



# Iran's Health after A Hundred Years: Snapshots of the Beginning and End of the Solar Hijri Century

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## Dear Editor-in-Chief

Iranians live by the *Solar Hijri* (SH) calendar. The starting point of this calendar, much like the *Lunar Hijri* calendar (which is the basis of religious practices in Islamic countries), is the Islam Prophet's migration. The origin of this particular calendar is on the earth's rotation around the Sun instead of the moon. On March 21, 2022, the year 1401 SH (Iranian calendar) was begun, and the 14th century of SH was ended. During the last SH century, from 1301 to 1400 SH (1922-2022 AD), Iran's health has experienced various changes.

The 14th century of SH began right after World War I when Iran experienced a great famine. The combination of this famine, along with Spanish influenza and other infectious diseases, killed about two million people (from an 8 to 10 million total population) (1). One such example of a situation was the ravage of cholera, which caused so many deaths on several occasions. In official reports, the number of victims was estimated as 40,000 just in an epidemic (2).

Before this century, there was no concrete structure for healthcare in Iran. However, in 1851, *Dar ul-Funun* (literally Polytechnique) was founded as the first comprehensive educational school for new sciences, including medicine and pharmacy.

In *Dar ul-Funun*, a council called the *Majles Hefz-o-Sehbeh* (council for the preservation of health) was established, which examined the status of health and diseases in the country and made recommendations to the prime minister. This council was mentioned in the country's written law at the time, which stated that taxes obtained from vehicles should be used to provide vaccinations against cholera and diphtheria (3). At the beginning of the century, a structure for health administration was established. There is evidence of its systematic management of cholera through their 1927's meetings' notes. During an epidemic in southern Iran, the ministry conducted widespread vaccinations and isolated patients. Census and issuance of death certificates were conducted for the first time in Tehran, the capital, in 1921 and 1922 (4).

There were only a few hospitals during these years, most of which were run by foreigners. The first public hospital in Iran with 20 beds was opened five years before the century (1917) for women and children in the capital. At the beginning of the century (1921), an army hospital with 200 beds was established. In 1922, the Pasteur Institute was established. 13 years after the beginning of the



century, the medical school was established at Tehran University (3).

The life expectancy increased from less than 35 years at the beginning of the century to 77 years (4). A significant reason for this is the expansion of Primary Health Care, which was initiated in 1984 and expanded into the whole country (5). Over the past century, Iran had experienced the world's longest-running contemporary classic war with Iraq for eight years, which caused perhaps the death of 500,000 people on both sides. Iran had also witnessed several natural disasters. In two of the most severe deadly earthquakes in this century (1990 and 2003), about 40 and 26 thousand death tolls, respectively, show the country's high risk of natural disasters (6). Non-communicable diseases, before the COVID-19 epidemic, were the leading cause of more than three-quarters of the registered deaths, and more than 80% of them came from the disease burden imposed on Iran (3). Deaths from air pollution, road accidents, heart attacks, strokes, and cancers were significant causes of death. However, the COVID-19 pandemic and complications in Iran demonstrated the country's negligence in preparedness for emerging diseases. The inefficiency of the health system and the lack of financial protection for health expenditures are two chronic problems in the Iranian health system. Although the country's social insurance system dates back to about 90 years ago, it still does not contain evidence-informed decisions and principles for insurance regulations. Economic sanctions against Iran, inefficiency in the healthcare system, unregulated private sector, and inadequate financial protection for health expenditures are the current challenges of Iran's health system. The Health Transformation Plan was the last major sector reform in Iran aimed to achieve universal health coverage (UHC) by 2025, but due to the harmful effects of sanctions and the COVID-19 pandemic, the program failed to continue. This

showed that the movement towards UHC in the country must be accompanied by health security. The life and health of Iranians at the beginning and the end of this century are very different. One hundred years ago, people died quickly from famine and infectious diseases without access to health care services. All people now have a high life expectancy at birth, even in rural and underprivileged communities, and all have access to essential health services. However, the disasters mentioned earlier and challenges in the country and the health system imply that there still needs to be more resilient systems to achieve decent health outcomes when confronted with unforeseen circumstances.

## Conflict of Interest

The authors declare that there is no conflict of interests.

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