

## The midwife's role in prevention of non-communicable diseases in Iran

Noncommunicable diseases (NCDs) are the leading cause of death worldwide and the underlying causes of almost two-thirds of global deaths. Although all countries face this epidemic, low- and middle-income countries, and the poor people in these countries, are the most vulnerable.<sup>[1]</sup> It is a global necessity to implement an effective strategy for preventing NCDs because the cost of treatment in the future will be uncontrollable.<sup>[2]</sup> NCDs account for 73% of global mortality<sup>[3]</sup> and 59.7% of disability-adjusted life years (DALYs). It should be borne in mind that the prevalence of and mortality from these diseases are distributed unevenly around the world so that NCDs account for 79.2% of all deaths and 74% of the DALYs in Iran.<sup>[4]</sup>

Diabetes, hypertension, cancer, and chronic respiratory diseases are the most important diseases of NCDs that may result from four risk factors of sedentary lifestyle, unhealthy eating habits, and alcohol and tobacco consumption.<sup>[5]</sup> The four mentioned diseases have a higher global and national prevalence, more mortality rates, and a higher financial burden for their control in all countries.<sup>[6]</sup> That is why the World Health Organization (WHO) has determined control of these four diseases and their underlying causes as its main goal in reducing mortality resulting from NCDs by 25% by the year 2025.<sup>[5]</sup> Remarkable changes in lifestyle over the past 30 years have increased the prevalence of sedentary lifestyle and obesity.<sup>[1]</sup> A study on 30,541 adults in 30 Iranian Provinces reported a high prevalence of physical inactivity, especially in women (62%).<sup>[7]</sup> The prevalence rates of obesity and abdominal obesity in Iranian women are 32.2 and 81.4%, respectively.<sup>[8]</sup> However, with the shift in tobacco consumption from industrialized countries to developing ones, tobacco use has also become pandemic among women in the majority of the developing countries.<sup>[9,10]</sup> Consequently, many NCDs such as osteoporosis, cardiovascular diseases, and hypertension can be prevented by changing lifestyles and controlling the risk factors.<sup>[11]</sup>

The Deputy Minister of Health and Medical Education in Iran developed the prevention and control service package for the mentioned four diseases and the four risk factors related to them. This package was prepared based on past experiences, the new guidelines issued by the WHO and the "National Document for Prevention and Control of NCDs and Related Risk Factors in the

Islamic Republic of Iran from 2015 to 2025," and in cooperation with the other health centers and offices of the Deputy Minister of Health and Medical Education. This package, entitled Iran's Package of Essential NCD Interventions (known as IraPEN), is being implemented throughout the country according to the trend of change in the health sector and received the top priority in the health system of the country. Making a personal health record and myocardial infarction (MI) and stroke risk assessment and early diagnosis of breast, cervical, and colon cancers and of tuberculosis are among the activities having top priorities in this service package. Cardiovascular stroke risk assessment is an important step that is expected to be carried out for everyone over the age of 30 to identify the 10-year risk of MI and stroke and to prevent them by taking preventive measures. The health-care providers including midwives at health-care centers provide this package.<sup>[12]</sup>

Midwifery in Iran is a 4-year course and graduate students called bachelor of midwifery. Graduate midwives can be employed in hospitals in the maternity or neonatal wards. They also can be employed in the health system who have duties such as prenatal care, vaccination, screening women regarding breast and cervix cancers, screening people regarding cardiovascular diseases, and providing care for middle-aged and elderly people. Although the master and Ph.D. of midwifery are existing in Iran, most graduates of these periods work as instructors in universities.

The growing prevalence of NCDs involves all health professionals in community health. As the key members among the providers of primary health care at the community level, midwives have access to all levels of the population.<sup>[12]</sup> They have the necessary skills to enhance the strengths of individuals and communities in order to improve prevention and therapeutic outcomes. As a part of the multidisciplinary teams for dealing with NCDs and for reducing their related risk factors, midwives can offer substantial help. In Iran, midwives are the largest group of health workers at health centers. Besides providing care for women in prenatal and postnatal periods, breastfeeding, family planning, vaccination, healthy eating, and smoking cessation, they play a major role in the prevention, screening/early diagnosis, and treatment of NCDs and in promoting the health of the general population.<sup>[13,14]</sup>

At present, in Iran, midwives are the majority of health-care providers in the Iranian health system, and 10,517 midwives

are providing services at health centers for prevention of NCDs. As health-care providers, midwives provide many services related to the program for prevention and control of NCDs and for control of their related risk factors. These services include 10-year fatal and nonfatal MI and stroke risk assessment, cervical, breast, and colorectal cancer screening and provision of care for cancer patients, assessment of the four risk factors (unhealthy eating habits, sedentary lifestyle, and consumption of alcohol and tobacco) and provision of necessary education in this relation, blood pressure control, blood sugar and lipid profile, fecal immunochemical test, and anthropometric indicator measurement.<sup>[12]</sup> Furthermore, in order to prevent cardiovascular and osteoporosis diseases, midwives provide education and counseling for middle-aged women (during pre- and postmenopausal periods) to modify their lifestyle. Furthermore, midwives conduct HIV rapid screening tests in pregnant women and provide counseling for affected women with this virus. Therefore, midwives are vitally important members in a community's health-care system and play a substantial role in preventing and controlling NCDs.

With the announcement of 2020 as the "Year of the Nurse and Midwife" by the WHO, investments in the midwifery workforce will have a substantial, rapid, cost-effective, and high-quality share of global health care.<sup>[15]</sup> Therefore, it is recommended that the national authorities consider reviewing the Health System Evolution Plan while taking the various articles in the Document for General Health Policies into account. By giving more emphasis to the role that midwives play and by utilizing this powerful and inexpensive workforce, pave the way for achieving fundamental changes in the community health status, especially for preventing NCDs and mortality resulting from them, and prevent the loss of the economic and human resources in the health sector.

### Financial support and sponsorship

This study has been financially supported by Tabriz University of Medical Sciences.

### Conflicts of interest

There are no conflicts of interest.

**Parvin Abedi, Shahla Khosravi<sup>1</sup>,  
Mojgan Mirghafourvand<sup>2</sup>, Jafar Sadegh Tabrizi<sup>3</sup>**

*Department of Midwifery, Menopause Andropause Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, <sup>1</sup>Department of Community Medicine, Medicine School, Tehran University of Medical Sciences, Tehran, Iran, <sup>2</sup>Department of Midwifery, Social Determinants of Health Research Center, Tabriz University of Medical Sciences, Tabriz, Iran, <sup>3</sup>Department of Health Services Management, Health Management and Safety Promotion Research Institute, Tabriz University of Medical Sciences, Tabriz, Iran.*

### Address for correspondence:

Dr. Mojgan Mirghafourvand,  
Department of Midwifery, Social Determinants of Health Research  
Center, Tabriz University of Medical Sciences, Tabriz, Iran.  
E-mail: mirghafourvandm@tbzmed.ac.ir

Received: 04-10-2020

Accepted: 24-10-2020

Published: 27-02-2021

### References

1. World Health Organization. Global Status Report on Noncommunicable Diseases. World Health Organization; 2014. Available from: [https://apps.who.int/iris/bitstream/handle/10665/148114/9789241564854\\_eng.pdf;jsessionid=92EA2944A48396E9D2306B94C3DD7B3?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/148114/9789241564854_eng.pdf;jsessionid=92EA2944A48396E9D2306B94C3DD7B3?sequence=1). [Last accessed on 2020 Jan 03].
2. Kelly MP, Russo F. Causal narratives in public health: The difference between mechanisms of aetiology and mechanisms of prevention in non-communicable diseases. *Social Health Illn* 2018;40:82-99.
3. Roohafza H, Khani A, Sadeghi M, Bahonar A, Sarrafzadegan N. Health volunteers' knowledge of cardiovascular disease prevention and healthy lifestyle following a community trial: Isfahan healthy heart program. *J Educ Health Promot* 2014;3:59.
4. Khosravi Shadmani F, Farzadfar F, Larjani B, Mirzaei M, Haghdoost AA. Trend and projection of mortality rate due to non-communicable diseases in Iran: A modeling study. *PLoS One* 2019;14:e0211622.
5. Balbus JM, Barouki R, Birnbaum LS, Etzel RA, Gluckman PD Sr., Grandjean P, *et al.* Early-life prevention of non-communicable diseases. *Lancet* 2013;381:3-4.
6. Hamedani Z, Haghani F, Kelishadi R. Strategies to non-communicable diseases prevention improvement from the viewpoints of students in Isfahan: A qualitative research. *J Educ Health Promot* 2019;8:232.
7. Mohebi F, Mohajer B, Yoosefi M, Sheidaei A, Zokaei H, Damerchilu B, *et al.* Physical activity profile of the Iranian population: STEPS survey, 2016. *BMC Public Health* 2019;19:1266.
8. Tabrizi JS, Sadeghi-Bazargani H, Farahbakhsh M, Nikniaz L, Nikniaz Z. Prevalence and associated factors of overweight or obesity and abdominal obesity in Iranian population: A population-based study of Northwestern Iran. *Iran J Public Health* 2018;47:1583.
9. Baheiraei A, Mirghafourvand M, Mohammadi E, Majdzadeh R. Experiences of cigarette smoking among Iranian educated women: A qualitative study. *Int J Prev Med* 2016;7:93.
10. Sarraf-Zadegan N, Boshtam M, Shahrokhi S, Naderi GA, Asgari S, Shahparian M, *et al.* Tobacco use among Iranian men, women and adolescents. *Eur J Public Health* 2004;14:76-8.
11. Tankó LB, Christiansen C, Cox DA, Geiger MJ, McNabb MA, Cummings SR. Relationship between osteoporosis and cardiovascular disease in postmenopausal women. *J Bone Miner Res* 2005;20:1912-20.
12. Peykari N, Hashemi H, Dinarvand R, Haji-Aghajani M, Malekzadeh R, Sadrolsadat A, *et al.* National action plan for non-communicable diseases prevention and control in Iran: a response to emerging epidemic. *J Diabetes Metab Disord* 2017;16:3.
13. Brownie S, Hills AP, Rossiter R. Public health service options for affordable and accessible noncommunicable disease and related chronic disease prevention and management. *J Multidiscip Healthc* 2014;7:543-9.
14. Crisp N, Brownie S, Refsum C. Nursing & Midwifery: The key to the Rapid and Cost Effective Expansion of High Quality Universal Healthcare. Doha, Qatar, World Innovation Summit for Health; 2018. p. 1-39. Available from: <https://ecommons.aku.edu/>

eastafrika\_fhs\_sonam/232. [Last accessed on 2020 Jan 03].

15. Baygi M. Health transformation plan in Iran: A new return to the declaration of Alma-Ata. Health Scope 2020;9:e67268.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
<b>Quick Response Code:</b>	<b>Website:</b> www.jehp.net
	<b>DOI:</b> 10.4103/jehp.jehp_1315_20

**How to cite this article:** Abedi P, Khosravi S, Mirghafourvand M, Tabrizi JS. The midwife's role in prevention of non-communicable diseases in Iran. J Edu Health Promot 2021;10:43.

© 2021 Journal of Education and Health Promotion | Published by Wolters Kluwer - Medknow