**TITLE**

Adherence to the Eatwell Guide and Population and Planetary Health: A Rank Prize Forum Report

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**ABSTRACT**

This report summarises a Forum conducted in June 2023 to explore the current state of the knowledge around the Eatwell Guide, which is the UK Government's healthy eating tool, in relation to population and planetary health. The 1.5-day Forum highlighted the limited, albeit promising evidence linking higher adherence to the Eatwell Guide with favourable health outcomes, including reduced overall mortality risk, lower abdominal obesity in post-menopausal women, and improved cardiometabolic health markers. Similarly, evidence was presented to suggest that higher adherence to the Eatwell Guide is associated with reduced greenhouse gas emissions. Presentations were given around cultural adaptations of the Eatwell Guide, including African Heritage and South Asian versions, which are designed to increase acceptability and uptake of the Eatwell Guide in these communities in the UK. Presentations highlighted ongoing work relevant to the applications of the Eatwell Guide in randomised controlled trials and public health settings, including the development of a screening tool to quantify Eatwell Guide adherence. The Forum ended with a World Café-style event, in which strengths and limitations of the Eatwell Guide were discussed, and directions for future research were identified. This Forum report serves as a primer on the current state of the knowledge on the Eatwell Guide and population and planetary health and will be of interest to researchers, healthcare professionals, and public health officials.

## INTRODUCTION

The Eatwell Guide reflects the UK Government's recommendations for a healthy, balanced diet (PHE, 2016c) and was launched in March 2016, replacing its predecessor the eatwell plate as the UK's healthy eating tool (PHE, 2016d; Scarborough et al., 2016). UK dietary recommendations reflected in the Eatwell Guide include consumption of a variety of fruits and vegetables (at least 5 portions/d), fish (2 portions/wk, including one portion of oily fish), and fibre (a recommended intake of 30 g/day for adults), adequate intake of fluid (6-8 cups or glasses/d), and low intake of red and processed meat (≤70g/d), salt (≤ 6g/2363 mg sodium/d), total (≤35% total energy) and saturated (≤11% food energy/≤10% total energy) fat, and free sugars (≤5% total energy) (PHE, 2016c; PHE, 2016b). The Eatwell Guide can also be used to help individuals achieve a balance of healthier, more sustainable foods, which could help reduce the environmental footprint of this diet, improving planetary as well as population health. There is some similarity between the dietary recommendations provided in the Eatwell Guide and other healthy dietary patterns, such as the Mediterranean diet (Siervo et al., 2021; Bach-Faig et al., 2011), Eat-Lancet Reference diet (Willett et al., 2019), and the Dietary Approach to Stop Hypertension (DASH) diet (Sacks et al., 2001). However, in order to increase acceptability and adoption it is modelled around foods which are accessible and familiar to many individuals in the UK.

Despite being widely used in UK policy and clinical practice, knowledge on the impact of the Eatwell dietary pattern on human and planetary health is somewhat lacking, with approaches to quantify and support Eatwell adherence poorly defined. Against this background, in June 2023, funded by Rank Prize, a 1.5-day forum focused on the Eatwell Guide, took place at Newcastle University, UK. It included twenty-four participants (twenty-one in person, two via videoconferencing and one via pre-recorded presentations) from nine different

universities across the UK, ranging from undergraduate through to professorial level. It aimed to consolidate existing knowledge on the Eatwell Guide and population and planetary health, foster collaborations between researchers and practitioners interested in this area, and set the agenda for future research by answering the following questions:

1. What is the current state of the knowledge around Eatwell Guide adherence and population and planetary health?
2. How best can we quantify adherence to the Eatwell Guide in clinical trials and public health settings?
3. What strategies can be put in place to increase adherence to the Eatwell Guide in diverse population groups?
4. What are the priority areas for future research and what are the key challenges likely to be faced?

The Forum included one plenary session and four original research communication sessions. A World Café style event (described later) was also conducted to identify current knowledge gaps and directions for future research. The event was live scribed, to produce a visual summary of key messages and assist with dissemination to a variety of audiences (**Figure 1**). A written summary of the Forum is provided here.

## PLENARY SESSION: EVOLUTION OF THE EATWELL GUIDE

The Forum began with a plenary session from Prof. Louis Levy, who outlined the rationale behind, and processes involved in, developing the Eatwell Guide. Participants heard how the Eatwell Guide (PHE, 2016c) was updated from its predecessor the eatwell plate (PHE, 2016d), to encompass new UK recommendations (e.g., for fibre and free sugar intake) following the publication of various reports from the Scientific Advisory Committee on

Nutrition (SACN), including the, then draft, SACN report on Carbohydrate and Health (SACN, 2003; SACN, 2010; SACN, 2011; SACN, 2015). Non-linear programming was then used to assess how to meet UK Government dietary recommendations (PHE, 2016b; Scarborough et al., 2016) from a baseline of current consumption (using data from the National Diet and Nutrition Survey (NDNS) wave 7 (2008-2011)) while making the fewest changes to commonly consumed foods and drinks (DHSC, 2016; PHE, 2016a; Scarborough et al. 2016). This was supplemented by input from an independently chaired Expert Reference Group and informed by several tranches of public engagement covering socioeconomic, geographical and ethnic diversity spread (PHE, 2016a). Compared with the eatwell plate, the Eatwell Guide incorporated amended and additional wording, changes in imagery and visual presentation. There were no differences reported in focus group testing by geography, socioeconomic group, ethnicity, age nor size or composition of family. This was acknowledged in consumer focus groups to be of educational value and made the Guide easier to understand. Moreover, from the consumer's perspective, it highlighted the divergence of the recommended diet to that which they reported consuming (PHE, 2016a).

Prof. Levy outlined how post-hoc analyses verified the environmental benefits of the Eatwell Guide, with an independent sustainability assessment conducted by the Carbon Trust revealing reduced environmental impact compared with the currently consumed diet (The Carbon Trust, 2016). As outlined in one of the later presentations in this Forum, Scheelbeek et al. (2020) provided further support for the environmental benefits of the Eatwell Guide demonstrating that intermediate-to-high Eatwell Guide adherence was associated with ~30% lower greenhouse gas emissions versus very low adherence. It was also noted that, at the time of development, the cost of a diet consistent with the Eatwell Guide was calculated to be £5.99/d, compared to that of a diet consumed in the National Diet and Nutrition Survey

(NDNS) of £6.02, suggesting that a healthier, more sustainable diet did not necessarily have to be more costly (Scarborough et al., 2016). Given the high rate of food inflation in 2023 (17.4 % in the year prior to June 2023) (ONS, 2023), the cost of food purchasing, including following the Eatwell Guide recommendations, are likely to be higher than the figures quoted above.

Prof. Levy then moved on to outline how the Eatwell Guide was intended to be used, with the key messages summarised in **Figure 2**. He finished by noting some of the challenges of developing dietary indices to quantify adherence to dietary patterns, including the Eatwell Guide and other dietary recommendations, such as ensuring the reliability/validity of dietary data, deciding on the number of parameters to include in the diet score, and identifying an appropriate scoring methodology (e.g., Miller et al., 2020). These themes were picked up and discussed further by other presenters in the first original communication session of the day.

## SESSION 1: EATWELL GUIDE ADHERENCE AND POPULATION HEALTH

A number of individual Eatwell Guide components, such as higher intake of fruits and vegetables (e.g., associated with reduced CVD incidence (Aune et al., 2017)) and fish (e.g., associated with reduced dementia incidence (Bakre et al., 2018)), and lower intake of red/processed meat (e.g., associated with reduced risk of colorectal cancer (Farvid et al., 2021)) have been associated with improved health outcomes. However, only a handful of studies have explored associations between overall adherence to the Eatwell Guide (accounting for level of adherence to the Eatwell Guide as a whole, and appreciating potential cumulative/synergistic effects of different dietary components) and health (Cobiac et al., 2016; Scheelbeek et al., 2020; Best & Flannery, 2023; Gregory et al., 2023). In this session, which included four presentations, we set out to summarise the limited body of evidence on

links between Eatwell Guide adherence and risk of mortality, markers of adiposity, cognitive outcomes, and risk of falls.

Dr. Keren Papier from the University of Oxford discussed their previously published work (see (Scheelbeek et al., 2020)) exploring associations between Eatwell Guide adherence and mortality in a large, multi-cohort analysis (EPIC-Oxford, UK Biobank and the Million Women Study). A key initial step in this work involved developing a score for quantifying Eatwell Guide adherence, which could be used as a measure of diet quality in their analyses. Building upon previous work by Scarborough et al. (2016), who defined cut offs for recommended levels of each Eatwell Guide component, they awarded points on a binary basis for consuming the recommended levels of fruits and vegetables, oily fish, non-oily fish, red and processed meat, fibre, salt, free sugars, saturated fat and total fat to create an overall Eatwell Guide adherence score. In their cohorts of interest, <1% of participants met all of the nine quantified Eatwell Guide recommendations, with most meeting 3 or 4 of the dietary guidelines. Using a cross-cohort analysis, which explored associations between Eatwell Guide adherence and mortality via Cox proportional hazard regression models, low (meeting 3 to 4 recommendations) and intermediate-to-high (meeting 5 to 9 recommendations) adherence to the Eatwell Guide was associated with a 4% and 7% relative risk reduction in mortality, respectively, compared with very low adherence (meeting <3 recommendations). Of the individual Eatwell Guide components, meeting the recommendations for fruits and vegetables and saturated fat appeared to have the greatest individual impacts on mortality risk. Although several limitations to the analyses were highlighted, many of which are typical to observational studies, including the inability to infer cause-effect relationships and the risk of residual/unmeasured confounding, the results provide compelling evidence that following the Eatwell Guide recommendations could be an effective way to reduce risk of mortality.

Dr. Nicola Best gave a summary of their work (for published paper see Best & Flannery (2023)) on the associations between Eatwell Guide adherence and markers of adiposity in post-menopausal women – a group who have received limited research attention to date, but in whom weight gain, especially abdominal obesity, is prevalent (Kapoor et al., 2017). Using linear and logistic regression and the Eatwell Guide adherence score described above (Scheelbeek et al., 2020), in 4162 post-menopausal women from the UK Women's Cohort Study, a higher adherence to the Eatwell Guide was associated with smaller increases in waist circumference over 4 years follow up (~0.5 cm less per tertile increase in score) and a 45% lower odds of abdominal obesity (defined as a waist circumference of 88cm or greater). Associations were similar to those observed for a Mediterranean diet, which is a commonly used model of healthy eating (Shannon et al., 2021a).

Dr. Sarah Gregory discussed the development of an Eatwell Guide score in a UK midlife cohort designed to understand risk for dementia (PREVENT Dementia), as well as cross-sectional associations with markers of brain health, including cognition and MRI volumetrics (for preprint see Gregory et al., (2023)). The scoring methodology built on the binary scoring approach described by Dr Papier, with additional components added as available in PREVENT Dementia. A graded scoring method was also developed where points were awarded on a sliding scale to recognise the potential benefit of incremental dietary changes in Eatwell Guide components. An analysis of 517 individuals from the PREVENT Dementia cohort found no association with either the binary or graded scoring method and the CAIDE score, an established midlife risk score for future dementia (Gregory et al., 2023). However, a number of cardiovascular health measures, which contribute to the CAIDE score, were significantly associated with Eatwell Guide adherence. Specifically, higher-graded Eatwell

Guide scores were associated with lower systolic and diastolic blood pressure as well as lower body mass index. Adhering to (or getting close to) recommended daily dietary intakes of fibre, fruits and vegetables and fish seemed to be particularly important for cardiovascular health. There were no significant associations with brain health measures. However, Dr. Gregory noted that, through effects on known dementia risk factors including hypertension and obesity, following a diet based on the Eatwell Guide may still affect life-long dementia risk, with investigation in other UK cohorts needed.

Finally, Miss Chloe French, a PhD student from the University of Manchester, presented data exploring adherence to the Eatwell Guide and health in older adults (aged ≥65 years) in the UK Biobank prospective cohort. The presentation began by outlining some of the nutritional challenges prevalent in older adults, including reductions in appetite (Johnson et al., 2020), and how older adults may have different nutritional requirements to the general population <65 years due to absorption inefficiencies and health complications (Clegg & Williams, 2018). Miss French then discussed preliminary data analyses on the association between adherence to the Eatwell Guide and risk of falls in UK older adults. Dietary data were collected from participants in the UK Biobank at baseline and subsequent online follow-up assessments via the Oxford WebQ – a 24 hour dietary assessment tool which considers intake of 206 commonly consumed food and 32 drinks (Liu et al., 2011; Galante et al., 2016). This information was mapped to components of the Eatwell Guide using a binary scoring system similar to the work previously described (Scheelbeek et al., 2020). Subsequently, associations between adherence to the Eatwell Guide (considering individual components and overall adherence) and the number of self-reported falls was explored in older adults. This work is ongoing with findings planned for publication in 2024.

Overall, the findings presented in this session highlighted accruing evidence that greater adherence to the Eatwell Guide recommendations is associated with potentially meaningful health benefits. Although not discussed as part of the Forum, another study has recently been published exploring associations between Eatwell Guide adherence in childhood and cardiometabolic risk factors in adolescence/early adulthood (Buckland et al., 2023). This analysis of data from the Avon Longitudinal Study of Parents and Children (ALSPAC) cohort used regression-based approaches to explore associations between an Eatwell Guide score in children at 7, 10 and 13 years with a composite cardiometabolic risk score (including blood pressure, blood biomarkers, and DXA-derived measured of adiposity) measured at 17 and 24 years. The authors found that a higher Eatwell Guide score at 7 years old was associated with lower cardiometabolic risk score at both 17 and 24 years, whilst a higher Eatwell Guide score at 10 years was associated with a lower cardiometabolic risk score at 24 years. These data also emphasise the importance of encouraging adoption of a healthy diet at a young age (Buckland et al., 2023).

**SESSION 2: EATWELL GUIDE ADHERENCE AND PLANETARY HEALTH**

The balance of foods represented in the Eatwell Guide may be considered more environmentally sustainable than current (average) food choices, and improved adherence to the Eatwell Guide could help to minimise environmental impact. In session two we heard from Dr. Pauline Scheelbeek, who led a large-scale analysis of multiple UK cohorts to explore the impact of adhering to the Eatwell Guide on total greenhouse gas emissions and blue water footprints (Scheelbeek et al., 2020).

Dr. Scheelbeek began by outlining the bidirectional link between diet and climate change, whereby what we eat can impact the climate and, reciprocally, changes to the climate can

challenge growth of crops and production of food (Green et al., 2022). They discussed various measures of environmental footprint which are typically associated with the production and supply of the various foods that make up individual diets, including land and water use alongside greenhouse gas emissions, the latter two of which were evaluated in their study. They found that blue water footprints (the amount of surface and ground water used to produce the foods) were similar between very low (meeting <3 recommendations), low (meeting 3 to 4 recommendations) and intermediate-to-high (meeting 5 to 9 recommendations) Eatwell Guide adherence groups. However, intermediate-to-high Eatwell Guide adherence was associated with a reduction in average dietary greenhouse gas emissions of 12% (~3.8 kg $CO_2$eq/d) and 30% (~5.4 kg $CO_2$eq/d), respectively, when compared to low and very low adherence groups. Reduction in red and processed meat intake appeared to be particularly important for driving these effects. An important point made by Dr. Scheelbeek during the concluding remarks was that, to reduce the environmental footprint of our diets, we need to think carefully about the specific components of different food groups. For example, this may involve preferential consumption of vegetables which are grown domestically instead of air-freighted fresh produce (Frankowska et al., 2019), or consuming foods grown using more environmentally friendly farming practices (Gan et al., 2014), since this may result in a lower environmental impact, depending on the individual food items selected~~to minimise greenhouse gas emissions~~.

In the second presentation of this session, Dr. Curie Kim from King's College London presented their work which focused on associations between cognitive function and the EAT-Lancet Reference Diet – a dietary pattern proposed to be healthy and sustainable (for full paper, see (Dalile et al., 2022)). The work was presented here to provide insight from other dietary approaches which are designed to have both population and planetary health benefits.

Dr. Kim provided an outline of the key components of the EAT-Lancet Reference Diet and evaluated the strength of evidence for beneficial effects of these components on cognitive outcomes across the life course. Much like the Mediterranean dietary pattern, the EAT-Lancet Reference diet is abundant in plant-based foods including whole grains, fruits and vegetables, nuts, legumes and unsaturated fats. It also contains low to moderate amounts of seafood and poultry, and little or no red and processed meat, added sugar, refined grains, or starchy vegetables. Weak and inconsistent evidence linking components of the EAT-Lancet Reference diet to cognitive outcomes were evident, which precludes strong inferences from being made. However, the strongest evidence for beneficial effects on cognition was for fruits and vegetables in younger (2-18 years) and older (>60 years) individuals, wholegrains in younger (2-18 years) individuals, nuts in older (>60 years) individuals, and dairy products in individuals in their early mid-life (19-40 years). Dr. Kim concluded their talk with a series of methodological recommendations to improve the quality of future research in this area, including better measures of dietary exposure (e.g., detailed food logging and assessment of objective food-based biomarkers), the need for longer-term randomised controlled trials, and studies exploring the impact of whole dietary patterns on health rather than studies focused on individual foods.

**SESSION 3: CULTURAL ADAPTATIONS FOR THE EATWELL GUIDE**

There are notable ethnic differences in culture, dietary preferences, behaviours and disease risk factors (Felando et al., 2020; Ho et al., 2022; Lubin et al., 2003). The NICE (2021) guidelines on patient experience in adult NHS services state that healthcare services should be tailored to patients' needs and preferences and according to coexisting conditions. Individuals from racial/ethnic minority groups are in general more likely to experience ill health and having poor experience using health services within England, compared with

individuals of White ethnicity (Raleigh & Holmes, 2021). A patient-centred care approach is only possible by promoting cultural competence among healthcare professionals (Brottman et al., 2020), and should respond to patients' needs and reduce health disparities among diverse populations (Abrishami, 2018). As such, specific consideration should be given to ensure dietary recommendations meet the needs of different communities, rather than advocating a one-size-fits all approach (Ojo et al., 2023). In session 3 of the Forum two presenters discussed their work adapting the Eatwell Guide for African and South Asian communities in the UK. Prof. Bertha Ochieng from De Montfort University discussed their work around the development of an African Heritage Eatwell Guide.

Obesity prevalence within the UK displays variations based on ethnicity (OHID, 2023), with children and adults from minority ethnic backgrounds often experiencing higher levels of obesity. For example, around 72.0% of adults from black ethnic groups in the UK have overweight or live with obesity, compared with a prevalence of 63.5% across the entire population (OHID, 2023). Nevertheless, there is a noticeable absence of initiatives involving these minority ethnic groups in the development of interventions aimed at fostering healthy weight management. Prof. Ochieng discussed their research to address this evidence gap (for full texts of this research see: Ochieng (2020) and Ochieng et al. (2021)), including a co-creation project with Black African parents to develop an African Heritage Eatwell guide. The purpose of the project was twofold:

1. Explore the socio-cultural, familial, and environmental factors that either support or hinder healthy weight in Black African children during early years.
2. Examine how these identified factors could be harnessed to create a framework for sustaining healthy weight in children's lives.

Prof. Ochieng outlined how the project involved the participation of two key groups: Black African parents (n=30) and Health Visitors (n=32), residing and practicing in the East Midlands, UK. Phase one of the project included seven focus group discussions: four focus groups with parents and three with health visitors, scheduled at times and locations convenient for the participants (Ochieng, 2020). Phase two involved the engagement of the Black African parents in three collaborative workshops, to co-create culturally specific interventions (Ochieng et al., 2021). The co-creation collaborative exercise resulted in an African Heritage Eatwell Guide, illustrating how different African descent food items contribute to a balanced and healthy diet. The visual illustration of an African Heritage Eatwell Guide (presented in Ochieng et al., (2021)) garnered a positive reception from the Black African community members and local health and social care.

In the second presentation, Mrs. Fareeha Jay, a registered dietitian from Lifestyle Change Ltd, discussed their work adapting the Eatwell Guide for a South Asian population. The presentation began by noting that, although many European countries have adapted their national dietary guidelines to make them more appropriate to specific populations such as infants, children and older adults, dietary guidelines tend to lack recommendations and adaptations to meet the needs of ethnic minorities (Rong et al., 2021). Indeed, although the Eatwell Guide was developed to apply to all individuals across different ethnicities, it does not include example food items which reflect the diets of ethnic minority groups which might hinder engagement and uptake of recommendations among these populations. To improve outcomes and to reduce disparities in the South Asian populations, Mrs Jay argued that it is essential to include culturally competent health promotion (Nair & Adetayo, 2019), which means giving appropriate care and advice according to cultural needs. It would also fit with the agenda of the NHS Equality and Diversity Council (NHS, 2021) which is to help improve

access, experiences, and health outcomes for patients of all communities. To overcome these issues, Mrs. Jay developed the South Asian Eatwell Guide. This has been widely used by nutritionists and dietitians with the aim of increasing acceptability and adherence to the Eatwell Guide, and included in guidelines produced by bodies such as Blood Pressure UK (2022), NHS Forth Valley (2022), and NHS South East London (2022). The South Asian Eatwell Guide includes all foods found in the original version of the Eatwell Guide alongside various traditional South Asian food.

The South Asian Eatwell Guide was developed through gathering information about South Asian foods from one-to-one consultations with South Asian clients of Mrs. Jay and from a popular South Asian Facebook Group, "Aap Ki Dietitian" (Your Dietitian). To further improve the South Asian Eatwell Guide, an online survey was conducted with 132 participants, who were recruited via the Aap Ki Dietitian Facebook Group, in which participants provided suggestions on foods to be included in the Eatwell Guide. The survey was open to both men and women, although all volunteers were women. Participants were aged 18 and above, and resided across the UK (London, Manchester, Leicester, Birmingham, Loughton, Wolverhampton, Harlow, Stafford, Oxford, Brentwood, Glasgow, Chelmsford, Bristol, and Buckinghamshire). 94% of the participants wanted a South Asian version of the Eatwell Guide and 95% believed a South Asian Eatwell Guide would help them make better food choices. Popular suggestions of foods to include were various carbohydrates such as poha (a dish made with flattened rice), idli (a type of savoury rice cake), dosa (a savoury pancake); various different fruits/vegetables such as bitter gourd, mango, and dates; and dairy options such as paneer (a type of cheese). Given that many South Asians, specifically young British South Asians, combine attributes from Western culture and their culture of origin, none of the foods from the Eatwell Guide were removed, and only food additions were made

(see: https://mynutriweb.com/wp-content/uploads/2021/10/Untitled-700-x-700-px.pdf). Mrs. Jay noted that the impact of adherence to the South Asian version of the Eatwell Guide on health has not been scientifically evaluated to date, although anecdotal reports from dietitians and patients suggest perceived health benefits. ~~In addition, at present, the South Asian Eatwell Guide is not officially endorsed by the UK Health Security Agency or OHID.~~ Moreover, there is currently a lack of evidence as to whether culturally adapted versions of the Eatwell Guide, such as the African Heritage and South Asian Eatwell Guides, provide adequate/comparable nutrients to the traditional/original version of the Eatwell Guide and what their environmental impact would be.

**SESSION 4: APPLICATIONS OF THE EATWELL GUIDE IN CLINICAL TRIALS AND PUBLIC HEALTH SETTINGS**

In the final session, two presentations focused on ongoing work relevant to the applications of the Eatwell Guide in randomised controlled trials and public health settings.

Dr. Amy Jennings from Queens University Belfast discussed how we might apply the Eatwell Guide in clinical trials - something which is necessary to provide robust, causal evidence for beneficial effects on health outcomes. Dr. Jennings began the presentation by comparing the Eatwell Guide to the Mediterranean diet (as defined using the MEDAS Mediterranean diet score) (Schröder et al., 2011), which is one of the most prominent healthy dietary patterns in the nutrition and health literature. Data was presented from a recently completed Mediterranean diet-based intervention, the MedEx-UK study (Shannon et al., 2021b), to evaluate whether older individuals (aged 55-74 years at baseline) following a Mediterranean diet met Eatwell Guide recommendations. Participants following a Mediterranean diet typically consumed higher fat levels than advocated in the Eatwell Guide (≤35% food

energy), with only 24.6% of participants meeting this Eatwell Guide recommendation. This was partly due to the high intake of olive oil. Meanwhile, 43.1% of participants met the recommendations for saturated fats (≤11% food energy). Most participants (50-90%) adopting a Mediterranean diet also met the Eatwell Guide recommendations for red and processed meat (≤70 g/day), fish (≥2 portions/wk) and fruits and vegetables (≥ 5 portions/d). However, very few participants (<15%) met the UK Government dietary recommendations for fibre (30g/d; reflected in the Eatwell Guide as recommendations to choose wholegrains and other high fibre foods), despite substantial intake of fruits and vegetables, and <8% of participants met the recommendations for carbohydrate (≥50% food energy). This highlights discrepancies between the Eatwell Guide and the Mediterranean diet, particularly for fibre, carbohydrate and total fat intakes. Differences in carbohydrate and fat intake between the Eatwell Guide and Mediterranean diet may be difficult to resolve, given certain differences in the constituents of these two dietary patterns (e.g., liberal use of olive oil and regular consumption of higher fat foods like nuts and seeds with the Mediterranean diet). However, Dr. Jennings suggested that future Mediterranean-diet based interventions, including the next phase of the MedEx-UK trial, may wish to encourage increased intake of fibre rich whole-grains to ensure better fit with the UK-specific Eatwell Guide recommendations. The presentation finished by briefly highlighting the NuLife study, which will evaluate impact of an Eatwell Guide-based intervention on disease risk in deprived communities (Carter et al., 2021), and noted how development of a screening tool to monitor Eatwell Guide adherence would be essential for this project (something which was discussed further in the next and final presentation of the Forum).

The final presenter was Miss. Kaydee Shepherd, an undergraduate student at Leeds Beckett University, who is currently undertaking a Nutrition Society-funded studentship under the

guidance of Dr. Jamie Matu. Their work, in collaboration with Dr. Oliver Shannon at Newcastle University, involves undertaking pilot work to develop a screening tool for measuring adherence to the Eatwell Guide. The presentation began by outlining the rationale behind why such a tool is needed. Miss. Shepherd noted that in clinical and research settings, food diaries are frequently used to assess individuals' nutritional intake. However, food diaries can be onerous to complete, creating room for errors and omissions, and they are also associated with substantial time and labour burden for dietary and nutrient data analysis. Development of a validated Eatwell Guide screening tool would be valuable to:

- Reduce the workload for both participants and researchers, by allowing rapid assessment of Eatwell Guide adherence levels.
- Highlight areas for improvement in an individual's diet (e.g., in clinical settings), which could be used to educate them on opportunities for improving their diet.
- Identify participants for enrolment into research trials (e.g., by screening adherence scores and enrolling those deemed most likely to benefit from intervention).

In developing the Eatwell Guide screening tool, the focus was maximising the clarity and ease of use, with inclusion of accessible language within questions. Photos were provided to demonstrate example foods and portion sizes. The photos were taken specifically for this purpose and were intended to improve the accuracy of reporting portion sizes, a common problem when asking populations about the quantity of foods eaten. Initial pilot testing has been conducted with 10 participants, 6 of whom were female, with an age range of 22-55 years, and including six individuals who identified as White British, one as White (other) and three as Black (British). Participants used the tool and then gave feedback to help with its refinement via a survey and semi-structured interview. Participants reported that the language in the tool is clear and easy to follow, and the pictures were viewed as helping participants to

give accurate answers. Adjustments were made based upon this feedback, such as highlighting more clearly when questions switch from daily to weekly format, and a co-developed second version of the tool has now been generated. The next stage of the research consists of an exploratory comparison of the Eatwell Guide screener, which will be administered digitally (but with the option to print out and complete manually where required) and enquires about the intake of different foods on a daily or weekly basis, against a more detailed dietary assessment method. A total of 20 participants will be recruited to complete both the Eatwell Guide screening tool and a prospective 4-day unweighted food diary. Eatwell Guide adherence scores will be derived from both dietary assessment methods. Agreement between both adherence scores will be evaluated using Bland-Altman plots. Results from this analysis are expected later this year. Going forward, Miss Shepherd and team are keen to explore potential options for further development of the tool including adaptation to suit a broader range of audiences (e.g., via incorporation of food examples and wording more relevant to marginalised communities), and creation of a mobile phone application or web-based tool. When accessible through mobile phone app or website, the possibility for real-time feedback widens, and the scope for supporting behaviour change may grow~~s~~ (West et al., 2017; Nour et al., 2016). Given the growing interest into links between the Eatwell Guide and health, this work is likely to be of considerable interest and value to a range of research and clinical stakeholders.

**WORLD CAFÉ EVENT**

The final phase of the Forum was a World Café style event. Here, participants formed small groups (~5/6 individuals per group) and were allocated to one of 4 different stations, in which they were encouraged to discuss and make notes on: 1) strengths of the Eatwell Guide, 2) limitations of the Eatwell Guide, 3) knowledge gaps, and 4) priority areas for future research.

Groups rotated around each station, such that they could develop existing ideas or add new suggestions on each topic. Each participant had the opportunity to contribute towards all four topics. A summary of the perceived strengths/limitations of the Eatwell Guide are provided in **Table 1**. Identified knowledge gaps and priority areas for future research are grouped together to avoid repetition and provided as bullet points below:

***Knowledge gaps and priority areas for future research***

The Forum participants provided a range of best practice recommendations to help guide future research in this area, including: working closely with PPI (patient and public involvement) groups to co-design/develop future studies; encouraging cross-discipline involvement in research studies; engaging with key stakeholders, including relevant governmental departments (e.g., OHID/FSA) and commercial/industry partners; and ensuring future research includes diverse population groups to maximise generalisability (e.g., different age groups and ethnicities). In addition, the participants identified the following specific areas in which future research is warranted:

- Exploring the impact of adherence to the Eatwell Guide on novel population (e.g., neurodegeneration, type II diabetes, cardiovascular disease) and planetary (e.g., environmental metrics) health outcomes in both observational and interventional studies.
- Exploring different permutations of the Eatwell Guide (e.g., the ‘classic’ Eatwell Guide alongside culturally tailored versions) and comparing the Eatwell Guide to scores designed to quantify adherence to other prominent healthy dietary patterns (e.g., Mediterranean and or DASH diets) to determine relative efficacy.

- Evaluating whether the Eatwell Guide can/should be modified to fit the nutritional needs of different populations (e.g., older age groups, different ethnicities, varying health statuses).
- Understanding knowledge, beliefs, barriers, and facilitators to following the Eatwell Guide in the public using behaviour change frameworks.
- Understanding knowledge and beliefs about the Eatwell Guide in healthcare professionals and policy makers.
- Developing and refining tools for measuring adherence to the Eatwell Guide

Finally, the participants proposed some recommendations which could be applied in retail settings, including:

- Working with food retailers (e.g., supermarkets and meal box companies) to promote adherence to the Eatwell Guide.
- Developing novel strategies to help communicate how compliant individuals' diets are with the Eatwell Guide. Examples may include the creation of an 'Eatwell-approved' stamp for promotion on healthy foods (similar to MSC Certified), displaying an Eatwell Guide score on shopping receipts, or displaying Eatwell Guide components on food packaging.

**CONCLUDING REMARKS**

This Forum provided evidence to suggest that following the Eatwell Guide could improve certain health outcomes and reduce environmental footprints. It also showed that the Eatwell Guide can be adapted to the needs and preferences of different cultures and ethnicities. Presentations detailed how there is ongoing work to design clinical trials which will focus on

empowering individuals to increase their Eatwell Guide adherence and exploring the attendant effects on incident disease. Likewise, there is ongoing research to validate screening tools for tracking Eatwell Guide adherence which may be valuable for interventional and public health settings. The Forum demonstrated that there is interest in the Eatwell Guide from researchers and practitioners across the UK, and considerable need for future investigation in this area. It also provided the opportunity to build collaborations which will be crucial for moving this research forward and helping support the UK population to eat well to improve their health, and that of the planet.

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**REFERENCES**


Abrishami, D. (2018) The Need for Cultural Competency in Health Care. *Radiologic Technology*, 89 (5), pp.441–448.

Aune D, Giovannucci E, Boffetta P, Fadnes LT, Keum N, Norat T et al. (2017) Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all-cause mortality—a systematic review and dose-response meta-analysis of prospective studies. *International Journal of Epidemiology*, 46, 1029–1056.

Bach-Faig A, Berry EM, Lairon D, Reguant J, Trichopoulou A, Dernini S et al. (2011) Mediterranean diet pyramid today. Science and cultural updates. *Public Health Nutrition*, 14, 2274–2284.

Bakre AT, Chen R, Khutan R, Wei L, Smith T, Qin G et al. (2018) Association between fish consumption and risk of dementia: a new study from China and a systematic literature review and meta-analysis. *Public Health Nutrition*, 21, 1921–1932.

Best N & Flannery O (2023) Association between adherence to the Mediterranean Diet and the Eatwell Guide and changes in weight and waist circumference in post-menopausal women in the UK Women's Cohort Study. *Post Reproductive Health*, 29, 25–32.

Blood Pressure UK (2022) *A South Asian guide to controlling your blood pressure*. Available at https://www.bloodpressureuk.org/media/bpuk/docs/South-Asian-2022_web.pdf.

Brottman MR, Char DM, Hattori RA, Heeb R & Taff SD (2020) Toward Cultural Competency in Health Care: A Scoping Review of the Diversity and Inclusion Education Literature. *Academic Medicine*, 95, 803.

Buckland G, Taylor CM, Emmett PM & Northstone K (2023) Prospective association between adherence to UK dietary guidelines in school-age children and cardiometabolic risk markers in adolescence/early adulthood in the Avon

Longitudinal Study of Parents and Children (ALSPAC) cohort. *British Journal of Nutrition*, 17, 1–13.

Carter J, Mathers J, Fairweather-Tait S, Jebb S, Sattar N, Jennings A et al. (2021) Medical Research Council Hot Topic workshop report: Planning a UK Nutrition and Healthy Life Expectancy Trial. *Nutrition Bulletin*, 46, 395–408.

Clegg ME & Williams EA (2018) Optimizing nutrition in older people. *Maturitas*, 112, 34–38.

Cobiac LJ, Scarborough P, Kaur A & Rayner M (2016) The Eatwell Guide: Modelling the Health Implications of Incorporating New Sugar and Fibre Guidelines. *PloS One*, 11, e0167859.

Dalile B, Kim C, Challinor A, Geurts L, Gibney ER, Galdos MV et al. (2022) The EAT–Lancet reference diet and cognitive function across the life course. *The Lancet Planetary Health*, 6, 749–759.

DHSC (Department of Health and Social Care) (2016) *The National Diet and Nutrition Survey*. Available at https://www.gov.uk/government/collections/national-diet-and-nutrition-survey.

Farvid MS, Sidahmed E, Spence ND, Mante Angua K, Rosner BA & Barnett JB (2021) Consumption of red meat and processed meat and cancer incidence: a systematic review and meta-analysis of prospective studies. *European Journal of Epidemiology*, 36, 937–951.

Felando M, Rasmussen H, Karmally W & Guyton JR (2020) JCL roundtable: Healthy ethnic diets. *Journal of Clinical Lipidology*, 14, 274–281.

Frankowska A, Jeswani HK & Azapagic A (2019) Environmental impacts of vegetables consumption in the UK. *Science of The Total Environment*, 682, 80–105.

Galante J, Adamska L, Young A, Young H, Littlejohns TJ, Gallacher J et al. (2016) The acceptability of repeat Internet-based hybrid diet assessment of previous 24-h dietary intake: administration of the Oxford WebQ in UK Biobank. *The British Journal of Nutrition*, 115, 681–686.

Gan Y, Liang C, Chai Q, Lemke RL, Campbell CA & Zentner RP (2014) Improving farming practices reduces the carbon footprint of spring wheat production. *Nature Communications*, 5, 5012.

Green R, Scheelbeek P, Bentham J, Cuevas S, Smith P & Dangour AD (2022) Growing health: global linkages between patterns of food supply, sustainability, and vulnerability to climate change. *The Lancet. Planetary Health*, 6, 901–908.

Gregory S, Griffiths A, Jennings A, Malcomson FC, Matu J, Minihane AM et al. (2023) Adherence to the Eatwell Guide and cardiometabolic, cognitive and neuroimaging parameters: An analysis from the PREVENT Dementia study. medXriv. doi: 10.1101/2023.05.09.23289734.

Ho FK, Gray SR, Welsh P, Gill JMR, Sattar N, Pell JP et al. (2022) Ethnic differences in cardiovascular risk: examining differential exposure and susceptibility to risk factors. *BMC Medicine*, 20, 149.

Johnson KO, Shannon OM, Matu J, Holliday A, Ispoglou T & Deighton K (2020) Differences in circulating appetite-related hormone concentrations between younger and older adults: a systematic review and meta-analysis. *Aging Clinical and Experimental Research*, 32, 1233–1244.

Kapoor E, Collazo-Clavell ML & Faubion SS (2017) Weight Gain in Women at Midlife: A Concise Review of the Pathophysiology and Strategies for Management. *Mayo Clinic Proceedings*, 92, 1552–1558.

Liu B, Young H, Crowe FL, Benson VS, Spencer EA, Key T et al. (2011) Development and evaluation of the Oxford WebQ, a low-cost, web-based method for assessment of previous 24 h dietary intakes in large-scale prospective studies. *Public Health Nutrition*, 14, 1998–2005.

Lubin F, Lusky A, Chetrit A & Dankner R (2003) Lifestyle and ethnicity play a role in all-cause mortality. *The Journal of Nutrition*, 133, 1180–1185.

Miller V, Webb P, Micha R & Mozaffarian D (2020) Defining diet quality: a synthesis of dietary quality metrics and their validity for the double burden of malnutrition. *The Lancet Planetary Health*, 4, 352–370.

Nair L & Adetayo OA (2019) Cultural Competence and Ethnic Diversity in Healthcare. *Plastic and Reconstructive Surgery Global Open*, 7, 2219.

NHS (National Health Service) (2021) *NHS Equality and Diversity Council*. Available at https://www.england.nhs.uk/about/equality/equality-hub/patient-equalities-programme/edc/.

NICE (National Institute for Health and Care Excellence). (2021) *Patient experience in adult NHS services: improving the experience of care for people using adult NHS services*. Available at https://www.nice.org.uk/guidance/cg138/chapter/1-guidance.

NHS Forth Valley (2022) *Multicultural Nutrition*. Available at https://nhsforthvalley.com/health-services/health-promotion/nutrition/multi-cultural-nutrition/.

NHS South East London (2022) *Tasty recipes when you have gestational diabetes*. Available at https://selondonccg.nhs.uk/wp-content/uploads/2022/03/Recipe-Book-compressed.pdf.

Nour M, Chen J & Allman-Farinelli M (2016) Efficacy and External Validity of Electronic and Mobile Phone-Based Interventions Promoting Vegetable Intake in Young Adults: Systematic Review and Meta-Analysis. *Journal of Medical Internet Research*, 18, 58.

Ochieng BMN (2020) Healthy weight maintenance strategy in early childhood: The views of black African migrant parents and health visitors. *Health & Social Care in the Community*, 28, 1551–1559.

Ochieng L, Amaugo L & Ochieng BMN (2021) Developing healthy weight maintenance through co-creation: a partnership with Black African migrant community in East Midlands. *European Journal of Public Health*, 31, 487–493.

OHID (Office for Health Improvement and Disparities) (2023) Overweight adults. Available at https://www.ethnicity-facts-figures.service.gov.uk/health/diet-and-exercise/overweight-adults/latest.

ONS (Office for National Statistics) (2023) *Cost of Living Insights: Food*. Available at https://www.ons.gov.uk/economy/inflationandpriceindices/articles/costoflivinginsights/food.

Ojo AS, Nnyanzi LA, Giles EL, Ells LJ, Awolaran O, Okeke SR et al. (2023) Perceptions of dietary intake amongst Black, Asian and other minority ethnic groups in high-income countries: a systematic review of qualitative literature. *BMC Nutrition*, 9, 85.

PHE (Public Health England) (2016a) *From Plate to Guide: What, why and how for the eatwell model.* Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/579388/eatwell_model_guide_report.pdf.

PHE (Public Health England) (2016b) *Government Dietary Recommendations. Government recommendations for energy and nutrients for males and females aged 1 – 18 years and 19+ years*. Available at

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/618167/government_dietary_recommendations.pdf.

PHE (Public Health England) (2016c) *The Eatwell Guide*. Available at https://assets.publishing.service.gov.uk/media/5a75564fed915d6faf2b2375/Eatwell_guide_colour.pdf.

PHE (Public Health England) (2016d) *The Eatwell Guide: How does it differ to the Eatwell Plate and Why?* Available at https://assets.publishing.service.gov.uk/media/5a8099a240f0b62305b8c183/Eatwell_guide_whats_changed_and_why.pdf

Raleigh V & Holmes J (2021) *The health of people from ethnic minority groups in England*. Kings Fund. Available at https://www.kingsfund.org.uk/publications/health-people-ethnic-minority-groups-england.

Rong S, Liao Y, Zhou J, Yang W & Yang Y (2021) Comparison of dietary guidelines among 96 countries worldwide. *Trends in Food Science & Technology*, 109, 219–229.

Sacks FM, Svetkey LP, Vollmer WM, Appel LJ, Bray GA, Harsha D et al. (2001) Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. DASH-Sodium Collaborative Research Group. *The New England Journal of Medicine*, 344, 3–10.

Scarborough P, Kaur A, Cobiac L, Owens P, Parlesak A, Sweeney K et al. (2016) Eatwell Guide: modelling the dietary and cost implications of incorporating new sugar and fibre guidelines. *BMJ Open*, 6, 013182.

Scheelbeek P, Green R, Papier K, Knuppel A, Alae-Carew C, Balkwill A et al. (2020) Health impacts and environmental footprints of diets that meet the Eatwell Guide recommendations: analyses of multiple UK studies. *BMJ Open*, 10, 037554.

Schröder H, Fitó M, Estruch R, Martínez-González MA, Corella D, Salas-Salvadó J et al. (2011) A short screener is valid for assessing Mediterranean diet adherence among older Spanish men and women. *The Journal of Nutrition*, 141, 1140–1145.

SACN (Scientific Advisory Committee on Nutrition) (2015) *Carbohydrate and health*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/445503/SACN_Carbohydrates_and_Health.pdf.

SACN (Scientific Advisory Committee on Nutrition) (2011) *Dietary Reference Values for Energy*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/339317/SACN_Dietary_Reference_Values_for_Energy.pdf.

SACN (Scientific Advisory Committee on Nutrition) (2010) *Iron and health*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/339309/SACN_Iron_and_Health_Report.pdf.

SACN (Scientific Advisory Committee on Nutrition) (2003) *Salt and Health report*. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/338782/SACN_Salt_and_Health_report.pdf.

Shannon OM, Ashor AW, Scialo F, Saretzki G, Martin-Ruiz C, Lara J et al. (2021a) Mediterranean diet and the hallmarks of ageing. *European Journal of Clinical Nutrition*, 75,1176-1192.

Shannon OM Lee V, Bundy R, Gillings R, Jennings A, Stephan B et al. (2021b) Feasibility and acceptability of a multi-domain intervention to increase Mediterranean diet adherence and physical activity in older UK adults at risk of dementia: protocol for the MedEx-UK randomised controlled trial. *BMJ Open*, 11, 042823.

Siervo M, Shannon OM, Llewellyn DJ, Stephan BC & Fontana L (2021) Mediterranean diet and cognitive function: From methodology to mechanisms of action. *Free Radical Biology & Medicine*, 176, 105–117.

The Carbon Trust (2016) *The Eatwell Guide: a More Sustainable Diet*. Available at https://www.carbontrust.com/resources/reports/advice/sustainable-diets.

The Food Foundation (2019) *The Broken Plate 2019*. Available at https://www.foodfoundation.org.uk/sites/default/files/2021-10/The-Broken-Plate.pdf.

West JH, Belvedere LM, Andreasen R, Frandsen C, Hall PC & Crookston BT (2017) Controlling Your "App"etite: How Diet and Nutrition-Related Mobile Apps Lead to Behavior Change. *JMIR mHealth and uHealth*, 5, e95.

Willett W, Rockström J, Loken B, Springmann M, Lang T, Vermeulen S, et al. (2019) Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. *Lancet*, 393, 447–492.

## FIGURE LEGENDS

**Figure 1.** A visual representation of the Eatwell Guide Forum live-scribed during the event.

**Figure 2.** An outline of intended use of the Eatwell Guide.

**Table 1.** Perceived strengths and limitations of the Eatwell Guide identified by participants in the Eatwell Guide Forum.

| **Strengths** | **Limitations** |
|---|---|
| Achievable and accessible goals. | Other dietary patterns (e.g., Mediterranean, ketogenic, or DASH diets) may be more prominent, and some people may decide to adopt these other dietary approaches (which aren't always consistent with the recommendations of the Eatwell Guide) instead of following the Eatwell Guide recommendations. |
| Evidence-based development. | Information on portion sizes is limited. |
| Considers both health impact and environmental sustainability. | Includes a mix of food and nutrient-based recommendations, which may be difficult for individuals to follow (although this was not reported as part of consumer testing during development of the Eatwell Guide). |
| Helps to ensure consistency of messaging across policy & clinical | The main Eatwell Guide lacks cultural representation for the diverse |

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|---|---|
| practice. | UK population (although adapted versions are being/have been developed). |
| Opportunity to adapt to different populations and dietary preferences/habits. | May be overwhelming to some individuals, for whom small and incremental dietary changes may be easier to understand. |
| Focuses on overall health benefits rather than targeted at an individual health condition. | Currently limited options for measuring adherence. |
| Visually appealing and deemed to be preferable to a hierarchy. | May require modification for some populations such as older adults, individuals living with specific disease states or athletes. |
| Includes a variety of different foods. | Difficult to fit composite foods into specific food groups, as composite foods are not shown on the Eatwell Guide. |
| Can help individuals move towards a more environmentally | Whilst adherence would lower environmental footprints of diets, it |

| | |
|---|---|
| sustainable diet. | would not be sufficient to transform our food system and deliver on our Net Zero targets. |
| Use of the term ‘Guide’ rather than ‘Diet’, which may help with communication and avoiding stigma associated with diet culture. | The cost of adhering to the Eatwell Guide may be too high for some. For example, data from the Food Foundation suggests that the poorest 10% of UK households would need to spend 74% of their disposable income to meet the Eatwell Guide recommendations (versus only 6% of income for the richest 10%), suggesting that compliance with the Eatwell Guide may be difficult/impossible for some households (The Food Foundation, 2019). |