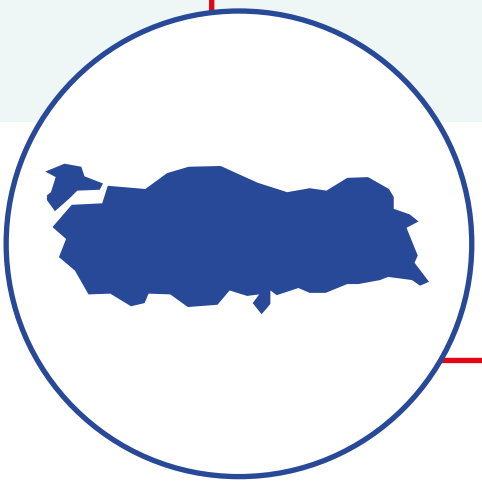
ECONOMIST IMPACT

Country Profile: Turkey



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

Sponsored by sanofi

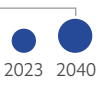
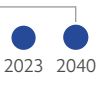
Areas of Focus

- **Expand education among primary care physicians –** Availability of, and access to, primary care has expanded over the past decade following Turkey's Health Transformation Programme. However, research suggests that many healthcare workers in Turkey underestimate the severity of influenza.[13] Improving education on seasonal influenza among physicians and providing them with tools and resources to educate high-risk patients, in turn, will be important to mitigate the severity of the virus in these populations.
- **Extend the reach of public education interventions –** While the public health authority maintains an informative and up-to-date webpage on seasonal influenza, the reach and engagement with such information may be limited. Communicating public health messages through social media and utilising community organisations' support may help improve public knowledge, attitudes, and awareness about the risk of seasonal influenza, as well as increase the uptake of prevention measures.
- **Develop an annual plan for seasonal influenza –** Although Turkey has a Pandemic Influenza Preparedness Plan in place, developing and maintaining an annual plan for seasonal influenza, and engaging healthcare and non-healthcare stakeholders could facilitate disease prevention and help mitigate the negative impacts of seasonal influenza, while simultaneously building capacity for pandemic preparedness.

Population

The population aged over 65, a high-risk group for influenza and its complications, is projected to double in the next two decades.[1] Turkey 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 imposing significant pressures on the health system. The country also has a higher prevalence of chronic obstructive pulmonary disease (COPD) and asthma, as compared with global averages, meaning that healthcare systems in the country should anticipate increased incidence of respiratory issues and potential complications with influenza.

Population structure and projections

	Population over 65 years[1]	7,668,312 (2023)	15,226,225 (2040)	106% growth 
	Total population[1]	85,816,199 (2023)	93,057,500 (2040)	9% growth 

Risk factors

Risk factor, prevalence		Turkey %	Global %
	Diabetes[2] Adult population, 2021	**14.5**	9.8
	Obesity[3] Adult population, 2022	**20.2**	14.0
	CVD[4] Total population, age-standardised, 2019	**6.6**	7.0
	COPD[4] Total population, age-standardised, 2019	**3.4**	2.8
	Asthma[4] Total population, age-standardised, 2019	**5.3**	3.5

Surveillance

Sentinel Surveillance – Influenza-like Illness (ILI) surveillance is conducted at the primary care level through a network of 220 family physician centres. To monitor and follow up on more severe cases of influenza, Sentinel Severe Acute Respiratory Infections (SARI) surveillance is conducted at the hospital level, across 10 hospitals in selected departments including intensive care, emergency, internal medicine, paediatrics, infectious disease and pulmonary disease.[5,6]

National Influenza Centre (NIC) – The National Influenza Centre Virology Reference and Research Laboratory is the designated NIC in Turkey. Expanding the number and capacity of the influenza reference laboratories was noted as a priority area in the 2019 Pandemic Influenza Preparedness Plan.[7]

Data sharing – The General Directorate of Public Health (HSGM) in Turkey publishes surveillance data on seasonal influenza on a weekly basis. National influenza surveillance is monitored through the web-based Public Health Management System (HSYS). The data is analysed weekly by the Infectious Diseases and Early Warning Department of the Respiratory Transmitted Diseases Unit. Turkey is also part of the Global Influenza Surveillance and Response System (GISRS) and reports to the European Centre for Disease Prevention and Control's (ECDC) European Surveillance System (TESSy) and the World Health Organization (WHO) Europe's FluNet database.[5]

Policy

National policy for influenza prevention and control – The Pandemic Influenza Preparedness Plan (2019) covers public health legislation and infection control measures related to seasonal influenza, and outlines surveillance, reporting and precautionary measures for seasonal influenza and influenza of endemic/pandemic potential.[7]

National immunisation programme – Seasonal influenza vaccination is recommended for all individuals over six months, and is funded by the state for individuals aged over 65, and for n certain high-risk groups, including those with diabetes, chronic lung disease, and heart disease. Individuals from these groups can get their vaccines at pharmacies with a doctor's prescription.[5]

Data on vaccination rates for seasonal influenza are limited; however, estimates from a published study in 2022 reported that only 8.1% of the population received regular annual influenza vaccination, while 13.4% reported receiving the vaccination on occasion. Vaccination rates were higher among those over 65 years and in individuals with chronic lung disease and CVD, indicating a higher perceived risk of influenza among these groups.[8]

Pandemic preparedness – The Pandemic Influenza Preparedness Plan (2019) includes strategies for surveillance, diagnosis, treatment and control of pandemic influenza. The plan also outlines the roles and responsibilities of healthcare and non-healthcare stakeholders including media, finance, education, defence, transport and workplaces during a pandemic or health emergency.[7]

Prevention and control

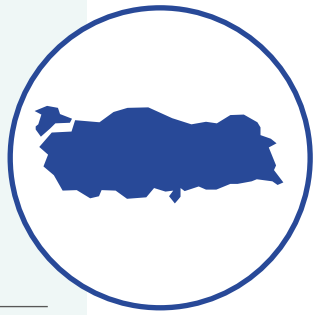
Infection control – Although not specific to seasonal influenza, the Pandemic Influenza Preparedness Plan in Turkey outlines infection control measures for community and healthcare settings. At the community level, the infection control measures primarily focus on hand hygiene and prevention of contact with respiratory secretions.[7] The weekly influenza report, published by the HSGM, also outlines personal protection precautions.[5]

Health system capacity – While healthcare worker and bed capacity are lower than the average in Europe and the Organisation for Economic Co-operation and Development (OECD) bloc, Turkey's healthcare system proved to be relatively robust in managing the covid-19 pandemic, with a low case fatality rate, particularly among the elderly population. Turkey also has a large intensive care unit (ICU) bed capacity, as compared with other European countries (46 ICU beds per 100,000 population versus 29 in Germany). ICU occupancy rates did not exceed 70% during the pandemic. Turkey is also a large producer of personal protective equipment (PPE), meaning that stockpiles are readily available in the event of an epidemic or pandemic health emergency.[8]

Public education

HSGM maintains a public website dedicated to seasonal influenza. The website showcases timely advice around protection and treatment measures and other resources targeted at high-risk groups.[12]

HEALTHCARE RESOURCES PER 1,000 PEOPLE:



Physicians (2019) [9]

Turkey	OECD average
1.9 ●●	3 ●●●

Nurses (2017) [10]

Turkey	OECD average
3 ●●●	10 ●●●●●●●●●●

Hospital beds (2017) [11]

Turkey	OECD average
2.9 ●●●	5.1 ●●●●●

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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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