Nutritional training in gastroenterology

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Despite the clear importance of nutritional knowledge for health professionals, such education has long been notoriously patchy at both undergraduate and postgraduate levels. Gastroenterologists in particular have a special responsibility to provide advice and expertise, not only in general nutrition but also in artificial nutrition support in the setting of extreme risk of malnutrition and intestinal failure. Recently, with the restructuring of undergraduate medical teaching and the advent of modernising medical careers, curricula have been examined in detail and training programmes have become competency based. These changes, together with increasing public expectations regarding both the importance of nutrition and ability of doctors to provide advice and guidance, have provided an opportunity to reassess nutritional training at all levels of medical education. In this review, the authors consider the factors which may have hindered the progression of nutritional education for doctors, and gastroenterologists in particular, as well as the steps which have been taken in recent years to address these issues and move such training forward. There is now a real opportunity to improve the quality of nutrition training in gastroenterology. If this can be achieved, all gastroenterologists of the future, instead of shrinking from difficult nutritional issues, should be able to manage them with confidence and enthusiasm no matter what their subspecialty; indeed, an increasing proportion may become nutrition subspecialists in their own right.

Introduction

The importance of nutrition in health and disease has been recognised from the first publications of medical texts: "Let food be your medicine and medicine be your food"—translated from the Aphorisms of Hippocrates, c.400 BC. Hippocrates also noted the dangers of a restricted diet and described the problems of refeeding.¹ Over the centuries, much valuable information has been garnered through observation of both epidemiological phenomena such as the effect of war and famine and also through case studies of individuals or

patient groups with specific nutritional issues.

Rapid advances in technology over the past century have enhanced our ability to understand the complex mechanisms of disease and to develop the means to investigate and treat these conditions. Such increasing 'scientificisation' has led to subspecialisation of medicine, both in education and delivery of care, separating mind from body and organ from organ. A further consequence of such a culture shift is the move from observational studies to research involving parameters, which can be easily measured and quantified, as well as attraction to ever more sophisticated technology for diagnosing and treating disease.

The study, education and treatment of nutrition in health and disease do not sit comfortably in this culture of organ specific evidence based medicine, with its demand for instant and reproducible results and treatments. There are many reasons why this is the case:

- It is difficult to design meaningful double blind, randomised, placebo controlled trials of important nutritional interventions for logistical and ethical reasons. Therefore, published studies are often perceived to be of poor quality or having limited applicability.
- Nutritional interventions may require time to produce positive results, and often confounding factors make data difficult to interpret and benefits less obvious.
- Nutrition as a theme cuts across all specialties and should rightfully be the province of every clinician. Unfortunately, as a result, it is often assumed to be addressed by others and, with no one taking ownership, becomes lost both in education and clinical practice.

Ironically, therefore, despite increasing public awareness of the importance of nutrition in health and disease and expectations regarding the ability of doctors to

provide nutritional advice, the medical profession is often deficient in this area.

A number of studies have recorded dissatisfaction among UK medical students, general practitioners and hospital doctors with both their undergraduate and postgraduate training in nutrition.^{2–5} The training that is delivered is reported to be incomplete, with insufficient time allocated.⁶

Nutritional knowledge, including assessment and management of under-nutrition, has also been found to be poor among doctors, medical students, nurses and pharmacists.^{3 7–11} Despite this lack of training, several studies have found that patients expect and trust doctors to be able to provide them with dietary advice.^{12–14}

How can this be addressed?

Clearly, given this disparity between public expectations in nutrition and a medical workforce which seems ill-equipped to meet such needs, action has been required and a large number of initiatives, both at undergraduate and postgraduate levels, have arisen in recent years.

Following publication of the Black report (Inequalities in Health) in 1980,¹⁵ in which it was acknowledged that nutrition was responsible for many of the diseases in the UK, the British Nutrition Foundation Task Force was established. Their report, published in 1983,¹⁶ highlighted the need for better training in diet and nutrition for doctors, noting that limited time was given to nutrition teaching in both the preclinical and clinical years of UK medical schools.¹⁷

The Kings Fund in its 1992 report, 'A positive approach to nutrition as treatment', concluded that by addressing nutrition, the potential benefits at an individual, organisational and national level were far reaching.¹⁸

Following the publication of the White Paper, 'The health of the nation', in 1992, a National Nutrition Task Force was established. This called for the development of a core curriculum in nutrition for healthcare professionals,^{19–21} the first time that specific learning outcomes had been identified.

The Royal College of Physicians (RCP) has also been taking an increased interest in the role of nutrition in medicine. In 2002 it published a working party report entitled 'Nutrition and patients: a

doctor's responsibility' which highlighted the importance of nutrition in the clinical care of patients.²² In addition, the College established an Intercollegiate Group on Nutrition (ICGN) with representation from all of the medical royal colleges. Its original purpose was to provide courses in nutrition for medical professionals although, recently the ICGN has also re-convened an undergraduate nutrition implementation group with representation from all UK medical schools. This group has agreed some key learning objectives for undergraduate nutrition education²³ which have been signposted in the most recent edition of *Tomorrow's doctors* published in 2009.²⁴

The introduction of the UK Foundation Programme and Modernising Medical Careers has transformed the training of junior doctors and provided an opportunity to address the perceived failings of nutrition training. Nutritional care is a core competency in the first year of the foundation programme. Every doctor should therefore be assessed in some aspect of nutritional care before completing the foundation stage. Core medical training requires that the trainee should be knowledgeable of the impact of disease on nutritional state and that of malnutrition on clinical outcomes. The principles behind and routes available for nutrition support and the role of the nutrition support team (NST) should be understood. The trainee must be able to assess nutritional status, and recognise when to institute nutritional support, when to involve the NST and that cultural and religious issues surrounding nutrition may be present. Assessment of the trainee can be achieved through case based discussion and postgraduate examination questions. The wide availability of information from the royal colleges in particular leaves the individual in no doubt as to what is expected in terms of learning objectives.

What are the special issues in gastroenterology?

Although nutrition should be the province of every clinician, there is an understandable expectation that gastroenterologists should have specific expertise (particularly in artificial nutrition support (ANS)), given that the digestive tract is intimately involved with many of the processes which govern nutritional health. Indeed, it is intriguing how few gastroenterologists

have significant interest or awareness of the implications of intestinal failure on nutritional and general health and the effect on other disease processes.

This contrasts with other medical specialties where failures of their specific organ systems are treated with appropriate concern and recognition (both in terms of training, research and clinical management).

In order to be able to address this problem, it is important to understand the possible reasons for its existence.

- With rapid advances in imaging and endoscopic techniques in other areas of gastroenterology, nutrition, which still relies very much on conventional skills such as good history taking and observational powers, is relatively underemphasised. Indeed, there may be few good role models, even at medical school (see figure 1), and nutrition is often seen to be the province solely of dietitians.
- Assessment and delivery of ANS should ideally be provided by a multidisciplinary team. Until recently, such teams have been available in only a minority of trusts and therefore providing optimum treatment (and training) has been difficult. Also, in order to gain maximum benefit, ANS may have to be given for considerable time, an unpopular concept in today's world where clinicians are under constant pressure to reduce hospital lengths of stay.
- Gastroenterology trainees have increasing and competing demands on their time while the European working time directive is constraining available training hours. Endoscopy training in particular, with its increasing stipulations regarding training and assessment objectives, tends to take high priority for most trainees at the expense of other areas of gastroenterology, including nutrition.
- Perhaps most importantly, assessment of nutritional knowledge, skills and attitudes among gastroenterology trainees has been highly variable, and in some areas almost non-existent. Nutritional training has therefore remained a low priority for many registrars.

The way forward...

Despite the above factors, which have stifled progress, there are now an increasing

Figure 1 How often final year students feel that the importance of nutritional management in the care of patients has been emphasised by senior clinicians in their experience to date.⁵

number of drivers which are likely to work together in improving gastroenterology nutrition training in the years ahead.

Public expectation of doctors' nutritional knowledge and management of both inpatients and outpatients is taken very seriously. In conjunction with a number of national guidelines and recommendations against which trusts are assessed, the profile of nutrition is achieving increasing prominence among management as well as clinicians. The National Institute for Clinical Excellence published guidelines in 2006 which outlined key priorities for nutrition support in adults.²⁵ The recently published joint RCP/BSG report on nutritional issues towards the end of life has added further weight to the importance of tackling feeding difficulties.²⁶

Feedback from trainees is also given increasing weight and credence. A recent report from a trainee in gastroenterology survey suggested that nutritional support and intestinal failure were the two main areas where trainees felt unlikely to gain competence by the end of their training (see figure 2).²⁷

With increasing emphasis being placed on the value of nutrition education, at both medical undergraduate and junior postgraduate levels, specialty training committees such as gastroenterology have inevitably had to examine their own provision of training and assessment. The latter is key in terms of driving trainee learning and encouraging them to re-appraise their priorities.

The new knowledge based Specialty Certificate Examination in

Figure 2 Views on training. Trainees in gastroenterology survey, 2008.²⁶ IBD, inflammatory bowel disease; LFT, liver function test; SBS, short bowel syndrome; UGI bleeding, upper gastrointestinal bleeding.

gastroenterology was introduced in 2008 and will be mandatory for all specialty registrars to pass in order to obtain their certificate for completion of training. This test stipulates that it should include a minimum number of nutrition related questions.

Increasing emphasis on workplace based training and assessment presents a unique opportunity to develop a core training module for gastroenterology trainees, based around experience with the multi-disciplinary NST. Such increased training has been acknowledged to be desirable by the vast majority of training programme directors throughout the UK as far back as 2003. However, at that time, less than half of the hospitals had NSTs and it was felt that only 20% would be able to provide specific training in nutrition for gastroenterologists (Forbes 2002, BAPEN, personal communication).

Fortunately, along with the drivers mentioned above, as well as pressure from multidisciplinary organisations such as the British Association for Parenteral and Enteral Nutrition (BAPEN), there has been a significant increase, both in the number of consultants appointed with an interest in nutrition and establishment of trust NSTs throughout UK. In a survey undertaken in 2008 of gastroenterology consultants in 174 acute trusts throughout the UK, 84% of respondents claimed to have at least one consultant with an interest in nutrition, 73% had an NST and 75% said that they would be interested in principle in providing a training module in nutrition.²⁸

The internet has transformed the way in which we are able to access information

and also provides huge scope for the development of e-learning modules,²⁹ a panoply of which already exist through organisations such as the British Medical Association, American Gastroenterology Association, Doctors.net, BAPEN, etc. The European Society for Clinical Nutrition and Metabolism has also developed an online modular training programme in clinical nutrition.³⁰ The profile of this 'life long learning' programme needs to be raised such that it is effectively utilised.

Back to the future for nutritional training in gastroenterology...?

So has the time finally come when formal nutritional training in gastroenterology is both feasible and desirable for both trainers and trainees?

Clearly there will be challenges ahead. A workplace based training and assessment module in core nutrition would be a significant step forward in the delivery of training in nutritional gastroenterology. Such a module has already been proposed, in collaboration with specialist nutrition bodies such as BAPEN, British Society of Gastroenterology small bowel and nutrition committee, RCP Nutrition Committee and ICGN. It is predicated on the basis that trainees will ideally spend a defined period (~6 months) attached to the NST within their trust. They will receive multidisciplinary training across a broad range of nutritional subjects, including nutritional screening and assessment, and provision and management of ANS.

However, at the present time it remains up to individual deaneries and trusts to decide how they wish to deliver this locally and how they would engage with their allied health professional colleagues with regard to contributing to both training and assessment. Requirement for workplace based assessment at all stages of training is proliferating and it is clearly important that such commitment and responsibility will be recognised in individual job plans.

Guidance at a national level would have a significantly higher impact and it is to be hoped that the requirement for more standardised and structured core nutrition training will be recognised and included in the revised curriculum for gastroenterology to be published in 2010.

There is also likely to be an opportunity for a small number of gastroenterology trainees to undertake a more advanced

module in nutrition training, with increased emphasis on the management of patients with type 2/3 intestinal failure and home parenteral nutrition. Again there will need to be some detailed planning regarding optimum numbers and geographical locations of such placements to ensure maximum take up and minimum disruption to core nutrition for other trainees at the nominated institutions. The national Strategic Framework for Intestinal Failure and Home Parenteral Nutrition Services, due to be implemented by 2012, will address many of the challenges surrounding provision of high quality care for this patient group. Resulting changes in the provision of intestinal failure services throughout England will inevitably create significant opportunities in the future for the appointment of suitably qualified consultant gastroenterologists. It is to be hoped that those who have undertaken more advanced nutritional training within gastroenterology will be ideally placed to take up such positions that may become available within regional, supra-regional and national intestinal failure units.

Such proposed changes in nutrition training for gastroenterologists are to be commended and are long overdue. If it can achieve the magnitude of seismic shift that endoscopy training has demonstrated possible, nutrition may yet, in the future, become the gastroenterology subspecialty of choice.

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