iDEAL
Insights for Diabetes Excellence, Access and Learning

iDEAL Group Position Statement

Improving the Accessibility and Personalisation of Nutrition and Dietetics in Current Diabetes Care – A Call to Action

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The iDEAL (Insights for Diabetes Excellence, Access and Learning) Group exists to enable the delivery of best practice in diabetes care for every person living with diabetes (PLwD). We are a highly engaged independent multidisciplinary team of representative experts with a visionary outlook to improve diabetes care outcomes across the UK.

The group includes the perspective of people living with diabetes, clinical service provider organisations and their professional bodies as well as the main charities and interest groups. This enables networking and outreach to gather, evaluate and share evidence to reach practitioners delivering diabetes care and those in need of it. We lobby policymakers and challenge perceptions to encourage the redirection of resources and influence education and training opportunities to meet the needs of all individuals living with diabetes.

Our programme of action is focused on harnessing our professional expertise to build consensus, network, research, share knowledge and collectively seek to make things better; both for practitioners working in partnership with and for people living with diabetes.

KEY RECOMMENDATIONS

- Urgent action is required to develop a sustainable workforce of dietitians specialising in, and working with PLwD, including a current workforce survey and a national business case.
- Introduce a validation procedure to quickly identify authentic healthcare professionals using social media platforms.
- Ensure that all PLwD have a choice of effective nutritional strategies for the prevention (Type 2 diabetes) and management of their diabetes.
- Nutritional messaging (both verbal and written) needs to be clear, consistent and based on the best current science based evidence, delivered by qualified sources.
- Nutrition messages need to be based on realistic incremental changes which are food based as opposed to nutrient based to enhance engagement.
- Diabetes technologies can be successfully partnered with the individuals preferred nutrition strategy to improve and enhance self-management.
- Nutritional strategies and public health campaigns need to be aimed at a population levels, committed to both inclusivity and diversity, reducing stigma and bias.
- Nutritional resources need to be readily accessible, accommodating a range of ethnic diets and income.
- Nutritional strategies and policies need to be personalised and refocused on the social, environmental and economic determinants of health.
- A step change is urgently required in the food environment in order to have an effective, lasting impact.
- The food industry need to be part of the solution, but not part of policy making.
- Eating behaviours are complex and the implementation of effective, supported nutritional strategies require adequate psychological support.
- Overall, a pragmatic approach is required when applying the evidence when working with PLwD.

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INTRODUCTION

This position statement has been produced to inform health care professionals (HCP) working alongside (PLwD) and policymakers, with a particular focus on primary care. It sets out to highlight key messages and signpost to helpful resources, in order to inform and impart consistent messaging, reducing confusion, so that nutritional strategies can be suitably personalised to each PLwD. iDEAL has reviewed the best level evidence to inform our recommendations and conclusions.

ACCESS TO SPECIALIST DIETETIC SERVICES

Nutrition is core to the management of diabetes, and as such access to evidence-based dietary advice should be seen as an essential component of diabetes care (Twenefour, 2018). Dietitians are the only degree qualified and regulated health professionals that assess, diagnose and treat dietary and nutritional problems at an individual and wider public-health level in a clinical setting. By practically translating scientific and public health research on food, health and disease they support and enable people to make appropriate lifestyle and food choices (BDA, 2020). Health policy recognises that the only affordable long term option for healthcare is to engage the public and people with long term conditions to make healthier lifestyle choices in order to be able to self manage (NHS England, 2017). The dietetic workforce has key skills required to meet this need, but are limited in numbers (Diabetes UK, NHS Diabetes & DMEG, 2010). The results of the workforce survey demonstrate that there is a significant shortfall of dietetic capacity working in diabetes care compared with that set out in the quality standards (NICE QS6, 2016). This situation will have significantly worsened in the last decade with the increasing numbers of people at risk of, and developing diabetes.

iDEAL supports the need for more diabetes dietetic posts to be funded to ensure accurate, evidence based nutrition messaging is expertly disseminated to a growing population and individualised to match personal needs.

Dietitians are best placed to educate and inform colleagues on a consultative basis, including those working in primary care and pharmacists, ensuring the provision of consistent, evidence-based advice throughout the PLwD care pathway.

iDEAL wish to support further research which will inform a new workforce strategy going into the next decade that both acknowledges the drivers for change and stakeholders views, whilst preparing the profession for the future.

The development and dissemination of a robust business case requires a coordinated national approach, ensuring maximum impact and deliverable change. Where the profession of dietetics has a small voice we wish to articulate the message through our multidisciplinary team.

In recent years a resurgence in the value of science based nutrition messaging has been recognised by the wider population, and the expertise of dietitians sought after (Williams, 2019).

A welcome shift in society's preferences where there is an overwhelming lack of validity, reliability and reproducibility in popular media narratives. However, it remains that the nutrition science space is a complicated area to navigate, iDEAL calls for a method of clearly identifying qualified health experts such as registered dietitians, on social media platforms, in a similar way to the blue tick verified badge demonstrating the authenticity of public figures on the Instagram platform.

PERSONALISED NUTRITION STRATEGIES

Nutrition science is a multifaceted research field, integrating the discipline with the related fields of molecular biology, genetics, biochemistry, physiology, pathology, immunology, psychology, sociology, political science, anthropology, and economics; which in itself is nuanced for a number of reasons. A full continuum of nutrition involves the global concerns of malnutrition, both under nutrition and over nutrition (obesity) ranging from individuals to communities. This health science is unique in that it doubles up as a belief system, and as is currently evident in the growing online resourcing and social media, cognitive bias exists within the positioning of this overlap (Kruger and Dunning, 1999). In the age where information and opinion are immediately accessible, there is a current trend for people to place more value in those with widespread appeal

and influence than the scientific message, choosing the narrative which best fits their own. This can be costly and damaging for the individual, and also may create a barrier with their HCPs. Therefore, the importance of consistent partnership working from the inception of the PLwD-HCP relationship is imperative in order to support scientific reasoning and personal choice (Doherty et al, 2020; Odiase et al, 2020; Phillips et al, 2020), including the use of social media platforms by HCPs (Benetoli et al, 2018). Highly skilled registered dietitians will understand the shades of grey within nutrition science and support personal lifestyle preferences and facilitate self-management within a safe environment. It is our aim that all PLwD receive consistent, reliable individualised advice at all points of contact, by all HCPs, throughout their care pathway, signposting to reliable resources where needed (Table 1).

TABLE 1: Validated recommended resources and online diet-related materials for specific life events and presenting comorbidities with diabetes that can be accessed by HCPs and PLwD

Meal Plans (if personal preference) for different caloric intake, dietary preferences and budgets)	https://www.diabetes.org.uk/guide-to-diabetes/enjoy-food/eating-with-diabetes/meal-plans
Recipe ideas	https://www.diabetes.org.uk/guide-to-diabetes/recipes https://www.bbcgoodfood.com/
Ethnic Nutrition (including special occasions including Ramadan)	https://www.carbsandcals.com/books/world-foods https://www.sahf.org.uk/publications
Diabetes Prevention & Remission	https://www.diabetes.org.uk/guide-to-diabetes/managing-your-diabetes/treating-your-diabetes/type2-diabetes-remission https://www.directclinicaltrial.org.uk/
Food Labelling	https://www.diabetes.org.uk/guide-to-diabetes/enjoy-food/food-shopping-for-diabetes/understanding-food-labels
Cholesterol lowering	https://www.heartuk.org.uk/downloads/health-professionals/publications/uclp-consumer-booklet---17oct---lr---100dpi.pdf
Pregnancy	Carbs and Cals: https://www.carbsandcals.com/diabetes/gestational-diabetes Diabetes UK: https://www.diabetes.org.uk/diabetes-the-basics/food-and-diabetes/i-have-gestational-diabetes https://www.diabetes.org.uk/resources-s3/2017-08/0302A-gestational-diabetes-guide-0915.pdf
Exercise	JDRF: https://jdrf.org.uk/information-support/living-with-type-1-diabetes/everyday-life/exercise Extod: http://www.extod.org/ Excarb: https://excarbs.sansum.org/ Runsweet: http://www.runsweet.com/
Disordered Eating	Diabetes UK: https://www.diabetes.org.uk/guide-to-diabetes/emotions/eating-disorders DWED: http://dwed.org.uk/ Centre for Clinical Interventions, Perth, Australia: https://www.cci.health.wa.gov.au/Resources/Looking-After-Yourself/Disordered-Eating

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With the global incidence of diabetes increasing in both developed and developing countries a paradigm shift in preventative nutrition is needed. The reductionist linear cause effect relationship from where nutrition science has evolved cannot be applied when investigating the multicausal nonlinear relationship between nutrition and health. Public health messaging needs to be relevant to the population as a whole, as opposed to targeting individuals (Marks et al, 2011), which causes a personal responsibility narrative. The primary drivers of non-communicable diseases such as diabetes and obesity are socioeconomic and environmental in nature, so population level conversations need to be focused on supporting vulnerable people whose financial, urban and social circumstances are the primary factors driving daily decision making and food choice (WHO, 2020). The Government's Foresight Report Obesity Systems Map (2007) presents the more balanced complexity of the relationship between an individual and their environment, illustrating that weight is influenced by over 100 complex and interacting factors including genetics, the built environment and a vast array of psychological and social factors. However, despite poverty and social inequalities having a dramatic effect on health and incidence of diabetes, there is often no mention of this in campaigns. This is particularly concerning where the aim is to change policy. It has been estimated that there is a 19 year difference in healthy life expectancy between people living in the most and least deprived areas of England (PHE, 2018). A person living in one of the most deprived areas is 2.5 times as likely to die from diabetes compared to someone living in the least deprived area (PHE, 2018). But instead of focusing on these important social determinants campaigns focus purely on weight. (Wilkinson & Pickett, 2009) have consistently questioned this and repeatedly suggest that equality is possible and will lead to much improved outcomes if taken seriously by governments.

iDEAL recognises that the responsiveness to public health messaging is tied to socioeconomic and education status, as in people that are more receptive are those that are already prioritising their health, having the availability and access to do so (Wilkinson & Pickett, 2009). iDEAL supports the need for public health campaigns to shift away from individual responsibility and instead highlight how socio-economic demographic factors drive differences in diabetes and weight.

The biggest return in investment and most focus will be at an industry and regulatory level, an example of which is the sugar tax (GOV.UK, 2018). However these need to be framed and formulated to not exacerbate the social inequalities that drive obesity and diabetes (Grintsova et al, 2014; Moody et al, 2016; Wilkinson & Pickett, 2009), and in addition, need to have a meaningful impact to enforce change as opposed to being easily absorbed by industry. Mandatory regulation to modify the environment such as capping levels of sugar, salt and fat in foods and providing reward and levies is one method of industry wide intervention (Martin et al, 2017).

When drawing up these policies we recommend that industry themselves are not present within the decision making process but are part of the solution.

Education based public health initiatives are often promoted as the solution (ODPHP, 2020), but there is evidence that lack of time and food preparation skills (Reicks et al, 2014) are the main contributors to health inequity.

iDEAL is committed to the development and delivery of new and existing initiatives that support people with limited time and cooking skills.

In the same way that the parkrun is now nationally available and inclusive to all (Stevinson et al, 2015), the availability and development of culturally appropriate cooking skills classes (in school years and beyond), an easy access guide (paper/app) comparing healthier supermarket ready meals (akin to the Food Maestro app https://www.foodmaestro.me/ for food allergies), revised nutritional information, including front of pack labelling. In addition, urgent step changes in our obesogenic environment are needed, in terms of revision of town planning in our urban environment and behavioural economics in our concessions (Meelu, 2015; Townsend & Lake, 2009). Changes in the architecture of hypercaloric foods and drinks in our stores, such as eliminating price point confectionary displays and moving sugary drinks to far reachable shelves have been found to reduce purchasing (Bucher et al, 2016), and therefore their consumption. These subtle nudges in the food supply and food environment reduce overall total energy availability in the food supply making conversations regarding optimal diet composition less relevant.

NUTRITIONAL GUIDELINES

iDEAL acknowledges recent commentary within academic and social media forums that criticise the current dietary guidelines for being causative to increasing trends of type 2 diabetes, obesity and heart disease (Jelly, 2018; Malhotra, 2013). However, we support the stance that this argument is not justified and the guidelines are unrelated to shifts in the food environment due to changes in global food systems and the food industry (Nunan et al, 2018).

FOOD BASED MESSAGING

iDEAL supports the general consensus emerging that more food based, directive recommendations are beneficial for people to engage with, as opposed to individual nutrients (Green, 2015). In order to increase messaging needs to be specific, identifying the healthfulness of the food product as opposed to arbitrary thresholds set as a regulatory context, for example, healthful food swaps and specific recommendations with regards to type, quantity and frequency when consuming the food product. Examples such as "increase nuts and seed intake" as opposed to "increase more fibre," or "make rapeseed and olive oil your primary cooking oil" as opposed to "have more monounsaturated fat" have been found to be effective (Nordic Council of Ministers, 2014). Small incremental changes such as changing from cola to diet cola as opposed to a step change to water only, or frosted flakes to microwave oats, as opposed to unrefined porridge oats, are known to increase uptake and continued adherence (Ley et al, 2016).

CURRENT EFFECTIVE NUTRITIONAL INTERVENTIONS

iDEAL supports the use of a variety of nutritional interventions to prevent or manage diabetes by supporting weight loss, blood glucose management and reducing the risk of cardiovascular disease. Recent studies (Hallberg et al, 2019; Lean, 2019a) have confirmed that weight loss achieved by very low calorie diets (VLCD), low carbohydrate diets and time restricted feeding can all provide significant weight loss to induce remission or prevent the development of Type 2 diabetes, and/or reduce postprandial glycaemic excursions (Lean et al, 2019b). There is no consistent evidence that one approach is more effective than another, and long-term data is required. It is encouraging that there is a menu of options for individuals and that personal preferences can be accounted for within their care pathway. In addition, movement between different approaches should be encouraged when and where required, as personal choice and situations change. Consistency of support and messaging is imperative in order to fully support individuals and prevent barriers to self-management behaviours throughout this continuum. Whereby, in the past dietary interventions followed a more slow and steady approach to weight loss, and interventions such as VLCDs may appear restrictive and extreme, the overwhelming data support their use and the health benefits (McCrombie et al, 2017) associated if PLwD wish to choose these.

PERSONALISATION OF CARE USING DIABETES TECHNOLOGIES

iDEAL has previously documented the need to support the standards of BG meters in people with type 1 and 2 diabetes to improve access and equity of care (Grumitt et al, 2019; Phillips et al, 2019). With the emerging evidence supporting self-assessment of postprandial glycaemia in people with, or at risk of developing type 2 diabetes we strongly support this initiative and the supportive education required (Phillips et al, 2019). Increasing use of advancing technologies in people with Type 1 diabetes including closed loops now recognises the advancing use of technologies and advancing educational processes and techniques for people with type 1 and their diabetes self-management. These are exciting times for self-management opportunities and adoption of emerging technologies supported through digital education (ABCD DTN, 2020).

STIGMA, BIAS AND LANGUAGE MATTERS

There is extensive research highlighting that bias, stigma and discrimination are as pervasive in diabetes and obesity healthcare research and clinical practice as it is in wider society, with the same perceptions also being experienced by the individual themselves (Brewis et al, 2018; Browne et al, 2013; Flint et al, 2015; Liu et al, 2017; Puhl &Heuer, 2009; Winkley et al, 2006). Diabetes Australia (2014) defined health-related social stigma specifically related to diabetes as, "negative social judgement based on an aspect of diabetes or its management that may lead to perceived or experienced exclusion, rejection,

blame, stereotyping and/or status loss.” The association of being a higher weight and developing type 2 diabetes, and the oversimplification of the complexity of obesity and type 2 diabetes, along with the majority of PLwD being diagnosed with type 2 diabetes and the confusion between type 1 and type 2 results in common, significant misconceptions, magnifying the stigmatisation of living with diabetes (Browne et al, 2013; WHO, 2017).

On a societal level the subsequent negative attitudes, prejudice and discrimination that is regularly experienced in educational, workplace and healthcare settings, is magnified by both mass and social media (Puhl & Heuer, 2009). These latter forms are far reaching and the rise of social media, in particular, has accelerated harmful behaviours, enabled by anonymity. Furthermore, recent landmark research into the prevention of type 2 diabetes and public health messaging have framed an individual's eating, activity and diabetes self-management behaviours as the problem, the adopted narratives by all media have often been oversimplified adding to the echo chambers of the current discourse. The dominant public perception is that obesity, diabetes and dysglycemia are caused by being lazy and lacking willpower, self-discipline and intelligence (Rubino et al, 2020). This culture of blame plays into prejudices and negative stereotypes which drive the social exclusion, marginalisation, and inequality of an already stigmatised population. The overall picture being that the diabetes was brought on by the individual themselves and that these conditions can be easily and rapidly managed by following guidelines, thus perpetuating feelings of self-blame, shame and guilt (Browne et al, 2013; Liu et al, 2016; Rubino et al, 2020). Whereas, we are increasingly understanding that the repetitive routine and ability and discipline to perform regular diabetes self-care such as administering insulin and blood glucose checks, performing regular physical activity, self-limiting and quantifying daily nutritional intake and hypo treatments are burdensome and complex (Doherty et al, 2020).

iDEAL recognises that theThese prevailing negative stereotypes have been shown to increase the risk for adverse psychological and behavioural issues such as diabetes distress, depression, poor body image, binge eating, delaying/avoiding screening/treatment, insulin omission and an unwillingness/ embarrassment to disclose the diagnosis and therefore seek timely treatment and support (Diabetes Australia, 2014; Phelan et al, 2015; Phillips et al, 2020; Puhl et al, 2016).

Therefore, the stigma that PLwD experience actively discourages them from engaging in the health promoting behaviours which reduce diabetes risk (regardless of BMI), instead of compromising timely diabetes management, and adopting potentially life-threatening behaviours. This is unacceptable in modern society, damaging health and undermining human and social rights (Rubino et al, 2020).

iDEAL recognises the stigmatisation of both diabetes and obesity as being unhelpful. We support a move towards healing people's relationships with food, modifying the environment to facilitate better food access and choice and removing weight stigma from our society as much needed actions.

There is a heightened risk of developing an eating disorder and subclinical disordered eating behaviours in PLwD (both type 1 and type 2) compared with their peers. The growing body of evidence in this area points to the demands of daily self-directed behaviours, with a particular focus on dietary intake and body weight, which additively contribute to, but are not solely responsible for, glycaemic outcomes; of which, the associated feelings of blame and shame can cause maladaptation of their daily self-management tasks. Triggered further by negative attitudes of providers, unsolicited advice with regards to body image and size and the presence of other psychiatric diagnoses. Here the unique but common purging behaviour of insulin omission in this demographic may sit with or without more commonly recognised anorexia and bulimia nervosa behaviours. Timely diagnoses and effective treatments are notoriously difficult, misunderstood and overlooked resulting in devastating consequences (Pursey et al, 2020). It is increasingly evident there are now an array of disordered eating behaviours without categorisation or an appropriate treatment model, contributing to a number of PLwD remaining mis/ undiagnosed.

iDEAL welcomes the current research into identifying these as a step in supporting the development of screening tools and individualised treatment approaches.

Furthermore, clinicians and researchers working in diabetes should be aware of their own biases; biases in research and be able to critically evaluate current practice and research prior to believing any conclusions.

iDEAL is committed to reducing the variation in diabetes healthcare in the UK by challenging social and environmental influences of health without fuelling the already pervasive weight stigma, bias and discrimination that exists. Health campaign communications need to avoid a focus on diabetes and weight that is misleading. Body Mass Index (BMI) is a crude indicator of health and while there is an association between higher BMI and diabetes (Romero Correll et al, 2005), the reasons and mechanisms for this are complex (Foresight Report, 2007). We need to remove the structural and systemic prejudices of health campaigns and incorporate more accurate and inclusive messaging, emphasising the respectful care for all bodies, empowering people to make health promoting changes, without blaming or shaming.

Potential solutions suggested by iDEAL:

Solutions:

1. Deliver health messages that are (weight) inclusive and focus on empowering positive health-promoting changes for everybody. Campaigns that centre on the person's weight or glycaemic outcomes are not empowering, feeding into weight and diabetes related stigma (ie negative attitudes, stereotypes and behaviours experienced by people at a higher weight or with out of range blood glucose levels).
2. Accurately communicate risks, don't mislead the public, much of risk and causes of progression in type 2 diabetes is due to people with a higher BMI: there is a link: but campaigns don't highlight how socioeconomic demographic factors drive differences in weight.
3. Make a commitment to end (weight and diabetes) stigma: encourage health campaigns to build on their in-house commitments to diversity and inclusion by recognising (weight and diabetes) stigma as a form of discrimination and taking action to reduce its impact, for example, by exploring (weight and diabetes) stigma as a barrier to accessing diabetes screening and treatment. Recognising that there will always be a diversity of body weight and size, and normoglycemia is not a constant for somebody with diabetes.
4. Refocus policy action on the social and environmental determinants of health: while we support action to improve the food environment, we ask for more emphasis in their lobbying and awareness-raising work on the impact of poverty and social inequalities on health, in particular, the stark difference in diabetes mortality/incidence/risk between the least and most deprived areas.
5. Most importantly, change the focus of campaigns and explain why: the aim of campaigns is to educate people about diabetes risk and it's management and change related policies then it could explicitly make links between Government (in)action and diabetes risk.

CONCLUSION

The need for access to reliable scientific nutrition information, and a stop to the damaging dissemination of nutrition (mis)information is imperative in society today; with the rise of social media fast forwarding its accessibility. The heightened cognitive bias that results from dangerously combining superficial knowledge and unbridled confidence causes confusion, altering public perception and creating barriers, whilst devaluing and undermining expertise. Furthermore, these biases and stigmas are confirmed to be held within the wider societal settings including in healthcare and research influencing public health campaigns. Instead of fostering a nurturing environment, these negative stereotypes create barriers to support by instilling cognitions and feelings that affect an individual's emotional and mental health whilst oversimplifying a complex condition. Registered dietitians are the only healthcare professionals who are degree educated and qualified in clinical settings to reliably educate and advise the current nutritional science evidence base. These societal circumstances coupled with the current and projected prevalence of diabetes pose an unprecedented challenge for the limited number of registered dietitians working with PLwD in the UK today. There is a pressing need for a paradigm shift that incorporates equality, diversity and inclusivity, whilst recognising the hugely complex and nuanced science of nutrition. The dietetic workforce needs to mobilise this shift, gaining more trust through social media platforms. The impact of dietetic-led services needs an urgent up-to-date review and analysis, employing the support of multidisciplinary colleagues as well as commissioners to produce deliverable change.

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