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COVID-19 in Older Adults: Iran Health Care System Response

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Brief Communication

In March 2020, the World Health Organization announced the pandemic of an infectious disease caused by SARS-CoV-2 (1-4). The morbidity and mortality of older adults during the COVID-19 pandemic is a major public health concern (5-7). As age, especially above 65 years, is the most important factor that reduces the survival rate of patients with COVID-19 (8); thus, preventive measures targeting older adults will have a greater effect on reducing the number of deaths. The pandemic affects both the physical and mental health of the elderly and isolates them. Therefore, governments need to prioritize the needs of older adults when planning for such disasters. Public authorities around the world have especially focused on older adults considering fundamental issues, such as social support, protecting their right to health care, and accessing correct information (9).

According to the most recent census, there were 7.4 million people aged 60 years or above in Iran; currently, 14,419 older adults live in long-term care facilities. Based on the Iranian Ministry of Health and Medical Education (MoHME) reports, 6,004,460 confirmed infected cases and 127,551 deaths were recorded up to November 10, 2021 (10). So far, 39.3% of COVID-19-associated hospitalizations and 63.5% of COVID-19 deaths have occurred in people >60 years. To deal with the challenges posed by the COVID-19 pandemic, the following measures were taken in Iran to prevent and control the disease and to stop the transmission cycle of the virus.

Public Health Measures Among Older Adults in Long-term Care Facilities

Older adults in long-term care facilities have been dramatically hit by the COVID-19 pandemic all around the world (11). In Iran, the MoHME paid special attention to the residents of long-term care facilities. The health care system substantially supported these facilities by planning and managing the COVID-19 control and prevention programs. These measures included the development and communication of an infection prevention and control guideline to these centers and the development of a checklist for monitoring its correct implementation.

Other collaborative measures included deploying specialist teams (representatives of the Center of Disease Control and Prevention, Center of Environmental and Occupational Health, geriatricians, and epidemiologists) for a quick and comprehensive assessment and proposing infection control strategies at long-term care facilities with an outbreak or confirmed/suspected cases of COVID-19.

A temporary but important measure was geriatricians'

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↑What is "already known" in this topic:
In the context of coronavirus disease 2019 (COVID-19) and the risks posed to older people, they must be explicitly identified and considered in funding applications and decisions at all levels and in all settings. What some countries have done for the elderly during the COVID-19 pandemic has been published so far.

→What this article adds:
This paper introduces the public health measures to prevent and control COVID-19 among older adults in long-term care facilities and community doweling elderly in Iran.

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scheduling to provide 24-hour telephone consultation to some large long-term care facilities during the New Year holidays, meet their medical needs, and provide timely specialized measures for critically ill patients.

After vaccinating the health care providers, nationwide vaccination was performed for the residents and staff of all long-term care facilities as a high-priority group. Morbidity and mortality have dramatically declined with the progressive increase of vaccination. Moreover, an active surveillance system for adverse events after COVID-19 vaccination was also developed. This system actively monitored the adverse events after COVID-19 vaccination, recorded them online on an electronic system specifically designed for this group, and provided primary and outpatient care or inpatient measures depending on the severity of the symptoms. Before the COVID-19 vaccination, influenza vaccines were injected into all the residents of long-term care facilities to prevent COVID-19 and influenza coinfection.

In addition, the number of all probable and confirmed infected cases of COVID-19 and deaths among the residents and staff of these facilities were reported on the web-based platform (portal) of the Elderly Health Department of MoHME. In case of outbreaks at any long-term care facility, we could take immediate and timely control measures to manage the outbreak. Furthermore, referrals of the patients in need of hospitalization were also made as soon as possible.

Public Health Measures among Community-Dwelling Older Adults

Public Awareness and Training and Health care Providers' Education

Concurrent with the COVID-19 outbreak in Wuhan, China, and before the onset of the pandemic, health care providers' training programs were developed and implemented for COVID-19 prevention and control across the country.

Following the onset of the pandemic in Iran, public training was administered through mass media, including the Islamic Republic of Iran Broadcasting, the press, and social networks to promote public awareness about COVID-19 updates.

Disease prevention and health promotion recommendations were developed for older adults and their families and distributed nationwide. Group training sessions about personal hygiene principles and preventive measures were also held for the staff of long-term care facilities.

Self-care educational content focusing on nutrition, physical activity, and mental health during the epidemic was also developed for older adults and their families. A team of health education specialists developed this content in a way that would be understandable by older adults, and it was also presented as digital media (audio and video).

Finally, educational guidelines, contents, and messages about COVID-19 prevention and control targeting older adults, their families, and caregivers were developed and communicated online to Iranian medical universities for public training.

Vaccination

After the vaccination of these facilities' residents and staff, community-dwelling older adults were vaccinated in order, starting from those aged >80 and moving to those aged >60 years. So far, 87% of the elderly aged 60 to 69 years, 87% of 70 to 79-year-old adults, and 97% of those aged >80 years have been vaccinated. Based on the MoHME reports, vaccination has had a significant impact on reducing death rates in all age groups. The dramatic effect of vaccination on reducing the death rate at older ages has also been clearly observed. However, the risk of death has not dropped to zero, especially in those over 60 years of age. On November 13, 2021, a total of 80 people over the age of 80 who had not been vaccinated died; the number was 28 in fully vaccinated people, 20 in unvaccinated people aged 60 to 64, and 0.7 in those who received the 2 doses of the vaccine.

Screening

All older adults covered by primary health care services (about 6 million, ie, >70% of all older adults in Iran) were actively screened for COVID-19 symptoms and exposure 3 times, which was conducted by trained health care providers over the telephone. Suspected cases were referred to the closest health centers designated to provide diagnostic and treatment services.

Due to its structure and acceptable coverage, Iran's PHC system is suitable for being in charge of early detection and timely diagnosis and referrals of probable and confirmed cases of COVID-19, contact tracing, and other primary control measures. To this end, the work hours of some health care centers were extended from 8 to 16 hours a day.

High-Risk Older Adults' Identification and Classification

To identify high-risk older adults, health care workers call the families of older adults, identify different groups of older adults (those living alone, having refractory chronic illnesses, disability, immobility, aged >75 years, living as suburbanites, or having comorbidity), and record their information on electronic health record systems. Depending on the mentioned risk factors, older adults are classified into very high-risk, high-risk, moderate-risk, low-risk, and minimum-risk groups. Health care workers and managers can then establish acceptable plans and take timely measures for the target groups based on their needs and risk levels. More than one-third of the population of older adults has been examined and identified as high-risk.

Community-Driven and Family-based COVID-19 Outbreak Management Among Older Adults

Besides the MoHME as the principal body in charge of epidemic control, the COVID-19 control program was partly delegated to the community to take advantage of all the potentials. Active units in the community (health houses in urban areas, health centers in rural areas, and the community's volunteer organizations) in assistance with other stakeholders; for example, the Iranian Red Crescent and a nongovernmental organization (Shahid Soleimani

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Project) conducted the project. This project was an example of community cooperation, intersectoral coordination, planning based on community needs (bottom-up planning), and the optimal use of the value-added through social participation to support the national health system.

This project owed its success to its concentration on very high-risk older adults, its preventive approach, and the provision of active services instead of passive service provision. Ignoring these important points may increase the care burden of critically ill patients and the high mortality rate among high-risk groups, especially older adults. Provision of targeted care for high-risk and very high-risk older adults, targeted preventive strategies, and optimal and timely treatment could reduce the COVID-19 incidence rate, the number of hospitalized patients, and the mortality rate.

Telephone Counseling and Answering the Questions

Iran Association of Gerontology and Geriatric Medicine collaborated with specialists to implement a system for providing telephone counseling to older adults. The system was later connected to the national 4030 system. The 4030 system is a comprehensive telephone counseling service developed by the MoHME at the outset of the epidemic and is still providing telephone counseling about COVID-19 across the country.

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Conflict of Interests

The authors declare that they have no competing interests.

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