

The Role of Public Health Policies in Addressing Non-Communicable Diseases

Name/ Afarah Mbkot AL seri Speciality/ Nursing technician	Name/ Abdulelah Eid Almatiri Speciality/ nursing
Name/ Mona Meheb Alotaibi Speciality/ Health informatics technician	Name/ Shuaa Hussain A Alanazi Speciality/ General physician
Name/ Amaal Mugeb Alotibi Speciality/ Nursing technician	Name/ Ziyad saud almjlad Speciality/ General physician
Name/ Salman Mousa Mohammed ALQarni Speciality/ Technician Laboratory	Name/ ABDULRAHMAN TURKI ABDULRAHMAN ALHARTHI Speciality/ Medical secretary
Name/ Bader sanad alharbi Speciality/ Technician Laboratory	Name/ Wansh soud alroiley Speciality/ Nursing technician
Name/ Areej Sodi Ali Al-Ruwaili Speciality/ Nursing specialist	Name/ Abdullah moneef almotari Speciality/ Nursing technician

Introduction:

Non-communicable diseases (NCDs) impose a significant health and economic burden on local and national governments. Non-communicable diseases (NCDs) are diseases that are not caused by infectious agents. The aetiology of these diseases can be attributed to either hereditary or behavioural causes. They encompass coronary heart disease, stroke, hypertension (high blood pressure), type 2 diabetes, kidney disease, specific types of cancer, respiratory and liver diseases, excessive weight and obesity, as well as some mental health disorders. These diseases are the main cause of illness and death worldwide, and low- and middle-income nations experience a higher burden of these diseases compared to other countries. The majority of non-communicable diseases (NCDs) can be attributed to the modifiable factors of tobacco use, excessive alcohol use, unhealthy food, and insufficient physical exercise (Unwin, et al.2017).

NCDs are increasingly common in all geographies and income categories, with low- and middle-income countries being particularly afflicted. Although Non-communicable diseases (NCDs) were formerly associated with affluent individuals, they now impact people from all socioeconomic backgrounds, worsening health disparities and putting further strain on already vulnerable healthcare systems (Ndubuisi, 2021). These diseases can be avoided through preventive measures. Nevertheless, it is very simplistic to solely attribute these diseases to individual lifestyle choices, as other variables such as globalization, industrialization, and urbanization must also be taken into account. Non-communicable diseases (NCDs) can be classified as lifestyle and environmental diseases that are not primarily caused by an individual's conduct. Instead, they are often associated with societal changes such as economic transition, urbanization, globalization, and other recognized risk factors. The global shifts have profound impacts on the health and nutritional status of populations, particularly in low- and middle-income countries undergoing transition. To effectively address non-communicable diseases (NCDs), it is necessary to take a comprehensive approach that involves multiple disciplines and sectors. (Ndubuisi, 2021).

Amidst this escalating issue, public health strategies are crucial in reducing the burden of NCDs and advancing population health. Public health policies cover a wide array of actions designed to prevent diseases, encourage healthy behaviors, and enhance access to healthcare services. These policies aim to tackle the various factors that contribute to non-communicable diseases (NCDs)

and create conditions that promote good health and well-being. They include regulations, educational initiatives, and financial incentives (Gassner, et al.2022).

☒ **The Public Health Policies:**

Public health policies encompass a collection of guidelines, rules, regulations, and actions implemented by governmental and non-governmental organizations to promote and safeguard the health of populations. These policies are specifically formulated to tackle a broad spectrum of health concerns, encompassing both communicable diseases and long-term ailments. They have a pivotal role in influencing the health results of communities. The significance of public health policies rests in their capacity to tackle health determinants on a population-wide scale and establish environments that promote healthy behaviours and lifestyles. Public health policies strive to mitigate risk factors and address the underlying causes of diseases, to prevent illnesses, decrease morbidity and death rates, and enhance overall well-being. They function as frameworks for action, directing decision-making processes and allocation of resources to accomplish public health objectives (Tulchinsky, et al.2014).

➤ **Public health policies can be categorized into various types:**

- **Regulatory policies:** encompass the creation of regulations and standards to govern health-related products, services, and settings. Illustrative instances encompass regulations about food safety, legislation governing tobacco control, and standards addressing environmental contamination. Regulatory policies frequently entail government agencies establishing and ensuring adherence to health standards to safeguard public health (Eyler, et al.2016).
- **Legislative policies:** refer to the legislation enacted by legislative bodies, including national or municipal governments, with the aim of tackling public health concerns. These laws may impose regulations, restrictions, or incentives pertaining to health behaviors, practices, or services. Illustrative instances encompass statutes that enforce seatbelt utilization, limitations on the sale of alcohol, and mandates for immunization (Tulchinsky, et al.2014).
- **Educational policies:** primarily aim to distribute knowledge and enhance consciousness regarding health hazards, precautionary measures, and beneficial conduct. The objective of these policies is to enable individuals and communities to make well-informed choices regarding their health. Possible educational approaches encompass public health initiatives,

health education programs implemented in schools, and media campaigns aimed at promoting healthy habits (Hahn, & Truman, 2015).

- **Fiscal policies:** utilize financial incentives, levies, and subsidies to shape health behaviours and outcomes. These regulations can promote healthy habits by reducing the cost of good choices or deter unhealthy behaviours by raising the price of unhealthy products. Illustrative instances encompass levies on sugary beverages, grants for nutritious food items, and monetary rewards for companies to foster staff wellness initiatives (Thow, et al.2018).

☒ **Health Information Systems and Surveillance:**

Public health policies facilitate the development and implementation of health information systems and surveillance mechanisms to :

- **Monitoring NCD Trends:** Health information systems and surveillance mechanisms enable the systematic collection, analysis, and monitoring of data on NCDs, including prevalence rates, incidence rates, mortality rates, and associated risk factors. By tracking NCD trends over time, policymakers and public health professionals can identify emerging patterns, prioritize interventions, and allocate resources effectively (Chauhan, & Singh, 2021).
- **Tracking Risk Factors:** In addition to monitoring disease outcomes, HIS and surveillance systems allow for the tracking of NCD risk factors, such as tobacco use, unhealthy diet, physical inactivity, and alcohol consumption. By collecting data on these modifiable risk factors, policymakers can assess population-level behaviours, identify high-risk groups, and tailor interventions to address specific risk factors contributing to the NCD burden.
- **Evaluating Intervention Impact:** Health information systems play a crucial role in evaluating the impact of public health interventions aimed at preventing and controlling NCDs. By comparing pre- and post-intervention data, policymakers can assess the effectiveness of interventions in reducing NCD prevalence, modifying risk behaviours, and improving health outcomes. This evaluation informs evidence-based decision-making and guides future policy direction (Philip, et al.2018).
- **Facilitating Evidence-Based Decision-Making:** Policies that promote data collection, analysis, and dissemination are essential for evidence-based decision-making in NCD prevention and control efforts. Timely and accurate data enable policymakers to identify

priority areas, allocate resources strategically, and tailor interventions to meet the specific needs of populations. Furthermore, data-driven decision-making fosters transparency, accountability, and public trust in the policymaking process.

- **Supporting Continuous Improvement:** Health information systems facilitate continuous monitoring and evaluation of NCD prevention and control efforts, allowing policymakers to track progress, identify gaps, and adapt strategies as needed. By promoting a culture of learning and innovation, HISs contribute to the continuous improvement of public health policies and programs, ultimately enhancing their effectiveness and impact on population health (Gouda, et al.2015).

☒ **Epidemiology and Risk Factors of Non-Communicable Diseases (NCDs):**

Prevalence: Non-communicable diseases (NCDs) are highly prevalent worldwide, with varied rates across different locations and populations. As per the World Health Organization (WHO), non-communicable diseases (NCDs) are responsible for almost 74% of global fatalities. The main causes of mortality include cardiovascular diseases, cancer, respiratory illnesses, and diabetes (World Health Organization, 2023).

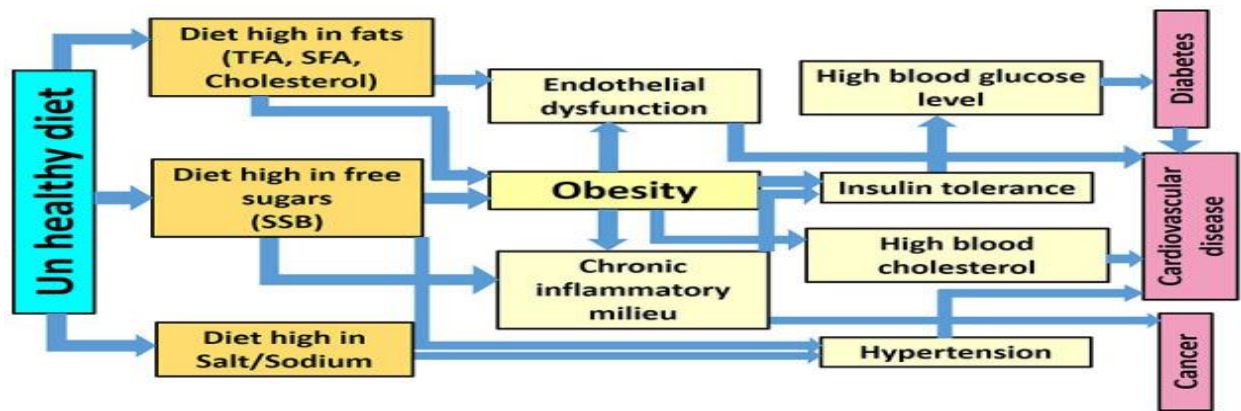
Incidence: The prevalence of non-communicable diseases (NCDs) is increasing due to causes such as the ageing of populations, urbanization, and lifestyle changes. Non-communicable diseases (NCDs) impact persons across all age groups, but they are particularly common among older folks.

Mortality: Non-communicable diseases (NCDs) have a considerable impact on mortality rates, resulting in millions of deaths each year. Cardiovascular illnesses are the primary cause of around 17.9 million fatalities annually, followed by cancer, respiratory diseases, and diabetes (World Health Organization, 2023).

➤ **Prevalent Risk Factors Associated with the Development of Non-Communicable Diseases:** (World Health Organization, 2023).

- **Tobacco smoking:** is a significant contributor to the development of non-communicable diseases (NCDs), such as cardiovascular illnesses, several types of cancer (including lung, .throat, and mouth cancer), and respiratory ailments. Exposure to secondhand smoke also presents health hazards.

- **An unhealthy diet:** refers to poor eating patterns that involve consuming excessive amounts of processed foods, saturated fats, and sugars, while having a low intake of fruits, vegetables, and whole grains. This type of diet is a major factor in the development of obesity, diabetes, cardiovascular illnesses, and some types of cancer (Al-Jawaldeh, & Abbass, 2022).
- **Physical inactivity:** characterized by sedentary lifestyles and a lack of regular physical activity, is a major contributor to the development of obesity, cardiovascular illnesses, diabetes, and other non-communicable diseases (NCDs). Lack of exercise is linked to higher rates of illness and death.
- **Alcohol Consumption:** Excessive alcohol intake is associated with several non-communicable diseases (NCDs), such as liver illnesses, cancer (specifically liver, breast, colorectal, etc.), cardiovascular diseases, and mental health disorders.
- **Environmental Exposures:** The presence of environmental contaminants, including air pollution, water contamination, and hazardous chemicals, has a role in the emergence of respiratory diseases, cardiovascular disorders, and specific types of malignancies (Shetty, et al.2023).



➤ **Social Determinants of NCDs:**

- **Socioeconomic Status:** Individuals with lower socioeconomic status (SES) often face greater exposure to NCD risk factors, including limited access to healthy food options, healthcare services, and safe environments. Socioeconomic disparities also influence health outcomes and access to preventive care (Raseemola, et al.2023).

- **Education Level:** Higher levels of education are associated with better health outcomes and health behaviours. Education serves as a determinant of health literacy, enabling individuals to make informed decisions about their health and adopt healthier lifestyles.
- **Access to Healthcare:** Disparities in access to healthcare services, including preventive care, screening, diagnosis, and treatment, contribute to disparities in NCD outcomes. Lack of access to healthcare facilities, health insurance, and health information can hinder disease prevention and management efforts (Murata, & Kondo, 2020).
- ☒ **Challenges and Barriers to Implementing Public Health Policies:** (Hadian, et al.2021).

Political Challenges:

- **Political will:** The lack of political commitment or prioritization of public health issues by policymakers can hinder the implementation of effective policies.
- **Interests of stakeholders:** Conflicting interests among political stakeholders, such as industry lobbyists or special interest groups, may influence policy decisions and dilute the effectiveness of public health interventions.
- **Short-term political cycles:** Public health policies often require long-term planning and sustained investment, but political cycles characterized by short-term priorities and electoral considerations may undermine the continuity and effectiveness of policy initiatives.

Economic Challenges:

- **Budget constraints:** Limited financial resources may restrict the implementation of comprehensive public health policies, particularly in resource-constrained settings where competing demands for funding exist.
- **Economic interests:** Economic considerations, such as the potential impact on industry profits or employment, may lead to resistance or opposition to policies that regulate or restrict certain products or behaviors, such as tobacco or sugary beverages.
- **Cost-effectiveness:** Demonstrating the cost-effectiveness of public health interventions and securing funding for preventive measures can be challenging, especially when the benefits may not be immediately apparent or quantifiable (Hadian, et al.2021).

Social and Cultural Challenges:

- **Social norms and attitudes:** Deeply entrenched social norms and cultural beliefs surrounding health behaviors, such as smoking or dietary habits, can pose barriers to policy acceptance and implementation (Kassa, & Grace, 2022).
- **Stigma and discrimination:** Stigma associated with certain health conditions, such as mental illness or substance abuse, may impede efforts to implement policies aimed at addressing these issues due to fear, prejudice, or lack of understanding.
- **Health literacy:** Limited health literacy and awareness among the public may hinder the uptake of health-promoting behaviors and interventions, necessitating targeted education and communication strategies.

Resource Constraints and Implementation Challenges:

- **Limited resources:** Insufficient human, financial, and infrastructural resources for policy implementation, monitoring, and enforcement can undermine the effectiveness of public health interventions.
- **Stakeholder engagement:** Inadequate involvement and engagement of key stakeholders, including community members, healthcare providers, and civil society organizations, may lead to resistance, mistrust, or lack of ownership of policies.
- **Policy enforcement:** Weak enforcement mechanisms, inadequate monitoring systems, and lack of sanctions for non-compliance can compromise the enforcement and effectiveness of public health policies, particularly in contexts with limited regulatory capacity or corruption.

☒ Enhancing the role of Public Health Policies in Addressing Non-Communicable Diseases:

- **Strengthening Policy Implementation:** Ensure effective implementation of existing NCD policies through robust enforcement mechanisms, stakeholder engagement, and resource allocation. This involves enhancing collaboration across government agencies, civil society organizations, healthcare providers, and community members to ensure policies are implemented consistently and equitably (Brownson, et al.2009).
- **Promoting Intersectoral Collaboration:** Foster collaboration between health and other sectors, such as education, agriculture, urban planning, and finance, to address the social determinants of NCDs and promote health equity. Multisectoral approaches are essential for

- tackling underlying factors contributing to the NCD burden, such as unhealthy diets, physical inactivity, and environmental pollution.
- **Investing in Health Information Systems:** Strengthen health information systems and surveillance mechanisms to monitor NCD trends, track risk factors, and evaluate the impact of interventions. Timely and accurate data are essential for evidence-based decision-making, resource allocation, and continuous improvement of NCD prevention and control efforts.
- **Implementing Evidence-Based Interventions:** Prioritize evidence-based interventions that have been proven effective in preventing and managing NCDs, such as tobacco control measures, healthy food policies, physical activity promotion programs, and alcohol regulation. Emphasize interventions that address modifiable risk factors and target high-risk populations to maximize impact.
- **Advocating for Policy Change:** Advocate for policy change at local, national, and global levels to address gaps in NCD prevention and control. This involves raising awareness about the burden of NCDs, building political will, and mobilizing support from policymakers, stakeholders, and the public to prioritize NCDs on the policy agenda.
- **Empowering Communities:** Empower communities to take ownership of their health by fostering health literacy, community engagement, and participatory decision-making processes. Ensure that public health policies are contextually relevant, culturally sensitive, and responsive to the needs and preferences of diverse populations (Haldane, et al.2019).
- **Monitoring and Evaluation:** Establish mechanisms for monitoring and evaluating the effectiveness of public health policies in addressing NCDs. Regularly assess policy outcomes, indicators, and impact to identify successes, challenges, and areas for improvement. Use findings to inform policy adjustments, scale up successful interventions, and drive continuous quality improvement (Krishnan, et al.2011).

Conclusion:

The battle against Non-Communicable Diseases (NCDs) demands concerted action from policymakers, public health professionals, and stakeholders worldwide. public health policies are indispensable tools in this fight, with the power to shape environments, behaviours, and health outcomes. To effectively combat NCDs and improve population health, policymakers must prioritise evidence-based interventions, strengthen intersectoral collaboration, and empower

communities. We must advocate for policy change, invest in health information systems, and monitor progress closely to ensure the success of our efforts. By recognising and embracing the crucial role of public health policies, we can create healthier environments, reduce health inequities, and build a brighter, healthier future for all.

References:

- Al-Jawaldeh, A., & Abbass, M. M. (2022). Unhealthy dietary habits and obesity: the major risk factors beyond non-communicable diseases in the eastern mediterranean region. *Frontiers in nutrition*, 9, 817808.
- Brownson, R. C., Fielding, J. E., & Maylahn, C. M. (2009). Evidence-based public health: a fundamental concept for public health practice. *Annual review of public health*, 30, 175-201.
- Chauhan, H., US, S., & Singh, S. K. (2021). Health Information and Its Crucial Role in Policy Formulation and Implementation. *Journal of Health Management*, 23(1), 54-62.
- Eyler, A. A., Chriqui, J. F., Moreland-Russell, S., & Brownson, R. C. (Eds.). (2016). *Prevention, policy, and public health*. Oxford University Press.
- Gassner, L., Zechmeister-Koss, I., & Reinsperger, I. (2022). National strategies for preventing and managing non-communicable diseases in selected countries. *Frontiers in Public Health*, 10, 838051.
- Gouda, H. N., Richards, N. C., Beaglehole, R., Bonita, R., & Lopez, A. D. (2015). Health information priorities for more effective implementation and monitoring of non-communicable disease programs in low-and middle-income countries: lessons from the Pacific. *BMC medicine*, 13, 1-8.
- Hadian, M., Mozafari, M. R., Mazaheri, E., & Jabbari, A. (2021). Challenges of the health system in preventing non-communicable diseases; systematized review. *International Journal of Preventive Medicine*, 12(1), 71.
- Hahn, R. A., & Truman, B. I. (2015). Education improves public health and promotes health equity. *International journal of health services*, 45(4), 657-678.
- Haldane, V., Chuah, F. L., Srivastava, A., Singh, S. R., Koh, G. C., Seng, C. K., & Legido-Quigley, H. (2019). Community participation in health services development, implementation, and evaluation: A systematic review of empowerment, health, community, and process outcomes. *PloS one*, 14(5), e0216112.
- Kassa, M. D., & Grace, J. M. (2022). Noncommunicable diseases prevention policies and their implementation in Africa: a systematic review. *Public Health Reviews*, 42, 1604310.

- Krishnan, A., Gupta, V., Nongkynrih, B., & Thakur, J. S. (2011). How to effectively monitor and evaluate NCD programmes in India. *Indian Journal of Community Medicine*, 36(Suppl1), S57-S62.
- Murata, C., & Kondo, K. (2020). Access to healthcare and health disparities. *Social Determinants of Health in Non-communicable Diseases: Case Studies from Japan*, 199-206.
- Ndubuisi, N. E. (2021). Noncommunicable diseases prevention in low-and middle-income countries: An overview of health in all policies (HiAP). *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 58, 0046958020927885.
- Philip, P. M., Kannan, S., & Parambil, N. A. (2018). Community-based interventions for health promotion and disease prevention in noncommunicable diseases: A narrative review. *Journal of education and health promotion*, 7(1), 141.
- Rasesemola, R. M., Mmusi-Phetoe, R. M., & Havenga, Y. (2023). Social determinants of health in non-communicable diseases prevention policies in South Africa. *curationis*, 46(1), 1-8.
- Shetty, S. S., Sonkusare, S., Naik, P. B., & Madhyastha, H. (2023). Environmental pollutants and their effects on human health. *Heliyon*.
- Thow, A. M., Downs, S. M., Mayes, C., Trevena, H., Waqanivalu, T., & Cawley, J. (2018). Fiscal policy to improve diets and prevent noncommunicable diseases: from recommendations to action. *Bulletin of the World Health Organization*, 96(3), 201.
- Tulchinsky, T. H., & Varavikova, E. A. (2014). Expanding the concept of public health. *The new public health*, 43.
- Unwin, N., Samuels, T. A., Hassell, T., Brownson, R. C., & Guell, C. (2017). The development of public policies to address non-communicable diseases in the Caribbean country of Barbados: the importance of problem framing and policy entrepreneurs. *International journal of health policy and management*, 6(2), 71.
- World Health Organization. (2023). Noncommunicable diseases. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>