
 - General level
 - Advanced specialists
 - Consultants
- Assess fitness for practice
- Promote clinical nutrition as an established specialty within pharmacy practice

Several other specialist groups have developed competency frameworks for advanced level practice within the relevant area of clinical practice. The frameworks developed by BOPA ⁽⁴⁾ and the Critical Care Group of the UKCPA ⁽⁵⁾ were used as templates.

WHO WILL USE THIS FRAMEWORK?

This framework is intended for pharmacists who provide a specialist service within the area of nutrition support. It is likely that these pharmacists will be part of a multidisciplinary nutrition team and may also be non-medical prescribers.

It is recommended that pharmacists have at least two years of experience of both clinical and technical nutrition support in addition to demonstrated competence within the general level framework before practising nutrition support unsupervised.

KEY FACTS ABOUT THIS COMPETENCY FRAMEWORK

The elements of advanced pharmacy practice are adapted from the work by CoDEG as the accepted evidence based reference ^(1,2).

Recommendations are made for practice at foundation, excellence and mastery level. These components are additive.

Foundation level practice is that level of practice that would be expected of a pharmacist working as a specialist clinical pharmacist (Agenda for change band 7 or equivalent).

It is expected that an advanced pharmacist practitioner (Agenda for change band 8A or equivalent) would be working at excellence level (at least) at five of the six elements.

A consultant level practitioner (Agenda for change band 8B or above or equivalent) is expected to work at mastery level in 'Expert Professional Practice', 'Building working relationships' and 'Leadership'. All other elements should be at excellence level at least. This level of practice is consistent with the requirements within the critical care framework.

The Core knowledge areas are adapted from the American Board of Pharmaceutical Specialties syllabus for the Nutrition Support Pharmacy Speciality Certification Examination ⁽³⁾

METHOD OF ASSESSMENT

A combination of assessment techniques may be used to demonstrate the level of practice achieved by an individual, for example:

- Self assessment
- Practice portfolio
- Peer review

PROPOSED CAREER PATHWAYS IN NUTRITION SUPPORT PHARMACY – PART 1

	Pre-registration Pharmacist	Clinical Pharmacist Or Post-registration Pharmacist	Specialist Clinical Pharmacist (Foundation)	Advanced Clinical Pharmacist (Excellence)	Consultant Pharmacist (Mastery)
Core duties, responsibilities or experience expected of the postholder	<p>To gain broad experience across various sectors of pharmacy (Hospital, Community, Industry)</p> <p>Gain insight into the provision of Artificial Nutrition Support (ANS) and the roles of the pharmacist</p>	<p>Basic Clinical Service to a variety of specialities, including general medicine and surgery</p> <p>Broad experience in relevant hospital pharmacy disciplines including aseptics, dispensary and medicines information</p> <p>Supervised experience in the provision of Artificial Nutrition Support (ANS) and the roles of the pharmacist</p>	<p>Able to provide a clinical service to uncomplicated inpatients requiring Artificial Nutrition Support (ANS)</p> <p>Contribute to care of more complicated patients</p> <p>Able to identify patients requiring ANS or associated management and seek help when appropriate</p> <p>Service development</p> <p>Clinical audit</p> <p>Competent to initiate and oversee the preparation of appropriate nutrition admixtures</p>	<p>Involved in direct clinical management of complex patients requiring Artificial Nutrition Support (ANS) in both inpatient and outpatient setting</p> <p>Demonstrable lead role in protocol and guideline development</p> <p>Managed entry of new drugs and/or nutrition related products & devices</p> <p>Demonstrates multi-professional working</p> <p>Nutrition support expenditure analysis</p> <p>Leads clinical audit of nutrition products</p> <p>Input into risk management for nutrition support</p> <p>Able to apply quality standards to the preparation and administration of nutrition admixtures</p> <p>Engaged in education and training</p> <p>Undertakes research and development</p>	<p>Leads on medicines management in nutrition support</p> <p>Accountable for development, implementation & evaluation of pharmacy aspect of nutrition support service</p> <p>Accountable for job development and implementation</p> <p>Strategic lead for pharmacy aspect of nutrition service</p> <p>Accountable for safe drug use in ANS patients</p> <p>Risk management lead or link for pharmacy nutrition services</p> <p>Undertakes own research and development</p> <p>Service quality assessment and audit</p> <p>Published in peer reviewed journal</p>

PROPOSED CAREER PATHWAYS IN NUTRITION SUPPORT PHARMACY – PART 2

	Pre-registration Pharmacist	Clinical Pharmacist Or Post-registration Pharmacist	Specialist Clinical Pharmacist (Foundation)	Advanced Clinical Pharmacist (Excellence)	Consultant Pharmacist (Mastery)
Additional experiences that augment nutrition support pharmacy practice	Hospital Pharmacy Placement	On-call or out of hours experience	Technical services experience relevant to clinical nutrition Knowledge of nutrition associated device management e.g. parenteral or enteral access devices Fluid and electrolyte management	Experience of management of nutritional support in patients with multi-organ dysfunction syndrome Management of ANS associated complications HPN Knowledge of quality assurance issues	Recognised peer reviewer National reputation Auditing skills
Gateway 1	Masters in Pharmacy (or equivalent)	Assessed as competent to provide clinical service at a general level	Assessed as competent to provide clinical service to all general surgical and medical patients	Assessed as competent to provide a nutrition support service to moderately complex patients	Peer reviewed (by specialist group externally to the organisation or equivalent) as meeting minimum consultant pharmacist criteria
Gateway 2	Assessed as competent in all pharmacy sections Registration as pharmacist	Assessed as competent to practice in all areas of hospital pharmacy at a general level Completion of the ASCP Stage II vocational training scheme (Scotland only)	Assessed as competent to participate in a nutrition support service to moderately complex patients	Assessed as competent to provide advanced level nutrition service to all ANS patients	

ELEMENTS OF ADVANCED PHARMACY PRACTICE

The key competencies for advanced level practice fall within six distinct elements:

- Expert professional practice
- Building working relationships
- Leadership
- Management
- Education
- Training and Development
- Research and evaluation

Each of these elements are considered in turn with recommendations made for standards for excellence and mastery.

The framework development group indicate that:

A Specialist Clinical Pharmacist in Nutrition Support must have attained competencies at Foundation level.

An Advanced Clinical Pharmacist in Nutrition Support must have attained competencies at Excellence level.

A Consultant Pharmacist in Nutrition Support must have attained Mastery level competencies in “Expert Professional Practice”, “Building Working Relationships” and “Leadership”, and also have attained competencies to at least Excellence level in “Management”, “Education, Training and Development” and “Research and Evaluation”.

It is envisaged that all institutions that provide specialist artificial nutrition services will support specialist pharmacists to meet the competencies that have been identified as relevant to both the institution and to the nutrition support service.

It is important to note that these are examples and as such are not intended to be either prescriptive, or exhaustive.

1. EXPERT PROFESSIONAL PRACTICE

These are examples of Knowledge and Skills Competencies for practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence (in addition to Foundation)	Mastery (in addition to Excellence)
Expert Skills and Knowledge (See Appendix for core knowledge areas)	<p>Application of basic knowledge of principles of artificial nutrition support (ANS)</p> <p>Application of basic understanding of parenteral and enteral nutrition, monitoring and formulation.</p> <p>Experience of caring for patients on ANS</p>	<p>Application of advanced knowledge of parenteral and enteral nutrition</p> <p>Carries out teaching regarding ANS to pharmacy, nursing, medical staff and other allied healthcare professionals (AHPs)</p> <p>Application of quality standards to preparation and delivery of clinical nutrition</p>	<p>Able to identify knowledge gaps and add new knowledge</p> <p>Involved in research and leads research where appropriate</p> <p>Publications in peer review journals</p> <p>Initiation of research</p> <p>Able to conduct independent, objective, searching audit of services</p>
Patient care Responsibilities	<p>Demonstrates basic competency in delivering patient care to nutrition support patients through a record of reflective practice</p> <p>Ensure that appropriate patient documentation is maintained for specialist medicines management issues</p> <p>Responsible for reporting adverse incidents related to nutrition support</p>	Responsible for direct delivery of care to defined patient groups receiving ANS	Ensures strategic decisions are made and implemented to maintain the delivery of a patient focussed pharmacy service to patients requiring ANS

(1. EXPERT PROFESSIONAL PRACTICE CONTINUED)

Competency	Foundation	Excellence	Mastery
Reasoning and Judgement	<p>Basic ability to recognise problems and formulate treatment plans</p> <p>Monitored ward visits/mentorship</p> <p>Can perform bedside case presentation</p> <p>Ability to recommend justifiable courses of action</p> <p>Demonstrate accurate reasoning</p> <p>Recognises own limitations</p> <p>Able to make decisions in a timely manner with limited information</p> <p>Ability to prioritise problems</p>	<p>Produces increasingly complex treatment plans</p> <p>Demonstrates the ability to appraise information, make an informed decision with the evidence available and be able to justify/defend the decision to others</p> <p>Demonstrates ability to see situations holistically.</p>	<p>Act as an external reference of experience</p> <p>Demonstrates ability to make decisions in the absence of evidence or data or when there is conflicting evidence or data.</p>
Professional autonomy	<p>Demonstrates the ability to follow relevant national and trust guidance related to the provision of ANS</p>	<p>Develops policies and procedures relating to the provision of ANS</p> <p>May be involved in or undertake supplementary / independent prescribing in ANS</p>	<p>Responsible for the implementation of national guidelines to the trust e.g. NICE guidance, NPSA</p> <p>Leads in Trust wide issues related to ANS</p> <p>Works within trust wide multidisciplinary groups with respect to the pharmacy issues of ANS</p> <p>Involved in the production of regional/national/international guidelines where appropriate</p>

2. BUILDING WORKING RELATIONSHIPS

These are examples of Knowledge and Skills Competencies for Practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence	Mastery
Communication Skills -Persuade/ Influence	Ability to persuade others about individual episodes of care	Ability to persuade or influence the nutrition support team / pharmacy team /clinical team with regard to complex cases, organisational change, research, guidelines and protocols	Ability to persuade or influence the clinical team, organisational development strategy and course of action in extremely complex cases
-Motivate	Demonstrates self motivation	Motivates nutrition support team / pharmacy team /clinical team (e.g. follow a guideline, collect data, etc)	Motivates multidisciplinary nutrition and pharmacy team (at regional or national level)
-Negotiate	Negotiates issues around an individual case	Negotiates issues between nutrition team and pharmacy such as configuration of aseptic services provision Negotiates service provision with external providers e.g. homecare	Negotiates issues on a Trust-wide, regional or (inter)national basis
-Empathise / Provide reassurance	To nutrition support patients/next of kin in difficult settings Learning this in difficult situations	To junior staff and multidisciplinary team colleagues	To nutrition support staff at regional or national level
-Listen	Listens to patients, their next of kin, visitors and the multidisciplinary team (MDT)	Is aware of all forms of communication, interprets and responds appropriately.	Utilises all forms of communication, interprets and responds appropriately.
-Networking skills	Member of British Pharmaceutical Nutrition Group (BPNG) or other local/national group that provides appropriate level of clinical support.	Participating Member of BPNG or other local/national group Participates in local or regional group initiatives	Member of nutrition steering group or organisational equivalent Participates / leads (inter) national networks of nutrition support Participation in working groups/scoping groups for relevant organisations or initiatives

(2. BUILDING WORKING RELATIONSHIPS CONTINUED)

Competency	Foundation	Excellence	Mastery
-Presentation skills	Presents to pharmacy and the multidisciplinary team (MDT) Communication is always clear, precise and appropriate	Presents to senior MDT including consultant level	Presents at senior Trust level, regional and (inter) national forums and conferences
Teamwork	Works as part of pharmacy team and nutrition support team	Shares expertise with pharmacy and nutrition support team Recognition of expertise by the multidisciplinary team	Shares expertise with the wider nutrition support community Recognition of expertise by wider nutrition support community including homecare
Consultation	Recognises a situation outside competence and refers to supervising pharmacist (appropriate pharmaceutical problems are always appropriately referred.)	Receive requests for advice in specialist field from within Trust Active participation in multi-disciplinary task forces / service developments / discharge planning meetings	Receives requests outside the Trust Leads multi-disciplinary task forces / service developments

3. LEADERSHIP

These are examples of Knowledge and Skills Competencies for Practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence	Mastery
Strategic Context	Awareness of relevant local and national healthcare policy	Incorporate/contribute relevant information, including from national policy, into local policy for nutrition support.	Lead for pharmacy within nutrition steering group or equivalent Involved in drawing up national level guidelines or policy (e.g. peer review publication, BPNG or BAPEN guidelines, editorial comment)
Clinical Governance	Implements changes agreed by local clinical governance group and/or nutrition steering group. Ensures compliance with local policies	Contributes to local clinical governance group by raising and/or dealing with identified issues including those raised by the implementation of national guidance	Contributes to clinical governance agenda at regional or national level
Vision	Understands and contributes to department and corporate vision	Clear vision of nutrition support service Co-ordinates pharmacy's activities to meet vision	Participation in relevant national working groups e.g. BPNG, BAPEN Member of BPNG/BAPEN committee/steering group/working group
Innovation	Implements service improvement projects Requires limited supervision	Draws up and implements service improvement projects Co-ordinates and reports on relevant audit and research projects	Participation in relevant national working groups Co-ordinates and reports on regional or national audit projects Publication in peer reviewed journal

(3. LEADERSHIP CONTINUED)

Competency	Foundation	Excellence	Mastery
Service development	Meets objectives in light of previous years progress	Participates in planning cycles through nutrition support team and/or other departmental groups	Participates in planning cycles through nutrition steering group Makes goals relevant to organisation / profession
Motivational	Maintains appropriate portfolio of practice Participate in audits, completes audits Meets appraisal objectives	Completes projects with other members of the nutrition / pharmacy team	Completes projects that requires investment of time/effort of individuals at a higher level within Trust, regional, professional or governmental organisations

4. MANAGEMENT

These are examples of Knowledge and Skills Competencies for Practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence	Mastery
Implementing National Priorities	Can present likely implications of national priorities to pharmacy and nutrition team	Shapes pharmacy and nutrition teams activities to meet priorities Responsible for meeting priorities at local level	Advise local healthcare economy on the service specification to purchase Advise on implementation of current priorities for ANS at Trust wide and regional/national level
Resource Utilisation	Understands necessity for managing own time and conflicting priorities Awareness of service capacity issues.	Demonstrates the ability to deploy pharmacy resources available to an ANS service ensuring effective cover is provided. Such deployment should also demonstrate the mentorship and development of junior staff. Actively involved in developing capacity plans.	Capable of formulating changes to long term strategic plans in order to accommodate short term absences and staff departure / turnover and unforeseen influences on aseptic service provision. Advise at a regional/national level of issues affecting capacity. Crisis management and disaster recovery planning.
Standards of Practice	Understands and able to identify existing standards for practice related to nutrition support Demonstrates ability to work within the standards of practice	Demonstrates ability to produce standards of practice for pharmacy staff working nutrition support Implements and monitors through audit the standards of practice in place within Trust	Involvement in producing standards of practice for nutrition at regional and national level Implements and monitors through audit the standards of practice in place

(4. MANAGEMENT CONTINUED)

Competency	Foundation	Excellence	Mastery
Managing Risk	<p>Generates incident reports for breaches of policy/protocol</p> <p>Advises on appropriate course of action within policy/protocol or guidelines and working practices</p>	<p>Writes and implements appropriate policies/ protocols /guidelines /working practices to manage risk for nutrition support. Advises where policy does not exist or is perceived as inadequate for nutrition support scenario.</p> <p>Comments/takes action on incident reports relating to nutrition support.</p>	<p>Accountable for drug/ANS risk management in patients on ANS, wherever located</p> <p>Apply lessons learnt in ANS to other areas</p> <p>Represents nutrition aspects of pharmacy team on clinical governance/ risk management committees.</p>
Managing Performance	<p>Recognises need to achieve set objectives both personal and team.</p> <p>Supports others in achieving objectives.</p> <p>Undertakes relevant CPD</p>	<p>Sets pharmacists objectives in relation to ANS (may be jointly with Clinical and managerial staff)</p> <p>Performance appraises junior staff in order to develop competent practitioners</p>	<p>Responsible for interpreting/dealing with ANS service implications from performance targets set at strategic levels such as Trust board /Region (or equivalent)</p> <p>Advises on delivery options.</p> <p>Develops performance objectives for junior pharmacy staff working within ANS.</p> <p>Performance appraises more senior nutrition support pharmacists/other healthcare professionals.</p>
Project Management	<p>Shows understanding of project management principles.</p> <p>Able to carry out simple projects without guidance</p>	<p>Demonstrates ability to manage project work of the team working within ANS</p>	<p>Manage projects related to care of patients receiving nutrition support at higher level in Trust or wider area such as a network (or equivalent)</p>

(4. MANAGEMENT CONTINUED)

Competency	Foundation	Excellence	Mastery
Managing change	Understands basic principles of change management, describes differences between old and new processes and how transition will occur	Draws up and implements changes in process / policy/ procedure at a local level	Draws up and implements changes in process / policy/ procedure at a regional or national level
Strategic Planning	Assist with data collection to prepare routinely required reports such as PN expenditure reporting Reviews policies and procedures to agreed schedule	Horizon scans for new therapies or changes to existing therapies with major financial / clinical impacts. Participates in drawing up business cases for submission to Trust / PCT or equivalent	Contributes to planning for regional services (or equivalent). Advises external bodies on pharmaceutical aspects of long term planning (DH, Schools of Pharmacy).
Working Across Boundaries	Takes on new responsibilities / activities that expand the pharmacy service within nutrition support	Takes on responsibilities / activities that contribute to wider nutrition support services (e.g. outpatients) Undertakes peer review	Opinions / methods of working sought to contribute to or develop other teams / services

5. EDUCATION, TRAINING AND DEVELOPMENT

These are examples of Knowledge and Skills Competencies for Practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence	Mastery
Role Model	Role model to junior pharmacists, pharmacy technicians and peers	Role model at a local level Participate in peer review	Role model to Pharmacy/multidisciplinary team (MDT) Instigates peer review to ensure that standards are maintained Recognised as a peer reviewer of clinical practice within pharmacy and within nutrition support team
Mentorship	Mentor for junior pharmacists	Mentors junior nutrition support pharmacy staff (if available). Mentors rotational staff Pre-registration/post graduate tutor Role model for nutrition support pharmacy specialists	Mentors other MDT team members Mentors other pharmacists regionally or nationally
Conducting education & training Links practice and education	Teaches within Pharmacy and to nurses, AHPs and healthcare scientists (HCS).	Teaches to senior MDT, certificate, diploma MSc courses and BPNG, UKCPA or other national groups	Teaches at regional, national or international level to all disciplines and patients Able to direct educational initiatives
CPD (Continuing Professional Development)	Maintains CPD portfolio and evaluates own learning	Evaluates learning of others	Shapes /contributes to CPD strategy of others
Education Policy	This box is intentionally blank	Contributes to the development and delivery of teaching on nutrition support to (for example) diploma and other post-graduate students	Part of nutrition pharmacy faculty or equivalent. Leads direction of BPNG or other nationally recognised specialist group Designs and advises on nutrition support to under-graduate and post-graduate courses

6. RESEARCH AND EVALUATION

These are examples of Knowledge and Skills Competencies for Practice in Nutrition Support. Their purpose is to be used as an outline intended to guide practice rather than to be a proscriptive list that has to be adhered to in all cases.

Competency	Foundation	Excellence	Mastery
Critical Evaluation	Contributes to Local Journal Club (generalist forum) Answers general information enquiries relating to nutrition support	Contributes to specialist Journal Club (locally, regionally or nationally) Presents newly published papers to other members of the nutrition support team	Produces critical comments on peer reviewed publications that are published Peer reviews nutrition support pharmacists in other Trusts / Organisations
Identifies Gaps in The Evidence Base	Can give examples of evidence gaps	Draws up appropriate research questions. These may have been utilised by the nutrition support team to direct research efforts	Can design clinical trials that answer a specific research question
Develops and Evaluates Research Protocols	Can recognise and describe core features of a research protocol	Draws up a research protocol relating to nutrition support	Supervises production of and reviews protocols produced by other members of the nutrition support team / network
Creates Evidence	Performs audit and presents results locally	Undertakes audit at regional level or wider Undertakes primary research Submits work to peer reviewed national and international conferences	Identifies a research question in clinical practice and follows through to publication in a peer reviewed journal

(6. RESEARCH AND EVALUATION CONTINUED)

Competency	Foundation	Excellence	Mastery
Research Evidence into Practice	Can demonstrate how own practice has changed Performs CPD Maintains/actions personal development plan (PDP)	Member of clinical governance team Writes evidence based guidelines that are implemented within pharmacy or nutrition support team	Member of regional clinical governance team / working parties / service improvement groups Writes or co-writes evidence based guidelines that are implemented regionally/nationally Interprets research and translates into clinical practice
Supervises Others undertaking research	This box is intentionally blank	Supervises Audit projects by multidisciplinary team Supervises data collection by multidisciplinary team for established research projects	Supervises students undertaking post-graduate research
Establishes Research Partnerships	Involved in clinical trials at supply and clinical information level	Involved in clinical trials at planning / implementation level	Member of organising committee for multi-centre research studies

CORE CLINICAL AND TECHNICAL KNOWLEDGE FOR ADVANCED NUTRITION SUPPORT PHARMACISTS

These are examples of core clinical knowledge required for practice in nutrition support. These examples are not about non-medical prescribing or administration of medicines, which falls outside the scope of this document. Their purpose is to be used as an outline intended to guide practice rather than to be a prescriptive list that has to be adhered to in all cases.

These statements are intended to guide knowledge base for consultant level practice and therefore will be aspirational for those at excellence and foundation level.

General Knowledge Competencies for Specialist Nutrition Pharmacists

1. Anatomy and Physiology

- Understands the anatomy and physiology of the gastrointestinal tract
- Understands the disease processes affecting the gastrointestinal tract
- Able to describe the different medical treatments of gastrointestinal diseases
- Understands the anatomy, physiology and metabolism related to nutrition, and artificial nutrition support in particular
- Understands congenital diseases affecting metabolism and anatomy

2. Fluid Balance and Electrolytes

- Understands the distribution of fluids in the body
- Understands and monitors serum electrolytes, and can correct levels as necessary
- Able to advise on optimal fluid regimens for patients receiving ANS

3. Surgical Procedures

- Able to broadly describe the surgical management of gastrointestinal disease
- Understands the problems of drug therapy in the stoma patient
- Understands the nutritional management of peri-operative patients
- Understands the nutritional management of surgical short gut patients
- Understands the management of post intestinal transplant patients

4. Other

- Understands and refers to relevant local and national guidelines relating to nutrition support (e.g. NICE, BAPEN, BPNG statements, PENG handbook, ESPEN guide, ASPEN guidelines, ESPGHAN guidelines)

Patient assessment

- Able to apply appropriate screening methods to identify patients at risk of malnutrition
- Able to take a comprehensive nutritional history
- Able to identify medical and patient factors that may affect nutritional intake and/or requirements, and understands how these can be managed e.g. organ function
- Able to interpret biochemical and microbiological data
- Able to carry out a relevant physical examination e.g. signs of malnutrition, use of anthropometry, centile charts, assessment of vascular access
- Able to accurately assess fluid balance through use of patient monitoring, charts and physical signs and symptoms, including phototherapy and stoma losses
- Able to identify patients at risk of refeeding and be able to manage this appropriately
- Able to predict and manage the effect of previous or concurrent drug therapy on nutritional requirements and indices

Nutritional Requirements

- Able to describe and apply methods for estimating nutritional requirements
- Be able to describe the limitations of the various methods available to estimate nutritional requirements
- Knowledge of electrolyte requirements
- Knowledge of micronutrient requirements
- Knowledge of requirements for novel substrates and the evidence supporting their use
- Understanding of the effect of disease on nutritional requirements e.g. renal and liver disease
- Knowledge of nutritional balance e.g. calorie to nitrogen ratio
- Understand the need to maintain growth and development in neonatal and paediatric patients

Enteral Nutrition

- Understand the indications for enteral nutrition support
- Understands the contraindications to enteral nutrition support
- Able to describe the different feeding tubes and devices available and their place in therapy, including advantages, disadvantages, risks and complications
- Able to identify complications of enteral nutrition and their prevention and management
- Able to describe the types of enteral feed formulas available and their place in therapy
- Understands the evidence base for immunonutrition in enteral nutrition therapy
- Understands the weaning process from parenteral to enteral nutrition

Parenteral Nutrition

- Has wide knowledge of the different indications for parenteral nutrition
- Has in depth understanding of relevant disease states and clinical conditions that may be an indication for parenteral nutrition
- Has knowledge of the limitations and contraindications to parenteral nutrition.
- Is able to identify and offer advice on alternative methods of feeding e.g. enteral, which may be more suitable to the patient dependant on disease state.
- Has a core understanding of the basic constituents of parenteral nutrition and all other nutrient components that may be required e.g. nutraceuticals, electrolytes etc.
- Understands the different types of vascular access devices that are available for the administration of parenteral nutrition.
- Is able to monitor the use of the different vascular access devices and ensure that infection control guidelines are being adhered to.
- Locally, is able to liaise with appropriate medical staff for vascular access device insertion if needed.
- Is able to initiate, advance and discontinue parenteral nutrition prescriptions according to patient's nutritional requirements and changes in disease states.
- Can prescribe appropriate additions of electrolytes and other nutrient components as dictated by patient requirements.
- Has in depth knowledge of formulation and stability issues relating to parenteral nutrition prescription.
- Understands the effects of pharmacotherapy on nutrition support and vice versa.
- Is able to offer advice on the co-administration of adjuvant drugs to nutrition support.
- Has knowledge of parenteral nutrition related complications and methods to prevent and manage them e.g. metabolic, infectious, and mechanical

- Knowledge of formulations specifically designed for paediatric and neonatal patients

Monitoring

- Awareness and understanding of all monitoring recommendations made in NICE Clinical Guideline 32 “Nutrition Support in Adults”
- Awareness and understanding of the key differences between monitoring of short term and long term patients on ANS
- Understands the key electrolyte deficiencies / abnormalities that present in ANS patients and can describe their signs and symptoms, causes and management
- Awareness of the key serum proteins used as nutritional markers / to monitor nutritional progress and the limitations / advantages of measuring each
- Understands the relevance of deranged renal function tests in individual patients
- Understands the impact of renal failure on the components of ANS and is aware of strategies available to tailor these to an individual patient
- Understands the impact of haemofiltration/dialysis on ANS
- Understands the relevance of deranged liver function tests (LFTs) in individual patients
- Where ANS identified as cause of deranged LFTs, aware of strategies available to minimise impact of ANS on LFTs

Administration

- Able to advise on appropriate storage conditions, affects of temperature and light
- Understands the affect of venous access device on regimen composition
- Is able to advise on infusion pumps, in-line filters, administration sets and syringe drivers
- Able to advise on infusion rates, cyclical feeding and infusion rate ramping

Medication issues

- Understands effect of nutritional status on drug pharmacokinetics
- Able to identify and manage drug-nutrient interactions
- Able to recognise and manage specific drugs or nutrients that interfere with laboratory values or nutritional parameters
- Able to identify drugs that may have a detrimental or beneficial effect on nutritional intake

Technical aspects of PN

- Understanding of factors influencing physical stability of parenteral nutrition solutions
- Understanding of factors influencing chemical stability of parenteral nutrition solutions
- Understanding of factors influencing microbiological aspects of parenteral nutrition solutions
- Understanding of the issues relating to drug additions to parenteral nutrition
- Knowledge of the quality steps in the audit cycle for PN provision

Long-term and home parenteral nutrition

1. Organisation of HPN

- Understand the function of the nutrition support team within an acute trust
- Know the underpinning directives of high-tech homecare
- Understand the local funding mechanism for home parenteral nutrition, and alternative funding mechanisms that may be employed
- Have an understanding of the role of HIFNET and the different types of intestinal failure
- Knowledge of the processes of producing a prescription and any guidance on best practice.

2. Clinical Background

- Understand the different diagnoses that may cause long term intestinal failure
- Understand how the diagnosis may affect the parenteral nutrition prescription
- Knowledge of the British Artificial Survery (BANS) and the information audited.

3. Formulation

- Understand the main stability issues around long term storage and use of PN
- Understand the role of the specialist parenteral nutrition solutions, mechanisms of action (if relevant) and possible benefits, and if their use is appropriate for the long term patient.

- Understand how a formulation may be manipulated to lengthen the stability time
- Understand the pros and cons of using off the shelf bags for long term patients
- Understands the benefits and limitations of 2 in1 and 3 in 1 systems

4. Monitoring

- Knowledge of any local and national guidance of what should be monitored for long term PN patients
- Understanding of the limitations of the biochemical tests, U&Es, LFTs, trace elements and vitamins for these patients and how to appropriately interpret the results.
- Understand the role of anthropometrics, what is measured, how and the limitations
- Knowledge of an appropriate monitoring schedule
- Able to interpret haematinics
- Able to interpret microbiological data
- Understand the implications of gut adaptation

5. Complications and their Management

- Understand the common complications that can occur for long term and HPN patients
- Understand how HPN related liver disease occurs, what can be done to minimise the incidence and the different ways of managing the problem if it occurs.
- Understand how infectious complications (line, exit site and tunnel) occur, how the incidence can be minimised and how the problem should be managed.
- Understand the possible mechanisms for line occlusion, how it can be prevented and possible solutions to the problem.
- Understand the mechanism of metabolic bone disease related to HPN, how the problem can be minimised and how it can be treated if it occurs.
- Understand how the psychosocial aspects of the patient can affect the patients ability to self manage the treatment.

Medicines safety

- Knowledge of NPSA and other relevant safety alerts
- Understanding of safety issues relating to the use of Enteral devices and can apply strategies to minimise these e.g. connection issues
- Understanding safety issues relating to PN administration and application of strategies to minimise these e.g. ward based additions to PN solutions

Ethical and legal issues relating to nutrition support

- Knowledge of, and understands implications of relevant case law
- Able to describe all ethical arguments for and against nutritional support and apply them in practice
- Knowledge and understanding of the Mental Capacity Act 2005

Policy and process

- Knowledge of local and national policies relating to nutrition support
- Understanding and application of capacity planning to service provision (facilities and human resources)

References

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4. V.Adams, D.Blake, S.Corlett et al. BOPA (2004) Competency Framework for Specialist Oncology Pharmacists.
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