

SUGAR-SWEETENED BEVERAGES IN THE UNITED ARAB EMIRATES:

A call for public health action





## **About The Policy Council**

The Mohammed Bin Rashid School of Government (MBRSG) took the initiative to explore Sugar-Sweetened Beverages (SSB) to promote meaningful dialogue that will enrich shared knowledge within government entities. The Policy Council aims to highlight vital public topics and policies of high priority within the framework of the renowned achievements realized by government entities in the United Arab Emirates (UAE) in various fields, positioning them locally, regionally, and globally as leaders within their specializations. The objectives of the Policy Council can be summarised by providing a platform for cognitive dialogue among experts, specialists and stakeholders involved in the government sector to highlight issues of priority and importance at government and community level, specifically:

- Emphasize crucial public issues and policies that are of great importance, based on the notable accomplishments achieved by government entities and across many sectors in the UAE. In doing so, they establish their leadership position at local, regional, and international levels in their respective areas of expertise.
- Promote interpersonal and institutional communication and interactions and reinforce the cognitive network inside the government to improve organizational collaboration.
- Promote the widespread sharing of expertise, facilitate the exchange of knowledge, and guarantee that all government organizations equally benefit from it.
- Promote diversity in all sessions, ranging from federal and municipal levels to central and specialized authorities.
- Facilitate the participation of significant non-government stakeholders in pertinent talks to foster substantive, inclusive dialogues and the capacity to address subjects from diverse viewpoints.
- Provide valuable insights and recommendations that will have a significant influence on collaborative efforts and the enhancement of government performance.

The UAE 2021 vision is to become one of the best countries in the world and "continually invest in building world-class healthcare infrastructure, expertise and services to fulfil the growing needs and expectations of its citizens.

## **Executive Summary**

The Policy Council proceeding reports on a policy dialogue that included experts and practitioners in the health field and aimed at identifying the challenges and opportunities the local context offers to tackle the high consumption of SSB.

The Council discussed the challenges and opportunities policymakers and practitioners encounter in reducing SSB consumption in the UAE. The importance of such dialogue stemmed from the urgent need to address the associated high levels of obesity, diabetes, cancer and cardiovascular disease. The Council identified several challenges, such as the need to strengthen leadership, limited school education on SSB, and the influence social media has on young people's behaviours. The opportunities are presented as recommendations and encompass behaviour change, intervention types and policy options and provide a comprehensive approach to curtail high levels of SSB consumption, improve Public Health and address the growing burden of Noncommunicable Diseases (NCDs) in the UAE.





## **Council Modularity and Purpose**

This Policy Council aimed to gather stakeholders to discuss measures to reduce sugar-sweetened beverage consumption in the UAE. Several stakeholders from the public and private sectors were invited to participate, including experts, policymakers, and clinical practitioners. Stakeholder selection was based on gathering diverse sectors, settings and expertise in healthy lifestyles, public health and health policy-making. The Council benefited greatly from participants' knowledge sharing, experiences, and points of view. The Council identified opportunities for action in different settings and contexts, such as industry, community, schools, higher education and workplaces.

### **Issue Overview**

The prevalence of NCDs and associated morbidity and mortality has risen significantly in the past two decades.<sup>1</sup> A key contributor is an unhealthy diet that can lead to lifelong management of diseases such as diabetes, cardiovascular disease, cancer, obesity and dental caries.<sup>2</sup> The burden of NCD impacts the individual and society in several ways: <sup>3 4 5</sup>

- Increased morbidity and mortality;
- Low productivity;
- High economic costs; and
- Widening health inequalities.

SSB are a key risk factor for morbidity. In the Middle East and North Africa Region, the prevalence of adult type 2 diabetes alone is expected to rise to 136 million by 2045, an increase of 87%. In the UAE, prevalence is reported at 16.4% and is expected to rise to 18.1% by 2045. 6 In January 2020, the UAE implemented a sugar-sweetened beverage tax to curtail the negative effects of the industry on health. An Excise Tax of 50% was imposed on any product with added sugar or other sweeteners, including a beverage, a concentrated beverage, a powder, an extract or any product that may be converted into a beverage. An Excise Tax of 100% was imposed on energy drinks. The law included clear definitions and exceptions.

In light of the legislative measures on taxation, research was performed to explore the effect of SSB on consumption, knowledge, beliefs, behaviours, barriers and enablers and where funding from taxation should be directed. The finding suggests that while there is an observed reduction in SSB consumption, the impact was minimal even during the COVID-19 lockdown. A sizable number of the study sample consume their daily sugar solely from SSB, with a proportion with limited knowledge of how much sugar comes from SSB per day. Participants reported enablers to include SSB being readily available when they go out, and labelling and packaging do not suggest it harms one's health. In contrast, SSB consumption barriers include concern for one's health and knowledge. Participants reported a high level of awareness of SSB consumption and health conditions such as diabetes and obesity (statistically significant by nationality, income and education). SSB tax was seen as 'very necessary' and reported to have a perceived 'big effect/severe' on health. The top three sources of awareness were the internet/social media, followed by the newspaper and information provided when buying a product. There was a high level of support for SSB revenue to be spent on government programs and even greater support for spending to be directed toward healthy lifestyle programs such as school health programs, diet and nutrition programs for children, physical activity programs, healthy food and drinks, health education programs and diet and nutrition programs for adults. Given these findings, more work is needed to tackle SSB consumption. Therefore, a Policy Council of key UAE stakeholders convened to discuss the issue of excess SSB consumption and its effects on health.





## **Council Modularity Objectives**

In this report, the Council explored SSB in the UAE. Mohammed Bin Rashid School of Government (MBRSG) utilized its evidence on consumption, knowledge, beliefs, behaviours, barriers and enablers and where funding should be directed. The findings were presented at the Policy Council, followed by Council discussions that were guided by a comprehensive framework for behaviour change.

## **Background And Rationale**

There has been a global epidemiological shift between Communicable Diseases (CDs) and Non-Communicable Diseases (NCDs) and associated morbidity and mortality. SSBs are associated with childhood and adult obesity and diabetes. The number of people with a Body Mass Index (BMI) greater than 30 has tripled globally since the 1980s and now exceeds 650 million. <sup>7</sup> In the UAE, 70% of the population were reported to be either overweight or obese, while 34% were obese, with a higher proportion reported among women. <sup>8</sup> Obesity also costs money; in 2014, the global economic impact of obesity was estimated at \$2.0 trillion or 2.8% of the global GDP. <sup>9</sup> <sup>10</sup> In the Middle East and North Africa (MENA) Region, the prevalence of adult type 2 diabetes alone is expected to rise to 136 million by 2045, an increase of 87%. In the UAE, prevalence of diabetes is reported at 16.4% and is expected to rise to 18.1% by 2045. <sup>11</sup>

The SSB industry targets vulnerable markets with inadequate strategies and regulations to tackle SSB consumption. Population-based interventions are favoured to improve health outcomes because they are cost-effective when targeting large population groups (Figure 1). <sup>12</sup> In this context, taxation on SSB is attractive because it generates funds to counter the negative effects on society and shifts behaviour toward healthy lifestyles due to price-elasticity. However, several issues arise from taxation, including lack of price pass-through to consumers, consumers swapping to other unhealthy alternatives, and effective distribution of funds toward health programs. <sup>13</sup> <sup>14</sup> <sup>15</sup>

In December 2019, the UAE implemented an Excise Tax of 50% on any product with added sugar or other sweeteners, including a beverage, a concentrated beverage, a powder, an extract or any product that may be converted into a beverage. <sup>16</sup> An Excise Tax of 100% was implemented on energy drinks. The legislation for SSB taxation included clear definitions and exceptions. For example, Article 2 notes excluded goods from the definition of sweetened drinks: a) a drink that contains at least 75% milk in its ready-to-drink form, b) a drink that contains at least 75% milk substitutes in its ready-to-drink form, and c) baby formula, follow up formula or baby food. <sup>16</sup>

In 2020, Mohammed Bin Rashid School of Government (MBRSG) led research to identify the associations between different demographic factors and SSB consumption, knowledge, beliefs, behaviours, barriers, and enablers, and where funding from taxation should be directed. <sup>17</sup> <sup>18</sup> <sup>19</sup> The finding suggests that while there is an observed reduction in sugar-sweetened beverage consumption, however; the impact was minimal even during the COVID-19 lockdown. A sizable number of the study sample reported consuming their daily sugar from SSB, with a proportion having limited knowledge of how much sugar comes from SSB per day. Participants reported the enablers to include SSB as being readily available when they go out, and the labelling and packaging do not suggest SSB harms one's health. In contrast, barriers to SSB consumption included concern for one's health and knowledge on the effects of SSB on health. Participants reported a high level of awareness between SSB consumption and health conditions such as diabetes and obesity (statistically significant by nationality, income and education). SSB tax was seen as 'very necessary' and reported to have a perceived 'big effect/severe' on health. The top three sources of awareness were the internet/social media, followed by the newspaper and

information provided when buying a product. There was a high level of support for SSB revenue to be spent on government programs and even greater support for spending to be directed toward healthy lifestyles programs such as school health programs, diet and nutrition programs for children, physical activity programs, healthy food and drinks, health education programs and diet and nutrition programs for adults. The finding suggests that further work is needed to tackle SSB consumption.

In 2022, The Ministry of Health and Prevention published a National Policy to promote healthy lifestyles and enhance the quality of life. <sup>20</sup> The policy aligns with the UAE's vision to have a society that adopts sustainable healthy lifestyles and focuses on promoting healthy food, increasing physical activity levels and tobacco control. The policy objectives include improving quality of life, strengthening leadership and governance, enhancing international support and cooperation, supporting capacity building, creating healthier environments, enhancing research capacity, monitoring global trends, encouraging multi-sectoral partnerships and instil community partnership. The policy targets health authorities, medical associations, international health organizations, academic and research institutions, private sector enterprises, and community members.

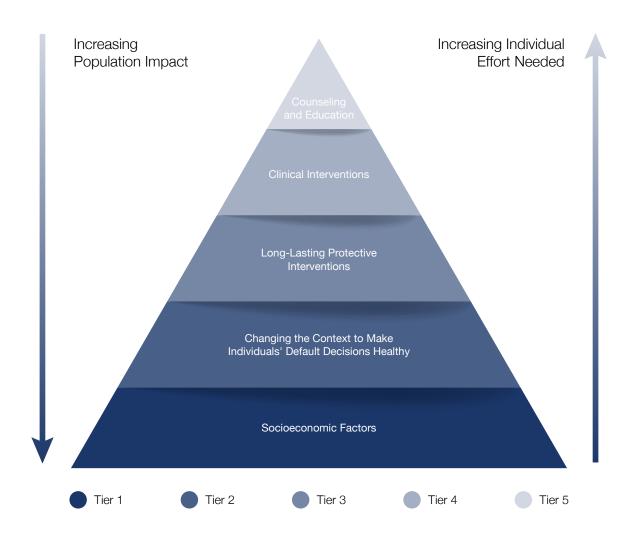


Figure 1. The Health Impact Pyramid – Adopted from Frieden T. R. (2010). A framework for public health action.





## **Discissions Points**

The Policy Council was guided by a framework for behaviour change that adopts a comprehensive approach (Figure 2). <sup>21</sup> Policy Council discussions were summarised and grouped into three themes and ten recommendations.

#### **Behaviour**

- Adolescent type 2 diabetes is on the rise, mainly due to the rise in obesity. Sugar consumption is increasing
  and is not limited to SSB. For example, young people perceived strawberry milk to be a healthy alternative;
- Behavioural change is challenging because the effects are not immediate and take time to motivate people. Furthermore, access to SSB is abundant for both adults and children;
- The use of mobile apps is also a concern and yet another mechanism for purchasing unhealthy products;
- There are challenges in implementing healthy lifestyles in UAE due to its climate, but more importantly, there is a need to recognize the differences in culture, lifestyle, principles and values with food and drink, and this, in part, reflects the disease burden seen in the Middle East; and
- Efforts should be made to educate the public on healthy lifestyles and the alternatives from a young age to adulthood.

#### Interventions

- Long-term collaboration between the government sectors, clinicians and patients' and advocacy societies
  is essential for interventions. It reflects the expertise of the scientists and the patients' journeys with obesity
  and obesity-related illnesses;
- The government and the societies specialized in obesity-related conditions (e.g. Emirates Diabetes and Endocrine Society, Emirates Cardiovascular Society, etc.) will need to appoint diabetes and obesity ambassadors from influential community celebrities to bridge the connection between the stakeholders and the community;
- The importance of schooling and education on healthy lifestyles must be implemented during daily schooling activities. Schools, higher education, the community and workplaces should be aware of successful initiatives like recycling;
- Social media is an important source of information for young people and unhealthy behaviours. The messaging needs to be clear for all age groups;
- More investment in audiovisual aids for patient empowerment is needed, e.g. TV, radio, social media platforms, handouts, interviews, program series and interactive games;
- A positive, attractive culture should be fostered with influential people to promote healthy lifestyles in school, community, and the workplace;
- Maternal health is a good opportunity to educate expecting parents on healthy lifestyles;
- There is a need to enhance group awareness sessions in all public and private premises for all NCDs;
- Funding and support should be equally considered to prevent and manage NCDs as well as managing the consequences; and
- Community-friendly metrics should be considered for desired interventions.





### **Policy**

- Behavioural economics should be adopted on this subject with the UAE context in mind. Excess sugar
  has implications on health. From a treatment perspective, the basic insurance plan should consider further
  coverage for those seeking treatment, e.g., High Blood Pressure and Diabetes. Thus, part of the taxation
  revenue could be directed to cover the insurance gap for adolescents, children and lower socio-economic
  groups to assure equity;
- Corporations should be engaged to facilitate the transfer of incentives or funds to individuals and realize the longer-term benefits of improving workplace health;
- Insurers should support more screening/ health checks to enable early intervention for patients with high
  glucose. Insurers should offer lower premiums for people participating in health checks due to the advantages
  of early detection and prevention;
- Taxation is a viable option but needs to consider incentivizing healthier options;
- Taxation should be reviewed and pursued with more vigour to promote reformulation and reduction of SSB consumption;
- Engagement with industry is needed to ensure the benefits of shifting toward healthy lifestyles are realized;
- A comprehensive approach to tackling SSB should be pursued to maximize outcomes;
- Policy is lacking to prevent SSB consumption in schools and higher education. Measures are only in place at the kindergarten step;
- Healthy alternatives and non-financial incentives are lacking;
- Community awareness and education levels vary; therefore, more work is needed to understand this. For
  example, there is no clear labelling of sugar. A traffic light grading system (A-E) for sugar content could be
  adopted, especially when there is a misconception with low fat and salt products that are high in sugar;
- Leadership on healthy lifestyles is lacking; therefore, we must prioritize this. For example, a white paper on higher government's decision could be the vehicle needed to establish a Council to lead on this issue and bring together key stakeholders through a strategy; and
- Legislation review, e.g. flavoured milk has been excluded from taxation, but it contains high calories and can increase the risk of obesity. The legislative review should consider other measures, such as restricting high levels of SSB to children under 16 years or restricting the quantity that can be purchased.

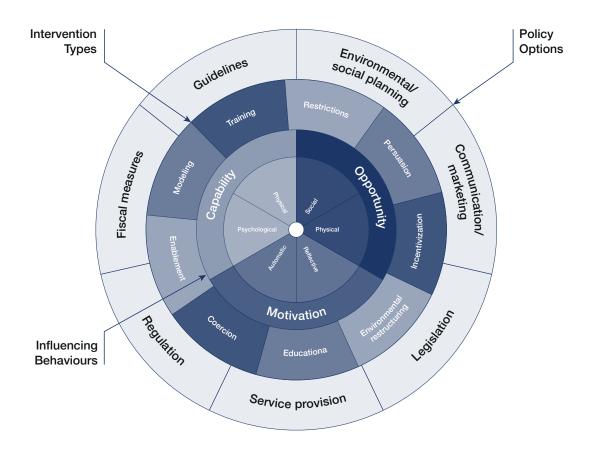


Figure 2. A Comprehensive Approach - Implementing The Behaviour Change Wheel – Adopted from Susan Michie, Lou Atkins and Robert West (2014). The Behaviour Change Wheel. A Guide To Designing Interventions.

# **Policy Recommendations**

### 1. Recommendation One - Establish a governing body to lead on Healthy Lifestyles

**Rationale:** A National Healthy Lifestyles Council with multi-sector representation will ensure a coordinated approach is adopted to leverage public and private partnerships, maximize the impact of prevention efforts, reduce duplication, and facilitate knowledge sharing across the UAE, Regionally and Internationally.

#### Implementation:

- Ensure adequate capacity and resources are in place;
- Clarify roles and responsibilities for different sectors in the UAE to take on a shared responsibility for public health, health promotion, health protection and health education;
- Ensure reporting to higher government reflects all policy recommendations; and
- Hold an annual forum for information exchange, sharing best practices and lessons learned.

# 2. Recommendation Two – Develop a Healthy Lifestyles Strategy and link it to the Sustainable Development Goals (SDGs)

**Rationale:** Aligning NCD prevention efforts with SDGs can leverage local, regional and global momentum, facilitate partnerships, and highlight the broader societal impacts of interventions.





### Implementation:

- Develop a healthy lifestyles strategy and action plan in the UAE to include a reduction of SSB consumption;
- Map and gap existing healthy lifestyles efforts to relevant SDG goals and targets, e.g., Good health and well-being (Goal 3), Reduced inequalities (Goal 10), and Partnerships for the goals (Goal 17);
- Use the SDG framework to advocate for increased resources and political commitment toward NCD prevention and report on progress;
- Integrate SDG into a healthy lifestyles strategy to prevent NCDs; and
- Develop partnerships with international organizations working on SDG-related initiatives.
- 3. Recommendation Three Support organizational policy and provide incentivize to schools, higher education, communities and workplaces that promote healthy lifestyles.

**Rationale:** Schools, higher education, communities and workplaces host a large segment of the population to promote healthy lifestyles. Organizational policies should reinforce and sustain health-promoting behaviours.

### Implementation:

- Develop guidelines on healthy lifestyles policy for schools, higher education, communities and workplaces;
- Facilitate peer learning and best practice sharing among organizations;
- Ensure education curricula are provided for all settings with clear grading criteria;
- Offer incentives to implement a comprehensive healthy lifestyles program;
- Create a national reward program for "healthy places";
- Implement programs for communities and reward those that achieve tangible and non-tangible health and wellness measures; and
- Allocate grants and resources to community organizations that facilitate access to indoor and outdoor physical activity and wellness programs.
- 4. Recommendation Four Make use of public health frameworks to support a comprehensive assessment and approach toward SSB consumption.

**Rationale:** The health behaviour framework provides a structured approach to analyzing and understanding factors influencing health-related behaviours. It considers multiple factors that influence health choices, including personal, social and policy. The comprehensive perspective is crucial for developing effective interventions to promote healthy lifestyles.

#### Implementation:

- Undertake a situation analysis of SSB-related programs;
- Develop health promotion programs that address multiple levels of influence on health behaviours;
- Integrate the framework into public health planning;
- Conduct training sessions for health professionals on how to make use of the health behaviour framework;
- Create assessment and evaluation tools based on the framework to understand the effects of SSB-related initiatives; and
- Fund research to further refine and adapt frameworks to the UAE context.





### 5. Recommendation Five- Make use of demographic data when devising health and fiscal policy.

**Rationale:** Tailoring policy to account for specific demographic groups can increase the effectiveness of behaviour change and ensure equity.

### Implementation:

- Conduct detailed demographic analysis of SSB consumption patterns in the UAE to inform policy;
- Ensure SSB policy measures account for high-risk demographic groups.
- Develop targeted interventions for high-risk demographic groups; and
- Implement age and culturally-appropriate health communication strategies;

# 6. Recommendation Six – Strengthen legislation for SSB taxation and improve labelling to promote consumer awareness and decision-making.

**Rationale:** Legislative measures toward taxation can support the reduction of SSB consumption and the adoption of healthier alternatives. Legislative measures to improve the labelling of SSB will promote consumer awareness and help consumers make informed decisions.

### Implementation:

- Identify and categorize high-risk SSB products through laboratory testing;
- Conduct an economic analysis and behavioural economics to determine optimal tax mechanisms and rates to discourage high intake of SSBs;
- Earmark tax revenue for healthy lifestyle prevention programs and subsidizing healthier alternatives (fresh fruits, vegetables, and other nutritious foods) for communities;
- Adopt legislation requiring clear front-of-pack labelling for the sugar content of SSB products to allow consumers to make informed choices through easy use of visual cues, e.g., a traffic light grading system (A-E) for sugar content;
- Develop a public education campaign to help consumers interpret and use new labelling information;
- Require disclosure of added sugars separate from total sugars on nutrition labels;
- Implement restrictions on health claims for products with high sugar content;
- Implement advertising standards to restrict marketing and advertising of SSB to children on radio, TV, social media, billboards and other platforms;
- Ensure non-supervised avenues for SSB consumption, such as vending machines, have in place age verification measures; and
- Develop and implement sanctions for non-compliance of legislation.

# 7. Recommendation Seven – Mandate the SSB industry to take up its social responsibility to prevent excess SSB consumption.

**Rationale:** The SSB industry significantly influences sugar consumption patterns and should be held accountable for its role in the rising disease burden. Mandating social responsibility can drive innovation and reformulation efforts.





### Implementation:

- Develop Public and Private Partnerships and measures to reduce SSB consumption and promotion of healthy alternatives;
- Create a regulatory framework requiring the SSB industry to invest a percentage of its profits toward public health prevention initiatives;
- Offer tax incentives for the SSB manufacturers that demonstrate a reduction of sugar content in their products; and
- Facilitate knowledge sharing and collaboration in the SSB industry.

# 8. Recommendation Eight – Support innovative and upstream strategies and policies to disrupt high SSB consumption and pursue innovative reformulation approaches.

**Rationale:** Upstream interventions that address the root causes of excess SSB consumption can be more effective and sustainable than individual-focused approaches. Innovative strategies are needed to counteract the pervasive marketing of SSB products.

### Implementation:

- Implement zoning laws to limit the density of outlets that sell SSB and increase access to healthy alternatives;
- Establish a no-go zone in supermarkets to restrict children from accessing SSB;
- Launch a "sugar-free smart cities" initiative to mobilize community-wide efforts to reduce SSB consumption.
   Sugar-free smart cities enable the public to become aware of hidden sugars, sugar consumption levels and available healthy alternatives supplemented through taxation;
- Offer tax reductions and financial incentives to startups and companies producing and selling healthy alternatives;
- Design and allocate subsidized or free sports parks and recreational areas within communities to increase physical activity levels; and
- Invest in research and development of SSB alternatives and reformulation technologies.

# 9. Recommendation Nine – Develop Community Awareness and Education Campaigns on SSB and Healthy Lifestyles

Rationale: Increase public knowledge of the harmful effects of SSB.

### Implementation:

- Launch a public communication campaign to explain the rationale and benefits of SSB taxation;
- Develop communication content on the harmful effects of SSB in schools, higher education, the community and workplaces;
- Develop SSB community challenges and incentivize participation;
- Develop segmented information for social media platforms to promote healthier alternatives to SSB;
- Promote healthy lifestyles such as physical activity through parks and exercise group sessions for all age groups; and
- Identify and facilitate engagement between health organizations and adolescent influencers who resonate with younger audiences to advocate the benefits of healthy lifestyles using personal stories, tips and challenges.





# 10. Recommendation Ten - Rigorously monitor and evaluate the implementation of the Healthy Lifestyles Strategy and SSB-specific interventions

**Rationale:** Ongoing monitoring and evaluation are fundamental to support the revision of national strategy and policy as well as SSB-specific interventions thus ensuring a comprehensive approach is adopted and remains effective to deliver sustainable change.

### Implementation:

- Develop a comprehensive framework for monitoring and evaluation, such as the logical model (input, activities, outputs, outcomes and impact);
- Provide feedback on implementing healthy lifestyles strategy and policy to key sectors to promote transparency and implement improvements.
- Develop a monitoring system to track the impact of taxation on SSB consumption patterns and health outcomes;
- Develop a centralized database of SSB prevention programs and outcomes;
- Monitor compliance of SSB marketing and advertising; Monitor progress against SSB key performance indicators across all sectors; and
- Evaluate the cost-effectiveness and impact of SSB interventions on the concerned sectors and demographic groups.

## **Conclusions**

The Policy Council reports an urgent need to address SSB consumption. This work should be done through a Healthy Lifestyles Governing Council. Undoubtedly, change from the status quo will require greater efforts and collaboration between the public and private and voluntary sectors and the community. Recognizing that reducing SSB consumption cannot be achieved through a single approach, the recommendations set out in the Policy Council encompass three dimensions: behaviour change, interventions and policy measures. These dimensions support various interventions that can be twinned within and with wider measures to promote healthy lifestyles. In doing so, the potential impact of reducing the burden of NCDs and associated costs and improving the quality of life will be substantial for citizens in the UAE.





## **Participating Entities**

- 1. Abu Dhabi Health Services Company PJSC
- 2. Abu Dhabi Early Childhood Authority
- 3. Daman Health Insurance Company
- 4. Dubai Academic Health Corporation (Dubai Health)
- 5. Emirates Airlines/ Noor Corporate Health
- 6. Imperial College London Diabetes Centre (UAE)
- 7. Knowledge and Human Development Authority
- 8. Ministry of Health and Prevention
- 9. Mohammed Bin Rashid University of Medicine and Health Sciences

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The views expressed in this report are those of the author(s) and do not necessarily reflect those of the trustees, officers, and other staff of the Mohammed Bin Rashid School of Government (MBRSG) and its associated entities and initiatives.

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- Executive education for senior officials and executives; and,
- Knowledge forums for scholars and policy makers.

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## References

- 1. Haijiang Dai, et al., (2020). The global burden of disease attributable to high body mass index in 195 countries and territories, 1990–2017: An analysis of the Global Burden of Disease Study, PLoS Med. 17 (7) (2020), e1003198. <a href="https://doi.org/10.1371/journal.pmed.1003198">https://doi.org/10.1371/journal.pmed.1003198</a>
- 2. Gillespie KM, Kemps E, White MJ, Bartlett SE. The Impact of Free Sugar on Human Health A Narrative Review. Nutrients. 2023 Feb 10;15(4):889. https://doi.org/ 10.3390/nu15040889. PMID: 36839247; PMCID: PMC9966020.
- Cuillin Zhang, et al., (2008) Abdominal obesity and the risk of all-cause, cardiovascular, and cancer mortality: sixteen years of follow-up in US women, Circulation 117 (13) (2008) 1658–1667. <a href="https://doi:10.1161/CIRCULATIONAHA.107.739714">https://doi:10.1161/CIRCULATIONAHA.107.739714</a>
- 4. Garaulet M, Ordovás JM, Madrid JA. (2010) The chronobiology, etiology and pathophysiology of obesity. Int J Obes. 34:1667–1683. <a href="https://doi:10.1038/ijo.2010.118">https://doi:10.1038/ijo.2010.118</a>
- 5. Radwan H, Ballout RA, Hasan H, Lessan N, Karavetian M, Rizk R. (2018). The Epidemiology and Economic Burden of Obesity and Related Cardiometabolic Disorders in the United Arab Emirates: A Systematic Review and Qualitative Synthesis. J Obes, 2185942. https://doi:10.1155/2018/2185942
- Sulaiman, A., Zimmet, P., Huse, O., Shaw, J., & Peeters, A. (2017). Prevalence of overweight and obesity in United Arab Emirates Expatriates: the UAE National Diabetes and Lifestyle Study. *Diabetology & metabolic syndrome*, 9, 88 <a href="http://doi:10.1186/s13098-017-0287-0">http://doi:10.1186/s13098-017-0287-0</a>
- 7. World Health Organisation (2020a). Obesity and overweight [Online]. <a href="https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight">https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight</a> [accessed 21 June 2024].
- 8. World Health Organisation (2020b). Diabetes country profiles: United Arab Emirates. <a href="https://www.who.int/diabetes/country-profiles/are-en.pdf">https://www.who.int/diabetes/country-profiles/are-en.pdf</a> [accessed 21 June 2024].
- McKinsey Global Institute (2024). Overcoming obesity: An initial economic analysis [Online]. <a href="https://www.mckinsey.com/~/media/mckinsey/business%20functions/economic%20studies%20temp/our%20insights/how%20the%20world%20could%20better%20fight%20obesity/mgi\_overcoming\_obesity\_full\_report.ashx\_[accessed 16 March 2024].</a>
- 10. Specchia, M. L., Veneziano, M. A., Cadeddu, C., Ferriero, A. M., Mancuso, A., Ianuale, C., Parente, P., Capri, S., & Ricciardi, W. (2015). Economic impact of adult obesity on health systems: a systematic review. European journal of public health. 25(2), 255–262. <a href="https://doi.org/10.1093/eurpub/cku170">https://doi.org/10.1093/eurpub/cku170</a>
- 11. IDF Diabetes Atlas (2024). Diabetes around the world in 2021. [accessed 24 June 2024]. <a href="https://diabetesatlas.org/#:~:text=Diabetes%20around%20the%20world%20in%202021%3A,%2D%20and%20middle%2Dincome%20countries.">https://diabetesatlas.org/#:~:text=Diabetes%20around%20the%20world%20in%202021%3A,%2D%20and%20middle%2Dincome%20countries.</a>
- 12. Frieden T. R. (2010). A framework for public health action: the health impact pyramid. *American journal of public health*, 100(4), 590–595. <a href="https://doi.org/10.2105/AJPH.2009.185652">https://doi.org/10.2105/AJPH.2009.185652</a>
- 13. World Bank Group (2020). Taxes on sugar-sweetened beverages: International evidence and experiences, Health, Nutrition, And Population [Online]. <a href="http://refhub.elsevier.com/S2666-5352(21)00114-2/sref44">http://refhub.elsevier.com/S2666-5352(21)00114-2/sref44</a> [Accessed 26 June 2024].
- 14. Institute of Economic Affairs. (2016) Sugar taxes: A Briefing [Online]. <a href="https://iea.org.uk/wp-content/uploads/2016/07/IEA%20Sugar%20Taxes%20Briefing%20Jan%202016.pdf">https://iea.org.uk/wp-content/uploads/2016/07/IEA%20Sugar%20Taxes%20Briefing%20Jan%202016.pdf</a> [Accessed 28 May 2023].





- 15. Griffith Rachel, Martin O'Connell, Smith Kate and Stroud Rebekah (2019). The evidence on the effects of soft drink taxes. IFS Briefing Note BN255. Institute of Fiscal Studies.
- 16. United Arab Emirates (2019). Federal Excise Tax [Online]. <a href="https://u.ae/en/information-and-services/finan%20ce-and-investment/taxation/excise-tax">https://u.ae/en/information-and-services/finan%20ce-and-investment/taxation/excise-tax</a> [accessed 28 June 2024].
- 17. Al-alawy K, Moonesar I, Muhsineh S, Gaafar R and Aden B (2021). The Sweet and Sour of Sugar-Sweetened Beverage Tax. International Journal for Nutrition. Doi:10.14302/issn.2379-7835.ijn-21-3780 Vol 6:3 pp:21-35.
- 18. Al-alawy K, Moonesar I, Gaafar R, and Muhsineh S. The Nexus of Sugar-Sweetened Beverages: Insights on Demographics, Enablers and Barriers. Public Health Pract (Oxf). 2021 Oct 1;2:100189. Doi: 10.1016/j. puhip.2021.100189
- 19. Moonesar I, Al-alawy K and Gaafar R. Taxing Sugar-Sweetened beverages: Knowledge, beliefs and where should the money go? HELIYON (2024), https://doi.org/10.1016/j.heliyon.2024.e28226
- 20. Ministry of Health and Prevention (2022). The National Policy for Promoting Healthy Lifestyles. Available on: <a href="https://www.uaelegislation.gov.ae/en/policy/details/lsy-s-lotny-ltaazyz-anm-t-lhy-lshy-fy-ldol#:~:text=The%20policy%20aims%20to%20establish,community%20partnership%20in%20the%20UAE [Accessed 12 August 2024].</a>
- 21. Susan Michie, Lou Atkins & Robert West (2014). The Behaviour Change Wheel. A Guide To Designing Interventions.



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