

The role of the Primary Healthcare Network in Iran in hepatitis C virus elimination by 2030

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Abstract

The World Health Organization (WHO) has estimated that about 71 million people in the world have chronic hepatitis C virus (HCV) and 399,000 die every year due to cirrhosis and cancer caused by HCV. Despite efforts to prevent and control hepatitis, there are still many barriers. In September 2000, during a summit in New York organised by the United Nations, world leaders agreed on a set of achievable targets within a limited timeframe, with the goal of combating poverty, hunger, disease, illiteracy, destruction of the environment and of improving the status of women by 2015; these were known as the Millennium Development Goals. The Primary Health Care Network (PHCN) in Iran has played a very important role in health promotion but its achievements could be enhanced further by improving performance and implementing further changes. The WHO strives to achieve goals of sustainable development by 2030 in many countries, thereby raising awareness, encouraging greater community participation, mobilising resources, using evidence-based policies, and increasing screening services, care and treatment. The concept of the PHCN has been very successful in health promotion in Iran, and has provided a basis for accessible and high-quality services for all. Achieving HCV elimination by 2030 could be achieved with the support of the PHCN, and changes in management with regard to screening, prevention and treatment practices.

Keywords: Primary healthcare network, elimination, hepatitis C, Iran

Introduction

Hepatitis C infection (HCV) affects the public health sector in both developed and developing countries. It causes an acute and chronic hepatitis and, in the absence of proper follow-up and treatment, can lead to cirrhosis and liver cancer and, ultimately, death [1]. The World Health Organization (WHO) has estimated that about 71 million people have chronic HCV and 399,000 die every year due to HCV-related cirrhosis and cancer [2]. In its 2017 report, WHO described the burden of disease in different parts of the world [3], showing the highest incidence in the Eastern Mediterranean Regional Office (EMRO) and European Regional Office (EURO) areas.

Each year, countries allocate resources to HCV prevention, control and treatment. For example, the economic burden of HCV in the USA is estimated to be more than US\$10 billion [4] and is on the increase [5]. More importantly, the disease can cause indirect costs, such as decreased quality of life and a loss of workforce [6].

In terms of their healthcare systems, many countries define and implement various strategies, and try to prevent and control hepatitis. Proper policy-making and effective strategies are tools to achieve these goals. In 2013, the WHO published a report entitled 'Global policy report on the prevention and control of viral hepatitis in WHO member states', which described the status of countries around the world with regard to systems, plans and strategies used for the hepatitis programme. Despite many efforts, there are still barriers, such as a lack of: adequate policies for fighting hepatitis, accurate data on the infection, knowledge in the community and service providers, sufficient funding, and of use of the guidelines and standardised procedures. Other challenges include the lack of up-to-date diagnostics and the adoption of treatments that are not evidence-based [7].

In September 2000, during a summit in New York organised by the United Nations (UN), world leaders agreed on a set of achievable targets within a limited timeframe, with the goal of combating poverty, hunger, disease, illiteracy, the destruction of the environment and improving the status of women by 2015, called the Millennium Development Goals (MDGs). These were a test of political will to create a wider and deeper partnership and have been instrumental in speeding up progress and assessing results. This announcement included goals for reducing child death, improving maternal health and the fight against AIDS, malaria and other diseases [8]. Much progress was made by this deadline [9–11]. For goal 6 for example, according to WHO, the death toll from tuberculosis, AIDS, and malaria had declined at the end of 2015; however, there was an increase in the number of deaths due to hepatitis.

In September 2015, the heads of different states agreed on a roadmap towards sustainable development goals (SDGs) by adopting the 2030 agenda, which contains 17 goals to be achieved by 2030, including social, economic, and environmental aspects of sustainable development. SDGs included a set of tasks for countries to be achieved by 2030, along with the results of the MDGs [12]. The third goal of this statement was health-related. Special attention was given to viral hepatitis, and the prospect of its elimination was considered a public health challenge. By 2030, there is intent to reduce the mortality rate due to hepatitis B and C by 90% and to reduce the incidence of new cases by 65% [13], which should be achievable if proper policies are put in place [14].

Iran is one of the countries of the EMRO area, with a population of around 80 million and a variety of climates and cultures. Most healthcare services in villages and cities are provided by the Ministry of Health and Medical Education (MoHME), and nearly 98% of people have access to healthcare [15]. Over the past decades, policy-makers have been working with success to improve the population's health [16]. Extensive efforts have been made in the field of infectious diseases, such as hepatitis, and since 2007 the coverage of hepatitis B (HBV) immunisation has increased

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dramatically and been shown to reduce incidence of the disease [17].

However, despite these successes, there is a need to try to fill existing gaps in healthcare. As in many other countries, studies have been conducted on HCV prevalence in Iran. For example, in a meta-analysis, its prevalence was reported to be 0.6% [18] in the general population and 0.5% [19] in blood donors. These studies show that HCV prevalence in Iran is lower than in other EMRO countries. Despite this, with increasing injecting drug use (IDU) in the community as well as in the young population and in subjects at risk, increased HCV prevalence is being noted. This has alarmed healthcare policy-makers in Iran [20].

The Primary Health Care Network (PHCN) in Iran

An appropriate level of healthcare is a recognised right in every country. Easy and economically affordable financial payments for individuals to healthcare providers are considered an important benchmark for system assessment [21]. In many countries, the healthcare system tries to reduce health costs, improve health and provide quality services [22]. Policy-makers in Iran have designed a network that will provide better access to primary healthcare in villages and cities. The Alma-Ata Declaration in 1978, directed at achieving 'Health for All' by the year 2000, prompted the design of this network to be put on the agenda and was supported by policy-makers [23].

Iran started the Primary Health Care Network (PHCN) in the 1980s to develop health services and increase access for all. Services were placed in villages (health houses), with locally sourced healthcare workers (Behvarz). These healthcare workers have a degree in community medicine, receive training over a 2-year period with fixed salaries, and are officially hired by the MoHME [24]. Healthcare workers are required to provide services such as collecting demographically protected household data, performing yearly census surveys, providing family planning services and antenatal care during and after childbirth, vaccination, environmental health services and health education [25]. Healthcare centres were also started in urban settings and services such as family planning, prenatal care and care during and after delivery, vaccination and health education were provided to the public. These centres are staffed by doctors, midwives and public health workers [26]. The impact of the PHCN services in Iran has been remarkable, and this network has been able to improve many health indicators in the country [26–28].

The PHCN in Iran and HCV

Over the past decades, the role of disease awareness and health education has been emphasised to enhance community health. When people become aware of a disease they may change their attitudes and behaviours and become less prone to infection [29]. The WHO emphasises the promotion of health literacy as the ability to understand and use information to improve health status [30]. Various studies have been carried out on the state of knowledge, attitudes and practice of people about HCV in Iran. The level of awareness in the country about HCV requires very serious consideration [31–33]. As there is no prophylactic vaccine against hepatitis C [34], increasing awareness is very important to reduce exposure. As stated by the WHO, growing awareness in a population is a means of preventing and controlling the disease, and should be promoted [13]. The PHCN in Iran can play a very important role in increasing the awareness of HCV by the public by having a set of service providers. As more services are offered free of charge at these centres, there will be an increase in users. Improved awareness is made possible when modern educational methods for communication and health education are used, such

as providing training on the ways in which hepatitis is acquired, reducing exposure to risk factors for all people, especially those at high risk, teaching condom use, increasing testing, and giving harm-reduction tools such as clean injectable syringes to addicts. Health education in schools and universities could be included in some of the recommendations from this network.

The PHCN can also play a very important role in improving the quality of life of people with HCV. The training provided by staff to affected people and families makes the family better able to deal with affected people and thereby improve their quality of life and inform on ways to prevent onward transmission. During antiviral treatment, patients with psychosocial problems present with symptoms, such as cognitive impairment, anxiety, depression and fatigue [35]. Currently, doctors in urban and rural health centres also provide these primary mental health services [36], and can play an important role in improving quality of life by treating mental health issues. One of the main challenges for patients remains stigma, which has a profound effect on their social function, and can lead to social isolation and a reduction in their level of treatment [37]. The PHCN network staff can also play an important role in the prevention of hepatitis transmission [38]. Patients with HCV are at high risk for cirrhosis and hepatitis A and B, vaccines for which have an important protective role can be accessed in the PHCN network [39].

Fortunately, for patients with HCV there are new, simple and short-term treatments that achieve a sustained virological response. Therefore, patients should be treated promptly [39]. As there are a lot of medical expenses involved, health policy-makers should try to provide financial support. One of the big advantages of the PHCN is the availability of easy access to experienced service providers, which can lead to a reduction in cost and an improved monitoring of the treatment process.

The referral of high-risk individuals by this network can be one of the best ways to improve diagnosis. People who have HCV-positive antibodies require HCV PCR testing to confirm active infection [40]. The PHCN can play two important roles in this instance. First, given the presence of general practitioners, it can help in identifying high-risk and at-risk populations. Referrals can then provide adequate diagnosis by identifying infected individuals and prevent medical complications by starting treatment promptly. Secondly, some of the centres have a laboratory system in place, and if health decision-makers provide better diagnostic tests, this will also help identify high-risk individuals and lower diagnostic costs.

Conclusions

The PHCN in Iran has played a very important role in promoting health but its achievements could be enhanced further by improving performance and implementing further change. Achieving HCV elimination in Iran by 2030 seems achievable with the support of the PHCN, in line with WHO SDGs.

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Declaration of Interests

The authors declare no conflict of interest.

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