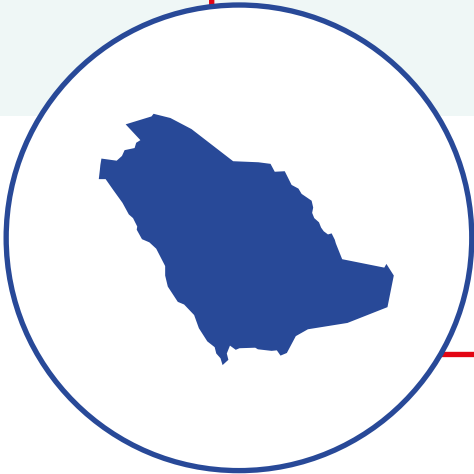


Country Profile: Saudi Arabia



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

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Areas of Focus

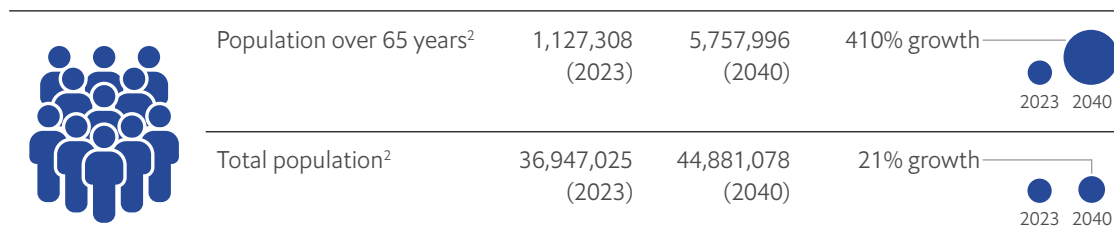
- **Building awareness among high-risk groups** – While Saudi Arabia has a high prevalence of chronic diseases, recent data indicate that influenza vaccination uptake is lower among this high-risk population.¹¹ Encouraging primary care physicians to identify and educate high-risk patients about the increased risk of influenza infection and its complications, and targeting national awareness campaigns to these groups, could help reduce hospitalisations and mortality due to influenza, while also reducing pressures on the healthcare system.
- **Prevention and infection control in non-health settings** – While there are established guidelines for infection prevention and control in healthcare settings, there is an opportunity to expand infection control measures at the school- and community-level, while leveraging the country's experience with mass gatherings, which could help prevent and control seasonal influenza outbreaks.
- **Data integration** – While Saudi Arabia has a relatively robust electronic surveillance network and the development of integrated national

EMR is underway, with the goals of covering 100% of the population by 2025,¹ data on the incidence and mortality due to influenza, as well as the rate of seasonal influenza vaccinations, are limited. Accurate and quality data on the impact of seasonal influenza, particularly among high-risk groups, will help guide policy and targeted prevention measures to those most vulnerable as the population grows and ages.






Population

The population aged over 65, a high-risk group for influenza and its complications, is projected to increase by over 400% in the next two decades in Saudi Arabia.² The country also has a high prevalence of chronic diseases, notably diabetes, obesity and cardiovascular disease (CVD), which increases the risk of hospitalisation and complications due to influenza, while also placing significant pressures on the health system.

Population structure and projections



Risk factors

Risk factor, prevalence	Saudi Arabia %	Global %
 Diabetes³ Adult population, 2021	18.7	9.8
 Obesity⁴ Adult population, 2019	20.2	14.0
 CVD⁵ Total population, age-standardised, 2019	8.3	7.0
 COPD⁵ Total population, age-standardised, 2019	2.1	2.8
 Asthma⁵ Total population, age-standardised, 2019	2.8	3.5



Surveillance

Saudi Arabia has made significant effort to strengthen influenza surveillance capacity and infrastructure over the past decade. These efforts have been driven partially by the response to the outbreaks of Middle East Respiratory Syndrome (MERS-CoV), avian influenza A (H5N1) and, more recently, covid-19. However, influenza surveillance has also long been a public health priority in the country due to the annual Hajj pilgrimage and Umrah season, which present a high risk of infectious disease transmission.

Sentinel Surveillance – In 2022, following the implementation of the National Influenza Surveillance Development Plan during the covid-19 pandemic, the Integrated Influenza Sentinel Surveillance System (IISS) was introduced. The IISS includes 100 sites (30 hospitals and 70 primary care clinics). It combines on-site molecular testing for influenza and respiratory syncytial virus (RSV). All test data are sent to the Public Health Laboratory at the Public Health Authority for subtyping, genetic sequencing and sharing.⁶

In 2012, the Ministry of Health launched the Health Electronic Surveillance Network (HESN), a web-based surveillance system integrating all health facilities in the Kingdom to monitor the growing threat of infectious disease and support national health security. The system was upgraded in 2022, following covid-19, to include comprehensive and advanced surveillance methods.⁶

National Influenza Centre (NIC) – In March 2022, the World Health Organization (WHO) recognised the Weqaya Public Health Laboratory as a National Influenza Centre (NIC) and a formal member of the Global Influenza Surveillance and Response System (GISRS), a global network of laboratories that provide the WHO with influenza control information.⁷

Data sharing – Saudi Arabia shares data with the WHO and has a well-developed electronic data collection system for influenza.⁶ In 2022, WHO's upgraded influenza platform, Eastern Mediterranean Flu Network (EMFLU 2.0), was pilot-tested in Saudi Arabia, offering additional functionality for data collection and analysis, including capturing and sharing multi-pathogen laboratory data.⁸

Policy

National policy for influenza prevention and control – The 'Infection Prevention and Control Guidelines for Seasonal Influenza in Healthcare Setting', published by the Ministry of Health (MOH) in 2017, outlines procedures for surveillance, testing, diagnosis and management of patients with influenza in a healthcare setting, including the treatment of patients in high-risk groups. The guideline also highlights infection prevention and control precautions, as well as instructions for home isolation.⁹

National immunisation programme – The National Immunization Schedule recommends universal annual influenza vaccination for all individuals over six months old.¹⁰ Seasonal influenza vaccinations are provided free of charge at public health clinics, and private health insurance plans are also required to cover vaccination. The MOH recommends universal flu vaccination to citizens. In August 2023, the National Immunization Technical Advisory Group (NITAG) announced a recommendation for high-dose influenza vaccination for individuals aged over 65.

Data on vaccination rates for seasonal influenza are limited, with estimates from published studies ranging from 55% to as low as 12%.¹¹ In a 2023 population-based questionnaire, distributed via social media, 55% of participants had received an influenza vaccination at the time. Working within the healthcare sector, contact with influenza-infected individuals, perceived risks, and exposure to national flu campaigns were some of the



factors associated with increased vaccination uptake.¹⁰ Another study conducted prior to the covid-19 pandemic reported that influenza vaccination uptake was lower among those aged over 65, 37% as compared with 45% among the general population.¹²

Pandemic preparedness – Saudi Arabia’s MOH published The National Plan for Preventing Flu Pandemics in 2009, which outlines strategies pertaining to surveillance, diagnosis, treatment and control of flu pandemics.¹³ During the covid-19 pandemic, a national emergency response committee was established to coordinate the response across sectors.¹⁴

Prevention and control

Infection control – The ‘Infection Prevention and Control Guidelines for Seasonal Influenza in Healthcare Setting’ outlines standard

precautions for general infection prevention including hand hygiene, mask-wearing, isolation and the use of personal protective equipment (PPE).⁹

Saudi Arabia also has unique experience in developing and implementing infection control protocols for mass gathering events. The MOH publishes the ‘Health Requirements and Recommendations for Travelers to Saudi Arabia for Hajj’ document annually, which covers infection control guidelines, including hand washing and mask-wearing. Seasonal influenza vaccination is also recommended for Hajj pilgrims.¹⁵

Health system capacity – The Saudi healthcare system is estimated to require an additional 20,000 hospital beds by 2030 to meet the needs of a growing and ageing population.¹⁶ In preparation for the rapidly growing population, the healthcare sector is undergoing big reforms in line with the country’s Health Sector Transformation Program, as part of Vision 2030 – the country’s national development plan. Restructuring primary healthcare services, including controlling infectious diseases through immunisation, and prevention and effective management of chronic diseases, are at the core of Saudi Arabia’s healthcare reforms.¹⁶ While the country has a large infrastructure of primary care facilities, geographical distribution and staffing are barriers to equitable access.¹⁸ As in other Gulf Cooperation Council (GCC) countries, the healthcare workforce relies heavily on expatriates, especially in rural areas. However, the new health reforms focus on attracting Saudi nationals to healthcare professions to develop a sustainable workforce.¹⁹ The covid-19 pandemic accelerated the digital transformation of the healthcare sector. Expanding access to mobile health applications and telehealth will help mitigate pressure on healthcare infrastructure. The ongoing implementation of electronic medical records (EMR) will also help to identify and target high-risk patients for influenza prevention.²⁰

HEALTHCARE RESOURCES PER 1,000 PEOPLE:

Physicians (2019)²¹

Saudi Arabia	OECD average
2.7 ●●●	3 ●●●●

Nurses (2017)²²

Saudi Arabia	OECD average
5.8 ●●●●●●	10 ●●●●●●●●●●

Hospital beds (2017)²³

Saudi Arabia	OECD average
2.2 ●●●	5.1 ●●●●●●●



Public education

Seasonal influenza public awareness campaigns launched by the Saudi MOH have thus far focused on increasing vaccination rates among high-risk groups. Utilising more targeted influenza awareness campaigns that focus on health education, addressing cultural and religious concerns, and building trust in the healthcare system and healthcare workers are among the recommended actions to expand the reach of public education and awareness campaigns.²⁴



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This profile report is one of the deliverables in a broader project, designed and conducted by Economist Impact, sponsored by Sanofi. To find out more, download the white paper *Unmasking the risk and burden of seasonal influenza in the Middle East: Strengthening prevention and control strategies for a healthier tomorrow*.

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