Malta, like many other countries, has experienced significant challenges in nutrition over the past 20 years. Given the increasing prevalence of diet-related diseases and overweight and obesity across all ages, nutrition has been high on the Ministry for Health agenda over the past 15 years. Public Health practitioners in Malta have been drivers of public health nutrition reform throughout this period. The Health Promotion and Disease Prevention Directorate was set up to mainly focus on health promotion and non-communicable diseases including healthy nutrition in 2007. Over the years a number of strategies have been outlined targeting nutrition for the Maltese population including the Non Communicable Disease Strategy, the National Cancer Plan, the National Healthy Weight for Life Strategy, the Food and Nutrition Policy and Action Plan for Malta, Diabetes: A National Public Health Priority – A National Strategy for Diabetes 2016-2020, Whole of School Approach to Healthy Lifestyle: Healthy Eating and Physical Activity Policy and Strategy and the National Breastfeeding Policy and Action Plan 2015 – 2020. With input from WHO and the EU, Malta has participated in many surveys allowing for continuous monitoring and evaluation. In 2015, Malta embarked on a first National Food Consumption Survey, results of which will provide a baseline on eating habits to target priority areas for action, inform policy and monitor trends.
Introduction

Unhealthy diets, characterised by the consumption of foods high in fats, free sugars and salt, and insufficient consumption of fruit, vegetables, whole grains and other sources of dietary fibre, are key global contributors to poor health. Poor diets are linked to hypertension, overweight/obesity, hyperglycaemia and hyperlipidaemia, which are major risk factors for the development of diet-related chronic diseases such as cardiovascular disease, certain types of cancer and diabetes [1]. These diseases are the main contributors to the global burden of disease in terms of mortality, disability and related health care costs [2].

Diets therefore occupy a prominent position in most strategies for the prevention and control of non-communicable diseases (NCDs). The World Health Organisation (WHO) has a leading role in promoting and monitoring global action against NCDs and supporting healthy diets through the life course. Reduction of salt intake and elimination of industrially-produced trans-fats from food are amongst the priority actions of the 13th General Programme of Work which guides the work of WHO for the period 2019–2023 [3]. The European Commission (EC) plays a pivotal role at the EU level and consistently provides Member States with guidance and support to make progress in the area of nutrition. Extensive work targeting food reformulation and marketing of unhealthy foods is underway [4].

At the National level, cardiovascular disease, cancer and diabetes are amongst the top ten causes of mortality[5]. The prevalence of adult diabetes (~10% of the population)[6],[7], hypertension[7],[8] (Figures 1 & 2), and obesity [9],[10] (Figures 3,4) are alarmingly high and on the rise across the whole Maltese population. The total cost of obesity in Malta for the year 2016 has been estimated at €36.3 million[11].

Various obesogenic environmental factors are likely to have a negative influence on the dietary patterns of the Maltese population, including cultural norms, a marked preference for large portion sizes, pervasive advertising of unhealthy foods targeting children, widespread availability of cheap fast-foods and pastries from numerous confectioneries, ‘pastizzeria’ and fast-food chain outlets spread around the islands, as well as mobile vendors selling pastries, often near schools[12].

Although a great deal has been done over the past two decades to address the burden of non-communicable diseases including the obesity epidemic, further urgent action is needed to better address this important public health challenge.
Nutrition in Malta

Three decades of action in the nutrition area have tackled the matter from various angles by utilising multiple evidence-based strategies[15].

Governance and policy development

The first National Nutrition Conference took place in 1986, followed by the second Nutrition conference in 1988. The latter resulted in Governmental action through the formulation of the first version of the Malta Food and Nutrition Policy in 1989[16], and the setting up of the Nutrition Unit within the Department of Health to act as the focal point for action related to nutrition and diet-related non-communicable diseases. This was later incorporated as the Health Promotion Department within the Ministry for Health.

A reformulation exercise in 2007 saw the establishment of a specific directorate to focus on health promotion and non-communicable diseases: the Health Promotion and Disease Prevention Directorate. Through the policy arm of the Department for Health Regulation and the Department for Policy in Health, various strategies have been outlined over the years which targeted nutritional factors including the Non-Communicable Disease Strategy[17], the National Cancer Plan[18], the National Healthy Weight for Life Strategy[19], the Food and Nutrition Policy and Action Plan for Malta[20], Health Systems Strategy[21], Whole of School Approach to Healthy Lifestyle: Healthy Eating and Physical Activity Policy and Strategy for all schools in Malta[22], the National Breastfeeding Policy[23] and the National Strategy for Diabetes[24].

A budget line dedicated to obesity was initiated in the Ministry of Finance budget estimates of 2011, accompanying The Healthy Weight for Life Strategy[19] and indicative of the importance given to nutrition issues. This budget line has continued since then.

Government has highlighted the issue of childhood obesity by placing it as a priority area during the Maltese Presidency of the Council of the European Union in 2017 to support action at EU level[25],[26]. During this Presidency, a midterm evaluation of the EU Action Plan on Childhood Obesity 2014-202027 was carried out. Based on the outcomes, Malta steered the development and adoption of Council Conclusions on halting the rise in childhood overweight and obesity[28]. These call upon Member States to integrate cross-sectoral measures, enabling environments that encourage healthy diets and adequate health-enhancing physical activity in their national action plans and strategies, amongst other actions. A technical report on public procurement guidelines for healthy food within school settings, which provides a useful tool for member states when issuing procurement tenders for food in schools was developed[29].

Legislative instruments

The World Health Organisation considers legislation to be a powerful policy tool for the prevention and control of NCDs[30]. Country experiences have shown that the introduction of appropriate legislation in combination with other approaches are central to achieving the vision of a tobacco-free Europe, reducing the harmful use of alcohol and promoting healthy diets. To this effect, WHO continues to recommend the use of law to reduce NCD risk factors, and recognizes the importance of developing legal capacity at the national level.

Malta issued such legislation with the enactment of the Healthy Lifestyle Promotion and Care of Non-Communicable Diseases Act, Chapter 550 of the Laws of Malta[31]. This legislative instrument formalised an intersectoral advisory committee which proposes actions on healthy lifestyles and NCD prevention through a Health in all Policies approach. A subsidiary legislation on procurement of food for schools has been enacted in August of 2018[32]. This emphasised the commitment of government to tackle the burden of NCDs, including diet-related disease, through all available means.

Health inequities and social determinants of health

Individuals living in low socioeconomic conditions are more prone to NCDs, including obesity, and diet is a strong contributing factor[33]. Evidence shows that health inequalities can be reduced by tackling social determinants through a Health in all Policies whole-of-government and a whole-of-society approach[34] where all sectors within government and society including NGOs are involved.

With this in mind, the Ministry for Health has partnered with Government Ministries and civil society that are evidently the most influential on social determinants through the newly set up Social Determinants Unit within the Superintendence of Public Health. This project, which is supported by the World Health Organization, will focus on reducing health inequalities by establishing a national platform to address social determinants of health. This initiative includes the establishment of an intersectoral group to act on areas of health inequalities. Investment will be aimed at research, training and awareness campaigns.

Awareness and skills development

The Health Promotion Department initiated the first weight management programme in Malta in 1995. A revised lifestyle programme is ongoing, with increasing elements of skills strengthening and motivational interviewing being used to support behaviour change.

Diabetics are supported through a specific programme focusing on weight management, nutrition and physical activity. Nutrition guidance documents have been developed through interdisciplinary working groups. There are ongoing health promotion initiatives that use population- and risk-based approaches in various settings including schools, community, institutions, workplaces and through intersectoral work with various stakeholders.

Awareness campaigns have evolved along the years, using various media platforms that target specific sectors of the population. Social media is increasingly being used to reach a wider online audience.

Research

Research forms the basis of any strategy. Malta participates in several international studies including the European Health Interview Survey[8], the Health Behaviour in School-aged Children Study[14], the WHO European Childhood Obesity Surveillance Initiative[35] and the Global Physical Activity Questionnaire[36]. In addition, fieldwork for the first National Food Consumption Survey was completed in January 2017. The findings are expected to be published this year, and will guide further targeted actions in this area.
Audio-visual advertising, such as advertising of unhealthy foods especially that directed at children needs to be regulated. Currently television adverts are being evaluated to outline the current situation and eventually develop a set of recommendations to tackle this area. Research and methodologies to tackle advertising on social media used by children and young people is limited and should ideally be developed at EU level.

**Monitoring and Evaluation**

The purpose of evaluation and monitoring is to track the implementation process of a policy or strategy, assess its outputs, and measure the effectiveness of the process. Malta takes part in several studies allowing for monitoring through collection of data. Monitoring of overweight and obesity is done through EHIS 8 for adults every five years, and through the HBSC study for adolescents every four years. For the past decade, the COSI has measured trends in overweight and obesity among primary school-aged children 35. Further monitoring indirectly related to diet is carried out through the Household Budgetary Survey conducted by the National Statistics Office[37] (NSO) (2008 and 2015).

**Lessons Learned**

To maximise the probability that population dietary patterns continue to improve over time, certain key factors should be in place.

**Political commitment** needs to be sought and maintained throughout the lifespan of any diet-related policy or strategy, with adequate resources, a budget line for funding, and appropriate legislation put in place and enforced.

A **clear vision** must be formulated, and a **dedicated team** responsible for implementation, timeframes, resources, evaluation and a clear monitoring framework should be identified. Evaluation must be built into all policies and strategies from the start, and a dedicated budget allocated to this core component of the policy process.

For each priority identified, an action plan should include: (1) entity responsible; (2) stakeholders to be involved in that action; (3) timeframes; (4) SMART targets; (5) a detailed plan of how action is to be carried out; (6) human and financial resources; (7) outputs, outcomes; (8) monitoring and evaluation processes.

Public and stakeholder consultations may lead to opposition to some elements of the policy. Often a clear and substantial information campaign targeted at the media and the public must be carried out at the consultation stage to avoid distortion of the key messages or policy measures. This has occurred on occasion when cultural factors are challenged, such as modification of portion sizes or reformulation of traditional food (e.g. reducing salt content of bread and sugar in yogurts).

**Trust** built up over time with key stakeholders must be valued and nurtured to allow meaningful intersectoral policy implementation.

Policy formulation should be **evidence-based** and be flexible enough to allow changes to be made reflecting new evidence and changes within the wider societal environment, especially in ten-year strategies.

Participation in **international scientific fora**, European Union-funded projects and the provision of technical expert support from the World Health Organisation European Region has regularly proved beneficial in supporting with technical expertise and exposure to good practices. The specialist public health workforce is relatively stable ensuring that organisational memory is retained and that a stepwise approach to policy development and implementation is taken.

**Future Outlook**

Actions to improve nutrition requires a multifaceted approach that is outside the sole responsibility of healthcare through a whole of government and whole of society approach. The burden of diet-related diseases is becoming larger and clearly requires more focused and determined action at national level. Devolving responsibility for dietary behaviour to the individual has only had minimal impact, as shown by the provisional unpublished results of the National Food Consumption Survey (2017). Actions at national level that will be effective include working with local food producers to achieve food improvement. This action is already occurring at the European Union level and will benefit the Maltese population due to the high level of food imports. Some experience in this area has already shown some results in the reduction of salt content in bread and sugars in some yogurts. Collaboration with, as well as technical and financial support for, local producers is required.

There are important areas were legislation and enforcement are necessary to increase the availability of healthy food and regulate the availability of foods high in fat, sugar and salt in specific settings. This should include food within hospitals, workplaces, homes for the elderly, sports centres and ready-made baby food.

Fiscal incentives and taxation have not yet been used to any extent, such as in reducing the cost of vegetables, nuts and fresh fish, or incentivising the catering industry to provide more healthy options at a cheaper price. A national surveillance and monitoring system for key dietary risk factors is not yet in place with ring-fenced funding. Studies continue to occur only on an ad hoc basis. Resources to address weight management for children within the family setting are also needed.

The reality of climate change, depleting freshwater and soil degradation needs to be addressed as a priority in view of requirements for a sustainable food production system in Malta and the impact on food security given high food importation rates.

There is widespread awareness of diet-related disease within the Maltese population. It is now time to move away from health education to effective and bold population-wide measures to address nutrition effectively.
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