

A Food and Nutrition Strategy for Jersey

2017 - 2022



Strategic Public Health Unit

#### **Foreword**

Food is our source of energy, central to human existence. The quality of our nutrition is fundamental to our health chances, throughout the life-course from conception until the end of life. From the very beginning we need a healthy balanced diet with enough, and the right balance of proteins, carbohydrates, fats, vitamins and minerals not just to sustain life but also to remain strong, energetic, and mentally and physically active.

Breast milk is the only perfect food. Breastfed babies benefit from the best possible start in life, with a lower risk of infections and allergies, better brain development, and the best chances of going on to have a healthy weight through childhood and into adulthood. Although breastfeeding initiation rates here in Jersey are good (74%), they are not well sustained. By 6-8 weeks the proportion of babies still benefiting from breastmilk falls to around a half, and by 9 months of age to only a minority (17%).

Relative malnutrition does still occur even in Western societies, and can contribute to frailty and loss of

independence in older age. However the most pressing public health concern nowadays – that of rising obesity levels and all the consequent health harm, and costs to individuals, families, communities and governments – is linked to relative excess of food energy intake. It is a key focus of this Strategy.

The ongoing epidemic of obesity in developed nations has its origins

in the latter half of the 20th century. Its associated consequences - notably diabetes, increased cancer risk and cardiovascular disease - are creating an unprecedented and unsustainable challenge to health care systems specifically, and to governments more generally. It threatens to slow or even reverse the gains of life expectancy that have been achieved over the past 50 years.

As well as being protected from developing obesity, people who consume good levels of fruit and vegetables as part of their balanced diet ('5-a-day' is a reasonable

rule of thumb – although evidence has been emerging that even more is even better!) benefit from an additional protective effect because of the reduced risk of many cancers, cardiovascular disease and stroke.

Obesity is regarded now as a major global economic problem. Up to 7% of all health care spending is needed for measures to prevent or treat obesity, and a further 20% is attributable to obesity-related medical conditions (including diabetes, cardiovascular disease, cancers, back pain, arthritis, depression). These health care costs are not the only burden on government finances. Obesity causes wider impacts on economic productivity and social security systems.

If the current trajectory continues, by 2030 almost half of the world's population will be overweight or obese. Based on Disability-Adjusted Life Years (DALYs) from the Global Burden of Disease Database, obesity is one of the top three global social burdens generated by human beings, ranking alongside smoking and armed conflict. In the UK, the cost of obesity as a proportion of GDP (3.0%)

is second only to smoking (3.6%).<sup>1</sup>

It's a growing problem in

Obesity is a complex disorder with complex causes. There is no single or simple solution to tackle it.

Jersey too. In 2010, less than half of our population were overweight or obese. By 2015, just over half were in this category, leaving Islanders with a healthy weight in a minority for the first time.<sup>2</sup> We know also that a fifth of school pupils overall in Reception classes are overweight or obese. This proportion

rises to a third of our Year 6 pupils and the end of their primary schooling.

Obesity is a complex disorder with complex causes. There is no single or simple solution to tackle it. At the simplest level, a person's weight increases because the amount of energy consumed in food exceeds the energy they expend through basic metabolism and additional activity. But the term 'obesogenic environment' has been coined to help to understand what has been driving the current obesity crisis. The relative cost of food has been falling, partly as a result of growing industrialisation of

food production. The cost of energy-dense foods high in fat and sugar has fallen the most, making the unhealthiest, most obesogenic foods the most affordable for families struggling to feed hungry families on limited budgets. Cheap fast-food outlets have (literally) been fuelling the problem further. These factors help to explain why there is such a pronounced socio-economic divide in the prevalence of obesity, and why obesity-related chronic medical conditions are such a serious health inequalities issue. In parallel with this changing food environment, to make matters worse, physical activity has also been declining and time spent being sedentary has increased, with increased car use along with advances in technology (television, computers and computer games etc).

Traditionally, public health strategies have focused on campaigns and education aimed at changing individual behaviour. There is a growing understanding now that behaviour change is not easy to achieve, influenced as it is by multiple factors including not only changes in knowledge, attitudes, motivation and skills, but also environmental factors such as access (including price), availability, cultural norms and expectations.

The objectives outlined in this strategy, therefore, reflect the understanding that we cannot expect behaviour change and nutrition to improve unless there is a change in the environments in which we live, and the development of policies to encourage and facilitate healthier food and nutrition. The focus is on prevention, but given that just over half of the adult population in Jersey is already overweight or obese, the strategy also addresses the current need for services to support weight management for both adults and children.

The challenge is huge. This cohesive system-wide strategy, as part of the States of Jersey's Health and Wellbeing Framework, to start addressing it will require commitment across government. It will also need to engage the enthusiasm and energy of key stakeholders in the private, as well as the voluntary and community sectors, and of course the people of this lovely island.

Ensan Cumbrell.

**Dr Susan Turnbull,**Medical Officer of Health



#### **Contents**

Foreword	2
Contents	4
Executive summary	5
Introduction	6
Policy context	7
Progress so far	9
Achieving success	10
Strategic aim	10
Population-level indicators for diet-related disease risk	10
Turning the curve on diet-related disease risk	10
Guiding principles	12
Ensure the strategy and its actions are based on evidence of effectiveness	12
Empowering individuals and communities through health-enhancing environments	12
Promoting a life course approach with a focus on prevention through early intervention	
Reduce inequalities in achieving a healthy diet	12
Areas for action	13
Promote an understanding of the benefits of a healthy diet throughout the life stages,	13
especially among key target groups	
Enable change through the creation of healthy food and drink environments	13
Provide access to training, skills and services to turn understanding into action	14
Development of weight management pathways for children and adults	14
Monitoring and evaluation	15
References	16

#### **Acknowledgements**

The Food and Nutrition Strategy Steering Group consists of colleagues across Education, Dietetics, Department of Metabolic Medicine, Family Nursing and Home Care and Midwifery. All have contributed to the development of the the strategy, offering ongoing support and guidance in their respective areas of expertise.

#### **Executive summary**

Diet-related disease has become a leading cause of preventable death globally, and local data shows that Jersey has not escaped this trend. The aim of the Food and Nutrition Strategy is to address the urgent need to turn the curve on diet-related disease in the Jersey population, by focusing on four areas of action:

- Promoting an understanding of the benefits of a healthy diet for all
- Enabling change through the creation of healthy food and drink environments
- Providing access to training and skills to turn understanding into action
- Developing weight management pathways for children and adults

The strategy highlights the need to work collaboratively across government to impact on the wider determinants of health, and the inequalities that exist locally in rates of obesity and risk of diet-related disease. This among other key themes is reflected in the strategy's guiding principles to:

- Ensure actions are based on evidence of effectiveness
- Promote a life course approach, with a focus on prevention through early intervention
- Empower individuals and communities through health-enhancing environments
- Reduce inequalities in achieving a healthy diet
- · Deliver through a multi-sector alliance

The progress and success of the strategy will be measured primarily by monitoring trends in the following indicators; prevalence of overweight and obesity among children and adults; levels of fruit and vegetable consumption among children and adults; and rates of infant breastfeeding. A collaborative and evidence-based outcomes approach will result in future reductions in diet-related disease, increase the health of our Island population, and help achieve the developing Island Vision Framework outcome of enjoying long, healthy active lives.



#### Introduction

Food is fundamental to survival and essential to quality of life. It is not just a physiological need but also a focus of celebrations, traditions and positive experiences. Nutritional status affects how we function, grow, feel and think, how we interact with each other and our ability to contribute to society.

In the past few decades, shifting dietary patterns have resulted in the increased consumption of an energy-dense diet by many, high in refined sugar and fat, and low in fruit and vegetables. This is a major risk driving the rising tide of non-communicable diseases, such as cardiovascular disease, cancer and diabetes, now responsible for 70% of all deaths in Europe.3 In Jersey, cancer is the most common cause of death, followed by cardiovascular disease. Together these conditions account for more than 60 per cent of all deaths locally.4 Being overweight or obese is the single biggest preventable cause of cancer after smoking. It is linked to 10 types of cancer, including cancer of the oesophagus, bowel, pancreas, breast and womb.5 Low levels of fruit and vegetable consumption is linked to increased risks of cancer of the mouth, throat, larynx and lung.6,7 Applying UK modelling estimates of the wider economic cost of overweight and obesity to the Jersey population indicates a cost of £42 million per year to Jersey's economy, with projected costs rising to £57 million per year by 2025, if current trends continue.8

Despite increased awareness of the importance of healthy eating, levels of diabetes, overweight and obesity remain high, indicating that education, knowledge and awareness is not uniform, or may not in itself translate into action. Ensuring everyone has the education, knowledge and skills to make informed choices regarding their diet has the potential to be most effective if we also create food environments that make healthy choices easier. We need better recognition of the complex relationship between individual health behaviour in the context of the physical, social, cultural and economic environment in which they are made.

Research shows that cost is a barrier for low-income groups meeting recommended levels of fruits and vegetables, and the States of Jersey's annual social survey shows a large proportion of Islanders report that it is difficult to find affordable fruit and vegetables in Jersey. 10

Research also shows that lower-income groups are more likely to be overweight or obese, 11 and locally, we know that levels of obesity are significantly higher among children living in urban areas, which are more likely to house low-income families. 12 To impact on wider determinants of health such as the affordability of healthy options, we must adopt a multi-sectoral approach to support the diverse range of policy and environmental actions required.

Solutions advocated by the World Health Organisation focus on a series of integrated government policies to improve the food environment, coupled with education. These approaches range from healthy food procurement policies, product reformulation and changes to planning laws, through to the consideration of pricing policies such as taxation and subsidies for unhealthy and healthy food respectively. This strategy sets out a number of evidencedbased approaches to improve the food environment, such as implementation of targeted taxes on sugary drinks, which are linked to weight gain and obesity. 13,14 Plans to introduce a sugar tax in the UK as part of the Childhood Obesity Plan for Action plan are supported by evidence that this approach will have benefits for children and young people, with reductions in levels of tooth decay and obesity.<sup>15</sup> Work has already begun with colleagues both in the UK and in Guernsey to work towards adopting a sugary drinks tax in Jersey, as part of the strategy's multicomponent approach.

Despite increased awareness of the importance of healthy eating, levels of diabetes, overweight and obesity remain high...

#### Policy context

The Food and Nutrition Strategy is underpinned by the States of Jersey Strategic Plan for 2015-2018<sup>16</sup>, with its focus Health and Wellbeing, and tackling the wider determinants of health. Key priority actions within the strategy are supported by the P82/2012 'A New Way Forward for Health and Social Care' work stream for 'Reducing preventable disease - enabling healthier lifestyles', the first phase of which has been agreed within the States of Jersey's Medium Term Financial Plan from 2017.

In addition, the developing States of Jersey Island Vision framework<sup>17</sup> alongside the central government ownership of the strategy, will support us in reaching beyond 2021, in recognition that health and wellbeing is central to the future of our Island's prosperity. Supporting improved dietary behaviours is key to achieving our aspirations for a healthier Jersey, and essential in delivering the outcome of enjoying long, healthy active lives for all Islanders.

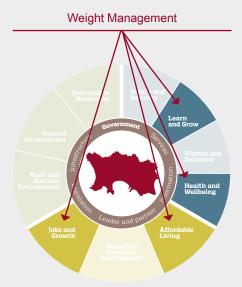
This cross government approach acknowledges that our health behaviours are shaped by the environment in which we are born, grow, live, learn and work. Health, ill-health and health inequalities are the consequence of a wide range of factors that operate at a number of different levels, illustrated in Figure 2. Factors that influence our health include those that are fixed, such as age, sex and genetic makeup. A set of further and modifiable factors are shown as a series of layers of influence including: personal lifestyle and the physical and social environment. Wider layers around our living and working conditions continue to influence health outcomes, but are factors over which we have less individual influence. The social, economic and environment conditions in which we live are not within our individual control, yet they strongly influence our health chances and are largely driven by public policy. In essence, the causes of health and health inequality are complex but they do not arise by chance.

Figure 1: Cross departmental working for Food and Nutrition (States of Jersey Island Vision framework)

#### Health is everyone's business - Food and Nutrition

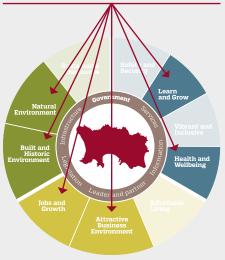
# Promoting Healthier Diets Safe tank Social V Learn and Grow Natural Environment Built and Historic Environment Jobs and Growth Attractive Business Environment

- Tourism
- Social Security
- Education
- · Economic Development
- · Health and Social Services
- Sport
- Primary Care



- · Health and Social Services
- Primary Care
- Social Security
- Education
- Sport

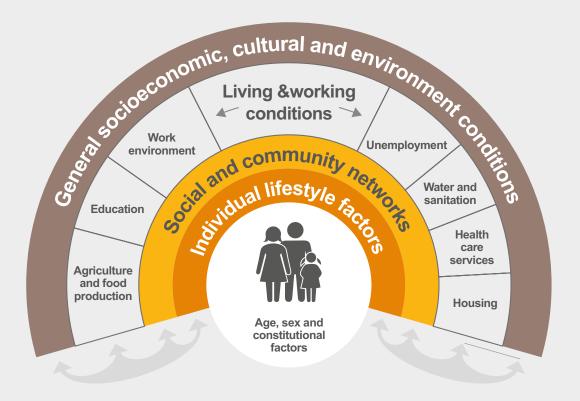
#### Healthier Food Environments



- Planning
- Procurement
- Environment
- •Treasury and Resources
- Customs
- Economic Development

#### Policy context cont.

Figure 2: The Wider Determinants of Health (Dahlgren and Whitehead<sup>18</sup>)



The development of a Food and Nutrition Strategy is consistent with the States of Jersey Strategic Plan, and should complement and be supported by strategic policy within Education, Planning and Environment, Housing, Social Security, Treasury, Health and Social Services and Jersey Sport.

Specific interdependencies exist with the following:

- P82/2012 'A New Way Forward for Health and Social Care'19
- Early Years and Childhood Partnership<sup>20</sup>
- 'Fit for the Future', the Sports Development Strategy for sport and physical activity in Jersey<sup>21</sup>
- 'Jersey's Sustainable Transport Policy', Department for Infrastructure<sup>22</sup>

The approaches within this strategy complement, but do not address, the challenges and practicalities of local food production and sustainability, and issues around expanding organic food production and reducing nitrate levels in our water supply. These are addressed within the States of Jersey Rural Economy Strategy<sup>23</sup>. Where appropriate, the Food and Nutrition Strategy will complement and support the Rural Economy Strategy in this work.

### Progress so far

In recent years much has been achieved across the States of Jersey and within the private and community and voluntary sector, in response to growing concerns of poor dietary behaviours and increasing overweight and obesity in our Island.

Schools have a strong history of supporting learning about the importance of a healthy diet and related healthier behaviours through both PSHE (Personal Social and Health Education) and science curriculums. Healthier diet behaviours are also encouraged through whole school approaches to learning about food, alongside creating school environments that are consistent with this learning. The Education Department, in collaboration with Public Health and private sector providers, have worked together towards improved provision for children and young people within secondary schools - by increasing the availability of healthy and nutritious food within canteens, and restricting unhealthy options, through an agreed school food standard. Breakfast clubs are also now a feature in many schools, allowing for increased access to a meal before school begins, and the increased concentration and learning opportunities that come with this.

Within the voluntary and community sector the charity Caring Cooks has been growing the provision of cooking skills courses for families and teaching skills in making healthy low-cost meals from scratch. The charity have also set up several cooking and growing clubs across primary schools and integrated growing, picking and preparation of fresh produce across the curriculum within these schools.

These are just some of the examples of work that has gone on. One of the key advantages of this strategy is that it is able to build on and celebrate these achievements, as well as provide support where needed to increase momentum and future success.



#### Achieving success

#### Strategic aim

The long-term aim of the Food and Nutrition Strategy is:

To reduce diet-related disease in the Jersey population

#### Population-level indicators for diet-related disease risk

To measure our progress, we will have a focus on the following population-level indicators:

- Levels of overweight and obesity in children and adults in Jersey
- Levels of children and adults consuming recommended levels of fruit and vegetables in Jersey
- Levels of infant breastfeeding in Jersey

These indicators have been chosen because there is strong evidence showing them to be linked to the level of risk of diet-related diseases. Table 1 below, shows the relationship of these indicators as factors that can affect disease chances.

#### Turning the curve on diet-related disease risk

'Turning the curve' simply means trying to shift the direction of observed trends to achieve improved outcomes for a population. The graphs 1-5 show current trends for the selected indicators for Jersey's adult and child population. Each graph shows future projections for the direction of each indicator if no action is taken - as depicted by the red arrows. Blue arrows indicate a positive change in direction, which we aim to achieve through the work of the Food and Nutrition Strategy. Observing future trends which shift away from the projected red trend lines, and towards the positive direction of these blue arrows, will indicate our success in 'turning the curve' in the years to come.

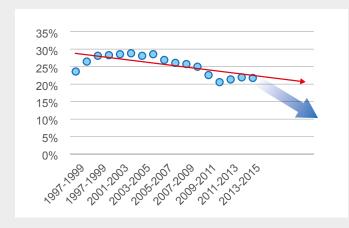
This population-level data will undergo further analysis as the strategy moves forward into action, in order to identify and address specific health inequalities that exist between population groups. We already know that health inequalities exist locally with rates of obesity significantly higher among children living in urban post codes.<sup>27</sup> We also know that obesity sharply increases between reception and year six aged children.<sup>28</sup>

Action will be delivered through a multi-sector alliance ensuring effective, incremental and sustainable changes to long established individual, cultural and environmental practices. This will require support and leadership for an integrated partnership approach across the States, private, and third-sector organisations. Engagement with all sectors, within the context of accepted standards and best evidence to meet nutrition and health goals, must be encouraged throughout the development, implementation and monitoring of the Food and Nutrition Strategy.

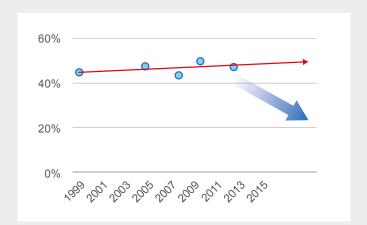
Table1: Links to diet-related disease

Indicator	Link to diet-related disease
Levels of overweight and obesity	Overweight and obesity are linked to higher risks of type-2 diabetes, cardiovascular disease and certain cancers, as well as metabolic, musculoskeletal, respiratory and psychosocial problems <sup>24</sup>
Levels of fruit and vegetable consumption	Increasing consumption of whole fruit and vegetables is linked to a reduced risk of cardiovascular disease, stroke and cancer. Emerging evidence also shows a role in maintaining a healthy weight <sup>25</sup>
Levels of breastfeeding	Breastfeeding is linked to a lower risk of infection for babies, improved intelligence and a reduced risk of childhood obesity, which is in turn strongly linked to obesity in adults. <sup>26</sup>

Graph 1: % reception aged children overweight or obese in Jersey



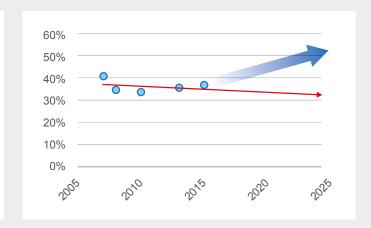
Graph 2: % adults overweight or obese in Jersey



Graph3: % children eating recommended levels of fruit and vegetables in Jersey

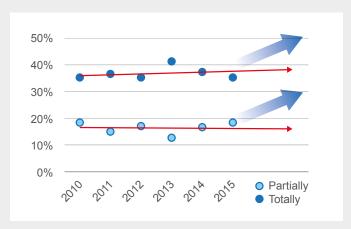


Graph 4: % adults eating recommended levels of fruit and vegetables in Jersey



11

Graph5: % partial and exclusive infant breastfeeding at 6-8 weeks\*



<sup>\*</sup>Measurement for breast feeding at six is currently at low levels. Options will be explored to increase measurement, in line with evidence that breastfeeding for six months has the most significant health benefits.

Strategic Public Health Unit

#### Guiding principles

#### Ensure the strategy and its actions are based on evidence of effectiveness

With finite financial resources and infrastructure, it is imperative that initiatives and approaches to prevent and control diet-related disease be based on sound public health principals and scientific evidence regarding effectiveness. Guidance from the National Institute for Health and Care Excellence (NICE guidance) provides a sound structure for developing evidence-based approaches; however it is essential to consider their transferability to the unique infrastructure, cultural and environmental differences specific to Jersey.

## **Empowering individuals and communities** through health-enhancing environments

Individuals, families and the wider community all have a role to play in the prevention of diet-related disease, and should be supported in making healthier choices easier through the creation of healthy food environments. Actions can be supported at various levels, from island-wide policy development and legislation, through to engaging people to implement change at an individual level.

# Promoting a life course approach with a focus on prevention through early intervention

Unless dietary risk factors and obesity are addressed in childhood, most of the financial consequences are likely to increasingly continue to be incurred when treating and managing a range of preventable disease and conditions in adulthood.<sup>29, 30</sup>

Initiatives which focus on antenatal and maternal nutrition through to the promotion of breastfeeding, and appropriate infant and early years feeding practices, are of particular importance. Dietary tastes and behaviours established in childhood can carry through to adult life. Up to 79% of children who are obese in their early teens are likely to remain obese as adults.<sup>31</sup> Actions that encourage healthy diets in early years should be reinforced through healthy workplace environments and the promotion of nutrition for healthy ageing throughout adulthood. This also includes a focus on nutritional care for individuals with diet-related illness and for the elderly, especially those in residential care

#### Reduce inequalities in achieving a healthy diet

The social determinants of health (as described in figure 2) are primarily responsible for health inequalities. Policies that positively influence social and economic conditions can support changes in individual behaviour and improve health at both individual and population level.

Social inequalities contribute significantly to nutritional status and diet-related conditions. An understanding of the needs of the key target groups in our society, whether through age, gender, ethnicity, disability or socio-economic status, is essential in ensuring limited resources are spent in the most appropriate way, and to maximise impact on avoidable inequalities in diet. A focus on the accessibility, availability and affordability of food in Jersey, as well as access to appropriate nutritional information and skills, and basic food preparation resources can help to close the gap in health inequalities.

Actions that encourage healthy diets in early years should be reinforced through healthy workplace environments and the promotion of nutrition for healthy ageing throughout adulthood.

#### Areas for action

## The Food and Nutrition Strategy actions will focus on consideration and progression of the following evidence-based priority areas:

- Promote an understanding of the benefits of a healthy diet throughout the life stages, especially for key target groups
- Enable change through the creation of healthy food and drink environments
- Provide access to training, skills and services to turn understanding into action
- · Development of a weight management pathway for children and adults

# Promote an understanding of the benefits of a healthy diet throughout the life stages, especially among key target groups

- Support actions that build on current activities to promote a healthy diet, beginning in antenatal stages, and continuing throughout pregnancy and early years, focusing on maternal diet, breastfeeding, weaning and healthy infant nutrition.
- Explore options to encourage early years care settings to adopt healthy eating policies and standards which support the promotion of age-appropriate healthy eating messages, as well as investing in appropriate training for practitioners to make the most of brief intervention opportunities offered through child health clinics, education and community settings. Consideration may be given to specific nutrition policy requirements or guidelines as well as training on minimum standards as part of the process to registration for early years settings.
- Continue to build on good work currently supported within primary and secondary schools. Activity should ensure the best use of curriculum, dining and outdoor environments in primary and secondary school settings, in order to continue to encourage the development of healthy eating habits in childhood, and facilitate growing and cooking skills with opportunities for parent/carer engagement where feasible, particularly in young adults and looked-after children. Consideration should be given to supporting the development and implementation of an evidence-based whole school nutrition programme.
- Encourage the development and promotion of consistent dietary messages based on agreed nutritional targets within the workplace and social media, to promote healthier food choices among

- adults, taking into account the needs of different age groups, cultural relevance and levels of health literacy.
- Promote the importance of nutrition within key target groups, including those with chronic illness and older people, both in the community and within care settings.

## Enable change through the creation of healthy food and drink environments

- Expand support of breastfeeding policies and venues in the community and the workplace, designed to encourage and support women to continue breastfeeding for the first six months of infancy.
- Continue to support Education in the roll out and monitoring of Jersey School Food Standards across secondary schools, and support expansion of standards to include early years settings.
- Build on progress made by Education, ensuring dining environments and catering facilities within educational settings encourage the consumption of balanced meals within a welcoming and social environment, and raise awareness of the co-benefits of this regarding improvements in student's academic performance.
- Increase access to breakfast clubs across all schools island-wide, ensuring they provide nutritionally balanced breakfasts that are accessible to all.
- Encourage the further development of healthy eating policies and healthy procurement policies across States of Jersey departments, in line with Health Promoting Hospitals and Government Buying Standards for Food and Catering Services, to encourage healthier food and catering across the public sector.

#### Areas for action cont.

- Consider a range of fiscal measures to improve access to a healthy balanced diet for key target groups, such as free school meals and co-operative food banks, in an effort to reduce diet-related health inequalities.
   Considerations may also include targeted subsidies to influence affordability and access to fruits and vegetables, particularly for key target groups, along with taxes to discourage the consumption of food and beverage products high in fat, sugar and salt.
- Consider planning measures to limit and regulate placement of fast food outlets, particularly with regard to proximity to schools, and to ensure minimum standards for cooking and food storage in housing accommodation.
- Consider the development and adoption of food and nutrition standards for care homes and residential facilities, as part of the registration and inspection process.
- Work with retailers to ensure promotion of healthier choices and consumer-friendly nutrition labels, to facilitate consumer understanding of the nutritional content of foods and potentially influence the purchase and consumption of a healthier diet.
- Work with the hospitality and catering industry to reformulate menus, consider portion control and promote healthier food options through displays and nutritional information. Consider the introduction of a healthy catering award scheme to encourage the adoption of healthier cooking techniques, use of healthier ingredients, nutrient profiling and provision and identification of healthier options for consumers.
- Work with local food producers and Genuine Jersey to promote consideration of the nutritional content of products and reformulation where appropriate.
- Support the development of legislation to ensure Environmental Health have the power and capacity to enforce appropriate food hygiene standards and labelling requirements within the catering industry.

## Provide access to training, skills and services to turn understanding into action

- Ensure provision of appropriate training for health and education practitioners to make the most of brief intervention and nutrition counselling opportunities i.e. primary care settings, health visitors, teaching staff and child care workers.
- Increase access to provision of training in nutrition, as well as food hygiene, for the catering industry i.e. subsidised access to Level 2 training on healthier food and special diets.
- Develop community-based training in nutrition and cooking skills for targeted groups, such as new mothers, young adults leaving care, older men, carers and low-income groups.

## Development of weight management pathways for children and adults

- Develop and disseminate guidance that supports access to the care pathways currently available across services and within the community for those identified as underweight, overweight and obese.
- Identify care pathways and funding required to establish appropriate weight management services to meet local need. These services should be designed to support the adoption of skills, behaviour and appropriate treatment interventions to protect against the development of diet-related disease. This includes the development of guidelines and quality standards to ensure high quality, reliable, cost effective evidencebased services.
- Ensure consideration is given to weight management support before, during and after pregnancy, familybased projects to support obese children and their families, weight management and bariatric services for adults, particularly for those with co-morbidities.
- Prioritise the development of weight management services to meet the particular needs of children and teenagers.

## Monitoring and evaluation Monitoring of the progress of the Food and Nutrition Strategy will use an outcomes based approach. We will focus on population-levels of overweight and obesity, fruit and vegetable consumption and breastfeeding, and look to turn the curve on these indicators, away from current concerning trends. We will also look to develop performance measures at programme level, which will gauge participation and community engagement with the strategy, as well as customer satisfaction. The Food and Nutrition Strategy Steering Group will be responsible for the ongoing monitoring of identified indicators, providing updates on progress and challenges relating to the implementation of actions, and reviewing evidence based solutions and strategies for moving forward. Meetings will be on a biannual basis and the Steering Group will report to the Medical Officer of Health, and annually to the States of Jersey Council of Ministers. There will be a focus on ensuring the maintenance of the monitoring and surveillance systems which allow reporting on our identified population-level indicators, such as the Child Weight Measurement Programme and key questions within the Jersey Opinions and Lifestyle Survey. Strategic Public riealth Unit

#### References

- McKinsey Global Institute, 2014: Overcoming obesity: an initial economic analysis. Discussion paper
- States of Jersey, Public Health Statistics Unit, 2017. (Health Profile for Jersey 2016). Available at: https://www.gov.je/government/pages/statesreports.aspx?reportid=2464
- World Health Organization, 2005. Preventing chronic diseases: a vital investment. WHO global report. Geneva: World Health Organization.
- States of Jersey, Public Health Statistics Unit, 2016. Health Profile for Jersey, 2016. Available at: https://www.gov.je/government/pages/statesreports.aspx?reportid=2464
- <sup>5</sup> Cancer Research UK and UK Health Forum, 2016.
  - Tipping the scales: Why preventing obesity makes economic sense.
  - Available at: http://www.cancerresearchuk.org/sites/default/files/tipping the scales cruk full report11.pdf
- <sup>6</sup> Liu J, Wang J, Leng Y, Lv C. Intake of fruit and vegetables and risk of esophageal squamous cell carcinoma: a meta-analysis of observational studies. Int J Cancer. 2013;133(2):473-485.
- Vieira AR, Abar L, Vingeliene S, et al. Fruits, vegetables and lung cancer risk: a systematic review and meta-analysis. Ann Oncol. 2016;27(1):81-96.
- Butland B, Jebb S, Kopelman P, et al. Tackling obesities: future choices project report (2nd Ed). London: Foresight Programme of the Government Office for Science, 2007. www.bis.gov.uk/assets/bispartners/foresight/docs/obesity/17. pdf
- Oassady, Diana, Karen M. Jetter, and Jennifer Culp. "Is price a barrier to eating more fruits and vegetables for low-income families?" Journal of the American Dietetic Association 107.11 (2007): 1909-1915.
- States of Jersey, Statistics Unit. Jersey Annual Social Survey, 2015. Available at: https://www.gov.je/government/pages/statesreports.aspx?reportid=1780
- 11 Wardle, Jane, Jo Waller, and Martin J. Jarvis. "Sex differences in the association of socioeconomic status with obesity." American journal of public health 92.8 (2002): 1299-1304.
- States of Jersey, Public Health Statistics Unit, 2017. Jersey Child Measurement Programme 2015/2016. Available at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20 JerseyChildMeasurementReport2015-2016%2020170202%20PH.pdf
- <sup>13</sup> Vartanian, Lenny R., Marlene B. Schwartz, and Kelly D. Brownell. "Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis." American journal of public health 97.4 (2007): 667-675.
- Malik, Vasanti S., Matthias B. Schulze, and Frank B. Hu. "Intake of sugar-sweetened beverages and weight gain: a systematic review." The American journal of clinical nutrition 84.2 (2006): 274-288.
- <sup>15</sup> Briggs, Adam DM, et al. "Health impact assessment of the UK soft drinks industry levy: a comparative risk assessment modelling study." The Lancet Public Health (2016).
- States of Jersey, 2015. Council of Ministers' Proposed Strategic Priorities. Available at: https://www.gov.je/sitecollectiondocuments/government%20and%20administration/r%20proposed%20strategic%20priorities%202015-18%2020150127%20ck.pdf
- 17 States of Jersey, 'Longer term plan' Available at: http://www.gov.je/government/planningperformance/longertermplan/ Pages/index.aspx
- 18 Dahlgren, Goran, and Margaret Whitehead. "Policies and strategies to promote equity in health." Policies and strategies to promote equity in health. OMS, 1992.
- 19 Health and Social Services, States of Jersey, 2012. P82/2012 'A New Way Forward for Health and Social Care'
- States of Jersey, 2011. Children and Young People; a strategic framework for Jersey. Available at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20 StrategicFrameworkFullVersion%2020111121%20CPG%20v1.pdf
- <sup>21</sup> Sports Development (Formerly Education, Sport and Culture), States of Jersey, 2013. Fit for the Future; a five year strategy for sport and physical activity in Jersey. Available at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/C%20Sports%20Strategy%20%20Phase%202%2020131014%20TM.pdf
- 22 States of Jersey, Department for Infrastructure, 2010. Jersey's Sustainable Transport Policy. Progress report available at: https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=1798
- <sup>23</sup> States of Jersey, Economic Development, Tourism, Sport and Culture, 2017. Rural Economy Strategy 2017 to 2021;
- Towards Sustainable Farming. Available at: https://www.gov.je/government/pages/statesreports.aspx?reportid=2652 
  <sup>24</sup> Public Health England, Health risks of adult obesity. Available at: http://www.noo.org.uk/NOO\_about\_obesity/obesity\_and\_health/health\_risk\_adult
- <sup>28</sup> Boeing, Heiner, et al. Critical review: vegetables and fruit in the prevention of chronic diseases. European Journal of Nutrition 51.6 (2012): 637-663.
- <sup>26</sup> Victora, C. G., R. Bahl, A. J. Barros, G. V. França, S. Horton, J. Krasevec, S. Murch, M. J. Sankar, N. Walker, N. C. Rollins, and Lancet Breastfeeding Series Group. 2016. Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. Lancet 387(10017):475-490.
- <sup>27</sup> Public Health Statistics Unit, 2017. Jersey Child Measurement Programme 2015/2016. Available at: https://www.gov.je/ SiteCollectionDocuments/Government%20and%20administration/R%20JerseyChildMeasurementReport2015-2016%20 20170202%20PH.pdf
- <sup>28</sup> Ibid
- <sup>29</sup> Serdula, Mary K., et al. Do obese children become obese adults? A review of the literature. Preventive medicine 22.2 (1993): 167-177.
- <sup>30</sup> Dietz, William H. "Childhood weight affects adult morbidity and mortality." The Journal of nutrition 128.2 (1998): 411S-414S.
- <sup>31</sup> Chief Medical Officer, 2008. Excerpt NICE guidelines; Weight management: lifestyle services for overweight or obese children and young people. Available at: https://www.nice.org.uk/guidance/ph47/resources/weight-management-lifestyleservices-for-overweight-or-obese-children-and-young-people-1996362978757

