Addressing Non-Communicable Diseases in the United Arab Emirates: A Possible Solution

Introduction

With every passing year 38 million people are killed by non-communicable diseases (NCDs) globally. Among them 16 million deaths are under 70 years of age. The foremost killers among NCDs are cardiovascular diseases (CVDs), cancer, respiratory diseases, and diabetes. These four major NCDs account for about 82 percent of all NCDs deaths, in the world (1). The risk factors of NCDs envelopes all age groups ranging from children to elderly; whether it is unhealthy diet, physical inactivity, tobacco smoke, or harmful effects of alcohol consumption.

These diseases are augmented by: ageing population, speedy urbanization, and globalization (1). Swift advancement in the economy of Gulf cooperation council (GCC) countries have also accompanied by adoption of unhealthy lifestyle. As a result, burden of NCDs due to tobacco smoking, inactivity, excess food intake, and harmful use of alcohol is on the rise.

According to the World Health Organization, approximately sixty five percent of total deaths in the United Arab Emirates are due to non-communicable diseases. Currently, there is no policy and plan for prevention and control of non-communicable diseases in the United Arab Emirates. The aim of this study is to suggest an action plan to curb non-communicable diseases epidemic in the United Arab Emirates.

This study is based on the World Health Organization recommendation, scientific literature and a successful case study. It focuses on the National Healthy Lifestyle Program run by the Singaporean government to alleviate the risk factors of chronic non-communicable diseases and how it can be implemented and direct the United Arab Emirates residents towards healthy lifestyle. This study illustrates how by providing information, skills training, and physical and social environment encourages healthy living. It entails the use of multiple strategies, which can ideally be implemented in any high-income country like the United Arab Emirates.

United Arab Emirates is in early stages of developing its strategy towards non-communicable disease and to avoid waste of resources a similar program like the National healthy lifestyle program can be adopted by the United Arab Emirates.

Keywords: epidemics, cardiovascular diseases, hypertension, obesity, diabetes mellitus.

ABSTRACT

According to the World Health Organization, approximately sixty five percent of total deaths in the United Arab Emirates are due to non-communicable diseases. Currently, there is no policy and plan for prevention and control of non-communicable diseases in the United Arab Emirates. The aim of this study is to suggest an action plan to curb non-communicable diseases epidemic n the United Arab Emirates.

This study is based on the World Health Organization recommendation, scientific literature and a successful case study. It focuses on the National Healthy Lifestyle Program run by the Singaporean government to alleviate the risk factors of chronic non-communicable diseases and how it can be implemented and direct the United Arab Emirates residents towards healthy lifestyle. This study illustrates how by providing information, skills training, and physical and social environment encourages healthy living. It entails the use of multiple strategies, which can ideally be implemented in any high-income country like the United Arab Emirates.

United Arab Emirates is in early stages of developing its strategy towards non-communicable disease and to avoid waste of resources a similar program like the National healthy lifestyle program can be adopted by the United Arab Emirates.

Keywords: epidemics, cardiovascular diseases, hypertension, obesity, diabetes mellitus.

ÖZET


Birleşik Arap Emirlikleri kronik hastalıklara karşı strateji geliştirmenin en önemli sorunlarından biri, Ulusal Sağlık Yaşam Programı gibi benzer bir program Birleşik Arap Emirlikleri tarafından alınmasıdır.

Anahtar kelimeler: baş ağrısı, migren, hematolojik parametreler

Corresponding Author / İletişim için
Dr. Muhammad Talha Khan
Department of Family and Community Medicine, College of Medicine, King Faisal University, Al Ahsa, Saudi Arabia
E-mail: talhakhanghaur@yahoo.com.
Date of submission: 29.05.2015 / Date of acceptance: 30.11.2015
consequence increased incidence of NCDs such as CVDs, cancer, and respiratory diseases is seen. Because of epidemic level prevalence of these diseases they become leading cause of deaths in the GCC (2).

NCDs have a considerable impact on the economic development of a country. In the year 2011, the first United Nation (UN) summit on NCDs highlighted the emerging threat to public health. The director general of the World health organization (WHO), Dr. Margaret Chan entitled NCDs “the diseases that break the bank” (3). A recent study by the Harvard-World economic forum (WEF) estimates that, the NCDs are responsible for economic loses equivalent to 10 percent of total global output, in 2010 (4). NCDs not only slow the economic growth by decreasing productivity of work force but also deviates their earning away from investment and savings (5).

As shown in Figure 1, the economic cost encumbered by the NCDs is in two forms i.e. tangible and non-tangible. Typically, cost associated with treatment, medicines, consultation, and operations are considered as direct costs. However, direct costs represent only one side of the problem. Indirect costs imposes further penalty by hampering productivity and decreased life expectancy. Not only the patients with NCDs suffers but immense burden is also imposed on their families, resulting in decreased contribution in economic activities. The quality and quantity of labor force decline because of shorter life span of patients with chronic illness. On the other hand, productivity of workers diminishes as they become less effective and there absenteeism increases due to sick days (2).

Mortality due to NCDs in the UAE:

Figure 2 depicts that: In the UAE, one of the members of GCC, approximately 65 percent of total deaths are due to NCDs. The commonest among them are CVDs claim 30 percent of total deaths, cancers accounts 13 percent of deaths, and chronic respiratory diseases and diabetes accounts 3 percent of total deaths. Whereas, 16 percent of deaths from NCDs are remained uncategorized. Injuries also have a significant proportion of 23 percent of total deaths. The remaining 12 percent of total deaths are because of communicable diseases, maternal, perinatal, and nutritional conditions (6).

Local approaches to control NCDs in UAE:

According to the WHO country profile 2014, the UAE ministry of health (MOH) has no functional NCDs unit, branch, or its equivalent. There is no multi-sectorial national policy and an action plan that includes various NCDs and their common risk factors. It also does not has any operational policy or action plan to: decrease harmful use of alcohol, decrease physical inactivity and promote physical

---

Figure 1. Vicious cycle as a consequence of non-communicable-diseases (2).
activity, decrease tobacco use, decrease consumption of unhealthy diet and promote healthy diet, and no surveillance system to report nine global NCD targets. As the UAE is focused mainly on treatment of these diseases it does have evidence based national guidelines, standards, and protocols to implement through primary care approach for the management of NCDs. However, fortunately UAE has its population based cancer registry at national level (6).

Figure 2. Causes of death in the UAE in all age groups and both sexes (6).

Economic burden due to NCDs in UAE:

So far, there has been no reliable current and predicted estimated cost of NCDs for the GCC countries including the UAE. These estimations are of great value for the policy makers to appraise impact of these diseases. Based on these appraisals they prioritize their actions as well as plan the funding for rising cost of treatment, required for NCDs. The policy makers critically require these estimates as it guide them to where preventative measures and interventions are required. However, Booz and Company in 2013 developed an econometric model and generated precise estimates of direct and indirect costs of NCDs, by adopting the Harvard-WEF cost illness model and up to date available and credible statistics (2).

As depicted in Figure 3, Booz and company estimated that the UAE spend approximately about 2219 US dollars per capita during 2013, out of which 198 US dollars are exclusively on NCDs. This national health care economic burden will only increase if the government of UAE retains its focus on treatment rather than preventive approach on this NCDs epidemic (2).

Figure 3. Total health care costs per capita in US dollars in the year 2013 (2).

Until now, UAE has not yet structured any national policy or planned any action to prevent the menace of NCDs, which if continued, will cause greater death toll and economic burden in coming future (2,6). The aim of this study is to propose a model based on the 6 global objectives cited in action plan for prevention and control of NCDs by the WHO for the Eastern Mediterranean region (EMRO) and a successful case study of the Singaporean national healthy lifestyle program (NHLP), for addressing NCDs epidemic in the UAE.

Proposed prevention and control of NCDs by the WHO for EMRO:

The 53rd World health assembly (WHA) in 2000 endorsed the global prevention and control strategy of NCDs in a resolution. The goal of the strategy was to tackle the epidemic of NCDs and to analyze behavioral, social, economic, and political determinants of these diseases, thus reducing the exposure of people to modifiable risk factors as well as to reinforce health care for NCDs patients. The
action plan for the global strategy was endorsed by member states in a resolution during the 61st WHA for the prevention and control of NCDs. To address the challenge of NCDs, the action plan provides guidance and translation of strategy into concrete action for member states, WHO, and other international partners (7). The regional action plan for EMRO was developed from the Global action plan for prevention and control of NCDs. It represents surplus call-to-action for the regional prevention of NCDs and to reinforce efforts for the implementation of prevention and control programs for NCDs (8).

_NHLP in brief:_

To alleviate the risk factors of NCDs and to direct the Singaporeans towards healthy lifestyle, the Singapore has adopted a disease control strategy at national level, with an emphasis on health promotion. Started in 1992, NHLP encouraged healthy living by providing information, skills training, and physical and social environment. It utilized multiple strategies, such as, creative means of communication and media, involvement of government and community organizations, schools and workplaces, as well as food industry collaboration for the provision of healthy choices of food. The baseline prevalence data for cardiovascular risk factors, together with, hypertension, hypercholesterolemia, diabetes mellitus, physical activity, obesity, and smoking was collected through the first national health survey, in 1992. After every six years, a cross-sectional study is conducted by the MOH to evaluate the effectiveness of NHLP (9).

_Proposed model:_

Figure 4 represents the proposed model. This model, solely address the core issues which hinders any development in the UAE towards the prevention and control of NCDs. It suggests from the start line on how the UAE can control NCDs epidemic and keep up the pace with its maintenance.

**Discussion**

The first line of action from where the UAE should begin with is to create and develop policy for the prevention and control of NCDs with its integration to all departments within the government. Therefore, the prevention and control of NCDs must be clearly addressed and the effort for development of policy and advocacy must adopt a multipronged approach so that all departments of government and stakeholders work together, which is regarded as the key for significant success in prevention and control of NCDs.

As there is a close link between NCDs and socioeconomic development, which are not only associated with poverty but also a contributing factor.
to it. Therefore the efforts to NCDs epidemic control must not only focus on health policy but it must also influence public policies in various sectors like food production, agriculture, nutrition, pharmaceutical, education, trade, urban development, and taxation. In addition, it should strongly advocate and work to accomplish equality in health care access at all levels and protection from risk factors exposure. As well as, environmental and social determinants of NCDs must be responded through national actions (10).

To strengthen NCDs policy and plan it should be integrated in national health policy and wider developmental frame. In these policies, special attention should be paid to disabled persons, gender, socioeconomic discriminations, and ethnicity. It should incorporate three components including: Multi-sectorial national framework development for NCDs prevention and control, integration of national health development plans with NCDs prevention and control, reorientation and strengthening of health systems so that they can act more effectively to NCDs patients on equitable basis (10).

The role of leadership is fundamental in respect of establishment of NCDs policy and plan and raising the priority of NCDs prevention and control in any country. We proposed a model based on NHLP, which was launched in 1992 by the Singaporean MOH. Initially, the program focused on a month long annual campaign which aimed to raise awareness of healthy lifestyle in general public. To generate and nurture an environment supportive for healthy behavior practices the program adopted a multipronged approach c. It included systematic participation of government organizations, innovative communication and media activities, community, schools, workplaces, and food industry and thus formed a civic committee for the prevention and control of NCDs (9).

Furthermore, NHLP in 1999, introduced an award called H.E.A.L.T.H. and a day program known as A.C.T.I.V.E. (All Companies / Communities Together In Various Exercises). The aim was to improve staff productivity in terms of reducing medical leave and enhancing performance by managing stress. On A.C.T.I.V.E day staff learn ways of healthy living and do exercise. This program helped in promoting health at workplace by bringing together various unions, private companies, and government departments (11).

Second step, after developing and strengthen NCDs policy and program, UAE should start interventions focused in prevention and control of these diseases. Ratification must be given to WHO recommendation to implement the Framework Convention for Tobacco Control (FCTC), Global strategy on diet, physical activity, and health, as well as regional strategies, plans, and policies relevant to the UAE (10).

Similar intervention programs as NHLP can be introduced in the UAE, which since its inception is offering various events, activities, and rewards for its promotion. The core of NHLP remains healthy diet and regular exercise, it also encouraged the Singaporeans to quit smoking, manage stress, and focus on healthy behavior practices. The wide range activities run by NHLP differ every year with some additions of new features (11).

As a third step, UAE need to generate a health management information system (HMIS). Monitoring of NCDs and its determinants at national level provides basis for policy development, advocacy, and action. It is not just limited to track trends and magnitude of NCDs but is also important to evaluate impact, effectiveness, and progress of implemented intervention (10).

In the UAE, monitoring system should be developed which is particularly important for collecting sustainable data on NCDs and its risk factors, strengthening data collection capacity, data analysis, and use of this data to develop informed policy. Whenever possible, data on NCDs should be incorporated to national health surveys. A mechanism of networking and information sharing from diverse partners should also be established, at national level (10).

Together with HMIS, a similar approach like NHLP can also be implemented in the UAE. NHLP includes feedback and surveys to monitor the progress of population. The survey is carried out after every six year to evaluate the effect of program on the Singapore residents (11). The UAE should start monitoring of NCDs by first conducting a baseline
survey and continue conducting it with regular intervals like NHLP.

In fourth step, it is also crucial for the UAE to nurture partnerships at national and regional level as the prevalence of NCDs and its risk factors are increasing swiftly, a huge burden is expected in terms of cost in coming future. Together with that, contribution is also required in creating alliance at international level for NCDs prevention and control (10). As discussed above, an example of NHLP on how it developed local partnership among its public private sectors is considerable in this context.

To encompass this aspect the WHO recommendations must be considered, including: Analysis of status and dynamics of collaboration among sectors must be done by conducting studies, and framework and mechanisms should be established so that partnership between various sectors can be enhanced, at national level. Secondly, for strengthening partnership and optimal use of opportunities and resources, collaborative networks should be developed to structure the coordination of stakeholder role and inputs. All stakeholders should be taken on board including external support agencies. Finally, active participation in sub-regional and regional networks is required by the UAE (10).

As a last step, continuous process of quantitative and qualitative research must be established for in-depth solution of NCDs epidemic in short and long term. As coordinated agenda of research on NCDs and its risk factors is a necessary component in effective NCDs prevention and control (10). A preferable line of action as suggested by the WHO must be implemented in the UAE.

According to the WHO recommendations: documentation and review of currently available research and its conversion into action must be done. Secondly, finance epidemiological, health system, and behavioral research on NCDs and its risk factors should be conducted and integrated with national programs for these diseases. Based on national priorities, a shared research agenda should be developed in collaboration with academic and other research institutions.

As per third recommendation, an establishment of national centers and network is required to conduct research on: gender, cost effective intervention, and socio economic determinants. In addition, research should also be done on workforce development, reorientation of health system, and private health sector input and participation. Finally, the fourth recommendation suffices an encouragement of national medical associations to begin and get involved in both operational and scientific research (10).

**Conclusion**

This study illustrates how healthy lifestyle can be encouraged in the UAE by providing physical and social environment, training of skills, and information. It entails the use of multiple strategies, such as, creative means of communication and media, participation of government and community organizations, schools and workplaces, as well as food industry collaboration for the provision of healthy choices of food. To avoid waste of resources a similar program like the NHLP can be adopted by the UAE as a disease control strategy at national level, with an emphasis on NCDs and its risk factors.
References


