Acknowledgements

This document was produced as part of the Technical series on primary health care on the occasion of the Global Conference on Primary Health Care under the overall direction of the Global Conference Coordination Team, led by Ed Kelley (WHO headquarters), Hans Kluge (WHO Regional Office for Europe) and Vidhya Ganesh (UNICEF). Overall technical management for the series was provided by Shannon Barkley (Department of Service Delivery and Safety, WHO headquarters) in collaboration with Pavlos Theodorakis (Department of Health Systems and Public Health, WHO Regional Office for Europe).

This document was produced under the overall direction of Zafar Mirza and Hassan Salah (WHO Regional Office for the Eastern Mediterranean).

The principal authors were Lauren Spigel, Dan Schwarz and Asaf Bitton, all from Ariadne Labs, Boston, USA.

Valuable comments and suggestions were made by WHO collaborating partners and regional and country office staff, particularly Alireza Raeisi (Ministry of Health and Medical Education); Mohammadreza Rahbar (Ministry of Health and Medical Education); Mohsen Asadi-Lari (Iran University of Medical Sciences and Ministry of Health and Medical Education); Mohammad Shhariati (Ministry of Health and Medical Education); Reza Majdzadeh (Tehran University of Medical Sciences); Shadrokh Sirous and Christoph Hamelmann (WHO Country Office); AliAkbar Haghdoost (Ministry of Health and Medical Education); Nastaran Aslani (Ministry of Health and Medical Education), and Luke Allen (Consultant, WHO, Geneva).

The views expressed in this document do not necessarily represent the opinions of the individuals mentioned here or their affiliated institutions.
Background

In parallel with the Declaration of Alma-Ata, the Revolution of 1979 launched landmark reforms to the health system of the Islamic Republic of Iran (1,2). These reforms, which were in line with primary health care (PHC) (3–6), began in the early 1980s (7) and continue to the present day (8). The Declaration of Alma-Ata outlined key tenants of PHC, which the Iranian government adopted, with the aim of achieving health for all by 2000 (6,9,10). Over recent decades, Iran has built a strong PHC system on a large scale, starting with a rural community health worker (CHW) programme and then an urban CHW programme. In the past decade, the family practice system has become a fundamental element of PHC in the Islamic Republic of Iran. PHC is highly organized and efficient, and has resulted in a dramatic decrease in maternal, infant and neonatal mortality rates. Strategies used by the Iranian health system to develop efficiency, responsiveness, equity and movement towards universal health coverage (UHC) include assessing needs and integrating new health programmes, then modifying the structure of the service delivery system based on needs.
Intervention

The development of health networks occurred in three phases. The first phase involved developing PHC. The main feature of this phase was the development of a system for delivering essential health care that prioritized the allocation of resources to rural areas. The second phase was the development of a family practice programme in rural areas and in urban communities with a population of under 20,000 people. The third phase was making progress towards developing family practice in suburban areas and in cities with a population of more than 20,000 people.

In the first phase, Behvarzes – CHWs based in rural health houses (4, 7, 13, 14) – were the main staff delivering PHC services. In subsequent phases, the country’s health system used a greater number of health experts to complete the coverage. The key health experts providing wider and more complex services included Moraghebe-salamat (multipurpose CHWs in urban areas); nutritionists; experts in mental, environmental and occupational health; and midwives.

First phase of developing PHC

The health care reforms of the Islamic Republic of Iran began in 1983, with the establishment of the National Health Network, which put rural communities at the heart of PHC in the country. This rural-focused approach aimed to improve health equity between urban and rural populations (7, 8, 10–12). The underlying values of PHC in Iran, modelled on the Declaration of Alma-Ata, have informed its implementation strategy (6, 10).

A key component of the health reforms has been the creation of health houses (Khaneh Behdasht), staffed by Behvarzes, which provide basic health services; each health house serves about 1500 people within a 1-hour walking distance (7, 13). Selecting local community members as Behvarzes is strategic, because these staff members are constantly available, and they have long-term commitments and personal connections to their community. Their origin and place in the locality strengthens the relationship between the health system and the community (6, 14–17).

Behvarzes provide a broad range of services, including annual censuses, health education, family planning, maternal and child health care (MCH), care for elderly populations, oral health care and occupational health (7, 13).

Training and supervision

The Behvarz training programme is financed entirely by the national and provincial health systems (18). Cohorts of 7–15 students undergo a rigorous 2-year task-oriented training at the country’s district Behvarz training centres (17, 18). Behvarz candidates who enter training with a university degree in public health or a related field have a reduced training requirement of about 6–8 months (18). The coursework is broad, covering the wide range of services that Behvarzes will need to provide to their communities (7, 14).
Movement towards UHC – the need to implement a family practice system and improve PHC services

Like many other societies, the Islamic Republic of Iran is experiencing rapid changes in all aspects of social life; for example, urbanization and lifestyle changes, demographic changes and a changing socioeconomic environment. The pattern of diseases has also changed. The most important challenges are:

- demographic transition – an increase in the elderly population with a higher burden of noncommunicable diseases (NCDs);
- the changing socioeconomic situation of communities, and rising public expectations of the health system; and
- increased marginalization and lack of adequate coverage of health services in marginal areas.

Providing infrastructure during the past two decades – events that made the system ready for new reforms

During the years after the establishment of health care networks, different projects were designed and integrated into the health system to improve infrastructure and undertake necessary reforms. Some of the projects implemented can be summarized as follows:

- developing techniques for assessing the burden of diseases and priority-setting for health problems;
- developing and integrating NCD programmes;
- developing models for community empowerment and participation;
- developing a health informatics and online electronic management information system;
- licensing the health workforce;
- assessing health technology; and
- developing performance-based payment for health staff.
Legislations and macropolicies

The health sector reforms began with the country’s third development plan, and continued in the fourth, fifth and sixth plans. A key point was rural health insurance in the fourth programme of development, known as the “family physician and rural insurance programme”; this important reform was implemented in 2005 (8,22).

Urban CHWs

Before the establishment of family practice, the health system benefited from various cadres of health workers. However, it was after the family practice programme that more CHWs entered the health system and started delivering more services based on new needs. These CHWs (also known as Moraghebesalamat) were accompanied by mental health, nutritional, environmental and occupational health experts, and midwives, allowing the team to provide more services. Urban CHWs are typically selected through advertising in the urban area. They are usually native to their working area, and have a college degree (e.g. in public health or midwifery). The district health centres select CHWs through competitive examinations, and individuals who are selected must complete training courses both before and during their service.
Family practice training programmes

Various programmes have been developed to enhance the ability of both family physicians and other members of the health team. These programmes include reviewing the syllabus for training health staff (especially physicians), and developing new academic disciplines and on-the-job training.

Additional graduate courses have been designed and implemented, including a masters of family medicine (an online modular course) and a family medicine specialty programme.

Integration of new services

To ensure that services are accessible to different groups, new services have been integrated into targeted group service packages. To optimize the effectiveness of these services, family doctors and health teams are being trained to deliver the services included in the packages, which were developed by scientific groups in the Ministry of Health and Medical Education (MoHME). Also, the health teams have been expanded to include other health professionals (e.g. experts in nutrition and mental health). The new service packages focus on:

- smoking cessation;
- improving nutrition;
- preventing traffic accidents;
- promoting physical activity;
- preventing cancers;
- preventing cardiovascular disease;
- preventing diabetes;
- improving oral health; and
- preventing mental illness and improving the health status of people with mental illnesses.
Second phase – developing family practice in rural areas and cities with a population of under 20 000

To reach UHC targets, the number of PHC services and the coverage of the population were scaled up. With the statutory requirement for rural health insurance, the government’s commitment to a comprehensive referral system and the move towards a family practice approach accelerated. Along with health sector reforms, the quality of services was enhanced by the appointment of new health workers, including nutritionists, mental health experts and midwives. Training courses for general physicians were considered necessary to develop family and community-based services; therefore, the MoHME started training specialist family doctors. In addition, the MoHME tried to expand health services for urban communities, with the aim of regulating the health market.

Third phase – developing family practice in suburban areas and cities with a population of more than 20 000

One target of the programme was populations living in urban areas, including the marginal population around cities, and cities with a population of more than 20 000. It is estimated that those living in urban areas total 10.2 million, and those in large cities total 43 million (without considering the marginal population). The programme aims to develop UHC countrywide, and is based on public–private partnerships and devolution of services to the nongovernmental sector. The payment in this programme is per capita, adjusted by service.
Impact

The Islamic Republic of Iran’s *Behvarz* programme has been a critical part of improving the country’s health outcomes over recent decades. The health system has improved MCH outcomes (19), NCD outcomes (11,24) and overall life expectancy (12,25). The use of a significant number of service providers in the second and third phases led to an increase in the coverage of health services in urban areas, and in the desire to receive various services including those for nutrition, mental health and NCDs.

According to the Department for Family, Population and School Health in the MoHME, the maternal mortality rate in 2015 was less than 20 per 100 000 live births. The department has announced the following results for 2015: a neonatal mortality rate of 9.5/1000, an infant mortality rate (IMR) of 13.4/1000 and an under-5 mortality rate of 15.5/1000 live births. The strength of the PHC system has also helped to reduce MCH disparities between urban and rural populations (7,19,26). In 1976, the IMR in rural areas (123.7/1000 live births) was almost double the IMR in urban areas (60.4/1000 live births) (7); however, by 2000, the gap between rural and urban IMR had was much less (30.2 compared to 27.7/1000 live births) (7,26).

Finally, and perhaps most notably, the population life expectancy has increased since the inception of the *Behvarz* programme, from 55.7 years in 1976 (19) to 75.5 years in 2015 (25). Other factors (e.g. economic growth and increased literacy) have also contributed to the increased life expectancy (7), but the PHC system played a major role in this outcome (12).
Lessons learned and implications for scaling

As the world observes the 40th anniversary of the Declaration of Alma-Ata, the experience of the Islamic Republic of Iran highlights the importance of placing the community at the heart of the PHC system. Recruiting and training CHWs has led to a health system that can respond to the community's needs, providing proactive, preventive care to people in their homes (3,20). The Behvarz training model is a complete example of a task-oriented instructional system that has improved its methods over time, but has remained responsive to community needs and new opportunities.

The Iranian health system has become more efficient, responsive and equitable, thanks to a range of initiatives. These include assessing needs and integrating new health programmes; designing the structure of the service delivery system based on needs; establishing performance-based payment systems and an online electronic information system; establishing a monitoring and evaluation system for services, and extensive assessment of people’s satisfaction; developing an appropriate structure of the health team; and creating basic structures for evaluating quality and quantity of services. The system has reaped significant health benefits for the Iranian people, and serves as an example for other settings globally, providing lessons for other countries and communities embarking on their own paths towards UHC.
References


27. Raeisi A, Deputy Minister for Public Health, Ministry of Health and Medical Education, Iran personal communication, 10 July 2018.
COUNTRY CASE STUDIES ON PRIMARY HEALTH CARE