

Manual of  
Dietetic  
Practice

FIFTH EDITION

*Edited by* **Joan Gandy**



**BDA**

The Association  
of UK Dietitians

**WILEY** Blackwell





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# Manual of Dietetic Practice

*This book is dedicated to Edith Elliot (BDA member number 001)  
for her outstanding and continuing contribution to dietetics.*



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**Fifth Edition**

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In conjunction with

The British Dietetic Association

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The BDA Specialist Groups:

- Cardiovascular & Respiratory Dietitians.
- Diabetes Management & Education Group.
- Dietitians in Critical Care.
- Dietitians in HIV/AIDS Group.
- DOM UK: Dietitians in Obesity Management.
- Food Allergy and Intolerance Group.
- Food Counts.
- Freelance Dietitians Group.
- Gastroenterology Specialist Group.
- Mental Health Group.
- Multicultural Nutrition Group.

- National Dietetic Management Group.
- Neurosciences Specialist Group.
- Nutrition Advisory Group for Older People.
- Oncology Group and Sub Groups.
- Paediatric Group.
- Parenteral & Enteral Nutrition Group.
- Public Health Nutrition Network.
- Renal Nutrition Group.
- Sport Dietitians UK.

Other groups of dietitians including:

- Department of Nutrition and Dietetics, Royal Surrey County Hospital.
- Dietitians with an Interest in Spinal Cord Injuries.
- Dietitians Working with Adults with Inherited Metabolic Disorders.
- Freelance Fact Sheet Authors.
- South East Neuro Dietitians Group.



# Foreword

Good nutritional care has never been so important and, as the British Dietetic Association (BDA) has said, registered dietitians (RDs) are the only '*qualified health professionals that assess, diagnose and treat diet and nutrition problems at an individual and wider public health level*'. Dietitians have, therefore, many crucial roles to play in improving care standards in the new emerging NHS and beyond in improving the health of our nation.

This edition of the *Manual of Dietetic Practice* is an outstanding source of information for both qualified and student dietitians. It takes an exemplary systems approach in its clinical sections, which focus on dietetic practice, beginning with nutritional support and followed by chapters dedicated to specialist areas such as gastroenterology and oncology. It also covers the breadth of dietetic specialties outside healthcare. Dr Joan Gandy should be congratulated for her excellent contribution in managing, collating and editing this leading edge reference work, and clear praise and acknowledgement must also be given to the many authors of the individual chapters without whom the manual could not have been produced.

Providing good nutritional care for all is a matter of quality. During my many years involved with clinical nutrition, including periods chairing the group that developed the National Institute for Health and Care Excellence (NICE) Quality Nutrition Support Standards (2006) as well as the British Association of Parenteral and Enteral Nutrition (BAPEN), I have had the privilege of working with visionary, highly committed and enthusiastic dietitians who make a real difference. This manual should help to guide many more individuals to pursue such dietetic excellence and I hope that for many it will also lead to a commitment to join cross disciplinary efforts to improve the nutritional care delivered to patients, their carers and the public. Only then will we attain unprecedented levels of excellence.

**Dr Mike Stroud**

*Consultant Gastroenterologist, Southampton  
University Hospitals NHS Trust  
Senior Lecturer in Medicine and Nutrition,  
Southampton University*

# Preface

This book, the fifth edition of the *Manual of Dietetic Practice*, is intended to be part of a spectrum of resources available to dietitians, dietetic students and others. The spectrum now includes an increasing number of specialist dietetic texts and this edition of the manual is written, as far as possible, to complement these texts; both published works and books currently being prepared, e.g. *Diet and Nutrition for Gastrointestinal Disease*. Inevitably, some specialisms are too small to warrant a separate text and are therefore included in this manual. This edition of the manual is aimed mainly at non-specialist dietitians and dietetic students, and is intended for use as a standard textbook in dietetic departments.

Dietetics is a dynamic profession, which means that knowledge and practice change rapidly and dietitians are working in more diverse areas. Therefore, this edition of the manual includes new topics such as genetics and nutrigenomics, and immunology and health. Areas of interest to dietitians continue to expand and dietitians are specialising in areas such as respiratory medicine that were previously considered as general rather than specialist; another new chapter. Medical advances have resulted in conditions that once resulted in early death being managed differently, with longer survivorship. An example of this is the dietetic management of inherited metabolic disorders. Most people with these conditions now survive well into adulthood and therefore present fresh challenges in management; as a result, this topic has been included in this edition.

Many of the chapters have been totally rewritten, often by pairs or groups of people and with many more involved in reviewing the texts; dietitians of every level of experience have been involved, from students through to professors. The approach of the manual has also changed and is in line with the specialisms of the British Dietetic Association (BDA) specialist groups and other dietetics groups and networks.

However, as this is a text on dietetic practice, general chapters on the nutrients have been removed, although an appendix has been created to provide a ready reference on micronutrients. The *Manual of Dietetic Practice*

is constructed to be cohesive and as such there is considerable cross referencing between chapters. It is divided into two parts encompassing seven sections with appendices:

## Part 1. General topics

Section 1 – Dietetic practice

Section 2 – Nutritional status

Section 3 – Nutrition in specific groups

Section 4 – Specific areas of dietetic practice

Section 5 – Other topics relevant to dietetic practice

## Part 2. Clinical dietetic practice

Section 6 – Nutrition support

Section 7 – Clinical dietetic practice

The area of paediatric dietetics is always challenging, as well as interesting, and this area has been completely revised in this edition to provide an appropriate level of knowledge for non-paediatric dietitians who work with children in general settings. Working with the BDA's Specialist Paediatric Group and Vanessa Shaw, editor of *Clinical Paediatric Dietetics*, the chapters on developmental stages have been edited and consolidated into one extended chapter, with an introduction to topics in clinical paediatric practice. Hopefully, dietitians will find this useful and student dietitians will be introduced to another exciting and satisfying area of practice.

Another innovation is the inclusion on the Wiley Blackwell Internet site of additional resources, including case study discussion papers and slides of the figures and tables that can be downloaded. In addition, this edition will be available as an electronic book. As the field of dietetic practice has expanded so too has the *Manual of Dietetic Practice* and I suspect that the next edition will be presented in a different, if not multiple, format.

While editing the MDP has been a challenge, the level of support has been overwhelming and inspiring. I am indebted to the many people who have written or revised the chapters, and the many reviewers and other contributors.

*Joan Gandy*

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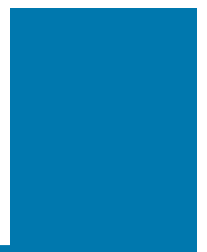




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# PART 1

## General topics





# SECTION 1

**Dietetic practice**





# 1.1

## Professional practice

Najia Qureshi, Sue Kellie, Ingrid Darnley, Julie Farmer, Judy Lawrence and Joan Gandy

### Key points

- In the UK dietitians must be graduates of an approved programme of education and registered with the Health and Care Professions Council.
- The British Dietetic Association is a professional association that aims to inform, protect, represent and support its members.
- Dietitians are autonomous practitioners who work within an ethical framework of conduct.
- The nutrition and dietetic process is central to dietetic practice.
- Dietetics is an evidence based profession with research and outcome evaluation at its core.
- Dietitians engage in continuing professional development throughout their careers to ensure that their practice is robust, efficacious and innovative.

Dietetics is a well respected and established profession, albeit a relatively new profession. The first UK dietitian, Ruth Pybus, a nursing sister, was appointed in 1924 at the Royal Infirmary in Edinburgh. She initially sought to demonstrate that a dietetic outpatient clinic could significantly reduce the number of admissions and therefore benefit the hospital. She was successful; after a 6-month trial, her appointment as a dietitian was confirmed. The development of other dietetic departments quickly followed, especially in London, and in 1928 the first non-nursing dietitians were appointed. From these early days dietetics has been a science based profession and in the 1980s became the first of the allied health professions (AHPs) to become a graduate profession.

In 1936 the British Dietetic Association (BDA) was founded as the professional association for registered dietitians in Great Britain and Northern Ireland. The BDA aims to inform, protect, represent, and support its members.

Dietetics is both an art and a science that requires the application of safe and evidence based practice, reflective practice and systematic clinical reasoning. A dietitian needs to combine these skills with knowledge and experience, together with intuition, insight and understanding of the individual (or specific) circumstance in order to maintain and improve practice. Following several public enquiries at the end of the last century it was recognised that there needed to be greater priority given to non-clinical aspects of care, such as skills in communicating with colleagues and service users, management, develop-

ment of teamwork, shared learning across professional boundaries, audit, reflective practice and leadership. Subsequent legislative changes were implemented with the establishment of the Health and Care Professions Council (HCPC).

### Dietetics as a profession

An occupation or trade becomes a profession '*through the development of formal qualifications based upon education, apprenticeship, and examinations, the emergence of regulatory bodies with powers to admit and discipline members, and some degree of monopoly rights on the knowledge base*' (Bullock & Trombley, 1999, p. 689). A degree of responsibility and expectation comes with being a professional. A member of any profession, including dietetics, must, within their practice, agree to be governed by a code of ethics, uphold high standards of performance and competence, behave with integrity and morality, and be altruistic in the promotion of the public good (Cruess *et al.*, 2004). Furthermore, these commitments form the basis of an understanding, or social contract, that results in professions, and their members, being accountable to service users and to society.

### Professional regulation

To practise as a dietitian, and to use the title of dietitian, it is mandatory to have completed an approved

programme of education and be registered with the HCPC. The HCPC was set up in 2001 to protect the health and wellbeing of people using the services of the health professionals registered with them. It aims to:

- Maintain and publish a public register of properly qualified members of the professions.
- Approve and uphold high standards of education and training and continuing good practice.
- Investigate complaints and take appropriate action.
- Work in partnership with the public and other groups, including professional bodies.

To remain on the HCPC register, dietitians must continue to meet the standards that are set for the profession. The professional standards are:

- Good character of health professionals.
- Health.
- Proficiency (dietetics).
- Conduct performance and ethics.
- Continuing professional development (CPD).
- Education and training.

The HCPC use these standards to determine if a registrant is fit to practise. If the HCPC finds that there are concerns about a dietitian's ability to practise safely and effectively, and therefore fitness to practise is impaired, it has the legal right to take action. This may mean that the registrant is not allowed to practise or that they are limited in what they are allowed to do. The HCPC can legally take appropriate action to enforce this (HCPC, 2010).

### The British Dietetic Association as a professional body

The distinction between a regulatory body (HCPC) and a professional body (BDA) is often misunderstood. It is important that dietitians are fully aware of the differences from the beginning of professional training. Much like the HCPC, the BDA is committed to protecting the public and service users. However, the two organisations achieve this in very different ways (Table 1.1.1). The HCPC has the ultimate sanction to prevent a dietitian from practising if, following investigation, they are deemed to be unsafe or untrustworthy. However, the BDA provides guidance, advice, learning and networking opportunities, and professional indemnity insurance cover, all with the aim of supporting the development of safe and effective practitioners. This ultimately helps protect the public and service users. The BDA also provides a trade union function and supports members throughout their working life on issues such as pay and conditions, equal opportunities, maternity rights and health and safety.

### Autonomy

Autonomy can be defined as the right of self governance and as independent practitioners, who practice autonomously, dietitians are personally accountable for their

**Table 1.1.1** Remit of the Health and Care Professions Council (regulatory body) and the British Dietetic Association (professional body)

Health and Care Professions Council	British Dietetic Association
Protect the public and service users	Protect the public and service users
Set professional standards of practice	Membership support
Approve education programmes that train and educate graduates to meet these standards	Advance the science and practice of dietetics
Register graduates of these programmes	Promote education and training in the science and practice of dietetics
Ensure registrants meet professional standards	Regulate the relationship between dietitians and their employer through the trade union
Sanction registrants who do not meet these standards	Provide professional indemnity insurance

practice (BDA, 2008a). This means they are answerable for their actions and omissions, regardless of advice or directions from another health professional. Dietitians have a duty of care for their service users and clients who are entitled to receive safe and competent care or service.

The HCPC states that as autonomous and accountable professionals, dietitians, '*... need to make informed and reasonable decisions about their practice. This might include getting advice and support from education providers, employers, professional bodies, colleagues and other people to make sure that you protect the wellbeing of service users at all times.*' (Health and Care Professions Council, 2008).

It is important that dietitians are aware of the boundaries of their autonomy, which will never be limitless but will always be confined to their scope of practice. As with all health professionals, dietitians must never practise in isolation. Up to date knowledge skills and experience are the cornerstone of safe and effective practice, and as such dietitians should always have access to a support network of leaning, development and peer review. In the National Health Service (NHS) setting, the system for learning and development is usually already established via internal processes, e.g. supervision, appraisal, local training programmes, library services and journal clubs. Outside of the NHS these processes are not automatically in place and it is essential that every healthcare professional actively establishes a network of support and learning to match their scope of practice, e.g. freelance practice (see Chapter 4.1).

### Scope of practice

Identifying individual scope of practice is not easy as the boundaries will be different for each practitioner and will

**Table 1.1.2** Factors that define dietetic scope of practice

Factor	Example
Occupational role	Clinician, researcher, educator, writer, consultant
Sector	Private practice, industry, higher education, commercial
Environment	Acute, community, GP practice, industry, media
Client group	Children, elderly, people with learning difficulties, public, supermarket
Speciality	Diabetes, public health, obesity, product development
Approaches	Behavioural therapy, group education, anthropometry, cook and eat session
Types of cases for referral elsewhere	Other dietitians or other healthcare professionals, social services

evolve over time (BDA, 2009a). The description of a dietitian's scope of practice is often broad and may describe some or all of the factors shown in Table 1.1.2.

A much more specific scope of practice is described in relation to specific service users. When presented with a service user, the dietitian should undertake a personal risk assessment as part of the overall assessment, asking key questions before proceeding. These questions include:

- Is the service user safe?
- Am I safe?
- Can I justify the decision I have made during the assessment (e.g. has the research, evidence, standards and guidance been considered)?
- Can I identify the most appropriate approach for the service user group?
- Do I have the correct balance of skills, knowledge and experience to be competent in my chosen approach?

### Extended scope of practice

The extended roles dietetic practitioner undertake are those outside their core and specialist roles. They are usually (but not exclusively) roles traditionally carried out by other health professionals either as a core duty or role extension. Additional skills and knowledge are acquired through formal training. The extended role practitioner must advance dietetic practice and contribute to improving outcomes. Examples of extended roles include:

- Replacing gastrostomy tubes in the community.
- Inserting peripheral midlines for intravenous feeding.
- Advising on appropriate exercise regimens.

Whatever role a dietitian commits to, extended or otherwise, they must constantly be aware of their individual scope of practice, and practice within this.

## Ethics and conduct

Conduct is the manner in which a person behaves, especially in a particular place or situation, while ethics are moral principles that govern a person's or group's behaviour. However, it is essential to put these definitions into context for them to have any meaning. In professional practice, professional ethical conduct is paramount. Outside of their professional role, dietitians have the right to behave how they choose, within the limits of the law, and this will be limited only by personal ethical boundaries. In professional practice, it is the professional codes of conduct that provide the framework for, and the benchmark by which, ethical conduct will be measured.

A major function of a code of conduct is to enable professionals to make informed choices when faced with an ethical dilemma. For the dietetic workforce the key guidance is laid out in the HCPC Standards of Conduct, Performance and Ethics (2008) and Guidance on Conduct and Ethics for Students (2009). These standards are written in broad terms so as to apply to all registrants as far as possible, and are designed not to be overly prescriptive, thereby undermining professional judgement and stifling progress and innovation.

The BDA Code of Professional Conduct (2008a) builds on the generic standards of the HCPC, with more dietetic specific guidance. They apply to the whole dietetic workforce from unregulated students and support workers to qualified dietitians. In practice, however, there will be numerous occasions where, despite guidance, there is no right or wrong answer to everyday dilemmas in practice. The HCPC (2008, p. 5) states that in such situations *'If you make informed, reasonable and professional judgements about your practice, with the best interests of your service users as your prime concern, and you can justify your decisions if you are asked to, it is very unlikely that you will not meet our standards.'*

Through HCPC mandated continuing professional development, a dietitian can ensure they have the technical knowledge, with the right skills and competencies, to be able to function in their role. As an autonomous professional, it is equally important to be an ethically competent practitioner to ensure trust between the professional and user. In addition, this trust is not confined to the individual practitioner but to the profession itself. Interpretation of ethical competence allows the distinction between skill and expertise or technical competence, and professionalism (Friedman, 2007). Friedman describes the acquisition of ethical competence in five stages as shown in Figure 1.1.1.

### Model and Process for Nutrition and Dietetic Practice

The primary purpose of the practice of dietetics is to optimise the nutritional health of the service users, be they an individual, group or community, or population. By optimising the nutritional health of the service users the dietitian expects to positively influence health outcomes. In the practice of dietetics it is common for the dietitian to seek to influence or change other aspects of

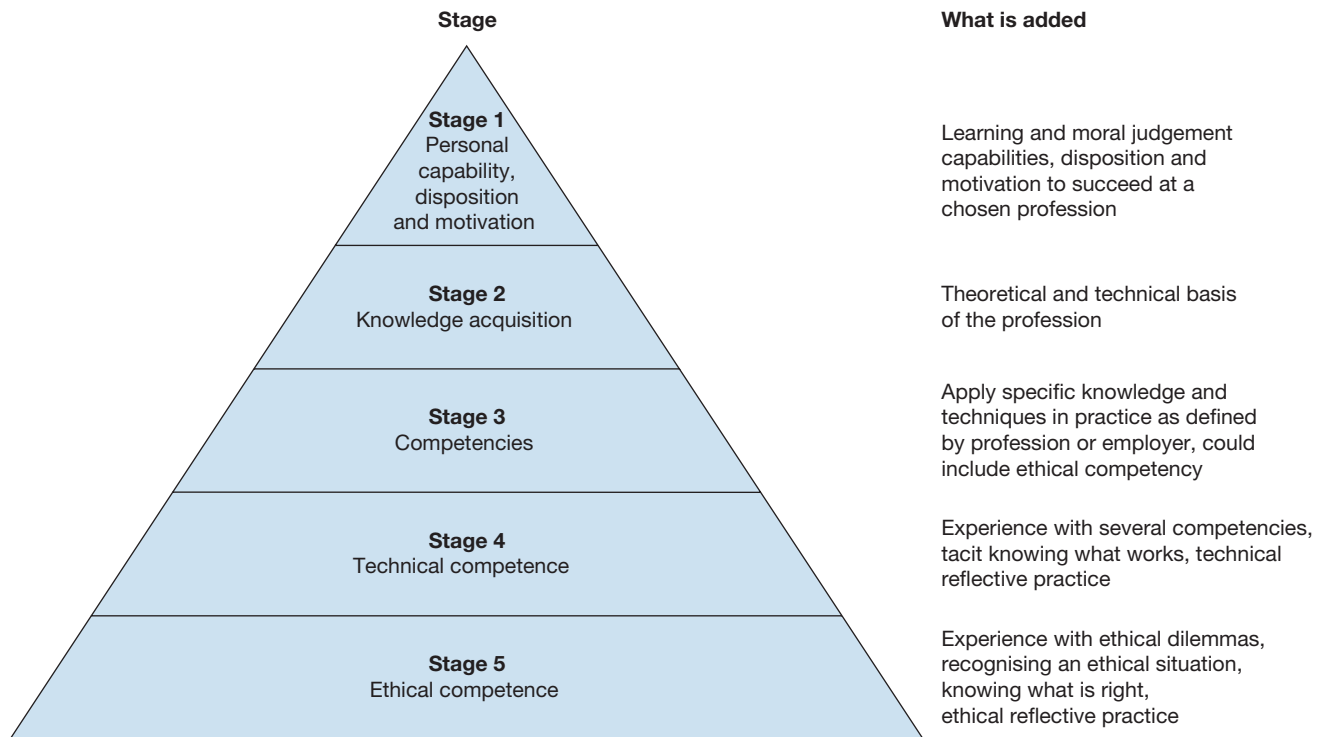


Figure 1.1.1 Stages in the acquisition of ethical competence (adapted from Friedman, 2007)

care or treatment, e.g. medication or the psychological wellbeing of the service user. However, the primary purpose of the dietitian is to identify and take action to improve the nutritional status of the service user and to improve those symptoms that are amenable to dietetic intervention.

Any single consultation or professional activity is incredibly complex and involves a number of different and varied strands of knowledge from biological and social sciences to food and medicine, alongside communication and clinical decision making skills and attributes such as empathy and respect. These are applied within professional and legal frameworks and boundaries and within organisational and social norms and standards. Most of this thought process is invisible to other professionals and often to the user as it takes place rapidly within the dietitian. The model of dietetic practice (MDP) seeks to make this explicit and visible. The BDA's Model and Process for Nutrition and Dietetic Practice (2012) is shown in Figure 1.1.2.

The model for dietetic practice brings together all of these aspects in a single framework that describes dietetic practice whether with individuals, groups or communities. The purpose of the MDP and the nutrition and dietetic process (NDP), which is the key aspect within it, is to help the profession provide safe, effective and consistent services and evidence of this.

### Nutrition and dietetic process

At the centre of the NDP is the relationship between the service user and the dietitian. This relationship is key and

influences how all the other aspects of the process function. The service user is at the centre of all professional practice and is most often the most important decision maker in any situation. User (person or patient) centred care has been demonstrated to lead to improved outcomes and to improved satisfaction with care (Robinson *et al.*, 2008). There are many and varied definitions, but the Institute of Medicine (2001) definition, '*Providing care that is respectful of, and responsive to individual patient preferences, needs and values and ensuring that patient values guide all clinical decisions*' encompasses all the concepts.

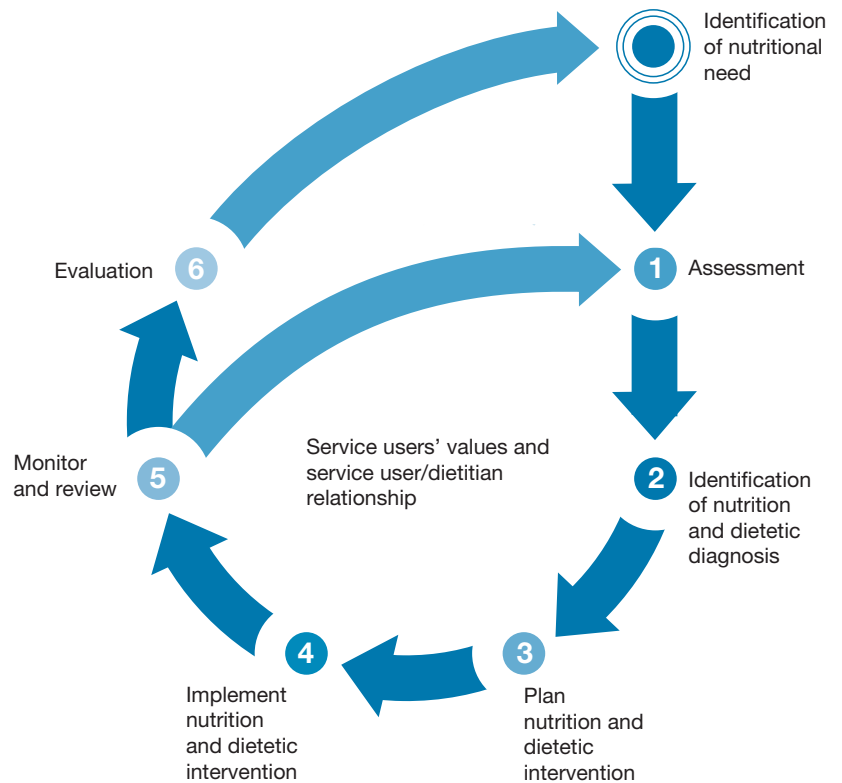
This definition ensures that the dietitian recognises that the service user's values and preferences will influence how the dietetic intervention is received and therefore how the intervention is delivered. This could be as simple as the level of information and choice the service user requests within the consultation or as complex as decisions about which aspects of the possible dietetic intervention plan to participate in or how to receive the service. The NDP developed by the BDA (2012) is shown in Figure 1.1.3.

This core relationship is at the centre of the NDP and is surrounded by other factors that will influence how the dietitian delivers the intervention and how the service user receives it. The inner rings describe what the dietitian, as a professional, brings to the relationship. This includes:

- Ethical frameworks such as the HCPC Code of Conduct, Performance and Ethics and the BDA Code of Professional Practice.



**Figure 1.1.2** Model of Nutrition and Dietetic Practice [source: The British Dietetic Association 2013. Reproduced with permission of the British Dietetic Association (www.bda.uk.com)]



**Figure 1.1.3** Nutrition and Dietetic Process [source: The British Dietetic Association 2013. Reproduced with permission of the British Dietetic Association (www.bda.uk.com)]

- Dietitian's scope of practice and professional capabilities.
- Evidence base for professional practice and the dietitian's continuing professional development.

This is surrounded by the organisational, social and environmental influences on practice. An organisation providing health services will require the dietitian to practise within their governance systems that are designed to provide safe and effective practice. There will be health needs and economic analysis, which will determine what services are required to meet the health needs of the local population and where the care is provided, and these can influence how the dietetic service is delivered.

The BDA Model and Process for Nutrition and Dietetic Practice (2012) provides the framework for a nutritional or dietetic intervention and describes the actions of the dietitian, together with the knowledge skills and critical thinking that a dietitian brings to all interventions. The dietitian places decision making skills and the service user's needs at the centre of the intervention. This process supports the implementation of a standard quality of care that is then personalised to the service user. By using the process, the dietitian moves from experience based practice to evidence based practice, explicitly applying the science and social science evidence base to critical decision making; essentially they are influenced by the service users preferences, need and values (Lacey & Pritchett, 2003). The BDA nutrition and dietetic process consists of five steps (Table 1.1.3):

1. Assessment.
2. Nutrition and dietetic diagnosis.
3. Formulation and planning of the intervention.
4. Implementation of the intervention.
5. Monitoring and evaluation.

### *Dietetic diagnosis*

As previously stated, a dietitian is an autonomous professional and therefore responsible for their actions. One of the ways in which a dietitian demonstrates this autonomy is the identification of a nutritional and dietetic diagnosis. The diagnosis step may be considered the most important step in the NDP but it is often the step that is missed. In making a diagnosis the dietitian uses critical reasoning skills to evaluate the assessment information and to make judgements as to the risks to the service user(s) of taking action, or not. The dietitian will prioritise the nutritional issues identified and make a judgement as to whether taking action on these issues will make a difference to the health and outcomes for the service user.

In developing the diagnosis, the dietitian identifies the relevant aspects of the assessment and clearly states the nutritional problems that they and the service user have prioritised and the nutritional issues the dietitian can influence, and by doing so, the impact the nutritional and dietetic intervention will have on the service user's health. The benefits from making a nutritional and dietetic diagnosis include:

- Sharing with others involved with the service user the nutritional issue(s) that the dietitian and service user have prioritised.
- Identifying the specific nutritional issue(s) that the dietitian can influence.
- Identifying the indicators in the assessment process that will form the basis of monitoring and evaluation.
- Demonstrating the thoroughness of the assessment process and clearly communicating this to other professionals.

The diagnostic statement should clearly record for all service providers the problem, its cause (aetiology) and why the dietitian considers that it is a problem (symptoms). This statement also forms the basis of the monitoring and evaluation step as the dietitian will also have identified the most important indicators from their description of the symptoms.

### Recording and information management

Another fundamental aspect of professionalism is the accurate recording of the nutrition and dietetic process. The HCPC (2007) Standards of Proficiency require dietitians to be able to maintain records appropriately. The information in records, including dietetic records, is used for many different purposes. Most importantly, it provides a permanent account of the dietetic process, especially the intervention, and a means of communication between all professionals and others involved, including the service user.

Information contained within records is also used for a number of other purposes, including demonstrating the overall effectiveness of the dietetic service and, possibly, organisation, quality monitoring and service improvement, research and public health purposes. While the increasing use of electronic health records will require more systematic record keeping, there is evidence that using a systematic format in any record, paper or electronic, improves the quality of care and service user outcomes (Mann & Williams, 2003). It is therefore important that the information in professional records is recorded accurately, systematically and consistently.

### Quality improvement

Quality (Donabedian, 1980) has many dimensions. In the health service, patients, the public and carers expect safe, effective and consistent high quality care and treatment (NHS Scotland, 2003). For the individual dietitian this is a requirement of registration with the HCPC. Quality improvement involves a series of activities undertaken to reduce the gap between current practice and desired practice.

As a result of the need to account for its management and clinical efficiency, effectiveness and value for money, the NHS developed the concept of clinical governance. Clinical governance is defined as, *'the system through which NHS organisations are accountable for continuously improving the quality of their services and safe-*