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Short Communication

Proceedings of the Second International Summit on Medical Nutrition Education and Research

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NNEdPro directors including SR, PD, DDR, and MRR. See reference² for details of the inaugural Summit.

Introduction

On June 17–18, 2016, the Need for Nutrition Education/Innovation Programme (NNEdPro) hosted the Second Annual International Summit on Medical Nutrition Education and Research at Wolfson College, Cambridge, UK. The Summit aimed to advance understanding for what and how to teach students and health professionals about nutrition to have public health impact, as well as how to progress current research priorities in the field. Sponsors and key attending organizations are presented in the acknowledgements and poster presentations are available online.¹ This event was approved by the Royal College of Physicians and Royal Society of Biology for Continuing Professional Development (CPD) points. Speakers and key messages are provided in [Table 1](#). The event was chaired by CL and LB, with support from all

Day 1: The Great Nutrient Debate

The Summit began by considering what information medical and other health students should be taught regarding macro and micronutrients, interpreting dietary guidelines and phytochemicals. Questions were posed for debate regarding how to translate evolving research findings into meaningful teaching and learning experiences.

The first speaker, LT, presented on the role of macronutrients in the diet, including the need to include nutrition basics in medical education such as energy balance, macronutrients, and the relationship between the two. Summarizing the evidence regarding regulation of dietary intake which supports a hedonistic response to food, LT noted that even when full, if food looks good people are likely to eat it. LT concluded with the suggestion that students need to know that the hedonistic response to dietary intake may have a greater influence on obesity than the macronutrient or energy content of foods.

Next, MK presented on whether the American dietary guidelines are enough to support individual healthy behaviours. MK argued that while on the surface, general

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Table 1 – Speakers and key messages.

Speaker	Initial in text	Organization	Country	Key messages
Day 1: The Great Nutrient Debate Professor Luc Tappy	LT	University of Lausanne	Switzerland	The need to include nutrition basics into medical nutrition education such as energy balance, macronutrients, and the relationship between the two.
Professor Martin Kohlmeier	MK	University of North Carolina, Chapel Hill	USA	General statements that form the American Dietary Guidelines may look appropriate, but do not represent the ethnic variability of the US population.
Professor Cary Nowson	CN	Deakin University	Australia	There is evolving evidence to support intake recommendations for vitamin D and it is difficult to determine appropriate intake values.
Professor Daniele Del Rio	DDR	University of Parma	Italy	There is emerging evidence for phytochemicals in nutrition and health, but the media often misinterpret the results when communicating nutrition science research to the public.
Day 1: Global Open Data for Agriculture and Nutrition (GODAN) Session André Laperrière	AL	GODAN	UK	GODAN promotes proactive sharing of data to make information about agriculture and nutrition available, accessible and usable to help address the urgent challenge of ensuring world food security.
Dr Elizabeth Dodsworth	ED	Centre for Agriculture and Biosciences International	UK	Evidence-based decision-making: managing nutrition information and data.
Dr Veronica Tuffrey	VT	Independent public health nutritionist	UK	Nutrition surveillance in low-income countries—time to refocus?
Patrizia Fracassi	PF	Scaling Up Nutrition	Europe	Data use for decision making: walking the talk.
Dr Sylvia Szabo	SS	Save the Children	Europe	Accountability for action: filling evidence gaps to ensure well-being of children and advance Sustainable Development Goals (SDG2).
Dr Daniela Beltrame	DB	Biodiversity International	Brazil	Bridging the gap: building capacities and networks to analyze and use nutrient data on edible biodiversity in Brazil.
Day 1: Panel Discussion—What should we teach our students? Dr Hans Hogan	HH	Cambridge University Health Partners	UK	Nutrition basics and information sourcing and critical analysis skills are the key nutrition areas that should be taught to medical students.
Dr Somnath Bhar	SB	NELICO	India	
Pauline Mullholland	PM	BDA	UK	
Dr Melissa Olfert	MO	SNEB	USA	
Dr Anand Ahnkari	AA	University of Nottingham	UK	
Dr Shashikant Ahnkari	SA	Halo Medical Foundation	India	
Professor Christi Deaton	CD	University of Cambridge	UK	
Day 2: Medical Nutrition Education and Research Professor Sumantra Ray	SR	NNEdPro	UK	Through education, NNEdPro aims to help health and medical professionals to provide nutrition care using evidence-based information.
Keynote: Dr Rachel Pryke	RP	NICE and RGCP	UK	There is potential for training programs to improve the competence of GPs to provide nutrition care.
Dr Minha Rajput-Ray and Pauline Douglas	MRR PD	NNEdPro	UK	The importance of good nutrition and hydration in the workplace.

Dr Lauren Ball, Katelyn Barnes, Dr Jennifer Crowley and Celia Laur	LB KB JC CL	Griffith University, Griffith University, University of Auckland, University of Waterloo	Australia, New Zealand and Canada	Global priorities for research in medical nutrition education.
Day 2: Panel Discussion—Priorities in delivery and assessment of nutrition				
Melita Avdagovska	MA	University of Alberta	Canada	Nutrition and referrals to appropriate health professionals should be incorporated into practical assessments for medical students.
Dr Melissa Olfert	MO	SNEB	USA	
Dr Glenys Jones	GJ	Association for Nutrition	UK	
Dr Angela Madden	AM	University of Herefordshire.	UK	
BDA = British Dietetic Association; GODAN = Global Open Data for Agriculture and Nutrition; NICE = Nutrition Education Leadership for Improved Clinical Outcomes; NELICO = National Institute For Health Care Excellence; NNEdPro = Need for Nutrition Education/Innovation Program; RCGP = Royal College of General Practitioners; SNEB = Society of Nutrition Education and Behavior; UK = United Kingdom; USA = United States of America.				

statements within the guidelines may be appropriate, students need to know that the guidelines do not represent the ethnic variability of the USA population. Dietary guidelines do not account for individual variance in health, or ability to metabolize food and nutrients. While this may make dietary guidelines inappropriate for some individuals, they are appropriate for promoting broad healthy eating behaviours. In an ever changing food environment, and with high individual variation, it is difficult to make individualized nutrition recommendations. Despite this, students need to recognize that national dietary guidelines should not be dismissed and their appropriate use is significant for public health impact.

To provide a specific example, CN presented on vitamin D and the evolving evidence to support intake recommendations. CN highlighted the variability of vitamin D status among international populations to illustrate the difficulties in determining appropriate intakes for optimal health. CN suggested that when using guidelines for vitamin D, students need to know to account for variable climates, different cultural dress requirements, and competing guidelines around skin cancer prevention.

DDR presented on the emerging evidence for phytochemicals in nutrition and health, focussing on common misinterpretations by the media when presenting results to the public. Students need to be aware of these mistakes and watch for ambiguous messages on dietary intake and advertised health benefits. Many foods, such as fruits and vegetables, contain polyphenolic compounds, yet media tend to focus on popular foods such as chocolate and continually publish unsubstantiated headlines. DDR concluded that because of the popularity and potential application of research in this field, students and health professionals need to be aware of the evolving nature of this evidence and critically appraise what they hear or read in public forums.

Global Open Data for Agriculture and Nutrition (GODAN)

To take a broader public health approach regarding what to teach students, GODAN conducted a session on the importance of information sourcing, critical analysis of publically available data, and the sharing of data through an open repository.³ GODAN promotes proactive sharing of data to make information about agriculture and nutrition available, accessible and usable to help address the urgent challenge of ensuring world food security. GODAN's Executive Director, AL, introduced the session and five panellists, ED, VT, PF, SS, and DB who focused on promoting collaboration in research (Table 1).

Panel discussion

A panel discussion on what we should be teaching students concluded the first day. The panel included representatives from the UK, USA, and India (Table 1). This discussion highlighted that nutrition research is constantly evolving and when nutrition experts feel unable to make concrete claims on new evidence, it can be difficult to know what to include in medical and health education. However, panel members agreed that: (1) there is a strong need for key nutrition messages to be included in health and medical curricula; (2) medical and other health professionals must consider

nutrition as important and having impact for patient care and public health; and (3) critical appraisal skills should be taught to help medical and other health professionals differentiate between nutrition *noise* and nutrition *science* so they can provide patients with evidence-based information.

Day 2: Medical Nutrition Education

Keynote

Following a brief introduction by SR, the second day commenced with a keynote presentation by RP (Table 1). RP provided practical suggestions for how GP training programs could improve GPs' competence to provide nutrition care. Suggestions included *conversation-based* training and practical examples of *conversation starters* or *safe openers* to allow patients to direct the conversation and the GP to provide patient centred nutrition care. Training can also highlight when and how to appropriately incorporate other health professionals into patient care. Similar training programs may also be beneficial for other health professionals to begin discussion about nutrition.

Nutrition and workplace well-being

MRR and PD presented on the importance of good nutrition and hydration in the workplace. They highlighted how an individual's capacity to work and be productive in workplace environments is impacted by nutrition and hydration, through availability of and access to food and water. MRR and PD both noted that many people consume a main meal during working hours and advocated for employers to take responsibility for employee health. They called for healthy food options as well as clean drinking water to be made accessible for employees. This issue, while applicable across different workforces, should be emphasized for all health professionals.

Research priorities

The 2015 Summit² highlighted a need to gain a better understanding of what key stakeholders perceived as research priorities in medical nutrition education. KB explained a recent project undertaken by the NNEdPro Group that used a systematic approach to identify and rank research questions raised by international stakeholders in the field. The top three questions included: (1) how confident are doctors and medical students in providing nutrition care?; (2) what are the essential skills for doctors and medical students to learn in nutrition?; and (3) how effective are doctors at improving the nutritional health of patients?

JC discussed that medical student's and GP's confidence has been researched extensively and results demonstrated that they lack nutrition knowledge and confidence to provide nutrition care.⁴ CL discussed that some consensus already exists regarding essential nutrition skills;^{5–7} however, consensus does not mean that these topics are included in the curriculum and more advocacy work is needed. LB explained that demonstrating the effectiveness of doctors is arguably the most important question to answer as it could provide

evidence to improve doctors' confidence in providing nutrition care and could support insertion of nutrition into curricula. LB acknowledged the multifaceted nature and subsequent challenges faced to answer this question with rigour. The proposed mechanism of effectiveness is that increasing the frequency of nutrition care by GPs can improve patient nutrition knowledge and attitudes, and consequently, support patients to adopt healthy nutrition behaviours. This can improve the nutritional status and health outcomes of patients, and of the wider community.

Panel discussion

The final panel discussion focused on delivery and assessment of nutrition education. All panellists agreed that engaging and innovative approaches are required for delivery of nutrition education in health care. Online modules, such as *Nutrition in Medicine (NIM)*⁸ or *WellnessRx*,⁹ were created to support medical students and health professionals, respectively, to increase their nutrition knowledge, skills, and attitudes. Incorporating nutrition into assessment was perceived as important. As a cross-cutting field, nutrition could be incorporated into case studies, simulation experiences, clinical rotations, Objective Structured Clinical Examinations (OSCEs), and more. Panellists stressed that medical and other health students should be aware of nutrition, but are not expected to be experts, thus should be taught how and when to refer to the appropriate health professional.

Final discussions

In the final session, all attendees discussed the next steps regarding what and how we should teach health and medical students as well as professionals, how we can move forward with newly identified research priorities, and the future direction of the NNEdPro Group. Discussion focused on practical needs, such as funding and increased access to information through online repositories. Other discussions focused on the need to use existing resources and collaborate to share knowledge and experiences.

Conclusion

The Summit provided extensive discussion regarding what and how to teach students and the need to collaborate on common goals. Medical and other health professionals need to be aware of the importance of nutrition and be able to provide effective and evidence-based advice to patients and the public. Plans are underway for the 2017 Summit, which will focus on methods and frameworks within implementation science and how to translate evidence into practice.

Author statements

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Key contributors

Key organizations present at the summit included American Society for Nutrition (ASN), British Dietetic Association (BDA), British Medical Association (BMA), Royal College of General Practitioners (RCGP), Society for Nutrition Education and Behavior (SNEB), Cambridge University Health Partners (CUHP), University of Cambridge School of Clinical Medicine, Medical Research Council (MRC), Global Open Data for Agriculture and Nutrition (GODAN). Key speakers are listed in [Table 1](#).

Authorship

KB, JC, LB, and CL were all involved in the drafting, editing and finalizing this article. SR provided oversight and review across the article. All speakers listed in [Table 1](#) have reviewed this article to ensure accurate reflection of their presentations, however were not involved in writing.

Ethical approval

Ethical approval was not required for this article because the risk to summit participants was deemed minimal, and all speakers consented to the inclusion of their details and key messages.

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Competing interests

KB has no conflicts of interest to declare. JC, LB, CL, and SR are core members of the NNEdPro group, which hosted the summit.

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