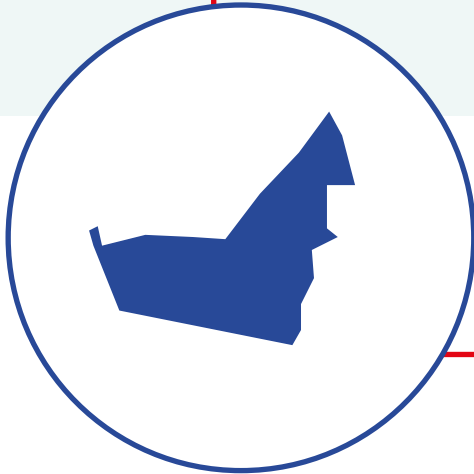


# Country Profile: United Arab Emirates



**Unmasking the risk and burden of seasonal influenza in the Middle East: strengthening prevention and control strategies for a healthier tomorrow**

Sponsored by **sanofi**

## Areas of Focus

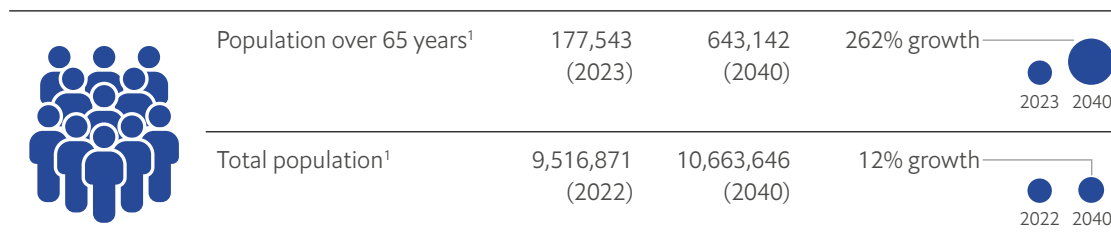
- **Improve data collection and quality** – Developments in sentinel surveillance and health information systems (HIS) in the United Arab Emirates (UAE) provide an opportunity to address an urgent need to improve data collection and availability on areas such as vaccination rate and status, prevalence of ILI symptoms, and travel history.
- **Integrate influenza prevention and management into treatment guidelines of comorbid conditions** – The greatest impact in terms of hospitalisation and mortality associated with influenza today is likely to be seen in the population with comorbid conditions, such as diabetes, obesity, CVD and COPD. Improving awareness of the risks of influenza among these population groups will be essential to reducing near-term hospitalisation and mortality.
- **Develop research capacity** – With recent advancements in surveillance and genome sequencing, the UAE is in a unique position to conduct research on influenza activity and the impact of influenza, which will be valuable to the wider region. Expanding access to public health data and improving collaboration between health systems and academia will be a necessary first step.

## Population






While health system infrastructure and capacity in the UAE are sufficient to manage the burden of influenza patients today, an ageing population and the growing prevalence of chronic diseases will undoubtedly increase pressure on healthcare resources in the coming decades. Almost 80% of the UAE population is between 15 and 55 years, a relatively low-risk age cohort for influenza-related complications and mortality. The population aged over 65, a high-risk group for influenza and complications due to influenza, is projected to increase by 262% in the next two decades.<sup>1</sup>

The UAE also has a high prevalence of chronic diseases, notably diabetes, obesity and cardiovascular disease (CVD). Individuals with these underlying medical conditions are at an increased risk of hospitalisation and mortality from influenza. The incidence and prevalence of many major chronic diseases are projected to increase in the coming decades. The prevalence of diabetes is projected to increase from 16% in 2021 to 18% by 2045, over 60% higher than the global average of 11%.<sup>2</sup> The prevalence of obesity is projected to increase from 27.8% in 2018 to 45% by 2035, significantly higher than the projected global average of 24% for the same year.<sup>3</sup> The UAE population also has a high prevalence of chronic obstructive pulmonary disorder (COPD) and asthma, which increase the risk of influenza-related complications.<sup>4</sup>

### Population structure and projections



### Risk factors

Risk factor, prevalence	UAE %	Global %
 <b>Diabetes<sup>2</sup></b> Adult population, 2021	<b>16.4</b>	9.8
 <b>Obesity<sup>3</sup></b> Adult population, 2018	<b>27.8</b>	14.0
 <b>CVD<sup>4</sup></b> Total population, age-standardised, 2019	<b>8.9</b>	7.0
 <b>COPD<sup>4</sup></b> Total population, age-standardised, 2019	<b>3.1</b>	2.8
 <b>Asthma<sup>4</sup></b> Total population, age-standardised, 2019	<b>7.5</b>	3.5



## Surveillance

Sentinel Surveillance – The UAE has made significant efforts to strengthen influenza surveillance capacity and infrastructure over the past decade. A National Influenza Surveillance Protocol, with support from the World Health Organization Regional Office for the Eastern Mediterranean (WHO EMRO), was introduced in 2016, which included the expansion of influenza-like illness (ILI) and severe acute respiratory infections (SARI) sentinel surveillance sites and a designated National Influenza Centre (NIC).<sup>5</sup>

Recent developments in the national infrastructure and integration of electronic health records (EHR) also provide an opportunity to expand influenza surveillance in hospitals, primary care and community clinics. The National Unified Medical Record (NUMR) platform, Riayati, connects and integrates patient medical records from all public and private healthcare facilities. The platform is expected to improve disease surveillance, including for respiratory viruses and influenza.<sup>6</sup>

**National Influenza Centre (NIC)** – Sheikh Khalifa Medical City (SKMC) Reference Laboratory within Shaikh Khalifa Medical City (Khaifa Hospital) in Abu Dhabi is the NIC in the UAE.<sup>5</sup>

**Data sharing** – The UAE reports to the WHO on the number of positive cases of Influenza. Data from sentinel sites can be found on the WHO FluNet database.<sup>7</sup>

Genome sequencing and genomic surveillance capabilities have also gradually expanded in the UAE, accelerated by the covid-19 pandemic. The use of genome sequencing has also increased significantly following covid-19. During the pandemic, the Abu Dhabi Public Health Centre (ADPHC) hosted a regional workshop in partnership with the WHO to train laboratory staff on the sequencing and analysis of SARS-CoV-2. The NIC also supported other countries in the region where such laboratory capabilities were unavailable.<sup>8</sup>

## Policy

**National policy for influenza prevention and control** – The Ministry of Health and Prevention's (MOHAP) National Plan for Prevention and Control of Acute Severe Respiratory Infections (2015) outlines procedures for testing, vaccination and antiviral treatment.<sup>5</sup> The Abu Dhabi Public Health Centre (ADPHC) issues an annual circular to all health facilities in the Emirate, namely, the 'Prevention and Control of Influenza Infection in the Community', which covers annual vaccination procedures, surveillance and reporting, and adherence to infection control guidelines.<sup>9</sup> The Dubai Health Authority (DHA) issued a Seasonal Influenza Factsheet and Technical Guide, 2022, to all public and private health facilities in the Emirate of Dubai, which covers guidelines for prevention and treatment.<sup>10</sup>

**National immunisation programme** – In Abu Dhabi, seasonal influenza vaccination is provided free to UAE nationals and individuals from the following groups – healthcare workers, pregnant women, adults aged 50 years and above, children, smokers, Hajj and Umrah pilgrims, close contacts of positive cases and individuals with high-risk chronic conditions – through public healthcare facilities, approved private healthcare facilities and pharmacies.<sup>11</sup> In Dubai, the DHA offers free flu vaccinations to UAE nationals, Dubai residents who are aged 65 years and above, children under five years, pregnant women and people of determination.<sup>12</sup>

Data on vaccination rates for seasonal influenza among the general public are limited. A 2021 survey of healthcare professionals, a high-risk group for influenza, reported that only 54% had received the influenza vaccine despite recommendations from regional health authorities.<sup>13</sup>

**Pandemic preparedness** – The UAE has a national public health emergency response plan that addresses planning for multiple communicable diseases with pandemic potential.



The National Response Framework (NRF), issued in 2013 by the National Emergency Crisis and Disasters Management Authority (NCEMA), includes planning for emergencies and crises.<sup>14</sup> NCEMA hosts regular training exercises to facilitate coordination between different sectors and entities to strengthen epidemic and pandemic preparedness.<sup>15</sup>

## Prevention and Control

**Infection control** – There are published infection prevention and control guidelines for seasonal influenza in healthcare settings. Both ADPHC and DHA release an annual circular or guidance to all healthcare facilities in their respective Emirate on prevention and control of seasonal influenza infections.<sup>9,10</sup> MOHAP also publishes an annual Seasonal Influenza Awareness Guide that outlines information on disease transmission, preventive measures and vaccination.<sup>16</sup>

**Health System capacity** – The UAE healthcare system experienced minimal disruption during the covid-19 pandemic, with access to essential healthcare services largely unrestricted, and a significantly lower mortality rate among covid-19 patients as compared with the global average.<sup>17</sup> However, an overreliance on expatriate healthcare workers (82% of physicians and 96% of nurses in the UAE are expatriates) may be a health security challenge as the population increases and ages, placing greater demand on healthcare services.<sup>18</sup>

## Public Education

MOHAP leads the annual national awareness campaign for seasonal influenza in collaboration with ADPHC in Abu Dhabi and DHA in Dubai. The 2023-24 campaign under the theme “Protect Yourself... Protect Your Community” focuses on cultivating a sense of “health consciousness” throughout society and advancing knowledge of international best practices for influenza prevention among healthcare professionals. The campaign employs various communication channels, including social media platforms, newspapers, television and radio.<sup>22</sup> Local health authorities also run supplementary campaigns and education initiatives. In Abu Dhabi, ADPHC’s public health programme for seasonal influenza seeks to educate the public on the role, myths and misconceptions regarding vaccination.<sup>23</sup>

### HEALTHCARE RESOURCES PER 1,000 PEOPLE:

#### Physicians (2019)<sup>19</sup>

**UAE**                      OECD average  
2.6 ●●●                      3 ●●●●

#### Nurses (2017)<sup>20</sup>

**UAE**                      OECD average  
5.7 ●●●●●●                      10 ●●●●●●●●●●

#### Hospital beds (2017)<sup>21</sup>

**UAE**                      OECD average  
1.4 ●●                      5.1 ●●●●●●●



## References

1. World Bank. Data Bank. Population estimates and projections. Available from: <https://databank.worldbank.org/source/population-estimates-and-projections>
2. International Diabetes Federation (IDF). IDF Diabetes Atlas 2021 [Internet]. [cited 2023 Aug 1]. Available from: <https://diabetesatlas.org/atlas/tenth-edition/>
3. Global Obesity Observatory. Rankings (% Obesity by Country). 2016. Available from: <https://data.worldobesity.org/rankings/?age=a&sex=f>.
4. Institute for Health Metrics and Evaluation. Global Burden of Disease Study 2019 (GBD 2019). Seattle, United States. 2021. Available from: <https://ghdx.healthdata.org/gbd-2019>
5. Influenza Control UAE Experience. Fondation Merieux. Presentation. 2018 Available from <https://www.fondation-merieux.org/wp-content/uploads/2017/11/8th-mena-2018-uae-mohamed-hassan.pdf>
6. MOHAP. National Unified Medical Record (NUMR). United Arab Emirates. UAE Ministry of Health and Prevention. 2023 [Available from: <https://riayati.mohap.gov.ae/NUMR.html>].
7. WHO. Influenza Surveillance Report. Available from <https://app.powerbi.com/view?r=eyJrIjoiYWU4YjUyN2YtMDB-kOC00MG11LTlhN2UtZGE5NTJhY2E1ZThhIiwidCI6ImY2MTBjMGI3LWJkMjQ0NGlzM0S04MTBiLTNkYzI4MGFmYjU5M-ClsImMiOjh9>
8. Emirates News Agency. Abu Dhabi hosts World Health Organisation's regional SARS-CoV-2 workshop. June 2022. Available from <https://www.wam.ae/en/details/1395303060149>
9. Abu Dhabi Public Health Centre (ADPHC). Prevention and Control of Influenza Infection in the Community (2022 – 2023). Circular No (2022/197).
10. Dubai Health Authority. External Circular: Enhancing Surveillance of Seasonal Influenza. 2022. Available from: <https://services.dha.gov.ae/sheryan/wps/portal/home/circular-details?circularRefNo=CIR-2022-00000244&isPublicCircular=1&fromHome=true>
11. Abu Dhabi Public Health Centre (ADPHC). Seasonal Influenza Vaccination (2022-2023). 2022. Available from: <https://www.doh.gov.ae/-/media/66E84371171240EB9408C78BF504AA0B.ashx>
12. Godinho V. DHA to administer free flu vaccinations for children below 5, pregnant women and elderly in Dubai. Gulf Business. 2020. Available from <https://gulfbusiness.com/dha-to-administer-free-flu-vaccinations-for-children-below-5-pregnant-women-and-elderly-in-dubai/>
13. Barqawi H, Saddik B, Adra S, Soudan H, Mustafa J, Nidal A, Abu-Gharbieh E. Evaluating the knowledge, attitudes, and uptake of the influenza vaccine in healthcare professionals: A cross-sectional study from the United Arab Emirates. Pharm Pract (Granada). 2021 Oct-Dec;19(4):2587. doi: 10.18549/PharmPract.2021.4.2587. Epub 2021 Dec 15. PMID: 35474649; PMCID: PMC9013187.
14. National Emergency Crisis and Disaster Management Authority, UAE. National Response Framework. 2013. Available from: <https://www.ncema.gov.ae/dassets/download/9ef6a125/NRF-English.pdf.aspx>
15. Gulf News. UAE holds exercise to fortify defence against epidemics. August 2023. Available from <https://gulfnews.com/uae/health/uae-holds-exercise-to-fortify-defence-against-epidemics-1.97740954>
16. MOHAP. Seasonal Influenza Awareness Guide 2023-2024. Available from <https://mohap.gov.ae/assets/78a5f0ac/seasonal-influenza-awareness-guide-2023-2024.aspx>
17. A Nishtha. Keeping COVID-19 at Bay: Lessons From A Resilient Health System. Georgetown Law. October 2021. Available from <https://oneill.law.georgetown.edu/keeping-covid-19-at-bay-lessons-from-a-resilient-health-system/#:~:text=While%2090%25%20of%20the%20countries,being%20provided%20free%20of%20charge>
18. KPMG. Workforce considerations. United Arab Emirates. 2022. Available from <https://assets.kpmg.com/content/dam/kpmg/ae/pdf-2020/09/workforce-consideration.pdf>
19. World Bank. Physicians (per 1,000 people). Available from <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS>
20. World Bank. Nurses and midwives (per 1,000 people). Available from <https://data.worldbank.org/indicator/SH.MED.NUMW.P3>
21. World Bank. Hospital beds (per 1,000 people). Available from <https://data.worldbank.org/indicator/SH.MED.BEDS.ZS>
22. MOHAP. MoHAP officially launches national seasonal influenza awareness campaign. September 2023. Available from <https://mohap.gov.ae/en/media-center/news/19/9/2023/seasonal-influenza-awareness-campaign#:~:text=MoHAP%20officially%20launches%20national%20seasonal%20influenza%20awareness%20campaign&text=The%20Ministry%20of%20Health%20and,Protect%20Your%20Community.%22>
23. ADPHC. Public health programs - seasonal influenza. Accessed September 2023. <https://www.adphc.gov.ae/en/Public-Health-Programs/Seasonal-Influenza>

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