



Review Article

Review of National Healthcare Systems in the Gulf Cooperation Council Countries for Noncommunicable Diseases Management

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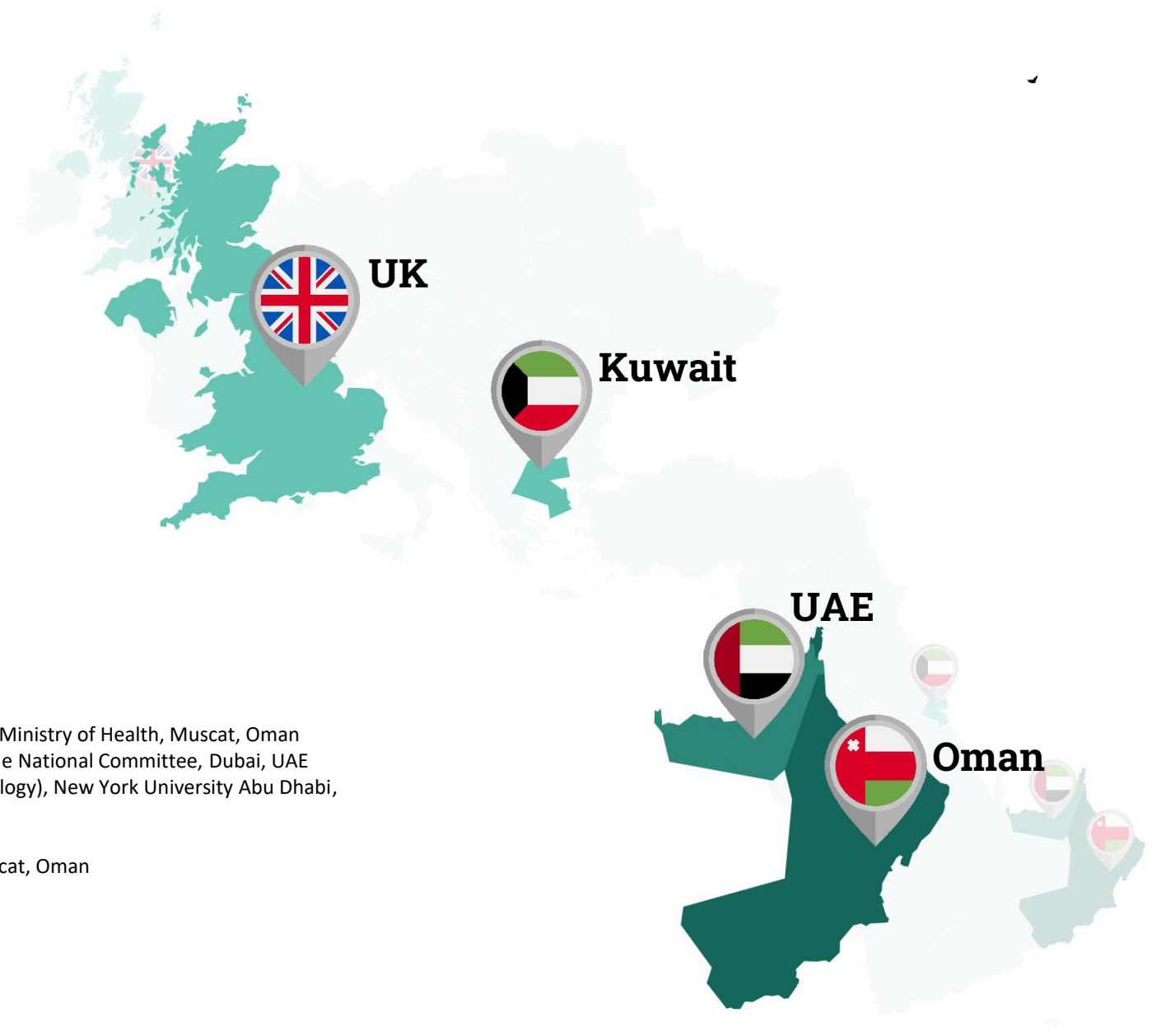
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UAE: United Arab Emirates; UK: United Kingdom

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INTRODUCTION

Non-Communicable Diseases (NCDs) the leading cause of death

NCDs account for approximately $\frac{3}{4}$ th of mortality cases worldwide

80% of NCD mortality is attributed to 4 key disease groups:

- CVD
- Cancer
- Diabetes
- Chronic respiratory disorders

With most of these NCD fatalities being **premature deaths** (occurring in individuals <70 years), **the increasing incidence of NCDs is associated with 4 common modifiable risk factors:**

- **Tobacco use**
- **Poor nutrition**
- **Physical inactivity**
- **Harmful alcohol consumption**

The scope of NCDs was recently broadened to a **5 X 5 approach** with:

- **Mental disorders** included as the 5th disease category and
- **Air pollution** as the 5th risk factor

Non-Communicable Diseases in Gulf Cooperation Council Countries

The Gulf Cooperation Council (GCC) consists of six Middle Eastern member countries:
Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates

In the GCC countries:

- **NCDs** account for **69%–83%** of all deaths
- **CVDs** are the leading cause of NCD-related mortality
- **Mental disorders** caused **2519 DALY/100,000 individuals***

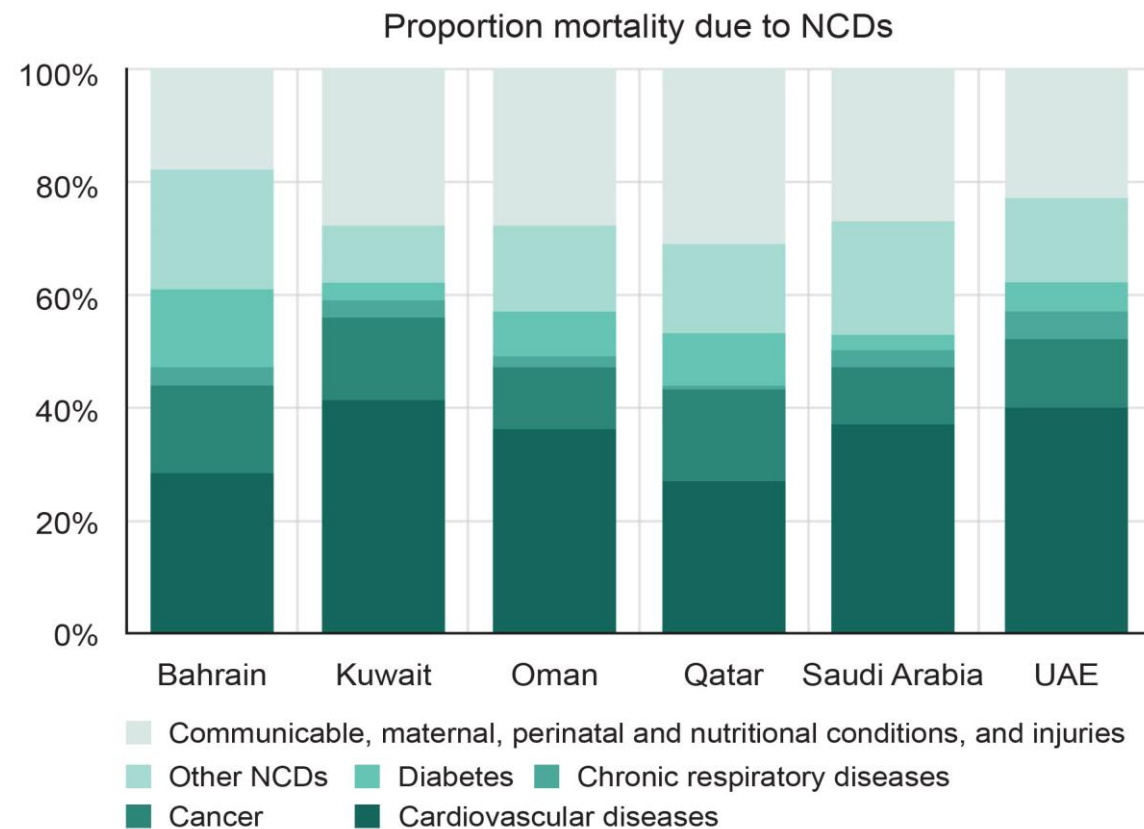


Fig 1: Noncommunicable disease burden in Gulf Cooperation Council countries

Source: World Health Organization. Noncommunicable diseases country profiles 2018

NCDs in GCC Countries

Diabetes in GCC Countries

- GCC countries have among the **highest prevalence of diabetes** in the world
- Compared with the **global diabetes prevalence of 9.3%**, the 2019 IDF has estimated alarming statistics for the 6 GCC Countries (Fig 2)

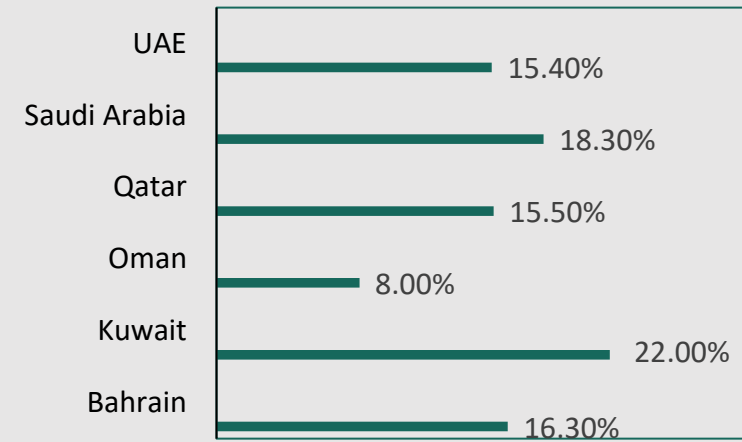


Fig 2: Prevalence of diabetes as per estimates of 2019 IDF, in the 6 GCC countries

NCDs are the leading cause of mortality in all GCC member countries

Non-Communicable Diseases and their substantial economic burden

Costs

- In 2013, the estimated direct and indirect costs of the **5 major NCDs** in GCC countries were **\$36.2 billion** with **CVD and diabetes** costing more than **\$11 billion**
- In 2022, the cost was estimated to increase to **\$67.9 billion**

Revenue and Expenditure

- GCC countries utilize the revenues from their natural resources to develop, modernize, and reform the national healthcare systems
- Healthcare remains dependent on government funding
- Government's expenditure on healthcare as a % of total healthcare is **high** compared to other HICs
- However, the GDP proportion contributed to healthcare is still not at par with developed Western countries



Rising demand for health services

- Triple burden of disease caused by NCDs (including mental health), communicable diseases, and accidental injuries
- Growing population, including a high influx of migrant workers, greater longevity and increased incidence of NCDs put further strain on healthcare systems

The Plan!

- Multiple challenges in expanding healthcare access and ensuring equitable, high-quality treatment for all
- Unique demographics of GCC nations (i.e., a significant expatriate population) has encouraged countries to explore various strategies to reduce government health expenditure
- Implementing UHC in the region can assist reduce financial hardship, particularly for chronic diseases, and improve overall population health

There is an urgent need to make significant improvements in healthcare infrastructure and develop measures to overcome the NCDs challenge



STUDY OBJECTIVES

This review of national healthcare systems in the GCC countries

- ✓ in the context of national NCD policies
- ✓ to highlight the challenges
- ✓ identify opportunities to strengthen NCD management and control in the region

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METHOD

Methodology

Data mining: Publications relevant to NCDs in the GCC Countries were identified through data sources:

PubMed Database

- **Search Terms:**
 - 'Noncommunicable Diseases', 'NCDs', 'Mental health', 'Mental disorder', 'Mental illness', 'depression', 'major depressive disorder', 'cardiovascular', 'hypertension', 'diabetes', 'risk factor', 'tobacco', 'salt', 'physical activity', 'physical inactivity', 'healthy diet', 'obesity', 'health system', and 'health policy'
- **Published in the last 5 years from 2014 onwards**
- **Articles providing information on:**
 - ✓ Healthcare systems in the GCC nations in the context of major NCDs (i.e., CVDs, cancer, diabetes, chronic respiratory illnesses, and mental health disorders) as significant contributors to NCD burden
 - ✓ Risk factors

In addition:

- **The WHO website**
- **Each GCC country's MoH websites**
- **Google databases**, were searched for additional relevant information



Data review

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RESULT

NCD risk factors

Lifestyle-related risk factors



Physical inactivity



High caloric diet



Obesity



NCD Prevention strategies in GCC countries

- Implementation of tax on tobacco products, soft drinks, and energy drinks and on sweetened beverages to promote a healthy lifestyle (Oman, Saudi Arabia, the UAE, Qatar, and Bahrain)
- Reduce the salt content in bread produced by major national bakeries and the private sector (Oman, Saudi Arabia, the UAE, Qatar, and Bahrain)
- Mandatory labeling of total fats, saturated fatty acids, trans-fat, and salt in all imported or locally produced food (Saudi Arabia)
- Ban on partially hydrogenated oils (Saudi Arabia)
- National school canteen guideline for all schools to promote healthy food choices, periodic screening programs for the adult population (United Arab Emirates)
- NCD screening program in the early detection of NCDs in the country (Oman)

NCD surveillance and research

- An e-health programs/services has been initiated to upgrade healthcare services (Qatar)
- Digitalizing its hospitals and patients' medical records through Healthcare Information and Management Systems Society (Saudi Arabia)
- Integrate patients' electronic medical records (eMR) with public hospitals and clinics (United Arab Emirates)
- Health information exchange programs (United Arab Emirates)



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Healthcare systems

The GCC countries' Ministries of Health have created strategic plans under the Gulf Plan for Control of NCDs 2011-2020 to ensure that necessary treatment for NCDs is available, identify risk reduction programmes, combine curative and preventive NCD programmes, and allot adequate funding to combat NCDs.

Challenges faced by Healthcare systems

- Inadequately trained health workforce
- Timely referral and follow-up of patients
- Inadequate infrastructure for mental health
- Insufficient numbers
- Skill imbalance
- Gender disparity
- Allied access challenges
- Insufficient resources
- Infrastructure for expansion
- Delivery of palliative care in the region

Health financing for NCDs

- The government expenditure on healthcare in the GCC countries is low (3.8% of GDP)
- Several GCC countries are also looking to reform their private healthcare system to ensure equitable and efficient healthcare services
- As mandated by the WHO, GCC countries have adopted frameworks for advancing UHC
- Some measures include mandatory national social health insurance and direct financial protection for citizens and expatriates

GCC: Gulf Cooperation Council; GDP: gross domestic product; NCD: noncommunicable diseases; UHC: Universal Health Coverage; WHO: World Health Organization.

National healthcare expenditure and resources for NCD management in GCC countries

Countries	Age standardized NCD mortality rate per 100000 (2016)	Current health expenditure as %GDP (2017)	Total health expenditure per capita (government, OOP, % 2017)	Existence of an operational integrated NCD national policy/ strategy/action plan (2019)	Doctors per 10000 population	Nursing personnel per 10000 population	Psychiatrists per 100000
Bahrain	439.5	4.7%	USD1127 (58%, 31%)	Yes	9.3	24.9	5.5
Kuwait	579.2	5.3%	USD 1529 (87%, 13%)	Yes	26.5	74.2	-
Oman	469.3	3.8%	USD 588 (88%, 7%)	Yes	20.0	42.0	1.7
Qatar	464.5	2.6%	USD 1649 (81%, 9%)	Yes	24.9	72.6	2.7
Saudi Arabia	561.8	5.2%	USD 1093 (64%, 17%)	Yes	26.1	54.8	1.3
UAE	498.6	3.3%	USD 1357 (72%, 19%)	Yes	25.3	57.3	1.7

GCC: Gulf Cooperation Council; GDP: gross domestic product; NCD: noncommunicable diseases; OOP: out-of-pocket expenditure; WHO: World Health Organization.

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DISCUSSION

Summary of Recommendations

Promoting a healthy lifestyle, such as educational programs to aid lifestyle modifications in the population. GCC countries have introduced NCD preventive measures to varying degrees through legislation as well as health education and promotion measures.

Management of NCDs needs strengthening and capacity building of primary care with a paradigm shift towards holistic and preventive care

The WHO Eastern Mediterranean regional framework provides strategic interventions to achieve the targets in governance, prevention and reduction of risk factors, surveillance, monitoring and evaluation, and healthcare

Mental health integration into general public health policy. Establishing reliable NCD surveillance and monitoring programs

Progress of GCC countries towards achieving the WHO NCD targets in 2020

	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Set national NCD targets and indicators						
Generate mortality data routinely						
Conduct periodic risk factor surveys						
Operational national integrated NCD policy/strategy/action plan						
Measure to reduce tobacco demand						
Measure to reduce harmful alcohol use		NR				
Measure to reduce unhealthy diet						
Implemented physical activity awareness campaign						
Has guidelines for management of major NCDs at primary care level						
Provision for therapy/ counseling to prevent heart attacks and stroke						



Fully achieved



Partially achieved



Not achieved



Limitations

This paper did not use a systematic search approach because it was found that peer-reviewed scientific articles and grey literature both provided most of the information regarding the current national NCD policy and strategy. The records acquired might not be all-inclusive, despite our efforts to include data from the WHO website and the government's Ministry of Health websites. Some regional or national NCD programmes may not have been included as a result of the exclusion of studies written in local languages. Finally, because several of the projects were just launched, there is no information on their effectiveness.

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CONCLUSION

Due to the **NCD epidemic**, the GCC countries are facing a growing healthcare problem that requires them to adapt and strengthen their healthcare systems.

In order to lessen the burden of NCDs in the area, some recommendations include improving primary care to provide a continuum of NCD care with an emphasis on holistic and preventive care, increasing the capacity of a workforce of health professionals who are adequately trained through improved training and education, addressing the dearth of research among the local populations to develop efficient treatment strategies, integrating mental health into general public health policy, and establishing regional NCD prevention and control programmes.



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