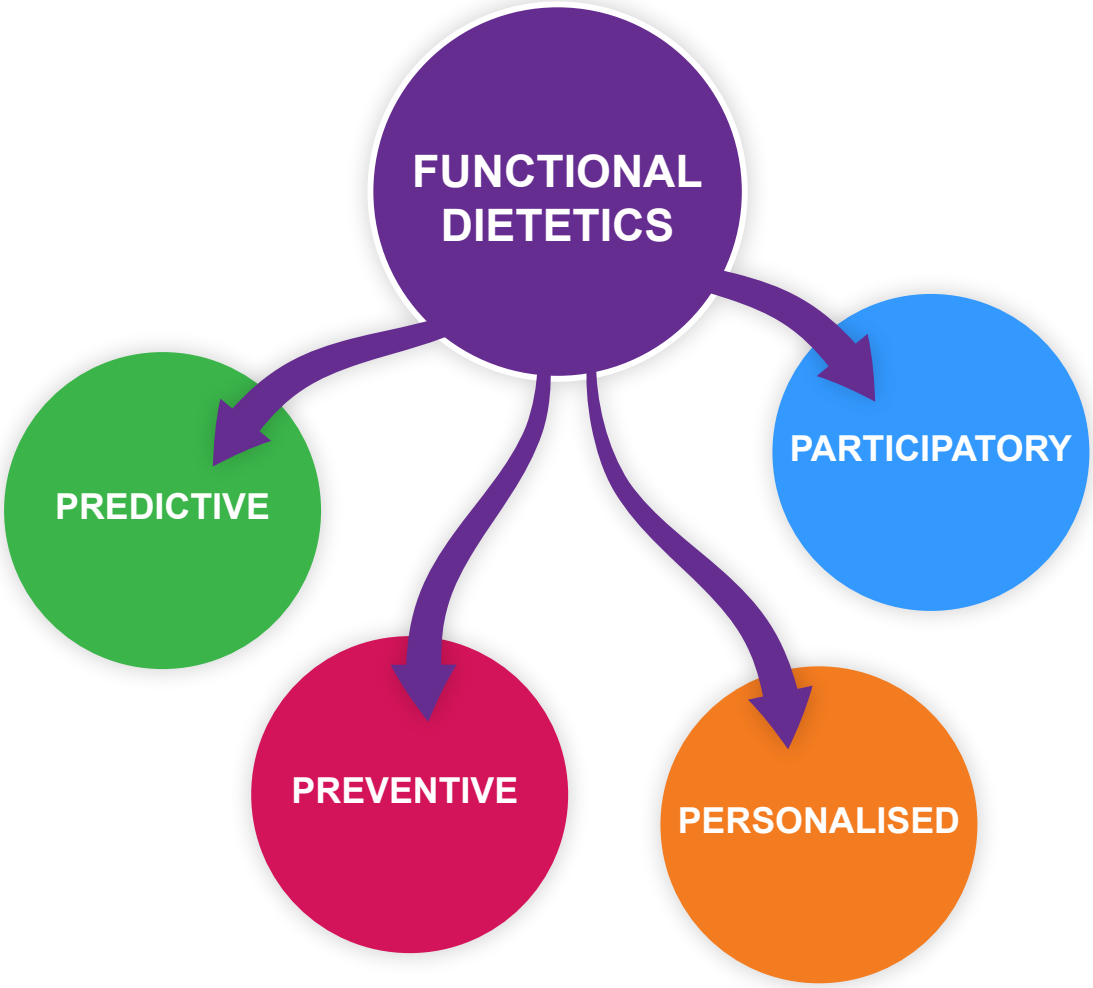
MARCH 2017

FUNCTIONAL DIETETICS

P4 IN PRACTICE – DELIVERING THE MODERN AGENDA FOR DIET-RELATED DISEASE



BANT
British Association for Applied Nutrition & Nutritional Therapy

FUNCTIONAL DIETETICS: THE RESPONSES

> *Variations of chemical behaviour […] are probably everywhere present in minor degrees and that just as no two individuals of a species are absolutely identical in bodily structure neither are their chemical processes carried out on exactly the same lines.*
>
> **Sir Archibald Edward Garrod, 1902**
> **Pioneer on Inborn Errors of Metabolism**

FOREWORD

From 24 November 2015 to 24 February 2016 BANT held a public consultation on its draft Curriculum Framework for Functional Dietetic Practice. We are grateful to all those who took the trouble to respond. While most of the responses were of a technical nature, the contributions from The Nutrition Society (NS), the British Dietetic Association (BDA) and the Association for Nutrition (AfN) raised points, which demand a substantive response. This document now includes the NS, BDA and AfN submissions and our responding comments.

Following the launch of the consultation, one of the unanticipated outcomes was that BANT was approached by a small but nonetheless significant number of current HCPC Registered Dietitians (RDs) who wish to adopt the functional model of practice and to become BANT members. This document has been delayed in its publication while we set up robust processes for RDs to become proficient in the functional model of practice. The NS, BDA and AfN submissions therefore have an important role in terms of the Health & Professions Council being confident that their registrants are continuing to meet their statutory obligations and fitness to practice standards. The BANT responses throughout the document are therefore designed to give RDs the evidentiary support for lawful, safe and effective practice. This document, therefore, is also being sent to the Health & Care Professions Council.

We are grateful to NS, BDA and AfN and hope that this correspondence may also serve as a basis for ongoing dialogue and cooperation between the groups.

BANT Council
March 2017

> *Discovery consists of seeing what everybody has seen and thinking what nobody has thought.*
>
> **Albert Szent-Gyorgyi (1893 - 1986)**
> **Nobel Prize in Medicine 1937**
> **Discoverer of vitamin C and catalysis of fumaric acid**

EMAIL RECEIVED 23 FEBRUARY 2016

Dear Sirs,

Please accept this email as the contribution from The Nutrition Society to your above public consultation.

The mission of the Nutrition Society since its establishment in 1941 is 'To advance the scientific study of nutrition and its application to the maintenance of human and animal health'. This is done in several ways including:

a. Promotion of sound **evidence-based** science and practice by critical discussion at our scientific meetings that are open to all who are interested in nutrition.
b. Publication of peer reviewed scientific articles.
c. Publication of text-books on various aspects of nutrition for the education of nutritionists, dietitians and other health workers.

BANT is very clear on the significant contribution made by the Nutrition Society and its members in:

- Cutting edge research in the domain of food constituents and how they influence the genome, the epigenome, the microbiome and their impact on the human nutritional phenotype;
- Membership of the Scientific Advisory Committee on Nutrition (and COMA before it), the Committee on Toxicity, Nutrigenomics Organisation, Food4Me and numerous EU-funded research projects;
- Research funded by the Food Standards Agency under its N02 (Diet and Cardiovascular Health) and N12 (Diet and Colonic Health)
- Disseminating knowledge on (i) chronobiology as influencing the diet-genome relationship and (ii) non-nutrient food bioactives as impacting the nutritional phenotype, in its recent Conference programme.

The Nutrition Society has always been concerned that the public is often misled and confused by the plethora of incorrect nutrition information and misinformation provided by unqualified spokespersons.

We are concerned that 'incorrect information' is all too often mixed up with 'unqualified spokespersons' and to protect the public, the Nutrition Society needs to be more politically proactive standing independently from the nutrition professional associations. There is a translational bridge to cross between research and practice, and separately professional practice demands Continuing Professional Development to remain up-to-date.

BANT recognises that former members of the Nutrition Society Council were instrumental in setting up the Joint Health Claims Initiative and in the formulation of various EU instruments, e.g. the Food Supplements Directive and the EU Nutrition and Health Claims Regulation 2006, as well as establishing the national dietary guidelines (the Balance of Good Health and Eatwell Plate/Guide). These developments were rigorously pursued without caveat despite the overwhelming evidence emerging about the individual nature of the nutritional response and indeed of their colleagues' statements on the inappropriate use of population data for over a decade, e.g.

> *There is not even the information needed for setting dietary recommendations with confidence now at the group level*

Lenore Arab, Keynote Speaker, Nutrition Society Summer Conference, London 2004
Arab L (2004) Individualised nutritional recommendations: do we have the measurements needed to assess risk and make dietary recommendations? Proceedings of the Nutrition Society **63**, 167-172.

> *There may be no such thing as a 'normal' population with respect to nutrient requirements, as was assumed when dietary reference values were established [...] populations should not copy each other's dietary recommendations for the prevention of coronary artery disease, and cancer, or any other disease for that matter.*

Artemis Simopoulos, President, Center for Genetics, Nutrition and Health, Washington, DC
Simopoulos AP (2002) Genetic variation and dietary response: Nutrigenetics/nutrigenomics. Asia Pacific Journal of Clinical Nutrition **11**, 117-128

> *More than one dietary pattern is consistent with health. FBDG can certainly not be developed on a European level but at most on a national level, and even there specific groups may have to be taken into account.*
>
> **European Food Safety Authority** (2007) Food Based Dietary Guidelines. Report of the 5th Scientific Colloquium.

> *For nutrients such as vitamins and minerals…..variability in the response of individuals has the potential to result in a situation in which a given level of exposure could be essential for some individuals but toxic for others.*
>
> **Committee on Toxicity** (2007) Variation and Uncertainty in Toxicology of Chemicals in Foods, Consumer Products and the Environment. Committee on Toxicity.

To protect the public, the Society has been active over many years in establishing sound and rigorous criteria for nutrition education that forms the basis of most nutritionists and dietitians, and in creating a register of nutrition courses and nutritionists that fulfill these criteria.

Following publication by the Nutrition Society of two Department of Health funded reports on the different nutrition professions, the Health Professions Council wrote to the Nutrition Society, BANT and BDA in 2006 asking that a working group should be set up to progress this issue in the public interest. It is disappointing that Nutrition Society did not continue its work, especially given the earlier taxpayer funding.

This voluntary regulatory role has recently been passed to the Association for Nutrition (AfN). The BDA has statutory regulation of dietitians. These organisations will no doubt be responding in detail to the consultation.

BANT has received responses from the AfN and BDA. These are also published and reflect a level of discordance between the AfN and the BDA on evidence-based practice as it relates to use of the Eatwell Guide as a basis for clinical practice.

AfN have published a document which states that the Nutrition Society is the 'professional association' for Registered Nutritionists while AfN acts as Regulator. We find this confusing as AfN displays more of the features of a professional association than a Regulator. It would be useful to have further clarity on the roles of the NS and AfN in this regard.

The Nutrition Society would like to express its serious concern regarding the BANT report, in particular the misrepresentation of UK dietetic curriculum. The Society is confident that the curriculum embraces a sound, evidence-based approach covering the key scientific concepts required of a practitioner involved in both the treatment of disease and maintenance of health.

You may be aware that BANT submitted to the Privy Council and Health & Care Professions Council in 2014 on dietetics as practiced in the NHS and wider. What are the key scientific concepts that you refer to here? In terms of scientific concepts, BANT's Underpinning Principles, Framework and Process are appended. It would be useful to have your detailed comments on these. You may not be aware that in its response the BDA has stated that it does not support the use of SACN derived 'evidence-based' tools in clinical practice [see page 10]. You should also know that we have received approaches that a number of current HCPC registered dietitians wish to use a functional model of practice. We are aware that internally some BDA members would like the BDA itself to form a group (Functional Dietetics Specialist Group) that can practise in this manner and can be liaison conduit with BANT to facilitate inter-professional learning.

In contrast, the BANT curriculum appears to emphasise unduly the still emerging concepts of personal nutrition and nutrigenetics for which there is currently not enough scientific evidence to support use in practice.

BANT has been surprised at the model developed by the EU-funded Food4Me to use nutrigenetic data and measure successful outcomes as meeting national population dietary guidelines. We do not believe that model will endure or that there is likely to be sufficient scientific evidence to support its use in practice: it is in fact an illogical proposition to us. The Individual Wellness model (see Appendix – Nutrition and Health Framework) was part of BANT's written evidence submitted in 2008 to the House of Lords' Genomic Medicine Inquiry. The model was not criticised then, it stands the test of time and adapts to the state of prevailing underpinning science.

BANT's evidence to the House of Lords Genomic Medicine Inquiry can be found here: https://www.publications.parliament.uk/pa/ld200809/ldselect/ldsctech/107/107we14.htm

The Nutrition Society will continue to support the publication of well designed, rigorously performed studies which develop further these important aspects of nutritional science in its peer reviewed journals to provide information that will ultimately make important contributions to dietetic practice.

BANT looks very much forward to the results of nutrition research over the last 30 years being adopted into NHS dietetics without being hostage to one-size-fits-all public health policy.

Kind regards
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Response to BANT Consultation on: Curriculum framework for functional dietetic practice.
This response is from the British Dietetic Association to the consultation (version Nov 2015)

Overview

In November 2015 BANT launched a consultation on its draft curriculum designed to meet the HCPC registration standards. The registration standards are those standards which every registrant is expected to achieve and maintain, including standards of proficiency. The standards also relate to the standards expected of education and training.

The current curriculum against which University courses are accredited by the BDA describes 'the key aspects of the knowledge, skills and attributes required by entry-level dietitians in order to ensure that new graduates are able to satisfy the Health Care Professions Council (HCPC) Standards of Proficiency for Dietitians and are thus eligible to apply for registration as a dietitian and work in the NHS and elsewhere'.

As with any curriculum, the dietetic curriculum is designed to offer Universities flexibility in how they approach and deliver dietetic education and training. No two courses are identical and neither the BDA nor the HCPC would expect absolute uniformity.

For any course, university or pattern of study and training to meet these standards, they would need to be assessed by the HCPC as satisfying their criteria for entry onto the register of Health and Care Professionals. We do not comment on any views the HCPC may have about whether BANT's draft curriculum meet these standards, but our experience and expertise in understanding and applying these standards assist us in responding to the consultation.

In brief, the graduates from HCPC accredited courses must be competent and fit to practice, having been through a pattern of Education and Training which meets the HCPC standards, and therefore protection of the public has been achieved.

The draft BANT curriculum talks about 'functional dietetic practice' but it is unclear whether BANT is intending to suggest to the HCPC that outputs from courses following this curriculum will seek to be registered as 'dietitians' or with another title (e.g. 'functional dietitian') This is important as any other title

will presumably require more than just HCPC consent and will, more importantly, undermine public protection with confusion about multiple titles. We assume therefore that the intention is for any functional dietetic outputs to seek registration as 'dietitians'.

Part of the consultation from BANT includes a document titled 'Understanding the differences – Functional Dietetics and NHS Dietetics'.

Your assumption is correct. The functional dietetic model of practice does not envisage a discrete title. You should be aware that there are current HCPC registered dietitians who have approached BANT and wish to adopt a functional model of practice. Will you consider some of your own members' requests for a Functional Dietetics Specialist Group?

In relation to NHS Dietetics our comments are as follows:

- There appears to be an emphasis on 'NHS' dietetics which is not representative of professional dietetics. A growing and significant minority of the profession are employed solely outside the NHS (c20%) while a significant proportion of the profession are employed both in the NHS and outside it (c40%). In addition, while NHS placements within NHS settings are routine in accredited programmes a growing number are adding placements in social care settings, charities and elsewhere. Dietitians are employed in public health, education, research, media, industry, sports and in many other settings. The identification of dietetics as an 'NHS' profession with a mainly NHS focus is outdated and incorrect.

- There is a reference that in the 'professional practice modality' current dietetic practice has a 'protocol based, public health one size fits all' approach. It is unclear where this comes from but it is incorrect. Dietetics is an evidence based profession but it does not follow a determined public health or one size fits all approach. To do so would not allow dietitians to work across the wide variety of employment settings or tackle the wide variety of complex clinical conditions in the NHS.

- Current dietetics is described as not following 'individualised professional practice'. This is incorrect. Dietitians are autonomous healthcare practitioners and are trained to act as such. They follow guidelines and evidence based practice but the interpretation of guidelines and evidence, the interpretation for the individual or population group and the following application, are at the discretion of the individual dietitian. Guidelines and evidence may conflict. They may also be absent. It is for the individual to determine what approach is best. For example, practice in renal disease and public health are entirely different, as is dealing with paediatric allergies or end of life care. The evidence base and the clinical guidelines/ approach within healthcare is entirely different

and a dietitian working within any one of these settings needs to be able to adapt highly defined pathways to individual patients or population groups, each with individual circumstances and needs. Dietitians would not be meeting their statutory roles and the requirements of the regulator if they did not follow 'individualised professional practice'.

- The comments in the preceding paragraph apply equally to the sections titled 'Recommendations for chronic disease dietary management', 'Population advice' and 'Functional'. Guidance and evidence based practice is used to inform clinical or professional practice, but it is not rigid. This is further exemplified by the recent approval by the Commission on Human Medicines for dietitians to be recommended for supplementary prescribing powers. This would not have been approved if there was not clear evidence of individualised approaches to the needs of patients with clinical conditions and their prescribing needs.

The statements in this section would demonstrate that there may be fewer differences in practice outside the NHS between BDA and BANT members. It is welcome that the BDA does 1) not endorse the one-size-fits-all Eatwell Guide as a basis for clinical practice, 2) recognises that Guidelines and evidence may conflict, and 3) emphasises the need for individualised practice to meet statutory obligations. The Appendices set out the Underpinning Principles, Framework and Process for functional dietetic practice and it would be useful to have a greater understanding, particularly in the NHS context, of current practice in healthy nutritional phenotype assessment. Focus on assessing the individual and nutritional needs rather than assessing diet as meeting population guidelines is welcome.

In general terms we would also make the following observations:

- Practice placements are integral to all healthcare professionals (in some shape or form or title). It would be of grave concern for the principles of public safety if any healthcare professional were to achieve statutory regulation and professional autonomy without a reasonable period of supervised practice as part of a course of study.

- Furthermore, ongoing supervision, line management and CPD is absolutely vital to any profession in healthcare, for the purposes of public protection. Newly qualified dietitians undertake close supervision and failure to do so is likely to cause risk to patients and the public. Newly qualified healthcare professionals have only just started on their professional journeys and careers. It seems to us that many Nutritional Therapists work independently and privately from the outset and this would be a grave concern to public protection.

- There appears to be a suggestion that private education providers could deliver suitable education and training. Again, concern would reasonably be expressed that quality assurance mechanisms (that exist within HEIs) must be put in place to ensure consistency, safety and quality. It is hard to imagine how this could be achieved without the use of the established HEI structure.

- Education and training normally requires the input at key levels of members of the relevant profession(s), to provide the oversight and quality assurance required (amongst other things). Registration with the regulator is vital for the purposes of accountability and quality control, when educating and training the healthcare professionals of the future. It is not uncommon for parts of healthcare education and training to be delivered by other regulated professionals/educators. However there is a key and vital expectation that the primary leads for any accredited course must be from professionals originating from that profession.

Clinical training and supervision is core to successful programmes. The terms on which HCPC approves training courses are clearly set out in their public documents. BANT has a continuing mission to uphold its members' standards in practice, with continuing professional development and appropriate monitoring as part of that process. It has developed a successful mentoring programme to support new practitioners.

Comments on the Curriculum Framework

We have gone on to look in further detail at the draft Curriculum Framework for Functional Dietetics. Preregistration dietetic education prepares students for lifelong practice across a wide range of settings, service users and nutritional practice. It is not clear from the documents provided that anyone entering the workforce with any qualification from this curriculum would be able to meet the standards of proficiency

There appears to be a fixation in the consultation (which is incorrect) that 'NHS Dietetics' has a one-size-fits-all approach, including withdrawing and withholding nutrition and hydration. It is interesting and equally concerning therefore to see a concept and description of 'functional dietetics' which is only aimed at producing practitioners who are themselves embedded in a single way of looking at health, with no robust evidence base and whose underpinning education is only designed to equip the practitioner to critique evidence based approaches to health and wellbeing. These practitioners will not meet the standards of proficiency as the curriculum is lacking in substance and cannot produce practitioners with the skills and knowledge required to be registered and use the title dietitian. The implied scope of practice of a 'functional dietitian' is with individuals seeking to maximise their health and who hold that unsafe and unevidenced modalities, such as detoxification, are the route to health.

We disagree and would point you towards the Underpinning Principles at appendix. If these principles are debated, we would welcome your comments. Otherwise they are such that they adapt to new knowledge and new situations. They are not dependent on using the national population dietary guidelines as a basis for clinical practice. In terms of 'detoxification', BANT's clinical aid is also appended – are you suggesting that this is inaccurate?

A dietitian is able to work with individuals, groups, communities and populations in health and ill health to maximise their nutritional health and therefore wellbeing and function within their community. Dietitians work in the NHS from pre-conception to end of life care; across most care pathways and settings; they work in local government and other agencies in public health and health improvement; they work in media, sport, food industry, education and research.

There is no indication in this curriculum that a 'functional dietitian' will be able to practice across this breadth, the underpinning knowledge, skills development and practice is not there. While we acknowledge the clear approach from the HCPC on the requirement for the individual to practice within their scope of practice; the scope of practice of dietetics is broad and any individual with the title of dietitian has to be aware of this breadth.

For example, a dietitian is able to work with individuals, groups and populations. Throughout the standards of proficiency the underpinning knowledge and skills are described and then the ability to apply these to work with individuals, groups and communities. There is no indication in the 'functional dietetics' curriculum that there is any understanding that to be called a dietitian you require this knowledge and skills or that the standards of proficiency have to be met in their entirety and it is not possible to pick and choose.

In terms of public health and groups, this is an area where BANT has produced its Wellness Guidelines, and there are specialist sub-groups, which share a common phenotype where advice can be generalized. But even here there is the caveat that the individual may not benefit or indeed may suffer harm. This is no different from either model of practice.

The whole curriculum appears predicated on the assumption that nutrition and nutritional care has changed in the 'post genome era'; "Current evidence on the individualised requirements of, and response to, diet now render the NHS one-size-fits-all approach as outdated and not sustainable. Up-to-date dietetic practice in the postgenome era demands a new approach in the delivery of care to all service users"

Unfortunately for the proposed functional dietitian, nutrition is not in the post genome era. Nutritional genomics can provide insights into how diet and genotype interact and affect phenotype and disease risk and development of disease. This is an exciting area and one which is likely to provide real advances in health in the future. However, early science has not so far translated into robust evidence that adequately supports everyday nutrition and dietetic practice.

There is no indication that health services in the UK, are in the post genome era. Specifically nutritional research is complex requiring a variety of research methods and a robust and appraised evidence base before any intervention becomes routine practice. The impact on an individual genome and the complex interplay of genome, environment, and nutrition is nowhere near researched or defined enough to base a curriculum or professional practice on.

We have responded to the area of Nutrigenetic Practice in our responses to the Nutrition Society.

It is also important to note that the emphasis on a 'postgenome era' ignores other developments in human nutrition which are equally as exciting and potentially impactful. Registered healthcare professionals must be adaptable and able to adapt their practice to ongoing changes in science, practice and policy. Something which does not appear to be recognised in the emphasis on 'functional dietetics' and the draft curriculum.

BANT agrees that professionals must adapt practice to ongoing changes in science, practice and policy. This is inherent in the Framework for Health at Appendix. We are agreed that the autonomous practitioner working within their scope of practice must always act in the best interests of the service user.

Refs:

www.bda.uk.com http://bant.org.uk/2015/11/24/bant-consultation-on-draft-functional-dietetic-curriculumframework-closing-date-24-february/ http://www.hcpc-uk.org/aboutregistration/standards/standardsofproficiency/ http://www.hcpc-uk.org/aboutregistration/standards/sets/ https://www.bda.uk.com/careers/education/curriculum http://www.hcpc-uk.org/aboutregistration/protectedtitles/ https://app.box.com/s/jv487awvqzzsrdql0o34h9gg350ceyd4/1/3477158784/449933314 49/1?&_suid=144861091922704555109361598475

Response to BANT's Draft 'Functional Dietetic' Curriculum Framework

23rd February 2016

Introduction

1.1 The purpose of the Association for Nutrition (AfN) is to protect and benefit the public by defining and advancing standards of evidence-based practice across the field of nutrition and at all levels within the workforce.

1.2 AfN is the voluntary regulator for qualified nutritionists. We protect and benefit the public by promoting nutrition and public health and championing high standards of practice in the nutrition profession. We maintain a competency-based register of individuals who are qualified and competent in nutritional science and practice and agree to uphold professional and ethical standards through a code of conduct. Only individuals who meet these high standards in evidence based science and professional practice can join and remain on the Register.

1.3 Registered Nutritionists occupy important positions, often with strategic input, in policy and service functions throughout the NHS and private healthcare, public health, in animal welfare, academia and the food sectors (retailing, service, manufacturing and aspects of agriculture) and across the field of sports and exercise nutrition.

1.4 The Association accredits over 60 undergraduate and postgraduate courses in nutrition and promotes high standards of competence, skill and ethical conduct. Each year approximately 450 students qualified in the science of nutrition with a strong all round skill set and a firm understanding of and commitment to professional responsibility and accountability graduate from AfN accredited courses.

1.5 In addition, following completion of two projects, the first funded by the Department of Health under the Third Sector Investment Programme entitled Improving Capacity, Confidence and Competence in Nutrition across the Workforce, and the second funded by Public Health England to develop Workforce Competence Framework in Nutrition for Catering, Fitness and Leisure, we have launched, with Public Heath England, our Certification Scheme to reduce nutrition-related inequalities by improving the capacity, confidence and competence of the frontline nutrition workforce. This Certification Scheme assesses the training and competence in nutrition for those who work or volunteer in health, social care, catering, sport, fitness and leisure at Levels 1, 2, 3 & 4 on the Qualifications and Credit Framework.

Our Response

2.1 We understand the purpose of the consultation is to seek views on its proposed curriculum framework for 'functional dietetic practice' to meet the registration standards of the Health & Care Professions Council and consists of;

- BANT Dietetic Curriculum Framework
- Functional Dietetics Curriculum Framework FAQ
- 'Understanding the Differences' Poster

2.2 We note a robust and credible curriculum already exists for the admittance of individuals to the HCPC register of dietitians, which has been developed by the dietetic community and its professional body, the British Dietetic Association (BDA). This curriculum holds the confidence of government, patients, stakeholders and the public and assures all those registered are suitably qualified and competent to provide evidence-based, scientific individualised dietetic advice to patients and the public. The proposed BANT curriculum does not meet the same robust criteria, resulting in a risk to both public confidence in the title of dietitian and potentially to the scientific credibility and safety of the information provided to patients. If the purpose of the curriculum framework for 'functional dietetic practice' is to establish a new professional title, that of 'functional dietetic practice,' such matters are more properly the remit of the Complimentary and Natural Healthcare Council (CNHC) BDA or HCPC as appropriate and subject to wider consultation regarding the formation of multiple use of titles within the dietetic field.

Your comments are opaque and not helpful as a Consultation response: can you please detail why the BANT curriculum does not meet the same robust criteria? There is no proposal for a new title. BANT has been approached by existing RDs who wish to adopt a different model of practice.

2.3 The response to the sixth question on page one of the FAQ sheet published by BANT states that courses currently approved by HCPC may be provided by private training providers. It is of course a fact that private universities with degree awarding powers exist in the United Kingdom. However, they occupy a limited role in the marketplace for professional qualifications and it is a normal requirement within the professions (both in healthcare and in the wider professions; law, accountancy, architecture, engineering, etc.) for qualified individuals to hold a first degree or relevant postgraduate qualification combined with supervised or monitored periods of professional practice. It is therefore highly unlikely a private training provider without degree awarding powers would have the credibility, resources or imprimatur to meet statutory requirements for course recognition or approval, and for the individuals who complete such courses to have the standing equivalent to professionals qualified in more-long established professions. In addition, our experience of university programme accreditation demonstrates only higher education institutions (as opposed to provide providers) have the appropriate quality assurance, external examiner, review and assessment arrangements to give confidence professional standards can be maintained.

We trust that HCPC knows how to do its job properly.

2.4 The BANT identification of dietetic practice as currently regulated by HCPC as one solely resting within the NHS and serving a public sector function is incorrect (as in the poster). Dietitians work in a range of private, commercial, food service and public/ policy functions at individual and population level, where dietetic practice is clearly based on scientific evidence. Dietitians are highly trained autonomous heathcare practitioners capable of responding to a variety of complex clinical needs, whose scope of practice will necessarily change and develop over the course of their career, requiring a commitment to continuing professional development and the maintenance of professional competence. It is factually incorrect to state that dietitians are not person-centred and use a one-size-fits all approach. Dietitians are highly trained and skilled at being able to identify scientifically-sound evidence and interpret this into individualised advice, taking into account the scientific evidence for individual variation in nutrient requirements and the fact that the effect any nutrient has on metabolic processes can vary between individuals.

As autonomous practitioners, Registered Dietitians who now wish to adopt a functional model of practice are using their skills to meet their professional obligations. Moreover your statements in 2.4 are in complete contradiction to those in 2.6 below.

2.5 We understand from the additional information published by BANT alongside the framework that the proposal is for HCPC to be asked to approve programmes which do not include periods of practice placements. We would be extremely concerned if the HCPC were to approve programmes which do not include periods of practice placements. It is vital that, upon graduation, healthcare practitioners eligible for HCPC registration are competent and capable, and as such, practice placements and the consequential exposure to patient and public safety and care are an essential element of healthcare practitioner training and education. Such placements must offer students a range of exposures to develop multi and inter-professional skills, leadership and clinical skills, be clearly monitored and assessed, and quality assured by the placement provider and higher education institution.

This is incorrect. BANT is clear that practice-based learning is a critical element of training to develop the skills necessary for professional practice.

2.6 The poster published by BANT as part of its consultation contains an implicit criticism of the standard scientifically-proven tools used in current dietetic practice, as listed in the poster's right-hand column. It should be noted that these are the accepted resources published by the UK Government and developed by expert Registered Nutritionists and Dietitians using sound scientific research which has been translated into Government policy. Criticism of the use of these scientifically-sound resources as the basis for dietetic practice advice to those can only indicate the BANT proposal supports non-evidence based nutrition practice, which must cause huge concern in patients and the public. We also note the BANT draft Curriculum Framework includes multiple references to other unsafe and unscientifically evidenced topics, which we see as evidence of the unlikely success of the draft curriculum at this stage.

You will note that the BDA does not endorse using one-size-fits-all Government approved tools in clinical practice but rather states that dietitians would not be meeting their statutory obligations if they did not individualise their recommendations. Your reference to 'unsafe topics' is again opaque: can you please give precise examples to which we can respond. We shall want to cover these aspects in a further submission to the HCPC.

UNDERPINNING PRINCIPLES
FOOD AND HEALTH
NUTRITION AND HEALTH FRAMEWORK PROCESS
DETOX 4 LIFE
DIETARY ACID-BASE LOAD
FOOD REACTOME

FUNCTIONAL DIETETICS
UNDERPINNING PRINCIPLES

FUNCTIONAL DIETITIAN

Uniquely trained to understand how nutrients and other food components influence the function of the body, protect against disease, restore health, and determine people's response to changes in the environment.

BIOCHEMICAL INDIVIDUALITY

Understanding and appreciating the importance of variations in metabolic function deriving from genetic, epigenetic and environmental differences among individuals.

PATIENT CENTRED

Recognition of the evidence that supports a patient-centred approach rather than a disease-centred approach. One-size-fits-all is not appropriate in the personal genome era.

WEB-LIKE INTERACTIONS

Human physiology functions as an orchestrated network of interconnected systems, rather than individual systems functioning autonomously and without effect on each other.

PROMOTION OF ORGAN RESERVE

As the means to enhance health span by maintaining genomic stability and mitochondrial capacity so decreasing morbidity.

DYNAMIC BALANCE OF INTERNAL AND EXTERNAL FACTORS

Understanding that resilient homeostasis (the buffering capacity to respond to a perturbation) is important for physiological equilibrium.

HEALTH

Health is an individual's metabolic flexibility and capacity to adapt physically, cognitively and socially to continuing changes in the environment to maintain complete well-being and not merely the absence of disease or infirmity.

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2. Van Ommen B., Van Der Greef J., Ordovas J., Daniel H. Phenotypic flexibility as key factor in the human nutrition and health relationship. Genese & Nutrition. 2014;Q(5):423

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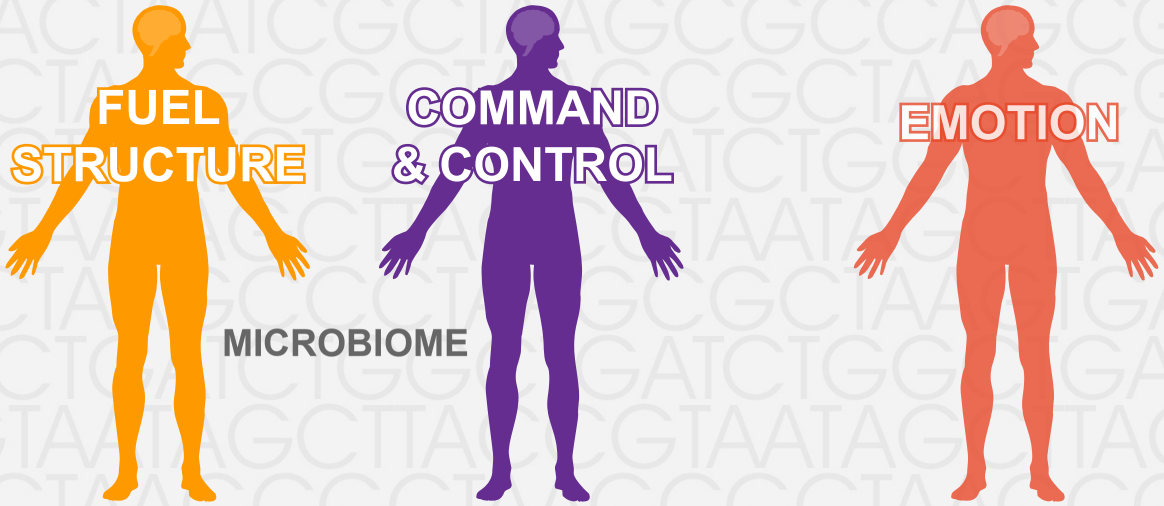
THE SEAL OF EXCELLENCE FOR NUTRITION HEALTH PROFESSIONALS

FOOD AND HEALTH

WHY DO WE NEED TO EAT?

BODY ⟷ **SOUL**

Protein
Fat
Carbohydrates
Fibre
Vitamins
Minerals
Phytochemicals
Other bioactives
Water



HIERARCHY OF NETWORKS
Organismal
Organ networks
Tissues
Cell networks
Genetic

ACTION
Energy
Metabolism

INFORMATION
Gene expression
Genomic stability

PLEASURE
Social interaction
Stress reduction

WHAT IS A NUTRIENT?

A nutrient is a constituent of a diet, natural or designed, that plays a unique biochemical or structural role in a function. A nutrient can serve as:

- *an energy yielding substrate*
- *a precursor for the synthesis of macromolecules or of other components needed for normal cell differentiation, growth, renewal, repair, defence and/or maintenance*
- *a signalling molecule, cofactor or determinant of normal molecular structure and function, and*
- *a promoter of cell and organ integrity*

NUTRITION AND HEALTH
PRACTICE FRAMEWORK

DRIVERS FOR PERSONALISED NUTRITION (P4)

PREDICTIVE
PREVENTIVE
PERSONALISED
PARTICIPATORY

- *Peak performance*
- *General well-being / anti-ageing*
- *Family history / targeted risk-reduction*
- *High risk occupation / environment*
- *Poor response to treatment*

GENETIC PROFILING

Broad or targeted

PHENOTYPE ASSESSMENT

Broad or targeted biomarker or functional assessment

PERSONALISED NUTRITION AND LIFESTYLE ADVICE
(including risk assessment)

PHENOTYPE ASSESSMENT

Digestion / Absorbption and microbiological markers.
Cardio / Circulatory markers.
Inflammatory / Immune markers.
Redox balance + Oxidative stress + Mitochondrial function.
Detox / Biotransformation / Excretory function.
Hormones and neurotransmitters.

Lifelong iterative process

Transgenerational epigenetic inheritance. Nutrition and environment in utero. Dynamical interactions from small or large perturbations, eg: stress, medications, gene transcription changes / epigenetic modifications, CLOCK mechanisms, age-glycosylation, nitrosative / oxidative stress, oral and gut microbiology.

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FUNCTIONAL DIETETICS
THE CONSULTATION PROCESS

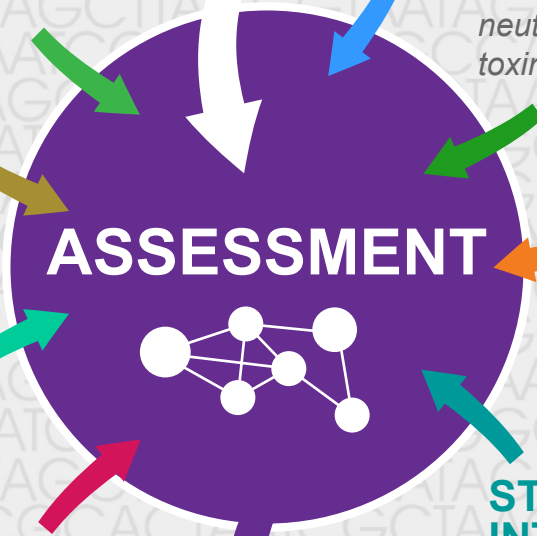
CLIENT GOALS

ENVIRONMENTAL INPUTS
Nutrition/hydration, sleep and relaxation, excercise/movement, physical trauma, environmental pollutants, micro-organisms.

GUT FUNCTION
Digestion, absorption, elimination.

DEFENCE AND REPAIR
Immune system, inflammatory processes, infection and microbiome.

MIND AND SPIRIT
Mental, emotional and spiritual influences. Stress / resilience, relationships / networks.



HORMONE AND NEUROTRANSMITTER REGULATION
Communication, immune messengers, neuro-function.

DETOXIFICATION
Biotransformation and neutralisation and elimination of toxins and metabolic byproducts

ENERGY PRODUCTION / OXIDATIVE STRESS
Energy regulation and mitochondrial function.

STRUCTURAL INTEGRITY
From the subcellular membranes to the musculo-skeletal system.

INDIVIDUALISED PROGRAMME
Integrates antecedents, triggers, and mediators with client's food reactome: e.g. food sensitivities, dietary imbalances, nutrient deficiencies, disturbed gut flora.

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DETOX 4 LIFE

PRESERVING GENOMIC STABILITY

GSTTI GSTM1 NAT1 NAT2 GSTT1 SOD1 SOD2 EPHX CYP1* CYP2* CYP3* COMT

GENOTYPE

TOTAL TOXIC BURDEN

By-products of metabolism

Heavy metals

e.g. mercury, lead, cadmium

Chemicals

e.g. drugs, solvents, pesticides, herbicides, food contaminants, plasticisers, endocrine disruptors

Cooking toxins

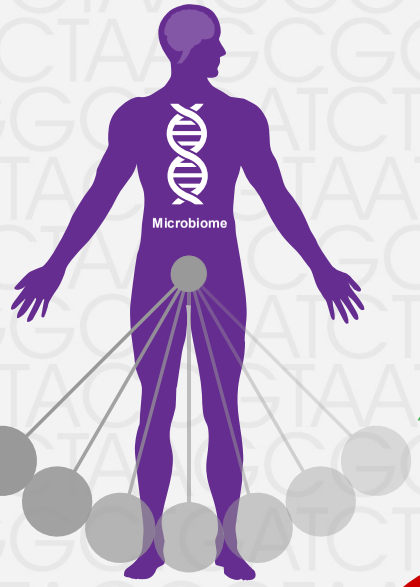
acrylamide, HCAs, PAHs

Environmental pollutants

e.g. POPs, VOCs

Time course/Exposure

Adiposity



HEALTH

SPECTRUM OF HEALTH

DISEASE

PHENOTYPE

NUTRITIONAL MODULATORS

For cellular detoxification:

Phase I inducers

B vitamins, glutathione, flavonoids, indol-3-carbinol, silymarin

Phase I inhibitors

e.g. naringenin, naringin, curcumin

Phase II supporters

isothiocyanates, curcumin, Fe, Se, Zn, Cu, Mg, B vitamins, L-methionine, N-acetylcystenine, glycine, reduced glutathione

ROS scavengers

Vitamins C and E, carotenoids, a-lipoic acid, flavonoids

Lipid membrane protectors

Vitamins D and E

Epigenome stability

folate, genistein, EGCG, Se

DNA Repair

Zn, Se, Mg, B12, folate, CoQ10

Chelators

Se, Mg, Ca, Zn, Fe

Reduction of exposure and the right nutritional programme for your genotype, including appropriate nutritional modulators, can reduce risk of disease, combat inflammation, support mitochondrial capacity and genomic stability.

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ACID-BASE LOAD

SOME EXAMPLES OF COMMON FOODS

ALKALINE ← → **ACID**

			MEATS FISH	Cold Water Fish	Turkey, Chicken, Lamb	Pork, Beef, Shellfish
	Breast Milk	Goat Milk, Goat Cheese	**DAIRY**	Eggs, Butter, Yoghurt, Cottage Cheese	Soy Cheese, Raw Milk	Cheese, Homogenized Milk, Ice Cream
		Amaranth, Millet, Wild Rice, Quinoa	**CEREALS GRAINS**	Sprouted Wheat Bread, Spelt, Brown Rice	White Rice, Corn, Buckwheat, Oats, Rye	Wheat, White Flour, Pastries, Pasta
Asparagus, Onions, Raw Spinach, Broccoli, Garlic	Squash, Beets, Celery, Lettuce, Courgettes, Sweet Potatoes	Carrots, Tomatoes, Fresh Corn, Mushrooms, Cabbage, Peas, Olives	**VEGETABLES BEANS**	Cooked Spinach, Kidney Beans, String Beans	Potatoes, Pinto Beans, Soybeans	
Lemons, Watermelon, Limes, Grapefruit, Mangoes, Papayas	Melons, Grapes, Papaya, Kiwi, Berries, Apples, Pears, Raisins	Oranges, Bananas, Cherries, Pineapple, Peaches	**FRUITS**	Plums	Sour Cherries, Rhubarb	Blueberries, Cranberries, Prunes
Lemon Water, Herb Tea	Green Tea	Ginger Tea	**DRINKS**	Tea	Coffee	Beer, Soft Drinks

1 Dong L, Krewson EA, Yang LV. Acidosis Activates Endoplasmic Reticulum Stress Pathways through GPR4 in Human Vascular Endothelial Cells. International Journal of Molecular Sciences. 2017; 18(2):278

2 Kiefte-de Jong, J.C., Li, Y., Chen, M. et al. Diet-dependent acid load and type 2 diabetes: pooled results from three prospective cohort studies. Diabetologia 2017 60: 270.

3 Ragnar Rylander, Tommi Tallheden, Jürgen Vormann. Acid-base conditions regulate calcium and magnesium homeostasis. Magnesium Research 2009;22(4):262-265

4 Welch, A.A., Mulligan, A., Bingham, S.A. and Khaw, K. Urine pH is an indicator of dietary acid–base load, fruit and vegetables and meat intakes: results from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Norfolk population study British Journal of Nutrition 2008 99(6), pp. 1335–1343

5 Thomas Remer, Triantafillia Dimitriou, and Friedrich Manz. Dietary potential renal acid load and renal net acid excretion in healthy, free-living children and adolescents American Journal of Clinical Nutrition 2003 77: 5 1255-1260

FOOD REACTOME

Food is information for the epigenome

ANAPHYLAXIS

ACUTE MEDICAL REACTION

Seek medical attention

CHRONIC CONDITION

GASTRIC ACID INSUFFICIENCY

GENETICS

DIGESTIVE ENZYME INSUFFICIENCY

NUTRIENT INSUFFICIENCY

Inflammation

Including: brain, skin, lungs, gut, joints, eyes, sinuses

Gut Bacteria

Gas / bloating

Parasite infection

Gut permeability

Yeast Overgrowth

Constipation / diarrhoea

Weight gain / adiposity

Fatigue

Disturbed sleep

DIETARY EXPOSURES

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CONSULT A REGISTERED NUTRITIONAL THERAPIST TO UNDERSTAND AND MANAGE YOUR INDIVIDUAL REACTOME